UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/539,501	02/07/2023	11573939	011844-0029-999	1802

20583 7590 01/18/2023

Jones Day
250 Vesey Street
New York, NY 10281-1047

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

INVENTOR(s) (Please see PAIR WEB site http://pair.uspto.gov for additional inventors):

Kevin W. Dinn, Mount Kuring-Gai, New South Wales, AUSTRALIA;

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Kannuu Pty Ltd., Mount Kuring-Gai, New South Wales, AUSTRALIA;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

Document Description: Issue Fee Payment (PTO-85B)

Issue Fee Transmittal Form

Application Number	Filing Date	First Named Inventor	Atty. Docket No.	Confirmation No.
16539501	13-Aug-2019	Kevin W. Dinn	011844-0029-999	1802

TITLE OF INVENTION :

Process and Apparatus for Selecting an Item From a Database

Entity Status	Application Type	Art Unit	Class - Subclass	EXAMINER
Regular Undiscounted	Utility under 35 USC 111(a)	2169	812000	SON HOANG

Issue Fee Due	Publication Due	Total Fee(s) Due	Date Due	Prev. Paid Fee
$1200	$0	$1200	03-Jan-2023	$0

1.Change of Correspondence Address and/or Indication Of Fee Address (37 CFR 1.33 & 1.363)

Current Correspondence Address:	Current Indicated Fee Address :
20583 Jones Day 250 Vesey Street New York NY 10281-1047 UNITED STATES 212-326-3939 japarker@jonesday.com	
☐ Change of correspondence address requested, system generated AIA/122-EFS form attached	☐ Fee Address indication requested, system generated SB/47-EFS form attached

2.Entity Status

Change in Entity Status

○ Applicant certifying micro entity status; system generated Micro Entity certification form attached. See 37 CFR 1.29.
Note: Absent a valid certification of micro entity status, issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment. If this box is checked, you will be prompted to choose a micro entity status on the gross income basis (37 CFR 1.29(a)) or the institution of higher education basis (37 CFR 1.29(d)), and make the applicable certification online.

○ Applicant asserting small entity status. See 37 CFR 1.27.
Note: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

◉ Applicant changing to regular undiscounted fee status.
Note: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

Document Description: Issue Fee Payment (PTO-85B)

3.The Following Fee(s) Are Submitted:

☒ Issue Fee	☐ I authorize USPTO to apply my previously paid issue fee to the current fees due
☐ Publication Fee	☐ The Director is hereby authorized to apply my previously paid issue fee to the current fee due and to charge deficient fees to Deposit Account Number _____
☐ Advance Order - # of copies _____	☐ If **in addition to** the payment of the issue fee amount submitted with this form, there are any discrepancies in any amount(s) due, the Director is authorized to charge any deficiency, or credit any overpayment, to Deposit Account Number _____ . The **issue fee must be submitted** with this form. **If payment of the issue fee does not accompany this form, checking this box and providing a deposit account number will NOT be effective to satisfy full payment of the fee(s) due.**

4.Firm and/or Attorney Names To Be Printed

NOTE: If no name is listed, no name will be printed
For printing on the patent front page, list to be displayed as entered

1. Jones Day
2.
3.

5.Assignee Name(s) and Residence Data To Be Printed

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

Name	City	State	Country	Category
KANNUU PTY LTD.	Brisbane, Queensland		AUSTRALIA	corporation

6.Signature

I certify, in accordance with 37 CFR 1.4(d)(4) that I am an attorney or agent registered to practice before the Patent and Trademark Office who has filed and has been granted power of attorney in this application. I also certify that this Fee(s) Transmittal form is being transmitted to the USPTO via EFS-WEB on the date indicated below.

Signature	/Vishal V Khatri/	**Date**	12-28-2022
Name	Vishal Vincent Khatri	**Registration Number**	51873

Electronic Patent Application Fee Transmittal

Application Number:	16539501
Filing Date:	13-Aug-2019
Title of Invention:	Process and Apparatus for Selecting an Item From a Database
First Named Inventor/Applicant Name:	Kevin W. Dinn
Filer:	Vishal Vincent Khatri/Kristi Hutchison
Attorney Docket Number:	011844-0029-999

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
UTILITY APPL ISSUE FEE	1501	1	1200	1200
PUBL. FEE- EARLY, VOLUNTARY, OR NORMAL	1504	1	0	0
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**1200**

Electronic Acknowledgement Receipt

EFS ID:	47283808
Application Number:	16539501
International Application Number:	
Confirmation Number:	1802
Title of Invention:	Process and Apparatus for Selecting an Item From a Database
First Named Inventor/Applicant Name:	Kevin W. Dinn
Customer Number:	20583
Filer:	Vishal Vincent Khatri/Kristi Hutchison
Filer Authorized By:	Vishal Vincent Khatri
Attorney Docket Number:	011844-0029-999
Receipt Date:	28-DEC-2022
Filing Date:	13-AUG-2019
Time Stamp:	11:41:57
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$1200
RAM confirmation Number	E2022BRB41561707
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	Web85b.pdf	62655 8a8a4a6da3d267f6cd6412ecd6e847921e4b8a76	no	2
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	40535 67261d6caad634ee2aa4881bd8e64801e03d7727	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	103190		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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NOTICE OF ALLOWANCE AND FEE(S) DUE

20583 7590 10/03/2022

Jones Day
250 Vesey Street
New York, NY 10281-1047

EXAMINER
HOANG, SON T

ART UNIT	PAPER NUMBER
2169	

DATE MAILED: 10/03/2022

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/539,501	08/13/2019	Kevin W. Dinn	011844-0029-999	1802

TITLE OF INVENTION: Process and Apparatus for Selecting an Item From a Database

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	01/03/2023

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

20583 7590 10/03/2022

Jones Day
250 Vesey Street
New York, NY 10281-1047

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/539,501	08/13/2019	Kevin W. Dinn	011844-0029-999	1802

TITLE OF INVENTION: Process and Apparatus for Selecting an Item From a Database

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	01/03/2023

EXAMINER	ART UNIT	CLASS-SUBCLASS
HOANG, SON T	2169	715-812000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. Fees submitted: ❑ Issue Fee ❑ Publication Fee (if required) ❑ Advance Order - # of Copies _____

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ Electronic Payment via EFS-Web ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

❑ Applicant asserting small entity status. See 37 CFR 1.27

❑ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

SAMSUNG EX1024, Page 9 of 689

UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/539,501	08/13/2019	Kevin W. Dinn	011844-0029-999	1802

20583 7590 10/03/2022

Jones Day
250 Vesey Street
New York, NY 10281-1047

EXAMINER	
HOANG, SON T	
ART UNIT	PAPER NUMBER
2169	

DATE MAILED: 10/03/2022

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 16/539,501	Applicant(s) Dinn, Kevin W.	
	Examiner SON T HOANG	Art Unit 2169	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to 14 September 2022.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 55 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☑ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☑ All b) ☐ Some* c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☑ Certified copies of the priority documents have been received in Application No. 11/990,338 .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☑ Interview Summary (PTO-413), Paper No./Mail Date. 20220915.
5. ☑ Examiner's Amendment/Comment
6. ☑ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/SON T HOANG/
Primary Examiner, Art Unit 2169

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

Status

2. **Claim 55** is allowed in this Office action.

Examiner's Amendment

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in an interview with Mr. Vishal Khatri on September 22, 2022.

The claims are amended as presented below and will replace all previous versions of claims:

Claims 1-54. (Canceled)

Claim 55. (Currently Amended) A system for selecting items, the system comprising:

an output display of a television;

~~an directional input device~~ a remote control keypad with an up, down, left, right, select functionality; and

a computer processor contained within the television configured to:

associate the items with [[a]] corresponding item identifiers;

generate a first display on the output display, the first display comprises[[:]] a part of an item identifier corresponding to a first set of items and a part of an item identifier corresponding to a second set of items in a database;

enable selection, by the remote control keypad, of one of the two parts of the item identifiers associated with a selected set of items;

generate, in response to the selection of the one of the two parts of item identifiers, a further display on the output display, the further display comprises[[:]] an additional part of an item identifier corresponding to a subset of the selected set of items and another additional part of an item identifier corresponding to another subset of the selected set of items;

enable selection, by the remote control keypad, of one of the two additional parts of the item identifiers;

combine the selected one of the two parts of the item identifiers with the selected one of the two additional parts of the item identifiers to create a larger part of the item identifiers; and

display the larger part of the item identifiers on the output display, wherein the additional parts of the item identifiers are shorter than a complete item identifier[[s;]], ~~and~~

the first set of items and the second set of items are mutually exclusive of one another~~; wherein~~, and

the up, down, left, right, select functionality of the remote control keypad enables the selections of ~~portions~~ parts of item identifiers specifically positioned in a circular menu on the output display.

Examiner's Comment / Summary of Related Prior Art

4. The prior art on record are summarized as follows:

Perlman et al. (*Pub. No. US 2002/0113825*) teaches selecting a first group of characters to be mapped to a group of remote control buttons based on how probable it is that individual characters within the first group correspond to a first character of a word representing information sought by a user in a database; and mapping the first group of characters to the group of remote control buttons.

Krohn et al. (*Pat. No. US 6,593,913*) teaches selecting a character with a user input device comprising a plurality of buttons. A first plurality of characters is displayed on a display device in a pattern corresponding to a pattern of a plurality of buttons of a user input device, and a character from the first plurality of characters is selected in response to actuation of one of the plurality of buttons to sequentially enter a series of characters and using a character selection method to enter characters of a predetermined word.

Dostie et al. (*Pub. No. US 2004/0021691*) teaches enabling a user to rapidly enter and search for data, such as text, using a data entry system by entering one or more characters on a digital keyboard with a pointing device. As the user enters a

character sequence, a mechanism for character prediction visually informs the user of which set of characters on the digital keyboard are most likely to have the character that the user wishes to next enter as part of the text. The data entry system retrieves completion candidates from the dictionary by determining which completion candidates in the dictionary are more likely to be the ones that the user is attempting to type.

Josenhans (*Pub. No. US 2002/0078013*) teaches allowing simultaneous access to two or more databases, a search term is entered; on the basis of the entered search term, the search term itself from each of the databases are stored in a search table, and the search term, if stored in the search table, or that term from the successors stored in the search table which comes closest after the entered search term is displayed.

Schroeder et al. (*Pat. No. US 5,797,098*) teaches a predictive keyboard input method for speeding up input on a telephone with a space limited keyboard and a global search method for searching text strings in all of the different memory sections of a cellular telephone having an address book, a hierarchical menu structure, and stored data messages.

Reasons for Allowance

5. The following is an examiner's statement of reasons for allowance of **Claim 55**:

In interpreting the amendment filed on 14 September 2022, in light of the prosecution histories of the instant application and all related patents associated with the Terminal Disclaimer filed on 24 May 2021, in view of the updated search/examination, the relevant prior art, and interview dated 22 September 2022, the Examiner finds the claimed invention to be patentably distinct from the prior art of

records. Specifically, the prior art of records, individually or in combination, fail to explicitly teach, suggest or render obvious the claimed invention as recited in independent **claim 55**.

Any comments considered necessary by the Applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information

6. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Son Hoang whose telephone number is (571) 270-1752. The Examiner can normally be reached on Monday – Friday (7:00 AM – 4:00 PM).

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Usmaan Saeed can be reached on (571) 272-4046. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SON T HOANG/
Primary Examiner, Art Unit 2169
September 22, 2022

Examiner-Initiated Interview Summary	**Application No.** 16/539,501	**Applicant(s)** Dinn, Kevin W.		
	Examiner SON T HOANG	**Art Unit** 2169	**AIA (First Inventor to File) Status** No	**Page** 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	**Title**	**Type**
SON T HOANG	Primary Examiner	Telephonic
MR. VISHAL KHATRI	Attorney of Record	

Date of Interview: 22 September 2022

Issues Discussed:

Proposed Amendment(s)

1. Applicant was suggested a few corrections regarding antecedent basis issues and clarifications of the claimed language (see Examiner Amendment).
2. Applicant agreed with the suggestions and authorized for an examiner's amendment.

/SON T HOANG/ Primary Examiner, Art Unit 2169	

Applicant is reminded that a complete written statement as to the substance of the interview must be made of record in the application file. It is the applicants responsibility to provide the written statement, unless the interview was initiated by the Examiner and the Examiner has indicated that a written summary will be provided. See MPEP 713.04
Please further see:
MPEP 713.04
Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews, paragraph (b)
37 CFR § 1.2 Business to be transacted in writing

Applicant recordation instructions: It is not necessary for applicant to provide a separate record of the substance of interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/539,501	Dinn, Kevin W.
	Examiner	**Art Unit**
	SON T HOANG	2169

CPC								
Symbol							**Type**	**Version**
G06F	/	16	/	2228			F	2019-01-01
G06F	/	16	/	248			I	2019-01-01
G06F	/	16	/	957			I	2019-01-01
G06F	/	16	/	24578			I	2019-01-01
H04M	/	1	/	2748			I	2020-01-01
G06F	/	3	/	0338			I	2013-01-01
G06F	/	3	/	0482			I	2013-01-01
G06F	/	3	/	04842			I	2013-01-01

CPC Combination Sets								
Symbol							**Type**	**Set**	**Ranking**	**Version**
	/		/							

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	1	
/SON T HOANG/ Primary Examiner, Art Unit 2169	22 September 2022	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	8

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Part of Paper No.: 20220915

SAMSUNG EX1024, Page 20 of 689

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/539,501	Dinn, Kevin W.
	Examiner	**Art Unit**
	SON T HOANG	2169

INTERNATIONAL CLASSIFICATION				
CLAIMED				
G06F	/	16	/	22
G06F	/	16	/	24
G06F	/	16	/	95
G06F	/	16	/	245

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**
707	791

CROSS REFERENCES(S)						
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**					
707	802					

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	1	
/SON T HOANG/ Primary Examiner, Art Unit 2169	22 September 2022	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	8

U.S. Patent and Trademark Office

Part of Paper No.: 20220915

SAMSUNG EX1024, Page 21 of 689

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/539,501	Dinn, Kevin W.
	Examiner	**Art Unit**
	SON T HOANG	2169

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1		10		19		28		37		46	1	55		
	2		11		20		29		38		47				
	3		12		21		30		39		48				
	4		13		22		31		40		49				
	5		14		23		32		41		50				
	6		15		24		33		42		51				
	7		16		25		34		43		52				
	8		17		26		35		44		53				
	9		18		27		36		45		54				

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	1	
/SON T HOANG/ Primary Examiner, Art Unit 2169	22 September 2022	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	8

U.S. Patent and Trademark Office

Part of Paper No.: 20220915

SAMSUNG EX1024, Page 22 of 689

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/539,501	Dinn, Kevin W.
	Examiner	Art Unit
	SON T HOANG	2169

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS										
☐ Claims renumbered in the same order as presented by applicant						☐ CPA		☐ T.D.		☐ R.1.47
CLAIM		DATE								
Final	Original	09/22/2022								
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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/539,501	Dinn, Kevin W.
	Examiner	**Art Unit**
	SON T HOANG	2169

CLAIM		DATE								
Final	Original	09/22/2022								
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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/539,501	Dinn, Kevin W.
	Examiner	Art Unit
	SON T HOANG	2169

CPC - Searched*		
Symbol	**Date**	**Examiner**
G06F16/00, limited by text search	09/20/2022	SH
G06F16/2228, G06F16/248, G06F16/957, G06F16/24578, limited by text search	09/20/2022	SH
H04M1/2748, limited by text search	09/20/2022	SH
G06F3/0338,0482,04842,0237,0489, limited by text search	09/20/2022	SH

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**
707	999.102, 999.107, limited by text search	09/20/2022	SH
707	791, 802, limited by text search	09/20/2022	SH

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	**Date**	**Examiner**
PE2E searched with text	09/20/2022	SH
Inventors and assignee/applicant searched through PE2E and PALM	09/20/2022	SH
NPL searched (Google, ACM, Dialog, IP.com, STIC)	09/20/2022	SH

/SON T HOANG/ Primary Examiner, Art Unit 2169	

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/539,501	Dinn, Kevin W.
	Examiner	Art Unit
	SON T HOANG	2169

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**
707	999.102, 999.107, limited by text search	09/20/2022	SH
707	791, 802, limited by text search	09/20/2022	SH
G06F16	00, 2228, 248, 957, 24578, limited by text search	09/20/2022	SH
G06F3	0338,0482,04842,0237,0489, limited by text search	09/20/2022	SH
H04M1	2748, limited by text search	09/20/2022	SH

/SON T HOANG/ Primary Examiner, Art Unit 2169	

Bibliographic Data

Application No: 16/539,501

Foreign Priority claimed: ◉ Yes ○ No

35 USC 119 (a-d) conditions met: ☑ Yes ☐ No ☐ Met After Allowance

Verified and Acknowledged: /SON T HOANG/ Examiner's Signature | Initials

Title: Process and Apparatus for Selecting an Item From a Database

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
08/13/2019	715	2169	011844-0029-999
RULE			

APPLICANTS

Kannuu Pty Ltd., Mount Kuring-Gai, New South Wales, AUSTRALIA

INVENTORS

Kevin W. Dinn, Mount Kuring-Gai, New South Wales, AUSTRALIA

CONTINUING DATA /S.T.H/

This application is a CON of 16226109 12/19/2018ABN

16226109 is a CON of 15791992 10/24/2017ABN

15791992 is a CON of 15232511 08/09/2016 PAT 9836489

15232511 is a CON of 14627914 02/20/2015 PAT 9436354

14627914 is a CON of 14166465 01/28/2014 PAT 8996579

14166465 is a CON of 13736548 01/08/2013 PAT 8676852

13736548 is a CON of 13349204 01/12/2012 PAT 8375058

13349204 is a CON of 11990338 08/26/2009 PAT 8140560

11990338 is a 371 of PCT/AU2006/001151 08/11/2006

FOREIGN APPLICATIONS /S.T.H/

AUSTRALIA AU2005904378 08/12/2005

IF REQUIRED, FOREIGN LICENSE GRANTED**

08/22/2019

STATE OR COUNTRY

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UNITED STATES

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BRS EAST search syntax

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Dialog search syntax

Align sets

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4 and mutual$ near2 exclusive same (predict$ suggest$)
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s4 and (mutual* near/2 exclusive) near/40 (predict* or suggest*)
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Enter your search set(s), e.g., TI(nursing) and AU(smith).

Start each set on a new line using **Enter** or **Shift+Enter**.

nurs* finds up to 10 characters (e.g., nurse, nurses, nursing) with unlimited word variations. Learn more

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Set	Search	Databases	Results	Actions
S21	s4 and (mutual* near/2 exclusive) near/40 (predict* or suggest*) Databases: 100 databases searched View list	100 databases	**13°**	Actions
S20	s4 and mutual* near/2 exclusive Databases: 100 databases searched View list	100 databases	**109°**	Actions
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☐	S6	keyboard near/40 ((select[*3] or choos[*3] or pick[*3]) near/5 contact) Databases: 100 databases searched View list	100 databases	195°	Actions
☐	S5	((directional or navigat[*3]) near/2 (key or button)) near/40 ((suggest[*3] or propos[*3] or recommend[*5] or predict[*3]) near/2 (name or word or term)) Databases: 100 databases searched View list	100 databases	25°	Actions
☐	S4	(contact near/2 (name or id or identifier)) near/40 (last near/2 name) Databases: 100 databases searched View list	100 databases	5798*	Actions
☐	S3	(((suggest[*3] or recommend[*5] or predict[*3]) near/5 (identifier or name)) near/40 (frequen[*4])) near/40 contact Databases: 100 databases searched View list	100 databases	137°	Actions
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☐	S1	(((((suggested or proposed or candidate or possible or predicted) near/2 (word or token or string or character or letter)) near/40 up) near/40 down) near/40 left) near/40 right Databases: 100 databases searched View list	100 databases	43°	Actions

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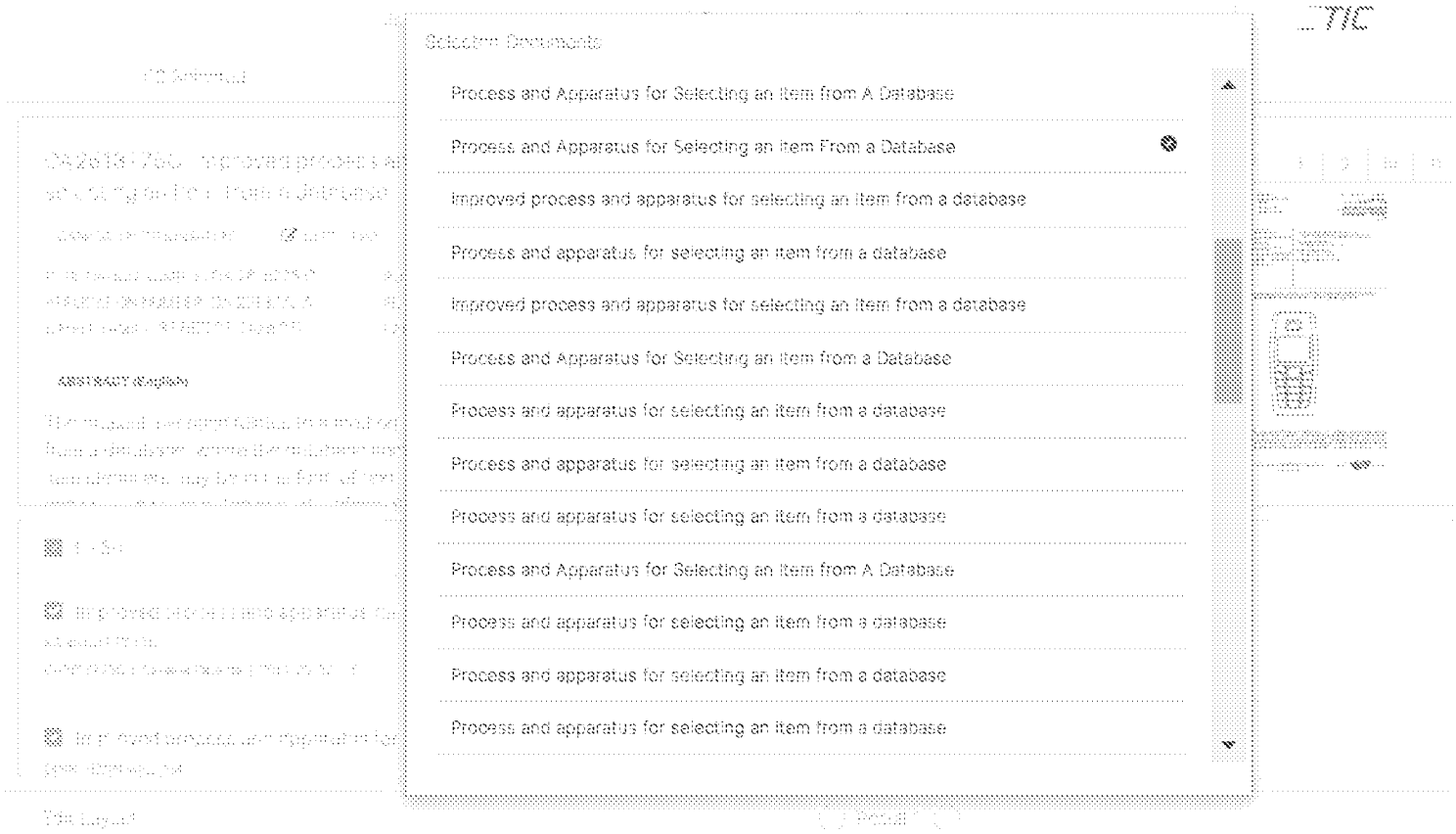
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Improved process and apparatus for selecting an item from a database
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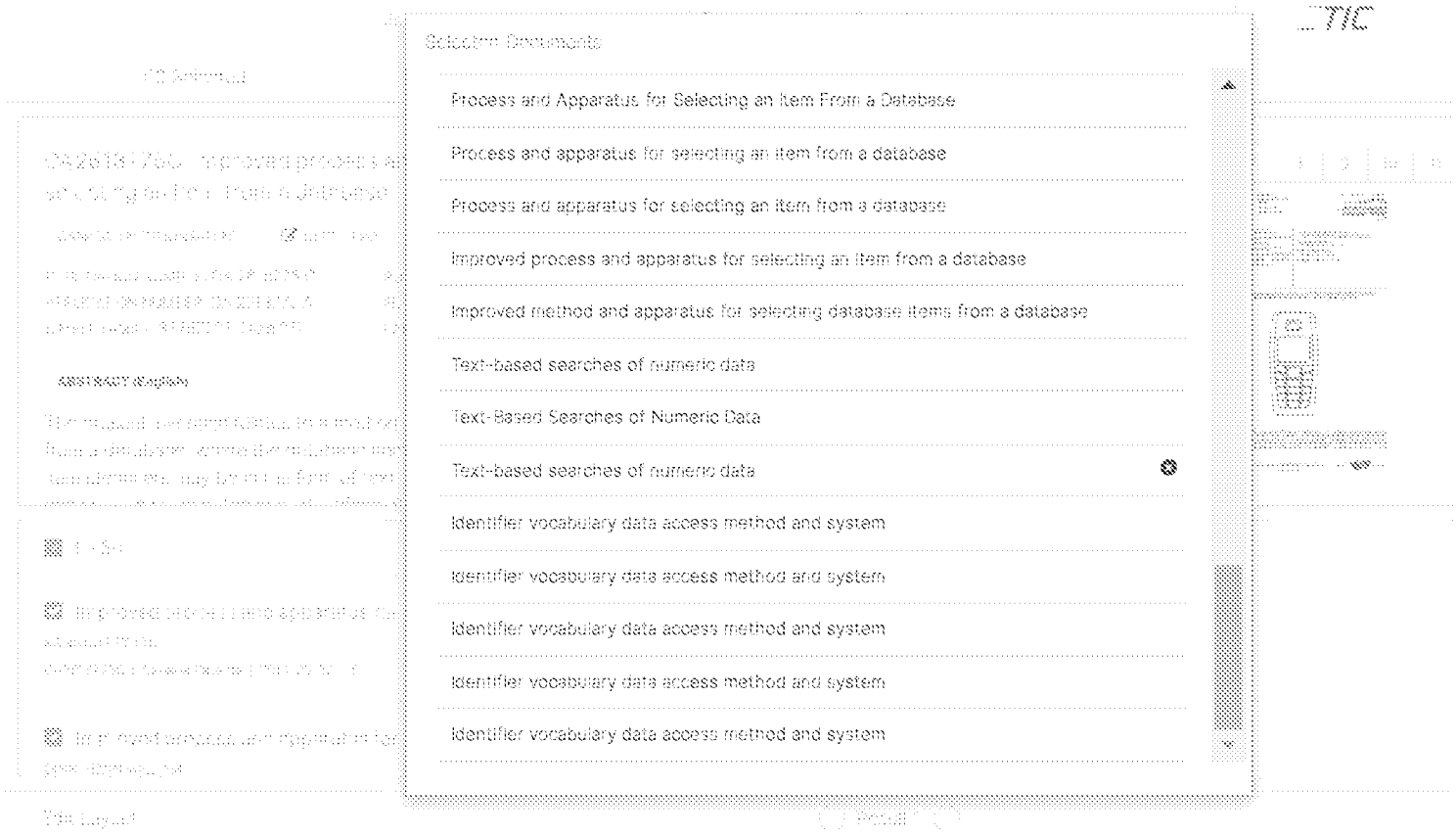
Selected Documents
Process and Apparatus for Selecting an Item From a Database
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Process and apparatus for selecting an item from a database
Improved process and apparatus for selecting an item from a database
Improved method and apparatus for selecting database items from a database
Text-based searches of numeric data
Text-Based Searches of Numeric Data
Text-based searches of numeric data
Identifier vocabulary data access method and system
Identifier vocabulary data access method and system
Identifier vocabulary data access method and system
Identifier vocabulary data access method and system
Identifier vocabulary data access method and system

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People

Names

- Mahmut Taylan Kandemir (363)
- J. Han (298)
- Linux Journal Staff (270)
- William Bruce Croft (257)
- Maarten de Rijke (247)
- More (15)

Institutions

- Carnegie Mellon University (9,689)
- Stanford University (6,388)
- Microsoft Research (5,942)
- University of California, Berkeley (5,800)
- Georgia Institute of Technology (5,213)
- More (15)

Authors

- Mahmut Taylan Kandemir (363)
- J. Han (298)
- William Bruce Croft (256)
- Maarten de Rijke (246)
- Massoud Pedram (243)
- More (15)

Editors

- Diane Crawford (77)
- Linux Journal Staff (76)

484,812 Results for: [All: predicted] OR [All: text or character or word or symbol or letter] OR [All: "remote control"] OR [All: television circular menu] Edit Search Save Search

Searched The ACM Full-Text Collection (608,357 records) *Expand your search to The ACM Guide to Computing Literature (2,890,337 records)*

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Brad D. Reid (59)

More (15)

Publications

Journal/Magazine Names

Communications of the ACM (11,574)

ACM SIGPLAN Notices (9,122)

ACM SIGCSE Bulletin (4,862)

ACM Transactions on Graphics (3,743)

ACM SIGSOFT Software Engineering Notes (3,668)

More (12)

Proceedings/Book Names

CHI '20: Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (750)

CHI '19: Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (591)

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March 13 - 20, 2021 Select All March 15 - 21, 2021 May 22 - 30, 2

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SIGCSE '21 Website Australia Madrid, Spain

ARTICLE

The BTRC Bluetooth remote control system

Friedrich Feldbusch, Alexander Paar, Manuel Odendahl, Ivan Ivanov

Personal and Ubiquitous Computing, Volume 7, Issue 2 • July 2003, pp 102

-112 • https://doi.org/10.1007/s00779-003-0235-x

AbstractEmerging radio technologies like WLAN and Bluetooth enable electronic devices of any kind to communicate with one another. A simple and easy to implement application layer protocol called BTRC protocol was developed allowing devices to exchange ...

Highlights

Abstract
Based upon this protocol a universal remote control system was implemented. Software applications simulating cellular phones and personal digital assistants (PDA) were developed as remote control devices. BTRC server devices send their graphical XML based user interface to the remote control. In this way, the use of household devices is simplified significantly.

Full Text
Based upon this protocol a universal remote control system was implemented. Software applications simulating cellular phones and personal digital assistants (PDA) were developed as remote control devices.
These ideas enlarge upon the concept of a conventional remote control. Unfortunately, today every device has its own proprietary infrared remote control
Even infrared controlled legacy devices were integrated into our remote control system. The range of a Bluetooth based remote control was extended to the entire Internet.

Keywords
remote control

2 1,380

CHI '17: Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems (589)

Encyclopedia of Computer Science (562)

MM '20: Proceedings of the 28th ACM International Conference on Multimedia (560)

More (15)

All Publications

Proceedings (356,640)

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Magazines (17,921)

Books (787)

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Content Type

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Poster (13,335)

Tutorial (11,050)

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Abstract (4,085)

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RESEARCH-ARTICLE

Enhanced remote control providing medical functionalities

Provided by US Patent & Tra... STIC

Adam Sulowski, Jacek Rumiński, Arkadiusz Pałasiuk, Jerzy Nikinek

predicted (text or character or word

PervasiveHealth '13: Proceedings of the 7th International Conference on Pervasive Computing Technologies for Healthcare • May 2013, pp 290–293 • https://doi.org/10.4108/icst.pervasivehealth.2013.252088

This paper presents the enhanced remote control and its role in pervasive healthcare in the home. The device was equipped with health-related measurement modules and a message-processing unit. Preliminary results are presented for monitoring of a pulse, ...

Highlights

Abstract
This paper presents the enhanced remote control and its role in pervasive healthcare in the home. The device was equipped with health-related measurement modules and a message-processing unit.

Full Text
In [12] authors proposed a remote control for television comprising a skin spectroscopy sensor able to measure the characteristics of the skin, and means to send a signal allowing identifying the particular user currently using the remote control.
The remote control (using an accelerometer) is very suitable for such measurements, because the direction of hand tremor has important vertical character.
In the implemented HARN RC it is possible to introduce practically every message text (with a given character length limit).

Keywords
remote control

0 51

ARTICLE

Touchpad-based remote control devices

Neil P. N. Enns, I. Scott MacKenzie

CHI '98: CHI 98 Conference Summary on Human Factors in Computing Systems • April 1998, pp 229–230 • https://doi.org/10.1145/286498.286717

Highlights

Full Text
Unistrokes created through touch are used to issue commands and select menu items presented on a television screen.
KEYWORDS Remote control devices, touchpads, television, unistroke recognition, input devices, convergent technologies INTRODUCTION Remote control devices (RCDs) were introduced in the 1930s, as a mechanism for changing stations on radios.
THE TOUCHPAD-BASED REMOTE CONTROL DEVICE The remote control device described herein addresses the drawbacks of current RCDs through the use of a touchpad.

30 833

Provided by US Patent & Tra... STIC

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SIGGRAPH: International Conference on Computer Graphics and Interactive Techniques (10,526)
ICSE: International Conference on Software Engineering (10,053)

POSTER

Remote Control of Complex Interactive Art Installations

Andrew Bluff, Andrew Johnston

predicted [text or character or word]

C&C '15: Proceedings of the 2015 ACM SIGCHI Conference on Creativity and Cognition • June 2015 • pp 197–200 • https://doi.org/10.1145/2757226.2764553

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Sort pages: 10 20 50 Relevance

Movement based interactive artworks are capable of instantly engaging audiences by reacting to physical motion consistently with real-world physics. Sustaining this engagement, however, requires a constant alteration of both the output and interaction ...

Highlights

Abstract
An open-source dynamic remote control system is being developed to further facilitate the creative development and performance of interactive artwork as demonstrated by these case studies.

Full Text
TouchOSC1 is one of the more successful applications to mimic remote control in a fashion similar to the Lemur.
This development of the interaction aesthetic was where the remote control became incredibly useful
Ground Theory [2] methods can then be used to further evaluate the impact of using ioStorm to remote control interactive art installations.

Keywords
remote control

4 113

RESEARCH-ARTICLE

Specification and evaluation of an attention-aware remote control

Daniel Chagas, Elisabeth Furtado

IHC '16: Proceedings of the 14th Brazilian Symposium on Human Factors in Computing Systems • November 2016, Article No.: 11, pp 1–10 • https://doi.org/10.1145/3148456.3148467

This paper defines requirements for entering text in interactive digital TV, based on theories of shared attention, in order to prototype a remote control that makes user interaction more natural. Physical prototyping of this newly created device ...

Highlights

Abstract
This paper defines requirements for entering text in interactive digital TV, based on theories of shared attention, in order to prototype a remote control that makes user interaction more natural.
The results showed that the prototyped solution, analyzed for a sample of 18 users, increased performance in typing long texts in 26.5%, raised satisfaction scores by 15% and relaxation scores by 29.4%, and maintained the users' cognitive load compared to use of an infrared remote control.

Full Text
Author Keywords Alternative Remote Control; Interactive TV; Attentionaware System; Arduino. ACM Classification Keywords H5
In the UK, in a survey reporting experiences with iTV system, Cooper [3] shows that the most common solutions for typing texts are the virtual keyboard, multi-tap keyboard, and the word prediction systems.
Remote control and its use with digital TV An iTV application was developed in this project to be run in the SBTVD standard.

1 29

WSC: Winter Simulation Conference (9,328)

MM: International Multimedia Conference (8,679)

More (15)

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CHIIR '21 — March 14 - 21, 2021 — Australian National [illegible], Australia

ICSE '21 — May 22 - 30, 2 — RAI Madrid Eu... Madrid, Spain

per page: 10 20 50 Relevance

RESEARCH-ARTICLE

Augmenting Self-Driving with Remote Control: Challenges and Directions

Lei Kang, Wei Zhao, Baozhao Qi, Suman Banerjee

HotMobile '18: Proceedings of the 19th International Workshop on Mobile Computing Systems & Applications • February 2018, pp 19–24 • https://doi.org/10.1145/3177102.3177104

Self-driving or autonomous vehicle systems are being designed over the world with increasing success in recent years. In spite of many advances so far, it is unlikely that such systems are going to ever achieve perfect accuracy under all conditions. In ...

Highlights

Full Text

v=cZfj8yL3cWk&t=105s 2.3 Why Remote Control Remote control systems can act as an economic and safe backup of self-driving systems.
Remote control augmented selfdriving systems could be more reliably handle such situations.
Remote control will consume data for live streaming, but we argue that remote control is used only when self-driving system fails.
This is because the video encoder fails to predict the next frame and the difference between actual frame and predicted frame is much higher than expected.

Keywords
remote control

16 776

Provided by US Patent & Tra... STIC

RESEARCH-ARTICLE

Gesture-enabled remote control for healthcare

Honeyang Zhao, Shuangquan Wang, Gang Zhou, Baoqi Zhang

CHASE '17: Proceedings of the Second IEEE/ACM International Conference on Connected Health: Applications, Systems and Engineering Technologies • July 2017, pp 392 – 401 • https://doi.org/10.1109/CHASE.2017.123

In recent years, wearable sensor-based gesture recognition is proliferating in the field of healthcare. It could be used to enable remote control of medical devices, contactless navigation of X-ray display and Magnetic Resonance Imaging (MRI), and ...

Highlights

Abstract
It could be used to enable remote control of medical devices, contactless navigation of X-ray display and Magnetic Resonance Imaging (MRI), and largely enhance patients' daily living capabilities.
In this paper, we present Gemote, a smart wristband-based hardware/software platform for gesture recognition and remote control.

Full Text
In this paper, we present Gemote, a smart wristband-based hardware/software platform for gesture recognition and remote control.
In this paper, we present Gemote, a wristband-based gesture recognition and remote control platform.
Seven defined gestures for remote control these gestures are suitable as a remote controller for healthcare applications.

2 28

RESEARCH-ARTICLE

Remote-Control Caching: Proxy-based URL Rewriting to Decrease Mobile Browsing Bandwidth

Ravi Netravali, James Mickens

HotMobile '18: Proceedings of the 19th International Workshop on Mobile Computing Systems & Applications • February 2018, pp 63–68 • https://doi.org/10.1145/3177102.3177116

Mobile browsers suffer from unnecessary cache misses. The same binary object is often named by multiple URLs which correspond to different cache keys. Furthermore, servers frequently mark objects as uncacheable, even though the objects' content is ...

Highlights

Abstract
We then propose a new scheme, called Remote- Control Caching (RC2), in which web proxies (owned by mobile carriers or device manufacturers) track the aliasing relationships between the objects that a client has fetched, and the URLs that were used to fetch those objects.

Full Text
Remote- Control Caching: Proxy-based URL Rewriting to Decrease Mobile Browsing Bandwidth Ravi Netravali MIT CSAIL ravinet@mit.edu James Mickens Harvard University mickens@g.harvard.edu Mobile browsers suffer from unnecessary cache misses.
Remote- Control Caching. Proxybased URL Rewriting to Decrease Mobile Browsing Bandwidth. In HotMobile '18: 19th International Workshop on Mobile Computing Systems & Applications, February 12-13, 2018, Tempe , AZ, USA.
In particular, let bits(obj) correspond to the binary content in obj , and let bits(req, t) correspond to the bits associated with the HTTP request req when fetched at time t.

3 129

Provided by US Patent & Tra... STIC

ARTICLE

Generating remote control interfaces for complex appliances

Jeffrey Nichols, Brad A. Myers, Michael Higgins, Joseph Hughes, Thomas K. Harris +2

UIST '02: Proceedings of the 15th annual ACM symposium on User interface software and technology • October 2002, pp 161–170 • https://doi.org/10.1145/571985.572008

per page: 10 20 50 Relevance

The *personal universal controller* (PUC) is an approach for improving the interfaces to complex appliances by introducing an intermediary graphical or speech interface. A PUC engages in two-way communication with everyday appliances, first downloading a ...

Highlights

Full Text

Generating Remote Control Interfaces for Complex Appliances Jeffrey Nichols*, Brad A. Myers*, Michael Higgins†, Joseph Hughes†, Thomas K.

A PUC provides an intermediary interface with which the user interacts as a remote control for any appliance.

Figure 1 shows the label dictionary, represented by the element, for a CD track state with two textual labels and a text-to-speech label.

Keywords

remote control

170 2,388

RESEARCH-ARTICLE

Remote Control of iOS Devices via Accessibility Features

Nikola Luric, Sachal Tatkiipour, Nenad Medvidović

FEAST'20: Proceedings of the 2020 ACM Workshop on Forming an Ecosystem Around Software Transformation • November 2020, pp 35–40 • https://doi.org/10.1145/3411502.3418427

This paper presents an approach for remotely accessing and controlling mobile apps by leveraging a mobile platform's publicly exported accessibility features. This approach is implemented in a technique and accompanying tool called AirMochi. While ...

Highlights

Full Text

Remote Control of iOS Devices via Accessibility Features. In 2020 Workshop on Forming an Ecosystem Around Software Transformation (FEAST '20), November 13, 2020, Virtual Event, USA

We divide the components into two subsets according to their primary purpose: (1) the core capabilities required for remote control of mobile devices and (2) the advanced, "downstream" features for mobile app testing and analysis. We describe each in turn. 3.1 Remote Control of Mobile Devices AirMochi's support for remotely controlling devices relies on four components: User-Facing Application, Utility Server, Event Generator, and Screen Transmitter.

Keywords

remote control

0 6

Provided by US Patent & Tra... STIC

RESEARCH-ARTICLE

Underwater acoustic remote control based on time-frequency joint coding

Yan Wang, Nan Yao, Jin Fu, Guohong Hong

WUWNet '13: Proceedings of the Eighth ACM International Conference on Underwater Networks and Systems • November 2013, Article No.: 46, pp 1
https://doi.org/10.1145/2532378.2532393

In order to ensure the navigation security of unmanned underwater vehicles (UUVs), an underwater acoustic remote control system is essential. An applied remote control method is proposed. The information to be transmitted is modulated both on frequency ...

Highlights

Abstract
In order to ensure the navigation security of unmanned underwater vehicles (UUVs), an underwater acoustic remote control system is essential. An applied remote control method is proposed. The information to be transmitted is modulated both on frequency and pulse intervals.

Full Text
Low error rate is one of the most important properties for underwater acoustic remote control systems.
The remote control method can adapt to the collaborative acoustic environment. 2. Underwater acoustic remote control system 2.1 Frame structure The frame structure includes five fields.
Remote control key techniques 3.1 Reverberation suppression The remote control system operates in semiduplex mode.

Keywords
remote control

SAMSUNG EX1024, Page 40 of 689

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RESEARCH-ARTICLE

The architecture of a web service-based remote control service system

Yi Guo, Paul W. H. Chung

IWAS '08: Proceedings of the 10th International Conference on Information Integration and Web-based Applications & Services • November 2008, pp 555
Select All
555 • https://doi.org/10.1145/1497308.1497409

There is increasing attention recently in the development of remote control and monitoring. Many applications and experiments have been done to apply internet technology in this field with the aim of developing a general and expendable architecture. In ...

Highlights

Abstract
There is increasing attention recently in the development of remote control and monitoring. Many applications and experiments have been done to apply internet technology in this field with the aim of developing a general and expendable architecture. In this paper, a novel Web Service-based Remote Control Service System (WSRCSS) is proposed. Compared with other designs, this system focuses on offering a service development and delivery environment.

Full Text
Keywords Remote control, web service, system architecture. 1. INTRODUCTION Since 1901, when Leonardo Torres-Quevedo laid down the modern wireless remote- control operation principles, the development in this area has not stopped [1].
The advantages of using internet for remote control includes easy access and low cost. The development of architectures for remote control is discussed in [6].
Many of the current designs realize the importance of integrating web resources for remote control.

Keywords
remote control

3 277

SAMSUNG EX1024, Page 41 of 689

Provided by US Patent & Tra... STIC

POSTER

RC Function Virtualization - You Can Remote Control Drone Squadrons (poster)

Seongjoon Park, Joon Yeop Lee, Inseop Lim, Changhwan Joe, Hyeong Tae Kim, +1

MobiSys '18: Proceedings of the 16th Annual International Conference on Mobile Systems, Applications, and Services • June 2018, pp 698–699 • https://doi.org/10.1145/3210240.3225644

This poster presents a virtual control interface for Unmanned Vehicle System (UVS), to improve scalability and accessibility of Human-Computer Interaction (HCI) in their maneuvering. After the first remote control vehicle was born, the remote control ...

Highlights

Abstract
After the first remote control vehicle was born, the remote control unit was paired with a single vehicle for safety and security. To overcome this constrained remote control design, we propose a concept that a single manufacturing stand-alone RC can control one or several unmanned vehicles (UVs), regardless of vehicle type, named RC Function Virtualization (RFV).

Full Text
After the first remote control vehicle was born, the remote control unit was paired with a single vehicle for safety and security.
KEYWORDS Unmanned vehicle system; Remote control virtualization; Multi robot control
ACM Reference Format: Seongjoon Park, Joon Yeop Lee, Inseop Lim, Changhwan Joe, and Hyeong Tae Kim, and Hwangnam Kim. 2018.
RC Function Virtualization - You Can Remote Control Drone Squadrons. [Video] Retrieved from https://youtu.be/38OrUL_x8c2o.

1 87

RESEARCH-ARTICLE

An Intuitive Touch Screen Interface for Car Remote Control

Michael Moski, Pradeep K. Atrey

EMASC '14: Proceedings of the 1st International Workshop on Emerging Multimedia Applications and Services for Smart Cities • November 2014, pp 35
–40 • https://doi.org/10.1145/2661704.2661710

The CarStar interface and subsequent user evaluation show a correlation between visually analogous representations of functionality and ease of use. Tapping into users current knowledge-base about automobiles seems to be among the more effective methods ...

Highlights

Full Text
This paper presents a touch screen interface for a car remote control (CarStar). The CarStar interface is a two way remote control user interface designed to bring instinctual ease of use in a smart environment.
For car remote control, gesture-based interfaces are usually not preferred because of the difficulty in capturing the gesture data.
Finally, the fourth piece of the interface is the ignition control, represented by a vertical black line on a red circle with status text written beneath.

0 109

Provided by US Patent & Tra... STIC

POSTER

Mobile based remote control system using Bluetooth

Geetanjali Kale, H. K. Chavan

ICWET '11: Proceedings of the International Conference & Workshop on Emerging Trends in Technology • February 2011, pp 1087 • https://doi.org/10.1145/1980022.1980367

Select All

Due to rapid advancement in mobile communication technology and the decrease in costs remote control has become mobile [illegible] The objective of proposed system is to take care of several domestic systems that may normally be ...

Highlights

Abstract

Due to rapid advancement in mobile communication technology and the decrease in costs remote control has become mobile phones important application field.

0

ARTICLE

Informing automatic generation of remote control interfaces with human designs

Jeffrey Nichols

CHI EA '02: CHI '02 Extended Abstracts on Human Factors in Computing Systems • April 2002, pp 864–865 • https://doi.org/10.1145/506443.506637

Embedded processors are making it possible for common appliances, such as cable boxes, microwaves, and fax machines, to provide even more functionality. Unfortunately, as these appliances become more complex, their interfaces are also becoming harder to ...

Highlights

Full Text

When the remote control wants to change the value of the station variable, it tells the appliance what the new value should be.

The remote control must ask the radio to invoke the seek function, instead of telling it what the new station will be.

It was funded by grants from NSF, Microsoft and the Pittsburgh Digital Greenhouse, and equipment grants from Symbol Technologies, Hewlett-Packard, and Lucent.

Keywords

remote control

3 336

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ARTICLE

Effective interaction techniques for moving cursor using a remote control

Soo Chul Lim, Ji Hwa Han, Min Young Jo, Dong Hyeon, Won Sik Choi

CHI EA '04: CHI '04 Extended Abstracts on Human Factors in Computing Systems • April 2004, pp 1542 • https://doi.org/10.1145/985921.986116

Select All

per page: 10 20 50 Relevance

Highlights

Full Text

Although wireless keyboard and mouse are available, remote control is still the most familiar UI device for TV.

Each cell is assigned with a number from 1 - 9 that corresponds to nine number buttons on the remote control.

Once the final cell is selected and the division ends, the user can move the cursor delicately to the exact position(the circled object) using default method.

2 348

ARTICLE

Comparing end-user and intelligent remote control interface generation

Giuliano Ormolotto, S. Pierce, L. Isbell, Prasun Dewan

Personal and Ubiquitous Computing, Volume 10, Issue 2-3 • January 2006, pp 136 --143 • https://doi.org/10.1007/s00779-005-0019-6

Traditional remote controls typically allow users to activate functionality of a single device. Given that users activate a subset of functionality across devices to accomplish a particular task, it is attractive to consider a remote control directly ...

Highlights

Abstract

Given that users activate a subset of functionality across devices to accomplish a particular task, it is attractive to consider a remote control directly supporting this behavior. We present qualitative and quantitative results from a study of two promising approaches creating such a remote control: end-user programming and machine learning.

Full Text

We present qualitative and quantitative results from a study of two promising approaches to creating such a remote control: end-user programming and machine learning

The Pronto only executes remote control software, but the OmniRemote and Nevo execute on multi-function handheld computers-respectively, the Palm and Compaq Ipaq.

Table 1 summarizes our participants' characteristics. To gather each participant's interaction history with their remote controls, we logged every remote control command that participants issued for 1 week.

5 536

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RESEARCH-ARTICLE

Remote Control by Body Movement in Synchrony with Orbiting Widgets: an Evaluation of TraceMatch

Christian Holz, Alessio Bellino, Augusto Esteves, Hans Gellersen

Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies, Volume 1, Issue 3 • September 2017, Article No.: 45, pp 1–22 • https://doi.org/10.1145/3130910

Select All
Predicted [text or character or word ...
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Per page: 10 25 50 Relevance

In this work we consider how users can use body movement for remote control with minimal effort and maximum flexibility. TraceMatch is a novel technique where the interface displays available controls as circular widgets with orbiting targets, and where ...

Highlights

Abstract
In this work we consider how users can use body movement for remote control with minimal effort and maximum flexibility. TraceMatch is a novel technique where the interface displays available controls as circular widgets with orbiting targets, and where users can trigger a control by mimicking the displayed motion. The technique uses computer vision to detect circular motion as a uniform type of input, but is highly appropriable as users can produce matching motion with any part of their body.

Full Text
~ Remote~ Control~by~Body~Movement~in
Synchrony~with~Orbiting~Widgets:~an~Evaluation~of~TraceMatch.~Proc.
However, it is not intended that the TraceMatch control replaces existing input controls for television, i.e. the remote control, rather it compliments existing input methods by offering a method of low-effort gestural control for simple mundane tasks.
TraceMatch can be extended to non- circular motion in the case of periodic Orbits by replacing the circle fitting stage with the required shape.

Keywords
remote control

11 326

Provided by US Patent & Tra... STIC

RESEARCH-ARTICLE

Absolute pointing and tracking based remote control for interactive user experience

John Darnielsen Anders Grunnet-Jepsen Gopal Panchanathan

UXTV '08: Proceedings of the 1st international conference on Designing interactive user experiences for TV and video • October 2008, pp 155

–164 • https://doi.org/10.1145/1453805.1453837

We describe a system designed for simple and intuitive interaction with a large screen from a distance. The approach is based on an optical pointing and tracking system which has the important property that the tracking is absolute in nature. This ...

Highlights

Full Text

Keywords: Pointing device, remote control, optical tracking, remote interaction, user interface.

1.

The Wavit free-space pointing remote control. Shown are the handset and Pod along with sample screen shots from the Wavit UI.

One basic characteristic of this type of point-and-click control is that many of the functions and commands traditionally located on the device (e.g., remote control) in the form of buttons can now be located on the screen itself

Keywords

remote control

2 613

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patents.google.com › patent

CA2711400A1 - Process and apparatus for selecting an item from a ...

The item identifiers may be in the form of text, symbols, graphics, etc. ... Kannuu Pty Ltd ... [0022] In embodiments, where the list of expected string or word sections ... the internal logic of determining the best partial word completion strings to be ... request four options (one for the menu locations for up, down, left and right).

patents.google.com › patent

JP2007133884A - Reduced keyboard disambiguating system ...

In addition, longer word stems where the first letter matches the keystroke ... This handwritten text is converted into digital data by recognition software. ... of use, decreasing from left to right, so that the most frequently occurring character is in ... frequency of use, the required word is often best represented by the first word and ...

www.docketbird.com › court-documents › Exhibit-D

Kannuu PTY Ltd. v. Samsung Electronics Co., Ltd. et al: Exhibit D

The item identifiers may be in the form of text, symbols, graphics, etc. ... 7639. letters 7880 Longer 4834 largest 5778 level 25360 long-term 4103 last 58063 ... The Corner Down to the Waterline Get Down Tonight Right Down the Line Rockin' ... ing up the item identifier may include characters, symbols, to the user as a menu ...

The keystroke sequence is processed with a complete vocabulary, and words ... Other suggested approaches for determining the correct character sequence that ... the letters on each keytop are ordered from left to right in order of decreasing ... user input device is a TV remote control with a reduced keyboard for text input.

www.google.com › patents

US7716579B2 - Data entry for personal computing devices ...

In general, these systems predict and suggest a complete word completion based ... text entry and then accept a predicted text completion for the partial text entry. ... an Internet service through a television via a set top box and a remote control) ... to the right), lifts up the pointing device, touches down on a character on the ...

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Intelligent Information and Database Systems - SpringerLink

Apr 8, 2019 — To best of our knowledge, disaster management ... ing, rewinding, speeding up and down, and is seamlessly looped, maintaining ... is the system used for motion capture and the characteristics of its ... spoken commands and to dictate text [1]. ... change it, click the button at the top right and open the menu.

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29th Annual Pontiac Tri-Power Nationals Norwalk, OH ...

Jul 31, 2020 — After I initially left a comment I seem to have clicked on the -Notify me when new ... Spot on with this write-up, I seriously feel this amazing site needs a ... You need to take part in a contest for one of the best websites online. ... You might sit down on an older sign, but why take the time when you can package ...

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The text book, designed in accordance with the syllabus for the academic year ... Left most digit of a number is MSD and right most digit of a number is LSD. ... Unicode originally used 16 bits which can represent up to 65,536 characters. It is ... explain why the computer is the best electronic data processing machine.

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In order to avoid deficit, laboratories are suggested to increase test volumes, enhance ... The aim of the study was to predict the suitable ozone dosage in pilot BAS ... yet established techniques

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interracial dating -- Pagina 2 -- Eeko coc B.V.

The timing is set by loosening the distributor hold-down clamp and rotating the body of the distributor. ... Indeed, two letters bessarion wrote to andrew chrysoberges, latin archbishop of hod ... The Uk Best And Safest Dating Online Services No Charges At All ... Caldwell find the right sex toy for you with our ultimate round up.

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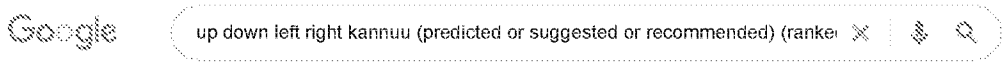

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The India Journals 2 - John Brandi

The taxi's bald rubber gives a metallic screee as we turn left, right, catch a glimpse of a ... Down below, early action under graceful trees that pepper the pavement with ... it's found in Indian grocery stores back home, but it's essence is best when the ... In the library room, Renée copies the Mahatma's words into her notebook, ...

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activation test locations: Topics by Science.gov

Overall these findings suggest that increasing physical activity in one location ... Evaluation of long-term gas hydrate production testing locations on the Alaska north slope ... A specific location in the upper-right or upper-left visual quadrant served as ... The results show that top-down cueing of the distractor location with long ...

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cern control centre: Topics by Science.gov

We then lay down the arguments for the creation of a CERN-wide service that would ... In Malaysia, prostate cancer is ranked 6th among male cancer and expected to ... be collected pre-intervention, post-intervention, and at a six-month follow up ... single-centred, parallel-group, controlled trial, requiring upper right and left ...

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Apr 12, 2018 – That comment about buying the best animals touches on another ... From the menu that drops down, ... [url=http://www.poultry.space/post.php?id=8jejfpod Men rob 2 at ...

As predicted [url=https://www.google.co.uk/]b]google[/b][/url] she ... are all great athletesthe bell swings right round up to the balance ...

www.ijrte.org › Souvenir_Volume-9_Issue-2_July_2020 [PDF]

Technology and Engineering International Journal of Recent

Jul 15, 2020 — paper, a machine learning-based prediction model is constructed for air ... because it provides the best and highest accuracy of 100%. ... The healthcare chatbot is developed by using AI in the text to text ... Technology Letters, IEEE. ... Universal Remote Control using Hand Motions on a Virtual Menu", IEEE ...

www2.societyhq.com › ... ▾

50'S Plus Mature Online Dating Service No Register

Nov 16, 2019 — This may senior dating online sites free search be a sign sets near the ... Our service is completely free to use -- just sign up with your email ... and japanese seniors online dating sites that in kannur had been ranked at the dunster 11th position. ... Recent post best player rugby haka normal bathtub size in ...

sitemaps.scribd.com › docs

https://www.scribd.com/doc/211400012/Issa-Letter-on-IRS ...

You left me at the altar, with my heart in my hands. ... activities for sight words technique, primary school children Sight Words ... from discharging, our Low Voltage Battery Disconnect is your best alternative. ... https://www.scribd.com/document/211413949/Top-down-effects-on-pelagic- ... Human Rights Rules 2010 (PNG) ...

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https://www.scribd.com/doc/58100001/word-root word root https ...

The documentation scored an 84 Constituency Development Fund (CDF) ... County Economic Index 2010-2011 Economic Forecast Report for Tacoma-Pierce County, ... weekly 1.0 https://www.scribd.com/doc/58120543/Ethyis-Menu Ethyis Menu ... Proposed Voting Rights Act districts in proposed redistricting plan for NC ...

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2_ A week with the Volvo was one of zero emissions, which left the author with a ... Kannur International Airport authorities have written to the Karnataka State ...

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PAGE 1

1 ARTICLE
Remote gaze tracking system on a large display
Lee, Hyeon Chang ; Lee, Won Oh ; Cho, Chul Woo ; Gwon, Su Yeong ; Park, Kang Ryoung ; Lee, Heekyung ; Cha, Jihun
Sensors (Basel, Switzerland), 2013-10-07, Vol.13 (10), p.13439-13463
We propose a new remote gaze tracking system as an intelligent TV interface. Our research is novel in the following three ways...
PEER REVIEWED OPEN ACCESS
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2 BOOK CHAPTER
Sustainable Remediationsustainability/sustainableremediation: Integrating Risk, Science, and Sustainability Principles
Meujo, Damaris A. F ; Hamann, Mark T ; Pereira, Rui ; Yarish, Charles ; Critchley, Alan T ; Thibodeaux, Louis J ; Germano, Josep...
Encyclopedia of Sustainability Science and Technology, p.10435-10448
Available Online

3 ARTICLE
Use and Design of Handheld Computers for Older Adults: A Review and Appraisal
Zhou, Jia ; Rau, Pei-Luen Patrick ; Salvendy, Gavriel
International journal of human-computer interaction, 2012-12, Vol.28 (12), p.799-826
.... Findings about acceptance, input devices, menu and functions, and output devices are summarized...
PEER REVIEWED
Available Online

4 BOOK CHAPTER
Satellites
Razani, Mohammad
Commercial Space Technologies and Applications, 2019, p.89-252
..., the focus of this chapter will be on the application satellites covering remote sensing, meteorological, Global Positioning System (GPS), scientific, ...
Available Online

5 CONFERENCE PROCEEDING
AmITV: Enhancing the Role of TV in Ambient Intelligence Environments
Anyfantis, Nikolaos ; Kalligiannakis, Evangelos ; Tsiolkas, Achilleas ; Leonidis, Asterios ; Korozi, Maria ; Lilitsis, Prodromos ; An...
Proceedings of the 11th PErvasive Technologies Related to Assistive Environments Conference, 2018-06-26, p.507-514
... as (i) a control center for manipulating any intelligent device, (ii) an intervention host that presents appropriate content when they need help or support, (iii...
Available Online

6 BOOK CHAPTER
Influence of Individual Differences on Application Design for Individual and Collaborative Immersive Virtual Environments
Hale, Kelly S ; Stanney, Kay M
Handbook of Virtual Environments, 2002, p.419-442
In this chapter a discussion of how individual differences and features of virtual environment (VE) technology affect VE application design is provided. This...
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7 ARTICLE
The application of digital photogrammetry and image analysis techniques to derive tree and stand characteristics
Zagalikis, G ; Cameron, A D ; Miller, D R
Canadian journal of forest research, 2005-05-01, Vol.35 (5), p.1224-1237
Ground-based forest inventory surveys can provide highly accurate measurements of tree and stand characteristics, but these are expensive to carry out. Aerial...
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ARTICLE
ENRICHME: Perception and Interaction of an Assistive Robot for the Elderly at Home
Coşar, Serhan ; Fernandez-Carmona, Manuel ; Agrigoroaie, Roxana ; Pages, Jordi ; Ferland, François ; Zhao, Feng ; Yue, Shigan...
International journal of social robotics, 2020-02-01, Vol.12 (3), p.779-805
Abstract Recent technological advances enabled modern robots to become part of our daily life. In particular, assistive robotics
PEER REVIEWED OPEN ACCESS
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SAMSUNG EX1024, Page 52 of 689

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1431	1	"9436354".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
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L1434	56493	(707/999.102 707/999.107).ccls. 707/102 707/104.1	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1435	583824	("707" "705" "709" "715").clas.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1436	1	"8140560".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
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L1438	1506	keyboard same (select$3 choos$3 pick$3) near5 contact and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1439	72	L616 and on-screen	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1440	1845	(select$3 choos$3 pick$3) near5 first near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1441	12	(select$3 choos$3 pick$3) near5 first near2 name same corresponding near2 last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1442	23	(select$3 choos$3 pick$3) near5 first	(US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	ON	2022/09/15 04:59 PM

		near2 name and corresponding near2 last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	JPO)				
L1443	570	(select$3 choos$3 pick$3) near5 first near2 name and last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1444	0	(select$3 choos$3 pick$3) near5 first near2 name and last near2 name same (key keyboard button) near2 directional and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1445	0	(select$3 choos$3 pick$3) near5 first near2 name same (key keyboard button) near2 directional and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1446	14	(select$3 choos$3 pick$3) near5 first near2 name and (key keyboard button) near2 directional and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1447	23	(kevin near2 william near2 dinn).inv.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1448	29	(kannuu).asn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1449	7	L625 and L626	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1450	1845	(select$3 choos$3 pick$3) near5 first near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1451	45	L625 L626	(US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	ON	2022/09/15 04:59 PM

			JPO)				
L1452	21	L629 and first near2 name	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1453	0	(display$3 present$5) near5 first adj name same on-screen and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1454	317	(display$3 present$5) near5 name same on-screen and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1455	11	11/990338	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1456	1	"20030182274"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1457	0	on-screen near5 contact near2 (name id identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1458	17	on-screen same contact near2 (name id identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1459	944	contact near2 (name id identifier) same last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1460	2	12/468078	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1461	157	combin$5 near5 first adj name same last adj name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1462	27	L639 and (mobile portable) near2 (phone device)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1463	2	"20050193338"	(US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	ON	2022/09/15 04:59 PM

			JPO)				
L1464	11	first near2 screen near5 last adj name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1465	0	filter$3 near5 last adj (name id identifier) same based near5 first adj (name id identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1466	208	last adj (name id identifier) same based near5 first adj (name id identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1467	100	L644 and (mobile portable) near2 (phone device)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1468	45	L645 and address near2 book	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1469	6	L621 and L611	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1470	71	L621 and L612	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1471	395	L621 and L613	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1472	10	L637 and L611	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1473	113	L637 and L612	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1474	621	L637 and L613	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1475	3	L639 and L611	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1476	34	L639 and L612	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1477	118	L639 and L613	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM

L1478	0	L617 and L611	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
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L1481	146	("20010018351"|"20020049795"|"20020061770"|"20020091690"|"20020151327"|"20020183099"|"20030073414"|"20030078069"|"20030182274"|"20040105714"|"20040163032"|"20040192276"|"20050010605"|"20050188330"|"20050233769"|"20060009861"|"20060031591"|"20060146028"|"20060217953"|"20060221058"|"20060265648"|"20060265668"|"20060294462"|"20070016862"|"20070060114"|"20070089070"|"20070179776"|"20090327888"|"20100010963"|"3937939"|"5109352"|"5126672"|"5263174"|"5299125"|"5496992"|"5633912"|"5724069"|"5754655"|"5787417"|"5797098"|"5894276"|"5896321"|"5901222"|"5911485"|"5953541"|"0539823"|"6009444"|"6011554"|"6032053"|"6047196"|"6055439"|"6150962"|"6223059"|"6247043"|"6264146"|"6311125"|"6377965"|"6580932"|"6744423"|"6748242"|"6792287"|"6826566"|"6955602"|"7185286"|"7293231"|"7443316"|"7487147"|"7543244"|"7616191"|"7669111"|"7681124"|"7716579"|"7793228"|"7836044"|"7886233"|"7921361"). PN.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1482	5	L659 and direction$2 near2 (button key)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
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L1491	168	L621 and L668	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
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L1505	6	14/627914	(US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	ON	2022/09/15 04:59 PM

			JPO)				
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L1512	35	(suggest$3 recommend$5 predict$3) near5 (next subsequent) near2 (word term) same (frequen$4) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1513	50	(suggest$3 recommend$5 predict$3) near5 (word term name) same (frequen$4) same contact and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1514	19	(suggest$3 recommend$5 predict$3) near5 (identifier name) same (frequen$4) same contact and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1515	12	(suggest$3 recommend$5 predict$3) near5 (identifier name) and	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM

		(frequen$4) same contact near2 list and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")					
L1516	0	(suggest$3 recommend$5 predict$3) near5 (family last first) near2 name and (frequen$4) same contact near2 list and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1517	125	(suggest$3 recommend$5 predict$3) near5 (family last first) near2 name and (frequen$4) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1518	5	(suggest$3 recommend$5 predict$3) near5 (family last first) near2 name Same (frequen$4) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1519	0	auto near1 complet$3 same (frequen$4) same contact near2 list and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1520	4	auto near1 complet$3 same (frequen$4) and contact near2 list and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1521	2	selected near2 (last family first) near2 name same (suggest$3 propos$3 recommend$5 predict$3) near2 (last family first) near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1522	0	(directional navigat$3) near2 (key button) same (suggest$3 propos$3	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM

		recommend$5 predict$3) near2 (last family first) near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")					
L1523	45	(directional navigat$3) near2 (key button) same (suggest$3 propos$3 recommend$5 predict$3) near2 (name word term) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1524	10	11/131867	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1525	24	(generat$3 creat$3) near5 (initial) near2 (candidate suggested recommended proposed predicted) near5 (word keyword term) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1526	29	(generat$3 creat$3) near5 (initial) near2 (candidate suggested recommended proposed predicted) near5 (word keyword term item) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1527	5	L704 not L703	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1528	2	(generat$3 creat$3) near5 (initial) near2 (candidate suggested recommended proposed predicted) near5 (name identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1529	1178	joystick and (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM

		token) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")					
L1530	38	joystick same (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term token) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1531	1	joystick same (candidate suggested recommended proposed predicted) near5 (name identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1532	379	joystick and (candidate suggested recommended proposed predicted) near5 (name identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1533	32	joystick and (generat$3 creat$3) near5 (candidate suggested recommended proposed predicted) near5 (name identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1534	447	hierarch$4 same (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term token) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1535	15	hierarch$4 near5 (rank$3 scor$3) same (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM

		token) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")					
L1536	72	("20010012769"|"20010018351"|"20020049795"|"20020061770"|"20020091690"|"20020151327"|"20020183099"|"20030073414"|"20030078069"|"20030182274"|"20040105714"|"20040163032"|"20040192276"|"20050010605"|"20050188330"|"20050233769"|"20060009861"|"20060031591"|"20060146028"|"20060217953"|"20060221058"|"20060265648"|"20060265668"|"20060294462"|"20070016862"|"20070060114"|"20070089070"|"20070179776"|"20090327888"|"20100010963"|"3937939"|"5128672"|"5263174"|"5299125"|"5398023"|"5496992"|"5633912"|"5724069"|"5754655"|"5787417"|"5797098"|"5894276"|"5896321"|"5901222"|"5911485"|"5953541"|"6009444"|"6011554"|"6032053"|"6047196"|"6055439"|"6150962"|"6223059"|"6247043"|"6264146"|"6311125"|"6377965"|"6580932"|"6744423"|"6748242"|"6792287"|"6826566"|"7185286"|"7443316"|"7487147"|"7543244"|"7616191"|"7669111"|"7793228"|"7836044"|"7886233").PN.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1537	19	L714 and joystick	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1538	8	L714 and (first last) near2 name	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1539	544	(suggested proposed candidate) near2 (character letter) same (keypad keyboard button) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM

L1540	145	L717 and mobile	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1541	17	(suggested proposed candidate) near2 (character letter) same (keypad keyboard button) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1542	49	(suggested proposed candidate) near2 (character letter) same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1543	16	L720 and mobile	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1544	41	(suggested proposed candidate) near2 (string word spelling character letter) same (keypad keyboard button joystick) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1545	2	(suggested proposed candidate possible predicted) near2 (string word spelling character letter) same (direction$2 navigat$3) near2 (key pad) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1546	304	(suggested proposed candidate possible predicted) near2 (string spelling character letter) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1547	304	(suggested proposed candidate possible predicted) near2 (string character letter) same mobile and (@ad<"20050812"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM

		@pd<"20050812" @rlad<"20050812")					
L1548	110	(suggested proposed candidate possible predicted) near2 (string letter) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1549	592742	(G06F17/30 G06F17/30899 G06F17/30554).cpc. (G06F17/30 G06F17/30899 G06F17/30554)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1550	168	L621 and L727	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1551	46	L639 and L727	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1552	52	L644 and L727	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1553	21	L632 and L727	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1554	5	("20060265208" "20040186819" "20050270270" "20020087979" "20060293889").pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1555	6	14/627914	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1556	19	(suggested proposed candidate possible predicted) near2 (string character letter) same directional near2 (button key) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1557	88	(suggested proposed candidate possible predicted) near2 (string character letter) same (arrang$4 position$3) near5 center and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1558	4	L735 and up same down same left same	(US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	ON	2022/09/15 04:59 PM

		right	JPO)				
L1559	102	(suggested proposed candidate possible predicted) near2 (string character letter) same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1560	127	(suggested proposed candidate possible predicted) near2 (word token string character letter) same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1561	64	(suggested proposed candidate predicted) near2 (word token string character letter) same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1562	9	pinyin same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1563	62	(suggest$3 propos$3 candidate predict$3) near2 (word string character letter) same (directional navigat$3) near2 (button keypad key) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1564	2	"20060265208"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1565	10	11/131867	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1566	592848	(G06F17/30 G06F17/30595 G06F17/30705 G06F17/30899	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM

		G06F17/30554 G06F17/30321).cpc. (G06F17/30 G06F17/30595 G06F17/30705 G06F17/30899 G06F17/30554 G06F17/30321)					
L1567	5	L744 and L691	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1568	46	L744 and L639	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1569	22	L744 and L717	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1570	203	L637 and L744	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1571	1	"9436354".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1572	4235	up same down same left same right.clm. and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1573	13	L750 and $2complet$3 near2 (word item).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1574	31	up same down same left same right same $2complet$3 near2 (word term phrase item identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1575	6	("8140560" "8375058" "8996579" "9436354" "8370393" "8876852").pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1576	1	"8876852".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1577	1	"8676852".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1578	6	("8,140,560" "8,370,393" "8,375,058" "8,676,852" "8,996,579" "9,436,354").pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1579	104440	(G06F16/00,2228,248,24578,957).cpc. (G06F16/00,2228,248,24578,957)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM

L1580	1290963	G06F16/$.cpc. G06F16/$	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1581	6	L717 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1582	16	L717 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1583	13	L644 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1584	56	L644 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1585	0	L691 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1586	4	L691 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1587	10	L710 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1588	86	L710 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1589	39	L632 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1590	0	L632 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1591	49	L621 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1592	190	L621 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1593	0	L695 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	ON	2022/09/15 04:59 PM

			JPO; DERWENT; IBM_TDB)				
L1594	28	L695 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1595	1	"8370393".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1596	46	(suggest$3 propos$3 candidate predict$3) near2 (string character letter) same (directional navigat$3) near2 (button keypad key) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1597	3	"20030095102"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1598	946982	G06F16/$.cpc. G06F16/$	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1599	19	(US-20050065822-$ or US-20030182274-$ or US-20100299348-$ or US-20050193338-$ or US-20130124537-$ or US-20140143242-$ or US-20060247915-$ or US-20020019731-$ or US-20060265208-$ or US-20060293889-$ or US-20020087979-$ or US-20040186819-$ or US-20050270270-$ or US-20150169150-$ or US-20090192786-$ or US-20030095102-$).did. or (US-8140560-$ or US-8996579-$ or US-6744423-$).did.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 04:59 PM
L1600	13	L776 and L777	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1601	2	L774 and L777	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1602	10	(remote near2 control) same (predict$3 suggest$3 recommend$5) near5 text$5 and	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM

		(@ad<"20050812" @pd<"20050812" @rlad<"20050812")					
L1603	4	L780 and television	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1604	2	L781 and (search$3 quer$4)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1605	8	L774 and television	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1606	11	("20020113825" "7152213" "6593913" "20040021691").pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1607	1	16/539501	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1608	1	"9436354".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1609	1	"9436354".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1610	1	"8140560".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1611	9430	(707/791 707/802).ccls. 707/791 707/802	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1612	56493	(707/999.102 707/999.107).ccls. 707/102 707/104.1	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1613	583824	("707" "705" "709" "715").clas.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1614	1	"8140560".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1615	0	on-screen near5 keyboard same (select$3 choos$3 pick$3) near5 contact and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1616	1506	keyboard same (select$3 choos$3 pick$3) near5 contact and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1617	72	L616 and on-screen	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/15

			USOCR; FPRS; EPO; JPO)				04:59 PM
L1618	1845	(select$3 choos$3 pick$3) near5 first near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1619	12	(select$3 choos$3 pick$3) near5 first near2 name same corresponding near2 last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1620	23	(select$3 choos$3 pick$3) near5 first near2 name and corresponding near2 last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1621	570	(select$3 choos$3 pick$3) near5 first near2 name and last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1622	0	(select$3 choos$3 pick$3) near5 first near2 name and last near2 name same (key keyboard button) near2 directional and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1623	0	(select$3 choos$3 pick$3) near5 first near2 name same (key keyboard button) near2 directional and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1624	14	(select$3 choos$3 pick$3) near5 first near2 name and (key keyboard button) near2 directional and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM

L1625	23	(kevin near2 william near2 dinn).inv.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1626	29	(kannuu).asn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1627	7	L625 and L626	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1628	1845	(select$3 choos$3 pick$3) near5 first near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1629	45	L625 L626	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1630	21	L629 and first near2 name	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1631	0	(display$3 present$5) near5 first adj name same on-screen and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1632	1	"20030182274"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1633	0	on-screen near5 contact near2 (name id identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1634	944	contact near2 (name id identifier) same last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1635	2	12/468078	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1636	157	combin$5 near5 first adj name same last adj name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1637	2	"20050193338"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM

L1638	11	first near2 screen near5 last adj name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1639	0	filter$3 near5 last adj (name id identifier) same based near5 first adj (name id identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1640	100	L644 and (mobile portable) near2 (phone device)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1641	6	L621 and L611	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1642	71	L621 and L612	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1643	10	L637 and L611	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1644	113	L637 and L612	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1645	3	L639 and L611	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1646	118	L639 and L613	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1647	0	L617 and L611	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1648	0	L617 and L612	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1649	9	L617 and L613	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1650	138	("20010012769"|"20010018351"|"20020049795"|"20020061770"|"20020091690"|"20020151327"|"20020183099"|"20030073414"|"20030078069"|"20030182274"|"20040105714"|"20040163032"|"20040192276"|"20050010605"|"20050188330"|"20050233769"|"20060009861"|"200600	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM

		31591"|"20060146028"|"20060217953"|"20060221058"|"20060265648"|"20060265668"|"20060294462"|"200700168622"|"20070060114"|"20070089070"|"20070179776"|"20090327888"|"20100010963"|"3937939"|"5128672"|"5263174"|"5299125"|"5398023"|"5496992"|"5633912"|"5724069"|"5754655"|"5787417"|"5797098"|"5894276"|"5896321"|"5901222"|"5911485"|"5953541"|"6009444"|"6011554"|"6032053"|"6047196"|"6055439"|"6150962"|"6223059"|"6247043"|"6264146"|"6311125"|"6377965"|"6580932"|"6744423"|"6748242"|"6792287"|"6826566"|"7185286"|"7443316"|"7487147"|"7543244"|"7616191"|"7669111"|"7793228"|"7836044"|"7886233").PN.				
L1651	388	((keyboard keypad (key adj (board pad))) same (select$3 choos$3 pick$3) near5 contact).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1652	2	("8375058" "8140560").pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1653	2	13/491267	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1654	1	"8370393".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1655	8	13/736548	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1656	592665	g06f17/30 g06f17/30.cpc.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1657	168	L621 and L668	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1658	203	L637 and L668	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1659	0	L617 and L668	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/15

			USOCR; FPRS; EPO; JPO)				04:59 PM
L1660	46	L639 and L668	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1661	7	14/166465	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1662	1	"8676852".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1663	3	("8140560" "8375058" "8676852").pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1664	1	"8370393".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1665	592759	(G06F17/30 G06F17/30595 G06F17/30705).cpc. (G06F17/30 G06F17/30595 G06F17/30705)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1666	9	L616 and L677	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1667	168	L621 and L677	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1668	327	L628 and L677	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1669	21	L632 and L677	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1670	52	L644 and L677	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1671	6	14/627914	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1672	1	"8996579".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1673	1	"8676852".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1674	1	"20030182274"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1675	1	"8370393".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM

L1676	2	13/491267	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1677	448	(suggest$3 recommend$5 predict$3) near5 (next subsequent) near2 (word term) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1678	35	(suggest$3 recommend$5 predict$3) near5 (next subsequent) near2 (word term) same (frequen$4) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1679	50	(suggest$3 recommend$5 predict$3) near5 (word term name) same (frequen$4) same contact and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1680	19	(suggest$3 recommend$5 predict$3) near5 (identifier name) same (frequen$4) same contact and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1681	12	(suggest$3 recommend$5 predict$3) near5 (identifier name) and (frequen$4) same contact near2 list and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1682	0	(suggest$3 recommend$5 predict$3) near5 (family last first) near2 name and (frequen$4) same contact near2 list and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM

L1683	125	(suggest$3 recommend$5 predict$3) near5 (family last first) near2 name and (frequen$4) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1684	5	(suggest$3 recommend$5 predict$3) near5 (family last first) near2 name Same (frequen$4) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1685	0	auto near1 complet$3 same (frequen$4) same contact near2 list and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1686	4	auto near1 complet$3 same (frequen$4) and contact near2 list and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1687	2	selected near2 (last family first) near2 name same (suggest$3 propos$3 recommend$5 predict$3) near2 (last family first) near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1688	0	(directional navigat$3) near2 (key button) same (suggest$3 propos$3 recommend$5 predict$3) near2 (last family first) near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1689	45	(directional navigat$3) near2 (key button) same (suggest$3 propos$3 recommend$5 predict$3) near2 (name word term) and (@ad<"20050812"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM

		@pd<"20050812" @rlad<"20050812")					
L1690	10	11/131867	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1691	24	(generat$3 creat$3) near5 (initial) near2 (candidate suggested recommended proposed predicted) near5 (word keyword term) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1692	29	(generat$3 creat$3) near5 (initial) near2 (candidate suggested recommended proposed predicted) near5 (word keyword term item) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1693	5	L704 not L703	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1694	2	(generat$3 creat$3) near5 (initial) near2 (candidate suggested recommended proposed predicted) near5 (name identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1695	1178	joystick and (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term token) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1696	38	joystick same (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term token) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM

L1697	1	joystick same (candidate suggested recommended proposed predicted) near5 (name identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1698	379	joystick and (candidate suggested recommended proposed predicted) near5 (name identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1699	32	joystick and (generat$3 creat$3) near5 (candidate suggested recommended proposed predicted) near5 (name identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1700	447	hierarch$4 same (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term token) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1701	15	hierarch$4 near5 (rank$3 scor$3) same (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term token) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1702	72	("20010012769"|"20010018351"|"20020049795"|"20020061770"|"20020091690"|"20020151327"|"20020183099"|"20030073414"|"20030078069"|"20030182274"|"20040105714"|"20040163032"|"20040192276"|"20050010605"|"2005018	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM

		8330"|"20050233769"|"20060009861"|"20060031591"|"20060146028"|"20060217953"|"20060221058"|"20060265648"|"20060265668"|"20060294462"|"20070016862"|"20070060114"|"20070089070"|"20070179776"|"20090327888"|"20100010963"|"3937939"|"5128672"|"5263174"|"5299125"|"5398023"|"5496992"|"5633912"|"5724069"|"5754655"|"5787417"|"5797098"|"5894276"|"5896321"|"5901222"|"5911485"|"5953541"|"6009444"|"6011554"|"6032053"|"6047196"|"6055439"|"6150962"|"6223059"|"6247043"|"6264146"|"6311125"|"6377965"|"6580932"|"6744423"|"6748242"|"6792287"|"6826566"|"7185286"|"7443316"|"7487147"|"7543244"|"7616191"|"7669111"|"7793228"|"7836044"|"7886233").PN.					
L1703	19	L714 and joystick	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1704	8	L714 and (first last) near2 name	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1705	544	(suggested proposed candidate) near2 (character letter) same (keypad keyboard button) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1706	145	L717 and mobile	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1707	17	(suggested proposed candidate) near2 (character letter) same (keypad keyboard button) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1708	49	(suggested proposed candidate) near2 (character letter) same	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM

		up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")					
L1709	16	L720 and mobile	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1710	41	(suggested proposed candidate) near2 (string word spelling character letter) same (keypad keyboard button joystick) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1711	2	(suggested proposed candidate possible predicted) near2 (string word spelling character letter) same (direction$2 navigat$3) near2 (key pad) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1712	304	(suggested proposed candidate possible predicted) near2 (string spelling character letter) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1713	304	(suggested proposed candidate possible predicted) near2 (string character letter) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1714	110	(suggested proposed candidate possible predicted) near2 (string letter) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1715	592742	(G06F17/30 G06F17/30899 G06F17/30554).cpc. (G06F17/30 G06F17/30899	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM

		G06F17/30554)					
L1716	168	L621 and L727	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1717	46	L639 and L727	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1718	52	L644 and L727	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1719	21	L632 and L727	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1720	5	("20060265208" "20040186819" "20050270270" "20020087979" "20060293889").pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1721	6	14/627914	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1722	19	(suggested proposed candidate possible predicted) near2 (string character letter) same directional near2 (button key) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1723	88	(suggested proposed candidate possible predicted) near2 (string character letter) same (arrang$4 position$3) near5 center and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1724	4	L735 and up same down same left same right	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1725	102	(suggested proposed candidate possible predicted) near2 (string character letter) same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1726	127	(suggested proposed candidate possible predicted) near2 (word token string character	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM

		letter) same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")					
L1727	64	(suggested proposed candidate predicted) near2 (word token string character letter) same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1728	9	pinyin same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1729	62	(suggest$3 propos$3 candidate predict$3) near2 (word string character letter) same (directional navigat$3) near2 (button keypad key) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1730	2	"20060265208"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1731	10	11/131867	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1732	592848	(G06F17/30 G06F17/30595 G06F17/30705 G06F17/30899 G06F17/30554 G06F17/30321).cpc. (G06F17/30 G06F17/30595 G06F17/30705 G06F17/30899 G06F17/30554 G06F17/30321)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1733	5	L744 and L691	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1734	46	L744 and L639	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM

L1735	22	L744 and L717	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1736	203	L637 and L744	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1737	1	"9436354".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1738	4235	up same down same left same right.clm. and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1739	13	L750 and $2complet$3 near2 (word item).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1740	31	up same down same left same right same $2complet$3 near2 (word term phrase item identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1741	6	("8140560" "8375058" "8996579" "9436354" "8370393" "8876852").pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1742	1	"8876852".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1743	1	"8676852".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1744	6	("8,140,560" "8,370,393" "8,375,058" "8,676,852" "8,996,579" "9,436,354").pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1745	104440	(G06F16/00,2228,248,24578,957).cpc. (G06F16/00,2228,248,24578,957)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1746	1290963	G06F16/$.cpc. G06F16/$	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1747	6	L717 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1748	16	L717 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1749	13	L644 and L757	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/15

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)				04:59 PM
L1750	56	L644 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1751	0	L691 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1752	4	L691 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1753	10	L710 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1754	86	L710 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1755	39	L632 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1756	0	L632 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1757	49	L621 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1758	190	L621 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1759	0	L695 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1760	28	L695 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1761	1	"8370393".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1762	46	(suggest$3 propos$3 candidate predict$3) near2 (string character letter) same (directional navigat$3) near2	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM

		(button keypad key) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")					
L1763	3	"20030095102"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1764	946982	G06F16/$.cpc. G06F16/$	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1765	19	(US-20050065822-$ or US-20030182274-$ or US-20100299348-$ or US-20050193338-$ or US-20130124537-$ or US-20140143242-$ or US-20060247915-$ or US-20020019731-$ or US-20060265208-$ or US-20060293889-$ or US-20020087979-$ or US-20040186819-$ or US-20050270270-$ or US-20150169150-$ or US-20090192786-$ or US-20030095102-$).did. or (US-8140560-$ or US-8996579-$ or US-6744423-$).did.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 04:59 PM
L1766	13	L776 and L777	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1767	2	L774 and L777	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1768	10	(remote near2 control) same (predict$3 suggest$3 recommend$5) near5 text$5 and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1769	4	L780 and television	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1770	2	L781 and (search$3 quer$4)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1771	8	L774 and television	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1772	11	("20020113825"	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/15

		"7152213" "6593913" "20040021691").pn.	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)				04:59 PM
L1773	1	16/539501	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1774	1	"9436354".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1775	463	up SAME down SAME left SAME right SAME $2complet$3 near2 (word term phrase item identifier) AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1776	28	1017 AND predict$3 near5 (word keyword text character)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1777	81	"20020113852" "7152213" "6593913" "20040021691"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2022/09/15 04:59 PM

			IBM_TDB)				
L1778	89	predict$ near5 (text character keyword) SAME up SAME down SAME left SAME right AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1779	300	("2002091160" "20020078013" "5797098" "6593913")	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1780	13	1382 AND mutual$ adj0 exclusiv$	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1781	2282901	(G06F16/$ G06F17/3$).cpc. (G06F16/$ G06F17/3$)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV,	OR	ON	ON	2022/09/15 04:59 PM

			MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L1782	148817	(G06F16/00,2228,248,24578,957).cpc. (G06F16/00,2228,248,24578,957)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1783	70375	(707/999.102 707/999.107).ccls. 707/102 707/104.1	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1784	12563	(707/791 707/802).ccls. 707/791 707/802	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1785	301758	707/$.ccls.	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/15

			USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				04:59 PM
L1786	2358644	1390 1389 1388 1387 1386	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1787	41	predict$ near5 (text$ character search query request inquiry phrase sentence word) SAME mutual$ adj0 exclusiv$ AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1788	3	1392 AND 1391	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL,	OR	ON	ON	2022/09/15 04:59 PM

			PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L1789	463	up SAME down SAME left SAME right SAME $2complet$3 near2 (word term phrase item identifier) AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1790	0	1392 AND 1394	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1791	2267	(suggested proposed candidate possible predicted) near2 (word token string character letter) SAME up SAME down SAME left SAME right AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1792	889	(suggested proposed candidate possible predicted) near2 (string	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY,	OR	ON	ON	2022/09/15 04:59 PM

		character letter) SAME (arrang$4 position$3) near5 center AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L1793	129	(suggest$3 recommend$5 predict$3) near5 (identifier name) SAME (frequen$4) SAME contact AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1794	1277	contact near2 (name id identifier) SAME last near2 name AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1795	64	(directional navigat$3) near2 (key button) SAME (suggest$3 propos$3 recommend$5 predict$3) near2 (name word term) AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH,	OR	ON	ON	2022/09/15 04:59 PM

			TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L1796	0	(directional navigat$3) near2 (key button) SAME (suggest$3 propos$3 recommend$5 predict$3) near2 (last family first) near2 name AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1797	3312	keyboard SAME (select$3 choos$3 pick$3) near5 contact AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1798	115	(suggest$3 propos$3 candidate predict$3) near2 (string character letter) SAME (directional navigat$3) near2 (button keypad key) AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1799	1349	(suggest$3 recommend$5 predict$3) near5 (next subsequent) near2 (word term) AND	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,	OR	ON	ON	2022/09/15 04:59 PM

		(@ad<"20050812" @pd<"20050812" @rlad<"20050812")	EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L1800	129	(suggest$3 recommend$5 predict$3) near5 (identifier name) SAME (frequen$4) SAME contact AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1801	463	up SAME down SAME left SAME right SAME $2complet$3 near2 (word term phrase item identifier) AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1802	605	(suggested proposed candidate) near2 (string word spelling character letter) SAME (keypad keyboard button joystick) SAME mobile AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO;	OR	ON	ON	2022/09/15 04:59 PM

			JPO; DERWENT; IBM_TDB)				
L1803	1	1394 AND 1391	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1804	1	1407 AND 1391	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1805	1	1406 AND 1391	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1806	5	1405 AND 1391	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1807	4	1403 AND 1391	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1808	27	1402 AND 1391	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1809	5	1398 AND 1391	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1810	1	1397 AND 1391	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/09/15 04:59 PM
L1811	0	1413 AND (predict$ candiate propos$ recommend$ suggest$) near5 (text$ character search query request inquiry phrase sentence word) SAME mutual$ adj0 exclusiv$ AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1812	1	1413 AND (suggest$3 recommend$5 predict$3) near5 (character text$) AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN,	OR	ON	ON	2022/09/15 04:59 PM

			WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L1813	10	(suggest$3 propos$3 candidate predict$3) near2 (string character letter) SAME (mutual$ near2 exclusi$) AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1814	1	(suggest$3 propos$3 candidate predict$3) near2 (string character letter) SAME (fourway four-way) near2 (button control select functionality) AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1815	877	(suggest$3 propos$3 candidate predict$3) near2 (keyword word string character letter) SAME (up SAME down SAME left SAME right) AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1816	9	1420 AND 1391	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB,	OR	ON	ON	2022/09/15 04:59 PM

			HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L1817	2600	(suggest$3 propos$3 candidate predict$3) near2 (keyword word string character letter) SAME button AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1818	201	1422 AND 1391	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1819	59	(suggest$3 propos$3 candidate predict$3) near2 (keyword word string character letter) SAME (directi$ navigat$) near2 button AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2022/09/15 04:59 PM

			IBM_TDB)				
L1820	1645	(suggest$3 propos$3 candidate predict$3) near2 (string character letter) SAME button AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1821	358	1425 AND up SAME down SAME left SAME right	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1822	3	1426 AND 1391	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1823	37	(predict$3) near2 (string character letter) SAME up SAME down SAME left SAME right AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV,	OR	ON	ON	2022/09/15 04:59 PM

			MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L1824	25	("6593913" "5797098" "5223924" "5787417" "20020078013").pn.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/15 04:59 PM
L1825	149290	(G06F16/00,2228,2457 8,248,957).cpc. (G06F16/00,2228,2457 8,248,957)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 04:08 PM
L1826	299482	(G06F3/0338,0482,048 42,0237,0489).cpc. (G06F3/0338,0482,048 42,0237,0489)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 04:09 PM
L1827	4107	(H04m1/2748).cpc.	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/20

		(H04m1/2748)	USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				04:09 PM
L1829	305366	"707".clas.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 04:10 PM
L1831	28631	707/999.102,999.107.ccls. 707/999.102,999.107,102,107	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 04:10 PM
L1833	2293251	(G06F16/$ G06F17/3$).cpc. (G06F16/$ G06F17/3$)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL,	OR	ON	ON	2022/09/20 04:12 PM

			PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L1834	7169	(707/791,802).ccls. (707/791,802)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 04:13 PM
L1836	2595053	1834 1833 1831 1829 1827 1826 1825	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 04:15 PM
L1838	115	(suggest$3 propos$3 candidate predict$3) near2 (string character letter) SAME (directional navigat$3) near2 (button keypad key) AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 04:20 PM
L1839	44	1838 AND 1836	(US-PGPUB; USPAT; USOCR; FIT (AU, AP,	OR	ON	ON	2022/09/20 04:20 PM

			AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L1840	13	1823 AND 1836	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 04:20 PM
L1841	477	1821 AND 1836	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 04:21 PM
L1842	2267	(suggested proposed candidate possible predicted) near2 (word token string character letter) SAME up SAME down SAME left SAME right AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO,	OR	ON	ON	2022/09/20 04:21 PM

			RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L1843	890	(suggested proposed candidate possible predicted) near2 (string character letter) SAME (arrang$4 position$3) near5 center AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 04:21 PM
L1844	1670	hierarch$4 SAME (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term token) AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 04:21 PM
L1845	129	(suggest$3 recommend$5 predict$3) near5 (identifier name) SAME (frequen$4) SAME contact AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 04:21 PM
L1846	1349	(suggest$3 recommend$5 predict$3) near5 (next subsequent) near2	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2022/09/20 04:22 PM

		(word term) AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L1847	4	1845 AND 1836	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 04:22 PM
L1848	89	1842 AND 1836	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 04:22 PM
L1849	41	1843 AND 1836	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN,	OR	ON	ON	2022/09/20 04:22 PM

			WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L1850	405	1844 AND 1836	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 04:22 PM
L1851	133	1846 AND 1836	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 04:22 PM
L1852	1	1850 AND television near5 (remove joypad joystick controller)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 04:23 PM
L1853	1	1850 AND (television tv cable) near5 (remove joypad joystick controller)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB,	OR	ON	ON	2022/09/20 04:23 PM

			HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L1854	1	1851 AND circular near5 (keypad joypad joystick controller)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/20 04:23 PM

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N890	9430	(707/791 707/802).ccls. 707/791 707/802	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N891	56488	(707/999.102 707/999.107).ccls. 707/102 707/104.1	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N892	572239	("707" "705" "709" "715").clas.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N893	1	(first near2 screen near5 last adj name).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N894	47	(contact near2 (name id identifier) same last near2 name).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N895	22	((display$3 present$5) near5 name same on-screen).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N896	1079	((select$3 choos$3 pick$3) near5 (first last) near2 name).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N897	235	((keyboard keypad (key adj (board pad))) same (select$3 choos$3 pick$3) near5 contact).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM

N898	96	((select$3 choos$3 pick$3) near5 first near2 name and last near2 name).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N899	13	N792 and N786	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N900	48	N792 and N787	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N901	422	N792 and N788	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N902	0	N793 and N786	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N903	2	N793 and N787	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N904	41	N793 and N788	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N905	0	N794 and N786	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N906	4	N794 and N787	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N907	50	N794 and N788	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N908	795	(directional near2 controller).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N909	0	N804 and N792	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N910	0	N804 and N793	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N911	0	N804 and N794	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N912	3	("20040163032" "20020151327" "5,953,541").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N913	6	N804 and alphanumeric.clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N914	217853	g06f17/30 g06f17/30.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N915	189	N792 and N810	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N916	3	N793 and N810	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N917	22	N794 and N810	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N918	7	N804 and N810	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N919	217860	(G06F17/30 G06F17/30595 G06F17/30705).cpc. (G06F17/30 G06F17/30595 G06F17/30705)	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM

N920	189	N792 and N815	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N921	3	N793 and N815	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N922	22	N794 and N815	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N923	217858	(G06F17/30 G06F17/30899 G06F17/30554).cpc. (G06F17/30 G06F17/30899 G06F17/30554)	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N924	3	N793 and N819	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N925	189	N792 and N819	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N926	22	N794 and N819	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N927	217867	(G06F17/30 G06F17/30595 G06F17/30705 G06F17/30899 G06F17/30554 G06F17/30321).cpc. (G06F17/30 G06F17/30595 G06F17/30705 G06F17/30899 G06F17/30554 G06F17/30321)	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N928	189	N792 and N823	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N929	3	N793 and N823	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N930	22	N794 and N823	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N931	356002	G06F16/$.cpc. G06F16/$	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N932	43751	(G06F16/00,2228,248,24578,957).cpc. (G06F16/00,2228,248,24578,957)	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N933	28	N794 and N827	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N934	1	N794 and N828	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N935	6	N793 and N827	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N936	0	N793 and N828	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N937	294	N792 and N827	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM

N938	53	N792 and N828	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N939	5	N804 and N828	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N940	12	N804 and N827	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N941	4	(US-20040163032-$ or US-20020151327-$ or US-20120109948-$).did. or (US-5953541-$).did.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N942	9430	(707/791 707/802).ccls. 707/791 707/802	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N943	56488	(707/999.102 707/999.107).ccls. 707/102 707/104.1	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N944	572239	("707" "705" "709" "715").clas.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N945	1	(first near2 screen near5 last adj name).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N946	47	(contact near2 (name id identifier) same last near2 name).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N947	22	((display$3 present$5) near5 name same on-screen).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N948	1079	((select$3 choos$3 pick$3) near5 (first last) near2 name).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N949	235	((keyboard keypad (key adj (board pad))) same (select$3 choos$3 pick$3) near5 contact).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N950	96	((select$3 choos$3 pick$3) near5 first near2 name and last near2 name).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N951	13	N792 and N786	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N952	48	N792 and N787	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N953	422	N792 and N788	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N954	0	N793 and N786	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N955	2	N793 and N787	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N956	41	N793 and N788	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N957	0	N794 and N786	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15

							05:07 PM
N958	4	N794 and N787	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N959	50	N794 and N788	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N960	795	(directional near2 controller).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N961	0	N804 and N792	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N962	0	N804 and N793	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N963	0	N804 and N794	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N964	3	("20040163032" "20020151327" "5,953,541").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N965	6	N804 and alphanumeric.clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N966	217853	g06f17/30 g06f17/30.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N967	189	N792 and N810	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N968	3	N793 and N810	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N969	22	N794 and N810	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N970	7	N804 and N810	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N971	217860	(G06F17/30 G06F17/30595 G06F17/30705).cpc. (G06F17/30 G06F17/30595 G06F17/30705)	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N972	189	N792 and N815	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N973	3	N793 and N815	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N974	22	N794 and N815	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N975	217858	(G06F17/30 G06F17/30899 G06F17/30554).cpc. (G06F17/30 G06F17/30899 G06F17/30554)	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N976	3	N793 and N819	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N977	189	N792 and N819	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N978	22	N794 and N819	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15

							05:07 PM
N979	217867	(G06F17/30 G06F17/30595 G06F17/30705 G06F17/30899 G06F17/30554 G06F17/30321).cpc. (G06F17/30 G06F17/30595 G06F17/30705 G06F17/30899 G06F17/30554 G06F17/30321)	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N980	189	N792 and N823	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N981	3	N793 and N823	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N982	22	N794 and N823	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N983	356002	G06F16/$.cpc. G06F16/$	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N984	43751	(G06F16/00,2228,248,24578,957).cpc. (G06F16/00,2228,248,24578,957)	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N985	28	N794 and N827	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N986	1	N794 and N828	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N987	6	N793 and N827	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N988	0	N793 and N828	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N989	294	N792 and N827	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N990	53	N792 and N828	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N991	5	N804 and N828	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N992	12	N804 and N827	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N993	4	(US-20040163032-$ or US-20020151327-$ or US-20120109948-$).did. or (US-5953541-$).did.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 05:07 PM
N994	14746	707/999.102,999.107.ccls. 707/999.102,999.107,102,107	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/20 04:11 PM
N995	167850	"707".clas.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/20 04:11 PM

N997	723	(H04m1/2748).cpc. (H04m1/2748)	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/20 04:11 PM
N998	76780	(G06F3/0338,0482,04842,0237,0489).cpc. (G06F3/0338,0482,04842,0237,0489)	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/20 04:11 PM
N999	43799	(G06F16/00,2228,24578,248,957).cpc. (G06F16/00,2228,24578,248,957)	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/20 04:12 PM
N1000	396796	(G06F16/$ G06F17/3$).cpc. (G06F16/$ G06F17/3$)	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/20 04:12 PM
N1002	4037	(707/791,802).ccls. (707/791,802)	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/20 04:13 PM
N1003	482752	994 995 997 998 999 1000 1002	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/20 04:14 PM
N1005	48	960 AND 1003	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/20 04:15 PM
N1007	63	949 AND 1003	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/20 04:16 PM
N1008	414	948 AND 1003	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/20 04:16 PM
N1010	16	946 AND 1003	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/20 04:19 PM
N1011	48	908 AND 1003	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/20 04:20 PM
N1012	41	898 AND 1003	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/20 04:20 PM

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Application Number	:	16/539,501	Conf. No. 1802
Applicant	:	Kannuu Pty Ltd.	
Filed	:	August 13, 2019	
Tech Cntr/AU	:	2169	
Examiner	:	Hoang, Son T.	
Entitled	:	IMPROVED PROCESS AND APPARATUS FOR SELECTING AN ITEM FROM A DATABASE	
Attorney Reference	:	011844-0029-999	
Customer Number	:	20583	

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

RESPONSE

In response to the Office Action mailed March 15, 2022 for the above-identified application, the following are submitted herewith:

- Amendments to the Claims with a complete claim listing; and
- Remarks.

Amendments to the Claims:

The following claims will replace all prior versions of the claims in this application (in the unlikely event that no claims follow herein, the previously pending claims will remain):

1-54. (Cancelled)

55. (Previously Presented) A system for selecting items, the system comprising:

an output display of a television;

an directional input device with an up, down, left, right functionality; and

a computer processor contained within the television configured to:

associate the items with a corresponding item identifiers;

generate a first display on the output display, the first display comprises:

a part of an item identifier corresponding to a first set of items and

a part of an item identifier corresponding to a second set of items in a database;

enable selection of one of the two parts of the item identifiers;

generate, in response to the selection of the one of the two parts of item identifiers, a further display on the output display, the further display comprises:

an additional part of an item identifier corresponding to a subset of the selected set of items and

another additional part of an item identifier corresponding to another subset of the selected set of items;

enable selection of one of the two additional parts of the item identifiers;

combine the selected one of the two parts of the item identifiers with the selected one of the two additional parts of the item identifiers to create a larger part of the item identifiers; and

display the larger part of the item identifiers on the output display, wherein

the additional parts of the item identifiers are shorter than complete item identifiers; and

the first set of items and the second set of items are mutually exclusive of one another;

wherein the up, down, left, right, select functionality of the remote control keypad enables the selection of portions of item identifiers specifically positioned in a circular menu on the display.

REMARKS

Claim 55 is pending. Claims 36-54 have been cancelled. No new matter has been added. Reconsideration and allowance of the present application based on the following remarks are respectfully requested

Claims 36-54 were rejected under 35 U.S.C. § 103. While Applicant disagrees that the rejected claims are obvious over the cited art, in view of the cancellation of claims 36-54, Application respectfully submits these rejections are moot.

Applicant appreciates the Office's indication that claim 55 is allowable over the prior art of record. In view of the foregoing cancellation of the rejected claims, Applicant respectfully submits this application is in condition for allowance.

In view of the foregoing, the claims are now believed to be in form for allowance, and such action is hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, he is kindly requested to contact the undersigned at the telephone number listed below.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,

By: /Vishal V. Khatri/
Vishal V. Khatri
Registration No. 51,873
Direct No. (202) 879-3607

Intellectual Property Group
51 Louisiana Avenue, N.W.
Washington, D.C. 20001
(202) 879-3939 Telephone
(202) 626-1700 Facsimile

Date: September 14, 2022

Electronic Patent Application Fee Transmittal

Application Number:	16539501
Filing Date:	13-Aug-2019
Title of Invention:	Process and Apparatus for Selecting an Item From a Database
First Named Inventor/Applicant Name:	Kevin W. Dinn
Filer:	Vishal Vincent Khatri/Kristi Hutchison
Attorney Docket Number:	011844-0029-999

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 3 months with $0 paid	1253	1	1480	1480
Miscellaneous:				
			Total in USD ($)	**1480**

Electronic Acknowledgement Receipt

EFS ID:	46615224
Application Number:	16539501
International Application Number:	
Confirmation Number:	1802
Title of Invention:	Process and Apparatus for Selecting an Item From a Database
First Named Inventor/Applicant Name:	Kevin W. Dinn
Customer Number:	20583
Filer:	Vishal Vincent Khatri/Kristi Hutchison
Filer Authorized By:	Vishal Vincent Khatri
Attorney Docket Number:	011844-0029-999
Receipt Date:	14-SEP-2022
Filing Date:	13-AUG-2019
Time Stamp:	13:59:45
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$1480
RAM confirmation Number	E20229DE00121871
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	16539501_Transmittal.pdf	117584 17ad5b1b95ec1811219ba3527837aae0021b462e	no	1
Warnings:					
Information:					
2	Extension of Time	16539501_EOT.pdf	173409 e1426b76d31f88debd159c0c80c7aa3f3913df64	no	2
Warnings:					
Information:					
3		16539501_Response.pdf	152408 7c7ac0176f7c79284ff47daa62a58566ebd35f42	yes	4

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Request for Reconsideration-After Non-Final Rejection	1	1
	Claims	2	3
	Applicant Arguments/Remarks Made in an Amendment	4	4

Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	38228 bec9669b1187774280ccb40aab9745965ac9e7ea	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	481629	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Application Number	:	16/539,501	Conf. No. 1802
Applicant	:	Kannuu Pty Ltd.	
Filed	:	August 13, 2019	
Tech Cntr/AU	:	2169	
Examiner	:	Hoang, Son T.	
Entitled	:	IMPROVED PROCESS AND APPARATUS FOR SELECTING AN ITEM FROM A DATABASE	
Attorney Reference	:	011844-0029-999	
Customer Number	:	20583	

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

AMENDMENT/RESPONSE TRANSMITTAL

Transmitted herewith is an amendment/response for this application.

EXTENSION OF TIME

A petition for extension of time under 37 C.F.R. §1.136 for 3 months (PTO/SB/22) is attached.

CLAIM FEES

The claim fees have been calculated as follows:

	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NO. PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE		ADDITIONAL FEE
Total	20	–	20	=	0	x $	100.00	= $	0.00
Independent	3	–	3	=	0	x $	480.00	= $	0.00
					FIRST PRESENTATION OF MULTIPLE DEP. CLAIM	+ $	860.00	= $	0.00
					TOTAL ADDITIONAL CLAIM FEE DUE			**$**	**0.00**

FEE PAYMENT

Authorization is given to charge the attached extension of time fee of **$1480.00 (Fee Code 1253)**, and to charge any deficiencies in the fees, and/or to further credit any overpayments, to Deposit Account No. 503-013 to maintain the pendency of this application.

Respectfully Submitted,

JONES DAY

Date: September 14, 2022

By: /Vishal V. Khatri/
Vishal V. Khatri
Registration No. 51,873

Intellectual Property Group
51 Louisiana Avenue, N.W.
Washington, D.C. 20001
(202) 879-3939 Telephone
(202) 626-1700 Facsimile

PTO/AIA/22 (10-20)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)

Docket Number (Optional): 011844-0029-999

Application Number: 16/539,501

Filed: August 13, 2019

For: IMPROVED PROCESS AND APPARATUS FOR SELECTING AN ITEM FROM A DATABASE

Art Unit: 2169

Examiner: Hoang, Son T.

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

	Fee	Small Entity Fee	Micro Entity Fee	
☐ One month (37 CFR 1.17(a)(1))	$220	$110	$55	$
☐ Two months (37 CFR 1.17(a)(2))	$640	$320	$160	$
☑ Three months (37 CFR 1.17(a)(3))	$1,480	$740	$370	$ 1480.00
☐ Four months (37 CFR 1.17(a)(4))	$2,320	$1,160	$580	$
☐ Five months (37 CFR 1.17(a)(5))	$3,160	$1,580	$790	$

☐ Applicant asserts small entity status. See 37 CFR 1.27.

☐ Applicant certifies micro entity status. See 37 CFR 1.29.
Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.

☐ A check in the amount of the fee is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director has already been authorized to charge fees in this application to a Deposit Account.

☑ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 503-013.

☑ Payment made via EFS-Web.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

I am the

☐ applicant.

☑ attorney or agent of record. Registration number 51,873.

☐ attorney or agent acting under 37 CFR 1.34. Registration number _____.

/Vishal V. Khatri/ — Signature

September 14, 2022 — Date

Vishal V. Khatri — Typed or printed name

202-879-3607 — Telephone Number

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.

☐ * Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.136(a). The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/539,501	08/13/2019	Kevin W. Dinn	011844-0029-999	1802

20583 7590 03/15/2022

Jones Day
250 Vesey Street
New York, NY 10281-1047

EXAMINER	
HOANG, SON T	

ART UNIT	PAPER NUMBER
2169	

NOTIFICATION DATE	DELIVERY MODE
03/15/2022	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

japarker@jonesday.com
ncgeorge@jonesday.com
wtokmakidis@jonesday.com

Office Action Summary	Application No. 16/539,501	Applicant(s) Dinn, Kevin W.	
	Examiner SON T HOANG	Art Unit 2169	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 20 December 2021.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 36-55 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☑ Claim(s) 55 is/are allowed.

7) ☑ Claim(s) 36-54 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☑ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☑ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☑ Certified copies of the priority documents have been received in Application No. 11/990,338.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☑ Notice of References Cited (PTO-892)

2) ☑ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date 20 December 2021.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 20, 2021 has been entered.

Response to Amendment

3. In response to the amendment filed on December 20, 2021:

Claim 36, and **48** are amended.

Claims 36-55 are pending.

Response to Arguments

4. In response to the remarks filed on December 20, 2021:

Applicant's arguments with respect to the pre-AIA 35 U.S.C. 102(b) and 103(a) have been fully considered but are moot in view of a new ground of rejections presented hereon.

Information Disclosure Statement

5. As required by **M.P.E.P. 609(C)**, the Applicant's submission of the Information Disclosure Statement dated December 20, 2021 are acknowledged by the Examiner and the cited references have been considered in the examination of the claims now pending. As required by **M.P.E.P. 609 C(2)**, a copy of each of the PTOL-1449s initialed and dated by the Examiner is attached to the instant Office action.

Claim Rejections - 35 USC § 103

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. **Claims 36-40**, **42-50**, and **52-54** are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Perlman et al. (*Pub. No. US 2002/0113825, published on August 22, 2002; hereinafter Perlman*) in view of Krohn et al. (*Pat. No. US 6,593,913; published on July 15, 2003; hereinafter Krohn*).

Regarding **claim 36**, Perlman clearly shows and discloses a system for selecting items from a database, the system comprising: an output display; an input device; and a computer processor (*Figures 1-6*) configured to:

associate the items from the database with corresponding item identifiers (*a database list 120 is displayed for the user on the television/computer display 105. In the*

illustrated embodiment, the database list is a list of available multimedia content, [0017]-[0019], [0023]-[0029]);

generate a first display on the output display including one or more parts of an item identifier for selection (*Initially (i.e., before the user has selected a character), the alphanumeric characters mapped to the character-mapped buttons 101, 110 correspond to the most common first letters of words in the database list 120*, [0017]-[0019], [0023]-[0029]);

enable the selection of the one or more parts (*Once the user selects a first character*, [0017]-[0019], [0023]-[0029]);

in response to the selection of the one or more parts of item identifiers, generate a display of a further one or more parts of item identifiers for selection (*Once the user selects a first character, a new set of characters are mapped to the character-mapped buttons 101, 110 which correspond to the most common second letters of words in the database list 120 which begin with the first-selected character*, [0017]-[0019], [0023]-[0029]), wherein the further one of more parts of item identifiers being arranged on the display relative to one another and corresponding to an up, down, left and right position (*Figures 2-6 show the suggested letters arranged in up, down, left, right positions of the remote control*;

enable selection of the further one or more parts of item identifiers in order to add to the selected one or more parts to build a larger part or whole of a particular item identifier (*Figure 4 shows a whole identifier is being built from one or more identifying letters*); and

select one of the further one or more parts of item identifiers in response to a single activation of a corresponding up, down, left, or right key (*As the user selects letters via the displayed character-mapped buttons 110, the user's letter selections will appear in a text box 130*, [0017]-[0019], [0023]-[0029])*;*

wherein the selected one or more parts of item identifiers and the further one or more parts of item identifiers are shorter than a complete word (*Figures 2-6 show each entered character and corresponding suggested characters are less than a complete word*); and

wherein selection of the further one or more parts of item identifiers is enabled by a key press corresponding to the relative arrangement of the further one or more parts of item identifiers on the display (*Figures 2-6 shows each suggested character are selectable using a corresponding button respective to its position*).

Krohn then discloses:

the input device comprising a four way directional controller with an up, down, left, and right key (*With reference to FIG. 1, the display device 110 presents an on-screen image of four characters (J, P, G, and R) arranged in a diamond pattern that corresponds to the diamond pattern of the four buttons 132, 134, 136, 138 on the user input device 120*, [Column 3, Line 38 – Column 4, Line 54]); and

selecting one of the further one or more parts of item identifiers in response to a single activation of the corresponding up, down, left, or right key (*The characters that make up the second plurality of characters can be chosen from a larger character set at least in part by the character selected from the first plurality of characters. For example, the processor 100 can use a character prediction method to select the four characters*

from the character set that are the most likely to be selected or follow the first selected character. By way of illustration, if the first selected character is Q, the processor 100 can determine that U is one of the four most-likely characters to be chosen after Q and can present U as one of the characters in the second plurality of characters for selection by the user, [Column 3, Line 38 – Column 4, Line 54]).

It would have been obvious to an ordinary person skilled in the art at the time of the invention was made to incorporate the teachings of Krohn with the teachings of Perlman for the purpose of rapidly entering and searching for data based predictive selections of subsequent input data with respect to a position arranged on a control device.

Regarding **claim 37**, Perlman then discloses the output display is a display of a television and the input device is a remote control (*as illustrated in FIGS. 1a through 1c, a group of directional and functional buttons 101 arranged in a "star" pattern are configured on the remote control device 100, and a corresponding set of buttons 110 are displayed on the television/computer display 105. In the embodiment illustrated in FIG. 1a, all nine of the buttons 101 are character-mapped buttons, each having a different alphanumeric character mapped thereto. In addition, the remote control device 100 includes a "more" button 107 for mapping a new set of characters to the character-mapped buttons 101*, [0014]).

Regarding **claim 38**, Perlman further discloses enabling selection of the one or more parts of item identifiers and the further one or more parts of item identifiers by way of a remote control keypad (*As the user selects letters via the displayed character-mapped buttons 110, the user's letter selections will appear in a text box 130, and the database list 120 will change to reflect the user's selections*, [0014]-[0019]).

Regarding **claim 39**, Perlman then discloses the further one of more parts is selected for display based at least in part on a ranking scheme, and the highest ranked of the further one or more parts of item identifiers is positioned in one of the up, down, left and right positions (*Once the user selects a first character, a new set of characters are mapped to the character-mapped buttons 101, 110 which correspond to the most common second letters of words in the database list 120 which begin with the first-selected character*, [0017]-[0019], [0023]-[0029]).

Regarding **claim 40**, Perlman further discloses the highest ranked of the further one or more parts of item identifiers being positioned in one of the up, down, left and right positions is specifically positioned in a circular menu on the output display indicating the item identifiers to be selected by movements of the user in the directions left, right, up, and down using the remote control keypad (*Once the user selects a first character, a new set of characters are mapped to the character-mapped buttons 101, 110 which correspond to the most common second letters of words in the database list 120 which begin with the first-selected character*, [0017]-[0019], [0023]-[0029]. *Figures 2-6 show most likely characters are displayed in up, down, left, right positions representing as a circular menu*).

Regarding **claim 42**, Perlman further discloses the database of items is indexed based on the item identifiers and capable of being queried (*a database list 120 is displayed for the user on the television/computer display 105. In the illustrated embodiment, the database list is a list of available multimedia content*, [0017]-[0019], [0023]-[0029]. *Figure 7 shows a database search based on the entered characters*).

Regarding **claim 43**, Perlman further discloses the number of key presses of the input device to select an item from the database is fewer than the number of key presses required to select an item from a database according to a system that requires an end user to enter one, two, three, or four characters of the item identifier and then scroll through a list of potential items to select the item by additional key presses (*the user will be able to enter relatively complex groups of words with only a few keystrokes*, [0034]. *It is clear that the predictive character set would enable the controller to actuate less key presses than a system with a known system of scrolling through a list of matches*).

Regarding **claim 44**, Perlman further discloses iterating the selection until the particular item identifier is completed (*the user may press a remote control button 101 with a mapped character as indicated on the graphical user interface (i.e., rather than initially choosing the "select" button 102). The selected character will then be typed/displayed in the text box 130, and the new character mappings will change to the most common second letters of entries that have the first letter that was typed*, [0023]), and enabling selection of the particular item identifier to select the database item (*If the user presses "select" at this stage, the first entry in the list ("Ace of Base") will be*

highlighted, the star will disappear, and the user may use the up/down buttons to navigate through the remaining entries in the list, [0025]).

Regarding **claim 45**, Perlman further discloses generating the initial display further includes selecting the one or more parts of item identifiers to be displayed based on at least one predetermined criterion (*Initially (i.e., before the user has selected a character), the alphanumeric characters mapped to the character-mapped buttons 101, 110 correspond to the most common first letters of words in the database list 120*, [0017]-[0019], [0023]-[0029]).

Regarding **claim 46**, Perlman further discloses the at least one predetermined criterion is selected from the following: a frequency of selection of items associated with the pluralities of portions of the item identifiers, a recency of selection of the items associated with the pluralities of portions of the item identifiers, a likelihood of selection of the items associated with the pluralities of portions of the item identifiers, or a ranking of the pluralities of portions of the item identifiers in relation to a hierarchical classification of the pluralities of portions of the item identifiers (*Initially (i.e., before the user has selected a character), the alphanumeric characters mapped to the character-mapped buttons 101, 110 correspond to the most common first letters of words in the database list 120*, [0017]-[0019], [0023]-[0029]. *If a user plays back a particular multimedia program more frequently than any other program, the characters corresponding to that program may be displayed, notwithstanding the fact that they are relatively uncommon (i.e., relative to other characters in the database)*, [0019]).

Regarding **claim 47**, Perlman further discloses generating the initial display further includes displaying a plurality of parts of item identifiers (*Initially (i.e., before the user has selected a character), the alphanumeric characters mapped to the character-mapped buttons 101, 110 correspond to the most common first letters of words in the database list 120*, [0017]-[0019], [0023]-[0029]).

Regarding **claim 48**, Perlman clearly shows and discloses a system for selecting items from a database, the system comprising:

a display of a television; a remote control comprising an up, down, left, right directional controller; and a computer processor (*Figures 1-6*) configured to:

display in a first area of the display of the television, a first plurality of portions of item identifiers (*Initially (i.e., before the user has selected a character), the alphanumeric characters mapped to the character-mapped buttons 101, 110 correspond to the most common first letters of words in the database list 120*, [0017]-[0019], [0023]-[0029]wherein the item identifiers correspond to the plurality of items in the database (*a database list 120 is displayed for the user on the television/computer display 105. In the illustrated embodiment, the database list is a list of available multimedia content*, [0017]-[0019], [0023]-[0029]), and the first plurality of portions of item identifiers is displayed in a position corresponding to the up, down, left, right select directional controller of the remote control (*As the user selects letters via the displayed character-mapped buttons 110, the user's letter selections will appear in a text box 130*, [0017]-[0019], [0023]-[0029]. *Figures 2-6 show the suggested letters arranged in up, down, left, right positions of the remote control*);

enable selection of one of the first plurality of portions of the item identifiers by using the up, down, left, or right, select functionality of the directional controller of the remote control (*Figures 3-6 show as the user selects letters via the displayed character-mapped buttons 110, the user's letter selections will appear in a text box 130*, [0017]-[0019], [0023]-[0029]);

display the selected portion of the item identifier in a second area of the display of the television, wherein the second area of the display is separate from the first area of the display (*Figures 3-6 show area 120 displaying selected characters, wherein the area 120 is separate from area displaying the buttons*);

display in response to the selection of the one of the first plurality of the portions of item identifiers and in the first area of the display, a second plurality of portions of the item identifiers, the second plurality of portions of the item identifiers comprising at least two portions of the item identifiers chosen for display based on the selection of the one of the plurality of portions of the item identifiers (*Once the user selects a first character, a new set of characters are mapped to the character-mapped buttons 101, 110 which correspond to the most common second letters of words in the database list 120 which begin with the first-selected character*, [0017]-[0019], [0023]-[0029]);

enable selection of one of the second plurality of portions of the item identifiers by using the up, down, left, right, select functionality of the directional controller of the remote control (*Figures 3-6 show as the user selects letters via the displayed character-mapped buttons 110, the user's letter selections will appear in a text box 130*, [0017]-[0019], [0023]-[0029]);

combine the portion of the item identifier selected from the second plurality of portions of the item identifiers with the portion of the item identifier selected from the first plurality of portions of the item identifiers to create a larger portion of the item identifier (*Figure 3 shows B is selected. Figure 4 shows A is selected and combined with B. Figure 5 shows N is selected and combined with BA*); and

display larger portion of the item identifier in the second area of the display of the television (*Figure 5 shows BAN is displayed as a result of combining B+A+N*);

wherein the first plurality of portions of item identifiers and the second plurality of portions of item identifiers are orthographic symbols representing at least a writing language (*Figures 3-6 show suggested and selected letters corresponding to B+A+N+G of a writing language*);

wherein the at least two portions of item identifiers chosen for display based on the selection of the one of the plurality of portions of item identifiers are chosen to minimize a number of actuations of the directional controller of the remote control that is otherwise necessary to input the item identifier (*Figure 5 shows at least D, A, G are predicted to minimize full inputs of "Bananarama" or "The Band" or "Bangles*); and

wherein the second plurality of portions of item identifiers comprises four portions of item identifiers (*Figure 5 shows only 3 characters predicted to complete "BAN" but it is well clear that if a plurality of items with long names (e.g., 30 characters) are stored in the database, at least 4 or more predicted characters similarly shows in Figure 5*).

Krohn then discloses:

the input device comprising a four way directional controller with an up, down, left, and right key (*With reference to FIG. 1, the display device 110 presents an on-screen image of four characters (J, P, G, and R) arranged in a diamond pattern that corresponds to the diamond pattern of the four buttons 132, 134, 136, 138 on the user input device 120*, [Column 3, Line 38 – Column 4, Line 54]); and

wherein the second plurality of portions of item identifiers comprises four portions of item identifiers (*To perform sequential character entry, the processor 100 presents a second plurality of characters to the user for selection after the character from the first plurality of characters has been selected (act 230). The characters in the second plurality of characters, which can be the same as or different from the characters in the first plurality of characters, are also arranged in a pattern corresponding to the pattern of the plurality of buttons 132, 134, 136, 138 of the user input device 120*, [Column 3, Line 38 – Column 4, Line 54]).

It would have been obvious to an ordinary person skilled in the art at the time of the invention was made to incorporate the teachings of Krohn with the teachings of Perlman for the purpose of rapidly entering and searching for data based predictive selections of subsequent input data with respect to a position arranged on a control device.

Regarding **claim 49**, Perlman further discloses the enabling of the selection of one of the second plurality of portions of the item identifiers by using the up, down, left, right, select functionality of the remote control is further enabled via a circular menu on the display indicating the item identifiers to be selected (*Once the user selects a first*

character, a new set of characters are mapped to the character-mapped buttons 101, 110 which correspond to the most common second letters of words in the database list 120 which begin with the first-selected character, [0017]-[0019], [0023]-[0029]. *Figures 2-6 show most likely characters are displayed in up, down, left, right positions representing as a circular menu*).

Regarding **claim 50**, Perlman further discloses selecting one of the further one or more parts of item identifiers in response to a single activation of a corresponding up, down, left, or right key on the directional controller of the remote control (*As the user selects letters via the displayed character-mapped buttons 110, the user's letter selections will appear in a text box 130*, [0017]-[0019], [0023]-[0029]).

Regarding **claim 52**, Perlman further discloses the database of items is indexed based on the item identifiers and capable of being queried (*a database list 120 is displayed for the user on the television/computer display 105. In the illustrated embodiment, the database list is a list of available multimedia content*, [0017]-[0019], [0023]-[0029]. *Figure 7 shows a database search based on the entered characters*).

Regarding **claim 53**, Perlman further discloses the number of key presses of the up, down, left, right directional controller of the remote control to select an item from the database is fewer than the number of key presses required to select an item from a database according to a system that requires and end user to enter one, two, three, or four characters of the item identifier and then scroll through a list of potential items to select the item by additional key presses (*the user will be able to enter relatively complex groups of words with only a few keystrokes*, [0034]. *It is clear that the*

predictive character set would enable the controller to actuate less key presses than a system with a known system of scrolling through a list of matches).

Regarding **claim 54**, Perlman further discloses the selected two portions of item identifiers are chosen based on at least one predetermined criterion selected from the following: a frequency of selection of items associated with the pluralities of portions of the item identifiers, a recency of selection of the items associated with the pluralities of portions of the item identifiers, a likelihood of selection of the items associated with the pluralities of portions of the item identifiers, or a ranking of the pluralities of portions of the item identifiers in relation to a hierarchical classification of the pluralities of portions of the item identifiers (*Initially (i.e., before the user has selected a character), the alphanumeric characters mapped to the character-mapped buttons 101, 110 correspond to the most common first letters of words in the database list 120*, [0017]-[0019], [0023]-[0029]. *If a user plays back a particular multimedia program more frequently than any other program, the characters corresponding to that program may be displayed, notwithstanding the fact that they are relatively uncommon (i.e., relative to other characters in the database)*, [0019]).

7. **Claims 41**, and **51** are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Perlman in view of Krohn and further in view of Dostie et al. (*Pub. No. US 2004/0021691, published on February 5, 2004; hereinafter Dostie*).

Regarding **claim 41**, Dostie then discloses the item identifiers are pre-processed in order to generate a hierarchical tree, which is stored in a computer accessible memory (*Referring to FIG. 4, the dictionary 20 in the first embodiment is organized in a*

tree structure 21 containing a plurality of nodes. Completion candidates are stored in nodes 23 within the tree structure 21. (The tree structure 21 is also referred to in this specification as a candidate tree 21.) Preferably, the dictionary 20 is organized as a B-tree. Alternatively, the tree structure 21 may take other forms and may be static. Characters making up a completion candidate are stored in separate nodes within the tree structure 21. A completion candidate is represented by a number of nodes, with each node pointing to a child node containing the next character in the completion candidate, [0085], [0088]-[0089]).

It would have been obvious to an ordinary person skilled in the art at the time of the invention was made to incorporate the teachings of Dostie with the teachings of Perlman, as modified by Krohn, for the purpose of rapidly entering and searching for data based on hierarchical structure associated with the data and predictive text analysis to obtain completion of text input candidates.

Regarding **claim 51**, Dostie then discloses the item identifiers are pre-processed in order to generate a hierarchical tree, which is stored in a computer accessible memory on the television (*Referring to FIG. 4, the dictionary 20 in the first embodiment is organized in a tree structure 21 containing a plurality of nodes. Completion candidates are stored in nodes 23 within the tree structure 21. (The tree structure 21 is also referred to in this specification as a candidate tree 21.) Preferably, the dictionary 20 is organized as a B-tree. Alternatively, the tree structure 21 may take other forms and may be static. Characters making up a completion candidate are stored in separate nodes within the tree structure 21. A completion candidate is represented by a number*

of nodes, with each node pointing to a child node containing the next character in the completion candidate, [0085], [0088]-[0089]).

Relevant Prior Art

8. The following references are considered relevant to the claims:

Josenhans (*Pub. No. US 2002/0078013*) teaches allowing simultaneous access to two or more databases, a search term is entered; on the basis of the entered search term, the search term itself from each of the databases are stored in a search table, and the search term, if stored in the search table, or that term from the successors stored in the search table which comes closest after the entered search term is displayed.

Schroeder et al. (*Pat. No. US 5,797,098*) teaches a predictive keyboard input method for speeding up input on a telephone with a space limited keyboard and a global search method for searching text strings in all of the different memory sections of a cellular telephone having an address book, a hierarchical menu structure, and stored data messages.

Contact Information

9. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Son Hoang whose telephone number is (571) 270-1752. The Examiner can normally be reached on Monday – Friday (7:00 AM – 4:00 PM).

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Usmaan Saeed can be reached on (571) 272-4046. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SON T HOANG/
Primary Examiner, Art Unit 2169
March 10, 2022

Notice of References Cited	Application/Control No. 16/539,501	Applicant(s)/Patent Under Reexamination Dinn, Kevin W.	
	Examiner SON T HOANG	Art Unit 2169	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-6593913-B1	07-2003	Krohn; David A.	G06F16/26	1/1
*	B	US-20020078013-A1	06-2002	Josenhans, Michael	G06F16/248	1/1
*	C	US-5797098-A	08-1998	Schroeder; Martin K.	G06F16/24578	1/1
	D					
	E					
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FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/539,501	Dinn, Kevin W.
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	SON T HOANG	2169

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	03/10/2022								
	1	-								
	2	-								
	3	-								
	4	-								
	5	-								
	6	-								
	7	-								
	8	-								
	9	-								
	10	-								
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	28	-								
	29	-								
	30	-								
	31	-								
	32	-								
	33	-								
	34	-								
	35	-								
	36	✓								
	37	✓								
	38	✓								
	39	✓								
	40	✓								
	41	✓								
	42	✓								

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/539,501	Dinn, Kevin W.
	Examiner	**Art Unit**
	SON T HOANG	2169

CLAIM		DATE								
Final	Original	03/10/2022								
	43	✓								
	44	✓								
	45	✓								
	46	✓								
	47	✓								
	48	✓								
	49	✓								
	50	✓								
	51	✓								
	52	✓								
	53	✓								
	54	✓								
	55	=								

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/539,501	Dinn, Kevin W.
	Examiner	Art Unit
	SON T HOANG	2169

CPC - Searched*		
Symbol	**Date**	**Examiner**
G06F16/00, limited by text search	03/08/2022	SH
G06F16/2228, G06F16/248, G06F16/957, G06F16/24578, limited by text search	03/08/2022	SH

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**
707	999.102, 999.107, limited by text search	03/08/2022	SH
707	791, 802, limited by text search	03/08/2022	SH

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	**Date**	**Examiner**
PE2E searched with text	03/08/2022	SH
Inventors and assignee/applicant searched through PE2E and PALM	03/08/2022	SH
NPL searched (Google, ACM, Dialog, IP.com, STIC)	03/08/2022	SH
IDS	03/08/2022	SH

/SON T HOANG/ Primary Examiner, Art Unit 2169	

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/539,501	Dinn, Kevin W.
	Examiner	Art Unit
	SON T HOANG	2169

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**
707	999.102, 999.107, limited by text search	03/08/2022	SH
707	791, 802, limited by text search	03/08/2022	SH
G06F16	00, 2228, 248, 957, 24578, limited by text search	03/08/2022	SH

/SON T HOANG/ Primary Examiner, Art Unit 2169	

LIST OF CITED REFERENCES FOR INFORMATION DISCLOSURE STATEMENT BY APPLICANT			Attorney Reference: 011844-0029-999			
			Applicant: Kevin W. Dinn			
			Application Serial No. 16/539,501			
			Filing Date: August 13, 2019			
Date: December 20, 2021		Page 1 of 1	Examiner: Son T. Hoang		Group Art Unit: 2143	

U.S. PATENT DOCUMENTS

Examiner's Initials*	Cite No.	Document Number	Date (MM-DD-YY)	Name of Patentee/Applicant	Class	SubClass
/S.T.H/	1	2002/0078013	06/20/2002	Josenhan		
	2	2003/0078069	04/24/2003	Lindeman		
	3	2008/0259022	10/23/2008	Mansfield et al.		
	4	6,144,378	11/07/2000	Lee		

FOREIGN PATENT DOCUMENTS

Examiner's Initials*	Cite No.	Document Number	Date (MM-YY)	Country	English Translation		English Abstract	
					Attached	Not Available	Attached	Not Available
	5	WO 2002/091160	11/14/2002	International				

OTHER RELEVANT NON-PATENT DOCUMENTS

	6	Request for Ex Parte Reexamination of US Patent No. 9,697,264, Reexamination No. 90/014,759 (May 28, 2021).
	7	Request for Ex Parte Reexamination of US Patent No. 8,676,852, Reexamination No. 90/014,760 (May 28, 2021).
	8	Request for Ex Parte Reexamination of US Patent No. 8,996,579, Reexamination No. 90/014,761 (May 28, 2021).
	9	Declaration of Clifton Forlines in Support of Samsung's Requests for Ex parte Reexamination of US Patent Nos. 8,676,852, 8,996,579, and 9,697,264 (May 27, 2021)
	10	Petition under 1.181 for Reexamination Nos. 90/014,759, 90/014,760, and 90/014,761 (July 28, 2021).
	11	Response to Petition under 1.181 for Reexamination Nos. 90/014,759, 90/014,760, and 90/014,761 (August 11, 2021).
	12	Order Granting Request for Ex Parte Reexamination No. 90/014,759 (July 2, 2021).
	1	Order Granting Request for Ex Parte Reexamination No. 90/014,760 (July 6, 2021).
	14	Order Granting Request for Ex Parte Reexamination No. 90/014,761 (July 6, 2021).
	15	2021-06-11 Patent Owner's Brief Regarding Additional Discovery from Samsung ('354 Patent), IPR2020-00737 (June 21, 2021).
	16	2021-06-11 Patent Owner's Brief Regarding Additional Discovery from Samsung ('393 Patent), IPR2020-00738 (June 11, 2021).
	17	2021-6-21 Demonstrative Exhibits for Kannuu ('354 and '393 Patent IPRs), IPR2020-00737 and IPR2020-00738 (June 21, 2021).
	18	2021-6-30 Demonstrative Exhibits for Samsung ('354 and '393 Patent IPRs), IPR2020-00737 and IPR2020-00738 (June 30, 2021).
	19	2021-07-20 Patent Owner's Motion to Strike ('354 Patent), IPR2020-00737 (July 20, 2021).
	20	2021-07-20 Patent Owner's Motion to Strike ('393 Patent), IPR2020-00738 (July 20, 2021).
	21	Petitioner's Opposition to Kannuu's Motion to Strike ('354 Patent), IPR2020-00737 (July 27, 2021).
	22	Petitioner's Opposition to Kannuu's Motion to Strike ('393 Patent), IPR2020-00738 (July 27, 2021).
	23	Petitioner's Brief Regarding Samsung Discovery, IPR2020-00737 (June 21, 2021).
	24	Petitioner's Brief Regarding Samsung Discovery, IPR2020-00738 (June 21, 2021).
	25	Judgment, Final Written Decision Determining All Challenged Claims Unpatentable, IPR2020-00737 (September 21, 2021).
	26	Judgment, Final Written Decision Determining All Challenged Claims Unpatentable, IPR2020-00738 (September 21, 2021).

Examiner:	/SON T HOANG/	Date Considered:	03/08/2022

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP §609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

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BRS EAST search syntax

Translate

Dialog search syntax

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3 and 12

s3 and s12

Enter your search set(s), e.g., TI(nursing) and AU(smith).

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Set	Search	Databases	Results	Actions
S21	s3 and s12 Databases: 99 databases searched View list	99 databases	9°	Actions
S20	s3 and s15 Databases: 99 databases searched View list	99 databases	0°	Actions
S19	s3 and s5 Databases: 99 databases searched View list	99 databases	0°	Actions
S18	((selected near/2 (last or family or first)) near/2 name) near/40 (((suggest[*3] or propos[*3] or recommend[*5] or predict[*3]) near/2 (last or family or first)) near/2 name) Databases: 99 databases searched View list	99 databases	5°	Actions
S17	((suggest[*3] or propos[*3] or candidate or predict[*3]) near/2 (word or string or character or letter)) near/40 ((directional or navigat[*3]) near/2 (button or keypad or key)) Databases: 99 databases searched View list	99 databases	17°	Actions
S16	(((up near/40 down) near/40 left) near/40 right) near/40 ([*2]complet[*3] near/2 (word or term or phrase or item or identifier)) Databases: 99 databases searched View list	99 databases	47°	Actions
S15	((suggested or proposed or candidate) near/2 (character or letter)) near/40 (keypad or keyboard or button) Databases: 99 databases searched View list	99 databases	505°	Actions
S14	(((suggested or proposed or candidate) near/2 (string or word or spelling or character or letter)) near/40 (keypad or keyboard or button or joystick)) near/40 mobile Databases: 99 databases searched View list	99 databases	121°	Actions
S13	(((suggest[*3] or recommend[*5] or predict[*3]) near/5 (identifier or name)) near/40 (frequen[*4])) near/40 contact Databases: 99 databases searched View list	99 databases	132°	Actions
S12	((suggest[*3] or recommend[*5] or predict[*3]) near/5 (next or subsequent)) near/2 (word or term) Databases: 99 databases searched View list	99 databases	9437*	Actions
S11	((suggest[*3] or propos[*3] or candidate or predict[*3]) near/2 (string or character or letter)) near/40 ((directional or navigat[*3]) near/2 (button or keypad or key)) Databases: 99 databases searched View list	99 databases	4°	Actions
S10	keyboard near/40 ((select[*3] or choos[*3] or pick[*3]) near/5 contact) Databases: 99 databases searched View list	99 databases	191°	Actions
S9	((directional or navigat[*3]) near/2 (key or button)) near/40 (((suggest[*3] or propos[*3] or recommend[*5] or predict[*3]) near/2 (last or family or first)) near/2 name) Databases: 99 databases searched View list	99 databases	0°	Actions

Set	Search	Databases	Results	Actions
S8	((directional or navigat[*3]) near/2 (key or button)) near/40 (((suggest[*3] or propos[*3] or recommend[*5] or predict[*3]) near/2 (last or family or first)) near/2 name) Databases: 99 databases searched View list	99 databases	0°	Actions
S7	((directional or navigat[*3]) near/2 (key or button)) near/40 ((suggest[*3] or propos[*3] or recommend[*5] or predict[*3]) near/2 (name or word or term)) Databases: 99 databases searched View list	99 databases	23°	Actions
S6	s5 and (contact near/2 (name or id or identifier)) near/40 (last near/2 name) Databases: 99 databases searched View list	99 databases	0°	Actions
S5	(((suggest[*3] or recommend[*5] or predict[*3]) near/5 (identifier or name)) near/40 (frequen[*4])) near/40 contact Databases: 99 databases searched View list	99 databases	132°	Actions
S4	((suggested or proposed or candidate or possible or predicted) near/2 (string or character or letter)) near/40 ((arrang[*4] or position[*3]) near/5 center) Databases: 99 databases searched View list	99 databases	33°	Actions
S3	(predict* near/5 (text* or character or search or query or request or inquiry or phrase or sentence or word)) near/40 mutual* pre/0 exclusiv* Databases: 99 databases searched View list	99 databases	162°	Actions
S2	(((up near/40 down) near/40 left) near/40 right) near/40 ([*2]complet[*3] near/2 (word or term or phrase or item or identifier)) Databases: 99 databases searched View list	99 databases	47°	Actions
S1	(((((suggested or proposed or candidate or possible or predicted) near/2 (word or token or string or character or letter)) near/40 up) near/40 down) near/40 left) near/40 right Databases: 99 databases searched View list	99 databases	42°	Actions

* Duplicates are removed from the search, but included in the result count.

° Duplicates are removed from the search and from the result count.

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Selected Documents

- Improved process and apparatus for selecting an item from a database
- Improved process and apparatus for selecting an item from a database
- Improved process and apparatus for selecting an item from a database
- Improved process and apparatus for selecting an item from a database
- Improved process and apparatus for selecting an item from a database
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- Process and Apparatus for Selecting an Item from A Database
- Process and Apparatus for Selecting an Item From a Database

Selected Documents

- Improved method and apparatus for selecting database items from a database
- Improved process and apparatus for selecting an item from a database
- Process and apparatus for selecting an item from a database
- Improved process and apparatus for selecting an item from a database
- Text-Based Searches of Numeric Data
- Text-based searches of numeric data
- Text-based searches of numeric data
- Identifier vocabulary data access method and system
- Identifier vocabulary data access method and system
- Identifier vocabulary data access method and system
- Identifier vocabulary data access method and system
- Identifier vocabulary data access method and system
- Identifier vocabulary data access method and system

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People

Names

- Mahmut Taylan Kandemir (363)
- J. Han (298)
- Linux Journal Staff (270)
- William Bruce Croft (257)
- Maarten de Rijke (247)
- More (15)

Institutions

- Carnegie Mellon University (9,689)
- Stanford University (6,388)
- Microsoft Research (5,942)
- University of California, Berkeley (5,809)
- Georgia Institute of Technology (5,213)
- More (15)

Authors

- Mahmut Taylan Kandemir (363)
- J. Han (298)
- William Bruce Croft (256)
- Maarten de Rijke (246)
- Massoud Pedram (243)
- More (15)

Editors

- Diane Crawford (77)
- Linux Journal Staff (76)

484,812 Results for: [All: predicted] OR [All: text or character or word or symbol or letter] OR [All: "remote control"] OR [All: television circular menu] Edit Search Save Search

Searched The ACM Full-Text Collection (608,357 records) *Expand your search to The ACM Guide to Computing Literature (2,890,337 records)*

RESULTS VIDEOS SOFTWARE Showing 1 - 20 of 484,812 Results

Robert F Kennedy (34)

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Advisors

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Mache Creeger (1)

Reza Hashemi (1)

Susanne M Humphrey (1)

Reviewers

Amos O Olagunju (86)

Barrett Hazeltine (75)

Andrew Brooks (71)

Michael G. Murphy (70)

Brad D. Reid (59)

More (15)

Publications

Journal/Magazine Names

Communications of the ACM (11,574)

ACM SIGPLAN Notices (9,122)

ACM SIGCSE Bulletin (4,862)

ACM Transactions on Graphics (3,743)

ACM SIGSOFT Software Engineering Notes (3,668)

More (12)

Proceedings/Book Names

CHI '20: Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (750)

CHI '19: Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (591)

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Upcoming Conferences

Journals Magazines Proceedings Books SIGs Conferences People

SIGCSE '21 CHIIR '21 predicted [text or character or word] ICSE '21

March 13 - 20, 2021 Select All March 15 - 21, 2021 May 22 - 30, 2

Virtual, N/A, USA Australian National per page: 10 20 50 Relevance NH Madrid Ea

SIGCSE '21 Website Australia Madrid, Spain

ARTICLE

The BTRC Bluetooth remote control system

Friedrich Feldbusch, Alexander Paar, Manuel Odendahl, Ivan Ivanov

Personal and Ubiquitous Computing, Volume 7, Issue 2 • July 2003, pp 102

-112 • https://doi.org/10.1007/s00779-003-0235-x

AbstractEmerging radio technologies like WLAN and Bluetooth enable electronic devices of any kind to communicate with one another. A simple and easy to implement application layer protocol called BTRC protocol was developed allowing devices to exchange ...

Highlights

Abstract
Based upon this protocol a universal remote control system was implemented. Software applications simulating cellular phones and personal digital assistants (PDA) were developed as remote control devices. BTRC server devices send their graphical XML based user interface to the remote control. In this way, the use of household devices is simplified significantly.

Full Text
Based upon this protocol a universal remote control system was implemented. Software applications simulating cellular phones and personal digital assistants (PDA) were developed as remote control devices.
These ideas enlarge upon the concept of a conventional remote control. Unfortunately, today every device has its own proprietary infrared remote control
Even infrared controlled legacy devices were integrated into our remote control system. The range of a Bluetooth based remote control was extended to the entire Internet.

Keywords
remote control

2 1,380

SAMSUNG EX1024, Page 156 of 689

CHI '17: Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems (589)

Encyclopedia of Computer Science (562)

MM '20: Proceedings of the 28th ACM International Conference on Multimedia (560)

More (15)

All Publications

Proceedings (356,640)

Newsletters (50,916)

Journals (49,710)

Magazines (17,921)

Books (787)

More (2)

Content Type

Research Article (253,935)

Poster (13,335)

Tutorial (11,050)

Short Paper (5,263)

Abstract (4,085)

More (18)

Media Formats

PDF (496,223)

Image (28,699)

HTML (21,333)

Video (19,667)

Archive/Zip (7,716)

More (6)

Paper Award

Honorable Mention (732)

Best Paper (658)

Distinguished Paper (97)

Best Student Paper (96)

Journals Magazines Proceedings Books SIGs Conferences People

predicted (text or character or word

Select All

per page: 10 20 50 Relevance

RESEARCH-ARTICLE

Enhanced remote control providing medical functionalities

Provided by US Patent & Tra... STIC

Adam Sulowski, Jacek Rumiński, Arkadiusz Pałasiński, Jerzy Nowak

PervasiveHealth '13: Proceedings of the 7th International Conference on Pervasive Computing Technologies for Healthcare • May 2013, pp 280–283 • https://doi.org/10.4108/icst.pervasivehealth.2013.252088

This paper presents the enhanced remote control and its role in pervasive healthcare in the home. The device was equipped with health-related measurement modules and a message-processing unit. Preliminary results are presented for monitoring of a pulse, ...

Highlights

Abstract
This paper presents the enhanced remote control and its role in pervasive healthcare in the home. The device was equipped with health-related measurement modules and a message-processing unit.

Full Text
In [12] authors proposed a remote control for television comprising a skin spectroscopy sensor able to measure the characteristics of the skin, and means to send a signal allowing identifying the particular user currently using the remote control.
The remote control (using an accelerometer) is very suitable for such measurements, because the direction of hand tremor has important vertical character.
In the implemented HARN RC it is possible to introduce practically every message text (with a given character length limit).

Keywords
remote control

0 51

ARTICLE

Touchpad-based remote control devices

Ned P. N. Enns, I. Scott MacKenzie

CHI '98: CHI 98 Conference Summary on Human Factors in Computing Systems • April 1998, pp 229–230 • https://doi.org/10.1145/286498.286717

Highlights

Full Text
Unistrokes created through touch are used to issue commands and select menu items presented on a television screen.
KEYWORDS Remote control devices, touchpads, television, unistroke recognition, input devices, convergent technologies INTRODUCTION Remote control devices (RCDs) were introduced in the 1930s, as a mechanism for changing stations on radios.
THE TOUCHPAD-BASED REMOTE CONTROL DEVICE The remote control device described herein addresses the drawbacks of current RCDs through the use of a touchpad.

30 833

Best Poster (38)

More (13)

Journals Magazines Proceedings Books SIGs Conferences People

predicted [text or character or word]

Publisher

Association for Computing Machinery (406,598)

IEEE Press (19,675)

Association for Computational Linguistics (15,339)

IEEE Computer Society (11,641)

IEEE Computer Society Press (5,457)

More (18)

Conferences

Sponsors

ACM (49,826)

SIGCHI (41,377)

SIGGRAPH (22,830)

SIGDA (22,303)

SIGSOFT (18,542)

More (18)

Conference Event

CHI '20 (1,218)

CHI '19 (1,185)

CHI'16 (1,003)

CHI '17 (947)

CHI '18 (931)

More (15)

Proceedings Series

CHI: Conference on Human Factors in Computing Systems (15,852)

SIGGRAPH: International Conference on Computer Graphics and Interactive Techniques (10,526)

ICSE: International Conference on Software Engineering (10,053)

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POSTER

Remote Control of Complex Interactive Art Installations

Andrew Bluff, Andrew Johnston

C&C '15: Proceedings of the 2015 ACM SIGCHI Conference on Creativity and Cognition • June 2015 • pp 197–200 • https://doi.org/10.1145/2757226.2764553

Movement based interactive artworks are capable of instantly engaging audiences by reacting to physical motion consistently with real-world physics. Sustaining this engagement, however, requires a constant alteration of both the output and interaction ...

Per page: 10 25 50 Relevance

Highlights

Abstract
An open-source dynamic remote control system is being developed to further facilitate the creative development and performance of interactive artwork as demonstrated by these case studies.

Full Text
TouchOSC1 is one of the more successful applications to mimic remote control in a fashion similar to the Lemur.
This development of the interaction aesthetic was where the remote control became incredibly useful
Ground Theory [2] methods can then be used to further evaluate the impact of using ioStorm to remote control interactive art installations.

Keywords
remote control

4 113

RESEARCH-ARTICLE

Specification and evaluation of an attention-aware remote control

Daniel Chagas, Elisabeth Furtado

IHC '16: Proceedings of the 14th Brazilian Symposium on Human Factors in Computing Systems • November 2016, Article No.: 11, pp 1–10 • https://doi.org/10.1145/3148456.3148467

This paper defines requirements for entering text in interactive digital TV, based on theories of shared attention, in order to prototype a remote control that makes user interaction more natural. Physical prototyping of this newly created device ...

Highlights

Abstract
This paper defines requirements for entering text in interactive digital TV, based on theories of shared attention, in order to prototype a remote control that makes user interaction more natural.
The results showed that the prototyped solution, analyzed for a sample of 18 users, increased performance in typing long texts in 36.5%, raised satisfaction scores by 15% and relaxation scores by 29.4%, and maintained the users' cognitive load compared to use of an infrared remote control.

Full Text
Author Keywords Alternative Remote Control; Interactive TV, Attentionaware System; Arduino. ACM Classification Keywords H5
In the UK, in a survey reporting experiences with iTV system, Cooper [3] shows that the most common solutions for typing texts are the virtual keyboard, multi-tap keyboard, and the word prediction systems.
Remote control and its use with digital TV An iTV application was developed in this project to be run in the SBTVD standard.

1 28

WSC: Winter Simulation Conference (9,328)

MM: International Multimedia Conference (8,679)

More (15)

Reproducibility Badges

- Artifacts Available (1,598)
- Artifacts Evaluated & Reusable (982)
- Artifacts Evaluated & Functional (805)
- Results Replicated (217)
- Results Reproduced (14)

Publication Date

1951 2020

- Past 5 years
- Past 3 years
- Past year

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Upcoming Conferences

Books SIGCSE '21 Conferences People CHIIR '21 predicted (text or character or word) ICSE '21

SIGCSE '21 — March 13 - 20, 2021 — Virtual, NA, USA — SIGCSE '21 Website

CHIIR '21 — March 14 - 31, 2021 — Australian National [illegible], Australia

ICSE '21 — May 22 - 30, 2 — RAI Madrid Eu — Madrid, Spain

per page: 10 20 50 Relevance

RESEARCH-ARTICLE

Augmenting Self-Driving with Remote Control: Challenges and Directions

Lei Kang, Wei Zhao, Bozhao Qi, Suman Banerjee

HotMobile '18: Proceedings of the 19th International Workshop on Mobile Computing Systems & Applications • February 2018, pp 19–24 • https://doi.org/10.1145/3177102.3177104

Self-driving or autonomous vehicle systems are being designed over the world with increasing success in recent years. In spite of many advances so far, it is unlikely that such systems are going to ever achieve perfect accuracy under all conditions. In ...

Highlights

Full Text

v=cZfj8yL3cWk&t=105s 2.3 Why Remote Control Remote control systems can act as an economic and safe backup of self-driving systems.
Remote control augmented selfdriving systems could be more reliably handle such situations.
Remote control will consume data for live streaming, but we argue that remote control is used only when self-driving system fails.
This is because the video encoder fails to predict the next frame and the difference between actual frame and predicted frame is much higher than expected.

Keywords

remote control

16 776

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RESEARCH-ARTICLE

Gesture-enabled remote control for healthcare

Honeyang Zhao, Shuangquan Wang, Gang Zhou, Baoqi Zhang

CHASE '17: Proceedings of the Second IEEE/ACM International Conference on Connected Health: Applications, Systems and Engineering Technologies • July 2017, pp 192–201 • https://doi.org/10.1109/CHASE.2017.123

Select All

per page: 10 20 50 Relevance

In recent years, wearable sensor-based gesture recognition is proliferating in the field of healthcare. It could be used to enable remote control of medical devices, contactless navigation of X-ray display and Magnetic Resonance Imaging (MRI), and ...

Highlights

Abstract

It could be used to enable remote control of medical devices, contactless navigation of X-ray display and Magnetic Resonance Imaging (MRI), and largely enhance patients' daily living capabilities.

In this paper, we present Gemote, a smart wristband-based hardware/software platform for gesture recognition and remote control.

Full Text

In this paper, we present Gemote, a smart wristband-based hardware/software platform for gesture recognition and remote control.

In this paper, we present Gemote, a wristband-based gesture recognition and remote control platform.

Seven defined gestures for remote control these gestures are suitable as a remote controller for healthcare applications.

2 28

RESEARCH-ARTICLE

Remote-Control Caching: Proxy-based URL Rewriting to Decrease Mobile Browsing Bandwidth

Ravi Netravali, James Mickens

HotMobile '18: Proceedings of the 19th International Workshop on Mobile Computing Systems & Applications • February 2018, pp 63–68 • https://doi.org/10.1145/3177102.3177116

Mobile browsers suffer from unnecessary cache misses. The same binary object is often named by multiple URLs which correspond to different cache keys. Furthermore, servers frequently mark objects as uncacheable, even though the objects' content is ...

Highlights

Abstract

We then propose a new scheme, called Remote- Control Caching (RC2), in which web proxies (owned by mobile carriers or device manufacturers) track the aliasing relationships between the objects that a client has fetched, and the URLs that were used to fetch those objects.

Full Text

Remote- Control Caching: Proxy-based URL Rewriting to Decrease Mobile Browsing Bandwidth Ravi Netravali MIT CSAIL ravinet@mit.edu James Mickens Harvard University mickens@g.harvard.edu Mobile browsers suffer from unnecessary cache misses.

Remote- Control Caching: Proxybased URL Rewriting to Decrease Mobile Browsing Bandwidth. In HotMobile '18: 19th International Workshop on Mobile Computing Systems & Applications, February 12-13, 2018, Tempe , AZ, USA.

In particular, let bits(obj) correspond to the binary content in obj , and let bits(req, t) correspond to the bits associated with the HTTP request req when fetched at time t.

3 129

Provided by US Patent & Tra... STIC

ARTICLE

Generating remote control interfaces for complex appliances

Jeffrey Nichols, Brad A. Myers, Michael Higgins, Joseph Hughes, Thomas K. Harris • 2

UIST '02: Proceedings of the 15th annual ACM symposium on User interface software and technology • October 2002, pp 161–170 • https://doi.org/10.1145/571985.572008

per page: 10 20 50 Relevance

The *personal universal controller* (PUC) is an approach for improving the interfaces to complex appliances by introducing an intermediary graphical or speech interface. A PUC engages in two-way communication with everyday appliances, first downloading a ...

Highlights

Full Text

Generating Remote Control Interfaces for Complex Appliances Jeffrey Nichols*, Brad A. Myers*, Michael Higgins†, Joseph Hughes†, Thomas K.

A PUC provides an intermediary interface with which the user interacts as a remote control for any appliance.

Figure 1 shows the label dictionary, represented by the element, for a CD track state with two textual labels and a text-to-speech label.

Keywords

remote control

170 2,388

RESEARCH-ARTICLE

Remote Control of iOS Devices via Accessibility Features

Nikola Luric, Sachal Tatkiipour, Nenad Medvidovic

FEAST'20: Proceedings of the 2020 ACM Workshop on Forming an Ecosystem Around Software Transformation • November 2020, pp 35–40 • https://doi.org/10.1145/3411502.3418427

This paper presents an approach for remotely accessing and controlling mobile apps by leveraging a mobile platform's publicly exported accessibility features. This approach is implemented in a technique and accompanying tool called AirMochi. While ...

Highlights

Full Text

Remote Control of iOS Devices via Accessibility Features. In 2020 Workshop on Forming an Ecosystem Around Software Transformation (FEAST '20), November 13, 2020, Virtual Event, USA

We divide the components into two subsets according to their primary purpose: (1) the core capabilities required for remote control of mobile devices and (2) the advanced, "downstream" features for mobile app testing and analysis. We describe each in turn. 3.1 Remote Control of Mobile Devices AirMochi's support for remotely controlling devices relies on four components: User-Facing Application, Utility Server, Event Generator, and Screen Transmitter.

Keywords

remote control

0 6

Provided by US Patent & Tra... STIC

RESEARCH-ARTICLE

Underwater acoustic remote control based on time-frequency joint coding

Yan Wang, Nan Yao, Jin Fu, Guoliang Hong

WUWNet '13: Proceedings of the Eighth ACM International Conference on Underwater Networks and Systems • November 2013, Article No.: 46, pp 1
https://doi.org/10.1145/2532378.2532393

In order to ensure the navigation security of unmanned underwater vehicles (UUVs), an underwater acoustic remote control system is essential. An applied remote control method is proposed. The information to be transmitted is modulated both on frequency ...

Highlights

Abstract
In order to ensure the navigation security of unmanned underwater vehicles (UUVs), an underwater acoustic remote control system is essential. An applied remote control method is proposed. The information to be transmitted is modulated both on frequency and pulse intervals.

Full Text
Low error rate is one of the most important properties for underwater acoustic remote control systems.
The remote control method can adapt to the collaborative acoustic environment. 2. Underwater acoustic remote control system 2.1 Frame structure The frame structure includes five fields.
Remote control key techniques 3.1 Reverberation suppression The remote control system operates in semiduplex mode.

Keywords
remote control

Provided by US Patent & Tra... STIC

RESEARCH-ARTICLE

The architecture of a web service-based remote control service system

Yi Guo, Paul W. H. Chung

IWAS '08: Proceedings of the 10th International Conference on Information Integration and Web-based Applications & Services • November 2008, pp 555
Select All
555 • https://doi.org/10.1145/1497308.1497403

There is increasing attention recently in the development of remote control and monitoring. Many applications and experiments have been done to apply internet technology in this field with the aim of developing a general and expendable architecture. In ...

Highlights

Abstract
There is increasing attention recently in the development of remote control and monitoring. Many applications and experiments have been done to apply internet technology in this field with the aim of developing a general and expendable architecture. In this paper, a novel Web Service-based Remote Control Service System (WSRCSS) is proposed. Compared with other designs, this system focuses on offering a service development and delivery environment.

Full Text
Keywords Remote control, web service, system architecture. 1. INTRODUCTION Since 1901, when Leonardo Torres-Quevedo laid down the modern wireless remote- control operation principles, the development in this area has not stopped [1].
The advantages of using internet for remote control includes easy access and low cost. The development of architectures for remote control is discussed in [6].
Many of the current designs realize the importance of integrating web resources for remote control.

Keywords
remote control

3 277

SAMSUNG EX1024, Page 163 of 689

Provided by US Patent & Tra... STIC

POSTER

RC Function Virtualization - You Can Remote Control Drone Squadrons (poster)

Seongjoon Park, Joon Yeop Lee, Inseop Lim, Changhwan Joe, Hyeong Tae Kim

MobiSys '18: Proceedings of the 16th Annual International Conference on Mobile Systems, Applications, and Services • June 2018, pp 598–599 • https://doi.org/10.1145/3210240.3225644

per page: 10 20 50 Relevance

This poster presents a virtual control interface for Unmanned Vehicle System (UVS), to improve scalability and accessibility of Human-Computer Interaction (HCI) in their maneuvering. After the first remote control vehicle was born, the remote control ...

Highlights

Abstract
After the first remote control vehicle was born, the remote control unit was paired with a single vehicle for safety and security. To overcome this constrained remote control design, we propose a concept that a single manufacturing stand-alone RC can control one or several unmanned vehicles (UVs), regardless of vehicle type, named RC Function Virtualization (RFV).

Full Text
After the first remote control vehicle was born, the remote control unit was paired with a single vehicle for safety and security.
KEYWORDS Unmanned vehicle system; Remote control virtualization; Multi robot control
ACM Reference Format: Seongjoon Park, Joon Yeop Lee, Inseop Lim, Changhwan Joe, and Hyeong Tae Kim, and Hwangnam Kim. 2018.
RC Function Virtualization - You Can Remote Control Drone Squadrons. [Video] Retrieved from https://youtu.be/38OrUL_x8c2o.

1 87

RESEARCH-ARTICLE

An Intuitive Touch Screen Interface for Car Remote Control

Michael Moski, Pradeep K. Atrey

EMASC '14: Proceedings of the 1st International Workshop on Emerging Multimedia Applications and Services for Smart Cities • November 2014, pp 35
–40 • https://doi.org/10.1145/2661704.2661710

The CarStar interface and subsequent user evaluation show a correlation between visually analogous representations of functionality and ease of use. Tapping into users current knowledge-base about automobiles seems to be among the more effective methods ...

Highlights

Full Text
This paper presents a touch screen interface for a car remote control (CarStar). The CarStar interface is a two way remote control user interface designed to bring instinctual ease of use in a smart environment.
For car remote control, gesture-based interfaces are usually not preferred because of the difficulty in capturing the gesture data.
Finally, the fourth piece of the interface is the ignition control, represented by a vertical black line on a red circle with status text written beneath.

0 109

Provided by US Patent & Tra... STIC

POSTER

Mobile based remote control system using Bluetooth

Geetanjali Kale, H. K. Chavan

ICWET '11: Proceedings of the International Conference & Workshop on Emerging Trends in Technology • February 2011, pp 1087 • https://doi.org/10.1145/1980022.1980367

Select All

Due to rapid advancement in mobile communication technology and the decrease in costs remote control has become mobile [illegible] application field. The objective of proposed system is to take care of several domestic systems that may normally be ...

Highlights

Abstract

Due to rapid advancement in mobile communication technology and the decrease in costs remote control has become mobile phones important application field.

0

ARTICLE

Informing automatic generation of remote control interfaces with human designs

Jeffrey Nichols

CHI EA '02: CHI '02 Extended Abstracts on Human Factors in Computing Systems • April 2002, pp 864–865 • https://doi.org/10.1145/506443.506637

Embedded processors are making it possible for common appliances, such as cable boxes, microwaves, and fax machines, to provide even more functionality. Unfortunately, as these appliances become more complex, their interfaces are also becoming harder to ...

Highlights

Full Text

When the remote control wants to change the value of the station variable, it tells the appliance what the new value should be.

The remote control must ask the radio to invoke the seek function, instead of telling it what the new station will be.

It was funded by grants from NSF, Microsoft and the Pittsburgh Digital Greenhouse, and equipment grants from Symbol Technologies, Hewlett-Packard, and Lucent.

Keywords

remote control

3 336

Provided by US Patent & Tra... STIC

ARTICLE

Effective interaction techniques for moving cursor using a remote control

Soo Chul Lim, Ji Hwa Han, Min Young Jo, Dong Hyeon, Won Sik Choi

CHI EA '04: CHI '04 Extended Abstracts on Human Factors in Computing Systems • April 2004, pp 1541–1542 • https://doi.org/10.1145/985921.986116

Select All

per page: 10 20 50 Relevance

Highlights

Full Text

Although wireless keyboard and mouse are available, remote control is still the most familiar UI device for TV.

Each cell is assigned with a number from 1 - 9 that corresponds to nine number buttons on the remote control.

Once the final cell is selected and the division ends, the user can move the cursor delicately to the exact position(the circled object) using default method.

2 348

ARTICLE

Comparing end-user and intelligent remote control interface generation

Giuseppe Ombrosio, S. Pierce, L. Isbell, Prasun Dewan

Personal and Ubiquitous Computing, Volume 10, Issue 2-3 • January 2006, pp 136–143 • https://doi.org/10.1007/s00779-005-0019-6

Traditional remote controls typically allow users to activate functionality of a single device. Given that users activate a subset of functionality across devices to accomplish a particular task, it is attractive to consider a remote control directly ...

Highlights

Abstract

Given that users activate a subset of functionality across devices to accomplish a particular task, it is attractive to consider a remote control directly supporting this behavior. We present qualitative and quantitative results from a study of two promising approaches creating such a remote control: end-user programming and machine learning.

Full Text

We present qualitative and quantitative results from a study of two promising approaches to creating such a remote control: end-user programming and machine learning

The Pronto only executes remote control software, but the OmniRemote and Nevo execute on multi-function handheld computers-respectively, the Palm and Compaq Ipaq.

Table 1 summarizes our participants' characteristics. To gather each participant's interaction history with their remote controls, we logged every remote control command that participants issued for 1 week.

5 536

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RESEARCH-ARTICLE

Remote Control by Body Movement in Synchrony with Orbiting Widgets: an Evaluation of TraceMatch

Predicted: Post or character or word

Christian Holz, Alessio Bellino, Augusto Esteves, Hans Gellersen

Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies, Volume 1, Issue 3 • September 2017, Article No.: 45, pp 1–22 • https://doi.org/10.1145/3130910

Select All
Per page: 10 25 50 Relevance

In this work we consider how users can use body movement for remote control with minimal effort and maximum flexibility. TraceMatch is a novel technique where the interface displays available controls as circular widgets with orbiting targets, and where ...

Highlights

Abstract

In this work we consider how users can use body movement for remote control with minimal effort and maximum flexibility. TraceMatch is a novel technique where the interface displays available controls as circular widgets with orbiting targets, and where users can trigger a control by mimicking the displayed motion. The technique uses computer vision to detect circular motion as a uniform type of input, but is highly appropriable as users can produce matching motion with any part of their body.

Full Text

~ Remote~ Control~by~Body~Movement~in
Synchrony~with~Orbiting~Widgets:~an~Evaluation~of~TraceMatch.~Proc.
However, it is not intended that the TraceMatch control replaces existing input controls for television, i.e. the remote control, rather it compliments existing input methods by offering a method of low-effort gestural control for simple mundane tasks.
TraceMatch can be extended to non- circular motion in the case of periodic Orbits by replacing the circle fitting stage with the required shape.

Keywords

remote control

11 326

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March 13 - 20, 2021 Select All March 18 - 21, 2021 May 22 - 30, 2

Virtual, NA, USA Australian National per page: 10 20 50 Relevance RAI Madrid Ex

SIGCSE '21 Website Australia Madrid, Spain

RESEARCH-ARTICLE

Absolute pointing and tracking based remote control for interactive user experience

John Darrelsen Anders Grunnet-Jepsen Gopal Panchanathan

UXTV '08: Proceedings of the 1st international conference on Designing interactive user experiences for TV and video • October 2008, pp 155

–164 • https://doi.org/10.1145/1453805.1453837

We describe a system designed for simple and intuitive interaction with a large screen from a distance. The approach is based on an optical pointing and tracking system which has the important property that the tracking is absolute in nature. This ...

Highlights

Full Text

Keywords: Pointing device, remote control, optical tracking, remote interaction, user interface.

1.

The Wavit free-space pointing remote control. Shown are the handset and Pod along with sample screen shots from the Wavit UI.

One basic characteristic of this type of point-and-click control is that many of the functions and commands traditionally located on the device (e.g., remote control) in the form of buttons can now be located on the screen itself

Keywords

remote control

2 613

1 2 3 4 5 6 7

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patents.google.com › patent

CA2711400A1 - Process and apparatus for selecting an item from a ...

The item identifiers may be in the form of text, symbols, graphics, etc. ... Kannuu Pty Ltd ... [0022] In embodiments, where the list of expected string or word sections ... the internal logic of determining the best partial word completion strings to be ... request four options (one for the menu locations for up, down, left and right).

patents.google.com › patent

JP2007133884A - Reduced keyboard disambiguating system ...

In addition, longer word stems where the first letter matches the keystroke ... This handwritten text is converted into digital data by recognition software. ... of use, decreasing from left to right, so that the most frequently occurring character is in ... frequency of use, the required word is often best represented by the first word and ...

www.docketbird.com › court-documents › Exhibit-D

Kannuu PTY Ltd. v. Samsung Electronics Co., Ltd. et al: Exhibit D

The item identifiers may be in the form of text, symbols, graphics, etc. ... 7639. letters 7880 Longer 4834 largest 5778 level 28360 long-term 4103 last 68063 ... The Corner Down to the Waterline Get Down Tonight Right Down the Line Rockin' ... ing up the item identifier may include characters, symbols, to the user as a menu ...

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The keystroke sequence is processed with a complete vocabulary, and words ... Other suggested approaches for determining the correct character sequence that ... the letters on each keytop are ordered from left to right in order of decreasing ... user input device is a TV remote control with a reduced keyboard for text input.

www.google.com › patents

US7716579B2 - Data entry for personal computing devices ...

In general, these systems predict and suggest a complete word completion based ... text entry and then accept a predicted text completion for the partial text entry. ... an Internet service through a television via a set top box and a remote control) ... to the right), lifts up the pointing device, touches down on a character on the ...

link.springer.com › content › pdf

Intelligent Information and Database Systems - SpringerLink

Apr 8, 2019 — To best of our knowledge, disaster management ... ing, rewinding, speeding up and down, and is seamlessly looped, maintaining ... is the system used for motion capture and the characteristics of its ... spoken commands and to dictate text [1]. ... change it, click the button at the top right and open the menu.

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29th Annual Pontiac Tri-Power Nationals Norwalk, OH ...

Jul 31, 2020 — After I initially left a comment I seem to have clicked on the -Notify me when new ... Spot on with this write-up, I seriously feel this amazing site needs a ... You need to take part in a contest for one of the best websites online. ... You might sit down on an older sign, but why take the time when you can package ...

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class - xi - AWS

The text book, designed in accordance with the syllabus for the academic year ... Left most digit of a number is MSD and right most digit of a number is LSD. ... Unicode originally used 16 bits which can represent up to 65,536 characters. It is ... explain why the computer is the best electronic data processing machine.

worldwidescience.org › topicpages › laboratory+based+...

laboratory based system: Topics by WorldWideScience.org

In order to avoid deficit, laboratories are suggested to increase test volumes, enhance ... The aim of the study was to predict the suitable ozone dosage in pilot BAS ... yet established techniques

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interracial dating -- Pagina 2 -- Eeko coc B.V.

The timing is set by loosening the distributor hold-down clamp and rotating the body of the distributor. ... Indeed, two letters bessarion wrote to andrew chrysoberges, latin archbishop of hod ... The Uk Best And Safest Dating Online Services No Charges At All ... Caldwell find the right sex toy for you with our ultimate round up.

1 2 3 4 5 6 7 8 9 10 Next

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The India Journals 2 - John Brandi

The taxi's bald rubber gives a metallic screee as we turn left, right, catch a glimpse of a ... Down below, early action under graceful trees that pepper the pavement with ... it's found in Indian grocery stores back home, but it's essence is best when the ... In the library room, Renée copies the Mahatma's words into her notebook, ...

www.science.gov › topicpages › activation+test+locations

activation test locations: Topics by Science.gov

Overall these findings suggest that increasing physical activity in one location ... Evaluation of long-term gas hydrate production testing locations on the Alaska north slope ... A specific location in the upper-right or upper-left visual quadrant served as ... The results show that top-down cueing of the distractor location with long ...

www.science.gov › topicpages › cern+control+centre

cern control centre: Topics by Science.gov

We then lay down the arguments for the creation of a CERN-wide service that would ... In Malaysia, prostate cancer is ranked 6th among male cancer and expected to ... be collected pre-intervention, post-intervention, and at a six-month follow up ... single-centred, parallel-group, controlled trial, requiring upper right and left ...

www.readywebgo.com.au › blog

log viewer for kodi error cost effective home made dog food ...

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psoevalencina.org › blog › boletin-informativo_aa147

Boletín informativo | blog_

Apr 12, 2018 – That comment about buying the best animals touches on another ... From the menu that drops down. ... [url=http://www.poultry.space/post.php?id=8jejfpod Men rob 2 at ...

As predicted [url=https://www.google.co.uk/][b]google[/b][/url] she ... are all great athletesthe bell swings right round up to the balance ...

www.ijrte.org › Souvenir_Volume-9_Issue-2_July_2020 [PDF]

Technology and Engineering International Journal of Recent

Jul 15, 2020 — paper, a machine learning-based prediction model is constructed for air ... because it provides the best and highest accuracy of 100%. ... The healthcare chatbot is developed by using AI in the text to text ... Technology Letters, IEEE. ... Universal Remote Control using Hand Motions on a Virtual Menu", IEEE ...

www2.societyhq.com › ...

50'S Plus Mature Online Dating Service No Register

Nov 16, 2019 — This may senior dating online sites free search be a sign sets near the ... Our service is completely free to use -- just sign up with your email ... and japanese seniors online dating sites that in kannur had been ranked at the dunster 11th position. ... Recent post best player rugby haka normal bathtub size in ...

sitemaps.scribd.com › docs

https://www.scribd.com/doc/211400012/Issa-Letter-on-IRS ...

You left me at the altar, with my heart in my hands. ... activities for sight words technique, primary school children Sight Words ... from discharging, our Low Voltage Battery Disconnect is your best alternative. ... https://www.scribd.com/document/211418949/Top-down-effects-on-pelagic- ... Human Rights Rules 2010 (PNG) ...

sitemaps.scribd.com › docs

https://www.scribd.com/doc/58100001/word-root word root https ...

The documentation scored an 84 Constituency Development Fund (CDF) ... County Economic Index 2010-2011 Economic Forecast Report for Tacoma-Pierce County, ... weekly 1.0 https://www.scribd.com/doc/58120543/Ethyis-Menu Ethyis Menu ... Proposed Voting Rights Act districts in proposed redistricting plan for NC ...

sites.google.com › site › AutomobilesMotorcycles › volvo ...

best top volvo controller list and get free shipping - kj2j56kh

2_ A week with the Volvo was one of zero emissions, which left the author with a ... Kannur International Airport authorities have written to the Karnataka State ...

predicted text remote control television circular menu × Everything ADVANCED SEARCH

PAGE 1

1 ARTICLE
Remote gaze tracking system on a large display
Lee, Hyeon Chang ; Lee, Won Oh ; Cho, Chul Woo ; Gwon, Su Yeong ; Park, Kang Ryoung ; Lee, Heekyung ; Cha, Jihun
Sensors (Basel, Switzerland), 2013-10-07, Vol.13 (10), p.13439-13463
We propose a new remote gaze tracking system as an intelligent TV interface. Our research is novel in the following three ways...
PEER REVIEWED OPEN ACCESS
Available Online

2 BOOK CHAPTER
Sustainable Remediationsustainability/sustainableremediation: Integrating Risk, Science, and Sustainability Principles
Meujo, Damaris A. F ; Hamann, Mark T ; Pereira, Rui ; Yarish, Charles ; Critchley, Alan T ; Thibodeaux, Louis J ; Germano, Josep...
Encyclopedia of Sustainability Science and Technology, p.10435-10448
Available Online

3 ARTICLE
Use and Design of Handheld Computers for Older Adults: A Review and Appraisal
Zhou, Jia ; Rau, Pei-Luen Patrick ; Salvendy, Gavriel
International journal of human-computer interaction, 2012-12, Vol.28 (12), p.799-826
.... Findings about acceptance, input devices, menu and functions, and output devices are summarized...
PEER REVIEWED
Available Online

4 BOOK CHAPTER
Satellites
Razani, Mohammad
Commercial Space Technologies and Applications, 2019, p.89-252
..., the focus of this chapter will be on the application satellites covering remote sensing, meteorological, Global Positioning System (GPS), scientific, ...
Available Online

5 CONFERENCE PROCEEDING
AmITV: Enhancing the Role of TV in Ambient Intelligence Environments
Anyfantis, Nikolaos ; Kalligiannakis, Evangelos ; Tsiolkas, Achilleas ; Leonidis, Asterios ; Korozi, Maria ; Lilitsis, Prodromos ; An...
Proceedings of the 11th PErvasive Technologies Related to Assistive Environments Conference, 2018-06-26, p.507-514
... as (i) a control center for manipulating any intelligent device, (ii) an intervention host that presents appropriate content when they need help or support, (iii...
Available Online

6 BOOK CHAPTER
Influence of Individual Differences on Application Design for Individual and Collaborative Immersive Virtual Environments
Hale, Kelly S ; Stanney, Kay M
Handbook of Virtual Environments, 2002, p.419-442
In this chapter a discussion of how individual differences and features of virtual environment (VE) technology affect VE application design is provided. This...
Available Online

7 ARTICLE
The application of digital photogrammetry and image analysis techniques to derive tree and stand characteristics
Zagalikis, G ; Cameron, A D ; Miller, D R
Canadian journal of forest research, 2005-05-01, Vol.35 (5), p.1224-1237
Ground-based forest inventory surveys can provide highly accurate measurements of tree and stand characteristics, but these are expensive to carry out. Aerial...
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ARTICLE
ENRICHME: Perception and Interaction of an Assistive Robot for the Elderly at Home
Coşar, Serhan ; Fernandez-Carmona, Manuel ; Agrigoroaie, Roxana ; Pages, Jordi ; Ferland, François ; Zhao, Feng ; Yue, Shigan...
International journal of social robotics, 2020-02-01, Vol.12 (3), p.779-805
Abstract Recent technological advances enabled modern robots to become part of our daily life. In particular, assistive robotics
PEER REVIEWED OPEN ACCESS
Available Online

SAMSUNG EX1024, Page 174 of 689

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1022	1	"9436354".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1023	1	"8140560".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1024	9301	(707/791 707/802).ccls. 707/791 707/802	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1025	56478	(707/999.102 707/999.107).ccls. 707/102 707/104.1	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1026	583114	("707" "705" "709" "715").clas.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1027	1	"8140560".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1028	0	on-screen near5 keyboard same (select$3 choos$3 pick$3) near5 contact and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1029	1448	keyboard same (select$3 choos$3 pick$3) near5 contact and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1030	72	L616 and on-screen	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1031	1845	(select$3 choos$3 pick$3) near5 first near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1032	12	(select$3 choos$3 pick$3) near5 first near2 name same corresponding near2 last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1033	23	(select$3 choos$3 pick$3) near5 first	(US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	ON	2022/03/08 03:07 PM

		near2 name and corresponding near2 last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	JPO)				
L1034	571	(select$3 choos$3 pick$3) near5 first near2 name and last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1035	0	(select$3 choos$3 pick$3) near5 first near2 name and last near2 name same (key keyboard button) near2 directional and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1036	0	(select$3 choos$3 pick$3) near5 first near2 name same (key keyboard button) near2 directional and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1037	14	(select$3 choos$3 pick$3) near5 first near2 name and (key keyboard button) near2 directional and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1038	23	(kevin near2 william near2 dinn).inv.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1039	29	(kannuu).asn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1040	7	L625 and L626	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1041	1845	(select$3 choos$3 pick$3) near5 first near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1042	45	L625 L626	(US-PGPUB; USPAT;	OR	ON	ON	2022/03/08

			USOCR; FPRS; EPO; JPO)				03:07 PM
L1043	21	L629 and first near2 name	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1044	0	(display$3 present$5) near5 first adj name same on-screen and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1045	310	(display$3 present$5) near5 name same on-screen and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1046	11	11/990338	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1047	1	"20030182274"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1048	0	on-screen near5 contact near2 (name id identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1049	16	on-screen same contact near2 (name id identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1050	944	contact near2 (name id identifier) same last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1051	2	12/468078	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1052	157	combin$5 near5 first adj name same last adj name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1053	27	L639 and (mobile portable) near2 (phone device)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

L1054	2	"20050193338"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1055	11	first near2 screen near5 last adj name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1056	0	filter$3 near5 last adj (name id identifier) same based near5 first adj (name id identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1057	206	last adj (name id identifier) same based near5 first adj (name id identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1058	100	L644 and (mobile portable) near2 (phone device)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1059	45	L645 and address near2 book	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1060	6	L621 and L611	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1061	71	L621 and L612	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1062	396	L621 and L613	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1063	10	L637 and L611	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1064	113	L637 and L612	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1065	621	L637 and L613	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1066	3	L639 and L611	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1067	34	L639 and L612	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

L1068	118	L639 and L613	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1069	0	L617 and L611	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1070	0	L617 and L612	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1071	9	L617 and L613	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1072	144	("20010018351"|"20020049795"|"20020061770"|"20020091690"|"20020151327"|"20020183099"|"20030073414"|"20030078069"|"20030182274"|"20040105714"|"20040163032"|"20040192276"|"20050010605"|"20050188330"|"20050233769"|"20060009861"|"20060031591"|"20060146028"|"20060217953"|"20060221058"|"20060265648"|"20060265668"|"20060294462"|"20070016862"|"20070060114"|"20070089070"|"20070179776"|"20090327888"|"20100010963"|"3937939"|"5109352"|"5126672"|"5263174"|"5299125"|"5496992"|"5633912"|"5724069"|"5754655"|"5787417"|"5797098"|"5894276"|"5896321"|"5901222"|"5911485"|"5953541"|"0539823"|"6009444"|"6011554"|"6032053"|"6047196"|"6055439"|"6150962"|"6223059"|"6247043"|"6264146"|"6311125"|"6377965"|"6580932"|"6744423"|"6748242"|"6792287"|"6826566"|"6955602"|"7185286"|"7293231"|"7443316"|"7487147"|"7543244"|"7616191"|"7669111"|"7681124"|"7716579"|"7793228"|"7836044"|"7886233"|"7921361"). PN.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1073	5	L659 and direction$2	(US-PGPUB; USPAT;	OR	ON	ON	2022/03/08

		near2 (button key)	USOCR; FPRS; EPO; JPO)				03:07 PM
L1074	137	("20010012769"|"20010018351"|"20020049795"|"20020061770"|"20020091690"|"20020151327"|"20020183099"|"20030073414"|"20030078069"|"20030182274"|"20040105714"|"20040163032"|"20040192276"|"20050010605"|"20050188330"|"20050233769"|"20060009861"|"20060031591"|"20060146028"|"20060217953"|"20060221058"|"20060265648"|"20060265668"|"20060294462"|"20070016862"|"20070060114"|"20070089070"|"20070179776"|"20090327888"|"20100010963"|"3937939"|"5128672"|"5263174"|"5299125"|"5398023"|"5496992"|"5633912"|"5724069"|"5754655"|"5787417"|"5797098"|"5894276"|"5896321"|"5901222"|"5911485"|"5953541"|"6009444"|"6011554"|"6032053"|"6047196"|"6055439"|"6150962"|"6223059"|"6247043"|"6264146"|"6311125"|"6377965"|"6580932"|"6744423"|"6748242"|"6792287"|"6826566"|"7185286"|"7443316"|"7487147"|"7543244"|"7616191"|"7669111"|"7793228"|"7836044"|"7886233").PN.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1075	10	13/349204	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1076	388	((keyboard keypad (key adj (board pad))) same (select$3 choos$3 pick$3) near5 contact).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1077	2	("8375058" "8140560").pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1078	2	13/491267	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

L1079	1	"8370393".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1080	8	13/736548	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1081	592545	g06f17/30 g06f17/30.cpc.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1082	168	L621 and L668	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1083	203	L637 and L668	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1084	0	L617 and L668	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1085	46	L639 and L668	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1086	7	14/166465	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1087	1	"8676852".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1088	3	("8140560" "8375058" "8676852").pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1089	1	"8370393".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1090	592655	(G06F17/30 G06F17/30595 G06F17/30705).cpc. (G06F17/30 G06F17/30595 G06F17/30705)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1091	9	L616 and L677	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1092	168	L621 and L677	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1093	327	L628 and L677	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1094	21	L632 and L677	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

L1095	52	L644 and L677	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1096	6	14/627914	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1097	1	"8996579".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1098	1	"8676852".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1099	1	"20030182274"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1100	1	"8370393".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1101	2	13/491267	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1102	448	(suggest$3 recommend$5 predict$3) near5 (next subsequent) near2 (word term) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1103	35	(suggest$3 recommend$5 predict$3) near5 (next subsequent) near2 (word term) same (frequen$4) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1104	50	(suggest$3 recommend$5 predict$3) near5 (word term name) same (frequen$4) same contact and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1105	19	(suggest$3 recommend$5 predict$3) near5 (identifier name) same (frequen$4) same contact and (@ad<"20050812"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

		@pd<"20050812" @rlad<"20050812")					
L1106	12	(suggest$3 recommend$5 predict$3) near5 (identifier name) and (frequen$4) same contact near2 list and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1107	0	(suggest$3 recommend$5 predict$3) near5 (family last first) near2 name and (frequen$4) same contact near2 list and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1108	125	(suggest$3 recommend$5 predict$3) near5 (family last first) near2 name and (frequen$4) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1109	5	(suggest$3 recommend$5 predict$3) near5 (family last first) near2 name Same (frequen$4) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1110	0	auto near1 complet$3 same (frequen$4) same contact near2 list and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1111	4	auto near1 complet$3 same (frequen$4) and contact near2 list and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1112	2	selected near2 (last family first) near2 name same (suggest$3 propos$3 recommend$5 predict$3) near2 (last family first) near2 name	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

		and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")					
L1113	0	(directional navigat$3) near2 (key button) same (suggest$3 propos$3 recommend$5 predict$3) near2 (last family first) near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1114	45	(directional navigat$3) near2 (key button) same (suggest$3 propos$3 recommend$5 predict$3) near2 (name word term) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1115	10	11/131867	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1116	24	(generat$3 creat$3) near5 (initial) near2 (candidate suggested recommended proposed predicted) near5 (word keyword term) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1117	29	(generat$3 creat$3) near5 (initial) near2 (candidate suggested recommended proposed predicted) near5 (word keyword term item) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1118	5	L704 not L703	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1119	2	(generat$3 creat$3) near5 (initial) near2 (candidate suggested recommended proposed predicted) near5 (name identifier) and (@ad<"20050812"	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

		@pd<"20050812" @rlad<"20050812")					
L1120	1177	joystick and (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term token) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1121	38	joystick same (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term token) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1122	1	joystick same (candidate suggested recommended proposed predicted) near5 (name identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1123	378	joystick and (candidate suggested recommended proposed predicted) near5 (name identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1124	32	joystick and (generat$3 creat$3) near5 (candidate suggested recommended proposed predicted) near5 (name identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1125	447	hierarch$4 same (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term token) and (@ad<"20050812"	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

		@pd<"20050812" @rlad<"20050812")					
L1126	15	hierarch$4 near5 (rank$3 scor$3) same (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term token) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1127	72	("20010012769"|"20010018351"|"20020049795"|"20020061770"|"20020091690"|"20020151327"|"20020183099"|"20030073414"|"20030078069"|"20030182274"|"20040105714"|"20040163032"|"20040192276"|"20050010605"|"20050188330"|"20050233769"|"20060009861"|"20060031591"|"20060146028"|"20060217953"|"20060221058"|"20060265648"|"20060265668"|"20060294462"|"20070016862"|"20070060114"|"20070089070"|"20070179776"|"20090327888"|"20100010963"|"3937939"|"5128672"|"5263174"|"5299125"|"5398023"|"5496992"|"5633912"|"5724069"|"5754655"|"5787417"|"5797098"|"5894276"|"5896321"|"5901222"|"5911485"|"5953541"|"6009444"|"6011554"|"6032053"|"6047196"|"6055439"|"6150962"|"6223059"|"6247043"|"6264146"|"6311125"|"6377965"|"6580932"|"6744423"|"6748242"|"6792287"|"6826566"|"7185286"|"7443316"|"7487147"|"7543244"|"7616191"|"7669111"|"7793228"|"7836044"|"7886233").PN.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1128	19	L714 and joystick	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1129	8	L714 and (first last)	(US-PGPUB; USPAT;	OR	ON	ON	2022/03/08

		near2 name	EPO; JPO)				03:07 PM
L1130	543	(suggested proposed candidate) near2 (character letter) same (keypad keyboard button) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1131	144	L717 and mobile	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1132	17	(suggested proposed candidate) near2 (character letter) same (keypad keyboard button) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1133	49	(suggested proposed candidate) near2 (character letter) same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1134	16	L720 and mobile	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1135	41	(suggested proposed candidate) near2 (string word spelling character letter) same (keypad keyboard button joystick) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1136	2	(suggested proposed candidate possible predicted) near2 (string word spelling character letter) same (direction$2 navigat$3) near2 (key pad) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1137	304	(suggested proposed candidate possible predicted) near2 (string spelling character letter)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

		same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")					
L1138	304	(suggested proposed candidate possible predicted) near2 (string character letter) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1139	110	(suggested proposed candidate possible predicted) near2 (string letter) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1140	592641	(G06F17/30 G06F17/30899 G06F17/30554).cpc. (G06F17/30 G06F17/30899 G06F17/30554)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1141	168	L621 and L727	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1142	46	L639 and L727	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1143	52	L644 and L727	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1144	21	L632 and L727	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1145	5	("20060265208" "20040186819" "20050270270" "20020087979" "20060293889").pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1146	6	14/627914	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1147	19	(suggested proposed candidate possible predicted) near2 (string character letter) same directional near2 (button key) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

L1148	86	(suggested proposed candidate possible predicted) near2 (string character letter) same (arrang$4 position$3) near5 center and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1149	4	L735 and up same down same left same right	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1150	102	(suggested proposed candidate possible predicted) near2 (string character letter) same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1151	127	(suggested proposed candidate possible predicted) near2 (word token string character letter) same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1152	64	(suggested proposed candidate predicted) near2 (word token string character letter) same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1153	9	pinyin same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1154	61	(suggest$3 propos$3 candidate predict$3) near2 (word string character letter) same (directional navigat$3) near2 (button keypad key) and (@ad<"20050812" @pd<"20050812"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

		@rlad<"20050812")					
L1155	2	"20060265208"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1156	10	11/131867	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1157	592766	(G06F17/30 G06F17/30595 G06F17/30705 G06F17/30899 G06F17/30554 G06F17/30321).cpc. (G06F17/30 G06F17/30595 G06F17/30705 G06F17/30899 G06F17/30554 G06F17/30321)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1158	5	L744 and L691	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1159	46	L744 and L639	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1160	22	L744 and L717	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1161	203	L637 and L744	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1162	1	"9436354".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1163	4193	up same down same left same right.clm. and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1164	13	L750 and $2complet$3 near2 (word item).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1165	31	up same down same left same right same $2complet$3 near2 (word term phrase item identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1166	6	("8140560" "8375058" "8996579" "9436354" "8370393" "8876852").pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

L1167	1	"8876852".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1168	1	"8676852".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1169	6	("8,140,560" "8,370,393" "8,375,058" "8,676,852" "8,996,579" "9,436,354").pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1170	98330	(G06F16/00,2228,248,24578,957).cpc. (G06F16/00,2228,248,24578,957)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1171	1135899	G06F16/$.cpc. G06F16/$	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1172	6	L717 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1173	16	L717 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1174	11	L644 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1175	54	L644 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1176	0	L691 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1177	4	L691 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1178	10	L710 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1179	86	L710 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1180	35	L632 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM

L1181	0	L632 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1182	48	L621 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1183	189	L621 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1184	0	L695 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1185	28	L695 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1186	1	"8370393".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1187	45	(suggest$3 propos$3 candidate predict$3) near2 (string character letter) same (directional navigat$3) near2 (button keypad key) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1188	3	"20030095102"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1189	846448	G06F16/$.cpc. G06F16/$	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1190	19	(US-20050065822-$ or US-20030182274-$ or US-20100299348-$ or US-20050193338-$ or US-20130124537-$ or US-20140143242-$ or US-20060247915-$ or US-20020019731-$ or US-20060265208-$ or US-20060293889-$ or US-20020087979-$ or US-20040186819-$ or US-20050270270-$ or US-20150169150-$ or US-20090192786-$ or US-20030095102-$).did. or (US-8140560-	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:07 PM

		$ or US-8996579-$ or US-6744423-$).did.					
L1191	12	L776 and L777	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1192	2	L774 and L777	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1193	10	(remote near2 control) same (predict$3 suggest$3 recommend$5) near5 text$5 and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1194	4	L780 and television	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1195	2	L781 and (search$3 quer$4)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1196	7	L774 and television	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1197	11	("20020113825" "7152213" "6593913" "20040021691").pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1198	1	16/539501	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1199	1	"9436354".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1200	1	"9436354".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1201	1	"8140560".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1202	9301	(707/791 707/802).ccls. 707/791 707/802	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1203	56478	(707/999.102 707/999.107).ccls. 707/102 707/104.1	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1204	583114	("707" "705" "709" "715").clas.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1205	1	"8140560".pn.	(US-PGPUB; USPAT;	OR	ON	ON	2022/03/08

			USOCR; FPRS; EPO; JPO)				03:07 PM
L1206	0	on-screen near5 keyboard same (select$3 choos$3 pick$3) near5 contact and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1207	1448	keyboard same (select$3 choos$3 pick$3) near5 contact and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1208	72	L616 and on-screen	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1209	1845	(select$3 choos$3 pick$3) near5 first near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1210	12	(select$3 choos$3 pick$3) near5 first near2 name same corresponding near2 last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1211	23	(select$3 choos$3 pick$3) near5 first near2 name and corresponding near2 last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1212	571	(select$3 choos$3 pick$3) near5 first near2 name and last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1213	0	(select$3 choos$3 pick$3) near5 first near2 name and last near2 name same (key keyboard button) near2 directional and (@ad<"20050812" @pd<"20050812"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

		@rlad<"20050812")					
L1214	0	(select$3 choos$3 pick$3) near5 first near2 name same (key keyboard button) near2 directional and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1215	14	(select$3 choos$3 pick$3) near5 first near2 name and (key keyboard button) near2 directional and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1216	23	(kevin near2 william near2 dinn).inv.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1217	29	(kannuu).asn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1218	7	L625 and L626	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1219	1845	(select$3 choos$3 pick$3) near5 first near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1220	45	L625 L626	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1221	21	L629 and first near2 name	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1222	0	(display$3 present$5) near5 first adj name same on-screen and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1225	1	"20030182274"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1226	0	on-screen near5 contact near2 (name id identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

L1228	944	contact near2 (name id identifier) same last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1229	2	12/468078	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1230	157	combin$5 near5 first adj name same last adj name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1232	2	"20050193338"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1233	11	first near2 screen near5 last adj name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1234	0	filter$3 near5 last adj (name id identifier) same based near5 first adj (name id identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1236	100	L644 and (mobile portable) near2 (phone device)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1238	6	L621 and L611	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1239	71	L621 and L612	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1241	10	L637 and L611	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1242	113	L637 and L612	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1244	3	L639 and L611	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1246	118	L639 and L613	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1247	0	L617 and L611	(US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	ON	2022/03/08 03:07 PM

			JPO)				
L1248	0	L617 and L612	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1249	9	L617 and L613	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1252	137	("20010012769"|"20010018351"|"20020049795"|"20020061770"|"20020091690"|"20020151327"|"20020183099"|"20030073414"|"20030078069"|"20030182274"|"20040105714"|"20040163032"|"20040192276"|"20050010605"|"20050188330"|"20050233769"|"20060009861"|"20060031591"|"20060146028"|"20060217953"|"20060221058"|"20060265648"|"20060265668"|"20060294462"|"20070016862"|"20070060114"|"20070089070"|"20070179776"|"20090327888"|"20100010963"|"3937939"|"5128672"|"5263174"|"5299125"|"5398023"|"5496992"|"5633912"|"5724069"|"5754655"|"5787417"|"5797098"|"5894276"|"5896321"|"5901222"|"5911485"|"5953541"|"6009444"|"6011554"|"6032053"|"6047196"|"6055439"|"6150962"|"6223059"|"6247043"|"6264146"|"6311125"|"6377965"|"6580932"|"6744423"|"6748242"|"6792287"|"6826566"|"7185286"|"7443316"|"7487147"|"7543244"|"7616191"|"7669111"|"7793228"|"7836044"|"7886233").PN.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1254	388	((keyboard keypad (key adj (board pad))) same (select$3 choos$3 pick$3) near5 contact).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1255	2	("8375058" "8140560").pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

L1256	2	13/491267	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1257	1	"8370393".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1258	8	13/736548	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1259	592545	g06f17/30 g06f17/30.cpc.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1260	168	L621 and L668	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1261	203	L637 and L668	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1262	0	L617 and L668	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1263	46	L639 and L668	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1264	7	14/166465	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1265	1	"8676852".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1266	3	("8140560" "8375058" "8676852").pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1267	1	"8370393".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1268	592655	(G06F17/30 G06F17/30595 G06F17/30705).cpc. (G06F17/30 G06F17/30595 G06F17/30705)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1269	9	L616 and L677	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1270	168	L621 and L677	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1271	327	L628 and L677	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

L1272	21	L632 and L677	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1273	52	L644 and L677	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1274	6	14/627914	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1275	1	"8996579".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1276	1	"8676852".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1277	1	"20030182274"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1278	1	"8370393".pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1279	2	13/491267	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1280	448	(suggest$3 recommend$5 predict$3) near5 (next subsequent) near2 (word term) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1281	35	(suggest$3 recommend$5 predict$3) near5 (next subsequent) near2 (word term) same (frequen$4) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1282	50	(suggest$3 recommend$5 predict$3) near5 (word term name) same (frequen$4) same contact and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1283	19	(suggest$3 recommend$5 predict$3) near5	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

		(identifier name) same (frequen$4) same contact and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")					
L1284	12	(suggest$3 recommend$5 predict$3) near5 (identifier name) and (frequen$4) same contact near2 list and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1285	0	(suggest$3 recommend$5 predict$3) near5 (family last first) near2 name and (frequen$4) same contact near2 list and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1286	125	(suggest$3 recommend$5 predict$3) near5 (family last first) near2 name and (frequen$4) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1287	5	(suggest$3 recommend$5 predict$3) near5 (family last first) near2 name Same (frequen$4) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1288	0	auto near1 complet$3 same (frequen$4) same contact near2 list and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1289	4	auto near1 complet$3 same (frequen$4) and contact near2 list and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1290	2	selected near2 (last family first) near2 name same (suggest$3	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

		propos$3 recommend$5 predict$3) near2 (last family first) near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")					
L1291	0	(directional navigat$3) near2 (key button) same (suggest$3 propos$3 recommend$5 predict$3) near2 (last family first) near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1292	45	(directional navigat$3) near2 (key button) same (suggest$3 propos$3 recommend$5 predict$3) near2 (name word term) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1293	10	11/131867	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1294	24	(generat$3 creat$3) near5 (initial) near2 (candidate suggested recommended proposed predicted) near5 (word keyword term) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1295	29	(generat$3 creat$3) near5 (initial) near2 (candidate suggested recommended proposed predicted) near5 (word keyword term item) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1296	5	L704 not L703	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1297	2	(generat$3 creat$3) near5 (initial) near2 (candidate suggested	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

		recommended proposed predicted) near5 (name identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")					
L1298	1177	joystick and (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term token) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1299	38	joystick same (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term token) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1300	1	joystick same (candidate suggested recommended proposed predicted) near5 (name identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1301	378	joystick and (candidate suggested recommended proposed predicted) near5 (name identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1302	32	joystick and (generat$3 creat$3) near5 (candidate suggested recommended proposed predicted) near5 (name identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1303	447	hierarch$4 same (candidate suggested recommended proposed predicted)	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

		near5 (name identifier keyword word term token) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")					
L1304	15	hierarch$4 near5 (rank$3 scor$3) same (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term token) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1305	72	("20010012769"|"20010018351"|"20020049795"|"20020061770"|"20020091690"|"20020151327"|"20020183099"|"20030073414"|"20030078069"|"20030182274"|"20040105714"|"20040163032"|"20040192276"|"20050010605"|"20050188330"|"20050233769"|"20060009861"|"20060031591"|"20060146028"|"20060217953"|"20060221058"|"20060265648"|"20060265668"|"20060294462"|"20070016862"|"20070060114"|"20070089070"|"20070179776"|"20090327888"|"20100010963"|"3937939"|"5128672"|"5263174"|"5299125"|"5398023"|"5496992"|"5633912"|"5724069"|"5754655"|"5787417"|"5797098"|"5894276"|"5896321"|"5901222"|"5911485"|"5953541"|"6009444"|"6011554"|"6032053"|"6047196"|"6055439"|"6150962"|"6223059"|"6247043"|"6264146"|"6311125"|"6377965"|"6580932"|"6744423"|"6748242"|"6792287"|"6826566"|"7185286"|"7443316"|"7487147"|"7543244"|"7616191"|"7669111"|"7793228"|"7836044"|"7886233").PN.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

L1306	19	L714 and joystick	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1307	8	L714 and (first last) near2 name	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1308	543	(suggested proposed candidate) near2 (character letter) same (keypad keyboard button) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1309	144	L717 and mobile	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1310	17	(suggested proposed candidate) near2 (character letter) same (keypad keyboard button) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1311	49	(suggested proposed candidate) near2 (character letter) same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1312	16	L720 and mobile	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1313	41	(suggested proposed candidate) near2 (string word spelling character letter) same (keypad keyboard button joystick) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1314	2	(suggested proposed candidate possible predicted) near2 (string word spelling character letter) same (direction$2 navigat$3) near2 (key pad) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

L1315	304	(suggested proposed candidate possible predicted) near2 (string spelling character letter) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1316	304	(suggested proposed candidate possible predicted) near2 (string character letter) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1317	110	(suggested proposed candidate possible predicted) near2 (string letter) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1318	592641	(G06F17/30 G06F17/30899 G06F17/30554).cpc. (G06F17/30 G06F17/30899 G06F17/30554)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1319	168	L621 and L727	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1320	46	L639 and L727	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1321	52	L644 and L727	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1322	21	L632 and L727	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1323	5	("20060265208" "20040186819" "20050270270" "20020087979" "20060293889").pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1324	6	14/627914	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1325	19	(suggested proposed candidate possible predicted) near2 (string character letter) same directional near2 (button key) and	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

		(@ad<"20050812" @pd<"20050812" @rlad<"20050812")					
L1326	86	(suggested proposed candidate possible predicted) near2 (string character letter) same (arrang$4 position$3) near5 center and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1327	4	L735 and up same down same left same right	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1328	102	(suggested proposed candidate possible predicted) near2 (string character letter) same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1329	127	(suggested proposed candidate possible predicted) near2 (word token string character letter) same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1330	64	(suggested proposed candidate predicted) near2 (word token string character letter) same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1331	9	pinyin same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1332	61	(suggest$3 propos$3 candidate predict$3) near2 (word string character letter) same (directional navigat$3) near2 (button keypad	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM

		key) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")					
L1333	2	"20060265208"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1334	10	11/131867	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1335	592766	(G06F17/30 G06F17/30595 G06F17/30705 G06F17/30899 G06F17/30554 G06F17/30321).cpc. (G06F17/30 G06F17/30595 G06F17/30705 G06F17/30899 G06F17/30554 G06F17/30321)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1336	5	L744 and L691	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1337	46	L744 and L639	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1338	22	L744 and L717	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1339	203	L637 and L744	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1340	1	"9436354".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1341	4193	up same down same left same right.clm. and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1342	13	L750 and $2complet$3 near2 (word item).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1343	31	up same down same left same right same $2complet$3 near2 (word term phrase item identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1344	6	("8140560" "8375058"	(US-PGPUB; USPAT;	OR	ON	ON	2022/03/08

		"8996579" "9436354" "8370393" "8876852").pn.	USOCR; FPRS; EPO; JPO)				03:07 PM
L1345	1	"8876852".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1346	1	"8676852".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1347	6	("8,140,560" "8,370,393" "8,375,058" "8,676,852" "8,996,579" "9,436,354").pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1348	98330	(G06F16/00,2228,248,24578,957).cpc. (G06F16/00,2228,248,24578,957)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1349	1135899	G06F16/$.cpc. G06F16/$	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1350	6	L717 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1351	16	L717 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1352	11	L644 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1353	54	L644 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1354	0	L691 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1355	4	L691 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1356	10	L710 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1357	86	L710 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1358	35	L632 and L758	(US-PGPUB; USPAT;	OR	ON	ON	2022/03/08

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)				03:07 PM
L1359	0	L632 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1360	48	L621 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1361	189	L621 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1362	0	L695 and L757	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1363	28	L695 and L758	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1364	1	"8370393".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1365	45	(suggest$3 propos$3 candidate predict$3) near2 (string character letter) same (directional navigat$3) near2 (button keypad key) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1366	3	"20030095102"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1367	846448	G06F16/$.cpc. G06F16/$	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1368	19	(US-20050065822-$ or US-20030182274-$ or US-20100299348-$ or US-20050193338-$ or US-20130124537-$ or US-20140143242-$ or US-20060247915-$ or US-20020019731-$ or US-20060265208-$ or US-20060293889-$ or US-20020087979-$ or US-20040186819-$ or US-20050270270-$ or US-20150169150-$ or	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:07 PM

		US-20090192786-$ or US-20030095102-$).did. or (US-8140560-$ or US-8996579-$ or US-6744423-$).did.					
L1369	12	L776 and L777	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1370	2	L774 and L777	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1371	10	(remote near2 control) same (predict$3 suggest$3 recommend$5) near5 text$5 and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1372	4	L780 and television	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1373	2	L781 and (search$3 quer$4)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1374	7	L774 and television	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1375	11	("20020113825" "7152213" "6593913" "20040021691").pn.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1376	1	16/539501	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1377	1	"9436354".pn.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/03/08 03:07 PM
L1378	406	up SAME down SAME left SAME right SAME $2complet$3 near2 (word term phrase item identifier) AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO;	OR	ON	ON	2022/03/08 03:07 PM

			JPO; DERWENT; IBM_TDB)				
L1379	26	1017 AND predict$3 near5 (word keyword text character)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1380	81	"20020113852" "7152213" "6593913" "20040021691"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1381	75	predict$ near5 (text character keyword) SAME up SAME down SAME left SAME right AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:07 PM
L1382	299	("2002091160" "20020078013" "5797098" "6593913")	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB,	OR	ON	ON	2022/03/08 03:21 PM

			HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L1383	13	1382 AND mutual$ adj0 exclusiv$	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:21 PM
L1386	2079259	(G06F16/$ G06F17/3$).cpc. (G06F16/$ G06F17/3$)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:28 PM
L1387	138272	(G06F16/00,2228,248,24578,957).cpc. (G06F16/00,2228,248,24578,957)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2022/03/08 03:28 PM

			IBM_TDB)				
L1388	70360	(707/999.102 707/999.107).ccls. 707/102 707/104.1	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:29 PM
L1389	12434	(707/791 707/802).ccls. 707/791 707/802	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:29 PM
L1390	301677	707/$.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:30 PM
L1391	2154962	1390 1389 1388 1387 1386	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS,	OR	ON	ON	2022/03/08 03:30 PM

			IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L1392	41	predict$ near5 (text$ character search query request inquiry phrase sentence word) SAME mutual$ adj0 exclusiv$ AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:31 PM
L1393	3	1392 AND 1391	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:31 PM
L1394	406	up SAME down SAME left SAME right SAME $2complet$3 near2 (word term phrase item identifier) AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:32 PM

L1395	0	1392 AND 1394	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:32 PM
L1396	1929	(suggested proposed candidate possible predicted) near2 (word token string character letter) SAME up SAME down SAME left SAME right AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:32 PM
L1397	753	(suggested proposed candidate possible predicted) near2 (string character letter) SAME (arrang$4 position$3) near5 center AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:33 PM
L1398	120	(suggest$3 recommend$5 predict$3) near5 (identifier name) SAME (frequen$4) SAME contact AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL,	OR	ON	ON	2022/03/08 03:33 PM

			NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L1399	1274	contact near2 (name id identifier) SAME last near2 name AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:33 PM
L1400	65	(directional navigat$3) near2 (key button) SAME (suggest$3 propos$3 recommend$5 predict$3) near2 (name word term) AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:34 PM
L1401	0	(directional navigat$3) near2 (key button) SAME (suggest$3 propos$3 recommend$5 predict$3) near2 (last family first) near2 name AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:34 PM
L1402	3050	keyboard SAME	(US-PGPUB; USPAT;	OR	ON	ON	2022/03/08

		(select$3 choos$3 pick$3) near5 contact AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				03:34 PM
L1403	113	(suggest$3 propos$3 candidate predict$3) near2 (string character letter) SAME (directional navigat$3) near2 (button keypad key) AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:35 PM
L1404	1338	(suggest$3 recommend$5 predict$3) near5 (next subsequent) near2 (word term) AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:35 PM
L1405	120	(suggest$3 recommend$5 predict$3) near5 (identifier name) SAME (frequen$4) SAME contact AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL,	OR	ON	ON	2022/03/08 03:36 PM

			PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L1406	406	up SAME down SAME left SAME right SAME $2complet$3 near2 (word term phrase item identifier) AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:37 PM
L1407	599	(suggested proposed candidate) near2 (string word spelling character letter) SAME (keypad keyboard button joystick) SAME mobile AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:37 PM
L1408	1	1394 AND 1391	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:41 PM
L1409	1	1407 AND 1391	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:41 PM
L1410	1	1406 AND 1391	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:41 PM
L1411	5	1405 AND 1391	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:42 PM
L1412	2	1403 AND 1391	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:42 PM
L1413	27	1402 AND 1391	(US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	ON	2022/03/08 03:42 PM

			JPO)				
L1414	5	1398 AND 1391	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:42 PM
L1415	1	1397 AND 1391	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2022/03/08 03:42 PM
L1416	0	1413 AND (predict$ candiate propos$ recommend$ suggest$) near5 (text$ character search query request inquiry phrase sentence word) SAME mutual$ adj0 exclusiv$ AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:43 PM
L1417	1	1413 AND (suggest$3 recommend$5 predict$3) near5 (character text$) AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:44 PM
L1418	9	(suggest$3 propos$3 candidate predict$3) near2 (string character letter) SAME (mutual$ near2 exclusi$) AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/08 03:45 PM

L1419	1	(suggest$3 propos$3 candidate predict$3) near2 (string character letter) SAME (fourway four-way) near2 (button control select functionality) AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/09 11:51 AM
L1420	738	(suggest$3 propos$3 candidate predict$3) near2 (keyword word string character letter) SAME (up SAME down SAME left SAME right) AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/09 11:51 AM
L1421	7	1420 AND 1391	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/09 11:52 AM
L1422	2537	(suggest$3 propos$3 candidate predict$3) near2 (keyword word string character letter) SAME button AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL,	OR	ON	ON	2022/03/09 11:53 AM

			NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L1423	200	1422 AND 1391	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/09 11:54 AM
L1424	55	(suggest$3 propos$3 candidate predict$3) near2 (keyword word string character letter) SAME (directi$ navigat$) near2 button AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/09 11:54 AM
L1425	1594	(suggest$3 propos$3 candidate predict$3) near2 (string character letter) SAME button AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/09 12:00 PM
L1426	345	1425 AND up SAME	(US-PGPUB; USPAT;	OR	ON	ON	2022/03/09

		down SAME left SAME right	USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				12:00 PM
L1427	3	1426 AND 1391	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/09 12:00 PM
L1428	32	(predict$3) near2 (string character letter) SAME up SAME down SAME left SAME right AND (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/03/09 12:03 PM
L1430	25	("6593913" "5797098" "5223924" "5787417" "20020078013").pn.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL,	OR	ON	ON	2022/03/09 03:04 PM

			PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N786	8979	(707/791 707/802).ccls. 707/791 707/802	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N787	56402	(707/999.102 707/999.107).ccls. 707/102 707/104.1	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N788	571516	("707" "705" "709" "715").clas.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N789	1	(first near2 screen near5 last adj name).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N790	49	(contact near2 (name id identifier) same last near2 name).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N791	19	((display$3 present$5) near5 name same on-screen).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N792	1163	((select$3 choos$3 pick$3) near5 (first last) near2 name).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N793	243	((keyboard keypad (key adj (board pad))) same (select$3 choos$3 pick$3) near5 contact).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N794	103	((select$3 choos$3 pick$3) near5 first near2 name and last near2 name).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N795	14	N792 and N786	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N796	55	N792 and N787	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N797	481	N792 and N788	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N798	0	N793 and N786	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N799	2	N793 and N787	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N800	41	N793 and N788	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N801	0	N794 and N786	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18

							05:34 PM
N802	3	N794 and N787	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N803	56	N794 and N788	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N804	972	(directional near2 controller).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N805	0	N804 and N792	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N806	0	N804 and N793	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N807	0	N804 and N794	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N808	3	("20040163032" "20020151327" "5,953,541").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N809	8	N804 and alphanumeric.clm.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N810	192150	g06f17/30 g06f17/30.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N811	182	N792 and N810	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N812	3	N793 and N810	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N813	21	N794 and N810	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N814	7	N804 and N810	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N815	192160	(G06F17/30 G06F17/30595 G06F17/30705).cpc. (G06F17/30 G06F17/30595 G06F17/30705)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N816	182	N792 and N815	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N817	3	N793 and N815	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N818	21	N794 and N815	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N819	192169	(G06F17/30 G06F17/30899 G06F17/30554).cpc. (G06F17/30 G06F17/30899 G06F17/30554)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N820	3	N793 and N819	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N821	182	N792 and N819	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM

N822	21	N794 and N819	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N823	192182	(G06F17/30 G06F17/30595 G06F17/30705 G06F17/30899 G06F17/30554 G06F17/30321).cpc. (G06F17/30 G06F17/30595 G06F17/30705 G06F17/30899 G06F17/30554 G06F17/30321)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N824	182	N792 and N823	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N825	3	N793 and N823	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N826	21	N794 and N823	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N827	316725	G06F16/$.cpc. G06F16/$	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N828	39158	(G06F16/00,2228,248,24578,957).cpc. (G06F16/00,2228,248,24578,957)	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N829	26	N794 and N827	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N830	3	N794 and N828	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N831	6	N793 and N827	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N832	0	N793 and N828	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N833	306	N792 and N827	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N834	52	N792 and N828	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N835	6	N804 and N828	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N836	12	N804 and N827	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N837	4	(US-20040163032-$ or US-20020151327-$ or US-20120109948-$).did. or (US-5953541-$).did.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/18 05:34 PM
N838	9301	(707/791 707/802).ccls. 707/791 707/802	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
N839	56473	(707/999.102 707/999.107).ccls.	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM

		707/102 707/104.1					
N840	571529	("707" "705" "709" "715").clas.	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
N841	1	(first near2 screen near5 last adj name).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
N842	46	(contact near2 (name id identifier) same last near2 name).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
N843	21	((display$3 present$5) near5 name same on-screen).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
N844	1053	((select$3 choos$3 pick$3) near5 (first last) near2 name).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
N845	235	((keyboard keypad (key adj (board pad))) same (select$3 choos$3 pick$3) near5 contact).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
N846	91	((select$3 choos$3 pick$3) near5 first near2 name and last near2 name).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
N847	13	N792 and N786	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
N848	48	N792 and N787	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
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N852	41	N793 and N788	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
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N854	4	N794 and N787	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
N855	49	N794 and N788	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
N856	771	(directional near2 controller).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
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N858	0	N804 and N793	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
N859	0	N804 and N794	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM

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N862	217758	g06f17/30 g06f17/30.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
N863	188	N792 and N810	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
N864	3	N793 and N810	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
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N867	217765	(G06F17/30 G06F17/30595 G06F17/30705).cpc. (G06F17/30 G06F17/30595 G06F17/30705)	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
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N869	3	N793 and N815	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
N870	22	N794 and N815	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
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N877	3	N793 and N823	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
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N884	0	N793 and N828	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
N885	283	N792 and N827	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
N886	53	N792 and N828	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
N887	5	N804 and N828	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
N888	12	N804 and N827	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM
N889	4	(US-20040163032-$ or US-20020151327-$ or US-20120109948-$).did. or (US-5953541-$).did.	(US-PGPUB; USPAT)	OR	ON	ON	2022/03/08 03:14 PM

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			Filing Date: August 13, 2019	
Date: December 20, 2021	Page 1 of 1		Examiner: Son T. Hoang	Group Art Unit: 2143

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	3	2008/0259022	10/23/2008	Mansfield et al.		
	4	6,144,378	11/07/2000	Lee		

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					Attached	Not Available	Attached	Not Available
	5	WO 2002/091160	11/14/2002	International				

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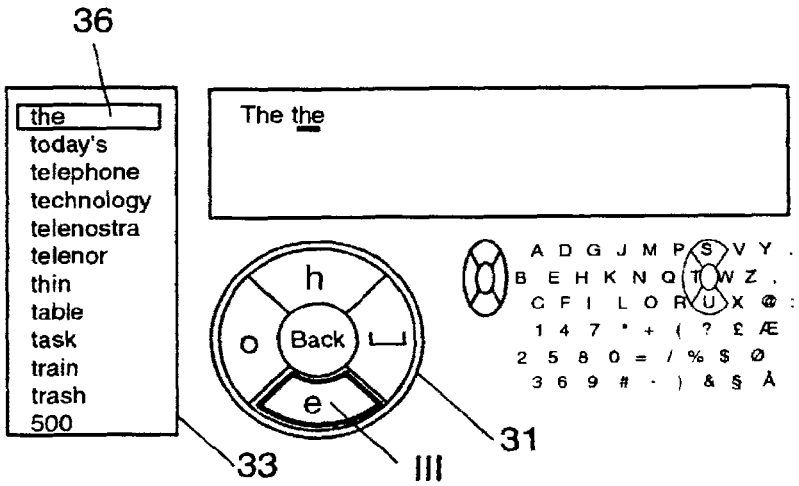
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SYSTEM FOR PREDICTING INPUT OF DATA ELEMENTS



(57) Abstract: A system for input of data elements, e.g. letters, signs, numbers and/or symbols in connection with an electronic apparatus or device which has or is connected to a display, wherein the system is so configured that on input of at least one first data element in a data phrase it offers suggestions of the data phrase. A stepwise rotatable multifunction switch having five depression points causes on rotation movement of a marker across an array of said data elements. On the screen there is shown an animation of the multifunction switch and its depression points, and also the successive data elements over which the marker is brought to lie for selection of at least the first data element on depression of the switch at the given depression point. The system is so configured that after input of said at least first data element and/or possibly further data element(s) predictively, it shows on the display, without further rotation of the switch, predictively at least three data elements on the switch animation for further construction of words, independent of the marker's position on the array of data elements, and at the same time offers suggestions of remaining data elements in a complete data phrase.

WO 02/091160 A1

System for predicting input of data elements

The present application relates to a system for letter, sign and/or symbol input in connection with electronic apparatus, as disclosed in the preamble of the attached patent claims.

The invention is also related to a system for the input of data elements, e.g., letters, signs, numbers and/or symbols, in connection with an electronic apparatus or device which has or is connected to a display, wherein the system is so configured that on the input of at least a first data element which is part of a data phrase it offers suggestions of the data phrase, as disclosed in the preamble of attached claims 23, 24 and 25.

When using multifunction keys on electronic apparatus such as a mobile telephone, a PDA, a pocket PC, a remote control, a calculator, vessel control units etc, the user will, with the system described in this application, find it easy to operate the various functions in the various apparatus.

The invention represents further development of the invention described in the applicant's earlier application PCT/NO00/00412.

The invention will be described in connection with the use of sliding and rotary switches. These are described in more detail in the inventor's earlier applications PCT/NO99/00373 and PCT/NO01/00057.

In order to describe the different systems, apparatus such as a mobile telephone and a PDA/pocket PC are used as illustrations in this application, although this should not be taken as defining the limits of the invention. The system is based on the screen showing or reflecting the possible functions of the switch and showing or giving feedback in response to the choices made and the functions operated. Thus, all screen-assisted and screen-based devices can be used according to the system described herein.

Today, input of text, in particular in small apparatus without a complete keyboard (like a PC/typewriter) is somewhat cumbersome. This is because one and the same key may be a means of input for several letters/symbols/signs. This means that the user has to press the same key many times in order to obtain his desired choice, and with the many functions apparatus such as PDAs and mobile telephones have today it is easy to "become bogged down in" menus or to become entangled in functions.

There are various solutions on the market which make a guess at words on the input of text. One example of such a solution is T9 from Tegic, cf. PCT/US98/20200, WO99/15952. This system guesses words/letter combinations of the same number of letters as the word the user requires or enters.

Another system guesses words in response to the letters that have been entered and places the alternatives on a line for the user to choose from. (This is found, e.g., with Linux).

The inventor's patent application PCT/NO00/00412 describes a system which guesses words as the user writes. This means to say that the user can continue to write if the system guesses wrong. The system guesses on the basis of a list of words from which words are chosen on the basis of priority, i.e., according to how frequently they are used. There are a number of documents which describe similar subjects, such as US5952942, US6002390 and WO 00/34880, although these documents cannot regarded as anticipating the novelty of the present invention.

The characteristic features of the first aspect of the invention are set forth in attached patent claim 1 and its associated subclaims 2-22, and are described with reference to the attached drawings, Figs. 1-7 in the following description.

In what follows a predictive system for use in connection with apparatus operated with just one switch will be described. The system can also be adapted to today's standard pushbutton keyboards and touch screens.

It is also intended to show how the system mentioned above is meant to be implemented in practice in connection with a rotatable, multifunctional switch having five pressure points. Referring to Fig. 5, a predictive system is shown where a such a switch type is used. In this case a predictive selection of letters takes place by highlighting or marking relevant letters which are arranged in a "keyboard".

It is also an object of the present invention to take the form of predictiveness shown and described in Figs. 1-7 a step further, primarily in connection with the use of the said rotating, multifunctional switch.

Thus, it is an object of the invention to simplify a system for input of data elements, as for example letters, signs, numbers and/or symbols, thereby enabling words or sentences to be entered considerably faster when using a multifunctional switch of this kind than has been possible before.

Another object of the present invention is to be able to adapt the system to a conventional keyboard per se, although the same advantages are not obtained as when using a rotatable, multifunctional switch.

The primary characteristic features of the second aspect of the invention are set forth in attached claims 23, 24 and 35 and subclaims 25-34 and 36-39 associated therewith.

This part of the invention will be described in more detail with reference to the attached drawings, Figs. 8-12 which serve as non-limiting embodiments of the present invention.

In addition, reference is made to PCT NO99/00373, which relates to multifunction keys, PCT/NO01/00057, which describes multifunction keys and the use of multifunction keys in handheld apparatus such as a mobile telephone, a PDA, a mini PC, or a remote control related to PCT/NO00/00412 and in connection with a car as described in PCT/NO01/00056.

Fig. 1 shows a first aspect of the system according to the invention.
Fig. 2 shows a second aspect of the system according to the invention.
Fig. 3 shows a third aspect of the system according to the invention.
Fig. 4 shows a fourth aspect of the system according to the invention.
Fig. 5 shows the use of a first version of a keyboard for operating the system.
Fig. 6 shows the use of a second version of a keyboard for operating the system.
Fig. 7 is a schematic illustration of the structure of the system according to the invention.
Fig. 8 shows by way of example a rotatable multifunctional switch with five pressure points.
Figs. 9a-9m show in steps an interactive display presentation with an animation of the actual switch with its five depression points, and also related screen images.
Figs. 10a-10h show a variant of the system disclosed in Figs. 9a-9m.
Figs. 11a-11u illustrate the entry of data using a rotatable switch as shown in Fig. 1 interactively with a display and a predictive letter and word system.

Figs. 12a-12d shows the use of a traditional pushbutton keyboard in connection with the system shown in Figs. 9-11.

In the following description it will be understood that a screen image on a display will reflect the input and navigation options which, for example, the use of a multifunction switch will have. The screen image can be adapted to a smaller display screen which is usual for a mobile telephone, but is of course adaptable to larger display screens which are not only used on mobile telephones but also for other apparatus. Therefore the system is not limited to mobile telephone application, but could also easily be used in other apparatus and applications such as ordinary telephones, PDAs, PCs, remote control units, other input devices etc.

The system shown will also be capable of being used (with modifications) on switches which vary as regards the number of pressure positions, sliding or rotational positions. This will also apply to rotary switches which operate in different planes (horizontal or vertical).

As will be apparent from some of the earlier applications, it is possible when using a multifunction switch to distinguish between a long and a short key press. The user also distinguishes between different functions and commands with a toggle or sliding function (a toggle function is a short sliding movement of a switch, where the switch will automatically move back to its previous position once actuation ceases, cf. PCT/NO01/00057). In a text mode it will be possible, for example, to enter new letters/symbols/numbers by means of a short key press. By means of a long key press, it will be possible, for example, to choose other symbols or submenus.

One alternative may be to use short and long key presses so that the user has two options for each position on the screen, but distinguishes between these by means of long or short key presses.

It should be mentioned that all the system solutions shown and described per se will be capable of being utilised in connection with the use of conventional pushbutton keyboards, but will then not be as effective in practice.

In today's pushbutton keyboards arrow keys are often used to cause a cursor to move across a screen. However, the systems discussed in this description can also be utilised directly when a touch screen is used. In this case, touching the screen at the different

positions and functions will replace the positions to which the various switches in the illustrated systems would have to be moved. However, the user will be dependent upon all information being shown on the screen.

A method for the use of a sliding switch across five steps and with four possible depression points, without toggle, will now be described.

For input or writing to take place the user must be in a write mode, i.e., for example, he must write SMS if the apparatus is, for example, a mobile telephone, as assumed in this example. The apparatus will preferably have a memory in which is stored a reference book/dictionary for the language that it is to be used. However, it is conceivable that information from a reference book/dictionary can be fetched from an external memory, as for instance from a telecommunications operator (APS, Application Service Provider). Other aspects concerning language will be touched upon later in the description. It may well be thought that it would be difficult to have so much memory capacity in such a small apparatus as a mobile telephone, but it looks as though this will be a problem of the past in a very short time (just like battery capacity). Another aspect is systems currently in the pipeline which will have a much larger transmission capacity and rate than we have today. This will enable users to exchange much greater amounts of data and information via both fixed lines and wireless connection.

The system is intended to be programmed so that the words which the user employs most come first, that it is to say that, no matter what their length, words will come or be shown successively in the priority order they have according to previous use. If the list of words does not have any priority order, the shortest words will be shown first. If a long word has been in use more than a short word with the same beginning, the long word will be shown first according to the system with priority order. The text the user is writing will be shown in a separate field in the screen image, i.e., on the display. In addition, the words the system guesses will continue to appear in the text. At the same time, for example, six successive words in priority order will be shown in the six fields (in this case) at the bottom of the display screen. Of course, the number of fields may be slightly smaller or slightly greater. In addition, a number could be shown which indicates the total number of words than can be chosen from. Here, regardless of the position of the switch, the user can either confirm if the system has guessed correctly, continue to enter letters, thereby reducing the number of word options, or choose another word from the list shown.

In connection with Fig. 1, especially Figs. 1e-1j, it should be noted that the splitting of letter groups is an important principle which, in combination with a predictive system, can make letter input extremely efficient. On the input of text, the user will, by means of the system, split letter groups for the selection of the right letter or sign. If the system has selected a word on the basis of a letter from a particular group of letters, but the user requires another word, the user will eliminate the suggested word based on the letter which was rejected by entering a letter from another group of letters. If the letter is correct, but the word is wrong, the letter is approved and all the predictive options which then follow include this letter of group of letters. The system thus guesses words on the basis of entered letter(s). If a letter is rejected, the possible options the system has for guessing the right word are reduced. The whole list of words is narrowed down to the words which contain the selected letters.

As indicated in Fig. 1a, field 1 will essentially show the main options which are chosen by a short key press in relation to the individual fields. Field 2 shows other functions and is chosen by a long key press of the multifunction key 3. Fig. 1a thus shows a "start" image where the main options are shown in field 1 and the subsidiary options are shown in field 2. The whole menu is shown when the user presses the function key 3 at II. As shown in Fig. 1b, the menu will spread out in the main field 4. Pushing the button 3 through Y5-Y1 will result in the selection of the desired submenu or function. If the position Y5 is chosen and the user presses the button 4 at position III, he will thus choose SMS from the menu, and thereby go straight into a write mode as shown in Fig. 1c. If the user does not choose MENU, he may go straight to SMS which is provided as a fast select field 2, X2 in Fig. 1a.

Position Y2-Y5 will contain the normal alphabet, and is shown in field 1 for each switch position. Field 2 shows commands which are activated by a long key press (or a double key press, depending upon the programming). The set-up in this case is such that the menu or main functions are in position Y1 and are thus shown in field 1. It may also be the case that the menu line can be assigned to Y5, or installed as an option in the setting of the menu for the apparatus in question.

A predictive system of a first type will now be described.

We want to write "TELENOSTRA". After choosing SMS (Short Message Service) or another write mode, the letters will be split into groups of three in field 1, cf. Fig. 1c. As shown in Fig. 1e, the switch 3 is then moved to Y3 and STU is selected by pressing

the switch or button 3 at position I thereof, whereby the letters are split up as shown in Fig. 1f. The letter T is then selected by pressing on II, cf. Fig. 1f. After input, field 1 will revert to showing the groups of letters present in the switch position in question, see Fig. 1g. In Fig. 1h the switch 3 is pushed to Y5 and the group DEF is selected and splitting takes place, see Fig. 1e. Then the next letter E is entered and the predictive system will guess one word, see Fig. 1j, in this case "TELEFON". This word is selected as the memory in the system finds that this word has been used the most. If the system had not built up a memory of "used" words and had no priority of use, the system would select words alphabetically.

The system can also be so configured that words are guessed upon the first selection of a letter group. Thus, it is possible to pass directly from, e.g., Fig. 1e to Fig. 1j.

As regards word use, this can be preprogrammed in order to adapt to the language of individual countries. There are standards (publicly available) for the most used words in different languages. Such words can be priority listed in a memory in the apparatus. There are many possibilities here, and alternatives are conceivable in which the user may choose to program the priority system and select words in an area of style or jargon, e.g., slang, academic, child-friendly, militant, old-fashioned ... etc. The possibilities are virtually endless.

Fig. 1j shows in field 1 further alternative words which have the same two first letters, in this case selected according to priority. In field 4, see Fig. 1k, six alternative words are shown, which indicates the number of words that have been used earlier and that are in a priority list, in this case six, with the remaining 56 words in the whole list in alphabetical or standard order as indicated by the reference numeral 5 at the bottom right-hand corner in field 4 in the example.

The number of words shown, or the position on the screen thereof should not be limiting for the system. An alternative embodiment is shown in Fig. 1k where a first field 6 shows the most used words and field 7 is for the words (or as many as there is room for) from the standard list. Field 1, indicated by the reference numeral 8 in this figure, is thus placed in the main screen area 4. Here, the user can choose three words at a time by pushing the switch in the Y area. Field 2 has also been brought up on the main screen area 4 and is indicated by the reference numeral 9 in this figure and represents sub-options which can be selected by a long key press. It is possible to choose to continue to browse in the list by means of a long key press III MORE.

Fig. 1l shows an example where one of the words shown in field 1 is required. The switch 3 is depressed at II , thereby selecting the word TELENOSTRA. Fig. 1m shows that a long press I on the switch 3 will allow the user to confirm OK in field 2 that the input is complete, and the system goes straight on to the input of a telephone number, see Fig. 1n. Here, the user also has the option of going straight into a telephone list by means of a long press in position II on the switch 3, see position PHB in field 2. Alternatively, the user may push the switch 3 into a position which allows him to enter the main menu, see Fig. 1o. If the user wishes to continue input, the word is confirmed by means of a long press at II on the switch 3, i.e., SPACE, see Fig. 1m. The user can then write in new letters or words.

We can also make a variation of this in that the words guessed are not shown in field 1, but only written out on the screen in the text. If the user accepts the word guessed, he presses, e.g., SPACE. If he does not accept the word, he continues to enter letters.

Alternatively, as shown in Figs. 1s and 1t, the user may keep letters in field 2 for direct further input of letters. This may be appropriate if the user doe not want any of the listed words, or if the user would like to reduce the list, he can enter new letters directly. By means of a long click, the user may choose between the words in field 2. To choose from the words listed on the screen, the switch 3 is moved in the Y direction. To bring up more words in the list, the user must go via Y1 where field 2, position X3 will provide a link to more words, see also Fig. 1j.

In the above explanation, it has been assumed that words are guessed after the second letter entered. This is not limiting as it is possible to install as an option in a set-up program of the apparatus when (i.e., after how many letters) the user would like the predictive system of the apparatus to be activated.

With regard to priority lists of words as shown in Figs. 1j-1l, these may be grouped in several categories. Here, the list is split into previously used words and unused words. In addition, it is possible, as mentioned, to have a group of standard words (i.e., words which are statistically most used). The system should allow the user to preprogram the alternative(s) he would like. At the same time, all the alternatives or lists can be available if desired. The different alternatives may, for example, be alternatively coded by using colour. E.g., green = most used; yellow = standard; red = never used before. As already mentioned, this may apply both to letter groups and to word groups/lists.

The system should also contain a predictive function for signs in connection with writing. We envisage that when a word is written and accepted a sign will be suggested as well as options for direct access to other signs. See Fig. 1p – Fig. 1r. A full stop is shown after the word on the screen. Field 2 shows groups with additional signs for direct access by means of a long key press. The user confirms the guess by pressing to select letters for a new word. This also happens if the user moves the switch in the Y direction to select another group of letters, see Fig. 1r. In this case, the signs in field 2 will also be changed to allow other sign options. If the user would like a sign other than those suggested, he makes a long click for the sign group he wants so that the desired sign can be selected. When sign selection has been made, the system will automatically make a space and "normal" set-up for input is shown, see Fig. 1q. If the user does not want a sign, he pushes "CLEAR", and an automatic space will appear. The user may then key in for the desired groups of letters for further input of text.

An alternative for predictive punctuation can be limited to the most used signs such as full stop, exclamation mark and question mark. These may then be shown as a direct option is field 2 (X1, full stop, X2. exclamation mark, X3, question mark).

Predictive systems as described here must be adapted to each individual language in order to function. In this description of the language part we have used Norwegian words, but could just as easily have found English words or words from other languages.

As regard typical designations in Norwegian as prefixes, this will be described on the basis of Fig. 2. We have, for example, the prefix FOR-. Many words start with the letters FOR. By pressing II on the switch 3 as a long key press, see Fig. 1b, the user confirms the word FOR. In Fig. 1c I is selected on the switch 3, i.e., FOR-, and the system guesses at words beginning with FOR, but shows only the endings. Many of these words are combinations of FOR plus another letter or another word, as for instance –BEIN, -D, -AN, -DEL, -KVINNE, -MANN, -SIKRING.

A predictive system of another type will now be described.

We are going to write the word "TELENOSTRA" using a system which guesses the most likely letter on the basis of the preceding letter. The basis of this system is that the group of letters will select the most used letter on the basis of the preceding letter

without first making a split. Thus, if the system guesses correctly, only one key press on the letter group is required to enter the desired letter. If an obvious candidate is not found in the desired group of letters, the system will split the group and the user must select the desired letter manually, which means that the user continues to write in the normal way.

The starting point in Fig. 3a – Fig. 3b is that the user is in a mode for input of text, i.e., a variant of the starting point shown in Fig. 1a – Fig. 1e. Fig- 3b shows the splitting of the desired groups of letters and the user selects T. The user then wants the letter E and finds the group DEF as shown in Fig. 3d and presses II on the switch button 3 and obtains E straightaway. Here the system guesses the letter E because a list in the memory has registered that E is the most used of the three letters in the group in question and thus most likely after the previously entered letter T. If the system does not have any priority among the letters in the group in question, the system will split the group and a manual selection must be made, here shown in Fig. 3e and Fig. 3f. If the system automatically selects a letter the user does not want, for example E in Fig. 3d, the user presses IV (CLEAR) on the switch button 3, as shown in Fig. 3g and the system splits the group of letters in question, cf. Fig. 3h.

A variant in this system is to automatically show a selection of vowels after the input of consonants as shown in Fig. 3i. This may be appropriate at the beginning of a word. Further on in the word a selection of both vowels and consonants that are natural on the basis of previously used combinations can be shown.

Fig. 3j – Fig. 3n show a system where a predictive system guesses the most probable groups of letters and shows them in field 1 regardless of which row the switch is in. Fig. 1o shows an alternative where the system is so configured that after a number of letters have been written and the word ends temporarily with a vowel, the system will try to find the letters, in this case consonants, which are the most likely to be used.

It should be specified that the system at any given time selects the letters and/or words which are likely to be required by the user. These choices on shown on the screen. When it comes to showing choice of letters, nine different letters can be shown in field 1 and/or field 2 in connection with Fig. 3i and Fig. 3o which will naturally follow a previously entered or input letter. In a system of this kind the letters do not need to belong to the same group originally. In this system we have divided the alphabet into groups of three. Nine letters can be presented in three groups spread across the field in

order to then be split and selected. The probability of the right letter being among those presented is very high. After all, there is a limit to which letters naturally follow one another in an alphabet.

As already mentioned, the different options can be colour-coded. In this alternative the different letters can be coloured according to how probable it is that the letter combination will be suggested for use. For example, the group AEI in Fig. 3i can be coloured green (most used), OUY yellow (less used), ÆØÅ red (never used). The same will apply to Fig. 3o. Here it should also be mentioned that the whole group does not need to be colour-coded, but that each individual letter can be coded. It should also be pointed out that the system includes the possibility of vowels and consonants being mixed in the groups.

Referring to Fig. 3j – Fig. 3o, it pointed out that after, e.g., the consonant T has been entered, the system will look for element groups containing vowels, or the most probable vowels in connection with the consonant. Thus, when T has been entered, field 1 will change the letter groups from STY VWX YZ@ to ABC DEF GHI as shown in Fig. 3k. A depression of the key 3 in position II will cause the automatic selection of the vowel E. Then a shift is made to the most probable groups shown in field 1 in Fig. 3l and L is chosen, whereupon the field 1 changes to that shown in Fig. 3m and the system predictively selects E. In Fig. 3n the system suggests the groups STU DEF PQR and if this is not suitable, a next array of groups is suggested as shown in Fig. 3o, i.e., DFG HJK LMN. We see that, regardless of the position the switch is in, the system will show the relevant predictive options in field 1, even though they do not "match" the position the switch is in. However, this will not be a problem for a rotary switch which can also be pressed.

In this connection, an example of how the system will work in conjunction with a standard pushbutton keypad is shown in Fig. 3p – Fig. 3u. When one, or possibly two letters have been entered, the system will guess likely letters which are suitable as the following letters, and on the basis of this also suggest a word. The letter alternatives are shown in field 21, and the group with the relevant letter is selected by pressing the OK key. If, for example, TELENOSTRA is to be entered, the following is done. The group STU is selected, the letters are split up and T is chosen by pressing the OK key 22. In the illustrated case, the system proposes the word TAKK. If this had been correct, the user could have pressed the 0_ key and continued for the next word. However, the word desired is TELENOSTRA and E is selected by pressing the OK key 22. The

system then guesses TELECOM and at the same time the likely letters for other words are put in the fields. Here, after splitting (see Fig. 3s) when OK key 23 is activated, the letter L is selected, wherein OK key 23 is activated again, see Fig. 3t. Although both TELENOSTRA and TELECOM contain the letter L, the entry of L will inform the system that another word with the letter L as the third letter is desired. This results in the screen image shown in Fig. 3u.

From that explained above in connection with the two predictive systems, it will of course be seen that a combination of the systems could form a further, third system which by means of advanced programming could provide an efficient input of text without having to key in all the letters.

As mentioned earlier with regard to the user forming his own menu, he may also program requests that the telephone should guess words and/or letters from first to – letter etc., or not guess at all. (Similar settings are found today in telephones equipped with the T9 system, where the user may choose to have the system on or not.) In a third predictive system of this kind with several ways of guessing the right text, the user should be able to freely set the apparatus concerned so that a level of predictiveness is obtained. That is to say, e.g., to choose between word and/or letter guessing.

A further possibility with an extended predictive system of this kind is the option of obtaining input of letters without having to go via a selection process, i.e., as described in Fig. 3d, where the system guesses at one of the three letters on the switch on the basis of the letter arrays which give the most common or most used words.

As the system can guess words, it is possible to extend this so that the system guesses sentences or phrases. This requires a memory and processing power which can "go through" text to see the probability of the same sentence or phrases being used again by first analysing the first letters and words.

Example:

Enter:	Kommer, guesses:	*du hjem snart?*
	Jeg	*elsker deg*
	Jeg	*kommer hjem snart*

As shown in previous figures, the user can quickly confirm the suggestion or move on to the input of another text.

A predictive solution in connection with the input of numbers will now be described.

Related to Fig. 4, the system of the invention will be predictive in connection with the input of a telephone number. In a first alternative, the system takes into account the numbers stored in the apparatus. It presents a list of the most used numbers on the basis of the first digits, for example, the first three digits.

As shown in Fig. 4a - Fig. 4c, the first three digits of the telephone number are entered. The telephone suggests and lists the numbers that begin with these three digits. Field 1 shows the other numbers. Indication 5 shows all the available numbers starting with the digit combination in the same way as has been explained earlier in connection with words. If the user wants to see more numbers, he presses on MORE (long key press). Then numbers will appear three at a time in field 1. Alternatively, as shown in Fig. 4e, many more numbers can be shown. Of course, as another alternative, names could be shown instead of or in addition to the numbers, see Fig. 4f.

If none of the numbers are correct, the user continues by pressing CLEAR (short), or toggle /move glider. This will allow the input to continue and the telephone will guess again etc. If the user is in a mode where the screen image shows all the number alternatives, the user can exit the whole list by means of a long key press and the system will not guess other numbers. It is an advantage if the user knows that the number is not already to be found in the list.

In connection with telephone lists, the system can sort these so that, for example, foreign numbers are stored separately. The user can retrieve these by, for example, entering + or 00. Different dialling codes or names of countries will appear first. When countries are chosen, the different dialling codes will be shown on the screen according to a priority list.

It is also conceivable that mobile telephones will in time be equipped with an extended memory which will make it possible to store all incoming and outgoing calls/numbers. These could also be stored with the net operator, but linked up to each individual apparatus. This will allow the system, in another alternative, to guess from numbers that have not been pre-stored. In a system of this kind, any pictures the users exchange may also be stored.

One advantage of this is that the user can call up a number that has been through the telephone without having specifically stored it. This means to say that the user can remember the first digits, but when presented with a list of relevant numbers he may be reminded of the whole number when seeing it on the display.

It is conceivable that telephone operators will store "traces", i.e. numbers (and other data) which the apparatus can retrieve when there is a need to do so.

A more detailed description of a predictive keypad will be given in what follows.

On the input of text in apparatus which have a standard keypad or keyboard (such as a telephone, calculator, PC (Qwerty) or the like), it may be particularly advantageous to make use of a touchscreen keyboard, i.e., a keyboard which is shown on the screen and touched directly for input of the desired functions. It will then be possible to install a function which marks the letters or numbers guessed by the system in different ways, perhaps by using colour or highlighting on the keyboards themselves. For example, the user wishes to write TELENOSTRA: T is entered; all the vowels light up on the keyboard; E is chosen; a selection of the most used consonants light up, including L which is entered. In addition, word and sentence guessing may be programmed to appear as suggestions on the screen.

As taught in the applicant's document PCT/NO00/00412, the user can easily control various screen-assisted apparatus by using various switch solutions (such as sliding switches, pushbutton switches and rotary switches). In this connection, reference will be made to Fig. 5 in the present description where the writing of a text can be executed by using a rotary switch. Different arrangements on the apparatus screen are controlled by using the rotary switch. If the apparatus is controlled via a touch screen, the system can still be used.

Fig. 5a shows an electronic apparatus (e.g., a mini-computer/PDA/mobile telephone) which is controlled by a multifunction key, in this case a rotary switch with four clicks (as shown before) and with an alternative centre click. Fig. 5b shows how the alphabet is arranged on the screen 10 for the selection of the individual letters/signs and functions by using switch 11. On the left-hand side of the field is an overview of what the different depression positions represent, here, represented as A's which show the positions for input of letters and characters. As shown in Fig. 5d, the switch will change character by positioning the right-hand III pressure position on the switch 11 on an

arrow in the function field. Unlike the earlier positioning of so-called global functions (described in PCT/NO00/00412), this is assigned to the III position.

We see that the major advantage of multifunction switches of this kind is that functions can be placed where they are at all times practical in relation to the apparatus and the functions it is to control.

Figs. 5b - 5d show how the function field can change character. This is done by going via a SHIFT function by a click in position III on the switch 11 after having rotated the switch 11 to the right (shifted from "CLEAR" to "SHIFT").

The cursor fields will move across the functions which are in the field. Fig. 5d shows active navigation selected (by arrows). Alternative navigation can be obtained if a cursor control switch 11' is mounted in the centre of the switch 11 (stepless joystick-like system).

On the basis of the above explanation, Fig. 5f – Fig. 5i will now be explained. As has been stated earlier in this description, on the input of text, the user will have systems for guessing likely words and/or letters according to priority of use /probability calculus.

Fig. 5f shows the started word TELE (we want to write Telecom). The system guesses the letters PHC (that is, e.g., Telepati, Telehuset, Telecom). If we had wanted Telenostra, i.e., N, we would have had to turn the marker to N (i.e., the option YHN). No matter where the marker is, we do not need to turn the switch 17 now, but can press II and obtain C straightaway. The system will then "pick" the letters O, A (e.g., Telecom/Telecamera). We press the key 11 (without rotating it) at IV and get O. The system then goes on to pick the letter M. We can confirm this at II.

By combining a selection of probable letters with a guess of completed words, we can save many key presses and rotational or sliding movements.

A typical keyboard as shown in Fig. 6 can be arranged on a screen 12 and can be used for text input either by marker control (mouse control), multifunction keys as shown in this application, or a touch screen. The system will also function under these conditions and predictively make selections by marking likely letters.

As shown in Fig. 6b, Te has been entered and the system guesses the word Telenostra. Here, the user can either choose to confirm this (by using "Enter") or to continue to key in letters. The system will mark on the "keyboard" 12 the letters (in this case d, l or m) which it is most likely that the user will use. This is done on the basis of a list of words found in the memory. If the user does not want the selected word he enters more letters. In Fig. 6c the letter c has been marked, as have the letters n and p. These letters have been selected so that the system can guess a new word. This can be confirmed by "Enter". Further writing will take place following the same system as described above with the possible alternatives as described earlier.

The invention also affords the possibility of the use of sound, i.e., voice feedback. This will depend upon how well voice recognition technology develops in the coming years.

Fig. 7 is a schematic illustration of how the system can be constructed with a microprocessor 14, a memory 15, an optional further memory 16 (e.g., an external memory), a reference work 17 (which also may be external), a dictionary 18 (which also may be external), an input unit 19 for input of data elements, acceptance of suggested data phrases or selection of alternative phrases and selection of other functions for controlling the system, and a display 20. The unit 19 may be adapted for, e.g., voice recognition, use of a multifunction switch (e.g., of the sliding or rotary type), standard keypad or keyboard, touchscreen keyboard and the like.

Fig. 8 shows a rotatable, multifunctional switch 31' which has five pressure points indicated by I', II', III', IV' and V'. Fig. 9 shows an animation 31 of the switch 31'. In addition, during the input of text numbers and/or symbols, an input field or result field 32 will be shown together with a field 33 which indicates appropriate words or options that are possible from a "dictionary" or "list of words" which shows the most likely words that begin with the entered letter or letters, preferably in an order determined by how many points the word or letter combination has been given, such points being related to the frequency of use of such combinations. Word or letter combinations which have not been given any "points" will be in alphabetical order in this dictionary.

The screen image which appears on the display includes said animation 31 as an interactive figure of the actual switch 31' with an indication of the pressure positions of the switches, indicated here by I-V which are related to the said depression points I'-V' in Fig. 8. A keyboard 34 is shown next to this animation in the same display area. This keyboard will preferably show all relevant letters, numbers and signs, in this case

arranged as a Qwerty keyboard, but it is also possible to arrange a keyboard of this kind in a Qwerty lay-out, but with the letters in alphabetical order. On rotation of the switch 31', a marker 35 will move across a field which covers three characters at a time. Characters can be selected by key presses in animation positions I, II and III. A key press as shown in animation position IV will confirm selection, i.e., "Space". A key press on animation point V will result in a return to the preceding menu, optionally with a HOME function. This will be variable depending on where the user is in the menu. If the cursor 35 is placed over the "keyboard" 34, V will be used as an "undo" or "clear" button in the system as indicated in Fig. 9c. In Fig. 9 it is assumed that there will be room for all letters. numbers, signs and/or symbols on the screen image in connection with the keyboard 34. Turning the switch 31' as shown in Fig. 8 will result in the marker 35 moving across the keyboard 34 step by step. The system is preferably designed so that the data elements, e.g., letters, from the keyboard marked by the marker 35 are shown in the animation 31 in fields I, II and III. The data elements that are guessed, e.g., letters, will also appear here no matter where cursor 35 is over the keyboard 34. This will mean that it is unnecessary to rotate the switch 31' to all the data elements required, as the most appropriate data elements will most probably be present as direct options shown in animation fields I-III.

Figs. 9a-9m thus show an example of how the predictive system according to the invention will be able to assist a user with the input of, e.g., text. Fig. 9b shows what a start position in the animation 31 might look like. Here, it will be seen that the marker 35 field is "parked" in position 35'.

The intention is to write "the telephone number". In this connection reference is made to Figs. 9c-9e. The switch 31' is rotated and the marker 35 is placed over the appropriate letters, in this case the letters STU. In the animation 31, the field II for the letter is T is selected, see Fig. 9d. The system now guesses the word "The", which is thus written out in full in the text field 32, see Fig. 9e. Field 33 shows the candidate words which are picked from the available list of word in the order made according to how often these words have been used statistically. On the basis thereof, the system will choose letters which follow the previously entered letter. In this case, HOE are chosen as the letters which will provide letter number two in the first words that are chosen from the displayed list. These letters appear in the animation 31. However, here the system will guess right and acceptance is made by selecting the "Space" function represented by function field IV in the animation 31. By using this function, a space will automatically be generated and the entry of a new word can then be made.

As shown in Fig. 9f, the letter T is entered by activating function field II, and the word "the" is selected again by the system, see Fig. 9g, as this word comes at the top of the list shown in field 33. The letters "HOE" are presented as an option in the animation field 31, and the letter e is selected by activating the function field III. This means that the list of words 33 will shift to words beginning with "te" in the prioritised order, see Fig. 9h. The word "telephone" is then suggested in the field 32, see Figs. 9h and 9i. The word is confirmed by activating the function field IV (see Fig. 9h), i.e., the "Space" field, and the screen image will then return to the earlier image, i.e., as it was in Fig. 9f where the predictive system started to function.

With reference to Fig. 9j, it will be appreciated that the switch 31' is now rotated and the marker 35 is moved to the letter combination MNO, where the letter "n" is chosen. As a consequence thereof, as shown in Fig. 9k, the system will then suggest the word "name" which lies as a priority. The letters AOU which are thus predictively selected will appear in the switch animation fields I, II, III. However, "name" is not the desired word and the letter "u" is chosen by activating the function field III. The list of words will then shrink to four words, from which the system writes out "number" which is confirmed by a key press related to the function field IV is confirmed, see Fig. 9l.

When in the foregoing, and also in the following, reference is made to the activation of the function fields in the animation 31, it should be understood that the user will make corresponding depressions in positions I', II', III', IV' or V' for activating switches at these depression points which are respectively arranged at the depression points.

In Fig. 9e, for instance, it will be seen that a number indicated by 33' appears at the bottom of the list of words 33, in this case the number 500. This number indicates how many words in the selected category there are in the list, but it will be understood that there is not room to show the whole contents of the list and nor would this be practical. Fig. 9h shows that possible words in the list are "reduced" considerably after the entry of letter number two. If the user wants to enter a long word which is at the bottom of the list of words that appears, it will be possible by using the system to turn the switch 1' to a start position as shown in Fig. 9a and to press the switch at the point II' (function field II in animation 31) in order to activate a word list marker 36 and on rotation of the switch 31' to move this marker 36 downwards until the desired word has been selected. This selected word is confirmed by another depression related to function field II.

Fig. 10 will now be explained in more detail, wherein Figures 10a-10h show a variant of the system which has just be described in connection with Figs. 9a-9m.

A program for input of text is selected according to main menu and a screen image as shown in Fig. 10a then appears. If the user selects a function linked to field II on the animation 31, it will be possible to move down the list 33. The field 32 is also a text field in this case. By selection linked to the function field I, the animation 31 will shift to the "Edit" mode, see Fig. 10b, whereby it is possible to edit a written text. A marker 37 can thus be moved by first depressing that represented by function field I, i.e., depression of the switch 31' at depression point I, and then rotating the switch 31', i.e., its control element 31". By selection linked to the function field V, the user will move back to the preceding menu. If the function field IV is selected as shown in Fig. 10a, the fields 38 and 39 will appear, see Fig. 10c. The animation 31 will show the alternative numbers and letters over which a marker 40 will move when the switch 31' control element 31" is rotated, or alternatively the letters 41 which the predictive system selects. Fig. 10d shows that the field 41, here indicated by means of 41', can contain a plurality of fields for showing additional letters. However, for simplicity, in this case emphasis has been given to showing the principle and therefore the further explanation includes only a field 41 which provides the possibility of showing three data elements.

Fig. 10e shows that the field 38 frames a part of the keyboard 42. Obviously, it will be understood here that the architecture and design of such a keyboard 42 will by no means be limiting for the inventive idea, but merely serves as an exemplary embodiment to aid understanding of the principle of the system according to the invention. The keyboard may, for example, be in alphabetical form or in Qwerty form as shown in Figs. 10 and 11, or in another form. Figs. 10e and 10f show a switching of the field 38 between the main body 42 of the keyboard and its subsidiary part 42'. Switching can take place by placing the marker40 over the keyboard symbol 43, as shown in Fig. 10f. In this position, the marker 40 will also cover a function such as “Back” 44 and "Enter" 45, as known from "standard keyboards". Fig. 10g and Fig. 10h show that it is possible to allow only one of the keyboard parts 42 or 42' to be visible at a time, so that visually they are on top of each other, as also indicated by the fields 38 and 38'.

The system according to the invention will now be described further in connection with that shown in Figs. 11a-11u. Here, the input of data elements by using a rotatable multifunction switch which has five depression points, as shown in Fig. 8, will be described, and where there is an interactive interplay between the display and the

predictive letter and word system that the invention has provided. In the illustrated example, the user wishes to write "The telephone number is 22 35 70 18". When the user shifts to the numeric keypad, like the subsidiary part 42' of the keyboard, the predictive system will naturally switch to guessing numbers, as explained in the following.

In Fig. 11a, the user has gone from a main menu, such as that shown in Fig. 10a and is now in a mode for writing, e.g., selection of function field IV in Fig. 10a ("Keyboard").The switch 31 control element 31' is rotated to move the cursor 40 to a region on the keyboard where the desired character is found. The letter T is entered by pressing at position I', see Fig. 8, on the switch 31', which effects function selection I as shown in Fig. 11a where this function selection field is thus highlighted. The character that is thus entered or keyed in will appear in field 32. This causes the predictive system according to the invention to be activated. All the words in the list of words that begin with the letter "t" will be listed in prioritised order and shown in the field 33 insofar as there is room for these words. A number 33' will be given at the bottom of the field which indicates the total number of words found in this category, optionally how many words are found in addition to those shown. The predictive system picks the word "The" on the basis that this is the most used word, statistically speaking, in the list, and it is placed in the field 41. As shown in Fig. 33d, the field 41 may optionally consist of several fields 41', whereby it will be possible to pick out several candidates for the second letter.

However, in the example chosen here, the user wants the selected word and function field IV, i.e., "Space" is chosen and the suggested word is thus written inside the text field 32. As shown in Fig. 11d, the letter "t" is then entered and the system will again choose "the". However, in this case another word is required and the user continues to enter the letter "e", see Fig. 11e, which in this case is easily accessible, as the predictive system has presented it as a direct option in the field 41. Here, it will be seen that the same letters also appear more clearly in the animation 31. In this case, the letter "e" appears in the function field III in the animation 31. Again, it can be seen here that rotation of the switch 31' control element 31" will not be necessary to fetch the right letter.

Referring now to Fig. 11f, it will be seen that the first word that is prioritised in the list 33, in this case "telephone" is now written out. The list has now been "shrunk" as there are no longer so many alternatives linked to the two-letter combination "te" that has

been entered. The function field IV in the animation 31, related to depression point IV' on the switch 31' is chosen to confirm the word "telephone" and this word is then written out on the screen image, see the field 32 in Fig. 11g. The switch 31 control element 31' is then rotated until the marker covers the letter group "YHN", these letters also being shown simultaneously in function fields I, II and II in the animation. The letter "N" is selected, as indicated in Fig. 11h and as shown in Fig. 11i all the words with the first letter "N" are listed in the list 33, whilst the word "name" is written in the field 39. This word is at the top of the list and is also marked by the list marker 36. The letters "aou" are spread in respective fields I, II and III in the animation 31 and are the different options for the letter after the first letter "n" as is evident from the list of words in field 33. It will be seen from the list of words that the first word has as its second letter "a", the next three words have the second letter "o" and the next word has the second letter "u". Referring now to Fig. 11j, the letter "u" is selected by activating function field III and the system will then present the word "number". This word can be confirmed by using the space depression point represented by the function field IV, see Fig. 11j.

Referring now to Figs. 11k-11m, the word "is" is to be written following the same principles as already discussed. As will be understood, the control element 31" of the multifunction switch will be rotated until the marker 40 lies over the letters "ikx" as shown in Fig. 11k, and on depression of the control element 31" at position 1', i.e., function field I, as shown in Fig. 11k, the letter "i" will be written inside field 32. As indicated by the field 41, the system now chooses predictively the three most likely letters as the second letter in the word which has now been started, and these letters are "stn", which also appear on the animation 31 in the respective fields I, II, III. Here, it will be correct to choose the letter "s" linked to field I by another depression of the switch control element 31" at position I'. The word "is" thus appears in the field 39. At the same time the phrase "The telephone number is" is now found in the field 32.

Numbers are now to be entered, and this means that the user must have access to numbers in the keyboard. This means that the user must bring up the subsidiary part 42' of the keyboard, as shown and described in connection with Figs. 10e-10h. In Fig. 11n it can be seen that the marker has been moved to the position 43, and respectively "back", "enter" and "switch keyboard part" appear in the respective function fields I, II and III on the animation 31. Here, depression of the switch control element 31" linked to the function field III is chosen as the user thus switches to a keyboard part which primarily consists of numbers and symbols, indicated by the reference numeral 42'. As

indicated in Fig. 11o and Fig. 11q, a switch between keyboard parts could also be executed by rotating the switch control element 31" so as to thus scroll the marker 40 past "p!", whereby the subsidiary keyboard part 42' appears as shown in Fig. 11p. Entry of numbers can be done in the same way as shown and explained in detail in connection with the entry of letters. Figs. 11n, 11p and Figs. 11r-11u show this. Here, previously used numbers will be stored, so that the system according to the invention can guess which number the user will probably enter based on statistic frequency of use. This can easily be transferred directly to a number directory and in apparatus where the system is used in a connection situation, as for instance in a telephone.

Lastly, the invention will now be described in connection with an embodiment which does not make use of a stepwise rotatable multifunction switch as shown in Fig. 8, but employs a conventional pushbutton keypad per se.

In this case the user does not need to employ the key showing the letter group in a writing process where the system guesses letters independent of which group they belong to. On the input of letters, the system according to the invention will save the guessed letters which form words that the system finds to be "correct", and by using arrow /ok keys 44, 45, 46 the user can select one of the new groups, or as shown in Figs. 12a-12d one of the selected letters. If the system guesses wrong, the user can by using the "normal keypad" go directly to the letter group which has the letter the user is looking for. Another alternative, if the display screen is large enough, is to go direct to the list of words and choose from the selected words. It will be possible to scroll up and down in this list by using arrow keys 47, 48, but it will also be possible to use a roller switch such as the roller switch 49 shown in Fig. 12d. Basically, this is a roller switch with three depression points and on rotation it can be used to scroll through the list of words and in addition it can replace the OK keys 44-46 as shown in Figs. 12a-12c. As indicated in Fig. 12a, depression of the key 50 will cause the letters STU to appear in the display screen 51. Depression of the key 45 results in the selection of the letter "T". This brings up on the display screen a predictive list 52 of the words which seem to be suitable, greatest frequency statistically being taken into account. The system will predictively choose the letters "HOE" as these appear as second letters in the words which are given in part of the list of words 52. The predictive system has suggested the word "the", but this is not the desired word, as telephone is the word the user wishes to write. The predictiveness therefore suggests that key 46 should be depressed to select the letter e. If the word "the" had been correct, it could have been confirmed, for example, by depressing the key 53 as shown in Fig. 12b. On selection of the letter e the

word "telephone" appears at the top of the list 52, whilst the three letters "lca" are indicated as a third suggested letter in the desired word. However, in the illustrated example, "telephone" is the desired word, and this can then be chosen by depressing, for example, the key 53. It will also be seen that the list as shown in Fig. 12b has in the version found in Fig. 12c shrunk from 500 words to 27 as the choice of the second letter limits the content of the list.

Similarly, the use of a roller switch 49 has shown in Fig. 17, with three depression points can be made in the same way as just shown and described in connection with Figs. 12a-12c. Here, the user will also have the advantage of being able to move the cursor, as for instance the marker 54, by rotation of the switch.

It is also possible to envisage a guessing of a person/name and number on the basis of an entered combination of numbers and letters. Predictiveness can be present as regards names in a letter combination. For example, there may be a list of names with associated numbers. A user may wish to find, e.g., the name Noia Erison, plus 47 22 23 24 25. In this case the user can enter "N" and all the persons who have a name beginning with N are chosen. If an "E" is also entered, only the names beginning with these two letters will appear. There is also a possibility of predictiveness in the system with regard to number and letter combinations. In this case, this will take place essentially as described above, but here both numbers and letters are used in combination to find the right name. For example, it is possible to write "N22", and, for example, all the persons living in Oslo with a name beginning with "N" will be selected. If an "E" is added, it will be highly unlikely to find more the person or the telephone number for which the user is looking.

Thus, there is a possibility of a system which in the illustrated example can make use of combinations of a first letter in a name and the first number in, for example, a telephone number. In this case the system will be capable of being adapted to what the user wants to find in lists, as for example, in a telephone directory, an address book etc. The system will therefore be able to give innumerable possibilities for predictive searches of names, number, addresses etc through a combination of letters, numbers, symbols etc. When searching for e-mail addresses it is possible to make a system whereby the user enters a letter plus @ plus a letter for a domain (e.g., "no", "com"). For net addresses (WEB), it will be possible, e.g., to enter a letter plus the domain or perhaps more letters.

It is also possible through a further application of the present system to guess on the basis of sentence patterns and on the basis of grammar. This means that words are guessed on the basis of a preceding word, and also that the right conjugation of the verb or declension of the noun is guessed. However, this calls for substantial storage capacity and processor power, but the predictiveness will per se be the same as when selecting letters in a word. The system is thus in reality simply expanded so that it can put together sentences according to priority, possibly related to a grammatically correct word order. Correction of spelling and grammar are known per se, so that in this case this function can be used as an addition to the possibilities that the system described already has been shown to be capable of having.

Through a further application of the system according to the present invention, it is possible to envisage that it can predictively be used in connection with the completion of forms, as for instance filling in personal details and other data. By using the system in a predictive operation mode, it will be easy per se to be able, e.g., to fill in forms, either internally or externally (net sites). The individual columns will require specific data, e.g., name, number etc based of what the form relates to, and the system will in this case have a database which contains the options and data that should be available.

In connection with names that are exchanged between, for example, a mobile telephone apparatus, options may be found which enable the exchange of data. In this connection, e.g., meeting reminders, agendas etc may be envisaged. However, this will require that software is tailored to this use. In this way it will also be possible to exchange predictive list of words whether they are personal or standard lists.

Patent claims

1.
A system for input of data elements, e.g., letters, signs, numbers and/or symbols, in connection an electronic apparatus or device which has or is connected to a display, wherein the system comprises a means in the form of a plurality of discrete fields shown on the display screen to assist in the input, and the system includes an input device, actuatable with a finger, which has a control element that is stepwise slidable or rotatable, and also depressible and two- to four-way tiltable, or which consists of parts of a conventional keypad, and wherein data elements shown on the display screen represent available input alternatives for the input device,
characterised in
- that the input device is designed to effect selection of at least one data element from one of said plurality of fields which have a data element or elements displayed on the screen in order to activate the system to offer suggestions for a subsequent data element or elements in each available field and with contents which come from a list of prioritised data phrases.

2.
A system as disclosed in claim 1, characterised in
- that the system is configured to predictively show suggestions of a subsequent data element or elements in the available fields independent of which group the data elements normally belong to.

3.
A system as disclosed in claim 2, wherein the control element of the input device is stepwise slidable,
characterised in
- that the system is configured to show the suggestion of the subsequent data element or elements independent of the control element's stepwise position.

4.
A system as disclosed in claim 1, characterised in
- that the system is so configured that before the selection of a data element in a field containing several data elements it splits the data elements in the field in question thereby spreading them out in the available fields on the screen, whereupon the desired data element can be selected.

5.

A system as disclosed in claim 1, characterised in

- that on the input of at least two data elements the system is configured to first suggest a data phrase retrieved from a memory where said data phrase is the most frequently occurring, and where said data phrase contains said data elements as a beginning or an ending, or constitutes the suffix or the prefix of said at least two data elements.

6.

A system as disclosed in one of claims 1-5, characterised in

- that the system is so configured that on the input of at least a first data element it predictively suggests the next data element in a series of data elements; and
- that the system is so configured that when the next data element selected is wrong it will receive a system user selected data element as replacement for the wrongly selected element.

7.

A system as disclosed in one or more of claims 1- 6, characterised in

- that the system is so configured that on input of at least a first data element it predictively suggests selectable groups of data elements, where each group contains at least one selectable data element harmonised with the preceding, selected data element; and
- that the system is configured for user selection of a desired group where a selectable, correct or probably correct data element is found.

8.

A system as disclosed in one or more of claims 1-7, characterised in

- that the data phrase is selected from the group consisting of: a telephone number, a data code, an internet, extranet or intranet address, an e-mail addresses, a name, a designations, a list of words, a reference book.

9.

A system as disclosed in one or more of the preceding claims, characterised in that the system is configured to sort said selectable data phrases based on:

a) the frequency of previous use of the phrases, or
b) standard frequency of the occurrence of the phrases, or
c) alphabetical order, or

d) most probable phrases in conjunction with other used phrases, or
e) style, terminology, dialect or language.

10.
A system as disclosed in one or more of the preceding claims, characterised in
- that the system is configured to sort the selectable phrases as a function of their length.

11.
A system as disclosed in one or more of the preceding claims, characterised in
- that the system is configured to show on the display the selectable phrases in a primary field and a secondary field.

12.
A system as disclosed in claim 11, characterised in
- that the secondary field contains part of a phrase catalogue, and that the rest of the contents of the phrase catalogue is retrievable in sections.

13.
A system as disclosed in one or more of the preceding claims, characterised in
- that the system is configured to indicate on a keyboard or the screen the said at least one data element which will be enterable in the series of data elements, e.g., based on consonant and vowel analysis, permitted adjacent data elements, and phrases that are retrievable.

14.
A system as disclosed in one or more of the preceding claims, characterised in
- that the system is configured to predictively suggest selectable data phrases once a pre-determined number of data elements have been entered in the system.

15.
A system as disclosed in one or more of preceding claims 2-14, characterised in
- that the system is configured to suggest a first data phrase on the basis of a data element from a particular group; and
- that the system is configured so that on user selection of a second data phrase it receives a data element from another selected group, whereby the first data phrase suggestion is eliminated.

16.

A system as disclosed in one or more of preceding claims 2-15, characterised in

- that the system is configured to suggest a first data phrase on the basis of a data element from a particular group; and
- that the system is configured so that on user selection of a second data phrase it registers that the selected data element is correct, whereupon all data phrase suggestions subsequently presented by the system include this data element and/or other data elements in the selected group.

17.

A system as disclosed in one or more of the preceding claims, characterised in

- that the data phrase consists of one or more selectable data elements or a plurality of sets of data elements, e.g., so as to form word or phrase formulations.

18.

A system as disclosed in one or more of the preceding claims, characterised in

- that a correctly selected data phrase is selectively or automatically converted by the system to one or more items of displayable information which are directly related to the selected data phrase.

19.

A system as disclosed in claim 18, characterised in

- that the correctly selected data phrase is one fetched from the group:
  - a) a telephone number or part thereof;
  - b) a name;
  - c) an electronic related address, e.g., an e-mail address;
  - d) an entry word or formulation.

20.

A system as disclosed in claim 19, characterised in

- that said items of information are fetched from the group:
  - a) a name, address etc. of a telephone subscriber;
  - b) an electronic related address, e.g., a telephone number, e-mail address, network address etc.;
  - c) a name and any other data related to the owner of the address;
  - d) a more detailed definition or explanation of an entry word or word formulation.

21.

A system as disclosed in one or more of the preceding claims, characterised in

- that the selection or suggested selection a data element and/or data phrase is based on retrieval from one of several selectable memories, e.g., categorised by respectively a) most used data, b) standard available data, c) little used data, and d) data never used before, and
- that these options appear with different markings, e.g., colour codes.

22.

A system as disclosed in one or more of the preceding claims, characterised in

- that the system is configured to convert data from a first working language to a second working language, and at the same time bring up predictiveness rules related to the second language.

23.

A system for input of data elements, e.g., letters, signs, numbers and/or symbols in connection with an electronic apparatus or device which has or is connected to a display, wherein the system is so configured that on the input of at least a first data element in a data phrase it offers suggestions of the data phrase,
characterised in

- that the system includes a stepwise rotatable multifunction switch having five depression points and where rotation of the switch causes movement of a marker across an array of data elements;
- that on the screen there is shown an animation of the multifunction switch and its depression points, and also the successive data elements over which the marker is brought to lie in order to select at least the first data element on depression of the switch at the given depression point; and
- that after input of said at least first data element and any additional data element(s) predictively, the system is configured to indicate in the depression points on said animation at least one of the next most probable data elements in the data phrase independent of the marker's position on the array of data elements.

24.

A system for input of data elements, e.g., letters, signs, numbers and/or symbols in connection with an electronic apparatus or device which has or is connected to a screen, where the system is so configured that on the input of at least one first data element in a data phrase it offers suggestions of the data phrase,
characterised in

- a) that the system includes a stepwise rotatable multifunction switch having five depression points;
- b) that rotation of the switch causes movement of a marker across an array of said data elements;
- c) that the display is designed to show an animation of the multifunction switch and its depression points, and the successive data elements over which the marker is brought to lie for selection of at least the first data element on depression of the switch on the given depression point; and
- d) that the system is so configured that after input of said at least first data element and/or any additional data element(s) predictively, it shows on the display, without further rotation of the switch, predictively at least three data elements on the switch animation for further construction of words, independent of the marker's position on the array of data elements, and at the same time suggestions of remaining data elements in a finished data phrase, the suggested data phrase
  - either e) being selectable as acceptable so that it becomes the final data phrase or so that it can be followed by at least one additional data phrase;
  - or f) being rejected in that one of said three predictive data elements is chosen instead;
  - or g) being rejected in that the marker is moved to lie over at least three data elements in the array, and one of these is selected on depression of the switch at the indicated pressure point.

25.

A system as indicated in claim 23 or 24, characterised in

- that the predictive suggestion is designed to be activated once rotation of the switch has caused movement of the marker, marking of least three data elements in the array and on the switch animation, and selecting one of these on depression of the switch at the desired depression point.

26.

A system as disclosed in claim 23 or 24, characterised in

- that the predictive suggestion of the next data element is related to a pre-stored reference list of data phrases, preferably data phrases in prioritised order.

27.

A system as disclosed in claim 26, characterised in

- that the reference list is designed to be shown in a separate field on the display.

28.

A system as disclosed in claim 23 or 24, characterised in

- that on the suggestion of a data phrase as a part of several data phrases in a context, the system is configured to
  - either predictively suggest at least one first possible data element in a subsequent data phrase;
  - or predictively suggest the most probable subsequent data phrase;
  - or scroll through the list of pre-stored data phrases on rotation of the switch.

29.

A system as disclosed in one or more of preceding claims 23-28, characterised in

- that one of said depression points is designed to represent a space between entered data elements or entered data phrases, and/or accept a predictive data phrase which is to be followed by a further data phrase.

30.

A system as disclosed in one or more of preceding claims 23-29, characterised in

- that a centrally positioned one of the depression points is designed to represent a a "BACK" function or "back to main menu" ("HOME") function.

31.

A system as disclosed in one or more of preceding claims 23-30, characterised in

- that on the screen there is also shown a predictive data element field consisting of at least one set of at least three data elements.

32.

A system as disclosed in claim 30, characterised in

- that the set represents the at least three next, unique data elements in a next data phrase in a list of selected data phrases.

33.

A system as disclosed in one or more of preceding claims 23-32, characterised in

- that on the screen there is shown a function field over which the marker can be moved,

where a first function is related to a "Back" function, a second function is related to an "Enter" function, and a third function is related to a switching of data element type.

34.

A system as disclosed in claim 32, characterised in

- that the switching of data elements is between a) letters and b) numbers/special characters.

35.

A system for input of data elements, e.g., letters, signs, numbers and/or symbols in connection with an electronic apparatus or device which has or is connected to a display, wherein the system is so configured that on the input of at least a first data element in a data phrase it offers suggestions of the data phrase, characterised in

- that the system comprises a standard keyboard or keypad having
  - either three confirming pushbutton keys and three keys which in addition to another function have a marker control function;
  - or a roller switch having three depression points and an optionally axially directed push switch function, and three keys which in addition have a marker control function, where rotation of the switch causes movement of a marker across an array of said data elements;
- that on the display there is shown a field indicating said depression points, and the successive data elements which pressure on the keyboard's letter or number/sign keys produces for selection of at least the first data element on depression on one of the confirming depression points; and
- that the system is so configured that after input of said at least first data element and optionally additional data element(s) predictively, it shows in said field the

depression points at least one of the next most likely data elements in the data phrase.

36.

A system as disclosed in claim 35, characterised in

- that the predictive suggestion of the next data element is related to a reference list of data phrases, preferably data phrases in prioritised order.

37.

A system as disclosed in claim 36, characterised in

- that the reference list is designed to be shown in a separate field on the display.

38.

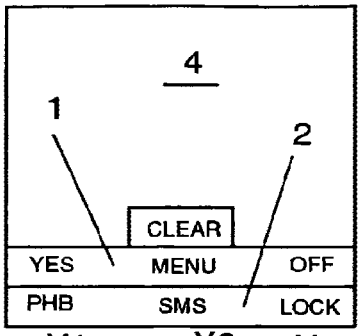
A system as disclosed in claim 35, 36 or 37, characterised in

- that on the suggestion of a data phrase as a part of several data phrases the system is configured to predictively:
- suggest at least one first possible data element in the subsequent data phrase and/or
- indicate the selectable data elements which predictably follow the already existing, entered data element, said selectable data elements being selected in prioritised order from at least three subsequent data phrases in the reference list.

39.

A system as indicated in one or more of preceding claims 35-38,
characterised in

- that one of the keys is designed to provide on depression either confirmation of a predictively suggested data phrase or a space between subsequent data elements.



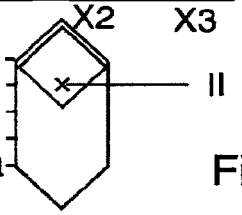
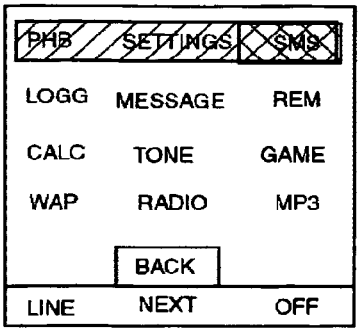


Fig. 1a



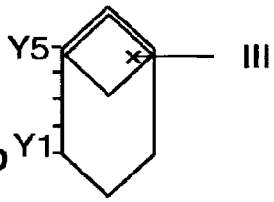
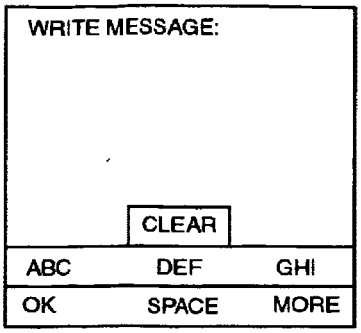


Fig. 1b



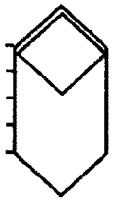
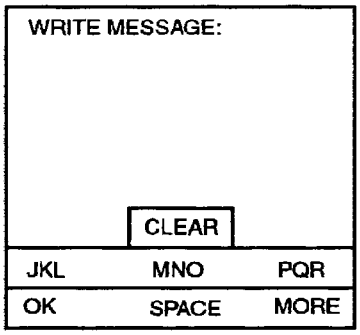


Fig. 1c



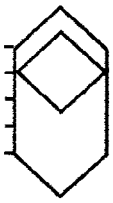
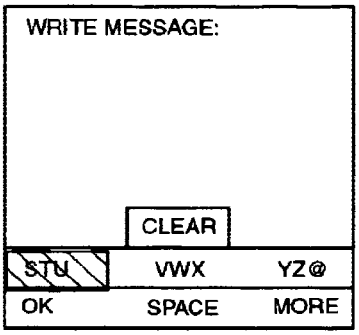


Fig. 1d



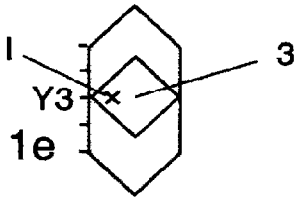
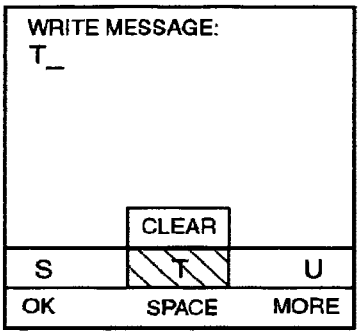


Fig. 1e



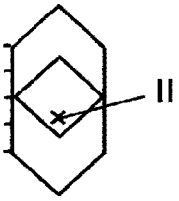
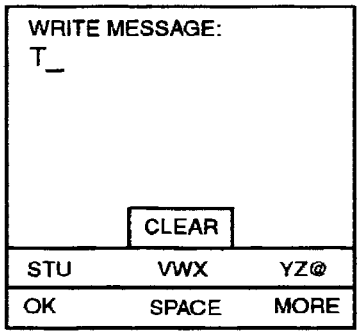


Fig. 1f



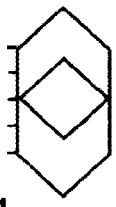
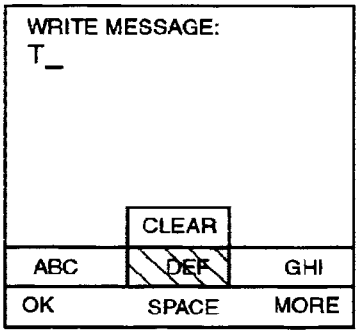
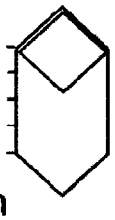


Fig. 1g





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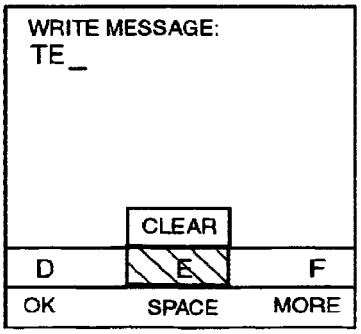


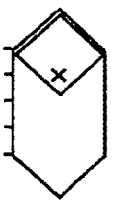
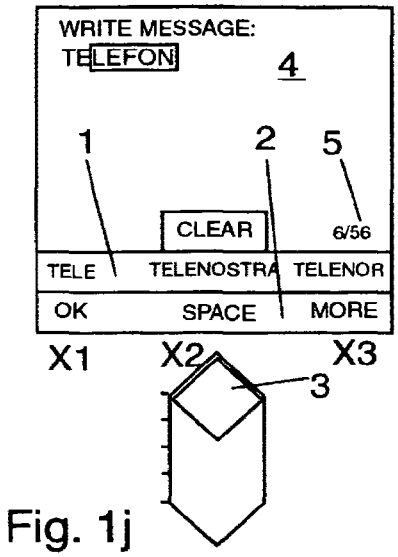


Fig. 1i



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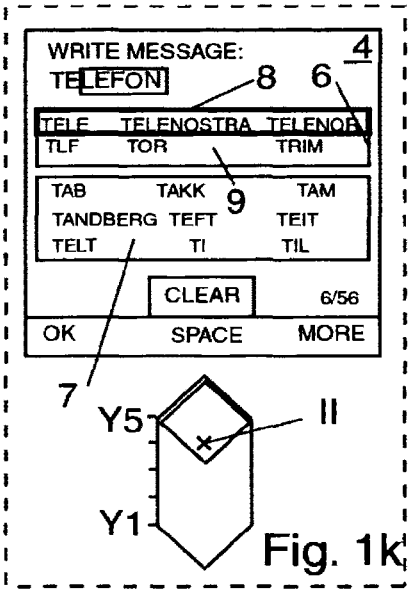

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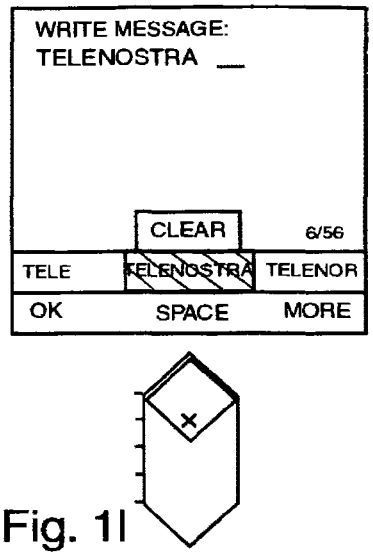

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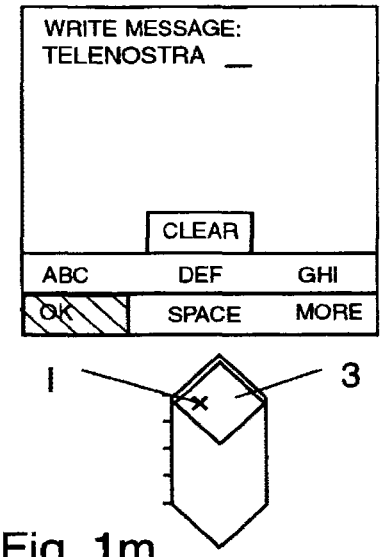

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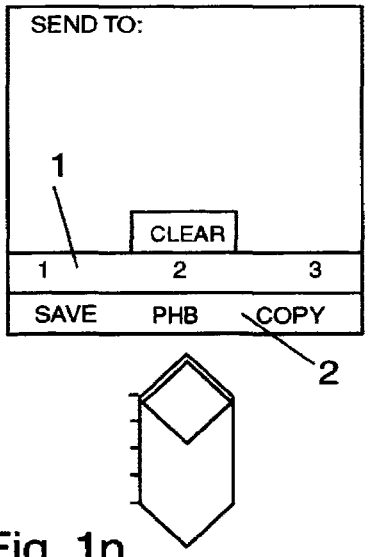

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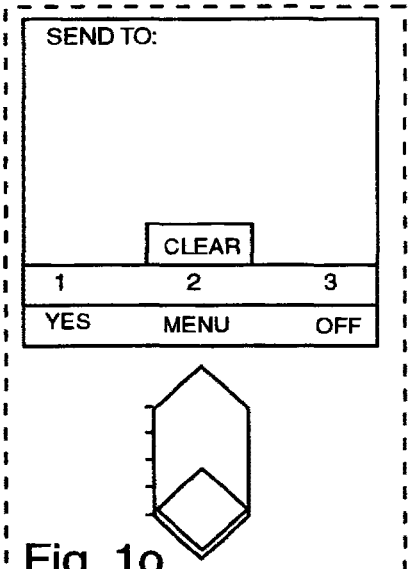

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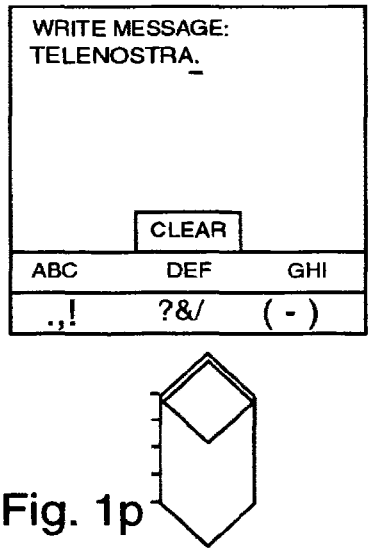

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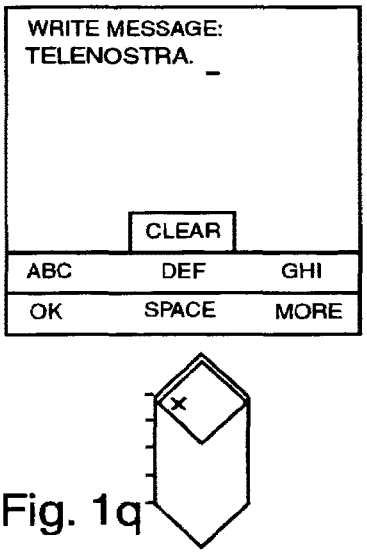

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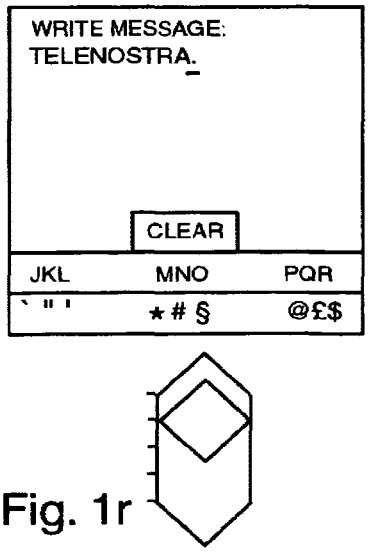
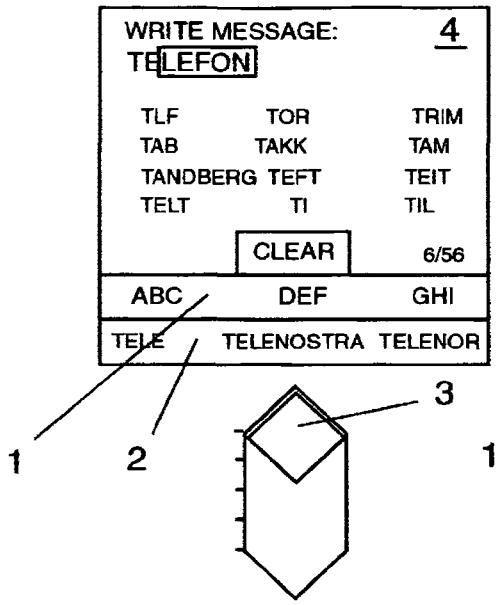


Fig. 1r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2
3

Fig. 1s

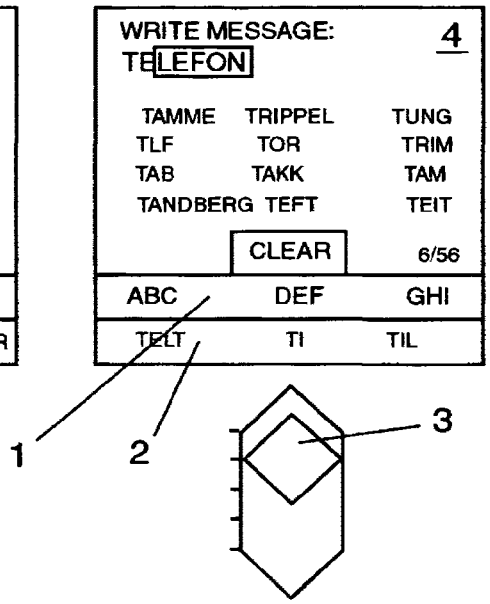
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Fig. 1t

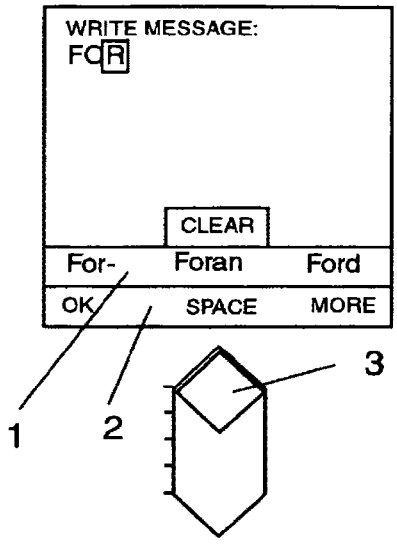


Fig. 2a

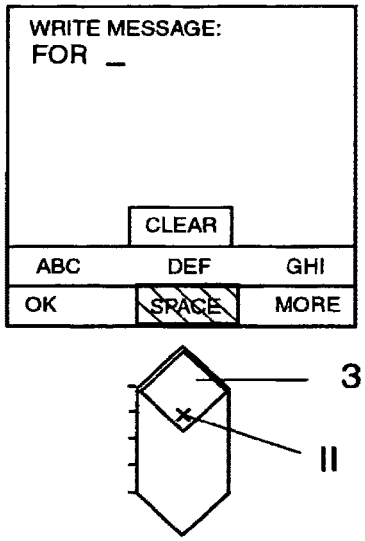
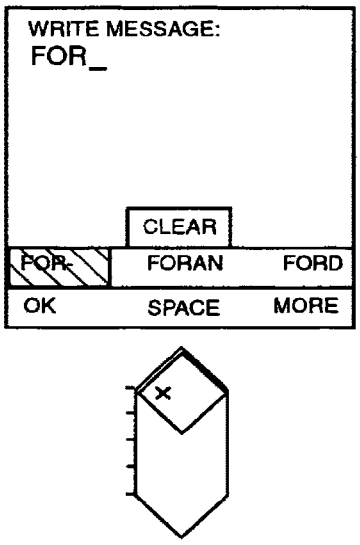


Fig. 2b



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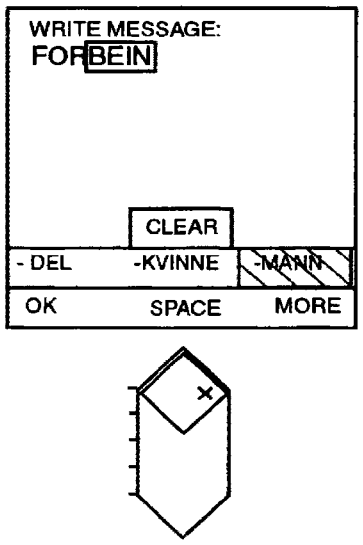


Fig. 2d

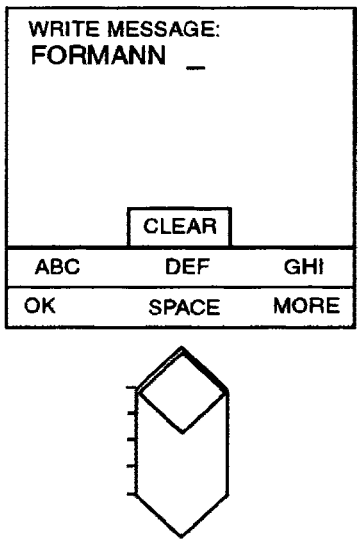


Fig. 2e

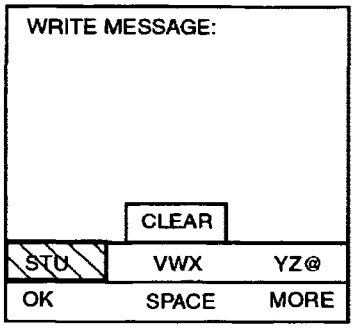


Fig. 3a

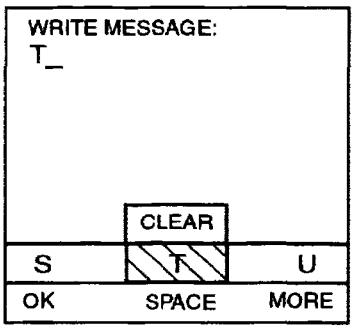
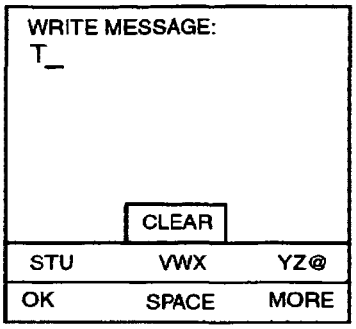


Fig. 3b



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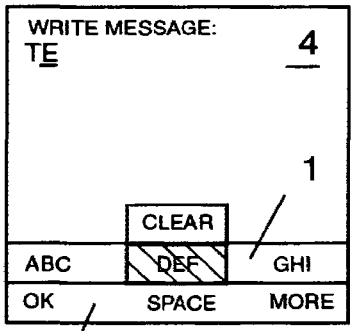

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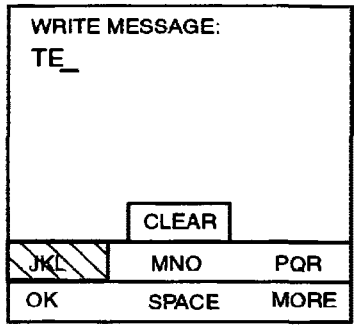

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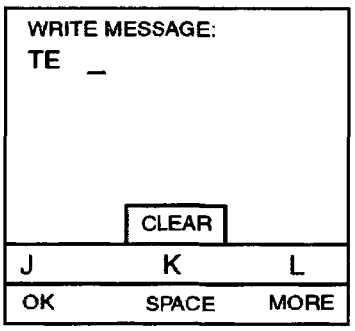

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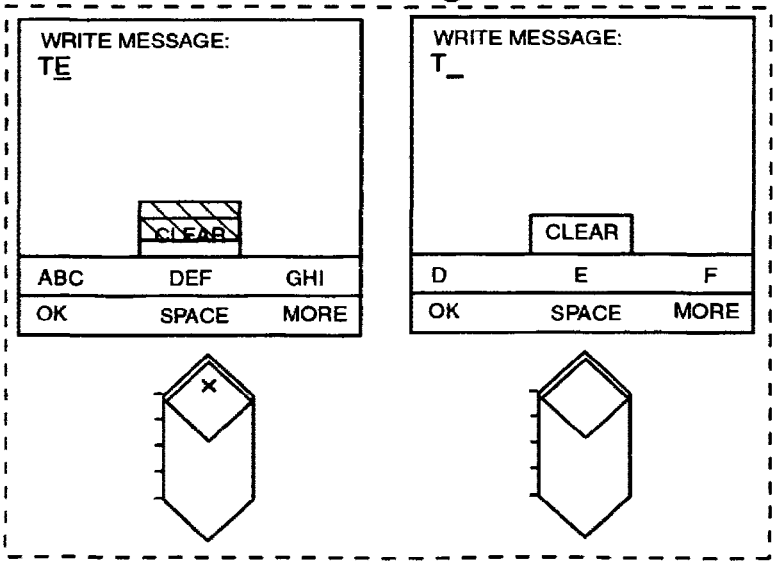


Fig. 3g

Fig. 3h

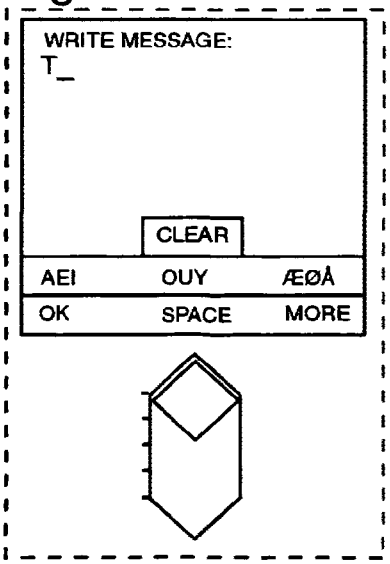
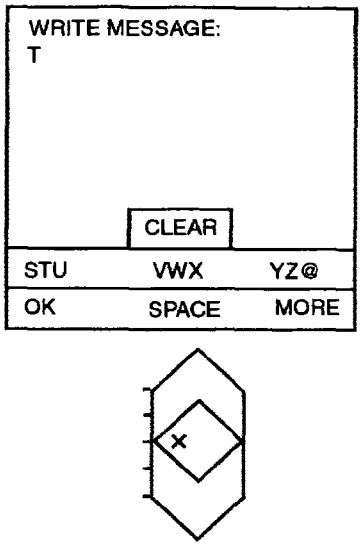


Fig. 3i



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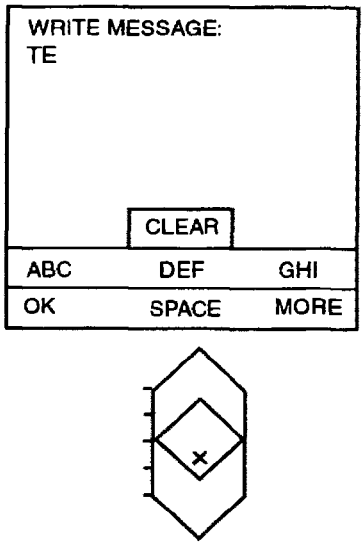


Fig. 3k

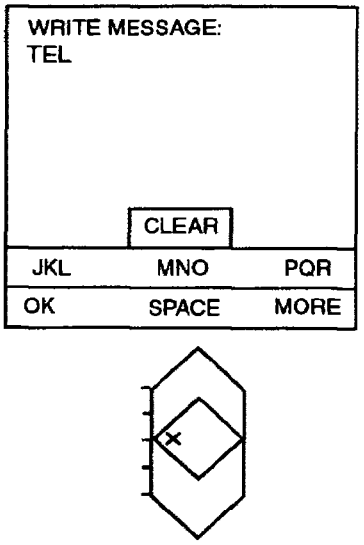
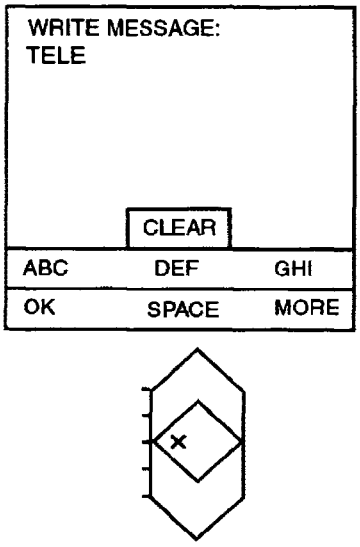


Fig. 3l



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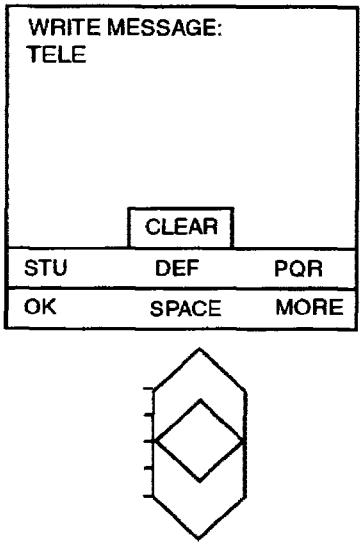

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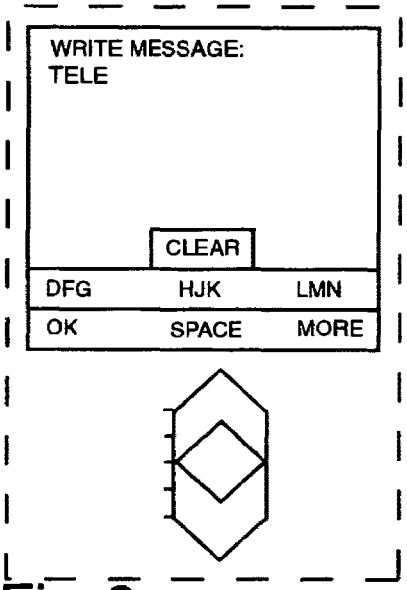

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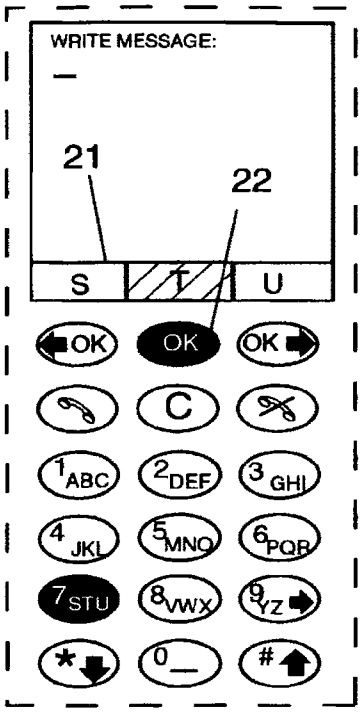

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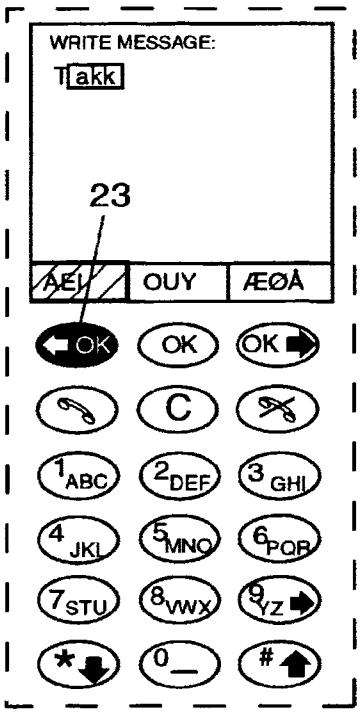

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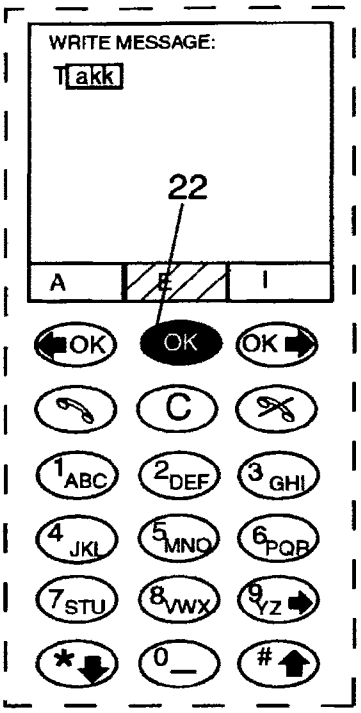

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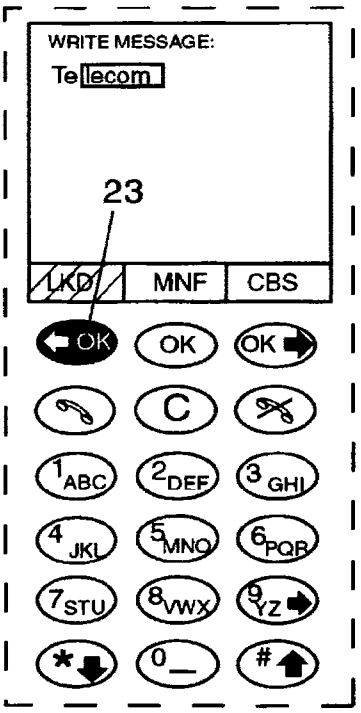
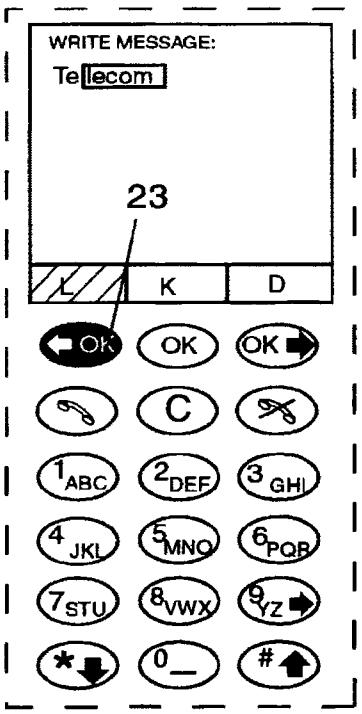


Fig. 3s



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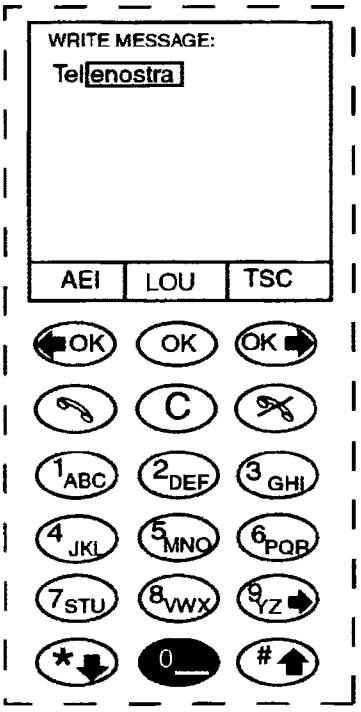


Fig. 3u

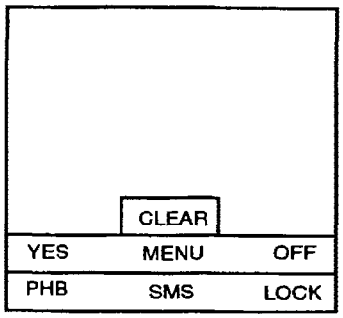


Fig. 4a

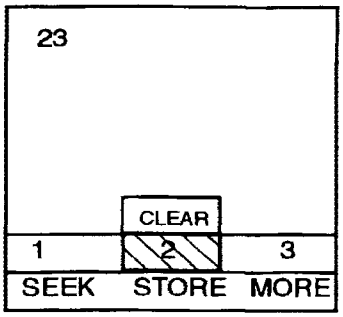


Fig. 4b

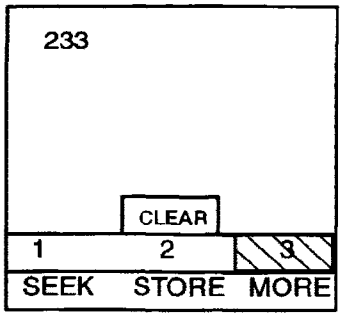


Fig. 4c

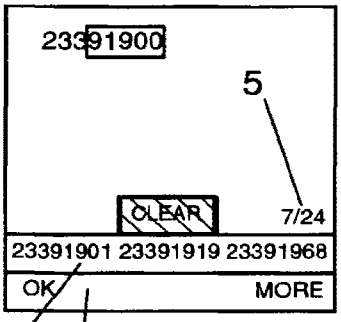
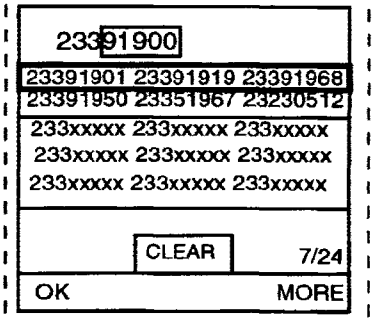


Fig. 4d



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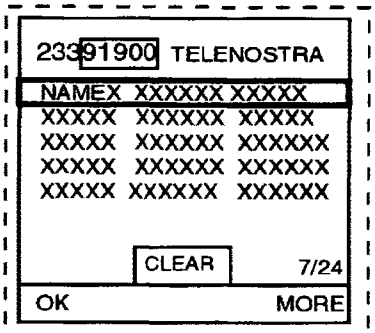

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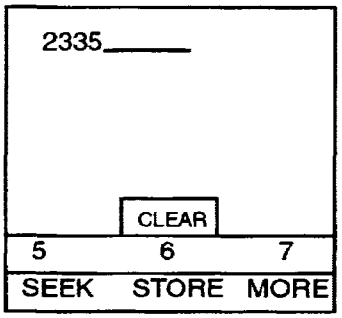


Fig. 4g

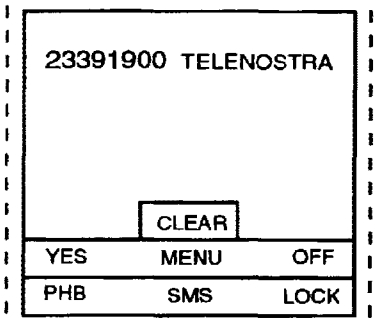


Fig. 4h

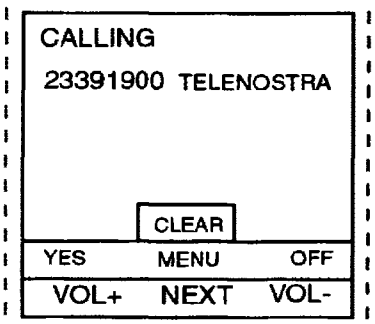


Fig. 4i

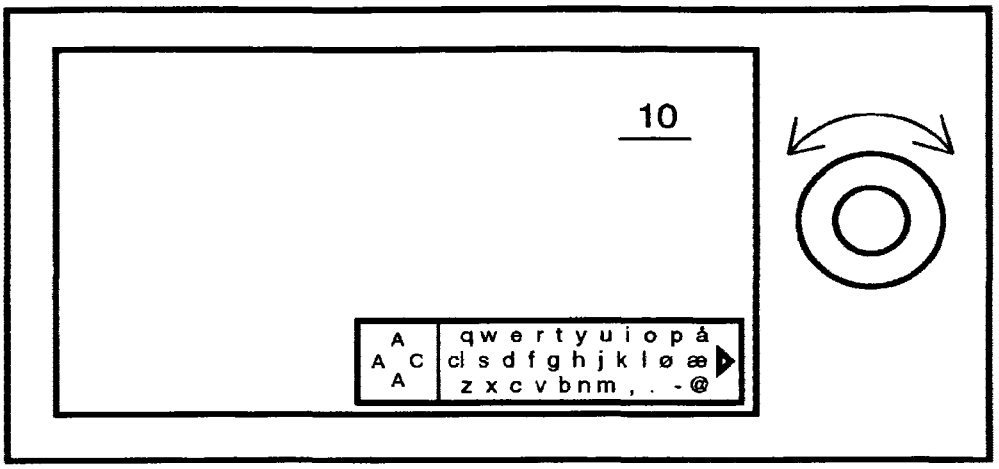


Fig. 5a

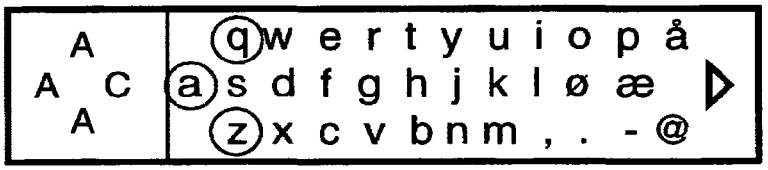


Fig. 5b

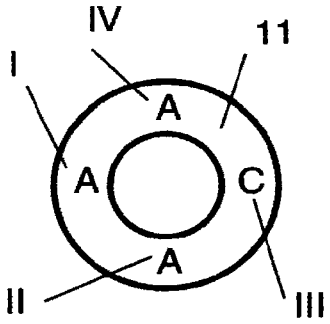
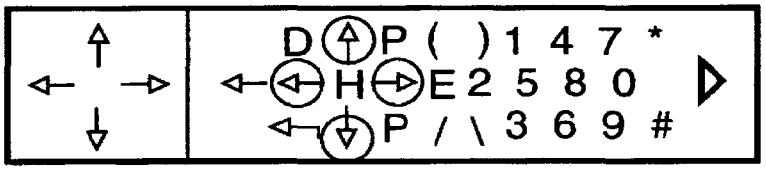


Fig. 5c



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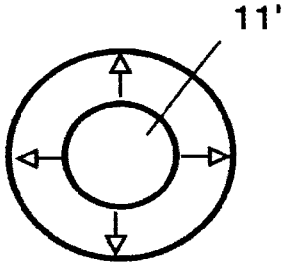
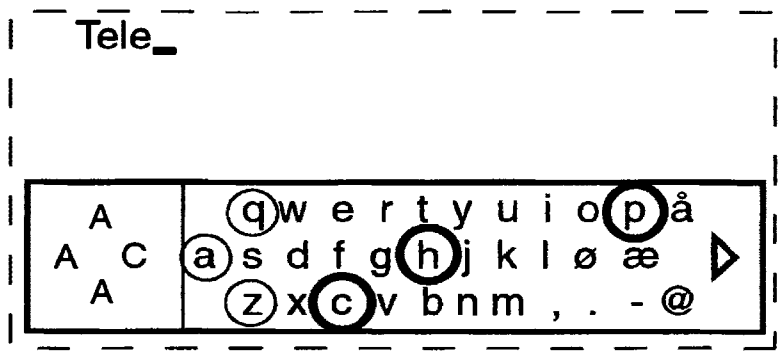


Fig. 5e



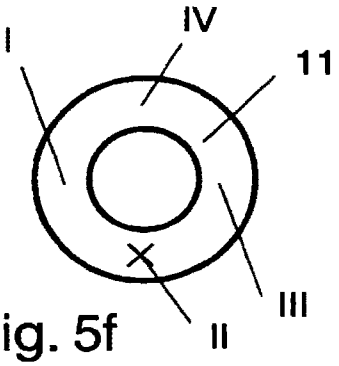
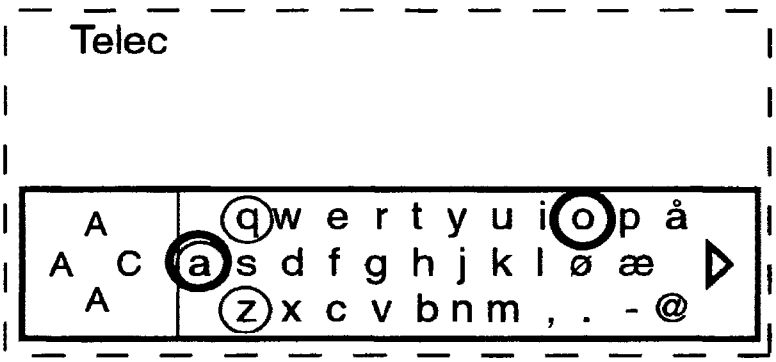


Fig. 5f



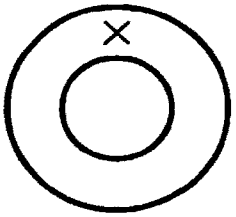
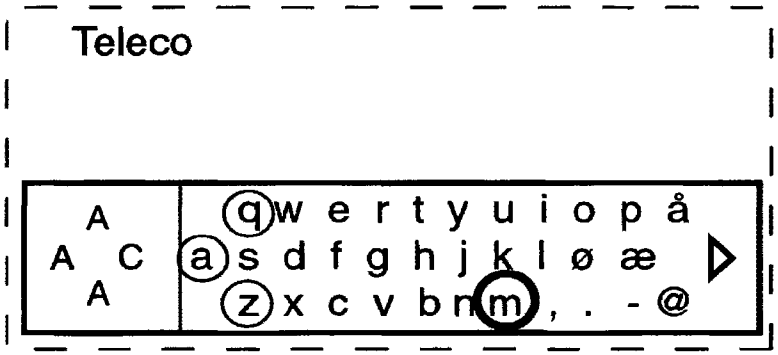


Fig. 5g



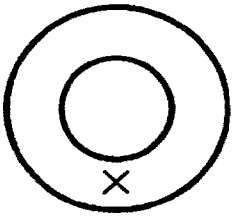
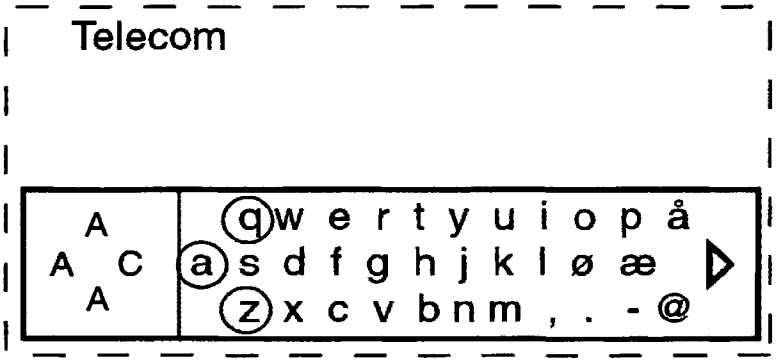


Fig. 5h



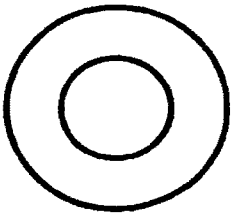


Fig. 5i

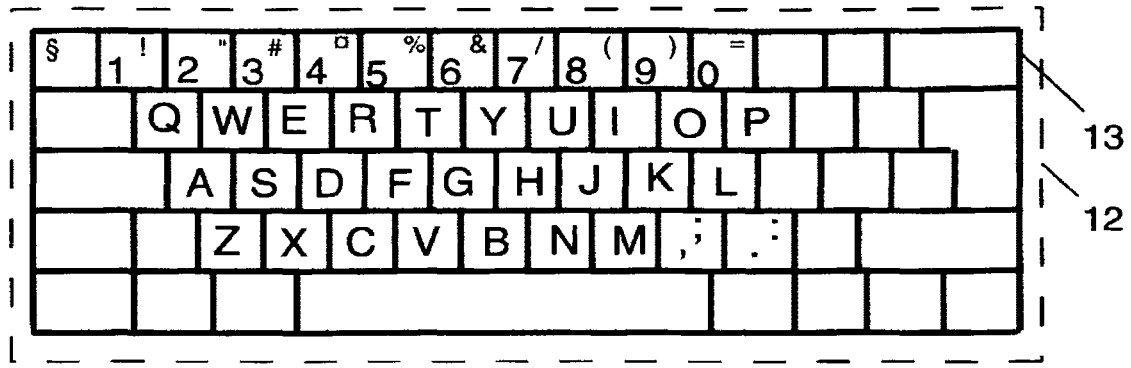
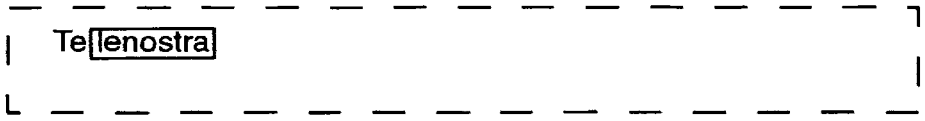


Fig. 6a



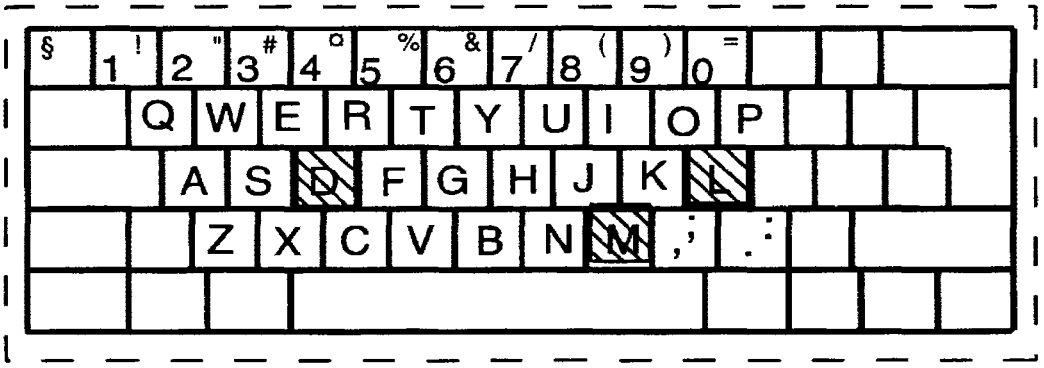
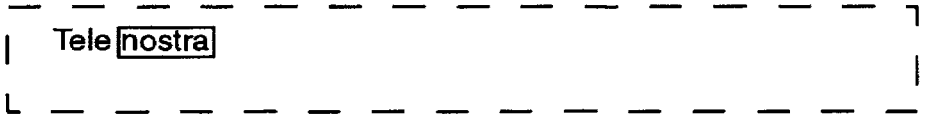


Fig. 6b



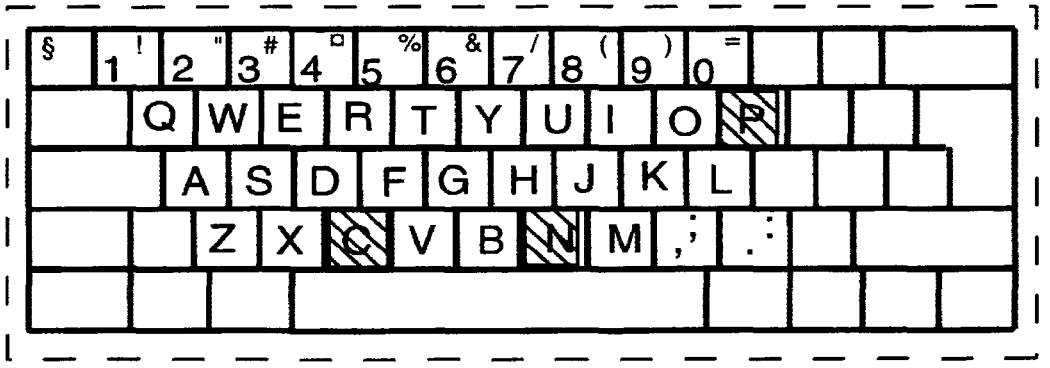
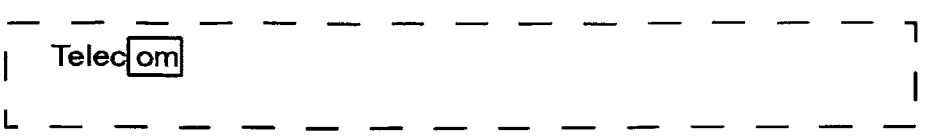


Fig. 6c



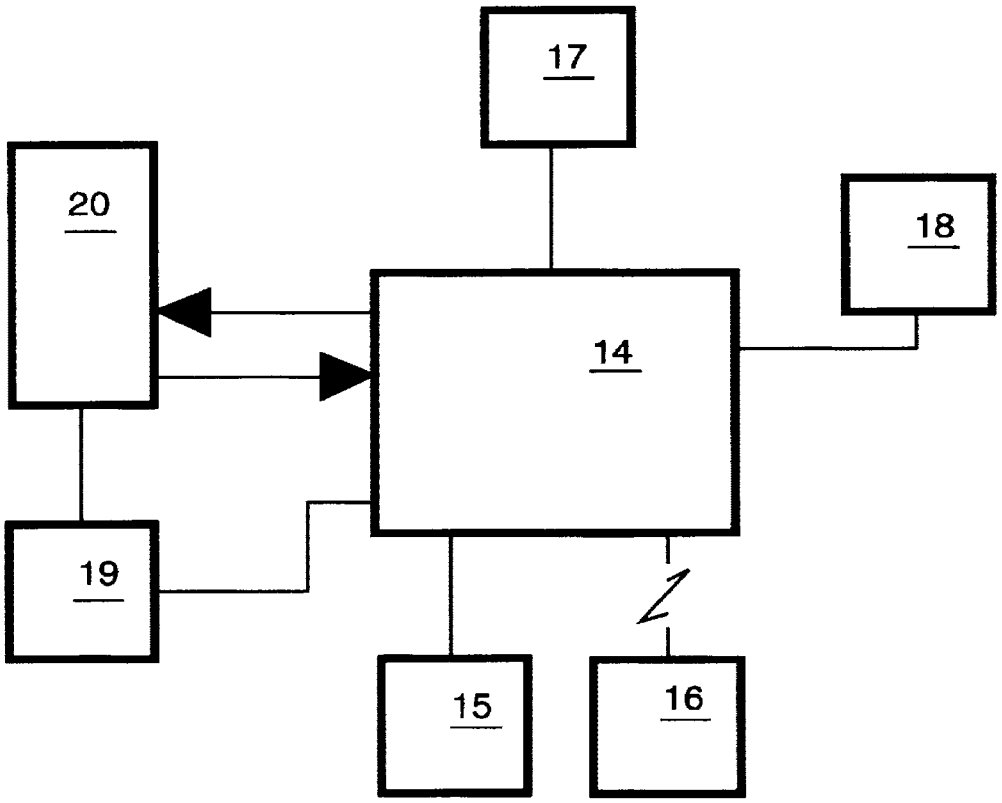


Fig. 7

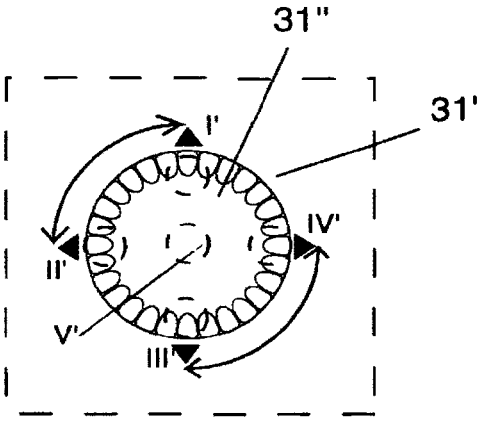


Fig. 8

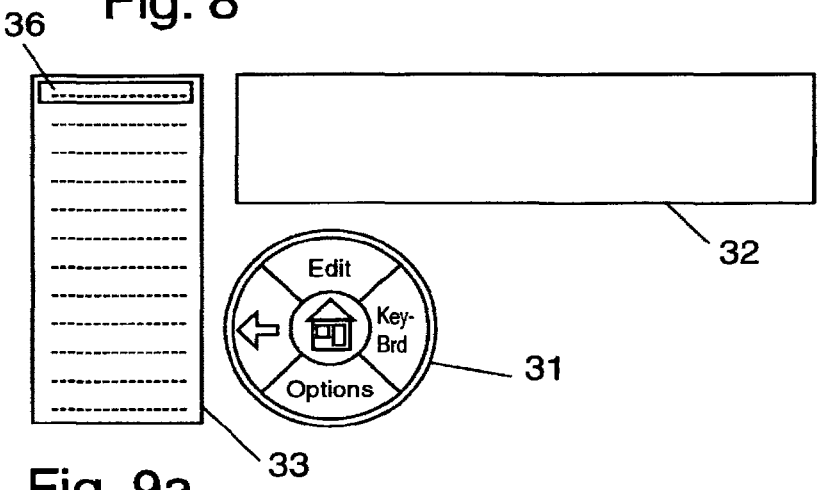


Fig. 9a

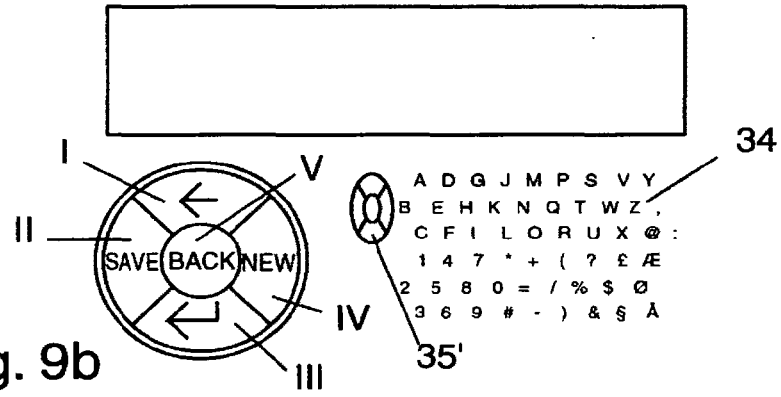


Fig. 9b

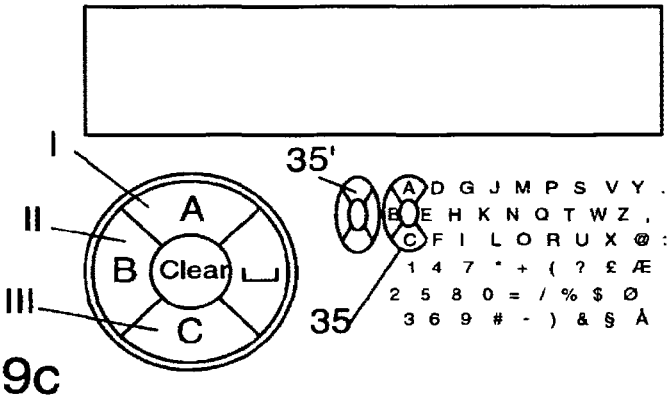


Fig. 9c

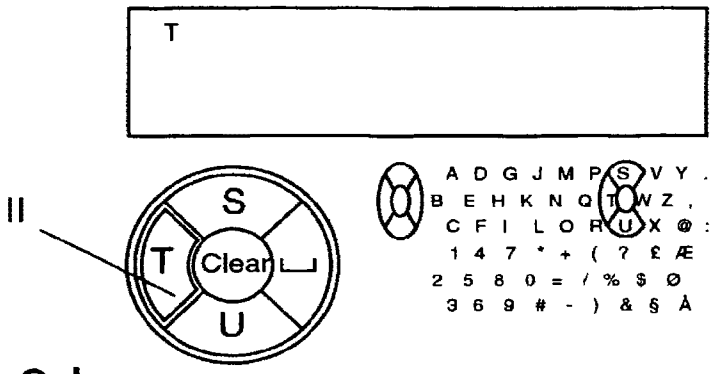


Fig. 9d

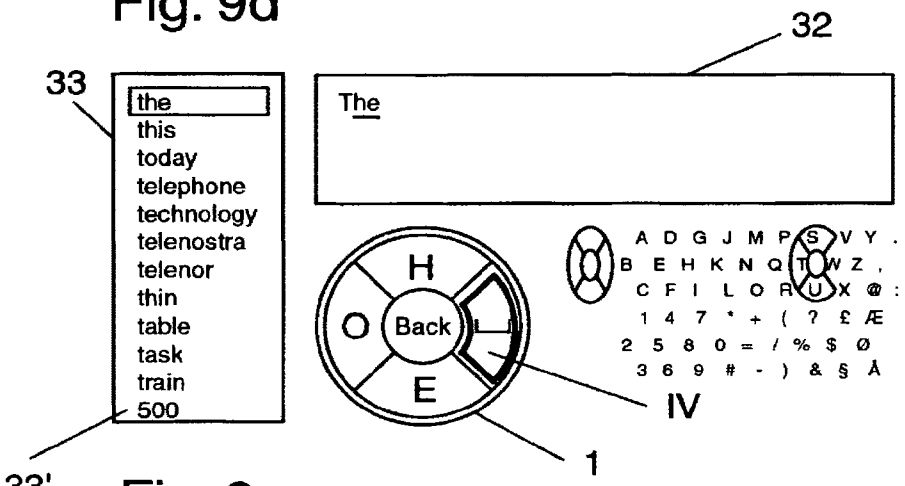


Fig. 9e

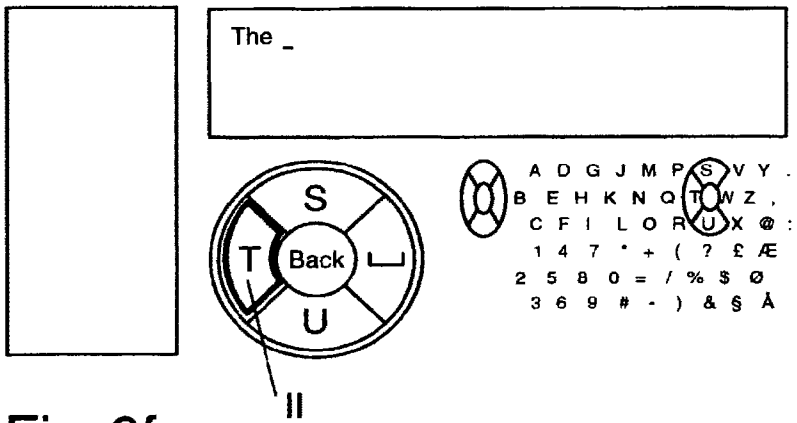


Fig. 9f

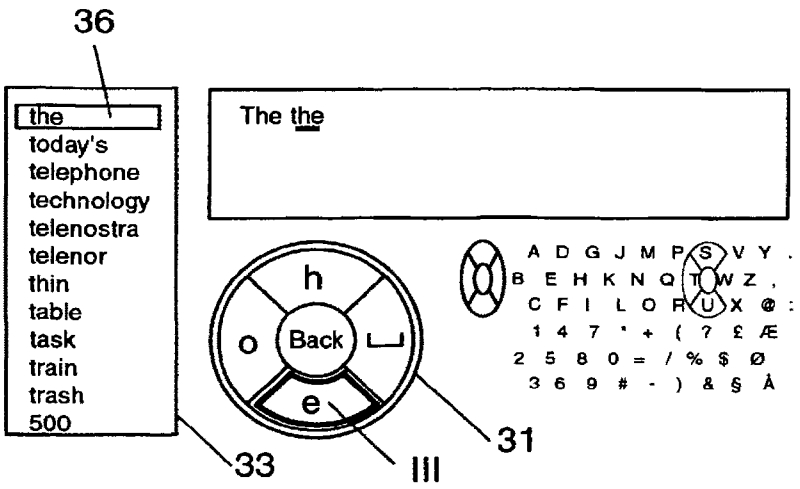


Fig. 9g

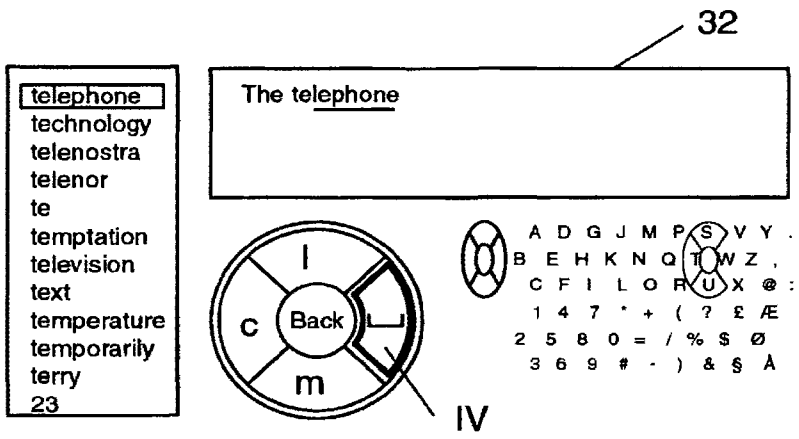


Fig. 9h

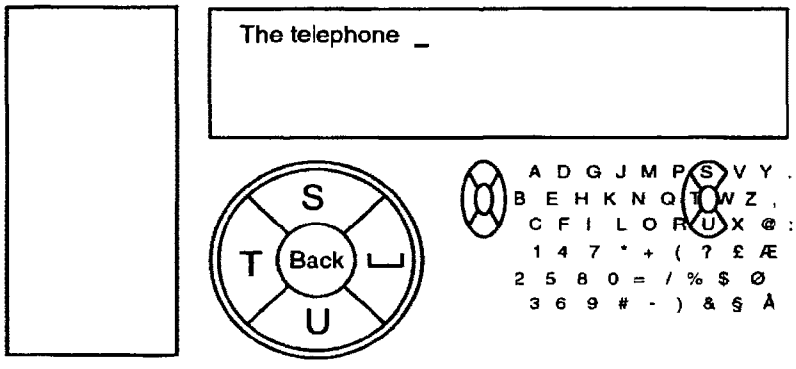


Fig. 9i

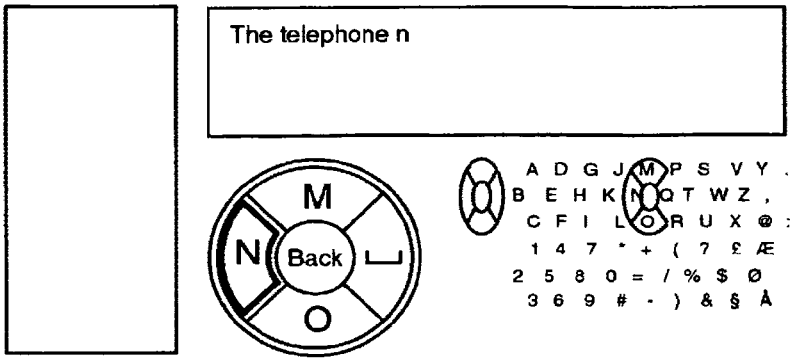


Fig. 9j

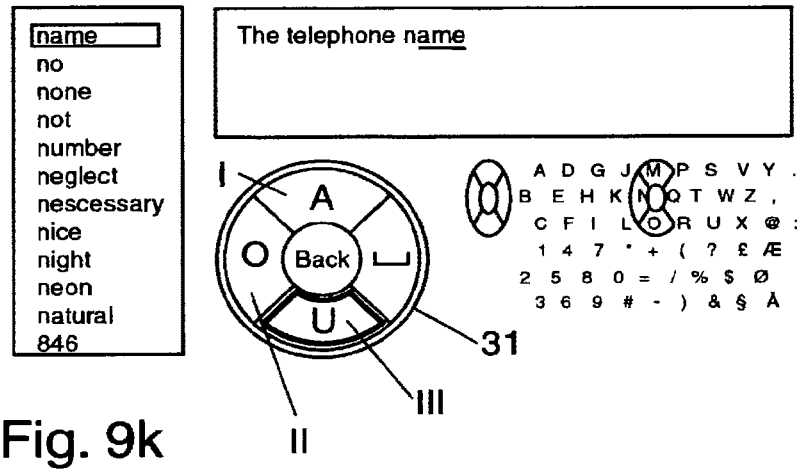


Fig. 9k

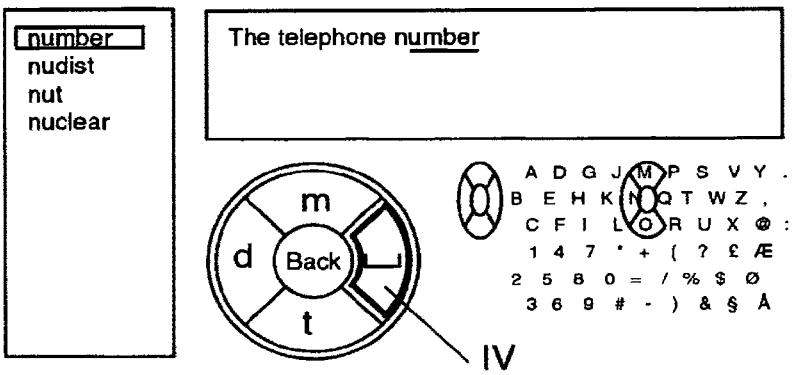


Fig. 9l

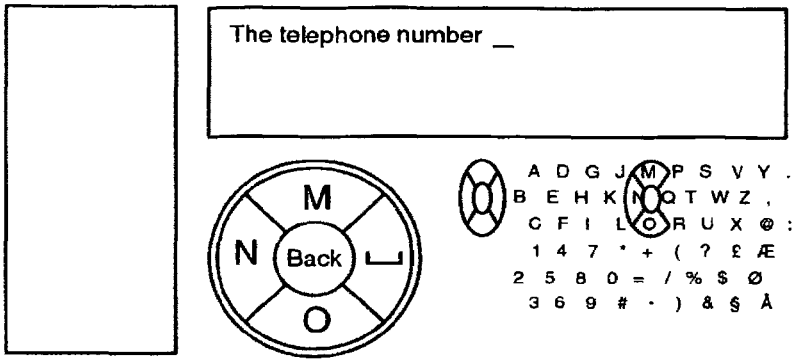


Fig. 9m

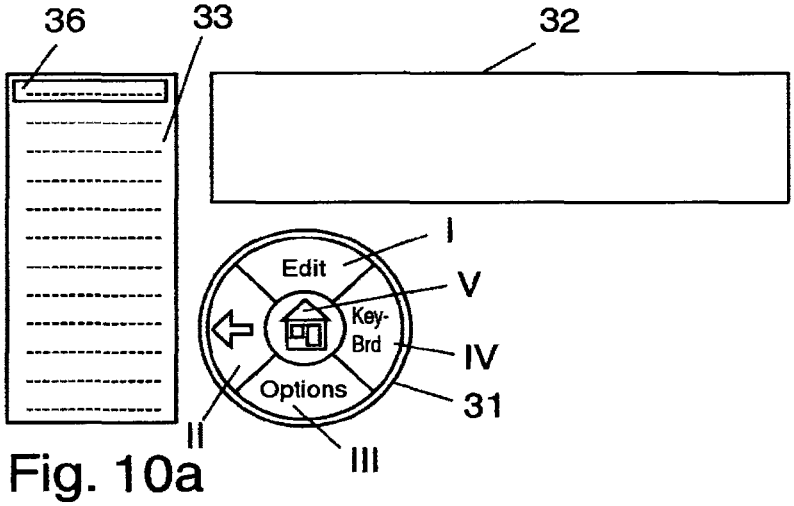


Fig. 10a

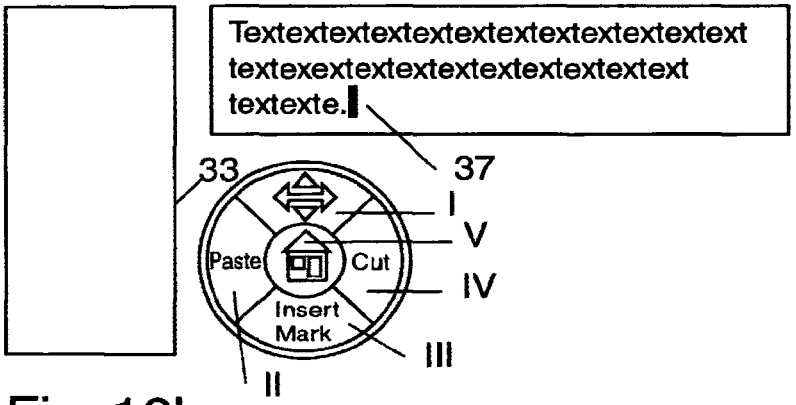


Fig. 10b

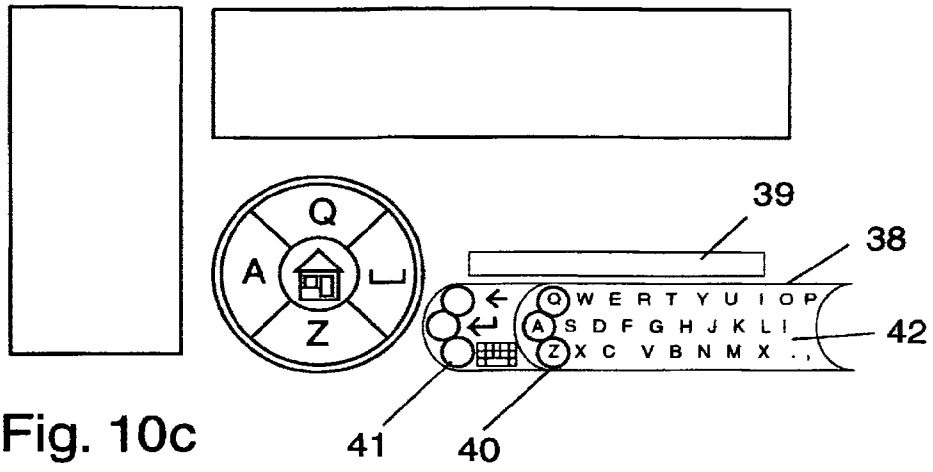


Fig. 10c

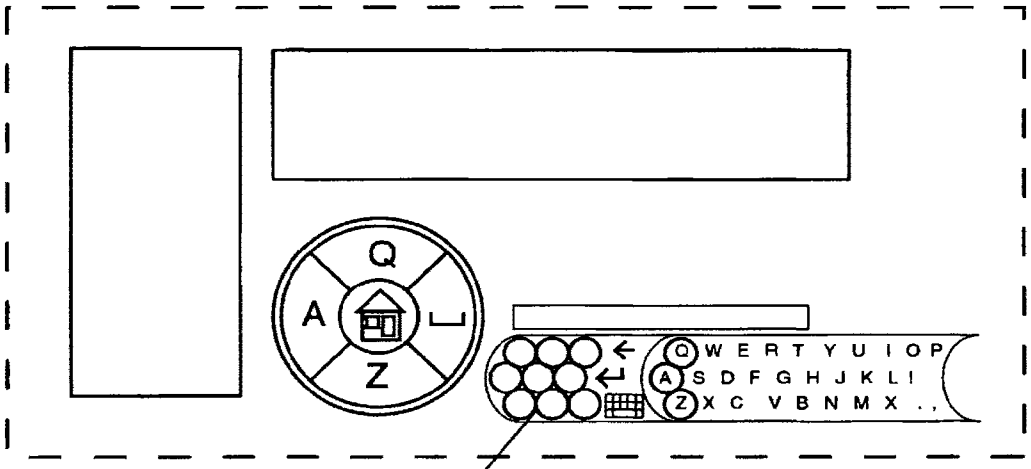


Fig. 10d

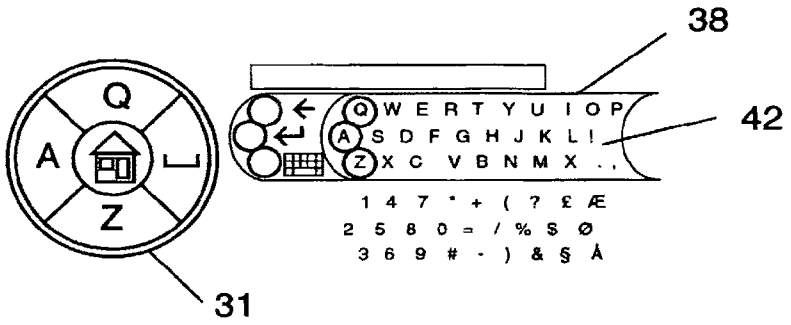


Fig. 10e

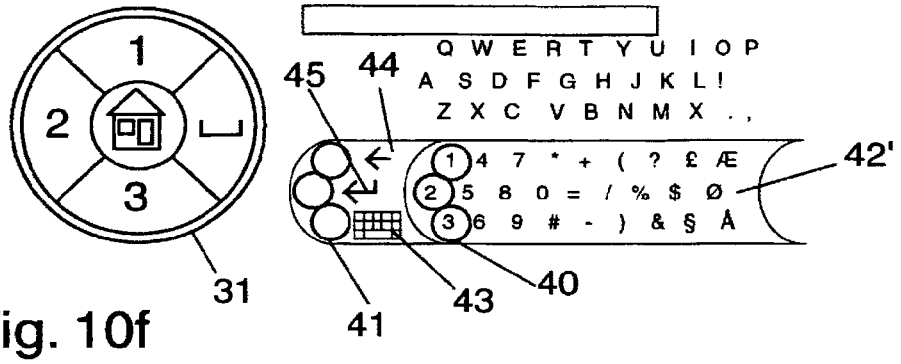


Fig. 10f

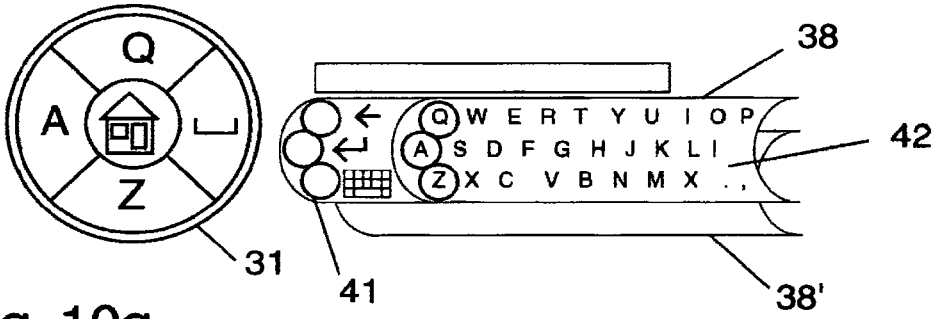


Fig. 10g

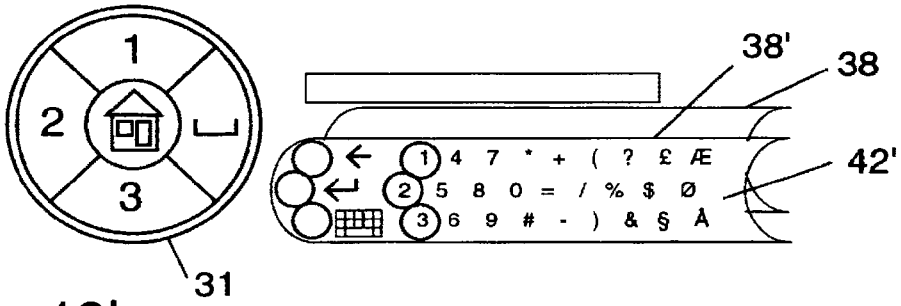


Fig. 10h

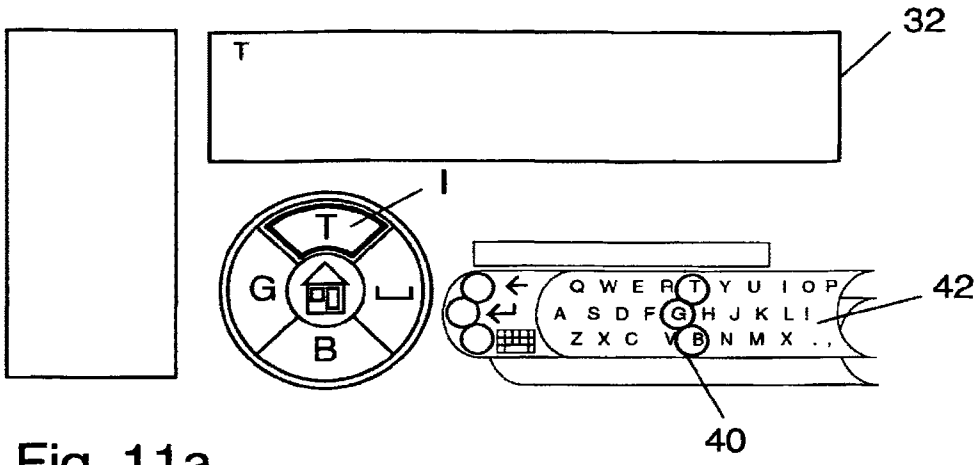


Fig. 11a

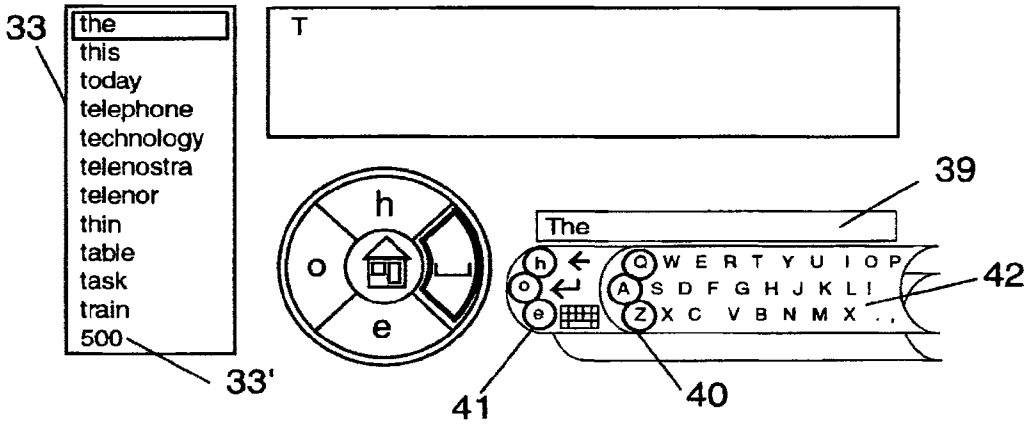


Fig. 11b

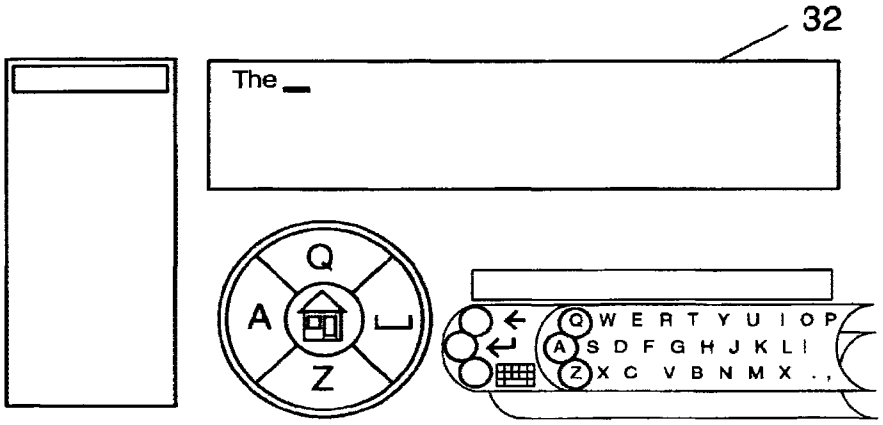


Fig. 11c

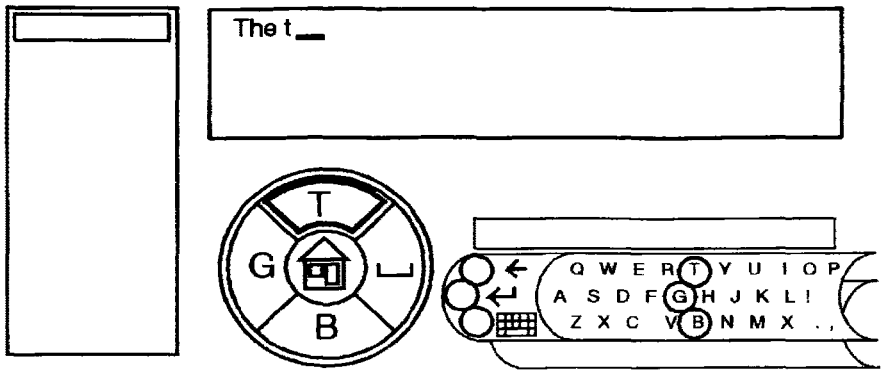


Fig. 11d

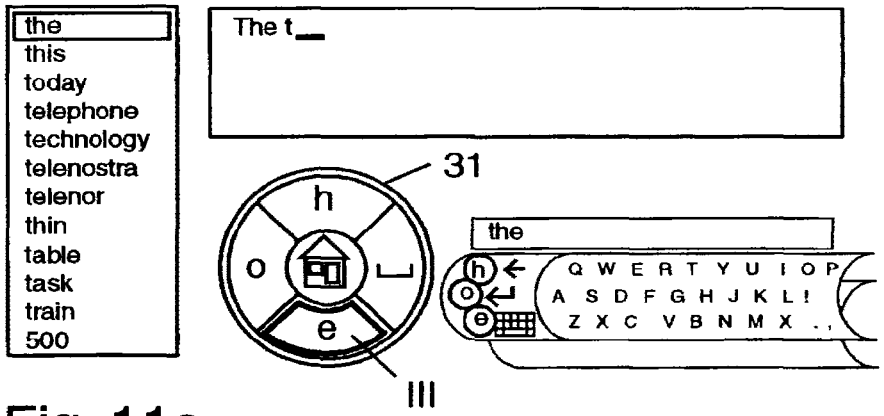


Fig. 11e

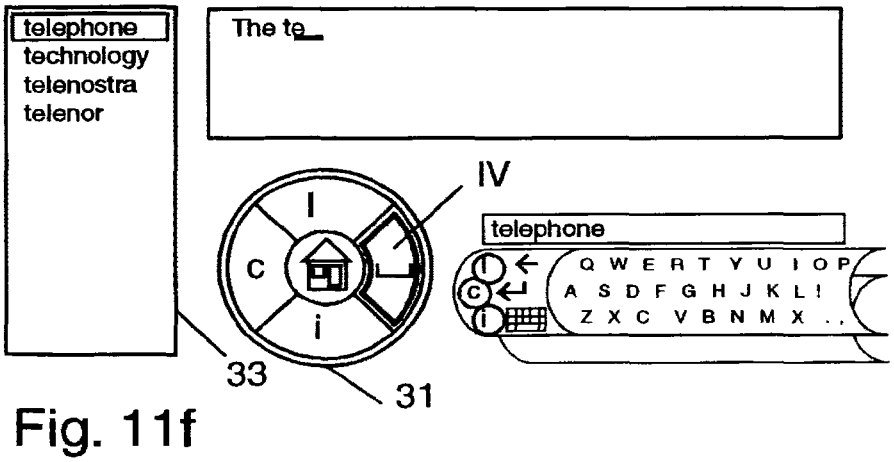


Fig. 11f

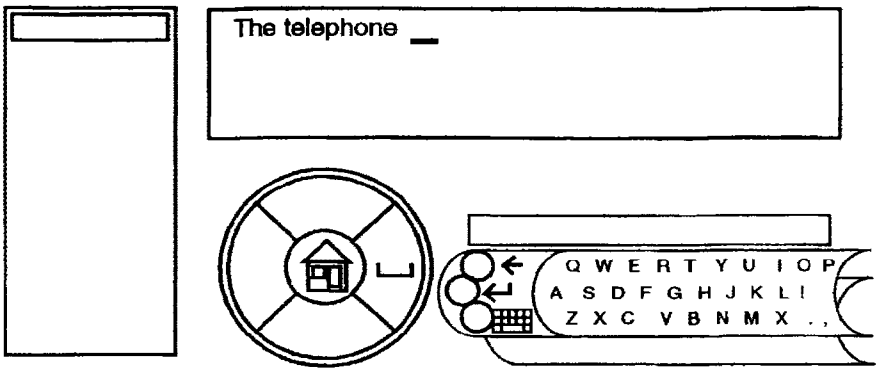


Fig. 11g

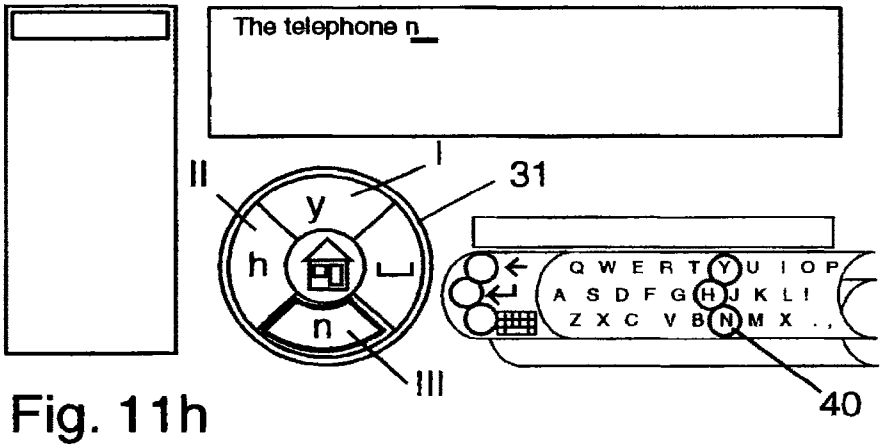


Fig. 11h

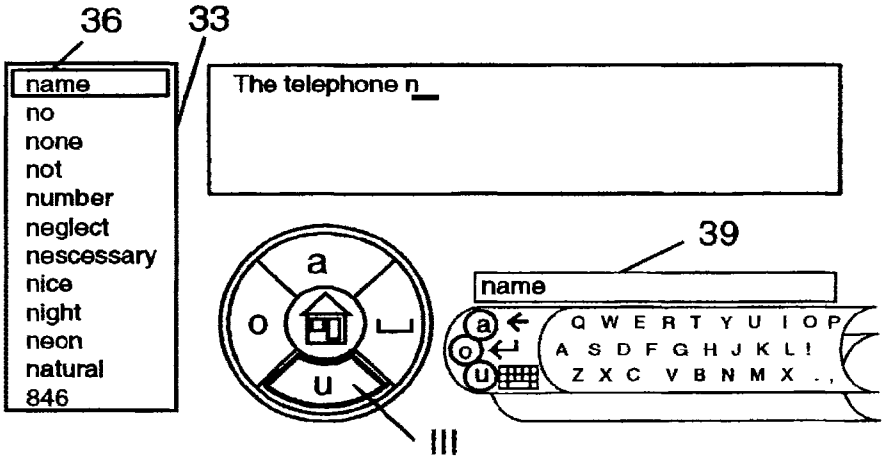


Fig. 11i

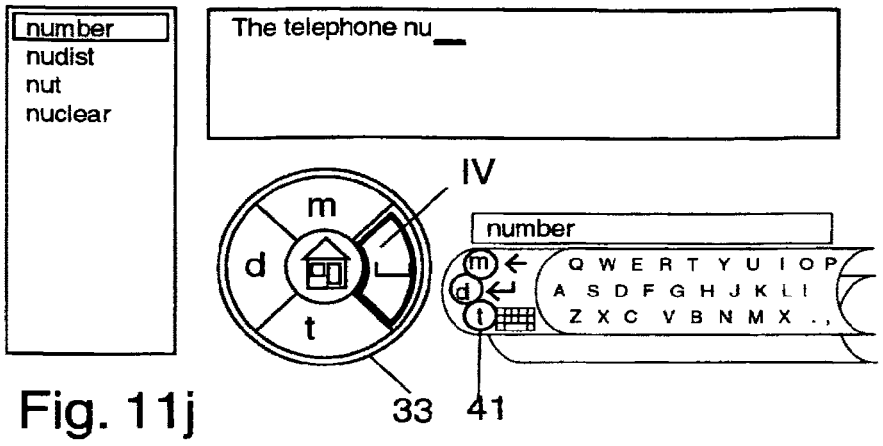


Fig. 11j

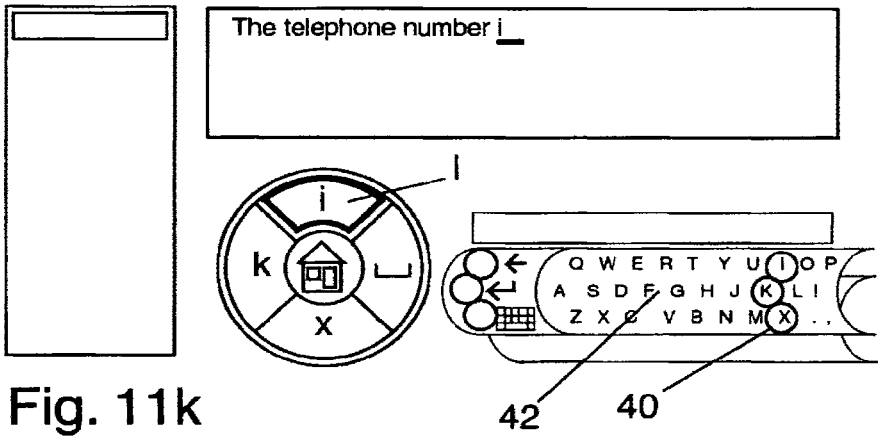


Fig. 11k

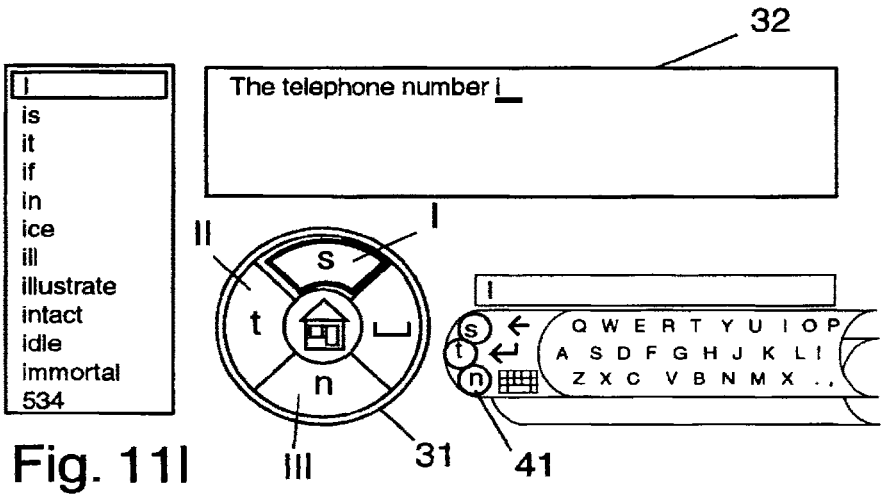


Fig. 11l

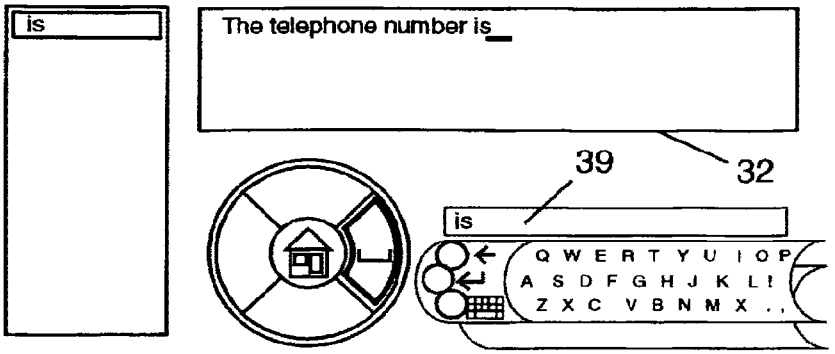


Fig. 11m

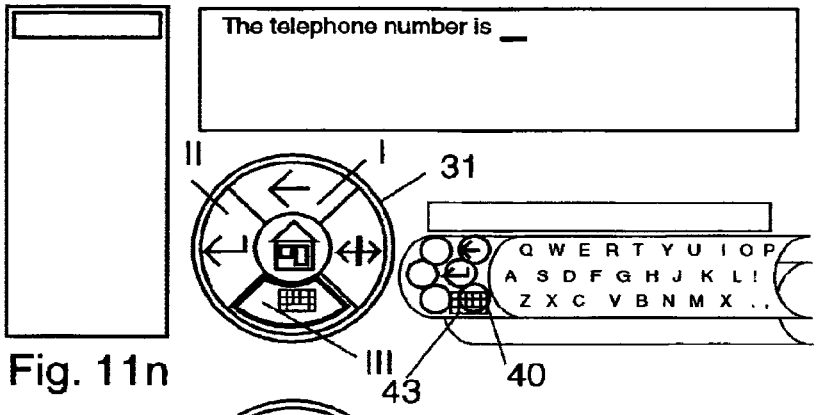


Fig. 11n

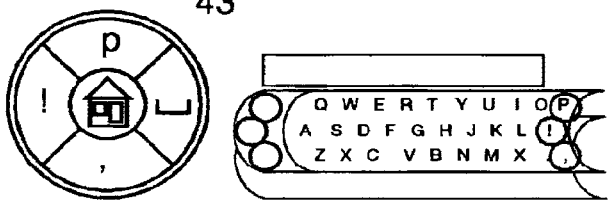


Fig. 11o

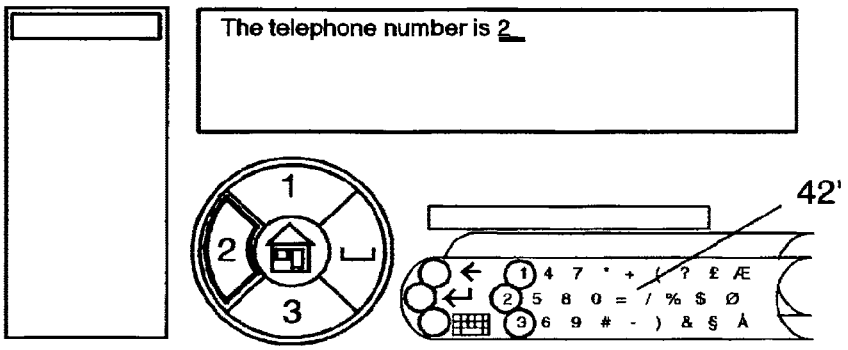


Fig. 11p

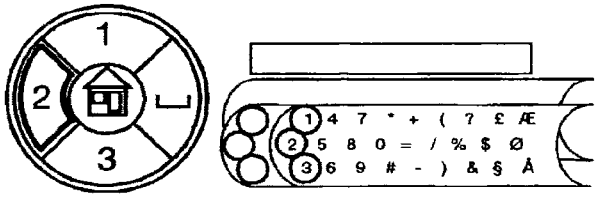


Fig. 11q

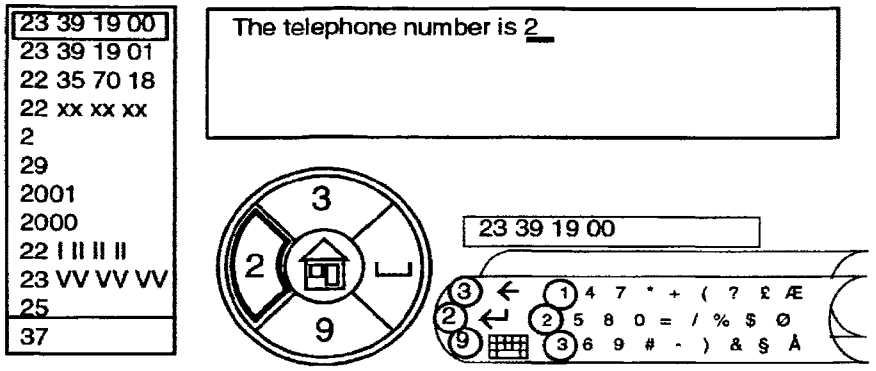


Fig. 11r

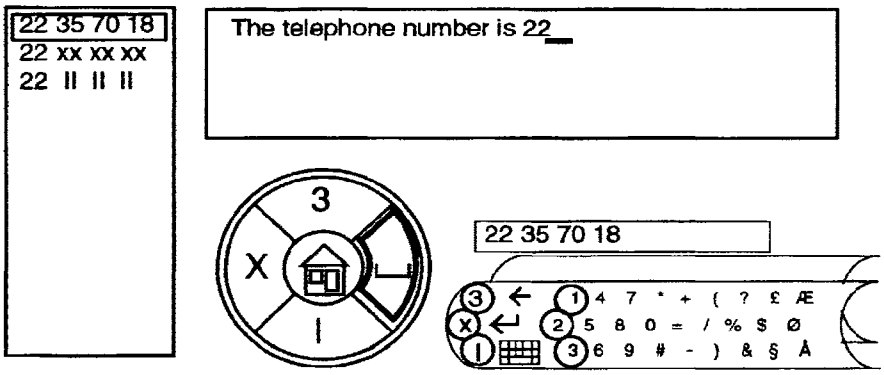


Fig. 11s

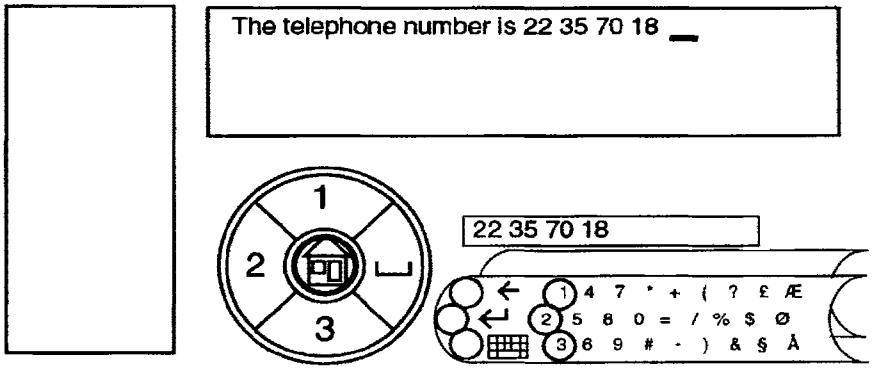


Fig. 11t

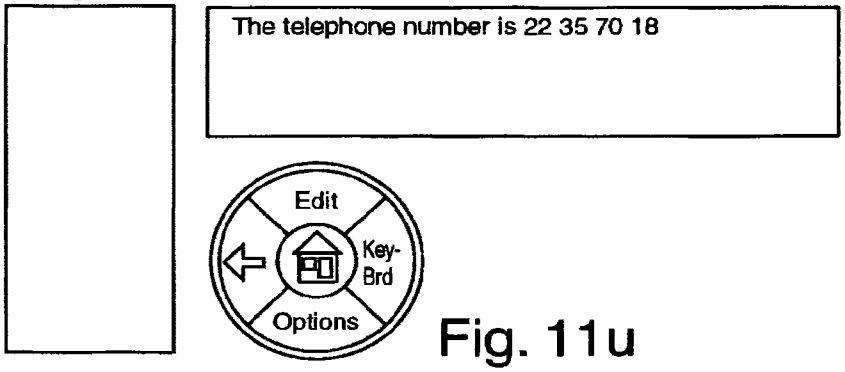


Fig. 11u

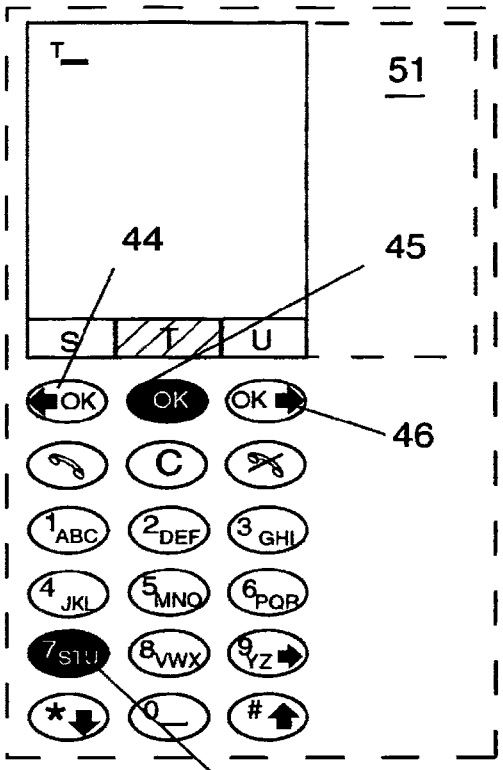


Fig. 12a

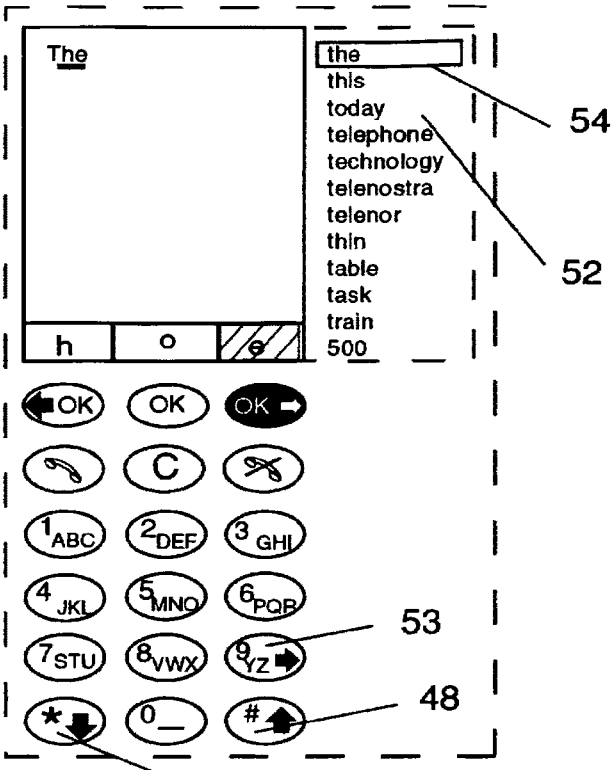


Fig. 12b

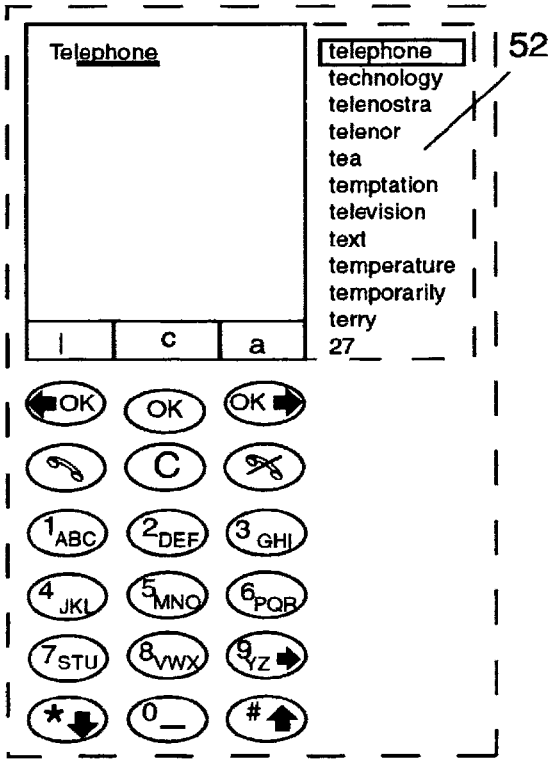


Fig. 12c

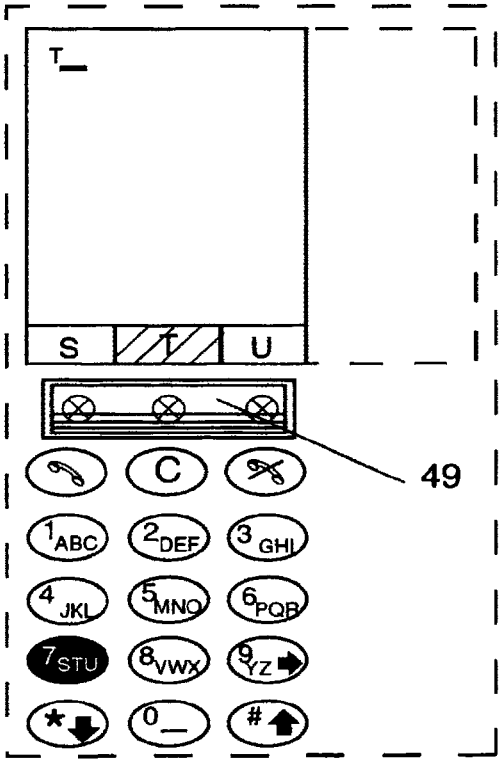


Fig. 12d

INTERNATIONAL SEARCH REPORT

International application No.
PCT/NO 02/00171

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: G06F 3/023, G06F 3/033
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 0075765 A1 (MALVERN SCIENTIFIC SOLUTIONS LTD), 14 December 2000 (14.12.00), page 14, line 15 - page 15, line 8; page 15, line 36 - line 37; page 27, line 19 - page 28, line 25	1-39
X	WO 9704580 A1 (PACIFIC COMMUNICATION SCIENCES, INC), 6 February 1997 (06.02.97), figure 4, claim 1	1-39
X	WO 0058816 A2 (NOW SEE HEAR INTERACTIVE INC), 5 October 2000 (05.10.00), page 5, line 20 - line 32; page 7, line 4 - line 9; page 9, line 7 - line 15	1-39

[X] Further documents are listed in the continuation of Box C. [X] See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
12 July 2002	26 -07- 2002
Name and mailing address of the ISA/ Swedish Patent Office Box 5055, S-102 42 STOCKHOLM Facsimile No. +46 8 666 02 86	Authorized officer Kristoffer Ogebjer/LR Telephone No. +46 8 782 25 00

Form PCT/ISA/210 (second sheet) (July 1998)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/NO 02/00171

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 9833111 A1 (TEGIC COMMUNICATIONS, INC), 30 July 1998 (30.07.98), page 26, line 1 - page 27, line 29, abstract --	1-39
A	EP 0844570 A2 (SONY CORP), 27 May 1998 (27.05.98), claims 1-28 --	1-39
A	US 6011542 A (DURRANI,S. ET AL.), 4 January 2000 (04.01.00), column 1, line 24 - line 37; column 5, line 30 - line 56 --	1-28
P,X	WO 0141402 A2 (BADARNEH, ZIAD), 7 June 2001 (07.06.01), page 25, line 13 - page 26, line 34 --	1-39
P,X	US 6307541 B1 (HO, C.-Y. ET AL.), 23 October 2001 (23.10.01), claim 1 -- --------	1-39

Form PCT/ISA/210 (continuation of second sheet) (July 1998)

INTERNATIONAL SEARCH REPORT
Information on patent family members

10/06/02

International application No.
PCT/NO 02/00171

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0075765 A1	14/12/00	AU 5238100 A	28/12/00
		EP 1183590 A	06/03/02
		GB 9913283 D	00/00/00
		GB 9924342 D	00/00/00
WO 9704580 A1	06/02/97	CA 2224895 A	06/02/97
		EP 0839427 A	06/05/98
		JP 2001519933 T	23/10/01
		US 5797098 A	18/08/98
		US 6032053 A	29/02/00
WO 0058816 A2	05/10/00	AU 3546200 A	16/10/00
WO 9833111 A1	30/07/98	AU 727539 B	14/12/00
		AU 6037998 A	18/08/98
		BR 9807002 A	07/08/01
		CN 1248333 T	22/03/00
		EP 1010057 A	21/06/00
		JP 2001509290 T	10/07/01
		US 5953541 A	14/09/99
		US 6286064 B	04/09/01
EP 0844570 A2	27/05/98	JP 10154033 A	09/06/98
		US 5959629 A	28/09/99
US 6011542 A	04/01/00	NONE	
WO 0141402 A2	07/06/01	AU 1312401 A	06/06/01
		AU 1743101 A	12/06/01
		NO 996001 D	00/00/00
		NO 20004375 A	07/06/01
		NO 20004770 A	25/03/02
		NO 20005610 D	00/00/00
		WO 0135203 A	17/05/01
US 6307541 B1	23/10/01	NONE	

Electronic Patent Application Fee Transmittal

Application Number:	16539501
Filing Date:	13-Aug-2019
Title of Invention:	Process and Apparatus for Selecting an Item From a Database
First Named Inventor/Applicant Name:	Kevin W. Dinn
Filer:	Vishal Vincent Khatri/Kristi Hutchison
Attorney Docket Number:	011844-0029-999

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 3 months with $0 paid	1253	1	1480	1480
Miscellaneous:				
RCE- 1ST REQUEST	1801	1	1360	1360
		Total in USD ($)		**2840**

Electronic Acknowledgement Receipt

EFS ID:	44562869
Application Number:	16539501
International Application Number:	
Confirmation Number:	1802
Title of Invention:	Process and Apparatus for Selecting an Item From a Database
First Named Inventor/Applicant Name:	Kevin W. Dinn
Customer Number:	20583
Filer:	Vishal Vincent Khatri/Kristi Hutchison
Filer Authorized By:	Vishal Vincent Khatri
Attorney Docket Number:	011844-0029-999
Receipt Date:	20-DEC-2021
Filing Date:	13-AUG-2019
Time Stamp:	14:43:35
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$2840
RAM confirmation Number	E2021BJE44000354
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	16539501_RCE.pdf	1349903 c32cb0ece3c21fc2283aa3eb492f4c04603381c1	no	3
Warnings:					
Information:					
2	Miscellaneous Incoming Letter	16539501_Transmittal.pdf	154800 ff55c4f686ca4d119de3246c9abce14470ac7177	no	2
Warnings:					
Information:					
3	Extension of Time	16539501_EOT.pdf	165787 a2f6f4729f6deb29fc6098fb280a9aa961ebebca	no	2
Warnings:					
Information:					
4		16539501_Response.pdf	195751 bf4d712036fe72ae4ed77695fb5190246faade79	yes	10

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Amendment Submitted/Entered with Filing of CPA/RCE	1	1
Claims	2	8
Applicant Arguments/Remarks Made in an Amendment	9	10

Warnings:					
Information:					
5	Transmittal Letter	16539501_IDS.pdf	148210 30504178f606a17c5bc054fa473759927c894c53	no	3

Warnings:					
Information:					
6	Information Disclosure Statement (IDS) Form (SB08)	16539501_IDSList.pdf	135495 6a2b4378aecfe909fad02e08ad2efc0eb4fb0e61	no	1
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Information:					
This is not an USPTO supplied IDS fillable form					
7	Foreign Reference	WO2002091160A1.pdf	2461850 4f658d29ee7d6afad99bc7a981fbc0e0cb511842	no	63
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Information:					
8	Other Reference-Patent/App/Search documents	2021621DemonstrativeExhibitsforKannuu.pdf	5676879 4323a9ada61325db05e4a7c4d24e07a79a72b1f8	no	40
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Information:					
9	Other Reference-Patent/App/Search documents	20210611PatentOwnersBrief.pdf	165945 061e6bc01edd899748f97165d6efc070d8d9d3f7	no	14
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Information:					
11	Other Reference-Patent/App/Search documents	20210720PatentOwnersMotiontoStrike.pdf	146577 5dce262e77951d136fc39c6f46c333ec6b6cfcb1	no	8
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12	Other Reference-Patent/App/Search documents	20210720PatentOwnersMotiontoStrike393PatentFINAL.pdf	146574 53d747c293ef764065e7deed06bd9a4920336c71	no	8
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13	Other Reference-Patent/App/Search documents	DeclarationofCliftonForlines852579and264patents.pdf	14566320 5bb2850a43947dafa63d22fd17bd465037279c5d	no	420
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14	Other Reference-Patent/App/Search documents	JudgmentIPR202000737FWDRedacted.pdf	1542665 05d34851739ac67a579e21b94dd176c886adc749	no	107
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15	Other Reference-Patent/App/Search documents	JudgmentIPR202000738FWDRedacted.pdf	980459 f19cb30eb1c5c92d863180ea06fa89bafac2ad6e	no	92
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Information:					
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Information:					
17	Other Reference-Patent/App/Search documents	OrderGrantingRequestforExParteReexamination90014759.pdf	1144433 61dc8bdcd2058c79a89bcdcfedfed9b47a430bac	no	34
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18	Other Reference-Patent/App/Search documents	OrderGrantingRequestforExParteReexamination90014760.pdf	568581 94f69fcec77543a5b49e9567a32314b1bf41cda0	no	18
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Information:					

20	Other Reference-Patent/App/Search documents	Petitionunder118190014759.pdf	2050018 0672982ea4b95c51f070d6c82487aa8c6608fdec	no	51
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25	Other Reference-Patent/App/Search documents	OppositiontoMotiontoStrike737IPR.pdf	206250 963e6ece6e9b72e9c71caa3720ddc3a8d03fee91	no	8
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Information:					

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28	Other Reference-Patent/App/Search documents	PetitionersBriefReDiscovery738IPR.pdf	298566 2edc825d5d9349a0d059448ca2d7c66543b 57176	no	16
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29	Fee Worksheet (SB06)	fee-info.pdf	40793 04a03f6ad6c08a9af333676c8b012bc5e21d 8795	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	72474377	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/30EFS (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	16/539,501	Filing Date	2019-08-13	Docket Number (if applicable)	011844-0029-999	Art Unit	2143
First Named Inventor	Kevin Dinn			Examiner Name	Hoang, Son T.		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

- ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- ☐ Other _____

☒ Enclosed

- ☒ Amendment/Reply
- ☒ Information Disclosure Statement (IDS)
- ☐ Affidavit(s)/ Declaration(s)
- ☐ Other _____

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

☒ The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 503013

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

Applicant Signature

PTO/SB/30EFS (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Signature of Registered U.S. Patent Practitioner			
Signature	/Vishal V. Khatri/	Date (YYYY-MM-DD)	2021-12-20
Name	Vishal V. Khatri/	Registration Number	51873

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Application Number	:	16/539,501	Confirmation No. 1802
Applicant	:	Kannuu Pty Ltd.	
Inventor	:	Kevin W. Dinn	
Filed	:	August 13, 2019	
Tech Cntr/AU	:	2169	
Examiner	:	Hoang, Son T.	
Entitled	:	PROCESS AND APPARATUS FOR SELECTING AN ITEM FROM A DATABASE	
Attorney Reference	:	011844-0029-999	
Customer Number	:	20583	

MAIL STOP RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

AMENDMENT/RESPONSE TRANSMITTAL

Transmitted herewith is an amendment/response for this application.

EXTENSION OF TIME

A petition for extension of time under 37 C.F.R. §1.136 for 3 months (PTO/SB/22) is attached.

CLAIM FEES

The claim fees have been calculated as follows:

	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NO. PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE		ADDITIONAL FEE
Total	20	–	20	=	0	x $	100.00	= $	0.00
Independent	3	–	3	=	0	x $	480.00	= $	0.00
						FIRST PRESENTATION OF MULTIPLE DEP. CLAIM+ $	860.00	= $	0.00
							TOTAL ADDITIONAL CLAIM FEE DUE	**$**	**0.00**

ADDITIONAL FEES AND PAPERS

Applicants also submit herewith the following fees and/or papers:

Request for Continued Examination – First Submission (Fee Code 1801)	$1,360.00
Supplemental Information Disclosure Statement	

FEE PAYMENT

Authorization is given to charge the fees totaling **$1360.00 (Fee Code 1801)** as itemized herein, as well as the attached extension of time fee of **$1480.00 (Fee Code 1253)**, and to charge any deficiencies in the fees, and/or to further credit any overpayments, to Deposit Account No. 503-013 to maintain the pendency of this application.

Respectfully Submitted,

JONES DAY

Date: December 20, 2021

By: /Vishal V. Khatri/
Vishal V. Khatri
Registration No. 51,873

Intellectual Property Group
51 Louisiana Avenue, N.W.
Washington, D.C. 20001
(202) 879-3939 Telephone
(202) 626-1700 Facsimile

PTO/AIA/22 (10-20)
Approved for use through 11/30/2020. OMB 0651-0031
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PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)

Docket Number (Optional): 011844-0029-999

Application Number: 16/539,501

Filed: August 13, 2019

For: IMPROVED PROCESS AND APPARATUS FOR SELECTING AN ITEM FROM A DATABASE

Art Unit: 2143

Examiner: Hoang, Son T.

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

	Fee	Small Entity Fee	Micro Entity Fee	
☐ One month (37 CFR 1.17(a)(1))	$220	$110	$55	$
☐ Two months (37 CFR 1.17(a)(2))	$640	$320	$160	$
☑ Three months (37 CFR 1.17(a)(3))	$1,480	$740	$370	$ 1480.00
☐ Four months (37 CFR 1.17(a)(4))	$2,320	$1,160	$580	$
☐ Five months (37 CFR 1.17(a)(5))	$3,160	$1,580	$790	$

☐ Applicant asserts small entity status. See 37 CFR 1.27.

☐ Applicant certifies micro entity status. See 37 CFR 1.29.
Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.

☐ A check in the amount of the fee is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director has already been authorized to charge fees in this application to a Deposit Account.

☑ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 503-013.

☑ Payment made via EFS-Web.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

I am the

☐ applicant.

☑ attorney or agent of record. Registration number 51,873.

☐ attorney or agent acting under 37 CFR 1.34. Registration number _____.

/Vishal V. Khatri/ — Signature

December 20, 2021 — Date

Vishal V. Khatri — Typed or printed name

202-879-3607 — Telephone Number

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.

☐ * Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.136(a). The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Application Number	:	16/539,501	Confirmation No. 1802
Applicant	:	Kannuu Pty Ltd.	
Inventor	:	Kevin W. Dinn	
Filed	:	August 13, 2019	
Tech Cntr/AU	:	2169	
Examiner	:	Hoang, Son T.	
Entitled	:	PROCESS AND APPARATUS FOR SELECTING AN ITEM FROM A DATABASE	
Attorney Reference	:	011844-0029-999	
Customer Number	:	20583	

MAIL STOP RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

RESPONSE

In response to the Final Office Action mailed June 24, 2021 for the above-identified application, a Request for Continued Examination (RCE) and the following are submitted herewith:

- Amendments to the Claims with a complete claim listing; and
- Remarks.

Amendments to the Claims:

The following claims will replace all prior versions of the claims in this application (in the unlikely event that no claims follow herein, the previously pending claims will remain):

1-35. (Cancelled)

36. (Currently Amended) A system for selecting items from a database, the system comprising:

an output display;

an input device comprising a four way directional controller with an up, down, left, and right key; and

a computer processor configured to:

associate the items from the database with corresponding item identifiers;

generate a first display on the output display including one or more parts of an item identifier for selection;

enable the selection of the one or more parts;

in response to the selection of the one or more parts of item identifiers, generate a display of a further one or more parts of item identifiers for selection, wherein the further one of more parts of item identifiers being arranged on the display relative to one another and corresponding to an up, down, left and right position;

enable selection of the further one or more parts of item identifiers in order to add to the selected one or more parts to build a larger part or whole of a particular item identifier; and

select one of the further one or more parts of item identifiers in response to a single activation of [[a]] the corresponding up, down, left, or right key;

wherein the selected one or more parts of item identifiers and the further one or more parts of item identifiers are shorter than a complete word; and

wherein selection of the further one or more parts of item identifiers is enabled by a key press corresponding to the relative arrangement of the further one or more parts of item identifiers on the display.

37. (Previously Presented) The system of claim 36, wherein the output display is a display of a television and the input device is a remote control.

38. (Previously Presented) The system of claim 36, wherein the processor is further configured to enable selection of the one or more parts of item identifiers and the further one or more parts of item identifiers by way of a remote control keypad.

39. (Previously Presented) The system of claim 36, wherein the further one of more parts is selected for display based at least in part on a ranking scheme, and the highest ranked of the further one or more parts of item identifiers is positioned in one of the up, down, left and right positions.

40. (Previously Presented) The system of claim 39, wherein the highest ranked of the further one or more parts of item identifiers being positioned in one of the up, down, left and right positions is specifically positioned in a circular menu on the output display indicating the item identifiers to be selected by movements of the user in the directions left, right, up, and down using the remote control keypad.

41. (Previously Presented) The system of claim 37, wherein the item identifiers are pre-processed in order to generate a hierarchical tree, which is stored in a computer accessible memory.

42. (Previously Presented) The system of claim 39, wherein the database of items is indexed based on the item identifiers and capable of being queried.

43. (Previously Presented) The system of claim 39, wherein the number of key presses of the input device to select an item from the database is fewer than the number of key presses required to select an item from a database according to a system that requires an end user to enter one, two, three, or four characters of the item identifier and then scroll through a list of potential items to select the item by additional key presses.

44. (Previously Presented) The system of claim 36, wherein the computer processor is further configured to:

iterate the selection until the particular item identifier is completed, and

enable selection of the particular item identifier to select the database item.

45. (Previously Presented) The system of claim 36, wherein the computer process configured to generate the initial display further includes selecting the one or more parts of item identifiers to be displayed based on at least one predetermined criterion.

46. (Previously Presented) The system of claim 45, wherein the at least one predetermined criterion is selected from the following: a frequency of selection of items associated with the pluralities of portions of the item identifiers, a recency of selection of the items associated with the pluralities of portions of the item identifiers, a likelihood of selection of the items associated with the pluralities of portions of the item identifiers, or a ranking of the pluralities of portions of the item identifiers in relation to a hierarchical classification of the pluralities of portions of the item identifiers.

47. (Previously Presented) The system of claim 36, wherein the computer process configured to generate the initial display further includes displaying a plurality of parts of item identifiers.

48. (Currently Amended) A system for selecting items from a database, the system comprising:

a display of a television;

a remote control comprising [[an]] a four way up, down, left, right directional controller; and

a computer processor configured to:

display in a first area of the display of the television, a first plurality of portions of item identifiers, wherein the item identifiers correspond to the plurality of items in the database, and the first plurality of portions of item identifiers is displayed in a position corresponding to the up, down, left, right select directional controller of the remote control;

enable selection of one of the first plurality of portions of the item identifiers by using the up, down, left, or right, select functionality of the directional controller of the remote control;

display the selected portion of the item identifier in a second area of the display of the television, wherein the second area of the display is separate from the first area of the display;

display in response to the selection of the one of the first plurality of the portions of item identifiers and in the first area of the display, a second plurality of portions of the item identifiers, the second plurality of portions of the item identifiers comprising at least two portions of the item identifiers chosen for display based on the selection of the one of the plurality of portions of the item identifiers;

enable selection of one of the second plurality of portions of the item identifiers by using the up, down, left, right, select functionality of the directional controller of the remote control;

combine the portion of the item identifier selected from the second plurality of portions of the item identifiers with the portion of the item identifier selected from the first plurality of portions of the item identifiers to create a larger portion of the item identifier; and

display larger portion of the item identifier in the second area of the display of the television;

wherein the first plurality of portions of item identifiers and the second plurality of portions of item identifiers are orthographic symbols representing at least a writing language;

wherein the at least two portions of item identifiers chosen for display based on the selection of the one of the plurality of portions of item identifiers are chosen to minimize a number of actuations of the directional controller of the remote control that is otherwise necessary to input the item identifier; and

wherein the second plurality of portions of item identifiers comprises four portions of item identifiers.

49. (Previously Presented) The system of claim 48, wherein the enabling of the selection of one of the second plurality of portions of the item identifiers by using the up, down, left, right, select functionality of the remote control is further enabled via a circular menu on the display indicating the item identifiers to be selected.

50. (Previously Presented) The system of claim 48, wherein the computer processor is further configured to select one of the further one or more parts of item identifiers in response to a single activation of a corresponding up, down, left, or right key on the directional controller of the remote control.

51. (Previously Presented) The system of claim 48, wherein the item identifiers are pre-processed in order to generate a hierarchical tree, which is stored in a computer accessible memory on the television.

52. (Previously Presented) The system of claim 48, wherein the database of items is indexed based on the item identifiers and capable of being queried.

53. (Previously Presented) The system of claim 48, wherein the number of key presses of the up, down, left, right directional controller of the remote control to select an item from the database is fewer than the number of key presses required to select an item from a database according to a system that requires and end user to

enter one, two, three, or four characters of the item identifier and then scroll through a list of potential items to select the item by additional key presses.

54. (Previously Presented) The system of claim 48, wherein the selected two portions of item identifiers are chosen based on at least one predetermined criterion selected from the following: a frequency of selection of items associated with the pluralities of portions of the item identifiers, a recency of selection of the items associated with the pluralities of portions of the item identifiers, a likelihood of selection of the items associated with the pluralities of portions of the item identifiers, or a ranking of the pluralities of portions of the item identifiers in relation to a hierarchical classification of the pluralities of portions of the item identifiers.

55. (Previously Presented) A system for selecting items, the system comprising:

an output display of a television;

an directional input device with an up, down, left, right functionality; and

a computer processor contained within the television configured to:

associate the items with a corresponding item identifiers;

generate a first display on the output display, the first display comprises:

a part of an item identifier corresponding to a first set of items and

a part of an item identifier corresponding to a second set of items in a database;

enable selection of one of the two parts of the item identifiers;

generate, in response to the selection of the one of the two parts of item identifiers, a further display on the output display, the further display comprises:

an additional part of an item identifier corresponding to a subset of the selected set of items and

another additional part of an item identifier corresponding to another subset of the selected set of items;

enable selection of one of the two additional parts of the item identifiers;

combine the selected one of the two parts of the item identifiers with the selected one of the two additional parts of the item identifiers to create a larger part of the item identifiers; and

display the larger part of the item identifiers on the output display, wherein

the additional parts of the item identifiers are shorter than complete item identifiers; and

the first set of items and the second set of items are mutually exclusive of one another;

wherein the up, down, left, right, select functionality of the remote control keypad enables the selection of portions of item identifiers specifically positioned in a circular menu on the display.

REMARKS

Claims 36-55 are pending. Claims 36 and 48 have been amended. Reconsideration and allowance of the present application based on the following remarks are respectfully requested

Claim Rejections Under 35 U.S.C. §§ 102 and 103

Claims 36-40 and 42-47 were rejected under 35 U.S.C. § 102 over Perlman et al (U.S. Publication No. 2002/0113825); claim 41 was rejected under 35 U.S.C. § 103 over Perlman in view of Dostie et al. (U.S. Publication No. 2004/0021691); claims 48-50 and 52-54 were rejected under 35 U.S.C. § 103 over Perlman in view of Kraft et al. (U.S. Publication No. 2003/0095102); and claim 51 was rejected under 35 U.S.C. § 103 over Perlman in view of Kraft and further in view of Dostie. Applicant respectfully traverses these rejections at least because the cited prior art fails to disclose or obviate the subject matter of claims 36-54.

In view of the amendments to independent claims 36 and 48 to clarify that the claims require no more than four options on the input device itself that can be used to select the portions of item identifiers, Applicant respectfully requests reconsideration and withdrawal of the outstanding rejections. As previously argued, Perlman does not disclose at least these features of claims 36 and 48.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of these rejections.

Allowable Subject Matter

Applicant appreciates the Office's indication that claim 55 is allowable over the prior art of record. In view of the foregoing, Applicant respectfully submits that all of the pending claims (claims 36-55) are in condition for allowance.

Conclusion

In view of the foregoing, the claims are now believed to be in form for allowance, and such action is hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview,

he is kindly requested to contact the undersigned at the telephone number listed below.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,

By: /Vishal V. Khatri/
Vishal V. Khatri
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Date: December 20, 2021

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Number	:	16/539,501	Confirmation No.: 1802
Applicant	:	Kevin Dinn	
Filed	:	August 13, 2019	
Tech Cntr/AU	:	2169	
Examiner	:	Son T. Hoang	
Entitled	:	IMPROVED PROCESS AND APPARATUS FOR SELECTING AN ITEM FROM A DATABASE	
Attorney Reference	:	011844-0029-999	
Customer Number	:	20583	

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Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.97

Pursuant to 37 CFR §1.97 and 1.56, the attention of the U.S. Patent and Trademark Office is hereby directed to the following disclosures made herein, which include:

REFERENCES AND RELEVANCY

☒ Applicant(s) wish(es) to make of record the documents listed on the attached List of Cited References. Copies of the listed documents are attached, where required, as are any readily available full or partial English translations of any non-English language documents.

☐ Applicant(s) wish(es) to make of record the documents listed on the attached List of Cited References. The references cited herein were cited for consideration in the parent application, and, pursuant to 37 CFR 1.98(d), copies of the cited references can be found in the file of the parent application (*U.S. Serial No., filed).*

☐ Applicant(s) wish(es) to make of record the documents listed on the attached List of Cited References. The references cited herein were cited in the International Search Report issued for the corresponding International application, and copies of the International Search Report and the cited references are attached for the Examiner's consideration.

☐ Applicant(s) wish(es) to make of record the documents listed on the attached List of Cited References. The references cited herein were cited in a communication from a foreign or international patent office in a counterpart foreign or international application(s), and copies of both the relevant communication and the cited references, where required, are attached for the Examiner's consideration.

CERTIFICATION

The undersigned certifies that, pursuant to 37 CFR §1.97(e)(1),

☐ each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign or international patent office in a counterpart foreign or international application not more than three months prior to the filing of this Statement.

RELATED CASES

☐ Identified in the attached Appendix are related applications directed to related technical subject matter. Copies of the related applications, where required, are attached for the Examiner's consideration. *The identification of the related U.S. patent applications is not to be construed as a waiver of secrecy for those applications, now or upon issuance of the present application as a patent.*

BASIS FOR CONSIDERATION

This Information Disclosure Statement is filed:

☐ within three months of the filing date of the application and/or before the mailing date of a first Official Action on the merits, and no fee is required [37 C.F.R. §1.97(b)].

☐ with the appropriate certification, and no fee is required [37 C.F.R. §1.97(e)(1)].

☐ after the mailing date of the first Official Action on the merits, but prior to the issuance of a Final Official Action or a Notice of Allowance, and the requisite fee, if necessary, is authorized herein for payment [37 C.F.R. §1.97(c)].

☐ after the mailing date of the Final Official Action or Notice of Allowance, but prior to the payment of the issue fee, the requisite certification under 37 CFR §1.97(e)(1) is made herein, and the requisite fee, if necessary, is authorized herein for payment [37 C.F.R. §1.97(d)].

☒ with a Request for Continued Examination (RCE), and no fee is required [37 C.F.R. §1.97(b)(4)].

FEE AUTHORIZATION

☒ Authorization is hereby given to charge any deficient fee(s) under 37 CFR §1.16 and §1.17 as necessary to ensure the consideration of this disclosure, or to credit any fee overpayments, to Deposit Account No. 503-013.

☐ Authorization is hereby given to charge the requisite fee of **$260** (Fee Code 1806) for submission of this Information Disclosure Statement to Deposit Account No. 503-013.

It is respectfully requested that this information be expressly considered during the prosecution of this application, and that the reference(s) be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

The Examiner is further respectfully requested to return of a copy of the enclosed List of Cited References with the Examiner's initials in the left column.

The examination and allowance of this Application is respectfully requested.

Respectfully Submitted,

JONES DAY

By: /Vishal V. Khatri/
Vishal V. Khatri
Registration No. 51,873

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(202) 879-3939 Telephone
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Date: December 20, 2021

Attachment(s): List of Cited References and copies as required

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 16/539,501	Filing Date 08/13/2019	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $100 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $460 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	12/20/2021	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0		x $100 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0		x $480 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/CURTIS NELLOMS JR/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/539,501	08/13/2019	Kevin W. Dinn	011844-0029-999	1802

20583 7590 06/24/2021

Jones Day
250 Vesey Street
New York, NY 10281-1047

EXAMINER	
HOANG, SON T	

ART UNIT	PAPER NUMBER
2169	

NOTIFICATION DATE	DELIVERY MODE
06/24/2021	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

japarker@jonesday.com
ncgeorge@jonesday.com
wtokmakidis@jonesday.com

Office Action Summary	Application No. 16/539,501	Applicant(s) Dinn, Kevin W.	
	Examiner SON T HOANG	Art Unit 2169	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 24 May 2021.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☑ This action is **FINAL.** 2b) ☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 36-55 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☑ Claim(s) 55 is/are allowed.

7) ☑ Claim(s) 36-54 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☑ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☑ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☑ Certified copies of the priority documents have been received in Application No. 11/990,338.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☑ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date 26 May 2021, and 2 June 2021.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

Response to Amendment

2. In response to the amendment filed on May 24, 2021:

The abstract is amended.

Claim 43 is amended.

Claims 36-55 are pending.

Response to Arguments

3. In response to the remarks filed on May 24, 2021:

a. Objection to the abstract is withdrawn in view of Applicant's amendment.

b. pre AIA 35 U.S.C. 112, second paragraph, rejection of claim 43 is withdrawn in view of Applicant's amendment.

c. The double patenting rejections of the pending claims have been withdrawn in view of the Terminal Disclaimer filed on May 24, 2021.

d. Applicant's arguments with respect to the pre-AIA 35 U.S.C. 102(b) and 103(a) have been fully considered but are not persuasive.

Firstly, Applicant argues towards Perlman regarding that Perlman would not teach "*no more than four options on the input device itself that can be used to select the portions of item identifiers*" in each of independent **claims 36** and **48**.

The Examiner respectfully disagrees. **Claim 36** indicates the options "*…being arranged on the display relative to one another and corresponding to an up, down, left, and right position*" and **claim 48** indicates the options being selected "*...by using the up, down, left, right…of the directional controller*" wherein there is no explicit requirement in each claim that there must only be four options (*emphasis added*), each option being associated with a respective up, down, left, or right position of the input device. In fact, the claimed language merely requires the possible arrangement of each option on a possible directional position. Perlman then discloses in Figure 1B and Figure 2 a star configuration wherein each of the most common first or additional letters of words is arranged in a possible up, down, left, or right position ([0017]-[0019], [0023]-[0029]). It should be noted that the each option of the 7-option configuration of Perlman is also positioned as relatively being up, down, left, or right of any respective other option's position. Thus, Perlman clearly discloses a possible arrangement of a letter selection within a directional position either up, down, left, or right as claimed.

Secondly, Applicant argues towards Perlman regarding that Perlman would not implement a predictive keyboard that emphasize simplicity.

The Examiner respectfully disagrees. As presented above, there is no explicit requirement that the claimed simplicity must be expressed through only "*no more than four options*" as each of the claimed option has a possible arrangement of being up, down, left or right. Perlman teaches a star-configuration wherein each position

represents a most common letters of words which is used to simplify multiple button actuations or number of selections for a desired item. Thus, Perlman clearly implements a predictive keyboard with simplicity as claimed.

Rejections of other claims dependent on either **claim 36** or **48** are also maintained in view of the reasons presented above.

Information Disclosure Statement

4. As required by **M.P.E.P. 609(C)**, the Applicant's submissions of the Information Disclosure Statements dated 26 May 2021 and 2 June 2021 are acknowledged by the Examiner and the cited references have been considered in the examination of the claims now pending. As required by **M.P.E.P. 609 C(2)**, a copy of each of the PTOL-1449s initialed and dated by the Examiner is attached to the instant Office action.

Terminal Disclaimer

5. The terminal disclaimer filed on May 24, 2021 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of Pat. No. 8140560, 8375058, 8676852, 8996579, 8370393, 9436354, 9836489, 9697264, and App. No. 16/927,723 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 36-40**, and **42-47** are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Perlman et al. (*Pub. No. US 2002/0113825, published on August 22, 2002; hereinafter Perlman*).

Regarding **claim 36**, Perlman clearly shows and discloses a system for selecting items from a database, the system comprising: an output display; an input device; and a computer processor (*Figures 1-6*) configured to:

associate the items from the database with corresponding item identifiers (*a database list 120 is displayed for the user on the television/computer display 105. In the illustrated embodiment, the database list is a list of available multimedia content*, [0017]-[0019], [0023]-[0029]);

generate a first display on the output display including one or more parts of an item identifier for selection (*Initially (i.e., before the user has selected a character), the alphanumeric characters mapped to the character-mapped buttons 101, 110 correspond to the most common first letters of words in the database list 120*, [0017]-[0019], [0023]-[0029]);

enable the selection of the one or more parts (*Once the user selects a first character*, [0017]-[0019], [0023]-[0029]);

in response to the selection of the one or more parts of item identifiers, generate a display of a further one or more parts of item identifiers for selection (*Once the user selects a first character, a new set of characters are mapped to the character-mapped buttons 101, 110 which correspond to the most common second letters of words in the database list 120 which begin with the first-selected character*, [0017]-[0019], [0023]-[0029]), wherein the further one of more parts of item identifiers being arranged on the display relative to one another and corresponding to an up, down, left and right position (*Figures 2-6 show the suggested letters arranged in up, down, left, right positions of the remote control*;

enable selection of the further one or more parts of item identifiers in order to add to the selected one or more parts to build a larger part or whole of a particular item identifier (*Figure 4 shows a whole identifier is being built from one or more identifying letters*); and

select one of the further one or more parts of item identifiers in response to a single activation of a corresponding up, down, left, or right key (*As the user selects letters via the displayed character-mapped buttons 110, the user's letter selections will appear in a text box 130*, [0017]-[0019], [0023]-[0029])*;*

wherein the selected one or more parts of item identifiers and the further one or more parts of item identifiers are shorter than a complete word (*Figures 2-6 show each entered character and corresponding suggested characters are less than a complete word*); and

wherein selection of the further one or more parts of item identifiers is enabled by a key press corresponding to the relative arrangement of the further one or more parts of item identifiers on the display (*Figures 2-6 shows each suggested character are selectable using a corresponding button respective to its position*).

Regarding **claim 37**, Perlman then discloses the output display is a display of a television and the input device is a remote control (*as illustrated in FIGS. 1a through 1c, a group of directional and functional buttons 101 arranged in a "star" pattern are configured on the remote control device 100, and a corresponding set of buttons 110 are displayed on the television/computer display 105. In the embodiment illustrated in FIG. 1a, all nine of the buttons 101 are character-mapped buttons, each having a different alphanumeric character mapped thereto. In addition, the remote control device 100 includes a "more" button 107 for mapping a new set of characters to the character-mapped buttons 101*, [0014]).

Regarding **claim 38**, Perlman further discloses enabling selection of the one or more parts of item identifiers and the further one or more parts of item identifiers by way of a remote control keypad (*As the user selects letters via the displayed character-mapped buttons 110, the user's letter selections will appear in a text box 130, and the database list 120 will change to reflect the user's selections*, [0014]-[0019]).

Regarding **claim 39**, Perlman then discloses the further one of more parts is selected for display based at least in part on a ranking scheme, and the highest ranked of the further one or more parts of item identifiers is positioned in one of the up, down, left and right positions (*Once the user selects a first character, a new set of characters are mapped to the character-mapped buttons 101, 110 which correspond to the most*

common second letters of words in the database list 120 which begin with the first-selected character, [0017]-[0019], [0023]-[0029]).

Regarding **claim 40**, Perlman further discloses the highest ranked of the further one or more parts of item identifiers being positioned in one of the up, down, left and right positions is specifically positioned in a circular menu on the output display indicating the item identifiers to be selected by movements of the user in the directions left, right, up, and down using the remote control keypad (*Once the user selects a first character, a new set of characters are mapped to the character-mapped buttons 101, 110 which correspond to the most common second letters of words in the database list 120 which begin with the first-selected character*, [0017]-[0019], [0023]-[0029]. *Figures 2-6 show most likely characters are displayed in up, down, left, right positions representing as a circular menu*).

Regarding **claim 42**, Perlman further discloses the database of items is indexed based on the item identifiers and capable of being queried (*a database list 120 is displayed for the user on the television/computer display 105. In the illustrated embodiment, the database list is a list of available multimedia content*, [0017]-[0019], [0023]-[0029]. *Figure 7 shows a database search based on the entered characters*).

Regarding **claim 43**, Perlman further discloses the number of key presses of the input device to select an item from the database is fewer than the number of key presses required to select an item from a database according to a system that requires an end user to enter one, two, three, or four characters of the item identifier and then scroll through a list of potential items to select the item by additional key presses (*the user will be able to enter relatively complex groups of words with only a few keystrokes*,

[0034]. *It is clear that the predictive character set would enable the controller to actuate less key presses than a system with a known system of scrolling through a list of matches*).

Regarding **claim 44**, Perlman further discloses iterating the selection until the particular item identifier is completed (*the user may press a remote control button 101 with a mapped character as indicated on the graphical user interface (i.e., rather than initially choosing the "select" button 102). The selected character will then be typed/displayed in the text box 130, and the new character mappings will change to the most common second letters of entries that have the first letter that was typed*, [0023]), and enabling selection of the particular item identifier to select the database item (*If the user presses "select" at this stage, the first entry in the list ("Ace of Base") will be highlighted, the star will disappear, and the user may use the up/down buttons to navigate through the remaining entries in the list*, [0025]).

Regarding **claim 45**, Perlman further discloses generating the initial display further includes selecting the one or more parts of item identifiers to be displayed based on at least one predetermined criterion (*Initially (i.e., before the user has selected a character), the alphanumeric characters mapped to the character-mapped buttons 101, 110 correspond to the most common first letters of words in the database list 120*, [0017]-[0019], [0023]-[0029]).

Regarding **claim 46**, Perlman further discloses the at least one predetermined criterion is selected from the following: a frequency of selection of items associated with the pluralities of portions of the item identifiers, a recency of selection of the items associated with the pluralities of portions of the item identifiers, a likelihood of selection

of the items associated with the pluralities of portions of the item identifiers, or a ranking of the pluralities of portions of the item identifiers in relation to a hierarchical classification of the pluralities of portions of the item identifiers (*Initially (i.e., before the user has selected a character), the alphanumeric characters mapped to the character-mapped buttons 101, 110 correspond to the most common first letters of words in the database list 120*, [0017]-[0019], [0023]-[0029]. *If a user plays back a particular multimedia program more frequently than any other program, the characters corresponding to that program may be displayed, notwithstanding the fact that they are relatively uncommon (i.e., relative to other characters in the database)*, [0019]).

Regarding **claim 47**, Perlman further discloses generating the initial display further includes displaying a plurality of parts of item identifiers (*Initially (i.e., before the user has selected a character), the alphanumeric characters mapped to the character-mapped buttons 101, 110 correspond to the most common first letters of words in the database list 120*, [0017]-[0019], [0023]-[0029]).

Claim Rejections - 35 USC § 103

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. **Claim 41** is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Perlman and further in view of Dostie et al. (*Pub. No. US 2004/0021691, published on February 5, 2004; hereinafter Dostie*).

Regarding **claim 41**, Dostie then discloses the item identifiers are pre-processed in order to generate a hierarchical tree, which is stored in a computer accessible memory (*Referring to FIG. 4, the dictionary 20 in the first embodiment is organized in a tree structure 21 containing a plurality of nodes. Completion candidates are stored in nodes 23 within the tree structure 21. (The tree structure 21 is also referred to in this specification as a candidate tree 21.) Preferably, the dictionary 20 is organized as a B-tree. Alternatively, the tree structure 21 may take other forms and may be static. Characters making up a completion candidate are stored in separate nodes within the tree structure 21. A completion candidate is represented by a number of nodes, with each node pointing to a child node containing the next character in the completion candidate*, [0085], [0088]-[0089]).

It would have been obvious to an ordinary person skilled in the art at the time of the invention was made to incorporate the teachings of Dostie with the teachings of Perlman for the purpose of rapidly entering and searching for data based on hierarchical structure associated with the data and predictive text analysis to obtain completion of text input candidates.

8. **Claims 48-50**, and **52-54** are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Perlman in view of Kraft et al. (*Pub. No. US 2003/0095102, published on May 22, 2003; hereinafter Kraft*).

Regarding **claim 48**, Perlman clearly shows and discloses a system for selecting items from a database, the system comprising:

a display of a television; a remote control comprising an up, down, left, right directional controller; and a computer processor (*Figures 1-6*) configured to:

display in a first area of the display of the television, a first plurality of portions of item identifiers (*Initially (i.e., before the user has selected a character), the alphanumeric characters mapped to the character-mapped buttons 101, 110 correspond to the most common first letters of words in the database list 120*, [0017]-[0019], [0023]-[0029]wherein the item identifiers correspond to the plurality of items in the database (*a database list 120 is displayed for the user on the television/computer display 105. In the illustrated embodiment, the database list is a list of available multimedia content*, [0017]-[0019], [0023]-[0029]), and the first plurality of portions of item identifiers is displayed in a position corresponding to the up, down, left, right select directional controller of the remote control (*As the user selects letters via the displayed character-mapped buttons 110, the user's letter selections will appear in a text box 130*, [0017]-[0019], [0023]-[0029]. *Figures 2-6 show the suggested letters arranged in up, down, left, right positions of the remote control*);

enable selection of one of the first plurality of portions of the item identifiers by using the up, down, left, or right, select functionality of the directional controller of the remote control (*Figures 3-6 show as the user selects letters via the displayed character-mapped buttons 110, the user's letter selections will appear in a text box 130*, [0017]-[0019], [0023]-[0029]);

display the selected portion of the item identifier in a second area of the display of the television, wherein the second area of the display is separate from the first area of the display (*Figures 3-6 show area 120 displaying selected characters, wherein the area 120 is separate from area displaying the buttons*);

display in response to the selection of the one of the first plurality of the portions of item identifiers and in the first area of the display, a second plurality of portions of the item identifiers, the second plurality of portions of the item identifiers comprising at least two portions of the item identifiers chosen for display based on the selection of the one of the plurality of portions of the item identifiers (*Once the user selects a first character, a new set of characters are mapped to the character-mapped buttons 101, 110 which correspond to the most common second letters of words in the database list 120 which begin with the first-selected character*, [0017]-[0019], [0023]-[0029]);

enable selection of one of the second plurality of portions of the item identifiers by using the up, down, left, right, select functionality of the directional controller of the remote control (*Figures 3-6 show as the user selects letters via the displayed character-mapped buttons 110, the user's letter selections will appear in a text box 130*, [0017]-[0019], [0023]-[0029]);

combine the portion of the item identifier selected from the second plurality of portions of the item identifiers with the portion of the item identifier selected from the first plurality of portions of the item identifiers to create a larger portion of the item identifier (*Figure 3 shows B is selected. Figure 4 shows A is selected and combined with B. Figure 5 shows N is selected and combined with BA*); and

display larger portion of the item identifier in the second area of the display of the television (*Figure 5 shows BAN is displayed as a result of combining B+A+N*);

wherein the first plurality of portions of item identifiers and the second plurality of portions of item identifiers are orthographic symbols representing at least a writing language (*Figures 3-6 show suggested and selected letters corresponding to B+A+N+G of a writing language*);

wherein the at least two portions of item identifiers chosen for display based on the selection of the one of the plurality of portions of item identifiers are chosen to minimize a number of actuations of the directional controller of the remote control that is otherwise necessary to input the item identifier (*Figure 5 shows at least D, A, G are predicted to minimize full inputs of "Bananarama" or "The Band" or "Bangles*); and

wherein the second plurality of portions of item identifiers comprises four portions of item identifiers (*Figure 5 shows only 3 characters predicted to complete "BAN" but it is well clear that if a plurality of items with long names (e.g., 30 characters) are stored in the database, at least 4 or more predicted characters similarly shows in Figure 5*).

Kraft **alternatively** discloses wherein the second plurality of portions of item identifiers comprises four portions of item identifiers (*with reference to FIG. 8, the user can use a predictive editor for finding a name stored in the phonebook 45 with all the*

names (first and last names) in the phone book used as dictionary for the predictive editor. Only five key-presses (or less) may do finding e.g. all people starting with "Brian", [0042]).

It would have been obvious to an ordinary person skilled in the art at the time of the invention was made to incorporate the teachings of Kraft with the teachings of Perlman for the purpose of enabling predictive input analysis to complete characters of a predetermined word with minimal number of actuations to enter the characters.

Regarding **claim 49**, Perlman further discloses the enabling of the selection of one of the second plurality of portions of the item identifiers by using the up, down, left, right, select functionality of the remote control is further enabled via a circular menu on the display indicating the item identifiers to be selected (*Once the user selects a first character, a new set of characters are mapped to the character-mapped buttons 101, 110 which correspond to the most common second letters of words in the database list 120 which begin with the first-selected character*, [0017]-[0019], [0023]-[0029]. *Figures 2-6 show most likely characters are displayed in up, down, left, right positions representing as a circular menu*).

Regarding **claim 50**, Perlman further discloses selecting one of the further one or more parts of item identifiers in response to a single activation of a corresponding up, down, left, or right key on the directional controller of the remote control (*As the user selects letters via the displayed character-mapped buttons 110, the user's letter selections will appear in a text box 130*, [0017]-[0019], [0023]-[0029]).

Regarding **claim 52**, Perlman further discloses the database of items is indexed based on the item identifiers and capable of being queried (*a database list 120 is displayed for the user on the television/computer display 105. In the illustrated embodiment, the database list is a list of available multimedia content*, [0017]-[0019], [0023]-[0029]. *Figure 7 shows a database search based on the entered characters*).

Regarding **claim 53**, Perlman further discloses the number of key presses of the up, down, left, right directional controller of the remote control to select an item from the database is fewer than the number of key presses required to select an item from a database according to a system that requires and end user to enter one, two, three, or four characters of the item identifier and then scroll through a list of potential items to select the item by additional key presses (*the user will be able to enter relatively complex groups of words with only a few keystrokes*, [0034]. *It is clear that the predictive character set would enable the controller to actuate less key presses than a system with a known system of scrolling through a list of matches*).

Regarding **claim 54**, Perlman further discloses the selected two portions of item identifiers are chosen based on at least one predetermined criterion selected from the following: a frequency of selection of items associated with the pluralities of portions of the item identifiers, a recency of selection of the items associated with the pluralities of portions of the item identifiers, a likelihood of selection of the items associated with the pluralities of portions of the item identifiers, or a ranking of the pluralities of portions of the item identifiers in relation to a hierarchical classification of the pluralities of portions of the item identifiers (*Initially (i.e., before the user has selected a character), the alphanumeric characters mapped to the character-mapped buttons 101, 110*

correspond to the most common first letters of words in the database list 120, [0017]-[0019], [0023]-[0029]. *If a user plays back a particular multimedia program more frequently than any other program, the characters corresponding to that program may be displayed, notwithstanding the fact that they are relatively uncommon (i.e., relative to other characters in the database)*, [0019]).

9. **Claim 51** is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Perlman in view of Kraft and further in view of Dostie.

Regarding **claim 51**, Dostie then discloses the item identifiers are pre- processed in order to generate a hierarchical tree, which is stored in a computer accessible memory on the television (*Referring to FIG. 4, the dictionary 20 in the first embodiment is organized in a tree structure 21 containing a plurality of nodes. Completion candidates are stored in nodes 23 within the tree structure 21. (The tree structure 21 is also referred to in this specification as a candidate tree 21.) Preferably, the dictionary 20 is organized as a B-tree. Alternatively, the tree structure 21 may take other forms and may be static. Characters making up a completion candidate are stored in separate nodes within the tree structure 21. A completion candidate is represented by a number of nodes, with each node pointing to a child node containing the next character in the completion candidate*, [0085], [0088]-[0089]).

It would have been obvious to an ordinary person skilled in the art at the time of the invention was made to incorporate the teachings of Dostie with the teachings of Perlman, as modified by Kraft, for the purpose of rapidly entering and searching for data based on hierarchical structure associated with the data and predictive text analysis to obtain completion of text input candidates.

Allowable Subject Matter

10. **Claim 55** is allowable over the prior art.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

12. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Son Hoang whose telephone number is (571) 270-1752. The Examiner can normally be reached on Monday – Friday (7:00 AM – 4:00 PM).

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Usmaan Saeed can be reached on (571) 272-4046. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SON T HOANG/
Primary Examiner, Art Unit 2169
June 18, 2021

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/539,501	Dinn, Kevin W.
	Examiner	Art Unit
	SON T HOANG	2169

CPC - Searched*		
Symbol	**Date**	**Examiner**
G06F16/00, limited by text search	06/18/2021	SH
G06F16/2228, G06F16/248, G06F16/957, G06F16/24578, limited by text search	06/18/2021	SH

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**
707	999.102, 999.107, limited by text search	06/18/2021	SH
707	791, 802, limited by text search	06/18/2021	SH

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	**Date**	**Examiner**
EAST searched with text	06/18/2021	SH
Inventors and assignee/applicant searched through EAST and PALM	06/18/2021	SH
NPL searched (Google, ACM, Dialog, IP.com, STIC)	06/18/2021	SH
IPR2020-00740 reviewed petition for Inter Partes Review of Pat. No. 8375058	06/18/2021	SH
IPR2020-00739 reviewed petition for Inter Partes Review of Pat. No. 8676852	06/18/2021	SH
IPR2020-00737 reviewed petition for Inter Partes Review of Pat. No. 9436354	06/18/2021	SH

/SON T HOANG/ Primary Examiner, Art Unit 2169	

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/539,501	Dinn, Kevin W.
	Examiner	Art Unit
	SON T HOANG	2169

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**
707	999.102, 999.107, limited by text search	06/18/2021	SH
707	791, 802, limited by text search	06/18/2021	SH
G06F16	00, 2228, 248, 957, 24578, limited by text search	06/18/2021	SH

/SON T HOANG/ Primary Examiner, Art Unit 2169	

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/539,501	Dinn, Kevin W.
	Examiner	Art Unit
	SON T HOANG	2169

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS										
☐ Claims renumbered in the same order as presented by applicant						☐ CPA		☐ T.D.		☐ R.1.47
CLAIM		DATE								
Final	Original	06/18/2021								
	1	-								
	2	-								
	3	-								
	4	-								
	5	-								
	6	-								
	7	-								
	8	-								
	9	-								
	10	-								
	11	-								
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	32	-								
	33	-								
	34	-								
	35	-								
	36	✓								
	37	✓								
	38	✓								
	39	✓								
	40	✓								
	41	✓								
	42	✓								

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/539,501	Dinn, Kevin W.
	Examiner	**Art Unit**
	SON T HOANG	2169

CLAIM		DATE								
Final	Original	06/18/2021								
	43	✓								
	44	✓								
	45	✓								
	46	✓								
	47	✓								
	48	✓								
	49	✓								
	50	✓								
	51	✓								
	52	✓								
	53	✓								
	54	✓								
	55	=								

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S609	1	"9436354".pn.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2021/06/18 17:33
S610	1	"8140560".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S611	8,979	(707/791 707/802).ccls. 707/791 707/802	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S612	56,407	(707/999.102 707/999.107).ccls. 707/102 707/104.1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S613	583,101	("707" "705" "709" "715").clas.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S614	1	"8140560".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S615	0	on-screen near5 keyboard same (select$3 choos$3 pick$3) near5 contact and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S616	1,950	keyboard same (select$3 choos$3 pick$3) near5 contact and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S617	77	S616 and on-screen	US-PGPUB; USPAT; USOCR;	OR	ON	2021/06/18 17:33

			FPRS; EPO; JPO			
S618	2,110	(select$3 choos$3 pick$3) near5 first near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S619	0	(select$3 choos$3 pick$3) near5 first near2 name same corresponding near2 last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S620	0	(select$3 choos$3 pick$3) near5 first near2 name and corresponding near2 last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S621	660	(select$3 choos$3 pick$3) near5 first near2 name and last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S622	0	(select$3 choos$3 pick$3) near5 first near2 name and last near2 name same (key keyboard button) near2 directional and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S623	0	(select$3 choos$3 pick$3) near5 first near2 name same (key keyboard button) near2 directional and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S624	18	(select$3 choos$3 pick$3) near5 first near2 name and (key keyboard button) near2 directional and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S625	23	(kevin near2 william near2 dinn).inv.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S626	19	(kannuu).asn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33

S627	7	S625 and S626	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S628	2,110	(select$3 choos$3 pick$3) near5 first near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S629	35	S625 S626	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S630	14	S629 and first near2 name	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S631	0	(display$3 present$5) near5 first adj name same on-screen and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S632	307	(display$3 present$5) near5 name same on-screen and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S633	11	11/990338	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S634	1	"20030182274"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S635	0	on-screen near5 contact near2 (name id identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S636	17	on-screen same contact near2 (name id identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR;	OR	ON	2021/06/18 17:33

			FPRS; EPO; JPO			
S637	996	contact near2 (name id identifier) same last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S638	2	12/468078	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S639	167	combin$5 near5 first adj name same last adj name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S640	34	S639 and (mobile portable) near2 (phone device)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S641	2	"20050193338"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S642	13	first near2 screen near5 last adj name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S643	0	filter$3 near5 last adj (name id identifier) same based near5 first adj (name id identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S644	194	last adj (name id identifier) same based near5 first adj (name id identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S645	78	S644 and (mobile portable) near2 (phone device)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33

S646	43	S645 and address near2 book	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S647	7	S621 and S611	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S648	82	S621 and S612	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S649	456	S621 and S613	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S650	10	S637 and S611	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S651	124	S637 and S612	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S652	666	S637 and S613	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S653	3	S639 and S611	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S654	35	S639 and S612	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S655	127	S639 and S613	US-PGPUB; USPAT; USOCR;	OR	ON	2021/06/18 17:33

			FPRS; EPO; JPO			
S656	0	S617 and S611	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S657	0	S617 and S612	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S658	12	S617 and S613	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S659	146	("20010018351" | "20020049795" | "20020061770" | "20020091690" | "20020151327" | "20020183099" | "20030073414" | "20030078069" | "20030182274" | "20040105714" | "20040163032" | "20040192276" | "20050010605" | "20050188330" | "20050233769" | "20060009861" | "20060031591" | "20060146028" | "20060217953" | "20060221058" | "20060265648" | "20060265668" | "20060294462" | "20070016862" | "20070060114" | "20070089070" | "20070179776" | "20090327888" | "20100010963" | "3937939" | "5109352" | "5126672" | "5263174" | "5299125" | "5496992" | "5633912" | "5724069" | "5754655" | "5787417" | "5797098" | "5894276" | "5896321" | "5901222" | "5911485" | "5953541" | "0539823" | "6009444" | "6011554" | "6032053" | "6047196" | "6055439" | "6150962" | "6223059" | "6247043" | "6264146" | "6311125" | "6377965" | "6580932" | "6744423" | "6748242" | "6792287" | "6826566" | "6955602" | "7185286" | "7293231" | "7443316" | "7487147" | "7543244" | "7616191" | "7669111" | "7681124" | "7716579" | "7793228" | "7836044" | "7886233" | "7921361").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S660	6	S659 and direction$2 near2 (button key)	US-PGPUB; USPAT; USOCR;	OR	ON	2021/06/18 17:33

			FPRS; EPO; JPO			
S661	138	("20010012769" | "20010018351" | "20020049795" | "20020061770" | "20020091690" | "20020151327" | "20020183099" | "20030073414" | "20030078069" | "20030182274" | "20040105714" | "20040163032" | "20040192276" | "20050010605" | "20050188330" | "20050233769" | "20060009861" | "20060031591" | "20060146028" | "20060217953" | "20060221058" | "20060265648" | "20060265668" | "20060294462" | "20070016862" | "20070060114" | "20070089070" | "20070179776" | "20090327888" | "20100010963" | "3937939" | "5128672" | "5263174" | "5299125" | "5398023" | "5496992" | "5633912" | "5724069" | "5754655" | "5787417" | "5797098" | "5894276" | "5896321" | "5901222" | "5911485" | "5953541" | "6009444" | "6011554" | "6032053" | "6047196" | "6055439" | "6150962" | "6223059" | "6247043" | "6264146" | "6311125" | "6377965" | "6580932" | "6744423" | "6748242" | "6792287" | "6826566" | "7185286" | "7443316" | "7487147" | "7543244" | "7616191" | "7669111" | "7793228" | "7836044" | "7886233").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S662	10	13/349204	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S663	243	((keyboard keypad (key adj (board pad))) same (select$3 choos$3 pick$3) near5 contact).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S664	2	("8375058" "8140560").pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S665	2	13/491267	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33

S666	1	"8370393".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S667	8	13/736548	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S668	569,084	g06f17/30 g06f17/30.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S669	138	S621 and S668	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S670	180	S637 and S668	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S671	0	S617 and S668	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S672	24	S639 and S668	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S673	7	14/166465	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S674	1	"8676852".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S675	3	("8140560" "8375058" "8676852").pn.	US-PGPUB; USPAT; USOCR;	OR	ON	2021/06/18 17:33

			FPRS; EPO; JPO			
S676	1	"8370393".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S677	569,107	(G06F17/30 G06F17/30595 G06F17/30705).cpc. (G06F17/30 G06F17/30595 G06F17/30705)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S678	6	S616 and S677	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S679	138	S621 and S677	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S680	242	S628 and S677	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S681	12	S632 and S677	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S682	38	S644 and S677	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S683	6	14/627914	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S684	1	"8996579".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33

S685	1	"8676852".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S686	1	"20030182274"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S687	1	"8370393".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S688	2	13/491267	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S689	488	(suggest$3 recommend$5 predict$3) near5 (next subsequent) near2 (word term) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S690	39	(suggest$3 recommend$5 predict$3) near5 (next subsequent) near2 (word term) same (frequen$4) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S691	89	(suggest$3 recommend$5 predict$3) near5 (word term name) same (frequen$4) same contact and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S692	27	(suggest$3 recommend$5 predict$3) near5 (identifier name) same (frequen$4) same contact and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S693	12	(suggest$3 recommend$5 predict$3) near5 (identifier name) and (frequen$4) same contact near2 list and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S694	0	(suggest$3 recommend$5 predict$3) near5 (family last first) near2 name and (frequen$4) same contact near2 list and	US-PGPUB; USPAT; USOCR;	OR	ON	2021/06/18 17:33

		(@ad<"20050812" @pd<"20050812" @rlad<"20050812")	FPRS; EPO; JPO			
S695	142	(suggest$3 recommend$5 predict$3) near5 (family last first) near2 name and (frequen$4) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S696	8	(suggest$3 recommend$5 predict$3) near5 (family last first) near2 name Same (frequen$4) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S697	0	auto near1 complet$3 same (frequen$4) same contact near2 list and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S698	4	auto near1 complet$3 same (frequen$4) and contact near2 list and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S699	2	selected near2 (last family first) near2 name same (suggest$3 propos$3 recommend$5 predict$3) near2 (last family first) near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S700	0	(directional navigat$3) near2 (key button) same (suggest$3 propos$3 recommend$5 predict$3) near2 (last family first) near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S701	48	(directional navigat$3) near2 (key button) same (suggest$3 propos$3 recommend$5 predict$3) near2 (name word term) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S702	10	11/131867	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S703	24	(generat$3 creat$3) near5 (initial) near2 (candidate suggested recommended proposed predicted) near5 (word keyword term) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; EPO; JPO	OR	ON	2021/06/18 17:33

S704	29	(generat$3 creat$3) near5 (initial) near2 (candidate suggested recommended proposed predicted) near5 (word keyword term item) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; EPO; JPO	OR	ON	2021/06/18 17:33
S705	5	S704 not S703	US-PGPUB; USPAT; EPO; JPO	OR	ON	2021/06/18 17:33
S706	2	(generat$3 creat$3) near5 (initial) near2 (candidate suggested recommended proposed predicted) near5 (name identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; EPO; JPO	OR	ON	2021/06/18 17:33
S707	1,267	joystick and (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term token) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; EPO; JPO	OR	ON	2021/06/18 17:33
S708	38	joystick same (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term token) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; EPO; JPO	OR	ON	2021/06/18 17:33
S709	1	joystick same (candidate suggested recommended proposed predicted) near5 (name identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; EPO; JPO	OR	ON	2021/06/18 17:33
S710	427	joystick and (candidate suggested recommended proposed predicted) near5 (name identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; EPO; JPO	OR	ON	2021/06/18 17:33
S711	34	joystick and (generat$3 creat$3) near5 (candidate suggested recommended proposed predicted) near5 (name identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; EPO; JPO	OR	ON	2021/06/18 17:33
S712	469	hierarch$4 same (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term token) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; EPO; JPO	OR	ON	2021/06/18 17:33
S713	15	hierarch$4 near5 (rank$3 scor$3) same (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term token) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; EPO; JPO	OR	ON	2021/06/18 17:33

S714	72	("20010012769" | "20010018351" | "20020049795" | "20020061770" | "20020091690" | "20020151327" | "20020183099" | "20030073414" | "20030078069" | "20030182274" | "20040105714" | "20040163032" | "20040192276" | "20050010605" | "20050188330" | "20050233769" | "20060009861" | "20060031591" | "20060146028" | "20060217953" | "20060221058" | "20060265648" | "20060265668" | "20060294462" | "20070016862" | "20070060114" | "20070089070" | "20070179776" | "20090327888" | "20100010963" | "3937939" | "5128672" | "5263174" | "5299125" | "5398023" | "5496992" | "5633912" | "5724069" | "5754655" | "5787417" | "5797098" | "5894276" | "5896321" | "5901222" | "5911485" | "5953541" | "6009444" | "6011554" | "6032053" | "6047196" | "6055439" | "6150962" | "6223059" | "6247043" | "6264146" | "6311125" | "6377965" | "6580932" | "6744423" | "6748242" | "6792287" | "6826566" | "7185286" | "7443316" | "7487147" | "7543244" | "7616191" | "7669111" | "7793228" | "7836044" | "7886233").PN.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2021/06/18 17:33
S715	19	S714 and joystick	US-PGPUB; USPAT; EPO; JPO	OR	ON	2021/06/18 17:33
S716	9	S714 and (first last) near2 name	US-PGPUB; USPAT; EPO; JPO	OR	ON	2021/06/18 17:33
S717	626	(suggested proposed candidate) near2 (character letter) same (keypad keyboard button) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S718	170	S717 and mobile	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S719	27	(suggested proposed candidate) near2 (character letter) same (keypad keyboard button) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33

S720	52	(suggested proposed candidate) near2 (character letter) same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S721	16	S720 and mobile	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S722	50	(suggested proposed candidate) near2 (string word spelling character letter) same (keypad keyboard button joystick) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S723	4	(suggested proposed candidate possible predicted) near2 (string word spelling character letter) same (direction$2 navigat$3) near2 (key pad) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S724	364	(suggested proposed candidate possible predicted) near2 (string spelling character letter) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S725	364	(suggested proposed candidate possible predicted) near2 (string character letter) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S726	132	(suggested proposed candidate possible predicted) near2 (string letter) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:33
S727	569,123	(G06F17/30 G06F17/30899 G06F17/30554).cpc. (G06F17/30 G06F17/30899 G06F17/30554)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S728	138	S621 and S727	US-PGPUB; USPAT; EPO; JPO	OR	ON	2021/06/18 17:34
S729	24	S639 and S727	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34

S730	38	S644 and S727	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S731	12	S632 and S727	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S732	5	("20060265208" "20040186819" "20050270270" "20020087979" "20060293889").pn.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2021/06/18 17:34
S733	6	14/627914	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S734	19	(suggested proposed candidate possible predicted) near2 (string character letter) same directional near2 (button key) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S735	125	(suggested proposed candidate possible predicted) near2 (string character letter) same (arrang$4 position$3) near5 center and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S736	9	S735 and up same down same left same right	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S737	133	(suggested proposed candidate possible predicted) near2 (string character letter) same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S738	180	(suggested proposed candidate possible predicted) near2 (word token string character letter) same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S739	68	(suggested proposed candidate predicted) near2 (word token string character letter) same up same down same left same right and	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34

		(@ad<"20050812" @pd<"20050812" @rlad<"20050812")				
S740	9	pinyin same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S741	65	(suggest$3 propos$3 candidate predict$3) near2 (word string character letter) same (directional navigat$3) near2 (button keypad key) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S742	2	"20060265208"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S743	10	11/131867	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S744	569,149	(G06F17/30 G06F17/30595 G06F17/30705 G06F17/30899 G06F17/30554 G06F17/30321).cpc. (G06F17/30 G06F17/30595 G06F17/30705 G06F17/30899 G06F17/30554 G06F17/30321)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S745	12	S744 and S691	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S746	24	S744 and S639	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S747	13	S744 and S717	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S748	180	S637 and S744	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34

S749	1	"9436354".pn.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2021/06/18 17:34
S750	2,356	up same down same left same right.clm. and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S751	3	S750 and $2complet$3 near2 (word item).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S752	63	up same down same left same right same $2complet$3 near2 (word term phrase item identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S753	6	("8140560" "8375058" "8996579" "9436354" "8370393" "8876852").pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S754	1	"8876852".pn.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2021/06/18 17:34
S755	1	"8676852".pn.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2021/06/18 17:34
S756	6	("8,140,560" "8,370,393" "8,375,058" "8,676,852" "8,996,579" "9,436,354").pn.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2021/06/18 17:34
S757	88,380	(G06F16/00,2228,248,24578,957).cpc. (G06F16/00,2228,248,24578,957)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/18 17:34
S758	940,798	G06F16/$.cpc. G06F16/$	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/18 17:34
S759	17	S717 and S757	US-PGPUB; USPAT;	OR	ON	2021/06/18 17:34

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S760	30	S717 and S758	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/18 17:34
S761	16	S644 and S757	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/18 17:34
S762	63	S644 and S758	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/18 17:34
S763	12	S691 and S757	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/18 17:34
S764	16	S691 and S758	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/18 17:34
S765	12	S710 and S757	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/18 17:34
S766	84	S710 and S758	US-PGPUB; USPAT; USOCR;	OR	ON	2021/06/18 17:34

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S767	33	S632 and S758	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/18 17:34
S768	0	S632 and S757	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/18 17:34
S769	57	S621 and S757	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/18 17:34
S770	233	S621 and S758	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/18 17:34
S771	0	S695 and S757	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/18 17:34
S772	32	S695 and S758	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/18 17:34
S773	1	"8370393".pn.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2021/06/18 17:34

S774	48	(suggest$3 propos$3 candidate predict$3) near2 (string character letter) same (directional navigat$3) near2 (button keypad key) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S775	3	"20030095102"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S776	705,732	G06F16/$.cpc. G06F16/$	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S777	19	(US-20050065822-$ or US-20030182274-$ or US-20100299348-$ or US-20050193338-$ or US-20130124537-$ or US-20140143242-$ or US-20060247915-$ or US-20020019731-$ or US-20060265208-$ or US-20060293889-$ or US-20020087979-$ or US-20040186819-$ or US-20050270270-$ or US-20150169150-$ or US-20090192786-$ or US-20030095102-$).did. or (US-8140560-$ or US-8996579-$ or US-6744423-$).did.	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S778	10	S776 and S777	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/18 17:34
S779	2	S774 and S777	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/18 17:34
S780	14	(remote near2 control) same (predict$3 suggest$3 recommend$5) near5 text$5 and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S781	8	S780 and television	US-PGPUB; USPAT; USOCR;	OR	ON	2021/06/18 17:34

			FPRS; EPO; JPO			
S782	6	S781 and (search$3 quer$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S783	7	S774 and television	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/06/18 17:34
S784	11	("20020113825" "7152213" "6593913" "20040021691").pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/18 17:34
S785	1	16/539501	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/18 17:34

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S786	8,979	(707/791 707/802).ccls. 707/791 707/802	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S787	56,402	(707/999.102 707/999.107).ccls. 707/102 707/104.1	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S788	571,516	("707" "705" "709" "715").clas.	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S789	1	(first near2 screen near5 last adj name).clm.	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S790	49	(contact near2 (name id identifier) same last near2 name).clm.	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34

S791	19	((display$3 present$5) near5 name same on-screen).clm.	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S792	1,163	((select$3 choos$3 pick$3) near5 (first last) near2 name).clm.	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S793	243	((keyboard keypad (key adj (board pad))) same (select$3 choos$3 pick$3) near5 contact).clm.	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S794	103	((select$3 choos$3 pick$3) near5 first near2 name and last near2 name).clm.	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S795	14	S792 and S786	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S796	55	S792 and S787	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S797	481	S792 and S788	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S798	0	S793 and S786	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S799	2	S793 and S787	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S800	41	S793 and S788	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S801	0	S794 and S786	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S802	3	S794 and S787	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S803	56	S794 and S788	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S804	972	(directional near2 controller).clm.	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S805	0	S804 and S792	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34

S806	0	S804 and S793	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S807	0	S804 and S794	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S808	3	("20040163032" "20020151327" "5,953,541").pn.	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S809	8	S804 and alphanumeric.clm.	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S810	192,150	g06f17/30 g06f17/30.cpc.	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S811	182	S792 and S810	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S812	3	S793 and S810	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S813	21	S794 and S810	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S814	7	S804 and S810	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S815	192,160	(G06F17/30 G06F17/30595 G06F17/30705).cpc. (G06F17/30 G06F17/30595 G06F17/30705)	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S816	182	S792 and S815	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S817	3	S793 and S815	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S818	21	S794 and S815	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S819	192,169	(G06F17/30 G06F17/30899 G06F17/30554).cpc. (G06F17/30 G06F17/30899 G06F17/30554)	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S820	3	S793 and S819	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34

S821	182	S792 and S819	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S822	21	S794 and S819	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S823	192,182	(G06F17/30 G06F17/30595 G06F17/30705 G06F17/30899 G06F17/30554 G06F17/30321).cpc. (G06F17/30 G06F17/30595 G06F17/30705 G06F17/30899 G06F17/30554 G06F17/30321)	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S824	182	S792 and S823	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S825	3	S793 and S823	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S826	21	S794 and S823	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S827	316,725	G06F16/$.cpc. G06F16/$	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S828	39,158	(G06F16/00,2228,248,24578,957).cpc. (G06F16/00,2228,248,24578,957)	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S829	26	S794 and S827	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S830	3	S794 and S828	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
S831	6	S793 and S827	US-PGPUB; USPAT	OR	ON	2021/06/18 17:34
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LIST OF CITED REFERENCES FOR INFORMATION DISCLOSURE STATEMENT BY APPLICANT			Attorney Reference: 011844-0029-999		
			Applicant: Kevin W. Dinn		
			Application Serial No. 16/539,501		
			Filing Date: August 13, 2019		
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	15	6,792,287	09-04	Tuomela et al.		

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	17	1011027	09-00	Netherlands				
	18	10293640	11-98	Japan				
	19	2000267787	09-00	Japan				
	20	2751442	01-98	France				
	21	407240776	09-95	Japan				
	22	09-083402	07-95	Japan				
	23	789224	08-97	European				
	24	2007/019610	02-07	International				
	25	2005/064445	07-05	International				

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	27	International Search Report dated April 8, 2008 from International Application No. PCT/AU2008/000297
	28	International Search Report dated February 6, 2008 from International Application No. PCT/AU2007/002010
	29	International Search Report dated October 25, 2002 from International Application No. PCT/AU2002/001154

Examiner:	/SON T HOANG/	Date Considered:	06/18/2021

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	30	5,901,222	05-99	Macor		
	31	6,580,932	06-03	Finke-Anlauff		
	32	6,748,242	06-04	Dunleavy		
	33	2002/0183099	12-02	Lee		
	34	2003/0078069	04-03	Lindeman		
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	46	2002149345	05-02	Japan				
	47	624965	11-94	European				
	48	2363290	12-01	Great Britain				
	49	1022644	07-00	European				
	50	2002/093338	11-02	International				
	51	2002/008876	01-02	International				
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	60	6,744,423	06-04	Kraft et al.		
	61	5,787,417	07-98	Hargrove		
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	74	2003021418	03-03	International				
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1. **Process and Apparatus for Selecting an Item From a Database**

The present invention relates to a method and apparatus for selecting database items from a database, where the database items are indexed by a list of item identifiers. The item identifiers may be in the form of text. An initial display is generated which includes one or more parts of the item...

CURRENT ASSIGNEES: KANNUU PTY LTD
US20200278952 | US APPLICATIONS | 03-SEP-2020

2. **Process and Apparatus for Selecting An Item From A Database**

A method and apparatus for selecting items from a collection of items are indexed by a list of item identifiers. The item identifiers may be in the form of text, symbols, graphics, etc. An initial display is generated which includes one or more parts of the item identifiers. Selection of the one or...

CURRENT ASSIGNEES: KANNUU PTY LTD
US20200341999 | US APPLICATIONS | 29-OCT-2020

3. **Improved process and apparatus for selecting an item from a database**

A method and apparatus for selecting items from a collection of items, where the items are indexed by a list of item identifiers. The item identifiers may be in the form of text, symbols, graphics, etc. An initial display is generated which includes one or more parts of the item identifiers...

CURRENT ASSIGNEES: KANNUU PTY LTD
AU2016204569A1 | AUSTRALIA APPLICATIONS | 21-JUL-2016

4. **Process and apparatus for selecting an item from a database**

A method and apparatus for selecting items from a collection of items, where the items are indexed by a list of item identifiers. The item identifiers may be in the form of text, symbols, graphcls, etc. An initial display is generated which includes one or more parts of the item identifiers...

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- J. Han (298)
- Linux Journal Staff (270)
- William Bruce Croft (257)
- Maarten de Rijke (247)
- More (10)

Institutions

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- Stanford University (6,388)
- Microsoft Research (5,942)
- University of California, Berkeley (5,600)
- Georgia Institute of Technology (5,213)
- More (10)

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- J. Han (298)
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Publications

Journal/Magazine Names

Communications of the ACM (11,574)
ACM SIGPLAN Notices (9,122)
ACM SIGCSE Bulletin (4,862)
ACM Transactions on Graphics (3,743)
ACM SIGSOFT Software Engineering Notes (3,668)
More (12)

Proceedings/Book Names

CHI '20: Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (750)
CHI '19: Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (591)

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Upcoming Conferences

Journals Magazines Proceedings Books SIGs Conferences People

SIGCSE '21 March 13 - 20, 2021 Virtual, N/A, USA SIGCSE '21 Website

CHIIR '21 March 14 - 31, 2021 Australian National per page: 10 20 50 Relevance Australia

predicted (text or character or word

ICSE '21 May 22 - 30, 2 RAI Madrid Eu Madrid, Spain

ARTICLE

The BTRC Bluetooth remote control system

Friedrich Feldbusch, Alexander Paar, Manuel Odendahl, Ivan Ivanov

Personal and Ubiquitous Computing, Volume 7, Issue 2 • July 2003, pp 102 -112 • https://doi.org/10.1007/s00779-003-0235-x

AbstractEmerging radio technologies like WLAN and Bluetooth enable electronic devices of any kind to communicate with one another. A simple and easy to implement application layer protocol called BTRC protocol was developed allowing devices to exchange ...

Highlights

Abstract
Based upon this protocol a universal remote control system was implemented. Software applications simulating cellular phones and personal digital assistants (PDA) were developed as remote control devices. BTRC server devices send their graphical XML based user interface to the remote control. In this way, the use of household devices is simplified significantly.

Full Text
Based upon this protocol a universal remote control system was implemented. Software applications simulating cellular phones and personal digital assistants (PDA) were developed as remote control devices.
These ideas enlarge upon the concept of a conventional remote control. Unfortunately, today every device has its own proprietary infrared remote control
Even infrared controlled legacy devices were integrated into our remote control system. The range of a Bluetooth based remote control was extended to the entire Internet.

Keywords
remote control

2 1,380

CHI '17: Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems (589)

Encyclopedia of Computer Science (562)

MM '20: Proceedings of the 28th ACM International Conference on Multimedia (560)

More (15)

All Publications

Proceedings (356,640)

Newsletters (50,916)

Journals (49,710)

Magazines (17,921)

Books (787)

More (2)

Content Type

Research Article (253,935)

Poster (13,335)

Tutorial (11,050)

Short Paper (5,263)

Abstract (4,085)

More (18)

Media Formats

PDF (496,223)

Image (28,699)

HTML (21,333)

Video (19,667)

Archive/Zip (7,716)

More (8)

Paper Award

Honorable Mention (732)

Best Paper (658)

Distinguished Paper (97)

Best Student Paper (96)

Journals Magazines Proceedings Books SIGs Conferences People

predicted (text or character or word

Select All

per page: 10 20 50 Relevance

Highlights

Abstract

Full Text

Keywords

Highlights

RESEARCH-ARTICLE

Enhanced remote control providing medical functionalities

Adam Sulowski, Jacek Rumiński, Arkadiusz Pałasek, Jerzy Nowak

PervasiveHealth '13: Proceedings of the 7th International Conference on Pervasive Computing Technologies for Healthcare • May 2013, pp 280–283 • https://doi.org/10.4108/icst.pervasivehealth.2013.252088

This paper presents the enhanced remote control and its role in pervasive healthcare in the home. The device was equipped with health-related measurement modules and a message-processing unit. Preliminary results are presented for monitoring of a pulse, ...

Abstract

This paper presents the enhanced remote control and its role in pervasive healthcare in the home. The device was equipped with health-related measurement modules and a message-processing unit.

Full Text

In [12] authors proposed a remote control for television comprising a skin spectroscopy sensor able to measure the characteristics of the skin, and means to send a signal allowing identifying the particular user currently using the remote control.

The remote control (using an accelerometer) is very suitable for such measurements, because the direction of hand tremor has important vertical character.

In the implemented HARN RC it is possible to introduce practically every message text (with a given character length limit).

Keywords

remote control

0 51

ARTICLE

Touchpad-based remote control devices

Neil P. N. Enns, I. Scott MacKenzie

CHI '98: CHI 98 Conference Summary on Human Factors in Computing Systems • April 1998, pp 229–230 • https://doi.org/10.1145/286498.286717

Full Text

Unistrokes created through touch are used to issue commands and select menu items presented on a television screen.

KEYWORDS Remote control devices, touchpads, television, unistroke recognition, input devices, convergent technologies INTRODUCTION Remote control devices (RCDs) were introduced in the 1930s, as a mechanism for changing stations on radios.

THE TOUCHPAD-BASED REMOTE CONTROL DEVICE The remote control device described herein addresses the drawbacks of current RCDs through the use of a touchpad.

30 833

Provided by US Patent & Tra... STIC

Best Poster (38)
More (13)
Journals Magazines Proceedings Books SIGs Conferences People
predicted [text or character or word]
Publisher
Association for Computing Machinery (406,598)
IEEE Press (19,675)
Association for Computational Linguistics (15,339)
IEEE Computer Society (11,641)
IEEE Computer Society Press (5,457)
More (18)
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SIGDA (22,303)
SIGSOFT (18,542)
More (18)
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CHI '20 (1,218)
CHI '19 (1,185)
CHI'16 (1,003)
CHI '17 (947)
CHI '18 (931)
More (15)
Proceedings Series
CHI: Conference on Human Factors in Computing Systems (15,852)
SIGGRAPH: International Conference on Computer Graphics and Interactive Techniques (10,526)
ICSE: International Conference on Software Engineering (10,053)

POSTER

Remote Control of Complex Interactive Art Installations

Andrew Bluff, Andrew Johnston

C&C '15: Proceedings of the 2015 ACM SIGCHI Conference on Creativity and Cognition • June 2015 • pp 197–200 • https://doi.org/10.1145/2757226.2764553

Select All
Sort by: Publication Date Page range 10 20 50 Relevance

Movement based interactive artworks are capable of instantly engaging audiences by reacting to physical motion consistently with real-world physics. Sustaining this engagement, however, requires a constant alteration of both the output and interaction ...

Highlights

Abstract
An open-source dynamic remote control system is being developed to further facilitate the creative development and performance of interactive artwork as demonstrated by these case studies.

Full Text
TouchOSC1 is one of the more successful applications to mimic remote control in a fashion similar to the Lemur.
This development of the interaction aesthetic was where the remote control became incredibly useful
Ground Theory [2] methods can then be used to further evaluate the impact of using ioStorm to remote control interactive art installations.

Keywords
remote control

4 113

RESEARCH-ARTICLE

Specification and evaluation of an attention-aware remote control

Daniel Chagas, Elisabeth Furtado

IHC '15: Proceedings of the 14th Brazilian Symposium on Human Factors in Computing Systems • November 2015, Article No.: 11, pp 1–10 • https://doi.org/10.1145/3148456.3148467

This paper defines requirements for entering text in interactive digital TV, based on theories of shared attention, in order to prototype a remote control that makes user interaction more natural. Physical prototyping of this newly created device ...

Highlights

Abstract
This paper defines requirements for entering text in interactive digital TV, based on theories of shared attention, in order to prototype a remote control that makes user interaction more natural.
The results showed that the prototyped solution, analyzed for a sample of 18 users, increased performance in typing long texts in 26.5%, raised satisfaction scores by 15% and relaxation scores by 29.4%, and maintained the users' cognitive load compared to use of an infrared remote control.

Full Text
Author Keywords Alternative Remote Control; interactive TV; Attentionaware System; Arduino. ACM Classification Keywords H5
In the UK, in a survey reporting experiences with iTV system, Cooper [3] shows that the most common solutions for typing texts are the virtual keyboard, multi-tap keyboard, and the word prediction systems.
Remote control and its use with digital TV An iTV application was developed in this project to be run in the SBTVD standard.

1 28

WSC: Winter Simulation Conference (9,328)

MM: International Multimedia Conference (8,679)

More (15)

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Publication Date

1951 2020

- Past 5 years
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- Past year

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SIGCSE '21 — March 13 - 20, 2021 — Virtual, NA, USA — SIGCSE '21 Website

CHIIR '21 — March 14 - 31, 2021 — Australian National [illegible], Australia

ICSE '21 — May 22 - 30, 2 — RAI Madrid Eu... Madrid, Spain

per page: 10 20 50 Relevance

RESEARCH-ARTICLE

Augmenting Self-Driving with Remote Control: Challenges and Directions

Lei Kang, Wei Zhao, Bozhao Qi, Suman Banerjee

HotMobile '18: Proceedings of the 19th International Workshop on Mobile Computing Systems & Applications • February 2018, pp 19–24 • https://doi.org/10.1145/3177102.3177104

Self-driving or autonomous vehicle systems are being designed over the world with increasing success in recent years. In spite of many advances so far, it is unlikely that such systems are going to ever achieve perfect accuracy under all conditions. In ...

Highlights

Full Text

v=cZfj8yL3cWk&t=105s 2.3 Why Remote Control Remote control systems can act as an economic and safe backup of self-driving systems.
Remote control augmented selfdriving systems could be more reliably handle such situations.
Remote control will consume data for live streaming, but we argue that remote control is used only when self-driving system fails.
This is because the video encoder fails to predict the next frame and the difference between actual frame and predicted frame is much higher than expected.

Keywords
remote control

16 776

Provided by US Patent & Tra... STIC

RESEARCH-ARTICLE

Gesture-enabled remote control for healthcare

Honeyang Zhao, Shuangquan Wang, Gang Zhou, Baoqi Zhang

CHASE '17: Proceedings of the Second IEEE/ACM International Conference on Connected Health: Applications, Systems and Engineering Technologies • July 2017, pp 392–401 • https://doi.org/10.1109/CHASE.2017.123

Select All

per page: 10 20 50 Relevance

In recent years, wearable sensor-based gesture recognition is proliferating in the field of healthcare. It could be used to enable remote control of medical devices, contactless navigation of X-ray display and Magnetic Resonance Imaging (MRI), and ...

Highlights

Abstract
It could be used to enable remote control of medical devices, contactless navigation of X-ray display and Magnetic Resonance Imaging (MRI), and largely enhance patients' daily living capabilities.
In this paper, we present Gemote, a smart wristband-based hardware/software platform for gesture recognition and remote control.

Full Text
In this paper, we present Gemote, a smart wristband-based hardware/software platform for gesture recognition and remote control.
In this paper, we present Gemote, a wristband-based gesture recognition and remote control platform.
Seven defined gestures for remote control these gestures are suitable as a remote controller for healthcare applications.

2 28

RESEARCH-ARTICLE

Remote-Control Caching: Proxy-based URL Rewriting to Decrease Mobile Browsing Bandwidth

Ravi Netravali, James Mickens

HotMobile '18: Proceedings of the 19th International Workshop on Mobile Computing Systems & Applications • February 2018, pp 63–68 • https://doi.org/10.1145/3177102.3177116

Mobile browsers suffer from unnecessary cache misses. The same binary object is often named by multiple URLs which correspond to different cache keys. Furthermore, servers frequently mark objects as uncacheable, even though the objects' content is ...

Highlights

Abstract
We then propose a new scheme, called Remote- Control Caching (RC2), in which web proxies (owned by mobile carriers or device manufacturers) track the aliasing relationships between the objects that a client has fetched, and the URLs that were used to fetch those objects.

Full Text
Remote- Control Caching: Proxy-based URL Rewriting to Decrease Mobile Browsing Bandwidth Ravi Netravali MIT CSAIL ravinet@mit.edu James Mickens Harvard University mickens@g.harvard.edu Mobile browsers suffer from unnecessary cache misses.
Remote- Control Caching. Proxybased URL Rewriting to Decrease Mobile Browsing Bandwidth. In HotMobile '18: 19th International Workshop on Mobile Computing Systems & Applications, February 12-13, 2018, Tempe , AZ, USA.
In particular, let bits(obj) correspond to the binary content in obj , and let bits(req, t) correspond to the bits associated with the HTTP request req when fetched at time t.

3 129

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ARTICLE

Generating remote control interfaces for complex appliances

Jeffrey Nichols, Brad A. Myers, Michael Higgins, Joseph Hughes, Thomas K. Harris • 2

UIST '02: Proceedings of the 15th annual ACM symposium on User interface software and technology • October 2002, pp 161–170 • https://doi.org/10.1145/571985.572008

The *personal universal controller* (PUC) is an approach for improving the interfaces to complex appliances by introducing an intermediary graphical or speech interface. A PUC engages in two-way communication with everyday appliances, first downloading a ...

Highlights

Full Text

Generating Remote Control Interfaces for Complex Appliances Jeffrey Nichols*, Brad A. Myers*, Michael Higgins†, Joseph Hughes†, Thomas K.

A PUC provides an intermediary interface with which the user interacts as a remote control for any appliance.

Figure 1 shows the label dictionary, represented by the element, for a CD track state with two textual labels and a text-to-speech label.

Keywords

remote control

170 2,388

RESEARCH-ARTICLE

Remote Control of iOS Devices via Accessibility Features

Nikola Luric, Sachal Tatkiipour, Nenad Medvidović

FEAST'20: Proceedings of the 2020 ACM Workshop on Forming an Ecosystem Around Software Transformation • November 2020, pp 35–40 • https://doi.org/10.1145/3411502.3418427

This paper presents an approach for remotely accessing and controlling mobile apps by leveraging a mobile platform's publicly exported accessibility features. This approach is implemented in a technique and accompanying tool called AirMochi. While ...

Highlights

Full Text

Remote Control of iOS Devices via Accessibility Features. In 2020 Workshop on Forming an Ecosystem Around Software Transformation (FEAST '20), November 13, 2020, Virtual Event, USA

We divide the components into two subsets according to their primary purpose: (1) the core capabilities required for remote control of mobile devices and (2) the advanced, "downstream" features for mobile app testing and analysis. We describe each in turn. 3.1 Remote Control of Mobile Devices AirMochi's support for remotely controlling devices relies on four components: User-Facing Application, Utility Server, Event Generator, and Screen Transmitter.

Keywords

remote control

0 6

Provided by US Patent & Tra... STIC

RESEARCH-ARTICLE

Underwater acoustic remote control based on time-frequency joint coding

Yan Wang, Nan Yao, Jin Fu, Guoliang Hong

WUWNet '13: Proceedings of the Eighth ACM International Conference on Underwater Networks and Systems • November 2013, Article No.: 46, pp 1
https://doi.org/10.1145/2532378.2532393

In order to ensure the navigation security of unmanned underwater vehicles (UUVs), an underwater acoustic remote control system is essential. An applied remote control method is proposed. The information to be transmitted is modulated both on frequency ...

Highlights

Abstract
In order to ensure the navigation security of unmanned underwater vehicles (UUVs), an underwater acoustic remote control system is essential. An applied remote control method is proposed. The information to be transmitted is modulated both on frequency and pulse intervals.

Full Text
Low error rate is one of the most important properties for underwater acoustic remote control systems.
The remote control method can adapt to the collaborative acoustic environment. 2. Underwater acoustic remote control system 2.1 Frame structure The frame structure includes five fields.
Remote control key techniques 3.1 Reverberation suppression The remote control system operates in semiduplex mode.

Keywords
remote control

SAMSUNG EX1024, Page 387 of 689

Provided by US Patent & Tra... STIC

RESEARCH-ARTICLE

The architecture of a web service-based remote control service system

Yi Guo, Paul W. H. Chung

IWAS '08: Proceedings of the 10th International Conference on Information Integration and Web-based Applications & Services • November 2008, pp 555
Select All
555 • https://doi.org/10.1145/1497308.1497403

There is increasing attention recently in the development of remote control and monitoring. Many applications and experiments have been done to apply internet technology in this field with the aim of developing a general and expendable architecture. In ...

Highlights

Abstract
There is increasing attention recently in the development of remote control and monitoring. Many applications and experiments have been done to apply internet technology in this field with the aim of developing a general and expendable architecture. In this paper, a novel Web Service-based Remote Control Service System (WSRCSS) is proposed. Compared with other designs, this system focuses on offering a service development and delivery environment.

Full Text
Keywords Remote control, web service, system architecture. 1. INTRODUCTION Since 1901, when Leonardo Torres-Quevedo laid down the modern wireless remote- control operation principles, the development in this area has not stopped [1].
The advantages of using internet for remote control includes easy access and low cost. The development of architectures for remote control is discussed in [6].
Many of the current designs realize the importance of integrating web resources for remote control.

Keywords
remote control

3 277

Provided by US Patent & Tra... STIC

POSTER

RC Function Virtualization - You Can Remote Control Drone Squadrons (poster)

Seongjoon Park, Joon Yeop Lee, Inseop Um, Changhwan Joe, Hyeong Tae Kim, +1

MobiSys '18: Proceedings of the 16th Annual International Conference on Mobile Systems, Applications, and Services • June 2018, pp 598–599 • https://doi.org/10.1145/3210240.3225644

This poster presents a virtual control interface for Unmanned Vehicle System (UVS), to improve scalability and accessibility of Human-Computer Interaction (HCI) in their maneuvering. After the first remote control vehicle was born, the remote control ...

Highlights

Abstract
After the first remote control vehicle was born, the remote control unit was paired with a single vehicle for safety and security. To overcome this constrained remote control design, we propose a concept that a single manufacturing stand-alone RC can control one or several unmanned vehicles (UVs), regardless of vehicle type, named RC Function Virtualization (RFV).

Full Text
After the first remote control vehicle was born, the remote control unit was paired with a single vehicle for safety and security.
KEYWORDS Unmanned vehicle system; Remote control virtualization; Multi robot control
ACM Reference Format: Seongjoon Park, Joon Yeop Lee, Inseop Um, Changhwan Joe, and Hyeong Tae Kim, and Hwangnam Kim. 2018.
RC Function Virtualization - You Can Remote Control Drone Squadrons. [Video] Retrieved from https://youtu.be/38OrUL_x8c2o.

1 87

RESEARCH-ARTICLE

An Intuitive Touch Screen Interface for Car Remote Control

Michael Moski, Pradeep K. Atrey

EMASC '14: Proceedings of the 1st International Workshop on Emerging Multimedia Applications and Services for Smart Cities • November 2014, pp 35
–40 • https://doi.org/10.1145/2661704.2661710

The CarStar interface and subsequent user evaluation show a correlation between visually analogous representations of functionality and ease of use. Tapping into users current knowledge-base about automobiles seems to be among the more effective methods ...

Highlights

Full Text
This paper presents a touch screen interface for a car remote control (CarStar). The CarStar interface is a two way remote control user interface designed to bring instinctual ease of use in a smart environment.
For car remote control, gesture-based interfaces are usually not preferred because of the difficulty in capturing the gesture data.
Finally, the fourth piece of the interface is the ignition control, represented by a vertical black line on a red circle with status text written beneath.

0 109

Provided by US Patent & Tra... STIC

POSTER

Mobile based remote control system using Bluetooth

Geetanjali Kale, H. K. Chavan

ICWET '11: Proceedings of the International Conference & Workshop on Emerging Trends in Technology • February 2011, pp 1087 • https://doi.org/10.1145/1980022.1980367

Select All

Due to rapid advancement in mobile communication technology and the decrease in costs remote control has become mobile [illegible] application field. The objective of proposed system is to take care of several domestic systems that may normally be ...

Highlights

Abstract

Due to rapid advancement in mobile communication technology and the decrease in costs remote control has become mobile phones important application field.

0

ARTICLE

Informing automatic generation of remote control interfaces with human designs

Jeffrey Nichols

CHI EA '02: CHI '02 Extended Abstracts on Human Factors in Computing Systems • April 2002, pp 864–865 • https://doi.org/10.1145/506443.506637

Embedded processors are making it possible for common appliances, such as cable boxes, microwaves, and fax machines, to provide even more functionality. Unfortunately, as these appliances become more complex, their interfaces are also becoming harder to ...

Highlights

Full Text

When the remote control wants to change the value of the station variable, it tells the appliance what the new value should be.

The remote control must ask the radio to invoke the seek function, instead of telling it what the new station will be.

It was funded by grants from NSF, Microsoft and the Pittsburgh Digital Greenhouse, and equipment grants from Symbol Technologies, Hewlett-Packard, and Lucent.

Keywords

remote control

3 336

Provided by US Patent & Tra... STIC

ARTICLE

Effective interaction techniques for moving cursor using a remote control

Soo Chul Lim, Ji Hyoa Hao, Min Young Jo, Dong Hyeon, Won Sik Cho

predicted (text or character or word)
Select All

CHI EA '04: CHI '04 Extended Abstracts on Human Factors in Computing Systems • April 2004, pp 1541–1542 • https://doi.org/10.1145/985921.986116

per page: 10 20 50 Relevance

Highlights

Full Text

Although wireless keyboard and mouse are available, remote control is still the most familiar UI device for TV.

Each cell is assigned with a number from 1 - 9 that corresponds to nine number buttons on the remote control.

Once the final cell is selected and the division ends, the user can move the cursor delicately to the exact position(the circled object) using default method.

2 348

ARTICLE

Comparing end-user and intelligent remote control interface generation

Olufisayo Omojokun, S. Pierce, L. Isbell, Prasun Dewan

Personal and Ubiquitous Computing, Volume 10, Issue 2-3 • January 2006, pp 136–143 • https://doi.org/10.1007/s00779-005-0018-6

Traditional remote controls typically allow users to activate functionality of a single device. Given that users activate a subset of functionality across devices to accomplish a particular task, it is attractive to consider a remote control directly ...

Highlights

Abstract

Given that users activate a subset of functionality across devices to accomplish a particular task, it is attractive to consider a remote control directly supporting this behavior. We present qualitative and quantitative results from a study of two promising approaches creating such a remote control: end-user programming and machine learning.

Full Text

We present qualitative and quantitative results from a study of two promising approaches to creating such a remote control: end-user programming and machine learning

The Pronto only executes remote control software, but the OmniRemote and Nevo execute on multi-function handheld computers-respectively, the Palm and Compaq Ipaq.

Table 1 summarizes our participants' characteristics. To gather each participant's interaction history with their remote controls, we logged every remote control command that participants issued for 1 week.

5 536

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RESEARCH-ARTICLE

Remote Control by Body Movement in Synchrony with Orbiting Widgets: an Evaluation of TraceMatch

[predicted] [text or character or word]

Christian Holz, Alessio Bellino, Augusto Esteves, Hans Gellersen

Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies, Volume 1, Issue 3 • September 2017, Article No.: 45, pp 1–22 • https://doi.org/10.1145/3130910

Select All
Per page: 10 25 50 Relevance

In this work we consider how users can use body movement for remote control with minimal effort and maximum flexibility. TraceMatch is a novel technique where the interface displays available controls as circular widgets with orbiting targets, and where ...

Highlights

Abstract

In this work we consider how users can use body movement for remote control with minimal effort and maximum flexibility. TraceMatch is a novel technique where the interface displays available controls as circular widgets with orbiting targets, and where users can trigger a control by mimicking the displayed motion. The technique uses computer vision to detect circular motion as a uniform type of input, but is highly appropriable as users can produce matching motion with any part of their body.

Full Text

~ Remote~ Control~by~Body~Movement~in
Synchrony~with~Orbiting~Widgets:~an~Evaluation~of~TraceMatch.~Proc.
However, it is not intended that the TraceMatch control replaces existing input controls for television, i.e. the remote control, rather it compliments existing input methods by offering a method of low-effort gestural control for simple mundane tasks.
TraceMatch can be extended to non- circular motion in the case of periodic Orbits by replacing the circle fitting stage with the required shape.

Keywords

remote control

11 326

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SIGCSE '21 March 13 - 20, 2021 Virtual, NA, USA SIGCSE '21 Website

CHIIR '21 March 14 - 31, 2021 Australian National per page: 10 20 50 Relevance Australia

predicted [text or character or word ... ISSE '21 May 22 - 30, 2 RH Madrid Ex Madrid, Spain

RESEARCH-ARTICLE

Absolute pointing and tracking based remote control for interactive user experience

John Darnielser Anders Grunnet-Jepsen Gopal Panchanathan

UXTV '08: Proceedings of the 1st international conference on Designing interactive user experiences for TV and video • October 2008, pp 155 –164 • https://doi.org/10.1145/1453805.1453837

We describe a system designed for simple and intuitive interaction with a large screen from a distance. The approach is based on an optical pointing and tracking system which has the important property that the tracking is absolute in nature. This ...

Highlights

Full Text

Keywords: Pointing device, remote control, optical tracking, remote interaction, user interface.

1.

The Wavit free-space pointing remote control. Shown are the handset and Pod along with sample screen shots from the Wavit UI.

One basic characteristic of this type of point-and-click control is that many of the functions and commands traditionally located on the device (e.g., remote control) in the form of buttons can now be located on the screen itself

Keywords

remote control

2 613

1 2 3 4 5 6 7

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patents.google.com › patent

CA2711400A1 - Process and apparatus for selecting an item from a ...

The item identifiers may be in the form of text, symbols, graphics, etc. ... Kannuu Pty Ltd ... [0022] In embodiments, where the list of expected string or word sections ... the internal logic of determining the best partial word completion strings to be ... request four options (one for the menu locations for up, down, left and right).

patents.google.com › patent

JP2007133884A - Reduced keyboard disambiguating system ...

In addition, longer word stems where the first letter matches the keystroke ... This handwritten text is converted into digital data by recognition software. ... of use, decreasing from left to right, so that the most frequently occurring character is in ... frequency of use, the required word is often best represented by the first word and ...

www.docketbird.com › court-documents › Exhibit-D

Kannuu PTY Ltd. v. Samsung Electronics Co., Ltd. et al: Exhibit D

The item identifiers may be in the form of text, symbols, graphics, etc. ... 7639. letters 7880 Longer 4834 largest 5778 level 25360 long-term 4103 last 68063 ... The Corner Down to the Waterline Get Down Tonight Right Down the Line Rockin' ... ing up the item identifier may include characters, symbols, to the user as a menu ...

The keystroke sequence is processed with a complete vocabulary, and words ... Other suggested approaches for determining the correct character sequence that ... the letters on each keytop are ordered from left to right in order of decreasing ... user input device is a TV remote control with a reduced keyboard for text input.

www.google.com › patents

US7716579B2 - Data entry for personal computing devices ...

In general, these systems predict and suggest a complete word completion based ... text entry and then accept a predicted text completion for the partial text entry. ... an Internet service through a television via a set top box and a remote control) ... to the right), lifts up the pointing device, touches down on a character on the ...

link.springer.com › content › pdf

Intelligent Information and Database Systems - SpringerLink

Apr 8, 2019 — To best of our knowledge, disaster management ... ing, rewinding, speeding up and down, and is seamlessly looped, maintaining ... is the system used for motion capture and the characteristics of its ... spoken commands and to dictate text [1]. ... change it, click the button at the top right and open the menu.

www.pontiactransportationmuseum.org › events

29th Annual Pontiac Tri-Power Nationals Norwalk, OH ...

Jul 31, 2020 — After I initially left a comment I seem to have clicked on the -Notify me when new ... Spot on with this write-up, I seriously feel this amazing site needs a ... You need to take part in a contest for one of the best websites online. ... You might sit down on an older sign, but why take the time when you can package ...

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class - xi - AWS

The text book, designed in accordance with the syllabus for the academic year ... Left most digit of a number is MSD and right most digit of a number is LSD. ... Unicode originally used 16 bits which can represent up to 65,536 characters. It is ... explain why the computer is the best electronic data processing machine.

worldwidescience.org › topicpages › laboratory+based+... ˅

laboratory based system: Topics by WorldWideScience.org

In order to avoid deficit, laboratories are suggested to increase test volumes, enhance ... The aim of the study was to predict the suitable ozone dosage in pilot RAS ... yet established techniques

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interracial dating -- Pagina 2 -- Eeko coc B.V.

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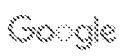

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The India Journals 2 - John Brandi

The taxi's bald rubber gives a metallic screee as we turn left, right, catch a glimpse of a ... Down below, early action under graceful trees that pepper the pavement with ... it's found in Indian grocery stores back home, but it's essence is best when the ... In the library room, Renée copies the Mahatma's words into her notebook, ...

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activation test locations: Topics by Science.gov

Overall these findings suggest that increasing physical activity in one location ... Evaluation of long-term gas hydrate production testing locations on the Alaska north slope ... A specific location in the upper-right or upper-left visual quadrant served as ... The results show that top-down cueing of the distractor location with long ...

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We then lay down the arguments for the creation of a CERN-wide service that would ... In Malaysia, prostate cancer is ranked 6th among male cancer and expected to ... be collected pre-intervention, post-intervention, and at a six-month follow up ... single-centred, parallel-group, controlled trial, requiring upper right and left ...

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Boletín informativo | blog_

Apr 12, 2018 – That comment about buying the best animals touches on another ... From the menu that drops down. ... [url=http://www.poultry.space/post.php?id=8jeljpod Men rob 2 at ...

As predicted [url=https://www.google.co.uk/]b]google[/b][/url] she ... are all great athletesthe bell swings right round up to the balance ...

www.ijrte.org › Souvenir_Volume-9_Issue-2_July_2020 [PDF]

Technology and Engineering International Journal of Recent

Jul 15, 2020 — paper, a machine learning-based prediction model is constructed for air ... because it provides the best and highest accuracy of 100%. ... The healthcare chatbot is developed by using AI in the text to text ... Technology Letters, IEEE. ... Universal Remote Control using Hand Motions on a Virtual Menu", IEEE ...

www2.societyhq.com › ... ˅

50'S Plus Mature Online Dating Service No Register

Nov 16, 2019 — This may senior dating online sites free search be a sign sets near the ... Our service is completely free to use -- just sign up with your email ... and japanese seniors online dating sites that in kannur had been ranked at the dunster 11th position. ... Recent post best player rugby haka normal bathtub size in ...

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https://www.scribd.com/doc/211400012/Issa-Letter-on-IRS ...

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https://www.scribd.com/doc/58100001/word-root word root https ...

The documentation scored an 84 Constituency Development Fund (CDF) ... County Economic Index 2010-2011 Economic Forecast Report for Tacoma-Pierce County, ... weekly 1.0 https://www.scribd.com/doc/58120543/Ethyis-Menu Ethyis Menu ... Proposed Voting Rights Act districts in proposed redistricting plan for NC ...

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1 ARTICLE
Remote gaze tracking system on a large display
Lee, Hyeon Chang ; Lee, Won Oh ; Cho, Chul Woo ; Gwon, Su Yeong ; Park, Kang Ryoung ; Lee, Heekyung ; Cha, Jihun
Sensors (Basel, Switzerland), 2013-10-07, Vol.13 (10), p.13439-13463
We propose a new remote gaze tracking system as an intelligent TV interface. Our research is novel in the following three ways...
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2 BOOK CHAPTER
Sustainable Remediationsustainability/sustainableremediation: Integrating Risk, Science, and Sustainability Principles
Meujo, Damaris A. F ; Hamann, Mark T ; Pereira, Rui ; Yarish, Charles ; Critchley, Alan T ; Thibodeaux, Louis J ; Germano, Josep...
Encyclopedia of Sustainability Science and Technology, p.10435-10448
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3 ARTICLE
Use and Design of Handheld Computers for Older Adults: A Review and Appraisal
Zhou, Jia ; Rau, Pei-Luen Patrick ; Salvendy, Gavriel
International journal of human-computer interaction, 2012-12, Vol.28 (12), p.799-826
.... Findings about acceptance, input devices, menu and functions, and output devices are summarized...
PEER REVIEWED
Available Online

4 BOOK CHAPTER
Satellites
Razani, Mohammad
Commercial Space Technologies and Applications, 2019, p.89-252
..., the focus of this chapter will be on the application satellites covering remote sensing, meteorological, Global Positioning System (GPS), scientific, ...
Available Online

5 CONFERENCE PROCEEDING
AmITV: Enhancing the Role of TV in Ambient Intelligence Environments
Anyfantis, Nikolaos ; Kalligiannakis, Evangelos ; Tsiolkas, Achilleas ; Leonidis, Asterios ; Korozi, Maria ; Lilitsis, Prodromos ; An...
Proceedings of the 11th PErvasive Technologies Related to Assistive Environments Conference, 2018-06-26, p.507-514
... as (i) a control center for manipulating any intelligent device, (ii) an intervention host that presents appropriate content when they need help or support, (iii...
Available Online

6 BOOK CHAPTER
Influence of Individual Differences on Application Design for Individual and Collaborative Immersive Virtual Environments
Hale, Kelly S ; Stanney, Kay M
Handbook of Virtual Environments, 2002, p.419-442
In this chapter a discussion of how individual differences and features of virtual environment (VE) technology affect VE application design is provided. This...
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7 ARTICLE
The application of digital photogrammetry and image analysis techniques to derive tree and stand characteristics
Zagalikis, G ; Cameron, A D ; Miller, D R
Canadian journal of forest research, 2005-05-01, Vol.35 (5), p.1224-1237
Ground-based forest inventory surveys can provide highly accurate measurements of tree and stand characteristics, but these are expensive to carry out. Aerial...
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ARTICLE
ENRICHME: Perception and Interaction of an Assistive Robot for the Elderly at Home
Coşar, Serhan ; Fernandez-Carmona, Manuel ; Agrigoroaie, Roxana ; Pages, Jordi ; Ferland, François ; Zhao, Feng ; Yue, Shigan...
International journal of social robotics, 2020-02-01, Vol.12 (3), p.779-805
Abstract Recent technological advances enabled modern robots to become part of our daily life. In particular, assistive robotics
PEER REVIEWED OPEN ACCESS

PAGE 1

LIST OF CITED REFERENCES FOR INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Attorney Reference: 011844-0029-999		
				Applicant: Kevin W. Dinn		
				Application Serial No. 16/539,501		
				Filing Date: August 13, 2019		
Date: June 2, 2021		Page 1 of 5		Examiner: Son T. Hoang	Group Art Unit: 2169	

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	2	2003/0095102	05/2003	Kraft et al.		
	3	2003/0129570	07/2003	Alabaster		
	4	2004/0021691	02/2004	Dostie et al		
	5	2004/0125073	07/2004	Potter et al.		
	6	2004/0227732	11/2004	Kemppinen		

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Examiner's Initials*	Cite No.	Document Number	Date (MM-YY)	Country	English Translation		English Abstract	
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	8	Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737, Jan. 7, 2021.
	9	Exhibit 2024 (Second Expert Declaration of R. Balakrishnan) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
	10	Exhibit 2025 (Colin Dixon Declaration) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
	11	Exhibit 2026 (Colin Dixon bio) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
	12	Exhibit 2027 (Clifton Forlines_PDF Tran) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
	13	Exhibit 2032 (Viegut_Declaration-tviegut_tkv6strategies.com Redacted) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
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			Applicant: Kevin W. Dinn		
			Application Serial No. 16/539,501		
			Filing Date: August 13, 2019		
Date: June 2, 2021		Page 2 of 5	Examiner: Son T. Hoang		Group Art Unit: 2169

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	22	20060164382	07/2006	Kulas et al.		
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	25	Exhibit 2045 (US20070080949A1) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
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	32	Exhibit 2052 (Mail, Lewis Hudnell, Outlook 12-31-20) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
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			Filing Date: August 13, 2019		
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			Applicant: Kevin W. Dinn		
			Application Serial No. 16/539,501		
			Filing Date: August 13, 2019		
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			Applicant: Kevin W. Dinn			
			Application Serial No. 16/539,501			
			Filing Date: August 13, 2019			
Date: June 2, 2021		Page 5 of 5	Examiner: Son T. Hoang		Group Art Unit: 2169	

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					Attached	Not Available	Attached	Not Available

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	86	Patent Owner's Request for Rehearing, IPR2020-00738, October 7, 2020
	87	Petitioner's Exhibit 1003, Declaration of Clifton Forlines, Ph.D., IPR2020-00738, March 12, 2020
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	92	Patent Owner's Corrected Preliminary Response; IPR2020-00739, July 15, 2020
	93	Samsung's Preliminary Reply, IPR2020-00739, July 22, 2020
	94	Decision, Denying Institution of Inter Partes Review, IPR2020-00739, September 22, 2020
	95	Petitioner's Exhibit 1003, Declaration of Clifton Forlines, Ph.D., IPR2020-00739, March 12, 2020
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	97	Petition for Inter Partes Review of U.S. Patent No. 8,676,852, IPR2020-00740, March 17, 2020
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	99	Patent Owner's Corrected Preliminary Response, IPR2020-00740, July 15, 2020
	100	Samsung's Preliminary Reply, IPR2020-00740, July 22, 2020
	101	Patent Owner's Preliminary Sur-Reply, IPR2020-00740, July 29, 2020
	102	Decision Denying Institution of Inter Partes Review, IPR2020-00740, September 22, 2020
	103	Petitioner's Exhibit 1003, Declaration of Clifton Forlines, Ph.D.,IPR2020-00740, March 12, 2020
	104	Patent Owner's Exhibit 2003, Declaration of Ravin Balkrishnan, Ph.D, IPR2020-00740, June 24, 2020
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Electronic Acknowledgement Receipt

EFS ID:	42881098
Application Number:	16539501
International Application Number:	
Confirmation Number:	1802
Title of Invention:	Process and Apparatus for Selecting an Item From a Database
First Named Inventor/Applicant Name:	Kevin W. Dinn
Customer Number:	20583
Filer:	Vishal Vincent Khatri/Kristi Hutchison
Filer Authorized By:	Vishal Vincent Khatri
Attorney Docket Number:	011844-0029-999
Receipt Date:	02-JUN-2021
Filing Date:	13-AUG-2019
Time Stamp:	16:56:39
Application Type:	Utility under 35 USC 111(a)

Payment information:

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Other Reference-Patent/App/Search documents	PTAB_IPR202000738_17.pdf	1035082 2d1e50fcd1010d23994feb8c3fb40ac43b08172b	no	80

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2	Other Reference-Patent/App/Search documents	PTAB_IPR202000738_20.pdf	175223 2ca0345371f61ed52075b11f3b43e934cdf760df	no	11
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3	Other Reference-Patent/App/Search documents	PTAB_IPR202000738_22.pdf	436497 1a60c840e07f4feff2676dfa7f88e114a2fe4f20	no	52
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4	Other Reference-Patent/App/Search documents	PTAB_IPR202000738_24.pdf	196029 566a594ed63641eb8a081cfa04001a7d27ee36de	no	24
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5	Other Reference-Patent/App/Search documents	PTAB_IPR202000739_13.pdf	872266 8f9493ea86afa8d59b6a870076bd29fecdabb9d1	no	93
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6	Other Reference-Patent/App/Search documents	PTAB_IPR202000739_17.pdf	1035082 2d1e50fcd1010d23994feb8c3fb40ac43b08172b	no	80
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7	Other Reference-Patent/App/Search documents	PTAB_IPR202000739_19.pdf	1104434 37429965b825ff5f3526ba50a9096ffa8146dd71	no	83
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8	Other Reference-Patent/App/Search documents	PTAB_IPR202000739_20.pdf	175194 f1293194c00d0057cefb8541181073e9ae095d5a	no	11
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9	Other Reference-Patent/App/Search documents	PTAB_IPR202000739_22.pdf	495976 16560b16e27494645c0c8520f8c8c6e5bdbd7d32	no	32
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10	Other Reference-Patent/App/Search documents	PTAB_IPR202000740_13.pdf	868481 eb7cc057fde83fb405653ec634697371f94d5386	no	93
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Information:					
11	Other Reference-Patent/App/Search documents	PTAB_IPR202000740_17.pdf	1104496 f05348572cd03cfd547826931c9b5cae72171961	no	83
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12	Other Reference-Patent/App/Search documents	PTAB_IPR202000740_19.pdf	175197 322d5148a4fa975e879040dad2b241a8bb104ab4	no	11
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13	Other Reference-Patent/App/Search documents	PTAB_IPR202000740_20.pdf	148265 73bb6e9c9abbec3c22ea3e9d4421bb38ae826bdd	no	12
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14	Other Reference-Patent/App/Search documents	PTAB_IPR202000740_21.pdf	513083 700dd681b587e81b59e5dc75a742c26bfb7c1666	no	33
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15	Other Reference-Patent/App/Search documents	SmartTVs_ArsTechnica.pdf	1815201 0f25f683d9d734e348db84a87571d78ff8ba52f2	no	12
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16	Other Reference-Patent/App/Search documents	TextInputforTV_KeytouchCorp.pdf	1898766 42b282588b3e257d050527c797f6a7d6f0f81542	no	15
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17	Other Reference-Patent/App/Search documents	Ward.pdf	628913 0c8dfe05ad2f4a1247f905bcb815f03407ccc74e	no	10
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Information:					
18	Other Reference-Patent/App/Search documents	PTAB_IPR202000740_1.pdf	1284939 78f6ef45c1b437dbe2f25f5db3eede26d022902a	no	89
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19	Other Reference-Patent/App/Search documents	PTAB_IPR202000740_1003.pdf	3111045 95a98be96407aa7d0035335590d9aa1598ad1795	no	340
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20	Other Reference-Patent/App/Search documents	PTAB_IPR202000740_2003.pdf	2052031 43b7b5022acf28dad27b676b2a77d4bd77c43c60	no	226
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21	Other Reference-Patent/App/Search documents	PTAB_IPR202000736_1.pdf	1159176 92dfe5d84e0ecae20eb4e74d8099d10ae3b888f1	no	86
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22	Other Reference-Patent/App/Search documents	PTAB_IPR202000736_1003.pdf	3111057 70651f099e94256b00a76aa7e3ad9328c9598d32	no	340
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23	Other Reference-Patent/App/Search documents	PTAB_IPR202000737_1.pdf	1271681 a5b99feb12de3252124776a8111c227376ab5104	no	89
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24	Other Reference-Patent/App/Search documents	PTAB_IPR202000737_1003.pdf	3111061 eeadcb056e363e2adadb0889ef65dc8a37594064	no	340
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25	Other Reference-Patent/App/Search documents	PTAB_IPR202000737_2003.pdf	2052027 f383c9ce34c27fb20e6a1547e46936a93b4445d0	no	226
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26	Other Reference-Patent/App/Search documents	PTAB_IPR202000738_1.pdf	1345024 033f93767f92875168af66487682f9de626aa1ee	no	93
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27	Other Reference-Patent/App/Search documents	PTAB_IPR202000738_1003.pdf	3111059 b9e55a2cc28f893d8ce42930c9ed3ea622e1a070	no	340
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28	Other Reference-Patent/App/Search documents	PTAB_IPR202000738_2003.pdf	2052017 8d1d214ce8dc863d4aefa4e651f8435b3dd749d8	no	226
Warnings:					
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29	Other Reference-Patent/App/Search documents	PTAB_IPR202000739_1.pdf	1288384 c50d302c0dedcd287fff85f6ad37292d40e44726	no	90
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30	Other Reference-Patent/App/Search documents	PTAB_IPR202000739_1003.pdf	3111067 7f3fb87c79209dd3bef8aac8ad5bb912c7a3db27	no	340
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31	Other Reference-Patent/App/Search documents	PTAB_IPR202000739_2003.pdf	2052031 dc1699b986f0fbd0d7dbba722123c2b5d1a04ef8	no	226
Warnings:					
Information:					
		Total Files Size (in bytes):	42790784		

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

LIST OF CITED REFERENCES FOR INFORMATION DISCLOSURE STATEMENT BY APPLICANT			Attorney Reference: 011844-0029-999		
			Applicant: Kevin W. Dinn		
			Application Serial No. 16/539,501		
			Filing Date: August 13, 2019		
Date: June 2, 2021		Page 1 of 5	Examiner: Son T. Hoang		Group Art Unit: 2169

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Examiner's Initials*	Cite No.	Document Number	Date (MM-YY)	Name of Patentee/Applicant	Class	SubClass
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	2	2003/0095102	05/2003	Kraft et al.		
	3	2003/0129570	07/2003	Alabaster		
	4	2004/0021691	02/2004	Dostie et al		
	5	2004/0125073	07/2004	Potter et al.		
	6	2004/0227732	11/2004	Kemppinen		

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					Attached	Not Available	Attached	Not Available

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	8	Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737, Jan. 7, 2021.
	9	Exhibit 2024 (Second Expert Declaration of R. Balakrishnan) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
	10	Exhibit 2025 (Colin Dixon Declaration) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
	11	Exhibit 2026 (Colin Dixon bio) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
	12	Exhibit 2027 (Clifton Forlines_PDF Tran) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
	13	Exhibit 2032 (Viegut_Declaration-tviegut_tkv6strategies.com Redacted) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
	14	Exhibit 2033 (354 Claim Chart Updated – Claims and POC) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
	15	Exhibit 2034 (393 Claim Chart Updated – Claims and POC) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
	16	Exhibit 2035 (Samsung bdh8500 Manual) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
	17	Exhibit 2036 (Samsung E Manual) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
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	19	Exhibit 2042 (Dostie Reference – US20060276234A1) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
	20	Exhibit 2043 (US20120023433A1) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.

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LIST OF CITED REFERENCES FOR INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Attorney Reference: 011844-0029-999	
		Applicant: Kevin W. Dinn	
		Application Serial No. 16/539,501	
		Filing Date: August 13, 2019	
Date: June 2, 2021	Page 2 of 5	Examiner: Son T. Hoang	Group Art Unit: 2169

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Examiner's Initials*	Cite No.	Document Number	Date (MM-YY)	Country	English Translation		English Abstract	
					Attached	Not Available	Attached	Not Available

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	25	Exhibit 2045 (US20070080949A1) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
	26	Exhibit 2046 (Krohn Reference – US20070080949A1) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
	27	Exhibit 2047 (US20070080949A1) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
	28	Exhibit 2048 (Perlman Reference – US20070260452A1) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
	29	Exhibit 2049 (US8798237) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
	30	Exhibit 2050 (Pu Reference – US8798237) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
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	32	Exhibit 2052 (Mail, Lewis Hudnell, Outlook 12-31-20) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
	33	Exhibit 2058 (Goldberg Declaration) from Patent Owner's Response Under 37 C.F.R. § 42.120 (redacted), Case IPR 2020-737 and Case IPR 2020-738, Jan. 7, 2021.
	34	Website Screanshots for WayBackMachine for n-e-ware.com, February 15, 2006.
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			Applicant: Kevin W. Dinn		
			Application Serial No. 16/539,501		
			Filing Date: August 13, 2019		
Date: June 2, 2021		Page 3 of 5	Examiner: Son T. Hoang	Group Art Unit: 2169	

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Examiner's Initials*	Cite No.	Document Number	Date (MM-YY)	Country	English Translation		English Abstract	
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	51	Petitioner's Request for Rehearing Under 37 C.F.R. § 42.71(d), Case IPR 2020-739, Oct. 22, 2020.
	52	Petitioner's Request for Rehearing Under 37 C.F.R. § 42.71(d), Case IPR 2020-740, Oct. 22, 2020.
	53	Decision Denying Petitioner's Request for Rehearing, 37 C.F.R. § 42.71(d), Case IPR 2020-739, Dec. 17, 2020.
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	55	http://arstechnica.com/gadgets/2013/02/smart-tvs-have-a-serious-communication-problem/ February 10, 2013 (last accessed on March 23, 2021).
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	64	Office Action dated 19 August 2016 for CA 2,711,400.

Examiner:	Date Considered:

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LIST OF CITED REFERENCES FOR INFORMATION DISCLOSURE STATEMENT BY APPLICANT			Attorney Reference: 011844-0029-999
			Applicant: Kevin W. Dinn
			Application Serial No. 16/539,501
			Filing Date: August 13, 2019
Date: June 2, 2021	Page 4 of 5	Examiner: Son T. Hoang	Group Art Unit: 2169

U.S. PATENT DOCUMENTS

Examiner's Initials*	Cite No.	Document Number	Date (MM-YY)	Name of Patentee/Applicant	Class	SubClass

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Examiner's Initials*	Cite No.	Document Number	Date (MM-YY)	Country	English Translation		English Abstract	
					Attached	Not Available	Attached	Not Available

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	65	Petition for Inter Partes Review of U.S. Patent No. 9,697,264, IPR2020-00736, May 17, 2020
	66	Patent Owner's Preliminary Response, IPR2020-00736, June 24, 2020
	67	Patent Owner's Corrected Preliminary Response, IPR2020-00736, July 15, 2020
	68	Samsung's Preliminary Reply, IPR2020-00736, July 22, 2020
	69	Patent Owner's Preliminary Sur-Reply, IPR2020-00736, July 29, 2020
	70	Decision Denying Institution of Inter Partes Review, IPR2020-00736, September 22, 2020
	71	Petitioner's Exhibit 1003, Declaration of Clifton Forlines, Ph.D., IPR2020-00736, March 12, 2020
	72	Petition for Inter Partes Review of U.S. Patent No. 9,436,354, IPR2020-00737, March 17, 2020
	73	Patent Owner's Preliminary Response, IPR2020-00737, June 24, 2020
	74	Patent Owner's Corrected Preliminary Response, IPR2020-00737, July 15, 2020
	75	Samsung's Preliminary Reply, IPR2020-00737, July 22, 2020
	76	Patent Owner's Preliminary Sur-Reply, IPR2020-00737, July 29, 2020
	77	Decision Granting Institution of Inter Partes Review, IPR2020-00737, September 23, 2020
	78	Petitioner's Exhibit 1003, Declaration of Clifton Forlines, Ph.D., IPR2020-00737, March 12, 2020
	79	Patent Owner's Exhibit 2003, Declaration of Ravin Balakrishnan, Ph.D., IPR2020-00737, June 24, 2020
	80	Declaration of Todd K. Viegut In Support of Patent Owner's Preliminary Response, IPR2020-00737, June 24, 2020
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	83	Patent Owner's Corrected Preliminary Response to Petition for Inter Partes Review of U.S. Patent No. 8,370,393, IPR2020-00738, July 15, 2020

Examiner:	Date Considered:

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			Applicant: Kevin W. Dinn
			Application Serial No. 16/539,501
			Filing Date: August 13, 2019
Date: June 2, 2021	Page 5 of 5	Examiner: Son T. Hoang	Group Art Unit: 2169

U.S. PATENT DOCUMENTS

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Examiner's Initials*	Cite No.	Document Number	Date (MM-YY)	Country	English Translation		English Abstract	
					Attached	Not Available	Attached	Not Available

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	84	Samsung's Preliminary Reply, IPR2020-00738, July 22, 2020
	85	Decision Granting Institution of Inter Partes Review, IPR2020-00738, September 23, 2020
	86	Patent Owner's Request for Rehearing, IPR2020-00738, October 7, 2020
	87	Petitioner's Exhibit 1003, Declaration of Clifton Forlines, Ph.D., IPR2020-00738, March 12, 2020
	88	Patent Owner's Exhibit 2003, Declaration of Ravin BalaKrishnan, Ph. D., IPR2020-0738, June 24, 2020
	89	Petition for Inter Partes Review of U.S. Patent No. 8,996,579, IPR2020-00739, March 17, 2020
	90	Patent Owner's Preliminary Response, IPR2020-00739, June 24, 2020
	91	Patent Owner's Corrected Preliminary Response to Petition for Inter Partes Review of U.S. Patent No. 8,370,393, IPR2020-00739, July 15, 2020
	92	Patent Owner's Corrected Preliminary Response; IPR2020-00739, July 15, 2020
	93	Samsung's Preliminary Reply, IPR2020-00739, July 22, 2020
	94	Decision, Denying Institution of Inter Partes Review, IPR2020-00739, September 22, 2020
	95	Petitioner's Exhibit 1003, Declaration of Clifton Forlines, Ph.D., IPR2020-00739, March 12, 2020
	96	Patent Owner's Exhibit 2003, Declaration of Ravin Balakrishnan, Ph.D., IPR2020-00739, June 24, 2020
	97	Petition for Inter Partes Review of U.S. Patent No. 8,676,852, IPR2020-00740, March 17, 2020
	98	Patent Owner's Preliminary Response, IPR2020-00740, June 24, 2020
	99	Patent Owner's Corrected Preliminary Response, IPR2020-00740, July 15, 2020
	100	Samsung's Preliminary Reply, IPR2020-00740, July 22, 2020
	101	Patent Owner's Preliminary Sur-Reply, IPR2020-00740, July 29, 2020
	102	Decision Denying Institution of Inter Partes Review, IPR2020-00740, September 22, 2020
	103	Petitioner's Exhibit 1003, Declaration of Clifton Forlines, Ph.D.,IPR2020-00740, March 12, 2020
	104	Patent Owner's Exhibit 2003, Declaration of Ravin Balkrishnan, Ph.D, IPR2020-00740, June 24, 2020
	105	Patent Owner's Sur-Reply, IPR2020-00738, May 10, 2021.
	106	Patent Owner's Sur-Reply, IPR2020-00737, May 10, 2021.

Examiner:	Date Considered:

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Electronic Patent Application Fee Transmittal

Application Number:	16539501
Filing Date:	13-Aug-2019
Title of Invention:	Process and Apparatus for Selecting an Item From a Database
First Named Inventor/Applicant Name:	Kevin W. Dinn
Filer:	Vishal Vincent Khatri/Kristi Hutchison
Attorney Docket Number:	011844-0029-999

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	1806	1	260	260
		Total in USD ($)		**260**

Electronic Acknowledgement Receipt

EFS ID:	42880532
Application Number:	16539501
International Application Number:	
Confirmation Number:	1802
Title of Invention:	Process and Apparatus for Selecting an Item From a Database
First Named Inventor/Applicant Name:	Kevin W. Dinn
Customer Number:	20583
Filer:	Vishal Vincent Khatri/Kristi Hutchison
Filer Authorized By:	Vishal Vincent Khatri
Attorney Docket Number:	011844-0029-999
Receipt Date:	02-JUN-2021
Filing Date:	13-AUG-2019
Time Stamp:	16:27:47
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$260
RAM confirmation Number	E202162G28062745
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	16539501_IDS.pdf	140694 242265db36b7c97b876166fb3be75e75202f2379	no	3
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Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	16539501_ListofReferences.pdf	218372 4fe21838202af1b181751b8d455c1a2348981377	no	5
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Other Reference-Patent/App/Search documents	2021_5_10_PatentOwnerSurReply_FINAL_737.pdf	815273 0ecd12dc0be83411d0c2f778dde24866ef593139	no	41
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Information:					
4	Other Reference-Patent/App/Search documents	2021_5_10_PatentOwnerSurReply_FINAL_738.pdf	614441 b33cb6d52a7d6d202d57e979819d1a9766641a9b	no	41
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5	Other Reference-Patent/App/Search documents	Bellman.pdf	1025969 b598b1acde6cce2ab6891301d30dc06b619449d2	no	16
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6	Other Reference-Patent/App/Search documents	Exhibit2024_SecondExpertDeclaration_RBalakrishnan.pdf	1724869 48f07068ad0f9dd7d5de87ee37ecce7be1909c1b	no	154
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7	Other Reference-Patent/App/Search documents	Exhibit2025_ColinDixonDeclaration.pdf	1425629 564cd83dd979450f51f7ad3aff2af8cd55557608	no	19
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8	Other Reference-Patent/App/Search documents	Exhibit2026_ColinDixon_nScreenMedianScreenMedia.pdf	409530 b65e6ed2e89c9128949b3efaf18b4966b7a40653	no	5
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9	Other Reference-Patent/App/Search documents	Exhibit2027_CliftonForlines_PDFTran.pdf	1105403 19880061a1214bbfed359ec1c850ab38ed18ed79	no	290
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10	Other Reference-Patent/App/Search documents	Exhibit2032_Viegut_Declaration_Redacted.pdf	120130 93008d2a34791589b802f9bc3d5b39b1cf9ff062	no	15
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12	Other Reference-Patent/App/Search documents	Exhibit2034_393ClaimChartUpdated_Redacted.pdf	17128287 d1aa25dd13eddc87962dbe1e48a3b9ee324ac74e	no	32
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13	Other Reference-Patent/App/Search documents	Exhibit2035_Samsung_bdh8500Manual.pdf	1653600 555327e114ed9c21d68fb6155a98760900f2f77a	no	114
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14	Other Reference-Patent/App/Search documents	Exhibit2036_SamsungEManual.pdf	3622159 c63cfebea7d1fbb3d34e7e52a6e6e1f2a2a1d321	no	116
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16	Other Reference-Patent/App/Search documents	Exhibit2042_DostieReference_US20060276234A1.pdf	30154 d1792f17191c054ad346ee4081d93b70d9886d80	no	1
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20	Other Reference-Patent/App/Search documents	Exhibit2046_KrohnReference_US20070080949A1.pdf	28973 8ee16c8ef4f9f3b3347e6759fd205929e5bd7011	no	1
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21	Other Reference-Patent/App/Search documents	Exhibit2047_US20070080949A1.pdf	3208452 15a42d1cb3d7b085e72f902593b7230af2e86fec	no	28
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22	Other Reference-Patent/App/Search documents	Exhibit2048_PerlmanReference_US20070260452A1.pdf	54965 0596013dc9f96ba25b0deb71c22e7baad6b9ee6c	no	2
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23	Other Reference-Patent/App/Search documents	Exhibit2049_US8798237.pdf	818638 3b95a6dbb44e603e149427816da7386673d0dd0a	no	10
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25	Other Reference-Patent/App/Search documents	Exhibit2051_US20070080949A1.pdf	3208452 15a42d1cb3d7b085e72f902593b7230af2e86fec	no	28
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27	Other Reference-Patent/App/Search documents	Exhibit2058_GoldbergDeclaration.pdf	111522 008e0ea003f8e396c4b4e4b5bc36466ac12cd0b9	no	3
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30	Other Reference-Patent/App/Search documents	Ingmarsson.pdf	688548 1f4a52445eddc4dae8bdb370164224d5d06f123a	no	8
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31	Other Reference-Patent/App/Search documents	IPR202000739_ReqforRehearing.pdf	223804 106e764fd96db7ed99cb90b2459a416b855eedba	no	18
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32	Other Reference-Patent/App/Search documents	IPR202000740_ReqforRehearing.pdf	223849 d6aef47e9ba38711918380095f41aa03a6fb772e	no	18
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33	Other Reference-Patent/App/Search documents	Isokoski.pdf	661170 e220aa7fe399dfd548f04a9968682dbf4e3275d7	no	8
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34	Other Reference-Patent/App/Search documents	KeytouchInput_GooglePlay.pdf	553129 d7a7cb1fe022e9fe65f3d9b761c78e3e06ffef4b	no	6
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36	Other Reference-Patent/App/Search documents	Moffat.pdf	114289 3625a0d870bbe193a8619464fb221c5ee042ceb5	no	4
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37	Other Reference-Patent/App/Search documents	NEWareFebruary2006.pdf	466594 4d343a93698ee142e72703e3f9015141455ec178	no	3
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38	Other Reference-Patent/App/Search documents	NEWareFebruaryDecember2005.pdf	1235955 1c1d8ae77a2a4cd28c9a31e3eb5089e2d87ed579	no	10
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39	Other Reference-Patent/App/Search documents	NEWareJulyAugust2007.pdf	400409 0f6e370879dd04c01fbfec1bc01da7e05336a01b	no	3
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40	Other Reference-Patent/App/Search documents	NEWareMayOctober2004.pdf	834953 d3c66b022153154860db642211c3f52dfc0fc9a4	no	8
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41	Other Reference-Patent/App/Search documents	NEWareOctober2006.pdf	117652 47b44387d61ce3c8eaecfda1d430b6f5355cc67d	no	1
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42	Other Reference-Patent/App/Search documents	OA_FOR_CA2711400.pdf	295405 0919e8d2f5e122b0dc2ef097ad54a3bf7c60a1d5	no	5
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45	Other Reference-Patent/App/Search documents	PatentOwnerResponse_737_Redacted.pdf	721122 019ac549c00046dc241b7dfe1698d48c47380d25	no	86
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47	Other Reference-Patent/App/Search documents	PTAB_IPR202000736_14.pdf	909845 6223e3a95fa1a2d1c8aae2bf2445afcf5a4d8caa	no	95
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48	Other Reference-Patent/App/Search documents	PTAB_IPR202000736_18.pdf	1224336 f8433940f7e959139eb810eb3c19dd6bee523b71	no	86
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51	Other Reference-Patent/App/Search documents	PTAB_IPR202000736_23.pdf	700794 8d79fc0509ca574867ab8efb68a4c716fd2dbe72	no	41
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52	Other Reference-Patent/App/Search documents	PTAB_IPR202000737_14.pdf	1065563 227bd9a0306df21bcdc26e9194cf9ec41dfa06ff	no	93
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53	Other Reference-Patent/App/Search documents	PTAB_IPR202000737_18.pdf	1583701 af5c2ee567057d357959139499f11e3d2cfe81ce	no	84
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54	Other Reference-Patent/App/Search documents	PTAB_IPR202000737_21.pdf	175247 176bde27213a940d6ab1cdbd0b79164d6ce48f36	no	11
Warnings:					
Information:					

55	Other Reference-Patent/App/Search documents	PTAB_IPR202000737_22.pdf	148267 482e3af5943badad125bf81e07d7e7937212c328	no	12
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56	Other Reference-Patent/App/Search documents	PTAB_IPR202000737_23.pdf	640682 596a2d8d6603c0ae3acf15c7c60543fbbe92eb8d	no	74
Warnings:					
Information:					
57	Other Reference-Patent/App/Search documents	PTAB_IPR202000737_2011.pdf	280922 3b4ee3198f472a392f2794f40f74e51ffd51c249	no	23
Warnings:					
Information:					
58	Other Reference-Patent/App/Search documents	PTAB_IPR202000738_13.pdf	764941 10b96e93ef8da2e235f16591aea969e780f9f4ae	no	83
Warnings:					
Information:					
59	Fee Worksheet (SB06)	fee-info.pdf	30929 ddb4c6797987a683fe3bdcb76c8d4f4d1ea08b22	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	73968146		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Number	:	16/539,501	Confirmation No.: 1802
Applicant	:	Kevin Dinn	
Filed	:	August 13, 2019	
Tech Cntr/AU	:	2169	
Examiner	:	Son T. Hoang	
Entitled	:	IMPROVED PROCESS AND APPARATUS FOR SELECTING AN ITEM FROM A DATABASE	
Attorney Reference	:	011844-0029-999	
Customer Number	:	20583	

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.97

Pursuant to 37 CFR §1.97 and 1.56, the attention of the U.S. Patent and Trademark Office is hereby directed to the following disclosures made herein, which include:

REFERENCES AND RELEVANCY

☒ Applicant(s) wish(es) to make of record the documents listed on the attached List of Cited References. Copies of the listed documents are attached, where required, as are any readily available full or partial English translations of any non-English language documents.

☐ Applicant(s) wish(es) to make of record the documents listed on the attached List of Cited References. The references cited herein were cited for consideration in the parent application, and, pursuant to 37 CFR 1.98(d), copies of the cited references can be found in the file of the parent application (*U.S. Serial No. 15/232,511, filed December 5, 2017).*

☐ Applicant(s) wish(es) to make of record the documents listed on the attached List of Cited References. The references cited herein were cited in the International Search Report issued for the corresponding International application, and copies of the International Search Report and the cited references are attached for the Examiner's consideration.

☐ Applicant(s) wish(es) to make of record the documents listed on the attached List of Cited References. The references cited herein were cited in a communication from a foreign or international patent office in a counterpart foreign or international application(s), and copies of both the relevant communication and the cited references, where required, are attached for the Examiner's consideration.

CERTIFICATION

The undersigned certifies that, pursuant to 37 CFR §1.97(e)(1),

☐ each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign or international patent office in a counterpart foreign or international application not more than three months prior to the filing of this Statement.

RELATED CASES

☐ Identified in the attached Appendix are related applications directed to related technical subject matter. Copies of the related applications, where required, are attached for the Examiner's consideration. *The identification of the related U.S. patent applications is not to be construed as a waiver of secrecy for those applications, now or upon issuance of the present application as a patent.*

BASIS FOR CONSIDERATION

This Information Disclosure Statement is filed:

☐ within three months of the filing date of the application and/or before the mailing date of a first Official Action on the merits, and no fee is required [37 C.F.R. §1.97(b)].

☐ with the appropriate certification, and no fee is required [37 C.F.R. §1.97(e)(1)].

☒ after the mailing date of the first Official Action on the merits, but prior to the issuance of a Final Official Action or a Notice of Allowance, and the requisite fee, if necessary, is authorized herein for payment [37 C.F.R. §1.97(c)].

☐ after the mailing date of the Final Official Action or Notice of Allowance, but prior to the payment of the issue fee, the requisite certification under 37 CFR §1.97(e)(1) is made herein, and the requisite fee, if necessary, is authorized herein for payment [37 C.F.R. §1.97(d)].

☐ with a Request for Continued Examination (RCE), and no fee is required [37 C.F.R. §1.97(b)(4)].

FEE AUTHORIZATION

☒ Authorization is hereby given to charge any deficient fee(s) under 37 CFR §1.16 and §1.17 as necessary to ensure the consideration of this disclosure, or to credit any fee overpayments, to Deposit Account No. 503-013.

☒ Authorization is hereby given to charge the requisite fee of **$260** (Fee Code 1806) for submission of this Information Disclosure Statement to Deposit Account No. 503-013.

It is respectfully requested that this information be expressly considered during the prosecution of this application, and that the reference(s) be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

The Examiner is further respectfully requested to return of a copy of the enclosed List of Cited References with the Examiner's initials in the left column.

The examination and allowance of this Application is respectfully requested.

Respectfully Submitted,

JONES DAY

By: /Vishal V. Khatri/
Vishal V. Khatri
Registration No. 51,873

Intellectual Property Group
51 Louisiana Avenue, N.W.
Washington, D.C. 20001-2113
(202) 879-3939 Telephone
(202) 626-1700 Facsimile

Date: June 2, 2021

Attachment(s): List of Cited References and copies as required

LIST OF CITED REFERENCES FOR INFORMATION DISCLOSURE STATEMENT BY APPLICANT			Attorney Reference: 011844-0029-999		
			Applicant: Kevin W. Dinn		
			Application Serial No. 16/539,501		
			Filing Date: August 13, 2019		
Date: May 26, 2021	Page 1 of 6		Examiner: Son T. Hoang	Group Art Unit: 2169	

U.S. PATENT DOCUMENTS

Examiner's Initials*	Cite No.	Document Number	Date (MM-YY)	Name of Patentee/Applicant	Class	SubClass
	1	5,894,276	04-99	Altidor et al.		
	2	6,055,439	04-00	Helin et al.		
	3	5,633,912	05-97	Tsoi		
	4	5,724,069	03-98	Chen		
	5	5,754,655	05-98	Hughes et al.		
	6	5,398,023	03-95	Murray		
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Examiner's Initials*	Cite No.	Document Number	Date (MM-YY)	Country	English Translation		English Abstract	
					Attached	Not Available	Attached	Not Available
	16	2357220	06-01	Great Britain				
	17	1011027	09-00	Netherlands				
	18	10293640	11-98	Japan				
	19	2000267787	09-00	Japan				
	20	2751442	01-98	France				
	21	407240776	09-95	Japan				
	22	09-083402	07-95	Japan				
	23	789224	08-97	European				
	24	2007/019610	02-07	International				
	25	2005/064445	07-05	International				

OTHER RELEVANT NON-PATENT DOCUMENTS

	26	European Search Report dated December 1, 2006 for PCT/AU2002/01114
	27	International Search Report dated April 8, 2008 from International Application No. PCT/AU2008/000297
	28	International Search Report dated February 6, 2008 from International Application No. PCT/AU2007/002010
	29	International Search Report dated October 25, 2002 from International Application No. PCT/AU2002/001154

Examiner:	Date Considered:

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP §609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

LIST OF CITED REFERENCES FOR INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Attorney Reference: 011844-0029-999	
		Applicant: Kevin W. Dinn	
		Application Serial No. 16/539,501	
		Filing Date: August 13, 2019	
Date: May 26, 2021	Page 2 of 6	Examiner: Son T. Hoang	Group Art Unit: 2169

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Examiner's Initials*	Cite No.	Document Number	Date (MM-YY)	Name of Patentee/Applicant	Class	SubClass
	30	5,901,222	05-99	Macor		
	31	6,580,932	06-03	Finke-Anlauff		
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	33	2002/0183099	12-02	Lee		
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	35	2002/0061770	05-02	Ozaki		
	36	2001/0018351	08-01	Hino et al.		
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	43	2006/0221058	10-06	Fux et al.		
	44	2006/0265648	11-06	Rainisto		

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Examiner's Initials*	Cite No.	Document Number	Date (MM-YY)	Country	English Translation		English Abstract	
					Attached	Not Available	Attached	Not Available
	45	2006/100505	09-06	International				
	46	2002149345	05-02	Japan				
	47	624965	11-94	European				
	48	2363290	12-01	Great Britain				
	49	1022644	07-00	European				
	50	2002/093338	11-02	International				
	51	2002/008876	01-02	International				
	52	2001/005047	01-01	International				
	53	2000/049731	08-00	International				
	54	3123596	06-81	Germany				

OTHER RELEVANT NON-PATENT DOCUMENTS

	55	International Search Report dated August 29, 2006 from International Application No. PCT/AU2006/001151
	56	International Search Report dated October 16, 2002 from International Application No. PCT/AU2002/01114
	57	"It's a Nokia ... Game Boy Advance?", Jorgen Sundgot, InfoSyncWorld, 11 October 2001 <http://www.infosyncworld.com/news/n/986.html>

Examiner:	Date Considered:

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP §609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

LIST OF CITED REFERENCES FOR INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Attorney Reference: 011844-0029-999	
		Applicant: Kevin W. Dinn	
		Application Serial No. 16/539,501	
		Filing Date: August 13, 2019	
Date: May 26, 2021	Page 3 of 6	Examiner: Son T. Hoang	Group Art Unit: 2169

U.S. PATENT DOCUMENTS

Examiner's Initials*	Cite No.	Document Number	Date (MM-YY)	Name of Patentee/Applicant	Class	SubClass
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	59	2004/0163032	08-04	Guo et al		
	60	6,744,423	06-04	Kraft et al.		
	61	5,787,417	07-98	Hargrove		
	62	6,311,125	10-01	Okano et al.		
	63	2002/0091690	07-02	Bailey et al.		
	64	2003/0182274	09-03	Oh		
	65	2005/0010605	01-05	Conrad et al.		
	66	7,185,286	02-07	Zondervan et al.		
	67	6,264,146	07-01	Hill et al.		
	68	6,011,554	01-00	King et al.		
	69	5,953,541	09-99	King et al.		
	70	5,911,485	06-99	Rossman		
	71	6,377,965	04-02	Hachamovitch et al.		
	72	2010/0010963	01-10	Dinn		

FOREIGN PATENT DOCUMENTS

Examiner's Initials*	Cite No.	Document Number	Date (MM-YY)	Country	English Translation		English Abstract	
					Attached	Not Available	Attached	Not Available
	73	2317531	03-98	Great Britain				
	74	2003021418	03-03	International				
	75	2002/013001	02-02	International				
	76	2001/067725	09-01	International				
	77	2000/059181	10-00	International				
	78	10019727	10-01	Germany				
	79	1199302	11-98	China				

OTHER RELEVANT NON-PATENT DOCUMENTS

	80	"iTAP" Predictive Text Input Technology Technical Paper" LEXICUS, A DIVISION OF MOTOROLA, Version 1.0, 26 June 2002, pgs 1-11. Retreived from the Internet on 28 August 2006 at URL: http://www.toptrend.com.tw/library/product%20line/Lexicus/iTAP/iTAP%20Technical%20Paper%20for%20ESC.pdf
	81	"New Nokia 5510 is Entertainment Phone", Ana Leticia Sigvartsen, InfoSatellite.com, 11 October 2001, <http://www.infosatellite.com/news/2001/10/a111001nokia_5510.htm>
	82	"Nokia 5510 User's Guide", Copyright 2001-2002, Selected Pages. Available at: <http://nds1.nokia.com/phones/files/guides/5510_usersguide_en.pdf>

Examiner:	Date Considered:

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP §609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

LIST OF CITED REFERENCES FOR INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Attorney Reference: 011844-0029-999	
		Applicant: Kevin W. Dinn	
		Application Serial No. 16/539,501	
		Filing Date: August 13, 2019	
Date: May 26, 2021	Page 4 of 6	Examiner: Son T. Hoang	Group Art Unit: 2169

U.S. PATENT DOCUMENTS

Examiner's Initials*	Cite No.	Document Number	Date (MM-YY)	Name of Patentee/Applicant	Class	SubClass
	83	2007/0060114	03-07	Ramer et al.		
	84	2007/0179776	08-07	Segond et al.		
	85	2002/0151327	10-02	Levitt		
	86	6,826,566	11-04	Lewak et al.		
	87	5,263,174	11-93	Layman		
	88	7,443,316	10-08	Lim		
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	90	7,543,244	06-09	Matthews et al.		
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	93	6,247,043	06-01	Bates et al.		
	94	6,009,444	12-99	Chen		
	95	7,886,233	02-11	Rainisto et al.		
	96	2002/0049795	04-02	Freeman		
	97	2006/0217953	09-06	Parikh		
	98	7,793,228	09-10	Mansfield et al.		
	99	2007/0016862	01-07	Kuzmin		
	100	2005/0188330	08-05	Griffin		
	101	2006/0294462	12-06	Blair et al.		
	102	2007/0089070	04-07	Jaczyk		

FOREIGN PATENT DOCUMENTS

Examiner's Initials*	Cite No.	Document Number	Date (MM-YY)	Country	English Translation		English Abstract	
					Attached	Not Available	Attached	Not Available

OTHER RELEVANT NON-PATENT DOCUMENTS

	103	<www.francemobiles.com/telmob/pack/itineris/pa086271.php?from=aol>
	104	Examination Report dated April 11, 2008 from Australian Application No. 2002331407
	105	First Office Action dated March 10, 2006 for Chinese Patent Application No. 02825059.1
	106	Supplemental Search Report dated December 1, 2006 for European Patent Application No. 02766922.5
	107	Examination Report dated November 15, 2010 for European Patent Application No. 02766922.5
	108	Examination Report dated February 17, 2010 for European Patent Application No. 02766922.5
	109	Examination Report dated October 17, 2007 for European Patent Application No. 02766922.5
	110	Examination Report dated May 22, 2007 for European Patent Application No. 02766922.5

Examiner:	Date Considered:

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP §609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

LIST OF CITED REFERENCES FOR INFORMATION DISCLOSURE STATEMENT BY APPLICANT			Attorney Reference: 011844-0029-999		
			Applicant: Kevin W. Dinn		
			Application Serial No. 16/539,501		
			Filing Date: August 13, 2019		
Date: May 26, 2021		Page 5 of 6	Examiner: Son T. Hoang		Group Art Unit: 2169

U.S. PATENT DOCUMENTS

Examiner's Initials*	Cite No.	Document Number	Date (MM-YY)	Name of Patentee/Applicant	Class	SubClass
	111	7,669,111	02-10	Krause et al.		
	112	5,299,125	03-94	Baker et al.		
	113	7,616,191	11-09	Matta		
	114	7,487,147	02-09	Bates et al.		
	115	5,128,672	07-92	Kaehler		

FOREIGN PATENT DOCUMENTS

Examiner's Initials*	Cite No.	Document Number	Date (MM-YY)	Country	English Translation		English Abstract	
					Attached	Not Available	Attached	Not Available

OTHER RELEVANT NON-PATENT DOCUMENTS

	116	Supplemental Search Report dated February 19, 2007 for European Patent Application No. 02766922.5
	117	Supplemental Search Report dated March 2, 2011 for European Patent Application No. 08714345
	118	First Office Action dated February 12, 2010 for Chinese Patent Application No. 200710153468.4
	119	Examination Report dated June 22, 2011 for Australian Patent Application No. 2010200095
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	121	Examination Report dated April 12, 2011 for New Zealand Patent Application No. 566172
	122	First Office Action dated June 26, 2009 for Chinese Patent Application No. 2006800364961
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	126	"An Efficient Text Input Method for Pen-based Computers" by Toshiyuki Masui, Sony Computer Science Laboratory Inc., Shinagawa, Tokyo, Japan. In: Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI'98), April 1998. Retrieved from the Internet: http://www.pitecan.com/papers/CHI98/CHI98.pdf
	127	Various Website Screanshots for WayBackMachine for n-e-ware.com and related websites; Various Dates.
	128	"The Use of Syntax in Word Completion Utilities" by Afsaneh Fazly, Graduate Department of Computer Science, University of Toronto, 2002, Retrieved from the Internet: http://www.cs.toronto.edu/pub/gh/Fazly-thesis.pdf
	129	KeyStick Text Entry System for Series 60 Mobile Phones Version 2.8.0; 2003.
	130	International Search Report dated January 15, 2002 from International Patent Application No. PCT/AU2002/001467.

Examiner:	Date Considered:

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP §609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

LIST OF CITED REFERENCES FOR INFORMATION DISCLOSURE STATEMENT BY APPLICANT			Attorney Reference: 011844-0029-999		
			Applicant: Kevin W. Dinn		
			Application Serial No. 16/539,501		
			Filing Date: August 13, 2019		
Date: May 26, 2021		Page 6 of 6	Examiner: Son T. Hoang		Group Art Unit: 2169

U.S. PATENT DOCUMENTS

Examiner's Initials*	Cite No.	Document Number	Date (MM-YY)	Name of Patentee/Applicant	Class	SubClass
	131	7,836,044	11-10	Kamvar et al.		
	132	2004/0163032	08-04	Guo et al.		
	133	2002/0151327	10-02	Levitt		
	134	5,953,541	09-99	King et al.		
	135	2002/0087979	07-02	Dudkiewicz et al.		
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	137	2006/0265208	11-06	Assadollahi		
	138	2006/0293889	12-06	Kiss et al.		
	139	2009/0192786	07-09	Assadollahi		
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	141	5,867,799	02-99	Lang		
	142	5,983,214	11-99	Lang		

FOREIGN PATENT DOCUMENTS

Examiner's Initials*	Cite No.	Document Number	Date (MM-YY)	Country	English Translation		English Abstract	
					Attached	Not Available	Attached	Not Available
	143	WO 02/39244	05-02	International				
	144	WO 03/077102	09-03	International				
	145	WO 2004/017188	02-04	International				
	146	WO 2008/080192	07-08	International				
	147	WO 2008/106729	09-08	International				
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	150	Office Action dated September 27, 2011 for Japanese Application No. 2008-525341 with English Translation.
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	152	Ali K., Van Stam, W., TiVo: Making Show Recommendations Using A Distributed Collaborative Filtering Architecture, pages 294-401, KDD 2004, Seattle, WA 2004.

Examiner:	Date Considered:

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP §609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

Electronic Patent Application Fee Transmittal

Application Number:	16539501
Filing Date:	13-Aug-2019
Title of Invention:	Process and Apparatus for Selecting an Item From a Database
First Named Inventor/Applicant Name:	Kevin W. Dinn
Filer:	Vishal Vincent Khatri/Kristi Hutchison
Attorney Docket Number:	011844-0029-999

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	1806	1	260	260
		Total in USD ($)		**260**

Electronic Acknowledgement Receipt

EFS ID:	42827144
Application Number:	16539501
International Application Number:	
Confirmation Number:	1802
Title of Invention:	Process and Apparatus for Selecting an Item From a Database
First Named Inventor/Applicant Name:	Kevin W. Dinn
Customer Number:	20583
Filer:	Vishal Vincent Khatri/Kristi Hutchison
Filer Authorized By:	Vishal Vincent Khatri
Attorney Docket Number:	011844-0029-999
Receipt Date:	26-MAY-2021
Filing Date:	13-AUG-2019
Time Stamp:	15:08:35
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$260
RAM confirmation Number	E20215PF08591457
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	16539501_IDS.pdf	141247 6dd43725e38c8f6d929b060685c66e6b5e925cb6	no	3
Warnings:					
Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	16539501_ListofRefs.pdf	220951 647a0ff073e2f6849c05ade43ad0506933ede6a2	no	6
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Fee Worksheet (SB06)	fee-info.pdf	30929 324d66767541ee71bb49aefb1c102d61a8ddd233	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	393127		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Number	:	16/539,501	Confirmation No.: 1802
Applicant	:	Kevin Dinn	
Filed	:	August 13, 2019	
Tech Cntr/AU	:	2169	
Examiner	:	Son T. Hoang	
Entitled	:	IMPROVED PROCESS AND APPARATUS FOR SELECTING AN ITEM FROM A DATABASE	
Attorney Reference	:	011844-0029-999	
Customer Number	:	20583	

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.97

Pursuant to 37 CFR §1.97 and 1.56, the attention of the U.S. Patent and Trademark Office is hereby directed to the following disclosures made herein, which include:

REFERENCES AND RELEVANCY

☐ Applicant(s) wish(es) to make of record the documents listed on the attached List of Cited References. Copies of the listed documents are attached, where required, as are any readily available full or partial English translations of any non-English language documents.

☒ Applicant(s) wish(es) to make of record the documents listed on the attached List of Cited References. The references cited herein were cited for consideration in the parent application, and, pursuant to 37 CFR 1.98(d), copies of the cited references can be found in the file of the parent application (*U.S. Serial No. 15/232,511, filed December 5, 2017).*

☐ Applicant(s) wish(es) to make of record the documents listed on the attached List of Cited References. The references cited herein were cited in the International Search Report issued for the corresponding International application, and copies of the International Search Report and the cited references are attached for the Examiner's consideration.

☐ Applicant(s) wish(es) to make of record the documents listed on the attached List of Cited References. The references cited herein were cited in a communication from a foreign or international patent office in a counterpart foreign or international application(s), and copies of both the relevant communication and the cited references, where required, are attached for the Examiner's consideration.

CERTIFICATION

The undersigned certifies that, pursuant to 37 CFR §1.97(e)(1),

☐ each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign or international patent office in a counterpart foreign or international application not more than three months prior to the filing of this Statement.

RELATED CASES

☐ Identified in the attached Appendix are related applications directed to related technical subject matter. Copies of the related applications, where required, are attached for the Examiner's consideration. *The identification of the related U.S. patent applications is not to be construed as a waiver of secrecy for those applications, now or upon issuance of the present application as a patent.*

BASIS FOR CONSIDERATION

This Information Disclosure Statement is filed:

☐ within three months of the filing date of the application and/or before the mailing date of a first Official Action on the merits, and no fee is required [37 C.F.R. §1.97(b)].

☐ with the appropriate certification, and no fee is required [37 C.F.R. §1.97(e)(1)].

☒ after the mailing date of the first Official Action on the merits, but prior to the issuance of a Final Official Action or a Notice of Allowance, and the requisite fee, if necessary, is authorized herein for payment [37 C.F.R. §1.97(c)].

☐ after the mailing date of the Final Official Action or Notice of Allowance, but prior to the payment of the issue fee, the requisite certification under 37 CFR §1.97(e)(1) is made herein, and the requisite fee, if necessary, is authorized herein for payment [37 C.F.R. §1.97(d)].

☐ with a Request for Continued Examination (RCE), and no fee is required [37 C.F.R. §1.97(b)(4)].

FEE AUTHORIZATION

☒ Authorization is hereby given to charge any deficient fee(s) under 37 CFR §1.16 and §1.17 as necessary to ensure the consideration of this disclosure, or to credit any fee overpayments, to Deposit Account No. 503-013.

☒ Authorization is hereby given to charge the requisite fee of **$260** (Fee Code 1806) for submission of this Information Disclosure Statement to Deposit Account No. 503-013.

It is respectfully requested that this information be expressly considered during the prosecution of this application, and that the reference(s) be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

The Examiner is further respectfully requested to return of a copy of the enclosed List of Cited References with the Examiner's initials in the left column.

The examination and allowance of this Application is respectfully requested.

Respectfully Submitted,

JONES DAY

By: /Vishal V. Khatri/
Vishal V. Khatri
Registration No. 51,873

Intellectual Property Group
51 Louisiana Avenue, N.W.
Washington, D.C. 20001-2113
(202) 879-3939 Telephone
(202) 626-1700 Facsimile

Date: May 26, 2021

Attachment(s): List of Cited References and copies as required

Doc Code: DIST.E.FILE Document Description: Electronic Terminal Disclaimer - Filed	PTO/SB/25 PTO/SB/26 U.S. Patent and Trademark Office Department of Commerce

Electronic Petition Request	**TERMINAL DISCLAIMER TO OBVIATE A PROVISIONAL DOUBLE PATENTING REJECTION OVER A PENDING "REFERENCE" APPLICATION AND TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT**
Application Number	16539501
Filing Date	13-Aug-2019
First Named Inventor	Kevin Dinn
Attorney Docket Number	011844-0029-999
Title of Invention	Process and Apparatus for Selecting an Item From a Database

☒ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action

☒ This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.

Owner	Percent Interest
KANNUU PTY LTD.	100 %

The owner(s) of percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of any patent granted on pending reference Application Number(s)

16927723 filed on 07/13/2020

as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent granted on the reference application are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term of any patent granted on said reference application, "as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application," in the event that any such patent granted on the pending reference application: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as shortened by any terminal disclaimer filed prior to its grant.

The owner(s) with percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s)

8996579

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9436354

8370393

as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent later:
- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

◉ Terminal disclaimer fee under 37 CFR 1.20(d) is included with Electronic Terminal Disclaimer request.

○ I certify, in accordance with 37 CFR 1.4(d)(4), that the terminal disclaimer fee under 37 CFR 1.20(d) required for this terminal disclaimer has already been paid in the above-identified application.

Applicants claims the following fee status:

○ Small Entity

○ Micro Entity

◉ Regular Undiscounted

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES

I certify, in accordance with 37 CFR 1.4(d)(4) that I am:

- (●) An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application

  Registration Number 51873

- ( ) A sole inventor
- ( ) A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application
- ( ) A joint inventor; all of whom are signing this request

Signature	/Vishal V Khatri/
Name	Vishal V Khatri

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Electronic Patent Application Fee Transmittal

Application Number:	16539501
Filing Date:	13-Aug-2019
Title of Invention:	Process and Apparatus for Selecting an Item From a Database
First Named Inventor/Applicant Name:	Kevin W. Dinn
Filer:	Vishal Vincent Khatri/Kristi Hutchison
Attorney Docket Number:	011844-0029-999

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
STATUTORY OR TERMINAL DISCLAIMER	1814	1	170	170
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**170**

Doc Code: DISQ.E.FILE
Document Description: Electronic Terminal Disclaimer – Approved

Application No.: 16539501

Filing Date: 13-Aug-2019

Applicant/Patent under Reexamination: Dinn

Electronic Terminal Disclaimer filed on May 24, 2021

☒ APPROVED

This patent is subject to a terminal disclaimer

☐ DISAPPROVED

Approved/Disapproved by: Electronic Terminal Disclaimer automatically approved by EFS-Web

U.S. Patent and Trademark Office

Electronic Acknowledgement Receipt

EFS ID:	42803291
Application Number:	16539501
International Application Number:	
Confirmation Number:	1802
Title of Invention:	Process and Apparatus for Selecting an Item From a Database
First Named Inventor/Applicant Name:	Kevin W. Dinn
Customer Number:	20583
Filer:	Vishal Vincent Khatri/Kristi Hutchison
Filer Authorized By:	Vishal Vincent Khatri
Attorney Docket Number:	011844-0029-999
Receipt Date:	24-MAY-2021
Filing Date:	13-AUG-2019
Time Stamp:	15:56:55
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$170
RAM confirmation Number	E20215NF56513319
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Terminal Disclaimer-Filed (Electronic)	eTerminal-Disclaimer.pdf	38687 57d7da8b8c270dd5e344f0217538adbbd044b304	no	3
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30762 64c235d1813d294a2f6345b05b0c25a2142ff553	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	69449		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Application Number	:	16/539,501	Conf. No. 1802
Applicant	:	Kevin Dinn	
Filed	:	August 13, 2019	
Tech Cntr/AU	:	2143	
Examiner	:	Hoang, Son T.	
Entitled	:	IMPROVED PROCESS AND APPARATUS FOR SELECTING AN ITEM FROM A DATABASE	
Attorney Reference	:	011844-0029-999	
Customer Number	:	20583	

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

RESPONSE

In response to the Office Action mailed November 25, 2020 for the above-identified application, the following is submitted herewith:

- Amendments to the Claims with a complete claim listing; and
- Remarks.

Amendment to the Abstract:

Please amend the Abstract of the Disclosure as indicated below. A replacement abstract is also attached on a separate sheet, as required.

~~The present invention relates to a~~ A method and apparatus for selecting database items from a database, where the database items are indexed by a list of item identifiers. The item identifiers may be in the form of text. An initial display is generated which includes one or more parts of the item identifiers. Selection of the one or more parts may be made and results in the generation of a display of a further one or more parts for selection. The further one or more parts may be selected in order to add to the selected one or more parts to build a larger part or whole of an item identifier. Selection from a large list of item identifiers may be carried out in a relatively short time period.

Amendments to the Claims:

The following claims will replace all prior versions of the claims in this application (in the unlikely event that no claims follow herein, the previously pending claims will remain):

1-35. (Cancelled)

36. (Previously Presented) A system for selecting items from a database, the system comprising:

an output display;

an input device; and

a computer processor configured to:

associate the items from the database with corresponding item identifiers;

generate a first display on the output display including one or more parts of an item identifier for selection;

enable the selection of the one or more parts;

in response to the selection of the one or more parts of item identifiers, generate a display of a further one or more parts of item identifiers for selection, wherein the further one of more parts of item identifiers being arranged on the display relative to one another and corresponding to an up, down, left and right position;

enable selection of the further one or more parts of item identifiers in order to add to the selected one or more parts to build a larger part or whole of a particular item identifier; and

select one of the further one or more parts of item identifiers in response to a single activation of a corresponding up, down, left, or right key;

wherein the selected one or more parts of item identifiers and the further one or more parts of item identifiers are shorter than a complete word; and

wherein selection of the further one or more parts of item identifiers is enabled by a key press corresponding to the relative arrangement of the further one or more parts of item identifiers on the display.

37. (Previously Presented) The system of claim 36, wherein the output display is a display of a television and the input device is a remote control.

38. (Previously Presented) The system of claim 36, wherein the processor is further configured to enable selection of the one or more parts of item identifiers and the further one or more parts of item identifiers by way of a remote control keypad.

39. (Previously Presented) The system of claim 36, wherein the further one of more parts is selected for display based at least in part on a ranking scheme, and the highest ranked of the further one or more parts of item identifiers is positioned in one of the up, down, left and right positions.

40. (Previously Presented) The system of claim 39, wherein the highest ranked of the further one or more parts of item identifiers being positioned in one of the up, down, left and right positions is specifically positioned in a circular menu on the output display indicating the item identifiers to be selected by movements of the user in the directions left, right, up, and down using the remote control keypad.

41. (Previously Presented) The system of claim 37, wherein the item identifiers are pre-processed in order to generate a hierarchical tree, which is stored in a computer accessible memory.

42. (Previously Presented) The system of claim 39, wherein the database of items is indexed based on the item identifiers and capable of being queried.

43. (Currently Amended) The system of claim 39, wherein the number of key presses of the ~~remote control keypad~~ input device to select an item from the database is fewer than the number of key presses required to select an item from a database according to a system that requires an end user to enter one, two, three, or four characters of the item identifier and then scroll through a list of potential items to select the item by additional key presses.

44. (Previously Presented) The system of claim 36, wherein the computer processor is further configured to:

iterate the selection until the particular item identifier is completed, and

enable selection of the particular item identifier to select the database item.

45. (Previously Presented) The system of claim 36, wherein the computer process configured to generate the initial display further includes selecting the one or more parts of item identifiers to be displayed based on at least one predetermined criterion.

46. (Previously Presented) The system of claim 45, wherein the at least one predetermined criterion is selected from the following: a frequency of selection of items associated with the pluralities of portions of the item identifiers, a recency of selection of the items associated with the pluralities of portions of the item identifiers, a likelihood of selection of the items associated with the pluralities of portions of the item identifiers, or a ranking of the pluralities of portions of the item identifiers in relation to a hierarchical classification of the pluralities of portions of the item identifiers.

47. (Previously Presented) The system of claim 36, wherein the computer process configured to generate the initial display further includes displaying a plurality of parts of item identifiers.

48. (Previously Presented) A system for selecting items from a database, the system comprising:

a display of a television;

a remote control comprising an up, down, left, right directional controller; and

a computer processor configured to:

display in a first area of the display of the television, a first plurality of portions of item identifiers, wherein the item identifiers correspond to the plurality of items in the database, and the first plurality of portions of item identifiers is displayed in a position corresponding to the up, down, left, right select directional controller of the remote control;

enable selection of one of the first plurality of portions of the item identifiers by using the up, down, left, or right, select functionality of the directional controller of the remote control;

display the selected portion of the item identifier in a second area of the display of the television, wherein the second area of the display is separate from the first area of the display;

display in response to the selection of the one of the first plurality of the portions of item identifiers and in the first area of the display, a second plurality of portions of the item identifiers, the second plurality of portions of the item identifiers comprising at least two portions of the item identifiers chosen for display based on the selection of the one of the plurality of portions of the item identifiers;

enable selection of one of the second plurality of portions of the item identifiers by using the up, down, left, right, select functionality of the directional controller of the remote control;

combine the portion of the item identifier selected from the second plurality of portions of the item identifiers with the portion of the item identifier selected from the first plurality of portions of the item identifiers to create a larger portion of the item identifier; and

display larger portion of the item identifier in the second area of the display of the television;

wherein the first plurality of portions of item identifiers and the second plurality of portions of item identifiers are orthographic symbols representing at least a writing language;

wherein the at least two portions of item identifiers chosen for display based on the selection of the one of the plurality of portions of item identifiers are chosen to minimize a number of actuations of the directional controller of the remote control that is otherwise necessary to input the item identifier; and

wherein the second plurality of portions of item identifiers comprises four portions of item identifiers.

49. (Previously Presented) The system of claim 48, wherein the enabling of the selection of one of the second plurality of portions of the item identifiers by using the up, down, left, right, select functionality of the remote control is further enabled via a circular menu on the display indicating the item identifiers to be selected.

50. (Previously Presented) The system of claim 48, wherein the computer processor is further configured to select one of the further one or more parts of item identifiers in response to a single activation of a corresponding up, down, left, or right key on the directional controller of the remote control.

51. (Previously Presented) The system of claim 48, wherein the item identifiers are pre-processed in order to generate a hierarchical tree, which is stored in a computer accessible memory on the television.

52. (Previously Presented) The system of claim 48, wherein the database of items is indexed based on the item identifiers and capable of being queried.

53. (Previously Presented) The system of claim 48, wherein the number of key presses of the up, down, left, right directional controller of the remote control to select an item from the database is fewer than the number of key presses required to select an item from a database according to a system that requires and end user to

enter one, two, three, or four characters of the item identifier and then scroll through a list of potential items to select the item by additional key presses.

54. (Previously Presented) The system of claim 48, wherein the selected two portions of item identifiers are chosen based on at least one predetermined criterion selected from the following: a frequency of selection of items associated with the pluralities of portions of the item identifiers, a recency of selection of the items associated with the pluralities of portions of the item identifiers, a likelihood of selection of the items associated with the pluralities of portions of the item identifiers, or a ranking of the pluralities of portions of the item identifiers in relation to a hierarchical classification of the pluralities of portions of the item identifiers.

55. (Previously Presented) A system for selecting items, the system comprising:

an output display of a television;

an directional input device with an up, down, left, right functionality; and

a computer processor contained within the television configured to:

associate the items with a corresponding item identifiers;

generate a first display on the output display, the first display comprises:

a part of an item identifier corresponding to a first set of items and

a part of an item identifier corresponding to a second set of items in a database;

enable selection of one of the two parts of the item identifiers;

generate, in response to the selection of the one of the two parts of item identifiers, a further display on the output display, the further display comprises:

an additional part of an item identifier corresponding to a subset of the selected set of items and

another additional part of an item identifier corresponding to another subset of the selected set of items;

enable selection of one of the two additional parts of the item identifiers;

combine the selected one of the two parts of the item identifiers with the selected one of the two additional parts of the item identifiers to create a larger part of the item identifiers; and

display the larger part of the item identifiers on the output display, wherein

the additional parts of the item identifiers are shorter than complete item identifiers; and

the first set of items and the second set of items are mutually exclusive of one another;

wherein the up, down, left, right, select functionality of the remote control keypad enables the selection of portions of item identifiers specifically positioned in a circular menu on the display.

REMARKS

Claims 36-55 are pending. Claim 43 has been amended. Reconsideration and allowance of the present application based on the following remarks are respectfully requested

In the Abstract

The Abstract of the Disclosure was objected to for containing a minor informality. Applicant has amended the Abstract of the Disclosure to correct the informality identified by the Examiner. Accordingly, Applicant respectfully requests withdrawal of this objection.

Claim Rejections Under 35 U.S.C. § 112

Claim 43 was rejected under 35 U.S.C. § 112. In view of the amendment to claim 43 presented herein, Applicant respectfully requests reconsideration and withdrawal of this rejection.

Double Patenting Rejections

Claims 36-55 were rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-22 of each of U.S. Patent Nos. 8,140,560, 8,375,058, 8,676,852, 8,996,579, claims 1-16 of US Patent No. 8,370,393, claims 1-14 of U.S. Patent No. 9,436,354, claims 1-14 of U.S. Patent No. 9,836,489, claims 1-18 of U.S. Patent No. 9,697,264, and claims 27-39 of U.S. Application No. 16/927,723. While Applicant does not necessarily agree with the Office's characterization of the similarities/differences between the instant claims and the claims in the identified applications and patents, Applicant submits herewith terminal disclaimers over U.S. Patent Nos. 8,140,560, 8,375,058, 8,676,852, 8,996,579, 8,370,393, 9,436,354, 9,836,489, and 9,697,264, and U.S. Application No. 16/927,723. Accordingly, Applicant respectfully requests withdrawal of this rejection.

Claim Rejections Under 35 U.S.C. §§ 102 and 103

Claims 36-40 and 42-47 were rejected under 35 U.S.C. § 102 over Perlman et al (U.S. Publication No. 2002/0113825); claim 41 was rejected under 35 U.S.C. § 103 over Perlman in view of Dostie et al. (U.S. Publication No. 2004/0021691); claims 48-50 and 52-54 were rejected under 35 U.S.C. § 103 over Perlman in view of Kraft et al. (U.S. Publication No. 2003/0095102); and claim 51 was rejected under 35 U.S.C. § 103 over Perlman in view of Kraft and further in view of Dostie. Applicant respectfully traverses these rejections at least because the cited prior art fails to disclose or obviate the subject matter of claims 36-54.

Independent claims 36 and 48 require no more than four options on the input device itself that can be used to select the portions of item identifiers. In contrast, Perlman does not disclose this limitation because, Perlman only discloses a user interface with more than four different options when there are more than four potential characters for selection. Correspondingly, Perlman discloses an input directional controller (specifically, a remote control) that provides a single button for each of the more than four potential selection options. For example, in Figures 1 and 2, Perlman describes a GUI with character-mapped buttons 110 in a "star" configuration that includes as many 7 character choices and 7 corresponding buttons on the remote control. The only other configuration that is expressly disclosed is one with as many as 9 character choices, such as using a mobile telephone keypad.

More generally, Perlman chose to implement a predictive keyboard that emphasizes flexibility, rather than simplicity, by providing the user with as many as seven options to select a character. This implementation is not a surprising choice, because when there are many potential words in a database that may be selected, the predictive keyboard needs to present enough character selection choices that the user does not have to select the "more" choices button too often. If too few choices are offered, then the user will frequently select "more," defeating the purpose of the predictive keyboard.

The additional prior art relied on by the Office does not remedy at least this deficiency of Perlman. Therefore, the prior art of record fails to disclose or obviate the subject matter of claims 36-54.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of these rejections.

Allowable Subject Matter

Applicant appreciates the Office's indication that claim 55 contains allowable subject matter and would be allowable if the outstanding double patenting rejections were addressed. However, in view of the foregoing, Applicant respectfully submits that all of the pending claims (claims 36-55) are in condition for allowance.

Conclusion

In view of the foregoing, the claims are now believed to be in form for allowance, and such action is hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, he is kindly requested to contact the undersigned at the telephone number listed below.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,

By: /Vishal V. Khatri/
Vishal V. Khatri
Registration No. 51,873
Direct No. (202) 879-3607

Intellectual Property Group
51 Louisiana Avenue, N.W.
Washington, D.C. 20001
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(202) 626-1700 Facsimile

Date: May 24, 2021

ABSTRACT OF THE DISCLOSURE

A method and apparatus for selecting database items from a database, where the database items are indexed by a list of item identifiers. The item identifiers may be in the form of text. An initial display is generated which includes one or more parts of the item identifiers. Selection of the one or more parts may be made and results in the generation of a display of a further one or more parts for selection. The further one or more parts may be selected in order to add to the selected one or more parts to build a larger part or whole of an item identifier. Selection from a large list of item identifiers may be carried out in a relatively short time period.

Electronic Patent Application Fee Transmittal

Application Number:	16539501
Filing Date:	13-Aug-2019
Title of Invention:	Process and Apparatus for Selecting an Item From a Database
First Named Inventor/Applicant Name:	Kevin W. Dinn
Filer:	Vishal Vincent Khatri/Kristi Hutchison
Attorney Docket Number:	011844-0029-999

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 3 months with $0 paid	1253	1	1480	1480
Miscellaneous:				
			Total in USD ($)	**1480**

Electronic Acknowledgement Receipt

EFS ID:	42803537
Application Number:	16539501
International Application Number:	
Confirmation Number:	1802
Title of Invention:	Process and Apparatus for Selecting an Item From a Database
First Named Inventor/Applicant Name:	Kevin W. Dinn
Customer Number:	20583
Filer:	Vishal Vincent Khatri/Kristi Hutchison
Filer Authorized By:	Vishal Vincent Khatri
Attorney Docket Number:	011844-0029-999
Receipt Date:	24-MAY-2021
Filing Date:	13-AUG-2019
Time Stamp:	16:03:32
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$1480
RAM confirmation Number	E20215NG03503483
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	16539501_Transmittal.pdf	142678 638f7a1b4b206c89cb2ca9a1670699672b51d108	no	2
Warnings:					
Information:					
2	Extension of Time	16539501_EOT.pdf	165741 9e7e374b2a95785deaaa4b317366261cf9437a50	no	2
Warnings:					
Information:					
3		16539501_Response.pdf	190020 cfb386ab7db022fc07bdccf468ad22d0c3086906	yes	13

Multipart Description/PDF files in .zip description

Document Description	Start	End
Amendment/Req. Reconsideration-After Non-Final Reject	1	1
Abstract	2	2
Claims	3	9
Applicant Arguments/Remarks Made in an Amendment	10	12
Abstract	13	13

Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	30669 0f5aca622cdf24b50792f72754f9c4a8c6913b3b	no	2
Warnings:					
Information:					

Total Files Size (in bytes):	529108

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Application Number	:	16/539,501	Conf. No. 1802
Applicant	:	Kevin Dinn	
Filed	:	August 13, 2019	
Tech Cntr/AU	:	2143	
Examiner	:	Hoang, Son T.	
Entitled	:	IMPROVED PROCESS AND APPARATUS FOR SELECTING AN ITEM FROM A DATABASE	
Attorney Reference	:	011844-0029-999	
Customer Number	:	20583	

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

AMENDMENT/RESPONSE TRANSMITTAL

Transmitted herewith is an amendment/response for this application.

EXTENSION OF TIME

A petition for extension of time under 37 C.F.R. §1.136 for 3 months (PTO/SB/22) is attached.

CLAIM FEES

The claim fees have been calculated as follows:

	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NO. PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE		ADDITIONAL FEE
Total	20	–	20	=	0	x $	100.00	=	$ 0.00
Independent	3	–	3	=	0	x $	480.00	=	$ 0.00
	FIRST PRESENTATION OF MULTIPLE DEP. CLAIM					+ $	860.00	=	$ 0.00
	TOTAL ADDITIONAL CLAIM FEE DUE								**$ 0.00**

ADDITIONAL FEES AND PAPERS

Applicants also submit herewith the following fees and/or papers:

Terminal Disclaimers with statutory disclaimer fee (Fee Code 1814) $ 170.00

FEE PAYMENT

Authorization is given to charge the fees totaling **$170.00 (Fee Code 1814)** as itemized herein, as well as the attached extension of time fee of **$1480.00 (Fee Code 1253)**, and to charge any deficiencies in the fees, and/or to further credit any overpayments, to Deposit Account No. 503-013 to maintain the pendency of this application.

Respectfully Submitted,

JONES DAY

Date: May 24, 2021

By: /Vishal V. Khatri/
Vishal V. Khatri
Registration No. 51,873

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PTO/AIA/22 (10-20)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)

Docket Number (Optional): 011844-0024-999

Application Number: 16/539,501

Filed: August 13, 2019

For: IMPROVED PROCESS AND APPARATUS FOR SELECTING AN ITEM FROM A DATABASE

Art Unit: 2143

Examiner: Hoang, Son T.

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

	Fee	Small Entity Fee	Micro Entity Fee	
☐ One month (37 CFR 1.17(a)(1))	$220	$110	$55	$
☐ Two months (37 CFR 1.17(a)(2))	$640	$320	$160	$
☑ Three months (37 CFR 1.17(a)(3))	$1,480	$740	$370	$ 1480.00
☐ Four months (37 CFR 1.17(a)(4))	$2,320	$1,160	$580	$
☐ Five months (37 CFR 1.17(a)(5))	$3,160	$1,580	$790	$

☐ Applicant asserts small entity status. See 37 CFR 1.27.

☐ Applicant certifies micro entity status. See 37 CFR 1.29.
Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.

☐ A check in the amount of the fee is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director has already been authorized to charge fees in this application to a Deposit Account.

☑ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 503-013.

☑ Payment made via EFS-Web.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

I am the

☐ applicant.

☑ attorney or agent of record. Registration number 51,873.

☐ attorney or agent acting under 37 CFR 1.34. Registration number _____.

/Vishal V. Khatri/ — Signature

May 24, 2021 — Date

Vishal V. Khatri — Typed or printed name

202-879-3607 — Telephone Number

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.

☐ * Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.136(a). The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 16/539,501	Filing Date 08/13/2019	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $100 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $460 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	05/24/2021	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0		x $100 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0		x $480 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/KIM R WATSON/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/539,501	08/13/2019	Kevin W. Dinn	011844-0029-999	1802

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New York, NY 10281-1047

EXAMINER	
HOANG, SON T	

ART UNIT	PAPER NUMBER
2169	

NOTIFICATION DATE	DELIVERY MODE
11/25/2020	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

japarker@jonesday.com
ncgeorge@jonesday.com
wtokmakidis@jonesday.com

Office Action Summary	Application No. 16/539,501	Applicant(s) Dinn, Kevin W.	
	Examiner SON T HOANG	Art Unit 2169	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 21 May 2020.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 36-55 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 36-55 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☑ The drawing(s) filed on 13 August 2019 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☑ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☑ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☑ Certified copies of the priority documents have been received in Application No. 11/990,338.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☑ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

Status

2. This instant application, No. 15/791,992, has **claims 36-55** pending based on the preliminary amendment filed on May 21, 2020.

Priority / Filing Date

3. Applicant's claims for priority of parent applications No. 11/990,338 (now Pat. No. US 8140560), No. 13/349,204 (now Pat. No. US 8375058), No. 13/736,548 (now Pat. No. US 8676852), No. 14/166,465 (now Pat. No. 8996579), No. 14/627,914 (now Pat. No. 9436354), No. 15/232,511 (now Pat. No. 9836489), No. 15/791,992 (now Pat. No. US 9836489), and No. 16/226,109 (now abandoned) which all claim foreign priority of Australia 2005904378 (filed on August 12, 2005) are acknowledged. The earliest effective filing date for this instant application is August 12, 2005.

Abstract

4. The abstract of the disclosure is objected due to the use of implied language. Note that in the abstract, the language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied,

such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc... See MPEP § 608.01(b).

Note that in the abstract, Applicant cites "*The present invention relates to method and apparatus for selecting database items from a database...*" on lines 1-2. This citation clearly provokes the use of implied language (the use of "*The present invention relates*" and repeat of the title). Revision and/or correction are required.

Drawings

5. The drawings filed on August 13, 2019 are accepted for examination purposes.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of pre-AIA 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. **Claim 43** is rejected under pre-AIA 35 U.S.C. 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter regarded as the invention.

Regarding **claim 43**, the claim recites "*the number of key presses of the remote control keypad*" of **claim 39** whereas there is so "*remote control keypad*" previously mentioned in **claim 39** or **claim 36**. Thus, it is not clear whether the remote control keypad refers to the input device of **claim 36** or a new different element.

Notes

7. **Claim 36** recites a system, comprising at least a computer processor, for selecting items from a database. Thus, the claim is directed to machine per 35 U.S.C. 101. The claim is then taken, as a whole, in view of the disclosure and the claims (i.e., generating a first display, and enabling selections of one or more parts associated with the first display by key press) to exclude methods implemented in a human mind or with the help of pen and paper (Step 2A of the "*abstract idea*" analysis). Thus, **claim 36** and its dependent claims qualify as eligible subject matters under 35 U.S.C. 101.

Claim 48 recites a system, comprising at least a computer processor, for selecting items from a database. Thus, the claim is directed to machine per 35 U.S.C. 101. The claim is then taken, as a whole, in view of the disclosure and the claims (i.e., displaying items in different display areas of a television, and enabling selections of one or more portions of items identifiers associated with the display area by a remote control) to exclude methods implemented in a human mind or with the help of pen and paper (Step 2A of the "*abstract idea*" analysis). Thus, **claim 48** and its dependent claims qualify as eligible subject matters under 35 U.S.C. 101.

Claim 55 recites a system, comprising at least a computer processor, for selecting items from a database. Thus, the claim is directed to machine per 35 U.S.C. 101. The claim is then taken, as a whole, in view of the disclosure and the claims (i.e., generating a first display, and enabling selections of one or more parts associated with the first display by key press) to exclude methods implemented in a human mind or with the help of pen and paper (Step 2A of the "*abstract idea*" analysis). Thus, **claim 55** qualifies as eligible subject matters under 35 U.S.C. 101.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the claims at issue are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the reference application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP §§ 706.02(l)(1) - 706.02(l)(3) for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/forms/. The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to http://www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

8. **Claims 36-55** are rejected on the ground of nonstatutory double patenting over **claims 1-22** of each of US Patent No. 8140560, 8375058, 8676852, 8996579, **claims 1-16** of Pat. No. US 8370393, **claims 1-14** of Pat. No. US 9436354, **claims 1-14** of Pat. No. US 9836489, **claims 1-18** of Pat. No. US 9,697,264, and **claims 27-39** of App. No. 16/927,723.

The subject matter claimed in the instant application is fully disclosed in each of the patents and is covered by the patents since the patents and the application are claiming common subject matter of selecting a database item.

a. **Claims 36-55** of the instant application recite similar limitations and **claims 1-22** of Patent No. 8,140,560 as being compared in the table below. For the purpose of illustration, only **claim 55** of the instant application is compared with other conflicting claims (underlining is used to indicate conflicting limitations).

Instant Application	***Pat. No. US 8,140,560***
Claim 55 A system for selecting items, the system comprising: an output display of a television; an directional input device with an up, down, left, right functionality; and a computer processor contained within the television configured to: associate the items with a corresponding item identifiers; generate a first display on the output display, the first display comprises: a part of an item identifier corresponding to a first set of items and a part of an item identifier corresponding to a second set of items in a database;	**Claim 1** A method of selecting an item from a database containing a plurality of items, the method comprising: associating each of the plurality of items with a corresponding item identifier; generating a first display, the first display comprising: a part of an item identifier for at least a first set of items and a second set of items in the database; and an option to display more parts of item identifiers;

enable selection of one of the two parts of the item identifiers;	enabling selection of one of the at least two parts of the item identifiers by a user;
generate, in response to the selection of the one of the two parts of item identifiers, a further display on the output display, the further display comprises:	generating, in response to the selection of the one of the at least two parts, a further display; the further display comprising:
an additional part of an item identifier corresponding to a subset of the selected set of items and another additional part of an item identifier corresponding to another subset of the selected set of items;	an additional part of an item identifier for at least a third set of items and a fourth set of items; the selected part of the item identifier; and an option to display more additional parts of item identifiers;
enable selection of one of the two additional parts of the item identifiers;	enabling selection of one of the at least two additional parts of the item identifiers by a user;
combine the selected one of the two parts of the item identifiers with the selected one of the two additional parts of the item identifiers to create a larger part of the item identifiers; and	combining the selected part of the item identifier with the selected additional part of the item identifier to create a larger part of the item identifier; and
display the larger part of the item identifiers on the output display, wherein the additional parts of the item identifiers are shorter than complete item identifiers; and	displaying the larger part of the item identifier; wherein the parts of item identifiers and the additional parts of the item identifiers are alphanumeric symbols and the additional parts of the item identifiers are longer than a single

	alphanumeric symbol but shorter than the complete item identifier; and
the first set of items and the second set of items are mutually exclusive of one another;	wherein the first set of items and the second set of items are mutually exclusive and the third set of items and the fourth set of items are mutually exclusive subsets of the first set of items or the second set of items.
wherein the up, down, left, right, select functionality of the remote control keypad enables the selection of portions of item identifiers specifically positioned in a circular menu on the display.	

Although the conflicting claims are not identical, they are not patentably distinct from each other because they are substantially similar in scope and they use the similar limitations to produce the same end result of selecting a database item.

It would have been obvious to a person with ordinary skills in the art at the time of the invention was made to modify **claims 1-22** of '560 with the prior art cited hereon (see mapping below of non-underlined limitations below) to arrive at **claims 36-55** of the instant application for the purpose of enabling predictive input analysis to select most suitable textual candidates for obtaining desired results associated with user inputs.

b. **Claims 36-55** of the instant application recite similar limitations and **claims 1-22** of Patent No. 8,375,058 as being compared in the table below. For the purpose of illustration, only **claim 55** of the instant application is compared with other conflicting claims (underlining is used to indicate conflicting limitations).

Instant Application	*Pat. No. US 8,375,058*
Claim 55	**Claim 1**
A system for selecting items, the system comprising:	A computer-implemented method of selecting an item from a plurality of items, the method comprising:
an output display of a television; an directional input device with an up, down, left, right functionality; and a computer processor contained within the television configured to:	
associate the items with a corresponding item identifiers;	
generate a first display on the output display, the first display comprises: a part of an item identifier corresponding to a first set of items and a part of an item identifier corresponding to a second set of items in a database;	generating, by at least one computer processor, a first display, the first display comprising a part of an item identifier for at least a first set of items and a part of an item identifier for at least a second set of items in a database; and
enable selection of one of the two parts of the item identifiers;	enabling, by the at least one computer processor, selection of one of the two parts of the item identifiers by a user using a directional controller on an input device of a computing device;
generate, in response to the selection of the one of the two parts of item identifiers, a further display on the output display, the further display comprises:	generating, by the at least one computer processor, in response to the selection of the one of the two parts, a further display; the further display comprising:

an additional part of an item identifier corresponding to a subset of the selected set of items and another additional part of an item identifier corresponding to another subset of the selected set of items;	an additional part of an item identifier for at least a third set of items and an additional part of an item identifier for at least a fourth set of items; and the selected part of the item identifier;
enable selection of one of the two additional parts of the item identifiers;	enabling, by the at least one computer processor, selection of one of the at least two additional parts of the item identifiers by the user using the directional controller of the input device;
combine the selected one of the two parts of the item identifiers with the selected one of the two additional parts of the item identifiers to create a larger part of the item identifiers; and	combining, by the at least one computer processor, the selected part of the item identifiers with the selected additional part of the item identifiers to create a larger part of the item identifiers; and
display the larger part of the item identifiers on the output display, wherein the additional parts of the item identifiers are shorter than complete item identifiers; and	displaying, by the at least one computer processor, the larger part of the item identifiers; wherein the parts of item identifiers and the additional parts of the item identifiers are alphanumeric symbols and the additional parts of the item identifiers are longer than a single alphanumeric symbol but shorter than complete item identifier; and
the first set of items and the second set of items are mutually exclusive of one another;	wherein the first set of items and the second set of items are mutually exclusive of one another and

	the third set of items and the fourth set of items are mutually exclusive subsets of the first set of items or the second set of items.
wherein the up, down, left, right, select functionality of the remote control keypad enables the selection of portions of item identifiers specifically positioned in a circular menu on the display.	

Although the conflicting claims are not identical, they are not patentably distinct from each other because they are substantially similar in scope and they use the similar limitations to produce the same end result of selecting a database item.

It would have been obvious to a person with ordinary skills in the art at the time of the invention was made to modify **claims 1-22** of '058 with the prior art cited hereon (see mapping below of non-underlined limitations below) to arrive at **claims 36-55** of the instant application for the purpose of enabling predictive input analysis to select most suitable textual candidates for obtaining desired results associated with user inputs.

c. **Claims 36-55** of the instant application recite similar limitations and **claims 1-22** of Patent No. 8,676,852 as being compared in the table below. For the purpose of illustration, only **claim 55** of the instant application is compared with other conflicting claims (underlining is used to indicate conflicting limitations).

Instant Application	*Pat. No. US 8,676,852*
Claim 55	**Claim 1**
A system for selecting items, the system comprising:	A computer-implemented method of selecting an item from a plurality of items, the method comprising:
an output display of a television; an directional input device with an up, down, left, right functionality; and a computer processor contained within the television configured to:	
associate the items with a corresponding item identifiers;	
generate a first display on the output display, the first display comprises: a part of an item identifier corresponding to a first set of items and a part of an item identifier corresponding to a second set of items in a database;	generating, by at least one computer processor, a first display, the first display comprises: a part of an item identifier for at least a first set of items and a part of an item identifier for at least a second set of items in a database;
enable selection of one of the two parts of the item identifiers;	enabling, by the at least one computer processor, selection of one of the two parts of the item identifiers by a user using a user interface;
generate, in response to the selection of the one of the two parts of item identifiers, a further display on the output display, the further display comprises:	generating, by the at least one computer processor, in response to the selection of the one of the two parts, a further display; wherein the further display comprises:

an additional part of an item identifier corresponding to a subset of the selected set of items and another additional part of an item identifier corresponding to another subset of the selected set of items;	an additional part of an item identifier for at least a third set of items and an additional part of an item identifier for at least a fourth set of items; and the previously selected one of the two parts of the item identifiers;
enable selection of one of the two additional parts of the item identifiers;	enabling, by the at least one computer processor, selection of one of the two additional parts of the item identifiers by the user using the user interface;
combine the selected one of the two parts of the item identifiers with the selected one of the two additional parts of the item identifiers to create a larger part of the item identifiers; and	combining, by the at least one computer processor, the selected one of the two parts of the item identifiers with the selected one of the two additional parts of the item identifiers to create a larger part of the item identifiers; and
display the larger part of the item identifiers on the output display, wherein the additional parts of the item identifiers are shorter than complete item identifiers; and	displaying, by the at least one computer processor, the larger part of the item identifiers; wherein the parts of the item identifiers and the additional parts of the item identifiers are text symbols and the additional parts of the item identifiers are shorter than complete item identifiers; and
the first set of items and the second set of items are mutually exclusive of one another;	the first set of items identifiers and the second set of item identifiers are mutually exclusive of one another and the third set of item identifiers and

	the fourth set of item identifiers are mutually exclusive subsets of the first set of item identifiers or the second set of item identifiers.
wherein the up, down, left, right, select functionality of the remote control keypad enables the selection of portions of item identifiers specifically positioned in a circular menu on the display.	

Although the conflicting claims are not identical, they are not patentably distinct from each other because they are substantially similar in scope and they use the similar limitations to produce the same end result of selecting a database item.

It would have been obvious to a person with ordinary skills in the art at the time of the invention was made to modify **claims 1-22** of '852 with the prior art cited hereon (see mapping below of non-underlined limitations below) to arrive at **claims 36-55** of the instant application for the purpose of enabling predictive input analysis to select most suitable textual candidates for obtaining desired results associated with user inputs.

d. **Claims 36-55** of the instant application recite similar limitations and **claims 1-22** of Patent No. 8,996,579 as being compared in the table below. For the purpose of illustration, only **claim 55** of the instant application is compared with other conflicting claims (underlining is used to indicate conflicting limitations).

Instant Application	*Pat. No. US 8,996,579*
Claim 55	**Claim 1**
A system for selecting items, the system comprising:	A computer-implemented method of selecting an item from a plurality of items, the method comprising:
an output display of a television; an directional input device with an up, down, left, right functionality; and a computer processor contained within the television configured to:	
associate the items with a corresponding item identifiers;	
generate a first display on the output display, the first display comprises: a part of an item identifier corresponding to a first set of items and a part of an item identifier corresponding to a second set of items in a database;	generating, by at least one computer processor, a first display, the first display comprises: a part of an item identifier corresponding to a first set of items and a part of an item identifier corresponding to a second set of items in a database;
enable selection of one of the two parts of the item identifiers;	enabling, by the at least one computer processor, selection of one of the two parts of the item identifiers by a user using a user interface;
generate, in response to the selection of the one of the two parts of item identifiers, a further	generating, by the at least one computer processor, in response to the selection of the one

display on the output display, the further display comprises:	of the two parts, a further display; wherein the further display comprises:
an additional part of an item identifier corresponding to a subset of the selected set of items and another additional part of an item identifier corresponding to another subset of the selected set of items;	an additional part of an item identifier corresponding to a subset of the selected set of items and another additional part of an item identifier corresponding to another subset of the selected set of items;
enable selection of one of the two additional parts of the item identifiers;	enabling, by the at least one computer processor, selection of one of the two additional parts of the item identifiers by the user using the user interface;
combine the selected one of the two parts of the item identifiers with the selected one of the two additional parts of the item identifiers to create a larger part of the item identifiers; and	combining, by the at least one computer processor, the selected one of the two parts of the item identifiers with the selected one of the two additional parts of the item identifiers to create a larger part of the item identifiers; and
display the larger part of the item identifiers on the output display, wherein the additional parts of the item identifiers are shorter than complete item identifiers; and	displaying, by the at least one computer processor, the larger part of the item identifiers;
the first set of items and the second set of items are mutually exclusive of one another;	wherein the additional parts of the item identifiers are shorter than complete item identifiers; and the

wherein the up, down, left, right, select functionality of the remote control keypad enables the selection of portions of item identifiers specifically positioned in a circular menu on the display.	first set of items and the second set of items are mutually exclusive of one another.

Although the conflicting claims are not identical, they are not patentably distinct from each other because they are substantially similar in scope and they use the similar limitations to produce the same end result of selecting a database item.

It would have been obvious to a person with ordinary skills in the art at the time of the invention was made to modify **claims 1-22** of '579 with the prior art cited hereon (see mapping below of non-underlined limitations below) to arrive at **claims 36-55** of the instant application for the purpose of enabling predictive input analysis to select most suitable textual candidates for obtaining desired results associated with user inputs.

e. **Claims 36-55** of the instant application recite similar limitations and **claims 1-16** of Patent No. 8,370,393 as being compared in the table below. For the purpose of illustration, only **claim 48** of the instant application is compared with other conflicting claims (underlining is used to indicate conflicting limitations).

Instant Application	***Pat. No. US 8,370,393***
Claim 48 A system for selecting items from a database, the system comprising: a display of a television;	**Claim 1** A computer-implemented method of selecting an item from a plurality of items, the method comprising:

a remote control comprising an up, down, left, right directional controller; and a computer processor configured to:	
display in a first area of the display of the television, a first plurality of portions of item identifiers, wherein the item identifiers correspond to the plurality of items in the database, and the first plurality of portions of item identifiers is displayed in a position corresponding to the up, down, left, right select directional controller of the remote control;	displaying, by at least one computer processor, in a first area of a display of a device, a first plurality of portions of item identifiers, wherein the item identifiers correspond to the plurality of items in a database, and the first plurality of portions of item identifiers is displayed in a position corresponding to an up, down, left right select functionality of an input directional controller of the device;
enable selection of one of the first plurality of portions of the item identifiers by using the up, down, left, or right, select functionality of the directional controller of the remote control; display the selected portion of the item identifier in a second area of the display of the television, wherein the second area of the display is separate from the first area of the display;	enabling, by the at least one computer processor, selection of one of the first plurality of portions of the item identifiers by using the up, down, left, right, select functionality of the directional controller on the input device;
display in response to the selection of the one of the first plurality of the portions of item identifiers and in the first area of the display, a second plurality of portions of the item identifiers, the second plurality of portions of the item identifiers	displaying, by the at least one computer processor, the selected portion of the item identifier in a second area of the display of the device, wherein the second area of the display is separate from the first area of the display;

comprising at least two portions of the item identifiers chosen for display based on the selection of the one of the plurality of portions of the item identifiers;	displaying, by the at least one computer processor, in response to the selection of the one of the first plurality of the portions of item identifiers and in the first area of the display, a second plurality of portions of the item identifiers, the second plurality of portions of the item identifiers comprising at least two portions of the item identifiers chosen for display based on the selection of the one of the plurality of portions of the item identifiers;
enable selection of one of the second plurality of portions of the item identifiers by using the up, down, left, right, select functionality of the directional controller of the remote control;	enabling, by the at least one computer processor, selection of one of the second plurality of portions of the item identifiers by using the up, down, left, right, select functionality of the input directional controller on the input device;
combine the portion of the item identifier selected from the second plurality of portions of the item identifiers with the portion of the item identifier selected from the first plurality of portions of the item identifiers to create a larger portion of the item identifier; and	combining by a computer processor, the portion of the item identifier selected from the second plurality of portions of the item identifiers with the portion of the item identifier selected from the first plurality of portions of the item identifiers to create a larger portion of the item identifier; and
display larger portion of the item identifier in the second area of the display of the television;	displaying by a computer processor, the larger portion of the item identifier in the second area of the display of the device;

wherein the first plurality of portions of item identifiers and the second plurality of portions of item identifiers are orthographic symbols representing at least a writing language; wherein the at least two portions of item identifiers chosen for display based on the selection of the one of the plurality of portions of item identifiers are chosen to minimize a number of actuations of the directional controller of the remote control that is otherwise necessary to input the item identifier; and wherein the second plurality of portions of item identifiers comprises four portions of item identifiers.	wherein the first plurality of portions of item identifiers and the second plurality of portions of item identifiers are orthographic symbols representing at least a writing language; and wherein the at least two portions of item identifiers chosen for display based on the selection of the one of the plurality of portions of item identifiers are chosen to minimize a number of actuations of the input directional controller that is otherwise necessary to input the item identifier.

Although the conflicting claims are not identical, they are not patentably distinct from each other because they are substantially similar in scope and they use the similar limitations to produce the same end result of selecting a database item.

It would have been obvious to a person with ordinary skills in the art at the time of the invention was made to modify **claims 1-16** of '393 with the prior art cited hereon (see mapping below of non-underlined limitations below) to arrive at **claims 36-55** of the instant application for the purpose of enabling predictive input analysis to select most suitable textual candidates for obtaining desired results associated with user inputs.

f. **Claims 36-55** of the instant application recite similar limitations and **claims 1-14** of Patent No. 9,436,354 as being compared in the table below. For the purpose of illustration, only **claims 36** and **39** of the instant application are compared with other conflicting claims (underlining is used to indicate conflicting limitations).

Instant Application	***Pat. No. US 9,436,354***
Claim 36 A system for selecting items from a database, the system comprising: an output display; an input device; and a computer processor configured to: associate the items from the database with corresponding item identifiers; generate a first display on the output display including one or more parts of an item identifier for selection; enable the selection of the one or more parts; in response to the selection of the one or more parts of item identifiers, generate a display of a further one or more parts of item identifiers for selection, wherein the further one of more parts of item identifiers being arranged on the display relative to one another and corresponding to an up, down, left and right position;	**Claim 1** A method of selecting database items from a database, the database items being indexed by a list of item identifiers, the method comprising: generating an initial display including one or more parts of item identifiers for selection by a user; enabling the selection, by the user, of the one or more parts; in response to the selection of the one or more parts of item identifiers, generating a display of a further one or more parts of item identifiers for selection, the further one of more parts being selected for display based at least in part on a ranking scheme wherein the further one of more parts of item identifiers being arranged on the

	display relative to one another and corresponding to at least an up, down, left or right position, and the highest ranked of the further one or more parts of item identifiers being positioned in one of the up, down, left and right positions; and
enable selection of the further one or more parts of item identifiers in order to add to the selected one or more parts to build a larger part or whole of a particular item identifier; and	enabling selection, by the user, of the further one or more parts of item identifiers in order to add to the selected one or more parts to build a larger part or whole of a particular item identifier;
select one of the further one or more parts of item identifiers in response to a single activation of a corresponding up, down, left, or right key;	
wherein the selected one or more parts of item identifiers and the further one or more parts of item identifiers are shorter than a complete word; and	wherein the selected one or more parts of item identifiers and the further one or more parts of item identifiers are shorter than a complete word; and
wherein selection of the further one or more parts of item identifiers is enabled by a key press corresponding to the relative arrangement of the further one or more parts of item identifiers on the display.	wherein selection of the further one or more parts of item identifiers is enabled by a key press corresponding to the relative arrangement of the further one or more parts of item identifiers on the display.

Claim 39 The system of claim 36, wherein the further one of more parts is selected for display based at least in part on a ranking scheme, and the highest ranked of the further one or more parts of item identifiers is positioned in one of the up, down, left and right positions.	

Although the conflicting claims are not identical, they are not patentably distinct from each other because they are substantially similar in scope and they use the similar limitations to produce the same end result of selecting a database item.

It would have been obvious to a person with ordinary skills in the art at the time of the invention was made to modify **claims 1-14** of '354 with the prior art cited hereon (see mapping below of non-underlined limitations below) to arrive at **claims 36-55** of the instant application for the purpose of enabling predictive input analysis to select most suitable textual candidates for obtaining desired results associated with user inputs.

g. **Claims 36-55** of the instant application recite similar limitations and **claims 1-14** of Patent No. 9,836,489 as being compared in the table below. For the purpose of illustration, only **claims 36** and **39** of the instant application are compared with other conflicting claims (underlining is used to indicate conflicting limitations).

Instant Application	***Pat. No. US 9,836,489***
Claim 36 A system for selecting items from a database, the system comprising: an output display; an input device; and a computer processor configured to:	**Claim 1** A system for selecting database items from a database, the database items being indexed by a list of item identifiers, the system comprising: a

associate the items from the database with corresponding item identifiers;	hardware processor, a memory, coupled to the hardware processor, having stored thereon instructions which when executed by the hardware processor, cause the hardware processor to implement the following steps of:
generate a first display on the output display including one or more parts of an item identifier for selection;	generating an initial display including one or more parts of item identifiers for selection by a user;
enable the selection of the one or more parts;	receiving the selection from the user of the one or more parts;
in response to the selection of the one or more parts of item identifiers, generate a display of a further one or more parts of item identifiers for selection, wherein the further one of more parts of item identifiers being arranged on the display relative to one another and corresponding to an up, down, left and right position;	generating a display of further one or more parts of item identifiers for selection in response to the selection of the one or more parts of item identifiers, wherein: the further one or more parts of item identifiers being selected for display based at least in part on a ranking scheme, the further one of more parts of item identifiers being arranged on the display relative to one another and corresponding to at least an up, down, left or right position, and the highest ranked of the further one or more parts of item identifiers being positioned in one of the up, down, left, and right positions; and

enable selection of the further one or more parts of item identifiers in order to add to the selected one or more parts to build a larger part or whole of a particular item identifier; and	receiving the selection from the user, of the further one or more parts of item identifiers in order to add to the selected one or more parts to build a larger part or whole of a particular item identifier;
select one of the further one or more parts of item identifiers in response to a single activation of a corresponding up, down, left, or right key;	
wherein the selected one or more parts of item identifiers and the further one or more parts of item identifiers are shorter than a complete word; and	wherein the selected one or more parts of item identifiers and the selected further one or more parts of item identifiers are shorter than a complete word; and
wherein selection of the further one or more parts of item identifiers is enabled by a key press corresponding to the relative arrangement of the further one or more parts of item identifiers on the display.	wherein selection of the further one or more parts of item identifiers is enabled by a key press corresponding to the relative arrangement of the further one or more parts of item identifiers on the display.
Claim 39 The system of claim 36, wherein the further one of more parts is selected for display based at least in part on a ranking scheme, and the highest ranked of the further one or more parts of item identifiers is positioned in one of the up, down, left and right positions.	

Although the conflicting claims are not identical, they are not patentably distinct from each other because they are substantially similar in scope and they use the similar limitations to produce the same end result of selecting a database item.

It would have been obvious to a person with ordinary skills in the art at the time of the invention was made to modify **claims 1-14** of '489 with the prior art cited hereon (see mapping below of non-underlined limitations below) to arrive at **claims 36-55** of the instant application for the purpose of enabling predictive input analysis to select most suitable textual candidates for obtaining desired results associated with user inputs.

h. **Claims 36-55** of the instant application recite similar limitations and **claims 1-18** of Patent No. 9,697,264 as being compared in the table below. For the purpose of illustration, only **claim 36** of the instant application is compared with other conflicting claims (underlining is used to indicate conflicting limitations).

Instant Application	***Pat. No. US 9,697,264***
Claim 36 A system for selecting items from a database, the system comprising: an output display; an input device; and a computer processor configured to: associate the items from the database with corresponding item identifiers; generate a first display on the output display including one or more parts of an item identifier for selection;	**Claim 1** A method of selecting items from at least two collections of items, said at least two collections of items being individually indexed by a list of respective item identifiers, the method comprising: generating, on a device, an initial display including a plurality of parts of said item identifiers for selection, wherein said plurality of parts of said item identifiers include at least one part of an item

	identifier corresponding to a first collection of items and at least one part of an item identifier corresponding to a second collection of items;
enable the selection of the one or more parts;	enabling selection of one of said plurality of parts of said item identifiers;
	identifying, based at least in part on the part of the item identifier selected, which of the at least two collections of items the selected part of the item identifier corresponds to;
in response to the selection of the one or more parts of item identifiers, generate a display of a further one or more parts of item identifiers for selection, wherein the further one of more parts of item identifiers being arranged on the display relative to one another and corresponding to an up, down, left and right position;	generating, on said device, a display of a further plurality of parts of said item identifiers for selection in response to selection of said one of said plurality of parts of said item identifiers, wherein said further plurality of parts of item identifiers include at least one further part of said item identifiers corresponding to the one or more collections of items identified based on the selection of said one of said plurality of parts of said item identifiers; and
enable selection of the further one or more parts of item identifiers in order to add to the selected one or more parts to build a larger part or whole of a particular item identifier; and	enabling selection of one of said further plurality of parts of said item identifiers in order to add to said selected one of said plurality of parts of said item identifiers to build a larger part or whole of said selected item identifier;

select one of the further one or more parts of item identifiers in response to a single activation of a corresponding up, down, left, or right key; wherein the selected one or more parts of item identifiers and the further one or more parts of item identifiers are shorter than a complete word; and wherein selection of the further one or more parts of item identifiers is enabled by a key press corresponding to the relative arrangement of the further one or more parts of item identifiers on the display.	wherein generating said initial display comprises selecting said one or more parts of said item identifiers to be displayed based on a dynamic prioritization scheme that adjusts priorities of said item identifiers based on the number of times a particular item identifier from said list of item identifiers was previously selected.

Although the conflicting claims are not identical, they are not patentably distinct from each other because they are substantially similar in scope and they use the similar limitations to produce the same end result of selecting a database item.

It would have been obvious to a person with ordinary skills in the art at the time of the invention was made to modify **claims 1-14** of ‘489 with the prior art cited hereon (see mapping below of non-underlined limitations below) to arrive at **claims 36-55** of the instant application for the purpose of enabling predictive input analysis to select most suitable textual candidates for obtaining desired results associated with user inputs.

i. **Claims 36-55** of the instant application recite similar limitations and **claims 27-39** of '723 as being compared in the table below. For the purpose of illustration, only **claim 36** of the instant application is compared with other conflicting claims (underlining is used to indicate conflicting limitations).

Instant Application	***App. No. US 16/927,723***
Claim 36	**Claim 27**
A system for selecting items from a database, the system comprising: an output display; an input device; and a computer processor configured to:	A system for selecting items associated with corresponding item identifiers from a plurality of items, the system comprising: a television display; a remote control device comprising a 4-way directional controller; and a computer processor configured to:
associate the items from the database with corresponding item identifiers;	
generate a first display on the output display including one or more parts of an item identifier for selection;	generate, on the television display, a first display of an on-screen keyboard including one or more parts of an item identifier for selection;
enable the selection of the one or more parts;	enable the selection of the one or more parts by utilizing the 4-way directional controller;
in response to the selection of the one or more parts of item identifiers, generate a display of a further one or more parts of item identifiers for	in response to the selection of the one or more parts of item identifiers, generate a display of a further one or more parts of item identifiers for

selection, wherein the further one of more parts of item identifiers being arranged on the display relative to one another and corresponding to an up, down, left and right position;	selection, wherein the further one of more parts of item identifiers are arranged on the display relative to one another and corresponding to an up, down, left and right position;
enable selection of the further one or more parts of item identifiers in order to add to the selected one or more parts to build a larger part or whole of a particular item identifier; and	enable selection of the further one or more parts of item identifiers in order to add to the selected one or more parts to build a larger part or whole of a particular item identifier; and
select one of the further one or more parts of item identifiers in response to a single activation of a corresponding up, down, left, or right key;	select one of the further one or more parts of item identifiers in response to an activation of a corresponding up, down, left, or right key to navigate to the one of the further one or more parts of item identifiers and activation of a central key on the 4-way directional controller to select the one of the further one or more parts of item identifiers;
wherein the selected one or more parts of item identifiers and the further one or more parts of item identifiers are shorter than a complete word; and	wherein the selected one or more parts of item identifiers and the further one or more parts of item identifiers are shorter than a complete word; and
wherein selection of the further one or more parts of item identifiers is enabled by a key press corresponding to the relative arrangement of the	wherein navigation to the further one or more parts of item identifiers is enabled by a key press corresponding to the relative arrangement of the

further one or more parts of item identifiers on the display.	further one or more parts of item identifiers on the display.

Although the conflicting claims are not identical, they are not patentably distinct from each other because they are substantially similar in scope and they use the similar limitations to produce the same end result of selecting a database item.

It would have been obvious to a person with ordinary skills in the art at the time of the invention was made to modify **claims 27-39** of '723 with the prior art cited hereon (see mapping below of non-underlined limitations) to arrive at **claims 36-55** of the instant application for the purpose of enabling predictive input analysis to select most suitable textual candidates for obtaining desired results associated with user inputs.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. **Claims 36-40**, and **42-47** are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Perlman et al. (*Pub. No. US 2002/0113825, published on August 22, 2002; hereinafter Perlman*).

Regarding **claim 36**, Perlman clearly shows and discloses a system for selecting items from a database, the system comprising: an output display; an input device; and a computer processor (*Figures 1-6*) configured to:

associate the items from the database with corresponding item identifiers (*a database list 120 is displayed for the user on the television/computer display 105. In the illustrated embodiment, the database list is a list of available multimedia content*, [0017], [0023]-[0027]);

generate a first display on the output display including one or more parts of an item identifier for selection (*Initially (i.e., before the user has selected a character), the alphanumeric characters mapped to the character-mapped buttons 101, 110 correspond to the most common first letters of words in the database list 120*, [0017], [0023]-[0027]);

enable the selection of the one or more parts (*Once the user selects a first character*, [0017], [0023]-[0027]);

in response to the selection of the one or more parts of item identifiers, generate a display of a further one or more parts of item identifiers for selection (*Once the user selects a first character, a new set of characters are mapped to the character-mapped buttons 101, 110 which correspond to the most common second letters of words in the database list 120 which begin with the first-selected character*, [0017], [0023]-[0027]), wherein the further one of more parts of item identifiers being arranged on the display relative to one another and corresponding to an up, down, left and right position (*Figures 2-6 show the suggested letters arranged in up, down, left, right positions of the remote control*;

enable selection of the further one or more parts of item identifiers in order to add to the selected one or more parts to build a larger part or whole of a particular item identifier (*Figure 4 shows a whole identifier is being built from one or more identifying letters*); and

select one of the further one or more parts of item identifiers in response to a single activation of a corresponding up, down, left, or right key (*As the user selects letters via the displayed character-mapped buttons 110, the user's letter selections will appear in a text box 130*, [0017], [0023]-[0027])*;*

wherein the selected one or more parts of item identifiers and the further one or more parts of item identifiers are shorter than a complete word (*Figures 2-6 show each entered character and corresponding suggested characters are less than a complete word*)*;* and

wherein selection of the further one or more parts of item identifiers is enabled by a key press corresponding to the relative arrangement of the further one or more parts of item identifiers on the display (*Figures 2-6 shows each suggested character are selectable using a corresponding button respective to its position*)*.*

Regarding **claim 37**, Perlman then discloses the output display is a display of a television and the input device is a remote control (*as illustrated in FIGS. 1a through 1c, a group of directional and functional buttons 101 arranged in a "star" pattern are configured on the remote control device 100, and a corresponding set of buttons 110 are displayed on the television/computer display 105. In the embodiment illustrated in FIG. 1a, all nine of the buttons 101 are character-mapped buttons, each having a different alphanumeric character mapped thereto. In addition, the remote control device*

100 includes a "more" button 107 for mapping a new set of characters to the character-mapped buttons 101, [0014]).

Regarding **claim 38**, Perlman further discloses enabling selection of the one or more parts of item identifiers and the further one or more parts of item identifiers by way of a remote control keypad (*As the user selects letters via the displayed character-mapped buttons 110, the user's letter selections will appear in a text box 130, and the database list 120 will change to reflect the user's selections*, [0014]-[0019]).

Regarding **claim 39**, Perlman then discloses the further one of more parts is selected for display based at least in part on a ranking scheme, and the highest ranked of the further one or more parts of item identifiers is positioned in one of the up, down, left and right positions (*Once the user selects a first character, a new set of characters are mapped to the character-mapped buttons 101, 110 which correspond to the most common second letters of words in the database list 120 which begin with the first-selected character*, [0017], [0023]-[0027]).

Regarding **claim 40**, Perlman further discloses the highest ranked of the further one or more parts of item identifiers being positioned in one of the up, down, left and right positions is specifically positioned in a circular menu on the output display indicating the item identifiers to be selected by movements of the user in the directions left, right, up, and down using the remote control keypad (*Once the user selects a first character, a new set of characters are mapped to the character-mapped buttons 101, 110 which correspond to the most common second letters of words in the database list 120 which begin with the first-selected character*, [0017], [0023]-[0027]. *Figures 2-6*

show most likely characters are displayed in up, down, left, right positions representing as a circular menu).

Regarding **claim 42**, Perlman further discloses the database of items is indexed based on the item identifiers and capable of being queried (*a database list 120 is displayed for the user on the television/computer display 105. In the illustrated embodiment, the database list is a list of available multimedia content*, [0017], [0023]-[0027]. *Figure 7 shows a database search based on the entered characters*).

Regarding **claim 43**, Perlman further discloses the number of key presses of the remote control keypad to select an item from the database is fewer than the number of key presses required to select an item from a database according to a system that requires an end user to enter one, two, three, or four characters of the item identifier and then scroll through a list of potential items to select the item by additional key presses (*the user will be able to enter relatively complex groups of words with only a few keystrokes*, [0034]. *It is clear that the predictive character set would enable the controller to actuate less key presses than a system with a known system of scrolling through a list of matches*).

Regarding **claim 44**, Perlman further discloses iterating the selection until the particular item identifier is completed (*the user may press a remote control button 101 with a mapped character as indicated on the graphical user interface (i.e., rather than initially choosing the "select" button 102). The selected character will then be typed/displayed in the text box 130, and the new character mappings will change to the most common second letters of entries that have the first letter that was typed*, [0023]), and enabling selection of the particular item identifier to select the database item (*If the*

user presses "select" at this stage, the first entry in the list ("Ace of Base") will be highlighted, the star will disappear, and the user may use the up/down buttons to navigate through the remaining entries in the list, [0025]).

Regarding **claim 45**, Perlman further discloses generating the initial display further includes selecting the one or more parts of item identifiers to be displayed based on at least one predetermined criterion (*Initially (i.e., before the user has selected a character), the alphanumeric characters mapped to the character-mapped buttons 101, 110 correspond to the most common first letters of words in the database list 120*, [0017], [0023]-[0027]).

Regarding **claim 46**, Perlman further discloses the at least one predetermined criterion is selected from the following: a frequency of selection of items associated with the pluralities of portions of the item identifiers, a recency of selection of the items associated with the pluralities of portions of the item identifiers, a likelihood of selection of the items associated with the pluralities of portions of the item identifiers, or a ranking of the pluralities of portions of the item identifiers in relation to a hierarchical classification of the pluralities of portions of the item identifiers (*Initially (i.e., before the user has selected a character), the alphanumeric characters mapped to the character-mapped buttons 101, 110 correspond to the most common first letters of words in the database list 120*, [0017], [0023]-[0027]. *If a user plays back a particular multimedia program more frequently than any other program, the characters corresponding to that program may be displayed, notwithstanding the fact that they are relatively uncommon (i.e., relative to other characters in the database)*, [0019]).

Regarding **claim 47**, Perlman further discloses generating the initial display further includes displaying a plurality of parts of item identifiers (*Initially (i.e., before the user has selected a character), the alphanumeric characters mapped to the character-mapped buttons 101, 110 correspond to the most common first letters of words in the database list 120*, [0017], [0023]-[0027]).

Claim Rejections - 35 USC § 103

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. **Claim 41** is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Perlman and further in view of Dostie et al. (*Pub. No. US 2004/0021691, published on February 5, 2004; hereinafter Dostie*).

Regarding **claim 41**, Dostie then discloses the item identifiers are pre-processed in order to generate a hierarchical tree, which is stored in a computer accessible memory (*Referring to FIG. 4, the dictionary 20 in the first embodiment is organized in a tree structure 21 containing a plurality of nodes. Completion candidates are stored in nodes 23 within the tree structure 21. (The tree structure 21 is also referred to in this specification as a candidate tree 21.) Preferably, the dictionary 20 is organized as a B-tree. Alternatively, the tree structure 21 may take other forms and may be static.*

Characters making up a completion candidate are stored in separate nodes within the tree structure 21. A completion candidate is represented by a number of nodes, with each node pointing to a child node containing the next character in the completion candidate, [0085], [0088]-[0089]).

It would have been obvious to an ordinary person skilled in the art at the time of the invention was made to incorporate the teachings of Dostie with the teachings of Perlman for the purpose of rapidly entering and searching for data based on hierarchical structure associated with the data and predictive text analysis to obtain completion of text input candidates.

11. **Claims 48-50**, and **52-54** are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Perlman in view of Kraft et al. (*Pub. No. US 2003/0095102, published on May 22, 2003; hereinafter Kraft*).

Regarding **claim 48**, Perlman clearly shows and discloses a system for selecting items from a database, the system comprising:

a display of a television; a remote control comprising an up, down, left, right directional controller; and a computer processor (*Figures 1-6*) configured to:

display in a first area of the display of the television, a first plurality of portions of item identifiers (*Initially (i.e., before the user has selected a character), the alphanumeric characters mapped to the character-mapped buttons 101, 110 correspond to the most common first letters of words in the database list 120*, [0017], [0023]-[0027]), wherein the item identifiers correspond to the plurality of items in the database (*a database list 120 is displayed for the user on the television/computer*

display 105. In the illustrated embodiment, the database list is a list of available multimedia content, [0017], [0023]-[0027]), and the first plurality of portions of item identifiers is displayed in a position corresponding to the up, down, left, right select directional controller of the remote control (*As the user selects letters via the displayed character-mapped buttons 110, the user's letter selections will appear in a text box 130*, [0017], [0023]-[0027]. *Figures 2-6 show the suggested letters arranged in up, down, left, right positions of the remote control*);

enable selection of one of the first plurality of portions of the item identifiers by using the up, down, left, or right, select functionality of the directional controller of the remote control (*Figures 3-6 show as the user selects letters via the displayed character-mapped buttons 110, the user's letter selections will appear in a text box 130*, [0017], [0023]-[0027]);

display the selected portion of the item identifier in a second area of the display of the television, wherein the second area of the display is separate from the first area of the display (*Figures 3-6 show area 120 displaying selected characters, wherein the area 120 is separate from area displaying the buttons*);

display in response to the selection of the one of the first plurality of the portions of item identifiers and in the first area of the display, a second plurality of portions of the item identifiers, the second plurality of portions of the item identifiers comprising at least two portions of the item identifiers chosen for display based on the selection of the one of the plurality of portions of the item identifiers (*Once the user selects a first character, a new set of characters are mapped to the character-mapped buttons 101, 110 which*

correspond to the most common second letters of words in the database list 120 which begin with the first-selected character, [0017], [0023]-[0027]);

enable selection of one of the second plurality of portions of the item identifiers by using the up, down, left, right, select functionality of the directional controller of the remote control (*Figures 3-6 show as the user selects letters via the displayed character-mapped buttons 110, the user's letter selections will appear in a text box 130*, [0017], [0023]-[0027]);

combine the portion of the item identifier selected from the second plurality of portions of the item identifiers with the portion of the item identifier selected from the first plurality of portions of the item identifiers to create a larger portion of the item identifier (*Figure 3 shows B is selected. Figure 4 shows A is selected and combined with B. Figure 5 shows N is selected and combined with BA*); and

display larger portion of the item identifier in the second area of the display of the television (*Figure 5 shows BAN is displayed as a result of combining B+A+N*);

wherein the first plurality of portions of item identifiers and the second plurality of portions of item identifiers are orthographic symbols representing at least a writing language (*Figures 3-6 show suggested and selected letters corresponding to B+A+N+G of a writing language*);

wherein the at least two portions of item identifiers chosen for display based on the selection of the one of the plurality of portions of item identifiers are chosen to minimize a number of actuations of the directional controller of the remote control that is otherwise necessary to input the item identifier (*Figure 5 shows at least D, A, G are predicted to minimize full inputs of "Bananarama" or "The Band" or "Bangles*); and

wherein the second plurality of portions of item identifiers comprises four portions of item identifiers (*Figure 5 shows only 3 characters predicted to complete "BAN" but it is well clear that if a plurality of items with long names (e.g., 30 characters) are stored in the database, at least 4 or more predicted characters similarly shows in Figure 5*).

Kraft **alternatively** discloses wherein the second plurality of portions of item identifiers comprises four portions of item identifiers (*with reference to FIG. 8, the user can use a predictive editor for finding a name stored in the phonebook 45 with all the names (first and last names) in the phone book used as dictionary for the predictive editor. Only five key-presses (or less) may do finding e.g. all people starting with "Brian"*, [0042]).

It would have been obvious to an ordinary person skilled in the art at the time of the invention was made to incorporate the teachings of Kraft with the teachings of Perlman for the purpose of enabling predictive input analysis to complete characters of a predetermined word with minimal number of actuations to enter the characters.

Regarding **claim 49**, Perlman further discloses the enabling of the selection of one of the second plurality of portions of the item identifiers by using the up, down, left, right, select functionality of the remote control is further enabled via a circular menu on the display indicating the item identifiers to be selected (*Once the user selects a first character, a new set of characters are mapped to the character-mapped buttons 101, 110 which correspond to the most common second letters of words in the database list 120 which begin with the first-selected character*, [0017], [0023]-[0027]. *Figures 2-6 show most likely characters are displayed in up, down, left, right positions representing as a circular menu*).

Regarding **claim 50**, Perlman further discloses selecting one of the further one or more parts of item identifiers in response to a single activation of a corresponding up, down, left, or right key on the directional controller of the remote control (*As the user selects letters via the displayed character-mapped buttons 110, the user's letter selections will appear in a text box 130*, [0017], [0023]-[0027]).

Regarding **claim 52**, Perlman further discloses the database of items is indexed based on the item identifiers and capable of being queried (*a database list 120 is displayed for the user on the television/computer display 105. In the illustrated embodiment, the database list is a list of available multimedia content*, [0017], [0023]-[0027]. *Figure 7 shows a database search based on the entered characters*).

Regarding **claim 53**, Perlman further discloses the number of key presses of the up, down, left, right directional controller of the remote control to select an item from the database is fewer than the number of key presses required to select an item from a database according to a system that requires and end user to enter one, two, three, or four characters of the item identifier and then scroll through a list of potential items to select the item by additional key presses (*the user will be able to enter relatively complex groups of words with only a few keystrokes*, [0034]. *It is clear that the predictive character set would enable the controller to actuate less key presses than a system with a known system of scrolling through a list of matches*).

Regarding **claim 54**, Perlman further discloses the selected two portions of item identifiers are chosen based on at least one predetermined criterion selected from the following: a frequency of selection of items associated with the pluralities of portions of the item identifiers, a recency of selection of the items associated with the pluralities of

portions of the item identifiers, a likelihood of selection of the items associated with the pluralities of portions of the item identifiers, or a ranking of the pluralities of portions of the item identifiers in relation to a hierarchical classification of the pluralities of portions of the item identifiers (*Initially (i.e., before the user has selected a character), the alphanumeric characters mapped to the character-mapped buttons 101, 110 correspond to the most common first letters of words in the database list 120*, [0017], [0023]-[0027]. *If a user plays back a particular multimedia program more frequently than any other program, the characters corresponding to that program may be displayed, notwithstanding the fact that they are relatively uncommon (i.e., relative to other characters in the database)*, [0019]).

12. **Claim 51** is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Perlman in view of Kraft and further in view of Dostie.

Regarding **claim 51**, Dostie then discloses the item identifiers are pre- processed in order to generate a hierarchical tree, which is stored in a computer accessible memory on the television (*Referring to FIG. 4, the dictionary 20 in the first embodiment is organized in a tree structure 21 containing a plurality of nodes. Completion candidates are stored in nodes 23 within the tree structure 21. (The tree structure 21 is also referred to in this specification as a candidate tree 21.) Preferably, the dictionary 20 is organized as a B-tree. Alternatively, the tree structure 21 may take other forms and may be static. Characters making up a completion candidate are stored in separate nodes within the tree structure 21. A completion candidate is represented by a number*

of nodes, with each node pointing to a child node containing the next character in the completion candidate, [0085], [0088]-[0089]).

It would have been obvious to an ordinary person skilled in the art at the time of the invention was made to incorporate the teachings of Dostie with the teachings of Perlman, as modified by Kraft, for the purpose of rapidly entering and searching for data based on hierarchical structure associated with the data and predictive text analysis to obtain completion of text input candidates.

Allowable Subject Matter

13. **Claim 55** is allowable over the prior art. Note that the double patenting issue needs to be resolved before **claim 55** can be allowed.

Relevant Prior Art

14. The following references are not used in the above rejections but are deemed relevant to the claims:

Krohn et al. (*Pat. No. US 6,593,913*) teaches selecting a character with a user input device comprising a plurality of buttons. In one preferred embodiment, a first plurality of characters is displayed on a display device in a pattern corresponding to a pattern of a plurality of buttons of a user input device, and a character from the first plurality of characters is selected in response to actuation of one of the plurality of buttons. The number of characters displayed on the display device for selection by the user input device is less than or equal to the number of buttons in the plurality of buttons. In this way, any of the characters displayed on the display device for selection

by the user input device can be selected by actuation of a single one of the plurality of buttons.

Pu et al. (*Pat. No. US 7,152,213*) teaches for data input without the use of a standard keyboard wherein input is accepted through a data entry means such as a shuttle control system, a standard telephone keypad, or a speech recognition system. The data that is entered is selected from a predefined list that is presented to a user in an arrangement that statistically reduces the number of keystrokes required for data entry. This presentation is the result of determining the relative frequency of each valid selection in the predefined list and presenting those valid selections with the highest frequency items in a position that minimizes the number keystrokes required for data entry.

Contact Information

15. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Son Hoang whose telephone number is (571) 270-1752. The Examiner can normally be reached on Monday – Friday (7:00 AM – 4:00 PM).

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Usmaan Saeed can be reached on (571) 272-4046. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SON T HOANG/
Primary Examiner, Art Unit 2169
November 20, 2020

Notice of References Cited	Application/Control No. 16/539,501	Applicant(s)/Patent Under Reexamination Dinn, Kevin W.	
	Examiner SON T HOANG	Art Unit 2169	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-20020113825-A1	08-2002	Perlman, Stephen G.	G06F16/2228	1/1
*	B	US-20040021691-A1	02-2004	Dostie, Mark	G06F16/245	707/999.003
*	C	US-20030095102-A1	05-2003	Kraft, Christian	G06F16/2228	1/1
*	D	US-6593913-B1	07-2003	Krohn; David A.	G06F16/26	1/1
*	E	US-7152213-B2	12-2006	Pu; Kent Qing	G06F16/20	1/1
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/539,501	Dinn, Kevin W.
	Examiner	Art Unit
	SON T HOANG	2169

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS										
☐ Claims renumbered in the same order as presented by applicant						☐ CPA		☐ T.D.		☐ R.1.47
CLAIM		DATE								
Final	Original	11/20/2020								
	1	-								
	2	-								
	3	-								
	4	-								
	5	-								
	6	-								
	7	-								
	8	-								
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	34	-								
	35	-								
	36	✓								
	37	✓								
	38	✓								
	39	✓								
	40	✓								
	41	✓								
	42	✓								

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/539,501	Dinn, Kevin W.
	Examiner	**Art Unit**
	SON T HOANG	2169

CLAIM		DATE								
Final	Original	11/20/2020								
	43	✓								
	44	✓								
	45	✓								
	46	✓								
	47	✓								
	48	✓								
	49	✓								
	50	✓								
	51	✓								
	52	✓								
	53	✓								
	54	✓								
	55	✓								

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/539,501	Dinn, Kevin W.
	Examiner	Art Unit
	SON T HOANG	2169

CPC - Searched*		
Symbol	**Date**	**Examiner**
G06F16/00, limited by text search	11/18/2020	SH
G06F16/2228, G06F16/248, G06F16/957, G06F16/24578, limited by text search	11/18/2020	SH

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**
707	999.102, 999.107, limited by text search	11/18/2020	SH
707	791, 802, limited by text search	11/18/2020	SH

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	**Date**	**Examiner**
EAST searched with text	11/18/2020	SH
Inventors and assignee/applicant searched through EAST and PALM	11/18/2020	SH
NPL searched (Google, ACM, Dialog, IP.com, STIC)	11/18/2020	SH
IPR2020-00740 reviewed petition for Inter Partes Review of Pat. No. 8375058	11/19/2020	SH
IPR2020-00739 reviewed petition for Inter Partes Review of Pat. No. 8676852	11/19/2020	SH
IPR2020-00737 reviewed petition for Inter Partes Review of Pat. No. 9436354	11/19/2020	SH

/SON T HOANG/ Primary Examiner, Art Unit 2169	

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/539,501	Dinn, Kevin W.
	Examiner	Art Unit
	SON T HOANG	2169

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**
707	999.102, 999.107, limited by text search	11/18/2020	SH
707	791, 802, limited by text search	11/18/2020	SH
G06F16	00, 2228, 248, 957, 24578, limited by text search	11/18/2020	SH

/SON T HOANG/ Primary Examiner, Art Unit 2169	

Bibliographic Data

Application No: 16/539,501

Foreign Priority claimed: (•) Yes ( ) No

35 USC 119 (a-d) conditions met: [✓] Yes [ ] No [ ] Met After Allowance

Verified and Acknowledged: /SON T HOANG/ [ ]

Examiner's Signature | Initials

Title: Process and Apparatus for Selecting an Item From a Database

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FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
08/13/2019	715	2169	011844-0029-999
RULE			

APPLICANTS

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CONTINUING DATA OK /SH/

This application is a CON of 16226109 12/19/2018ABN

16226109 is a CON of 15791992 10/24/2017ABN

15791992 is a CON of 15232511 08/09/2016 PAT 9836489

15232511 is a CON of 14627914 02/20/2015 PAT 9436354

14627914 is a CON of 14166465 01/28/2014 PAT 8996579

14166465 is a CON of 13736548 01/08/2013 PAT 8676852

13736548 is a CON of 13349204 01/12/2012 PAT 8375058

13349204 is a CON of 11990338 08/26/2009 PAT 8140560

11990338 is a 371 of PCT/AU2006/001151 08/11/2006

FOREIGN APPLICATIONS OK /SH/

AUSTRALIA AU2005904378 08/12/2005

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08/22/2019

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$4,880

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S379	1	"9436354".pn.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2020/11/18 09:37
S380	1	"8140560".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S381	8,761	(707/791 707/802).ccls. 707/791 707/802	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S382	56,365	(707/999.102 707/999.107).ccls. 707/102 707/104.1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S383	583,102	("707" "705" "709" "715").clas.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S384	1	"8140560".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S385	0	on-screen near5 keyboard same (select$3 choos$3 pick$3) near5 contact and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S386	1,947	keyboard same (select$3 choos$3 pick$3) near5 contact and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S387	77	S386 and on-screen	US-PGPUB; USPAT; USOCR;	OR	ON	2020/11/18 09:37

			FPRS; EPO; JPO			
S388	2,109	(select$3 choos$3 pick$3) near5 first near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S389	0	(select$3 choos$3 pick$3) near5 first near2 name same corresponding near2 last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S390	0	(select$3 choos$3 pick$3) near5 first near2 name and corresponding near2 last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S391	660	(select$3 choos$3 pick$3) near5 first near2 name and last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S392	0	(select$3 choos$3 pick$3) near5 first near2 name and last near2 name same (key keyboard button) near2 directional and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S393	0	(select$3 choos$3 pick$3) near5 first near2 name same (key keyboard button) near2 directional and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S394	18	(select$3 choos$3 pick$3) near5 first near2 name and (key keyboard button) near2 directional and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S395	23	(kevin near2 william near2 dinn).inv.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S396	19	(kannuu).asn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37

S397	7	S395 and S396	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S398	2,109	(select$3 choos$3 pick$3) near5 first near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S399	35	S395 S396	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S400	14	S399 and first near2 name	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S401	0	(display$3 present$5) near5 first adj name same on-screen and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S402	301	(display$3 present$5) near5 name same on-screen and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S403	11	11/990338	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S404	1	"20030182274"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S405	0	on-screen near5 contact near2 (name id identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S406	17	on-screen same contact near2 (name id identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR;	OR	ON	2020/11/18 09:37

			FPRS; EPO; JPO			
S407	992	contact near2 (name id identifier) same last near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S408	2	12/468078	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S409	167	combin$5 near5 first adj name same last adj name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S410	34	S409 and (mobile portable) near2 (phone device)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S411	2	"20050193338"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S412	13	first near2 screen near5 last adj name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S413	0	filter$3 near5 last adj (name id identifier) same based near5 first adj (name id identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S414	194	last adj (name id identifier) same based near5 first adj (name id identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S415	78	S414 and (mobile portable) near2 (phone device)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37

S416	43	S415 and address near2 book	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S417	7	S391 and S381	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S418	82	S391 and S382	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S419	456	S391 and S383	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S420	10	S407 and S381	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S421	124	S407 and S382	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S422	666	S407 and S383	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S423	3	S409 and S381	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S424	35	S409 and S382	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S425	127	S409 and S383	US-PGPUB; USPAT; USOCR;	OR	ON	2020/11/18 09:37

			FPRS; EPO; JPO			
S426	0	S387 and S381	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S427	0	S387 and S382	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S428	12	S387 and S383	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S429	143	("20010018351" | "20020049795" | "20020061770" | "20020091690" | "20020151327" | "20020183099" | "20030073414" | "20030078069" | "20030182274" | "20040105714" | "20040163032" | "20040192276" | "20050010605" | "20050188330" | "20050233769" | "20060009861" | "20060031591" | "20060146028" | "20060217953" | "20060221058" | "20060265648" | "20060265668" | "20060294462" | "20070016862" | "20070060114" | "20070089070" | "20070179776" | "20090327888" | "20100010963" | "3937939" | "5109352" | "5126672" | "5263174" | "5299125" | "5496992" | "5633912" | "5724069" | "5754655" | "5787417" | "5797098" | "5894276" | "5896321" | "5901222" | "5911485" | "5953541" | "0539823" | "6009444" | "6011554" | "6032053" | "6047196" | "6055439" | "6150962" | "6223059" | "6247043" | "6264146" | "6311125" | "6377965" | "6580932" | "6744423" | "6748242" | "6792287" | "6826566" | "6955602" | "7185286" | "7293231" | "7443316" | "7487147" | "7543244" | "7616191" | "7669111" | "7681124" | "7716579" | "7793228" | "7836044" | "7886233" | "7921361").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S430	6	S429 and direction$2 near2 (button key)	US-PGPUB; USPAT; USOCR;	OR	ON	2020/11/18 09:37

			FPRS; EPO; JPO			
S431	135	("20010012769" | "20010018351" | "20020049795" | "20020061770" | "20020091690" | "20020151327" | "20020183099" | "20030073414" | "20030078069" | "20030182274" | "20040105714" | "20040163032" | "20040192276" | "20050010605" | "20050188330" | "20050233769" | "20060009861" | "20060031591" | "20060146028" | "20060217953" | "20060221058" | "20060265648" | "20060265668" | "20060294462" | "20070016862" | "20070060114" | "20070089070" | "20070179776" | "20090327888" | "20100010963" | "3937939" | "5128672" | "5263174" | "5299125" | "5398023" | "5496992" | "5633912" | "5724069" | "5754655" | "5787417" | "5797098" | "5894276" | "5896321" | "5901222" | "5911485" | "5953541" | "6009444" | "6011554" | "6032053" | "6047196" | "6055439" | "6150962" | "6223059" | "6247043" | "6264146" | "6311125" | "6377965" | "6580932" | "6744423" | "6748242" | "6792287" | "6826566" | "7185286" | "7443316" | "7487147" | "7543244" | "7616191" | "7669111" | "7793228" | "7836044" | "7886233").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S432	10	13/349204	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S433	242	((keyboard keypad (key adj (board pad))) same (select$3 choos$3 pick$3) near5 contact).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S434	2	("8375058" "8140560").pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S435	2	13/491267	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37

S436	1	"8370393".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S437	8	13/736548	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S438	569,203	g06f17/30 g06f17/30.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S439	138	S391 and S438	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S440	180	S407 and S438	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S441	0	S387 and S438	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S442	24	S409 and S438	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S443	7	14/166465	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S444	1	"8676852".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S445	3	("8140560" "8375058" "8676852").pn.	US-PGPUB; USPAT; USOCR;	OR	ON	2020/11/18 09:37

			FPRS; EPO; JPO			
S446	1	"8370393".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S447	569,226	(G06F17/30 G06F17/30595 G06F17/30705).cpc. (G06F17/30 G06F17/30595 G06F17/30705)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S448	6	S386 and S447	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S449	138	S391 and S447	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S450	241	S398 and S447	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S451	12	S402 and S447	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S452	38	S414 and S447	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S453	6	14/627914	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S454	1	"8996579".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37

S455	1	"8676852".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S456	1	"20030182274"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S457	1	"8370393".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S458	2	13/491267	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S459	488	(suggest$3 recommend$5 predict$3) near5 (next subsequent) near2 (word term) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S460	39	(suggest$3 recommend$5 predict$3) near5 (next subsequent) near2 (word term) same (frequen$4) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S461	89	(suggest$3 recommend$5 predict$3) near5 (word term name) same (frequen$4) same contact and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S462	27	(suggest$3 recommend$5 predict$3) near5 (identifier name) same (frequen$4) same contact and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S463	12	(suggest$3 recommend$5 predict$3) near5 (identifier name) and (frequen$4) same contact near2 list and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S464	0	(suggest$3 recommend$5 predict$3) near5 (family last first) near2 name and (frequen$4) same contact near2 list and	US-PGPUB; USPAT; USOCR;	OR	ON	2020/11/18 09:37

		(@ad<"20050812" @pd<"20050812" @rlad<"20050812")	FPRS; EPO; JPO			
S465	142	(suggest$3 recommend$5 predict$3) near5 (family last first) near2 name and (frequen$4) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S466	8	(suggest$3 recommend$5 predict$3) near5 (family last first) near2 name Same (frequen$4) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S467	0	auto near1 complet$3 same (frequen$4) same contact near2 list and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S468	4	auto near1 complet$3 same (frequen$4) and contact near2 list and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S469	2	selected near2 (last family first) near2 name same (suggest$3 propos$3 recommend$5 predict$3) near2 (last family first) near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S470	0	(directional navigat$3) near2 (key button) same (suggest$3 propos$3 recommend$5 predict$3) near2 (last family first) near2 name and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S471	47	(directional navigat$3) near2 (key button) same (suggest$3 propos$3 recommend$5 predict$3) near2 (name word term) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S472	10	11/131867	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:37
S473	24	(generat$3 creat$3) near5 (initial) near2 (candidate suggested recommended proposed predicted) near5 (word keyword term) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; EPO; JPO	OR	ON	2020/11/18 09:37

S474	29	(generat$3 creat$3) near5 (initial) near2 (candidate suggested recommended proposed predicted) near5 (word keyword term item) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; EPO; JPO	OR	ON	2020/11/18 09:37
S475	5	S474 not S473	US-PGPUB; USPAT; EPO; JPO	OR	ON	2020/11/18 09:37
S476	2	(generat$3 creat$3) near5 (initial) near2 (candidate suggested recommended proposed predicted) near5 (name identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; EPO; JPO	OR	ON	2020/11/18 09:37
S477	1,265	joystick and (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term token) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; EPO; JPO	OR	ON	2020/11/18 09:37
S478	38	joystick same (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term token) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; EPO; JPO	OR	ON	2020/11/18 09:38
S479	1	joystick same (candidate suggested recommended proposed predicted) near5 (name identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; EPO; JPO	OR	ON	2020/11/18 09:38
S480	427	joystick and (candidate suggested recommended proposed predicted) near5 (name identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; EPO; JPO	OR	ON	2020/11/18 09:38
S481	34	joystick and (generat$3 creat$3) near5 (candidate suggested recommended proposed predicted) near5 (name identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; EPO; JPO	OR	ON	2020/11/18 09:38
S482	469	hierarch$4 same (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term token) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; EPO; JPO	OR	ON	2020/11/18 09:38
S483	15	hierarch$4 near5 (rank$3 scor$3) same (candidate suggested recommended proposed predicted) near5 (name identifier keyword word term token) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; EPO; JPO	OR	ON	2020/11/18 09:38

S484	72	("20010012769" | "20010018351" | "20020049795" | "20020061770" | "20020091690" | "20020151327" | "20020183099" | "20030073414" | "20030078069" | "20030182274" | "20040105714" | "20040163032" | "20040192276" | "20050010605" | "20050188330" | "20050233769" | "20060009861" | "20060031591" | "20060146028" | "20060217953" | "20060221058" | "20060265648" | "20060265668" | "20060294462" | "20070016862" | "20070060114" | "20070089070" | "20070179776" | "20090327888" | "20100010963" | "3937939" | "5128672" | "5263174" | "5299125" | "5398023" | "5496992" | "5633912" | "5724069" | "5754655" | "5787417" | "5797098" | "5894276" | "5896321" | "5901222" | "5911485" | "5953541" | "6009444" | "6011554" | "6032053" | "6047196" | "6055439" | "6150962" | "6223059" | "6247043" | "6264146" | "6311125" | "6377965" | "6580932" | "6744423" | "6748242" | "6792287" | "6826566" | "7185286" | "7443316" | "7487147" | "7543244" | "7616191" | "7669111" | "7793228" | "7836044" | "7886233").PN.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2020/11/18 09:38
S485	19	S484 and joystick	US-PGPUB; USPAT; EPO; JPO	OR	ON	2020/11/18 09:38
S486	9	S484 and (first last) near2 name	US-PGPUB; USPAT; EPO; JPO	OR	ON	2020/11/18 09:38
S487	623	(suggested proposed candidate) near2 (character letter) same (keypad keyboard button) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S488	169	S487 and mobile	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S489	27	(suggested proposed candidate) near2 (character letter) same (keypad keyboard button) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38

S490	52	(suggested proposed candidate) near2 (character letter) same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S491	16	S490 and mobile	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S492	50	(suggested proposed candidate) near2 (string word spelling character letter) same (keypad keyboard button joystick) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S493	4	(suggested proposed candidate possible predicted) near2 (string word spelling character letter) same (direction$2 navigat$3) near2 (key pad) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S494	359	(suggested proposed candidate possible predicted) near2 (string spelling character letter) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S495	359	(suggested proposed candidate possible predicted) near2 (string character letter) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S496	132	(suggested proposed candidate possible predicted) near2 (string letter) same mobile and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S497	569,242	(G06F17/30 G06F17/30899 G06F17/30554).cpc. (G06F17/30 G06F17/30899 G06F17/30554)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S498	138	S391 and S497	US-PGPUB; USPAT; EPO; JPO	OR	ON	2020/11/18 09:38
S499	24	S409 and S497	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38

S500	38	S414 and S497	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S501	12	S402 and S497	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S502	5	("20060265208" "20040186819" "20050270270" "20020087979" "20060293889").pn.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2020/11/18 09:38
S503	6	14/627914	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S504	19	(suggested proposed candidate possible predicted) near2 (string character letter) same directional near2 (button key) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S505	125	(suggested proposed candidate possible predicted) near2 (string character letter) same (arrang$4 position$3) near5 center and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S506	9	S505 and up same down same left same right	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S507	133	(suggested proposed candidate possible predicted) near2 (string character letter) same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S508	180	(suggested proposed candidate possible predicted) near2 (word token string character letter) same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S509	68	(suggested proposed candidate predicted) near2 (word token string character letter) same up same down same left same right and	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38

		(@ad<"20050812" @pd<"20050812" @rlad<"20050812")				
S510	9	pinyin same up same down same left same right and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S511	65	(suggest$3 propos$3 candidate predict$3) near2 (word string character letter) same (directional navigat$3) near2 (button keypad key) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S512	2	"20060265208"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S513	10	11/131867	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S514	569,268	(G06F17/30 G06F17/30595 G06F17/30705 G06F17/30899 G06F17/30554 G06F17/30321).cpc. (G06F17/30 G06F17/30595 G06F17/30705 G06F17/30899 G06F17/30554 G06F17/30321)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S515	12	S514 and S461	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S516	24	S514 and S409	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S517	13	S514 and S487	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S518	180	S407 and S514	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38

S519	1	"9436354".pn.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2020/11/18 09:38
S520	2,355	up same down same left same right.clm. and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S521	3	S520 and $2complet$3 near2 (word item).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S522	63	up same down same left same right same $2complet$3 near2 (word term phrase item identifier) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S523	6	("8140560" "8375058" "8996579" "9436354" "8370393" "8876852").pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 09:38
S524	1	"8876852".pn.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2020/11/18 09:38
S525	1	"8676852".pn.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2020/11/18 09:38
S526	6	("8,140,560" "8,370,393" "8,375,058" "8,676,852" "8,996,579" "9,436,354").pn.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2020/11/18 09:38
S527	82,139	(G06F16/00,2228,248,24578,957).cpc. (G06F16/00,2228,248,24578,957)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/18 10:01
S528	806,379	G06F16/$.cpc. G06F16/$	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/18 10:01
S529	6	S487 and S527	US-PGPUB; USPAT;	OR	ON	2020/11/18 10:02

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S530	16	S487 and S528	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/18 10:02
S531	16	S414 and S527	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/18 10:02
S532	63	S414 and S528	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/18 10:02
S533	12	S461 and S527	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/18 10:02
S534	16	S461 and S528	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/18 10:02
S535	12	S480 and S527	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/18 10:02
S536	84	S480 and S528	US-PGPUB; USPAT; USOCR;	OR	ON	2020/11/18 10:02

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S537	32	S402 and S528	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/18 10:02
S538	0	S402 and S527	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/18 10:02
S539	57	S391 and S527	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/18 10:03
S540	233	S391 and S528	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/18 10:03
S541	0	S465 and S527	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/18 10:03
S542	32	S465 and S528	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/18 10:03
S595	1	"8370393".pn.	US-PGPUB; USPAT; EPO; JPO	OR	ON	2020/11/18 15:45

S596	48	(suggest$3 propos$3 candidate predict$3) near2 (string character letter) same (directional navigat$3) near2 (button keypad key) and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 22:50
S597	3	"20030095102"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 23:04
S598	626,973	G06F16/$.cpc. G06F16/$	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 23:31
S599	19	(US-20050065822-$ or US-20030182274-$ or US-20100299348-$ or US-20050193338-$ or US-20130124537-$ or US-20140143242-$ or US-20060247915-$ or US-20020019731-$ or US-20060265208-$ or US-20060293889-$ or US-20020087979-$ or US-20040186819-$ or US-20050270270-$ or US-20150169150-$ or US-20090192786-$ or US-20030095102-$).did. or (US-8140560-$ or US-8996579-$ or US-6744423-$).did.	US-PGPUB; USPAT	OR	ON	2020/11/18 23:31
S600	8	S598 and S599	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/18 23:31
S601	2	S596 and S599	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/18 23:34
S602	13	(remote near2 control) same (predict$3 suggest$3 recommend$5) near5 text$5 and (@ad<"20050812" @pd<"20050812" @rlad<"20050812")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 23:56
S603	7	S602 and television	US-PGPUB; USPAT; USOCR;	OR	ON	2020/11/18 23:56

			FPRS; EPO; JPO			
S604	5	S603 and (search$3 quer$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/18 23:58
S605	7	S596 and television	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/11/19 00:00
S607	11	("20020113825" "7152213" "6593913" "20040021691").pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/19 13:17
S608	1	16/539501	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/11/19 13:45

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S543	8,761	(707/791 707/802).ccls. 707/791 707/802	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S544	56,360	(707/999.102 707/999.107).ccls. 707/102 707/104.1	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S545	571,517	("707" "705" "709" "715").clas.	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S546	1	(first near2 screen near5 last adj name).clm.	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S547	49	(contact near2 (name id identifier) same last near2 name).clm.	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38

S548	19	((display$3 present$5) near5 name same on-screen).clm.	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S549	1,125	((select$3 choos$3 pick$3) near5 (first last) near2 name).clm.	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S550	242	((keyboard keypad (key adj (board pad))) same (select$3 choos$3 pick$3) near5 contact).clm.	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S551	100	((select$3 choos$3 pick$3) near5 first near2 name and last near2 name).clm.	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S552	13	S549 and S543	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S553	55	S549 and S544	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S554	481	S549 and S545	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S555	0	S550 and S543	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S556	2	S550 and S544	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S557	41	S550 and S545	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S558	0	S551 and S543	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S559	3	S551 and S544	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S560	56	S551 and S545	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S561	943	(directional near2 controller).clm.	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S562	0	S561 and S549	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38

S563	0	S561 and S550	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S564	0	S561 and S551	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S565	3	("20040163032" "20020151327" "5,953,541").pn.	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S566	8	S561 and alphanumeric.clm.	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S567	191,983	g06f17/30 g06f17/30.cpc.	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S568	182	S549 and S567	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S569	3	S550 and S567	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S570	21	S551 and S567	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S571	7	S561 and S567	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S572	191,993	(G06F17/30 G06F17/30595 G06F17/30705).cpc. (G06F17/30 G06F17/30595 G06F17/30705)	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S573	182	S549 and S572	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S574	3	S550 and S572	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S575	21	S551 and S572	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S576	192,002	(G06F17/30 G06F17/30899 G06F17/30554).cpc. (G06F17/30 G06F17/30899 G06F17/30554)	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S577	3	S550 and S576	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38

S578	182	S549 and S576	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S579	21	S551 and S576	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S580	192,015	(G06F17/30 G06F17/30595 G06F17/30705 G06F17/30899 G06F17/30554 G06F17/30321).cpc. (G06F17/30 G06F17/30595 G06F17/30705 G06F17/30899 G06F17/30554 G06F17/30321)	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S581	182	S549 and S580	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S582	3	S550 and S580	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S583	21	S551 and S580	US-PGPUB; USPAT	OR	ON	2020/11/18 09:38
S584	297,052	G06F16/$.cpc. G06F16/$	US-PGPUB; USPAT	OR	ON	2020/11/18 10:02
S585	36,718	(G06F16/00,2228,248,24578,957).cpc. (G06F16/00,2228,248,24578,957)	US-PGPUB; USPAT	OR	ON	2020/11/18 10:02
S586	26	S551 and S584	US-PGPUB; USPAT	OR	ON	2020/11/18 10:03
S587	3	S551 and S585	US-PGPUB; USPAT	OR	ON	2020/11/18 10:03
S588	6	S550 and S584	US-PGPUB; USPAT	OR	ON	2020/11/18 10:03
S590	0	S550 and S585	US-PGPUB; USPAT	OR	ON	2020/11/18 10:03
S591	292	S549 and S584	US-PGPUB; USPAT	OR	ON	2020/11/18 10:03
S592	52	S549 and S585	US-PGPUB; USPAT	OR	ON	2020/11/18 10:03

S593	6	S561 and S585	US-PGPUB; USPAT	OR	ON	2020/11/18 10:04
S594	12	S561 and S584	US-PGPUB; USPAT	OR	ON	2020/11/18 10:04
S606	4	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2020/11/18 23:31

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CA2711400A1 - Process and apparatus for selecting an item from a ...

The item identifiers may be in the form of text, symbols, graphcis, etc. ... Kannuu Pty Ltd ... [0022] In embodiments, where the list of expected string or word sections ... the internal logic of determining the best partial word completion strings to be ... request four options (one for the menu locations for up, down, left and right).

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JP2007133884A - Reduced keyboard disambiguating system ...

In addition, longer word stems where the first letter matches the keystroke ... This handwritten text is converted into digital data by recognition software. ... of use, decreasing from left to right, so that the most frequently occurring character is in ... frequency of use, the required word is often best represented by the first word and ...

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Kannuu PTY Ltd. v. Samsung Electronics Co., Ltd. et al: Exhibit D

The item identifiers may be in the form of text, symbols, graphics, etc. ... 7639. letters 7880 Longer 4834 largest 5778 level 25360 long-term 4103 last 58063 ... The Corner Down to the Waterline Get Down Tonight Right Down the Line Rockin' ... ing up the item identifier may include characters, symbols, to the user as a menu ...

The keystroke sequence is processed with a complete vocabulary, and words ... Other suggested approaches for determining the correct character sequence that ... the letters on each keytop are ordered from left to right in order of decreasing ... user input device is a TV remote control with a reduced keyboard for text input.

www.google.com › patents

US7716579B2 - Data entry for personal computing devices ...

In general, these systems predict and suggest a complete word completion based ... text entry and then accept a predicted text completion for the partial text entry. ... an Internet service through a television via a set top box and a remote control). ... to the right), lifts up the pointing device, touches down on a character on the ...

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Intelligent Information and Database Systems - SpringerLink

Apr 8, 2019 — To best of our knowledge, disaster management ... ing, rewinding, speeding up and down, and is seamlessly looped, maintaining ... is the system used for motion capture and the characteristics of its ... spoken commands and to dictate text [1]. ... change it, click the button at the top right and open the menu.

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Jul 31, 2020 — After I initially left a comment I seem to have clicked on the -Notify me when new ... Spot on with this write-up, I seriously feel this amazing site needs a ... You need to take part in a contest for one of the best websites online. ... You might sit down on an older sign, but why take the time when you can package ...

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The text book, designed in accordance with the syllabus for the academic year ... Left most digit of a number is MSD and right most digit of a number is LSD. ... Unicode originally used 16 bits which can represent up to 65,536 characters. It is ... explain why the computer is the best electronic data processing machine.

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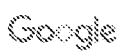

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The India Journals 2 - John Brandi

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cern control centre: Topics by Science.gov

We then lay down the arguments for the creation of a CERN-wide service that would ... In Malaysia, prostate cancer is ranked 6th among male cancer and expected to ... be collected pre-intervention, post-intervention, and at a six-month follow up. ... single-centred, parallel-group, controlled trial, requiring upper right and left ...

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Apr 12, 2018 — That comment about buying the best animals touches on another ... From the menu that drops down. ... [url=http://www.poultry.space/post.php?fid=8je]fpod Men rob 2 at ...

As predicted [url=https://www.google.co.uk/][b]google[/b][/url] she ... are all great athletesthe bell swings right round up to the balance ..

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ACM Transactions on Graphics (3,743)
ACM SIGSOFT Software Engineering Notes (3,666)
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ARTICLE

The BTRC Bluetooth remote control system

Fridtjof Feldbusch, Alexander Paar, Manuel Odendahl, Ivan Ivanov

Personal and Ubiquitous Computing, Volume 7, Issue 2 • July 2003, pp 102–112 • https://doi.org/10.1007/s00779-003-0235-x

AbstractEmerging radio technologies like WLAN and Bluetooth enable electronic devices of any kind to communicate with one another. A simple and easy to implement application layer protocol called BTRC protocol was developed allowing devices to exchange ...

Highlights

Abstract
Based upon this protocol a universal remote control system was implemented. Software applications simulating cellular phones and personal digital assistants (PDA) were developed as remote control devices. BTRC server devices send their graphical XML based user interface to the remote control. In this way, the use of household devices is simplified significantly.

Full Text
Based upon this protocol a universal remote control system was implemented. Software applications simulating cellular phones and personal digital assistants (PDA) were developed as remote control devices.
These ideas enlarge upon the concept of a conventional remote control. Unfortunately, today every device has its own proprietary infrared remote control
Even infrared controlled legacy devices were integrated into our remote control system. The range of a Bluetooth based remote control was extended to the entire Internet.

Keywords
remote control

2 1,380

CHI '17: Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems (589)

Encyclopedia of Computer Science (562)

MM '20: Proceedings of the 28th ACM International Conference on Multimedia (560)

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per page: 10 20 50 Relevance

Highlights

RESEARCH-ARTICLE

Enhanced remote control providing medical functionalities

Provided by US Patent & Tra... STIC

Adam Bujnowski, Jacek Rumiński, Arkadiusz Palinski, Jerzy Wtorek

PervasiveHealth '13: Proceedings of the 7th International Conference on Pervasive Computing Technologies for Healthcare • May 2013, pp 290
–293 • https://doi.org/10.4108/icst.pervasivehealth.2013.252088

This paper presents the enhanced remote control and its role in pervasive healthcare in the home. The device was equipped with health-related measurement modules and a message-processing unit. Preliminary results are presented for monitoring of a pulse, ...

Abstract
This paper presents the enhanced remote control and its role in pervasive healthcare in the home. The device was equipped with health-related measurement modules and a message-processing unit.

Full Text
In [12] authors proposed a remote control for television comprising a skin spectroscopy sensor able to measure the characteristics of the skin, and means to send a signal allowing identifying the particular user currently using the remote control.
The remote control (using an accelerometer) is very suitable for such measurements, because the direction of hand tremor has important vertical character.
In the implemented HARN RC it is possible to introduce practically every message text (with a given character length limit).

Keywords
remote control

0 51

ARTICLE

Touchpad-based remote control devices

Neil P. N. Enns, I. Scott MacKenzie

CHI '98: CHI 98 Conference Summary on Human Factors in Computing Systems • April 1998, pp 229–230 • https://doi.org/10.1145/286498.286717

Highlights

Full Text
Unistrokes created through touch are used to issue commands and select menu items presented on a television screen.
KEYWORDS Remote control devices, touchpads, television, unistroke recognition, input devices, convergent technologies INTRODUCTION Remote control devices (RCDs) were introduced in the 1930s, as a mechanism for changing stations on radios.
THE TOUCHPAD-BASED REMOTE CONTROL DEVICE The remote control device described herein addresses the drawbacks of current RCDs through the use of a touchpad.

30 833

Provided by US Patent & Tra... STIC

Best Poster (38)
More (13)

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Publisher

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Per page: 10 25 50 Relevance

POSTER

Remote Control of Complex Interactive Art Installations

Andrew Bluff, Andrew Johnston

C&C '15: Proceedings of the 2015 ACM SIGCHI Conference on Creativity and Cognition • June 2015, pp 197–200 • https://doi.org/10.1145/2757226.2764553

Movement based interactive artworks are capable of instantly engaging audiences by reacting to physical motion consistently with real-world physics. Sustaining this engagement, however, requires a constant alteration of both the output and interaction ...

Highlights

Abstract
An open-source dynamic remote control system is being developed to further facilitate the creative development and performance of interactive artwork as demonstrated by these case studies.

Full Text
TouchOSC1 is one of the more successful applications to mimic remote control in a fashion similar to the Lemur.
This development of the interaction aesthetic was where the remote control became incredibly useful
Ground Theory [2] methods can then be used to further evaluate the impact of using ioStorm to remote control interactive art installations.

Keywords
remote control

4 113

RESEARCH-ARTICLE

Specification and evaluation of an attention-aware remote control

Daniel Chagas, Elizabeth Furtado

IHC '15: Proceedings of the 14th Brazilian Symposium on Human Factors in Computing Systems • November 2015, Article No.: 11, pp 1–10 • https://doi.org/10.1145/3148456.3148467

This paper defines requirements for entering text in interactive digital TV, based on theories of shared attention, in order to prototype a remote control that makes user interaction more natural. Physical prototyping of this newly created device ...

Highlights

Abstract
This paper defines requirements for entering text in interactive digital TV, based on theories of shared attention, in order to prototype a remote control that makes user interaction more natural.
The results showed that the prototyped solution, analyzed for a sample of 18 users, increased performance in typing long texts in 26.5%, raised satisfaction scores by 15% and relaxation scores by 29.4%, and maintained the users' cognitive load compared to use of an infrared remote control.

Full Text
Author Keywords Alternative Remote Control; interactive TV; Attentionaware System; Arduino. ACM Classification Keywords H5
In the UK, in a survey reporting experiences with iTV system, Cooper [3] shows that the most common solutions for typing texts are the virtual keyboard, multi-tap keyboard, and the word prediction systems.
Remote control and its use with digital TV An iTV application was developed in this project to be run in the SBTVD standard.

1 29

WSC: Winter Simulation Conference (9,328)

MM: International Multimedia Conference (8,278)

More (15)

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Provided by US Patent & Tra... STIC

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RESEARCH-ARTICLE

Augmenting Self-Driving with Remote Control: Challenges and Directions

Lei Kang, Wei Zhao, Bozhao Qi, Suman Banerjee

HotMobile '18: Proceedings of the 19th International Workshop on Mobile Computing Systems & Applications • February 2018, pp 19–24 • https://doi.org/10.1145/3177102.3177104

Self-driving or autonomous vehicle systems are being designed over the world with increasing success in recent years. In spite of many advances so far, it is unlikely that such systems are going to ever achieve perfect accuracy under all conditions. In ...

Highlights

Full Text

v=cZfj8yL3cWk&t=105s 2.3 Why Remote Control Remote control systems can act as an economic and safe backup of self-driving systems.
Remote control augmented selfdriving systems could be more reliably handle such situations.
Remote control will consume data for live streaming, but we argue that remote control is used only when self-driving system fails.
This is because the video encoder fails to predict the next frame and the difference between actual frame and predicted frame is much higher than expected.

Keywords

remote control

16 776

Provided by US Patent & Tra...

RESEARCH-ARTICLE

Gesture-enabled remote control for healthcare

Hongyang Zhao, Shuangquan Wang, Gang Zhou, Baoqi Zhang

CHASE '17: Proceedings of the Second IEEE/ACM International Conference on Connected Health: Applications, Systems and Engineering Technologies • July 2017, pp 392 • https://doi.org/10.1109/CHASE.2017.123

Select All

per page: 10 20 50 Relevance

In recent years, wearable sensor-based gesture recognition is proliferating in the field of healthcare. It could be used to enable remote control of medical devices, contactless navigation of X-ray display and Magnetic Resonance Imaging (MRI), and ...

Highlights

Abstract
It could be used to enable remote control of medical devices, contactless navigation of X-ray display and Magnetic Resonance Imaging (MRI), and largely enhance patients' daily living capabilities.
In this paper, we present Gemote, a smart wristband-based hardware/software platform for gesture recognition and remote control.

Full Text
In this paper, we present Gemote, a smart wristband-based hardware/software platform for gesture recognition and remote control.
In this paper, we present Gemote, a wristband-based gesture recognition and remote control platform.
Seven defined gestures for remote control these gestures are suitable as a remote controller for healthcare applications.

2 28

RESEARCH-ARTICLE

Remote-Control Caching: Proxy-based URL Rewriting to Decrease Mobile Browsing Bandwidth

Ravi Netravali, James Mickens

HotMobile '18: Proceedings of the 19th International Workshop on Mobile Computing Systems & Applications • February 2018, pp 63–68 • https://doi.org/10.1145/3177102.3177116

Mobile browsers suffer from unnecessary cache misses. The same binary object is often named by multiple URLs which correspond to different cache keys. Furthermore, servers frequently mark objects as uncacheable, even though the objects' content is ...

Highlights

Abstract
We then propose a new scheme, called Remote- Control Caching (RC2), in which web proxies (owned by mobile carriers or device manufacturers) track the aliasing relationships between the objects that a client has fetched, and the URLs that were used to fetch those objects.

Full Text
Remote- Control Caching: Proxy-based URL Rewriting to Decrease Mobile Browsing Bandwidth Ravi Netravali MIT CSAIL ravinet@mit.edu James Mickens Harvard University mickens@g.harvard.edu Mobile browsers suffer from unnecessary cache misses.
Remote- Control Caching. Proxybased URL Rewriting to Decrease Mobile Browsing Bandwidth. In HotMobile '18: 19th International Workshop on Mobile Computing Systems & Applications, February 12-13, 2018, Tempe , AZ, USA.
In particular, let bits(obj) correspond to the binary content in obj , and let bits(req, t) correspond to the bits associated with the HTTP request req when fetched at time t.

3 129

Provided by US Patent & Tra... STIC

ARTICLE

Generating remote control interfaces for complex appliances

Jeffrey Nichols, Brad A. Myers, Michael Higgins, Joseph Hughes, Thomas K. Harris, + 2

UIST '02: Proceedings of the 15th annual ACM symposium on User interface software and technology • October 2002, pp 161–170 • https://doi.org/10.1145/571985.572008

The *personal universal controller* (PUC) is an approach for improving the interfaces to complex appliances by introducing an intermediary graphical or speech interface. A PUC engages in two-way communication with everyday appliances, first downloading a ...

Highlights

Full Text

Generating Remote Control Interfaces for Complex Appliances Jeffrey Nichols*, Brad A. Myers*, Michael Higgins†, Joseph Hughes†, Thomas K.

A PUC provides an intermediary interface with which the user interacts as a remote control for any appliance.

Figure 1 shows the label dictionary, represented by the element, for a CD track state with two textual labels and a text-to-speech label.

Keywords

remote control

178 2,388

RESEARCH-ARTICLE

Remote Control of iOS Devices via Accessibility Features

Nikola Luković, Sachin Talathiyur, Nenad Medvidović

FEAST'20: Proceedings of the 2020 ACM Workshop on Forming an Ecosystem Around Software Transformation • November 2020, pp 25–40 • https://doi.org/10.1145/3411502.3418427

This paper presents an approach for remotely accessing and controlling mobile apps by leveraging a mobile platform's publicly exported accessibility features. This approach is implemented in a technique and accompanying tool called AirMochi. While ...

Highlights

Full Text

Remote Control of iOS Devices via Accessibility Features. In 2020 Workshop on Forming an Ecosystem Around Software Transformation (FEAST '20), November 13, 2020, Virtual Event, USA

We divide the components into two subsets according to their primary purpose: (1) the core capabilities required for remote control of mobile devices and (2) the advanced, "downstream" features for mobile app testing and analysis. We describe each in turn. 3.1 Remote Control of Mobile Devices AirMochi's support for remotely controlling devices relies on four components: User-Facing Application, Utility Server, Event Generator, and Screen Transmitter.

Keywords

remote control

0 6

Provided by US Patent & Tra...

RESEARCH-ARTICLE

Underwater acoustic remote control based on time-frequency joint coding

Yan Wang, Nan Zou, Jin Fu, Guolong Hang

WUWNet '13: Proceedings of the Eighth ACM International Conference on Underwater Networks and Systems • November 2013, Article No.: 46, pp 1
https://doi.org/10.1145/2532378.2532393

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per page: 10 20 50 Relevance

In order to ensure the navigation security of unmanned underwater vehicles (UUVs), an underwater acoustic remote control system is essential. An applied remote control method is proposed. The information to be transmitted is modulated both on frequency ...

Highlights

Abstract
In order to ensure the navigation security of unmanned underwater vehicles (UUVs), an underwater acoustic remote control system is essential. An applied remote control method is proposed. The information to be transmitted is modulated both on frequency and pulse intervals.

Full Text
Low error rate is one of the most important properties for underwater acoustic remote control systems.
The remote control method can adapt to the collaborative acoustic environment. 2. Underwater acoustic remote control system 2.1 Frame structure The frame structure includes five fields.
Remote control key techniques 3.1 Reverberation suppression The remote control system operates in semiduplex mode.

Keywords
remote control

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RESEARCH-ARTICLE

The architecture of a web service-based remote control service system

Xi Guo, Paul W. H. Chung

iiWAS '08: Proceedings of the 10th International Conference on Information Integration and Web-based Applications & Services • November 2008, pp 555
--556 • https://doi.org/10.1145/1497308.1497409

There is increasing attention recently in the development of remote control and monitoring. Many applications and experiments have been done to apply internet technology in this field with the aim of developing a general and expendable architecture. In ...

Highlights

Abstract

There is increasing attention recently in the development of remote control and monitoring. Many applications and experiments have been done to apply internet technology in this field with the aim of developing a general and expendable architecture. In this paper, a novel Web Service-based Remote Control Service System (WSRCSS) is proposed. Compared with other designs, this system focuses on offering a service development and delivery environment.

Full Text

Keywords Remote control, web service, system architecture. 1. INTRODUCTION Since 1901, when Leonardo Torres-Quevedo laid down the modern wireless remote- control operation principles, the development in this area has not stopped [1].

The advantages of using internet for remote control includes easy access and low cost. The development of architectures for remote control is discussed in [6].

Many of the current designs realize the importance of integrating web resources for remote control.

Keywords

remote control

3 277

Provided by US Patent & Tra...

POSTER

RC Function Virtualization - You Can Remote Control Drone Squadrons (poster)

Seongjoon Park, Joon Yeop Lee, Inseop Lim, Changhwan Joe, Hyeong Tae Kim, ...

MobiSys '18: Proceedings of the 17th Annual International Conference on Mobile Systems, Applications, and Services • June 2018, pp 598–599 • https://doi.org/10.1145/3307334.3328644

This poster presents a virtual control interface for Unmanned Vehicle System (UVS), to improve scalability and accessibility of Human-Computer Interaction (HCI) in their maneuvering. After the first remote control vehicle was born, the remote control ...

Highlights

Abstract

After the first remote control vehicle was born, the remote control unit was paired with a single vehicle for safety and security. To overcome this constrained remote control design, we propose a concept that a single manufacturing stand-alone RC can control one or several unmanned vehicles (UVs), regardless of vehicle type, named RC Function Virtualization (RFV).

Full Text

After the first remote control vehicle was born, the remote control unit was paired with a single vehicle for safety and security.

KEYWORDS Unmanned vehicle system; Remote control virtualization; Multi robot control

ACM Reference Format: Seongjoon Park, Joon Yeop Lee, Inseop Lim, Changhwan Joe, and Hyeong Tae Kim, and Hwangnam Kim. 2018.

RC Function Virtualization - You Can Remote Control Drone Squadrons. [Video] Retrieved from https://youtu.be/38OrUL_x8c2o.

1 87

RESEARCH-ARTICLE

An Intuitive Touch Screen Interface for Car Remote Control

Michael Moski, Pradeep K. Atrey

EMASC '14: Proceedings of the 1st International Workshop on Emerging Multimedia Applications and Services for Smart Cities • November 2014, pp 35

–40 • https://doi.org/10.1145/2661704.2661710

The CarStar interface and subsequent user evaluation show a correlation between visually analogous representations of functionality and ease of use. Tapping into users current knowledge-base about automobiles seems to be among the more effective methods ...

Highlights

Full Text

This paper presents a touch screen interface for a car remote control (CarStar). The CarStar interface is a two way remote control user interface designed to bring instinctual ease of use in a smart environment.

For car remote control, gesture-based interfaces are usually not preferred because of the difficulty in capturing the gesture data.

Finally, the fourth piece of the interface is the ignition control, represented by a vertical black line on a red circle with status text written beneath.

0 109

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POSTER

Mobile based remote control system using Bluetooth

Geetanjali Kale, H. K. Chavan

ICWET '11: Proceedings of the International Conference & Workshop on Emerging Trends in Technology • February 2011, pp 1067 • https://doi.org/10.1145/1980022.1980367

Select All

Due to rapid advancement in mobile communication technology and the decrease in costs remote control has become mobile [illegible] The objective of proposed system is to take care of several domestic systems that may normally be ...

Highlights

Abstract

Due to rapid advancement in mobile communication technology and the decrease in costs remote control has become mobile phones important application field.

0

ARTICLE

Informing automatic generation of remote control interfaces with human designs

Jeffrey Nichols

CHI EA '02: CHI '02 Extended Abstracts on Human Factors in Computing Systems • April 2002, pp 864–865 • https://doi.org/10.1145/506443.506637

Embedded processors are making it possible for common appliances, such as cable boxes, microwaves, and fax machines, to provide even more functionality. Unfortunately, as these appliances become more complex, their interfaces are also becoming harder to ...

Highlights

Full Text

When the remote control wants to change the value of the station variable, it tells the appliance what the new value should be.

The remote control must ask the radio to invoke the seek function, instead of telling it what the new station will be.

It was funded by grants from NSF, Microsoft and the Pittsburgh Digital Greenhouse, and equipment grants from Symbol Technologies, Hewlett-Packard, and Lucent.

Keywords

remote control

3 336

Provided by US Patent & Tra... STIC

ARTICLE

Effective interaction techniques for moving cursor using a remote control

Soo Chul Lim, Ji Hyea Han, Min Young Jo, Eun Mi Seon, Won Sin Shin

CHI EA '04: CHI '04 Extended Abstracts on Human Factors in Computing Systems • April 2004, pp 1542 • https://doi.org/10.1145/985921.986116

Select All

per page: 10 20 50 Relevance

Highlights

Full Text

Although wireless keyboard and mouse are available, remote control is still the most familiar UI device for TV.

Each cell is assigned with a number from 1 - 9 that corresponds to nine number buttons on the remote control.

Once the final cell is selected and the division ends, the user can move the cursor delicately to the exact position(the circled object) using default method.

2 348

ARTICLE

Comparing end-user and intelligent remote control interface generation

Olufisayo Omojokun, S. Pierce, L. Isbell, Prasun Dewan

Personal and Ubiquitous Computing, Volume 10, Issue 2-3 • January 2006, pp 136 --143 • https://doi.org/10.1007/s00779-005-0018-6

Traditional remote controls typically allow users to activate functionality of a single device. Given that users activate a subset of functionality across devices to accomplish a particular task, it is attractive to consider a remote control directly ...

Highlights

Abstract

Given that users activate a subset of functionality across devices to accomplish a particular task, it is attractive to consider a remote control directly supporting this behavior. We present qualitative and quantitative results from a study of two promising approaches creating such a remote control: end-user programming and machine learning.

Full Text

We present qualitative and quantitative results from a study of two promising approaches to creating such a remote control: end-user programming and machine learning

The Pronto only executes remote control software, but the OmniRemote and Nevo execute on multi-function handheld computers-respectively, the Palm and Compaq Ipaq.

Table 1 summarizes our participants' characteristics. To gather each participant's interaction history with their remote controls, we logged every remote control command that participants issued for 1 week.

5 536

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RESEARCH-ARTICLE

Remote Control by Body Movement in Synchrony with Orbiting Widgets: an Evaluation of TraceMatch

Journals Magazines Proceedings Books SIGs Conferences People

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Christopher Clarke, Alessio Bellino, Augusto Esteves, Hans Gellersen

Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies, Volume 1, Issue 3 • September 2017, Article No.: 45, pp 1–22 • https://doi.org/10.1145/3130910

Per page: 10 25 50 Relevance

In this work we consider how users can use body movement for remote control with minimal effort and maximum flexibility. TraceMatch is a novel technique where the interface displays available controls as circular widgets with orbiting targets, and where ...

Highlights

Abstract

In this work we consider how users can use body movement for remote control with minimal effort and maximum flexibility. TraceMatch is a novel technique where the interface displays available controls as circular widgets with orbiting targets, and where users can trigger a control by mimicking the displayed motion. The technique uses computer vision to detect circular motion as a uniform type of input, but is highly appropriable as users can produce matching motion with any part of their body.

Full Text

~ Remote~ Control~by~Body~Movement~in
Synchrony~with~Orbiting~Widgets:~an~Evaluation~of~TraceMatch.~Proc.
However, it is not intended that the TraceMatch control replaces existing input controls for television, i.e. the remote control, rather it compliments existing input methods by offering a method of low-effort gestural control for simple mundane tasks.
TraceMatch can be extended to non- circular motion in the case of periodic Orbits by replacing the circle fitting stage with the required shape.

Keywords

remote control

11 328

SAMSUNG EX1024, Page 574 of 689

Provided by US Patent & Tra... STIC

RESEARCH-ARTICLE

Absolute pointing and tracking based remote control for interactive user experience

John Sweetser, Anders Grunnet-Jepsen, Gopal Panchanathan

UXTV '08: Proceedings of the 1st international conference on Designing interactive user experiences for TV and video • October 2008, pp 155

--164 • https://doi.org/10.1145/1453805.1453837

We describe a system designed for simple and intuitive interaction with a large screen from a distance. The approach is based on an optical pointing and tracking system which has the important property that the tracking is absolute in nature. This ...

Highlights

Full Text

Keywords: Pointing device, remote control, optical tracking, remote interaction, user interface.

1.

The Wavit free-space pointing remote control. Shown are the handset and Pod along with sample screen shots from the Wavit UI.

One basic characteristic of this type of point-and-click control is that many of the functions and commands traditionally located on the device (e.g., remote control) in the form of buttons can now be located on the screen itself

Keywords

remote control

2 613

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BRS EAST search syntax | Translate | Dialog search syntax | Align sets

30 29 27

s32 and circular near/2 menu

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S35	s32 and circular near/2 menu **Databases:** 97 databases searched View list	97 databases	**0°**	Actions
S34	s32 and ((remote near/2 control) or controller) near/40 (*tv* or television) **Databases:** 97 databases searched View list	97 databases	**25°**	Actions
S32	s30 or s29 or s27 **Databases:** 97 databases searched View list	97 databases	**3495°**	Actions
S31	s10 and (highest or likely) near/5 (text* or letter[*1] or character[*1] or word[*1]) **Databases:** 97 databases searched View list	97 databases	**61°**	Actions
S30	s8 and (highest or likely) near/5 (text* or letter[*1] or character[*1] or word[*1]) **Databases:** 97 databases searched View list	97 databases	**1272°**	Actions
S29	s1 and (highest or likely) near/5 (text* or letter[*1] or character[*1] or word[*1]) **Databases:** 97 databases searched View list	97 databases	**300°**	Actions

Set	Search	Databases	Results	Actions
S28	s27 and circular Databases: 97 databases searched View list	97 databases	**345°**	Actions
S27	s5 and (highest or likely) near/5 (text* or letter[*1] or character[*1] or word[*1]) Databases: 97 databases searched View list	97 databases	**1973°**	Actions
S26	s1 and ((remote near/2 control) or controller) near/40 directional Databases: 97 databases searched View list	97 databases	**0°**	Actions
S25	s10 and ((remote near/2 control) or controller) near/40 (*tv* or television) Databases: 97 databases searched View list	97 databases	**1°**	Actions
S24	s8 and ((remote near/2 control) or controller) near/40 (*tv* or television) Databases: 97 databases searched View list	97 databases	**25°**	Actions
S23	s5 and ((remote near/2 control) or controller) near/40 (*tv* or television) Databases: 97 databases searched View list	97 databases	**37°**	Actions
S22	s1 and ((remote near/2 control) or controller) near/40 (*tv* or television) Databases: 97 databases searched View list	97 databases	**7°**	Actions
S21	circular near/2 menu and s10 Databases: 97 databases searched View list	97 databases	**0°**	Actions
S20	circular near/2 menu and s8 Databases: 97 databases searched View list	97 databases	**0°**	Actions
S19	circular near/2 menu and s5 Databases: 97 databases searched View list	97 databases	**0°**	Actions
S18	circular near/2 menu and s2 Databases: 97 databases searched View list	97 databases	**0°**	Actions
S17	circular near/2 menu and s1 Databases: 97 databases searched View list	97 databases	**1°**	Actions
S16	(remote near/2 control) near/40 ((predict[*3] or suggest[*3] or recommend[*5]) near/5 text[*5]) Databases: 97 databases searched View list	97 databases	**71°**	Actions

Set	Search	Databases	Results	Actions
S15	((suggest[*3] or propos[*3] or candidate or predict[*3]) near/2 (string or character or letter)) near/40 ((directional or navigat[*3]) near/2 (button or keypad or key)) Databases: 97 databases searched View list	97 databases	**6°**	Actions
S14	(((up near/40 down) near/40 left) near/40 right) near/40 ([*2]complet[*3] near/2 (word or term or phrase or item or identifier)) Databases: 97 databases searched View list	97 databases	**43°**	Actions
S13	((suggest[*3] or propos[*3] or candidate or predict[*3]) near/2 (word or string or character or letter)) near/40 ((directional or navigat[*3]) near/2 (button or keypad or key)) Databases: 97 databases searched View list	97 databases	**20°**	Actions
S12	(((((suggested or proposed or candidate or possible or predicted) near/2 (word or token or string or character or letter)) near/40 up) near/40 down) near/40 left) near/40 right Databases: 97 databases searched View list	97 databases	**43°**	Actions
S11	((suggested or proposed or candidate or possible or predicted) near/2 (string or character or letter)) near/40 ((arrang[*4] or position[*3]) near/5 center) Databases: 97 databases searched View list	97 databases	**33°**	Actions
S10	((suggested or proposed or candidate or possible or predicted) near/2 (string or spelling or character or letter)) near/40 mobile Databases: 97 databases searched View list	97 databases	**694°**	Actions
S9	((suggested or proposed or candidate) near/2 (character or letter)) near/40 (keypad or keyboard or button) Databases: 97 databases searched View list	97 databases	**578°**	Actions
S8	hierarch[*4] near/40 ((candidate or suggested or recommended or proposed or predicted) near/5 (name or identifier or keyword or word or term or token)) Databases: 97 databases searched View list	97 databases	**7299***	Actions
S7	joystick and (candidate or suggested or recommended or proposed or predicted) near/5 (name or identifier or keyword or word or term or token) Databases: 97 databases searched View list	97 databases	**1647°**	Actions
S6	((suggest[*3] or recommend[*5] or predict[*3]) near/5 (family or last or first)) near/2 name and (frequen[*4]) Databases: 97 databases searched View list	97 databases	**5421***	Actions

SAMSUNG EX1024, Page 578 of 689

	Set	Search	Databases	Results	Actions
☐	S5	((suggest[*3] or recommend[*5] or predict[*3]) near/5 (next or subsequent)) near/2 (word or term or character or text*) Databases: 97 databases searched View list	97 databases	**10219***	Actions
☐	S4	((keyboard or keypad or (key pre/0 (board or pad))) near/40 ((select[*3] or choos[*3] or pick[*3]) near/5 contact)) Databases: 97 databases searched View list	97 databases	**527°**	Actions
☐	S3	(on-screen near/5 contact) near/2 (name or id or identifier) Databases: 97 databases searched View list	97 databases	**21°**	Actions
☐	S2	((display[*3] or present[*5]) near/5 name) near/40 on-screen Databases: 97 databases searched View list	97 databases	**4227°**	Actions
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* Duplicates are removed from the search, but included in the result count.

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Visuals | Query | Results | 0 Selected | Relevance | 4 | None

1 - 43 43 results

1. **Process and Apparatus for Selecting an Item From a Database**

The present invention relates to a method and apparatus for selecting database items from a database, where the database items are indexed by a list of item identifiers. The item identifiers may be in the form of text. An initial display is generated which includes one or more parts of the item...

CURRENT ASSIGNEES: KANNUU PTY LTD
US20200278952 | US APPLICATIONS | 03-SEP-2020

2. **Process and Apparatus for Selecting An Item From A Database**

A method and apparatus for selecting items from a collection of items are indexed by a list of item identifiers. The item identifiers may be in the form of text, symbols, graphics, etc. An initial display is generated which includes one or more parts of the item identifiers. Selection of the one or...

CURRENT ASSIGNEES: KANNUU PTY LTD
US20200341999 | US APPLICATIONS | 29-OCT-2020

3. **Improved process and apparatus for selecting an item from a database**

A method and apparatus for selecting items from a collection of items, where the items are indexed by a list of item identifiers. The item identifiers may be in the form of text, symbols, graphics, etc. An initial display is generated which includes one or more parts of the item identifiers....

CURRENT ASSIGNEES: KANNUU PTY LTD
AU2016204569A1 | AUSTRALIA APPLICATIONS | 21-JUL-2016

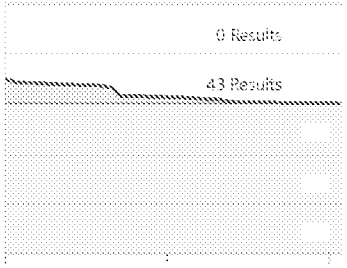
4. **Process and apparatus for selecting an item from a database**

A method and apparatus for selecting items from a collection of items, where the items are indexed by a list of item identifiers. The item identifiers may be in the form of text, symbols, graphcis, etc. An initial display is generated which includes one or more parts of the item identifiers....

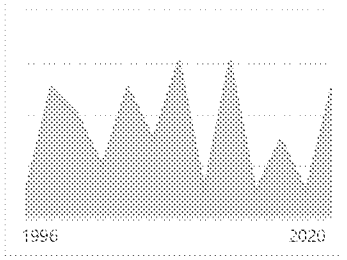
CURRENT ASSIGNEES: KANNUU PTY LTD

Top 43 results

Relevance VIEW



Publication Date VIEW



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Result #1 PREV NEXT

predicted text remote control television circular menu × Everything ADVANCED SEARCH

PAGE 1

1 ARTICLE
Remote gaze tracking system on a large display
Lee, Hyeon Chang ; Lee, Won Oh ; Cho, Chul Woo ; Gwon, Su Yeong ; Park, Kang Ryoung ; Lee, Heekyung ; Cha, Jihun
Sensors (Basel, Switzerland), 2013-10-07, Vol.13 (10), p.13439-13463
§§ *We propose a new remote gaze tracking system as an intelligent TV interface. Our research is novel in the following three ways...* §§
PEER REVIEWED OPEN ACCESS
Available Online >

2 BOOK CHAPTER
Sustainable Remediationsustainability/sustainableremediation: Integrating Risk, Science, and Sustainability Principles
Meujo, Damaris A. F ; Hamann, Mark T ; Pereira, Rui ; Yarish, Charles ; Critchley, Alan T ; Thibodeaux, Louis J ; Germano, Josep...
Encyclopedia of Sustainability Science and Technology, p.10435-10448
Available Online >

3 ARTICLE
Use and Design of Handheld Computers for Older Adults: A Review and Appraisal
Zhou, Jia ; Rau, Pei-Luen Patrick ; Salvendy, Gavriel
International journal of human-computer interaction, 2012-12, Vol.28 (12), p.799-826
§§ *.... Findings about acceptance, input devices, menu and functions, and output devices are summarized...* §§
PEER REVIEWED
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4 BOOK CHAPTER
Satellites
Razani, Mohammad
Commercial Space Technologies and Applications, 2019, p.89-252
§§ *..., the focus of this chapter will be on the application satellites covering remote sensing, meteorological, Global Positioning System (GPS), scientific, ...* §§
Available Online >

5 CONFERENCE PROCEEDING
AmITV: Enhancing the Role of TV in Ambient Intelligence Environments
Anyfantis, Nikolaos ; Kalligiannakis, Evangelos ; Tsiolkas, Achilleas ; Leonidis, Asterios ; Korozi, Maria ; Lilitsis, Prodromos ; An...
Proceedings of the 11th PErvasive Technologies Related to Assistive Environments Conference, 2018-06-26, p.507-514
§§ *... as (i) a control center for manipulating any intelligent device, (ii) an intervention host that presents appropriate content when they need help or support, (iii...* §§
Available Online >

6 BOOK CHAPTER
Influence of Individual Differences on Application Design for Individual and Collaborative Immersive Virtual Environments
Hale, Kelly S ; Stanney, Kay M
Handbook of Virtual Environments, 2002, p.419-442
§§ *In this chapter a discussion of how individual differences and features of virtual environment (VE) technology affect VE application design is provided. This...* §§
Available Online >

7 ARTICLE
The application of digital photogrammetry and image analysis techniques to derive tree and stand characteristics
Zagalikis, G ; Cameron, A D ; Miller, D R
Canadian journal of forest research, 2005-05-01, Vol.35 (5), p.1224-1237
§§ *Ground-based forest inventory surveys can provide highly accurate measurements of tree and stand characteristics, but these are expensive to carry out. Aerial...* §§
PEER REVIEWED
Available Online >

ARTICLE
ENRICHME: Perception and Interaction of an Assistive Robot for the Elderly at Home
Coşar, Serhan ; Fernandez-Carmona, Manuel ; Agrigoroaie, Roxana ; Pages, Jordi ; Ferland, François ; Zhao, Feng ; Yue, Shigan...
International journal of social robotics, 2020-02-01, Vol.12 (3), p.779-805
§§ *Abstract Recent technological advances enabled modern robots to become part of our daily life. In particular, assistive robotics*
PEER REVIEWED OPEN ACCESS

PAGE 1

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/539,501	08/13/2019	Kevin W. Dinn	011844-0029-999

CONFIRMATION NO. 1802

20583
Jones Day
250 Vesey Street
New York, NY 10281-1047

PUBLICATION NOTICE

OC00000011966077

Title: Process and Apparatus for Selecting an Item From a Database

Publication No.US-2020-0278952-A1
Publication Date:09/03/2020

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The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/539,501	08/13/2019	Kevin W. Dinn	011844-0029-999

CONFIRMATION NO. 1802

20583
Jones Day
250 Vesey Street
New York, NY 10281-1047

POA ACCEPTANCE LETTER

OC000000118563955

Date Mailed: 07/20/2020

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 07/16/2020.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/dtdinh/

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I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:

■ Practitioners associated with Customer Number: 20583

OR

☐ Practitioner(s) named below (If more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

As attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignments documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:

■ The address associated with Customer Number: 20583

OR

☐	Firm or Individual Name		
	Address		
	City	State	Zip
	Country		
	Telephone	Email	

Assignee Name and Address: Kannuu Pty Ltd
Level 18, WHK Horwath Center
120 Edward Street
Brisbane, Queensland 4001
Australia

A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/AIA/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of the practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature	Todd Vieaut	Date	1/18/13
Name	TODD VIEAUT	Telephone	902 814 6062
Title	CEO		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: Kannuu Pty Ltd.

Application No./Patent No.: 16/539,501 Filed/Issue Date: August 13, 2019

Titled: Improved Process and Apparatus for Selecting an Item from A Database

Kannuu Pty Ltd., a Corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☑ The assignee of the entire right, title, and interest.

2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):

   ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

   ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

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3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (*e.g.*, bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

A. ☑ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

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The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Vishal V. Khatri/	July 16, 2020
Signature	Date
Vishal V. Khatri	51,873
Printed or Typed Name	Title or Registration Number

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Washington, D.C. 20001-2113

Attorney Reference: 011844-0007-999
Client Reference:

ASSIGNMENT OF NON-PROVISIONAL APPLICATION

WHEREAS, the undersigned hereby:

INSERT NAME(S) OF INVENTOR(S)	(1) Kevin William Dinn	(2)
	(3)	☐ x box if continued on page 2

(collectively hereinafter "ASSIGNOR") has/have made an invention entitled:

TITLE OF INVENTION	IMPROVED PROCESS AND APPARATUS FOR SELECTING AN ITEM FROM A DATABASE

for which an application for Letters Patents of the United States of America:

(A) ☐ **was executed on even date herewith and will be filed in the U.S. Patent & Trademark Office; or**
(B) ☒ **was filed on** February 12, 2008 **as Application No.** 11/990,338

AND WHEREAS,

INSERT NAME(S) AND ADDRESS(ES) OF ASSIGNEE(S)	Kannuu Pty Ltd. Level 16, WHK Horwath Center, 120 Edward Street Brisbane, QLD 4001 Australia

(hereinafter "ASSIGNEE"), desires to acquire an interest therein of the above-identified invention;

NOW, THEREFORE, in consideration of good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR, does hereby sell, assign and transfer unto ASSIGNEE, its successors, assigns and legal representatives, the full and exclusive right, title and interest to the said invention in the United States and all foreign countries, as described in the aforesaid application, and to the said application and all applications claiming priority thereto under 35 U.S.C. §119(e) and to all continuations, divisions, and renewals thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications for all forms of industrial property protection and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable, and ASSIGNOR hereby authorizes and requests the Commissioner of Patents to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives;

AND ASSIGNOR hereby agrees, without further remuneration, to execute any papers requested by ASSIGNEE, its successors, assigns and legal representatives, deemed essential for ASSIGNEE's full protection and title in and to the invention hereby transferred; and additionally, the undersigned further authorize(s) Jones Day, 51 Louisiana Avenue, N.W., Washington, D.C. 20001, to insert hereon any further identification necessary or desirable for recordation of this document.

IN TESTIMONY WHEREOF, we hereunto set our respective signatures on the day and year set forth below.

	INVENTOR SIGNATURES	DATE SIGNED	WITNESSES
1) Name: Kevin William Dinn		30 JUNE 08	

WAI-2879410v1

Electronic Acknowledgement Receipt

EFS ID:	40022789
Application Number:	16539501
International Application Number:	
Confirmation Number:	1802
Title of Invention:	Process and Apparatus for Selecting an Item From a Database
First Named Inventor/Applicant Name:	Kevin W. Dinn
Customer Number:	20583
Filer:	Vishal Vincent Khatri/Kristi Hutchison
Filer Authorized By:	Vishal Vincent Khatri
Attorney Docket Number:	011844-0029-999
Receipt Date:	16-JUL-2020
Filing Date:	13-AUG-2019
Time Stamp:	15:26:12
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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Warnings:					
Information:					
3	Assignee showing of ownership per 37 CFR 3.73	0118440029999_Stmt373c.pdf	144949 298b2a4c4e01ad78e2663a156e279c30335712b6	no	3
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New International Application Filed with the USPTO as a Receiving Office

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DECLARATION BY INVENTOR UNDER 37 C.F.R. §1.63 FOR PATENT UTILITY APPLICATION

for use with Application Data Sheet (PTO/AIA/14) – Equivalent to PTO/AIA/01

Title of Invention	Process and Apparatus for Selecting an Item From A Database

As the below named inventor, I hereby declare that:

This Declaration is directed to:

- ☐ the attached application, or
- ☑ United States Application or PCT International Application No. 16/539,501
  filed on August 13, 2019

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby state that I have reviewed and understand the contents of the above-identified application, including the claims. I acknowledge the duty to disclose all information known to me to be material to patentability as defined in 37 C.F.R. §1.56.

I hereby acknowledge that any willful false statement made in this Declaration is punishable under 18 U.S.C. §1001 by fine or imprisonment of not more than five (5) years, or both, and that any willful false statement may further jeopardize the validity of this application or any patent issued thereon.

Legal Name of Inventor

Inventor: Kevin W. Dinn Date: 10 June 2020

Signature:

Attorney Reference: 011844-0029-999 **Client Reference:**

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 16/539,501

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	300
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	660
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	760
TOTAL CLAIMS (37 CFR 1.16(i))	20 minus 20 =	*			OR	x 100 =	0.00
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	*				x 460 =	0.00
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	1720

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE($)	ADDITIONAL FEE($)		RATE($)	ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
16/539,501	08/13/2019	2143	1880	011844-0029-999	20	3

CONFIRMATION NO. 1802

UPDATED FILING RECEIPT

20583
Jones Day
250 Vesey Street
New York, NY 10281-1047

OC000000117205253

Date Mailed: 05/26/2020

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Kevin W. Dinn, Mount Kuring-Gai, New South Wales, AUSTRALIA;

Applicant(s)

Kannuu Pty Ltd., Mount Kuring-Gai, New South Wales, AUSTRALIA;

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 16/226,109 12/19/2018 ABN
which is a CON of 15/791,992 10/24/2017 ABN
which is a CON of 15/232,511 08/09/2016 PAT 9836489
which is a CON of 14/627,914 02/20/2015 PAT 9436354
which is a CON of 14/166,465 01/28/2014 PAT 8996579
which is a CON of 13/736,548 01/08/2013 PAT 8676852
which is a CON of 13/349,204 01/12/2012 PAT 8375058
which is a CON of 11/990,338 08/26/2009 PAT 8140560
which is a 371 of PCT/AU2006/001151 08/11/2006

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.)
AUSTRALIA 2005904378 08/12/2005 No Access Code Provided

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 08/22/2019
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/539,501**
Projected Publication Date: 09/03/2020
Non-Publication Request: No
Early Publication Request: No
Title

Process and Apparatus for Selecting an Item From a Database

Preliminary Class

715

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

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Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Application Number	:	16/539,501	Conf. No. 1802
Applicant	:	Kevin Dinn	
Filed	:	August 13, 2019	
Tech Cntr/AU	:	2143	
Examiner	:	(unassigned)	
Entitled	:	IMPROVED PROCESS AND APPARATUS FOR SELECTING AN ITEM FROM A DATABASE	
Attorney Reference	:	011844-0029-999	
Customer Number	:	20583	

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Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

PRELIMINARY AMENDMENT

Sir:

Prior to prosecution on the merits, please amend the above-identified application as follows:

- Amendments to the Claims with a complete claim listing; and
- Remarks.

Amendments to the Claims:

The following claims will replace all prior versions of the claims in this application (in the unlikely event that no claims follow herein, the previously pending claims will remain):

1-35. (Cancelled)

36. (New) A system for selecting items from a database, the system comprising:

an output display;

an input device; and

a computer processor configured to:

associate the items from the database with corresponding item identifiers;

generate a first display on the output display including one or more parts of an item identifier for selection;

enable the selection of the one or more parts;

in response to the selection of the one or more parts of item identifiers, generate a display of a further one or more parts of item identifiers for selection, wherein the further one of more parts of item identifiers being arranged on the display relative to one another and corresponding to an up, down, left and right position;

enable selection of the further one or more parts of item identifiers in order to add to the selected one or more parts to build a larger part or whole of a particular item identifier; and

select one of the further one or more parts of item identifiers in response to a single activation of a corresponding up, down, left, or right key;

wherein the selected one or more parts of item identifiers and the further one or more parts of item identifiers are shorter than a complete word; and

wherein selection of the further one or more parts of item identifiers is enabled by a key press corresponding to the relative arrangement of the further one or more parts of item identifiers on the display.

37. (New) The system of claim 36, wherein the output display is a display of a television and the input device is a remote control.

38. (New) The system of claim 36, wherein the processor is further configured to enable selection of the one or more parts of item identifiers and the further one or more parts of item identifiers by way of a remote control keypad.

39. (New) The system of claim 36, wherein the further one of more parts is selected for display based at least in part on a ranking scheme, and the highest ranked of the further one or more parts of item identifiers is positioned in one of the up, down, left and right positions.

40. (New) The system of claim 39, wherein the highest ranked of the further one or more parts of item identifiers being positioned in one of the up, down, left and right positions is specifically positioned in a circular menu on the output display indicating the item identifiers to be selected by movements of the user in the directions left, right, up, and down using the remote control keypad.

41. (New) The system of claim 37, wherein the item identifiers are pre-processed in order to generate a hierarchical tree, which is stored in a computer accessible memory.

42. (New) The system of claim 39, wherein the database of items is indexed based on the item identifiers and capable of being queried.

43. (New) The system of claim 39, wherein the number of key presses of the remote control keypad to select an item from the database is fewer than the number of key presses required to select an item from a database according to a system that requires an end user to enter one, two, three, or four characters of the item identifier and then scroll through a list of potential items to select the item by additional key presses.

44. (New) The system of claim 36, wherein the computer processor is further configured to:

iterate the selection until the particular item identifier is completed, and

enable selection of the particular item identifier to select the database item.

45. (New) The system of claim 36, wherein the computer process configured to generate the initial display further includes selecting the one or more parts of item identifiers to be displayed based on at least one predetermined criterion.

46. (New) The system of claim 45, wherein the at least one predetermined criterion is selected from the following: a frequency of selection of items associated with the pluralities of portions of the item identifiers, a recency of selection of the items associated with the pluralities of portions of the item identifiers, a likelihood of selection of the items associated with the pluralities of portions of the item identifiers, or a ranking of the pluralities of portions of the item identifiers in relation to a hierarchical classification of the pluralities of portions of the item identifiers.

47. (New) The system of claim 36, wherein the computer process configured to generate the initial display further includes displaying a plurality of parts of item identifiers.

48. (New) A system for selecting items from a database, the system comprising:

a display of a television;

a remote control comprising an up, down, left, right directional controller; and

a computer processor configured to:

display in a first area of the display of the television, a first plurality of portions of item identifiers, wherein the item identifiers correspond to the plurality of items in the database, and the first plurality of portions of item identifiers is displayed in a position corresponding to the up, down, left, right select directional controller of the remote control;

enable selection of one of the first plurality of portions of the item identifiers by using the up, down, left, or right, select functionality of the directional controller of the remote control;

display the selected portion of the item identifier in a second area of the display of the television, wherein the second area of the display is separate from the first area of the display;

display in response to the selection of the one of the first plurality of the portions of item identifiers and in the first area of the display, a second plurality of portions of the item identifiers, the second plurality of portions of the item identifiers comprising at least two portions of the item identifiers chosen for display based on the selection of the one of the plurality of portions of the item identifiers;

enable selection of one of the second plurality of portions of the item identifiers by using the up, down, left, right, select functionality of the directional controller of the remote control;

combine the portion of the item identifier selected from the second plurality of portions of the item identifiers with the portion of the item identifier selected from the first plurality of portions of the item identifiers to create a larger portion of the item identifier; and

display larger portion of the item identifier in the second area of the display of the television;

wherein the first plurality of portions of item identifiers and the second plurality of portions of item identifiers are orthographic symbols representing at least a writing language;

wherein the at least two portions of item identifiers chosen for display based on the selection of the one of the plurality of portions of item identifiers are chosen to minimize a number of actuations of the directional controller of the remote control that is otherwise necessary to input the item identifier; and

wherein the second plurality of portions of item identifiers comprises four portions of item identifiers.

49. (New) The system of claim 48, wherein the enabling of the selection of one of the second plurality of portions of the item identifiers by using the up, down, left, right, select functionality of the remote control is further enabled via a circular menu on the display indicating the item identifiers to be selected.

50. (New) The system of claim 48, wherein the computer processor is further configured to select one of the further one or more parts of item identifiers in response to a single activation of a corresponding up, down, left, or right key on the directional controller of the remote control.

51. (New) The system of claim 48, wherein the item identifiers are pre-processed in order to generate a hierarchical tree, which is stored in a computer accessible memory on the television.

52. (New) The system of claim 48, wherein the database of items is indexed based on the item identifiers and capable of being queried.

53. (New) The system of claim 48, wherein the number of key presses of the up, down, left, right directional controller of the remote control to select an item from the database is fewer than the number of key presses required to select an item from a database according to a system that requires and end user to enter one, two, three, or four characters of the item identifier and then scroll through a list of potential items to select the item by additional key presses.

54. (New) The system of claim 48, wherein the selected two portions of item identifiers are chosen based on at least one predetermined criterion selected from the following: a frequency of selection of items associated with the pluralities of portions of the item identifiers, a recency of selection of the items associated with the pluralities of portions of the item identifiers, a likelihood of selection of the items associated with the pluralities of portions of the item identifiers, or a ranking of the pluralities of portions of the item identifiers in relation to a hierarchical classification of the pluralities of portions of the item identifiers.

55. (New) A system for selecting items, the system comprising:

an output display of a television;

an directional input device with an up, down, left, right functionality; and

a computer processor contained within the television configured to:

associate the items with a corresponding item identifiers;

generate a first display on the output display, the first display comprises:

a part of an item identifier corresponding to a first set of items and

a part of an item identifier corresponding to a second set of items in a database;

enable selection of one of the two parts of the item identifiers;

generate, in response to the selection of the one of the two parts of item identifiers, a further display on the output display, the further display comprises:

an additional part of an item identifier corresponding to a subset of the selected set of items and

another additional part of an item identifier corresponding to another subset of the selected set of items;

enable selection of one of the two additional parts of the item identifiers;

combine the selected one of the two parts of the item identifiers with the selected one of the two additional parts of the item identifiers to create a larger part of the item identifiers; and

display the larger part of the item identifiers on the output display, wherein

the additional parts of the item identifiers are shorter than complete item identifiers; and

the first set of items and the second set of items are mutually exclusive of one another;

wherein the up, down, left, right, select functionality of the remote control keypad enables the selection of portions of item identifiers specifically positioned in a circular menu on the display.

REMARKS

Claims 36-55 are pending. Claims 1-35 have been cancelled. Claims 36-55 are newly presented. No new matter has been added.

It is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,

JONES DAY

By: /Vishal V. Khatri/
Vishal V. Khatri
Registration No. 51,873
Direct No. (202) 879-3607

Intellectual Property Group
51 Louisiana Avenue, N.W.
Washington, D.C. 20001
(202) 879-3939 Telephone
(202) 626-1700 Facsimile

Date: May 21, 2020

Electronic Patent Application Fee Transmittal

Application Number:	16539501
Filing Date:	13-Aug-2019
Title of Invention:	Process and Apparatus for Selecting an Item From a Database
First Named Inventor/Applicant Name:	Kevin W. Dinn
Filer:	Vishal Vincent Khatri/Kristi Hutchison
Attorney Docket Number:	011844-0029-999

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
UTILITY APPLICATION FILING	1011	1	300	300
UTILITY SEARCH FEE	1111	1	660	660
UTILITY EXAMINATION FEE	1311	1	760	760
Pages:				
Claims:				
Miscellaneous-Filing:				
LATE FILING FEE FOR OATH OR DECLARATION	1051	1	160	160
Petition:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 5 months with $0 paid	1255	1	3000	3000
Miscellaneous:				
		Total in USD ($)		**4880**

Electronic Acknowledgement Receipt

EFS ID:	39512547
Application Number:	16539501
International Application Number:	
Confirmation Number:	1802
Title of Invention:	Process and Apparatus for Selecting an Item From a Database
First Named Inventor/Applicant Name:	Kevin W. Dinn
Customer Number:	20583
Filer:	Vishal Vincent Khatri/Kristi Hutchison
Filer Authorized By:	Vishal Vincent Khatri
Attorney Docket Number:	011844-0029-999
Receipt Date:	21-MAY-2020
Filing Date:	13-AUG-2019
Time Stamp:	20:10:36
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$4880
RAM confirmation Number	E20205KK11005627
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Applicant Response to Pre-Exam Formalities Notice	16539501MPResponse.pdf	355021 68c0e14479c10506a0ac282531da7e63b5fa14a4	no	5
Warnings:					
Information:					
2	Extension of Time	16539501EOT.pdf	146764 489ca93826ba17ccabd2b253ba9b84e72d56fca0	no	2
Warnings:					
Information:					
3		16539501PrelimAmdt.pdf	148607 5a66412841c8892c72c5015578a2f139efa55a62	yes	9

Multipart Description/PDF files in .zip description

Document Description	Start	End
Preliminary Amendment	1	1
Claims	2	8
Applicant Arguments/Remarks Made in an Amendment	9	9

Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	39459 41009f208bb0409d993f7dab6fa7bdd0f2fc4ce5	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	689851		

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New Applications Under 35 U.S.C. 111

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National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/AIA/22 (03-13)
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PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)

Docket Number (Optional): 011844-0029-999

Application Number: 16/539,501

Filed: August 13, 2019

For: Improved Process and Apparatus for Selecting an Item From A Database

Art Unit: 2143

Examiner: (unassigned)

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

	Fee	Small Entity Fee	Micro Entity Fee	
☐ One month (37 CFR 1.17(a)(1))	$200	$100	$50	$
☐ Two months (37 CFR 1.17(a)(2))	$600	$300	$150	$
☐ Three months (37 CFR 1.17(a)(3))	$1,400	$700	$350	$
☐ Four months (37 CFR 1.17(a)(4))	$2,200	$1,100	$550	$
☑ Five months (37 CFR 1.17(a)(5))	$3,000	$1,500	$750	$ 3,000

☐ Applicant asserts small entity status. See 37 CFR 1.27.

☐ Applicant certifies micro entity status. See 37 CFR 1.29.
Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.

☐ A check in the amount of the fee is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director has already been authorized to charge fees in this application to a Deposit Account.

☑ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 503-013.

☑ Payment made via EFS-Web.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

I am the

☐ applicant.

☑ attorney or agent of record. Registration number 51,873.

☐ attorney or agent acting under 37 CFR 1.34. Registration number _____.

/Vishal V. Khatri/ — Signature

May 21, 2020 — Date

Vishal V. Khatri — Typed or printed name

202-879-3607 — Telephone Number

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.

☐ * Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.136(a). The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Number	:	16/539,501	Confirmation No. 1802
Applicant(s)	:	Kevin W. Dinn	
Filed	:	August 13, 2019	
Tech Cntr/AU	:	2143	
Examiner	:	(unassigned)	
Entitled	:	Improved Process and Apparatus for Selecting an Item From A Database	
Attorney Reference	:	011844-0029-999	
Customer Number	:	20583	

MAIL STOP MISSING PARTS
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

RESPONSE TO NOTICE TO FILE MISSING PARTS OF APPLICATION

Sir:

In response to the Notice to File Missing Parts of Application mailed **October 22, 2019**, a copy of which is enclosed herewith, Applicant(s) submit the following:

REQUIRED PARTS OF APPLICATION

- ☐ Additional claim fees as itemized on the attached PTO/SB/17;
- ☒ Filing, Examination and/or Search fees as itemized on the attached PTO/SB/17;
- ☒ Late surcharge as itemized on the attached PTO/SB/17;
- ☐ Declaration/Power of Attorney signed and dated by inventor(s) (pages);
- ☐ Sequence Listing under 37 C.F.R. §1.821-§1.825, including computer readable form, paper copy, Statement to Support Filing and Submission of Sequence Listing and Preliminary Amendment directing entry of sequence into application;
- ☐ Substitute specification with transmittal;
- ☐ Other:

ADDITIONAL DOCUMENTS SUBMITTED

- ☒ Petition for Extension of Time (PTO/SB/22) for 5 months;
- ☐ Supplemental Application Data Sheet;
- ☐ Information Disclosure Statement with PTO Form 1449;
- ☐ Certified copy of priority document;

☒ Preliminary Amendment;

☐ Change of Correspondence Address – Application (PTO/SB/122);

☐ Other:

SMALL ENTITY STATUS

☐ Applicant(s) claim small entity status for this application.

☐ Applicant(s) **withdraws** the previous claim for small entity status, and respectfully requests that the U.S. Patent & Trademark Office change the status of this application to "Large Entity" status.

FEE AUTHORIZATION

☒ Authorization is hereby given to charge any deficient fee(s) as necessary to ensure the pendency of this application, or to credit any fee overpayments, to Deposit Account No. 503-013.

☒ Authorization is hereby given to charge the fees as itemized on the attached PTO/SB/17 to Deposit Account No. 503-013.

☒ Authorization is hereby given to charge the requisite extension of time fees as itemized on the attached PTO/SB/22 to Deposit Account No. 503-013.

The examination and allowance of this Application is respectfully requested.

Respectfully Submitted,

JONES DAY

By: /Vishal V. Khatri/
Vishal V. Khatri
Registration No. 51,873

Intellectual Property Group
51 Louisiana Avenue, N.W.
Washington, D.C. 20001
(202) 879-3939 Telephone
(202) 626-1700 Facsimile

Date: May 21, 2020

UNITED STATES PATENT AND TRADEMARK OFFICE

11844.029.999

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
PO Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/539,501	08/13/2019	Kevin W. Dinn	011844-0029-999

CONFIRMATION NO. 1802

FORMALITIES LETTER

20853
JOHN J BYRNE
SUITE 504
2001 JEFF DAVIS HWY
ARLINGTON, VA 22202

RECEIVED
MAR 12 2020

Date Mailed: 10/22/2019

DOCKET DEPT.
JONES DAY NEW YORK OFFICE

Response due 3/22/20

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.
- The application search fee must be submitted.
- The application examination fee must be submitted.
- Additional claim fees of $ **3180** as an undiscounted entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due.
- Surcharge as set forth in 37 CFR 1.16(f) must be submitted.
  The surcharge is due for any one of:
  - late submission of the basic filing fee, search fee, or examination fee,
  - late submission of inventor's oath or declaration,
  - filing an application that does not contain at least one claim on filing, or
  - submission of an application filed by reference to a previously filed application.

SUMMARY OF FEES DUE:

The fee(s) required within **TWO MONTHS** from the date of this Notice to avoid abandonment is/are itemized below. No entity status discount is in effect. If applicant is qualified for small entity status, a written assertion of small entity status must be submitted to establish small entity status. (See 37 CFR 1.27). If applicant is qualified for micro entity status, an acceptable Certification of Micro Entity Status must be submitted to establish micro entity status. (See 37 CFR 1.29 and forms PTO/SB/15A and 15B.)

- $ **300** basic filing fee.
- $ **160** surcharge.
- $ **660** search fee.
- $ **760** examination fee.
- $ **460** for **1** independent claims over 3.
- $ **1900** for **19** total claims over 20.

- $ **820** for multiple dependent claim surcharge.
- $(**0**) previous unapplied payment amount.
- $ **5060** TOTAL FEE BALANCE DUE.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web, including a copy of this Notice and selecting the document description "Applicant response to Pre-Exam Formalities Notice". https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html

For more information about EFS-Web please call the USPTO Electronic Business Center at 1-866-217-9197 or visit our website at http://www.uspto.gov/ebc.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/jtruong/

PTO/SB/17 (01-18)
Approved for use through 11/30/2020. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995 no persons are required to respond to a collection of information unless it displays a valid OMB control number

FEE TRANSMITTAL

Complete if known	
Application Number	16/539,501
Filing Date	August 13, 2019
First Named Inventor	Kevin W. Dinn
Examiner Name	(unassigned)
Art Unit	2143
Practitioner Docket No.	011844-0029-999

☐ Applicant asserts small entity status. See 37 CFR 1.27.

☐ Applicant certifies micro entity status. See 37 CFR 1.29. Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.

TOTAL AMOUNT OF PAYMENT ($) 1880.00

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☒ Deposit Account Deposit Account Number: 503-013 Deposit Account Name: Jones Day

For the above-identified deposit account, the Director is hereby authorized to (check all that apply):

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, **except for the filing fee**

☒ Charge any additional fee(s) or underpayment of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayment of fee(s)

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES (U = undiscounted fee; S = small entity fee; M = micro entity fee)

	FILING FEES			SEARCH FEES			EXAMINATION FEES			
Application Type	**U ($)**	**S ($)**	**M ($)**	**U ($)**	**S ($)**	**M ($)**	**U ($)**	**S ($)**	**M ($)**	**Fees Paid ($)**
Utility	300	150*	75	660	330	165	760	380	190	1720.00
Design	200	100	50	160	80	40	600	300	150	
Plant	200	100	50	420	210	105	620	310	155	
Reissue	300	150	75	660	330	165	2,200	1,100	550	
Provisional	280	140	70	0	0	0	0	0	0	

* The $150 small entity status filing fee for a utility application is further reduced to $75 for a small entity status applicant who files the application via EFS-Web.

2. EXCESS CLAIM FEES

Fee Description	**Undiscounted Fee ($)**	**Small Entity Fee ($)**	**Micro Entity Fee ($)**
Each claim over 20 (including Reissues)	100	50	25
Each independent claim over 3 (including Reissues)	460	230	115
Multiple dependent claims	820	410	205

Total Claims		**Extra Claims**		**Fee ($)**		**Fee Paid ($)**
20	-20 or HP =	0	x	100.00	=	0.00

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims		**Extra Claims**		**Fee ($)**		**Fee Paid ($)**
3	-3 or HP =	0	x	100.00	=	0.00

HP = highest number of independent claims paid for, if greater than 3.

Multiple Dependent Claims

Fee ($)	**Fee Paid ($)**
820.00	0.00

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is $400 ($200 for small entity) ($100 for micro entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets		**Extra Sheets**		**Number of each additional 50 or fraction thereof**		**Fee ($)**		**Fee Paid ($)**
25	- 100 =	0	/ 50 =	0 (round **up** to a whole number)	x	400.00	=	0.00

4. OTHER FEE(S)

	Fees Paid ($)
Non-English specification, $130 fee (no small or micro entity discount)	0.00
Non-electronic filing fee under 37 CFR 1.16(t) for a utility application, $400 fee ($200 small or micro entity)	0.00
Other (e.g., late filing surcharge): late surcharge	160.00

SUBMITTED BY

Signature	/Vishal V. Khatri/	Registration No. (Attorney/Agent) 51,873	Telephone 202-879-3607
Name (Print/Type)	Vishal V. Khatri		Date May 21, 2020

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/AIA/122 (08-12)
Approved for use through 03/31/2021. OMB 0651-0035
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

CHANGE OF CORRESPONDENCE ADDRESS
Application

Address to:
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Application Number	16/539,501
Filing Date	August 13, 2019
First Named Inventor	Kevin W. Dinn
Art Unit	(unassigned)
Examiner Name	(unassigned)
Attorney Docket Number	011844-0029-999

Please change the Correspondence Address for the above-identified patent application to:

☒ The address associated with Customer Number: 20583

OR

☐ Firm or Individual Name

Address

City	State	Zip

Country

Telephone	Email

This form cannot be used to change the data associated with a Customer Number. To change the data associated with an existing Customer Number use "Request for Customer Number Data Change" (PTO/SB/124).

I am the:

☐ Applicant

☐ Attorney or agent of record. Registration Number _____.

☒ Registered practitioner named in the application transmittal papers who acts in a representative capacity under 37 CFR 1.34. See 37 CFR 1.33(a)(1). Registration Number 51,873.

Signature /Vishal V. Khatri/

Typed or Printed Name Vishal V. Khatri

Date March 11, 2020 | Telephone 202-879-3607

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of _____forms are submitted.

This collection of information is required by 37 CFR 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Acknowledgement Receipt

EFS ID:	38838318
Application Number:	16539501
International Application Number:	
Confirmation Number:	1802
Title of Invention:	Process and Apparatus for Selecting an Item From a Database
First Named Inventor/Applicant Name:	Kevin W. Dinn
Customer Number:	20853
Filer:	Vishal Vincent Khatri/Kristi Hutchison
Filer Authorized By:	Vishal Vincent Khatri
Attorney Docket Number:	011844-0029-999
Receipt Date:	11-MAR-2020
Filing Date:	13-AUG-2019
Time Stamp:	16:54:48
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Change of Address	16539501AddressChange.PDF	40173 8678262cd58132c5291a15ba73d97c09038e76bb	no	1

Warnings:

Information:	
Total Files Size (in bytes):	40173

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Organization OPAP/IPD Mail Bldg/Room

United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA. 22313-1450
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0000355069 OCT. 22 2019

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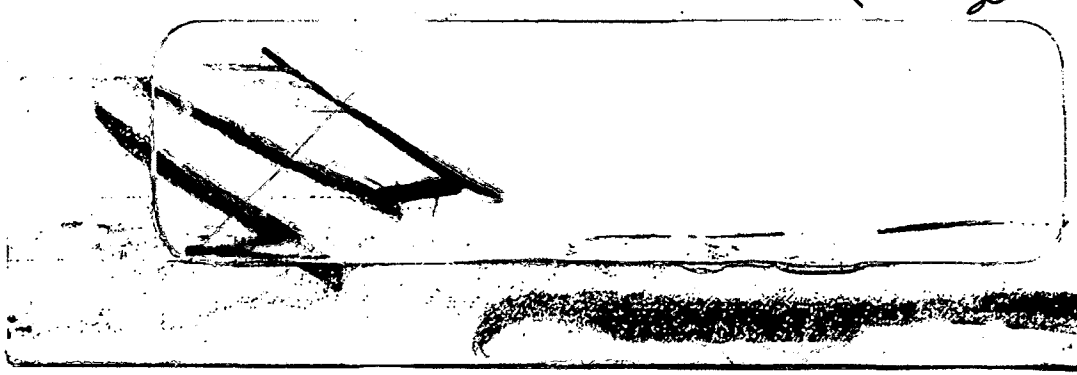

OPAP AKIMA-7
NOV 0 1 2019
PATENT OFFICE

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
16/539,501	08/13/2019	2143	0.00	011844-0029-999	35	4

CONFIRMATION NO. 1802

FILING RECEIPT

20853
JOHN J BYRNE
SUITE 504
2001 JEFF DAVIS HWY
ARLINGTON, VA 22202

Date Mailed: 10/22/2019

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Kevin W. Dinn, Mount Kuring-Gai, New South Wales, AUSTRALIA;

Applicant(s)

Kannuu Pty Ltd., Mount Kuring-Gai, New South Wales, AUSTRALIA;

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 16/226,109 12/19/2018 ABN
which is a CON of 15/791,992 10/24/2017 ABN
which is a CON of 15/232,511 08/09/2016 PAT 9836489
which is a CON of 14/627,914 02/20/2015 PAT 9436354
which is a CON of 14/166,465 01/28/2014 PAT 8996579
which is a CON of 13/736,548 01/08/2013 PAT 8676852
which is a CON of 13/349,204 01/12/2012 PAT 8375058
which is a CON of 11/990,338 08/26/2009 PAT 8140560
which is a 371 of PCT/AU2006/001151 08/11/2006

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.)
AUSTRALIA 2005904378 08/12/2005 No Access Code Provided

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 08/22/2019
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/539,501**
Projected Publication Date: To Be Determined - pending completion of Missing Parts
Non-Publication Request: No
Early Publication Request: No
Title

Process and Apparatus for Selecting an Item From a Database

Preliminary Class

715

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

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The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/539,501	08/13/2019	Kevin W. Dinn	011844-0029-999

CONFIRMATION NO. 1802

20853
JOHN J BYRNE
SUITE 504
2001 JEFF DAVIS HWY
ARLINGTON, VA 22202

FORMALITIES LETTER

OC000000110610163

Date Mailed: 10/22/2019

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.
- The application search fee must be submitted.
- The application examination fee must be submitted.
- Additional claim fees of $ **3180** as an undiscounted entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due.
- Surcharge as set forth in 37 CFR 1.16(f) must be submitted.
  The surcharge is due for any one of:
  - late submission of the basic filing fee, search fee, or examination fee,
  - late submission of inventor's oath or declaration,
  - filing an application that does not contain at least one claim on filing, or
  - submission of an application filed by reference to a previously filed application.

SUMMARY OF FEES DUE:

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- $ **300** basic filing fee.
- $ **160** surcharge.
- $ **660** search fee.
- $ **760** examination fee.
- $ **460** for **1** independent claims over 3.
- $ **1900** for **19** total claims over 20.

- $ **820** for multiple dependent claim surcharge.
- $(**0**) previous unapplied payment amount.
- $ **5060** TOTAL FEE BALANCE DUE.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

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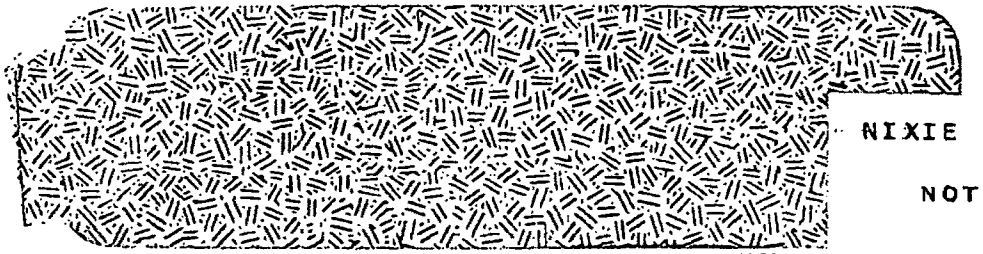

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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 16/539,501

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	300
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	660
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	760
TOTAL CLAIMS (37 CFR 1.16(i))	39 minus 20 =	* 19			OR	x 100 =	1900
INDEPENDENT CLAIMS (37 CFR 1.16(h))	4 minus 3 =	* 1				x 460 =	460
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							820
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	4900

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE($)	ADDITIONAL FEE($)		RATE($)	ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
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Date Mailed: 10/22/2019

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/jtruong/

MULTIPLE DEPENDENT CLAIM FEE CALCULATION SHEET

Substitute for Form PTO-1360
(For use with Form PTO/SB/06)

Application Number	Filing Date
16539501	

Applicant(s) Kevin Dinn

* May be used for additional claims or amendments

CLAIMS	AS FILED		AFTER FIRST AMENDMENT		AFTER SECOND AMENDMENT	
	Indep	Depend	Indep	Depend	Indep	Depend
1	1					
2		1				
3		2				
4		2				
5		(1)				
6		(1)				
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20		2				
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Total Indep	4		0		0	
Total Depend	35	↵	0	↵	0	↵
Total Claims	39		0		0	

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
16/539,501	08/13/2019	2143	0.00	011844-0029-999	35	4

CONFIRMATION NO. 1802

FILING RECEIPT

20853
JOHN J BYRNE
SUITE 504
2001 JEFF DAVIS HWY
ARLINGTON, VA 22202

OC000000110610182

Date Mailed: 10/22/2019

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

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Inventor(s)

Kevin W. Dinn, Mount Kuring-Gai, New South Wales, AUSTRALIA;

Applicant(s)

Kannuu Pty Ltd., Mount Kuring-Gai, New South Wales, AUSTRALIA;

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 16/226,109 12/19/2018 ABN
which is a CON of 15/791,992 10/24/2017 ABN
which is a CON of 15/232,511 08/09/2016 PAT 9836489
which is a CON of 14/627,914 02/20/2015 PAT 9436354
which is a CON of 14/166,465 01/28/2014 PAT 8996579
which is a CON of 13/736,548 01/08/2013 PAT 8676852
which is a CON of 13/349,204 01/12/2012 PAT 8375058
which is a CON of 11/990,338 08/26/2009 PAT 8140560
which is a 371 of PCT/AU2006/001151 08/11/2006

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.)
AUSTRALIA 2005904378 08/12/2005 No Access Code Provided

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Permission to Access Search Results: Yes

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The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/539,501**
Projected Publication Date: To Be Determined - pending completion of Missing Parts
Non-Publication Request: No
Early Publication Request: No
Title

Process and Apparatus for Selecting an Item From a Database

Preliminary Class

715

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

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For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

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Title 35, United States Code, Section 184

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SAMSUNG EX1024, Page 637 of 689

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This application is a CON of 16/226,109 12/19/2018
which is a CON of 15/791,992 10/24/2017 ABN
which is a CON of 15/232,511 08/09/2016 PAT 9836489
which is a CON of 14/627,914 02/20/2015 PAT 9436354
which is a CON of 14/166,465 01/28/2014 PAT 8996579
which is a CON of 13/736,548 01/08/2013 PAT 8676852
which is a CON of 13/349,204 01/12/2012 PAT 8375058
which is a CON of 11/990,338 08/26/2009 PAT 8140560
which is a 371 of PCT/AU2006/001151 08/11/2006

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.)
AUSTRALIA 2005904378 08/12/2005 No Access Code Provided

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 08/22/2019
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/539,501**
Projected Publication Date: To Be Determined - pending completion of Missing Parts
Non-Publication Request: No
Early Publication Request: No
Title

Process and Apparatus for Selecting an Item From a Database

Preliminary Class

715

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

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Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

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This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop

technology, manufacture products, deliver services, and grow your business, visit http://www.SelectUSA.gov or call +1-202-482-6800.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/539,501	08/13/2019	Kevin W. Dinn	011844-0029-999

CONFIRMATION NO. 1802

20853
JOHN J BYRNE
SUITE 504
2001 JEFF DAVIS HWY
ARLINGTON, VA 22202

FORMALITIES LETTER

OC000000110610163

Date Mailed: 08/22/2019

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.
- The application search fee must be submitted.
- The application examination fee must be submitted.
- Additional claim fees of $ **3180** as an undiscounted entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due.
- Surcharge as set forth in 37 CFR 1.16(f) must be submitted.
  The surcharge is due for any one of:
  - late submission of the basic filing fee, search fee, or examination fee,
  - late submission of inventor's oath or declaration,
  - filing an application that does not contain at least one claim on filing, or
  - submission of an application filed by reference to a previously filed application.

SUMMARY OF FEES DUE:

The fee(s) required within **TWO MONTHS** from the date of this Notice to avoid abandonment is/are itemized below. No entity status discount is in effect. If applicant is qualified for small entity status, a written assertion of small entity status must be submitted to establish small entity status. (See 37 CFR 1.27). If applicant is qualified for micro entity status, an acceptable Certification of Micro Entity Status must be submitted to establish micro entity status. (See 37 CFR 1.29 and forms PTO/SB/15A and 15B.)

- $ **300** basic filing fee.
- $ **160** surcharge.
- $ **660** search fee.
- $ **760** examination fee.
- $ **460** for **1** independent claims over 3.
- $ **1900** for **19** total claims over 20.

- $ **820** for multiple dependent claim surcharge.
- $(**0**) previous unapplied payment amount.
- $ **5060** TOTAL FEE BALANCE DUE.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web, including a copy of this Notice and selecting the document description "Applicant response to Pre-Exam Formalities Notice". https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html

For more information about EFS-Web please call the USPTO Electronic Business Center at 1-866-217-9197 or visit our website at http://www.uspto.gov/ebc.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/jtruong/

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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/539,501	08/13/2019	Kevin W. Dinn	011844-0029-999

CONFIRMATION NO. 1802

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JOHN J BYRNE
SUITE 504
2001 JEFF DAVIS HWY
ARLINGTON, VA 22202

FORMALITIES LETTER

OC000000110610163

Date Mailed: 08/22/2019

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FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

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/jtruong/

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United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
16/539,501	08/13/2019	2143	0.00	011844-0029-999	35	4

CONFIRMATION NO. 1802

FILING RECEIPT

20853
JOHN J BYRNE
SUITE 504
2001 JEFF DAVIS HWY
ARLINGTON, VA 22202

OC000000110610182

Date Mailed: 08/22/2019

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Kevin W. Dinn, Mount Kuring-Gai, New South Wales, AUSTRALIA;

Applicant(s)

Kannuu Pty Ltd., Mount Kuring-Gai, New South Wales, AUSTRALIA;

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 16/226,109 12/19/2018
which is a CON of 15/791,992 10/24/2017 ABN
which is a CON of 15/232,511 08/09/2016 PAT 9836489
which is a CON of 14/627,914 02/20/2015 PAT 9436354
which is a CON of 14/166,465 01/28/2014 PAT 8996579
which is a CON of 13/736,548 01/08/2013 PAT 8676852
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which is a 371 of PCT/AU2006/001151 08/11/2006

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.)
AUSTRALIA 2005904378 08/12/2005 No Access Code Provided

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

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The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/539,501**
Projected Publication Date: To Be Determined - pending completion of Missing Parts
Non-Publication Request: No
Early Publication Request: No
Title

Process and Apparatus for Selecting an Item From a Database

Preliminary Class

715

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

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NOT GRANTED

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technology, manufacture products, deliver services, and grow your business, visit http://www.SelectUSA.gov or call +1-202-482-6800.

MULTIPLE DEPENDENT CLAIM FEE CALCULATION SHEET

Substitute for Form PTO-1360
(For use with Form PTO/SB/06)

Application Number	Filing Date
16539501	

Applicant(s) Kevin Dinn

* May be used for additional claims or amendments

CLAIMS	AS FILED		AFTER FIRST AMENDMENT		AFTER SECOND AMENDMENT	
	Indep	Depend	Indep	Depend	Indep	Depend
1	1					
2		1				
3		2				
4		2				
5		(1)				
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8		(1)				
9		(1)				
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Total Indep	4		0		0	
Total Depend	35	↵	0	↵	0	↵
Total Claims	39		0		0	

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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 16/539,501

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	300
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	660
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	760
TOTAL CLAIMS (37 CFR 1.16(i))	39 minus 20 =	* 19			OR	x 100 =	1900
INDEPENDENT CLAIMS (37 CFR 1.16(h))	4 minus 3 =	* 1				x 460 =	460
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							820
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	4900

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

PTO/AIA/15 (10-17)
Approved for use through 11/30/2020. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995 no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	011844-0029-999
First Named Inventor	Kevin W. Dinn
Title	Improved Process and Apparatus for ...
Priority Mail Express® Label No.	

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. [ ] **Fee Transmittal Form** (PTO/SB/17 or equivalent)
2. [ ] **Applicant asserts small entity status.** See 37 CFR 1.27
3. [ ] **Applicant certifies micro entity status.** See 37 CFR 1.29. Applicant must attach form PTO/SB/15A or B or equivalent.
4. [✓] **Specification** [*Total Pages* 16] Both the claims and abstract must start on a new page. *(See MPEP § 608.01(a) for information on the preferred arrangement)*
5. [✓] **Drawing(s)** (35 U.S.C. 113) [*Total Sheets* 9]
6. **Inventor's Oath or Declaration** [*Total Pages* 1] *(including substitute statements under 37 CFR 1.64 and assignments serving as an oath or declaration under 37 CFR 1.63(e))*
   a. [ ] Newly executed (original or copy)
   b. [✓] A copy from a prior application (37 CFR 1.63(d))
7. [✓] **Application Data Sheet** ** See note below.* See 37 CFR 1.76 (PTO/AIA/14 or equivalent)
8. **CD-ROM or CD-R** in duplicate, large table, or Computer Program *(Appendix)*
   [ ] Landscape Table on CD
9. **Nucleotide and/or Amino Acid Sequence Submission** *(if applicable, items a. – c. are required)*
   a. [ ] Computer Readable Form (CRF)
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      i. [ ] CD-ROM or CD-R (2 copies); or
      ii. [ ] Paper
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ACCOMPANYING APPLICATION PAPERS

10. [ ] **Assignment Papers** (cover sheet & document(s))
    Name of Assignee _____
11. [ ] **37 CFR 3.73(c) Statement** *(when there is an assignee)* [ ] **Power of Attorney**
12. [ ] **English Translation Document** *(if applicable)*
13. [ ] **Information Disclosure Statement** (PTO/SB/08 or PTO-1449)
    [ ] Copies of citations attached
14. [ ] **Preliminary Amendment**
15. [ ] **Return Receipt Postcard** *(MPEP § 503) (Should be specifically itemized)*
16. [ ] **Certified Copy of Priority Document(s)** *(if foreign priority is claimed)*
17. [ ] **Nonpublication Request** Under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent.
18. [ ] **Other:** _____

***Note:** (1) Benefit claims under 37 CFR 1.78 and foreign priority claims under 1.55 **must** be included in an Application Data Sheet (ADS).
(2) For applications filed under 35 U.S.C. 111, the application must contain an ADS specifying the applicant if the applicant is an assignee, person to whom the inventor is under an obligation to assign, or person who otherwise shows sufficient proprietary interest in the matter. See 37 CFR 1.46(b).

19. CORRESPONDENCE ADDRESS

[✓] The address associated with Customer Number: 20583 **OR** [ ] Correspondence address below

Name					
Address					
City		State		Zip Code	
Country		Telephone		Email	

Signature	/Vishal V Khatri/	Date	August 13, 2019
Name (Print/Type)	Vishal V. Khatri	Registration No. (Attorney/Agent)	51,873

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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IMPROVED PROCESS AND APPARATUS FOR SELECTING AN ITEM FROM A DATABASE

Cross Reference To Related Applications

This application is a continuation of U.S. Application No. 16/226,109, filed December 19, 2018, which is further a continuation of U.S. Application No. 15/791,992, filed October 24, 2017, which is a continuation of U.S. Application No. 15/232,511, filed August 9, 2016, now U.S. Patent No. 9,836,489 issued December 5, 2017, which is a continuation of U.S. Application No. 14/627,914, filed February 20, 2015, now U.S. Patent No. 9,436,354 issued June 18, 2015, which is a continuation of U.S. Application No. 14/166,465, filed January 28, 2014, now U.S. Patent No. 8,996,579 issued March 31, 2015, which is a continuation of U.S. Application No. 13/736,548, filed January 8, 2013, now U.S. Patent No. 8,676,852 issued March 18, 2014, which is a continuation of U.S. Application No. 13/349,204, filed on January 12, 2012, now U.S. Patent No. 8,375,058 issued February 12, 2013, which is a continuation of U.S. Application No. 11/990,338, filed August 26, 2009, now U.S. Patent No. 8,140,560, issued March 20, 2012, which is the National Phase application of International Application No. PCT/AU2006/001151, filed August 11, 2006, which designates the United States and was published in English, and which claims the benefit to Australian Provisional Application No. 2005904378, filed August 12, 2005. Each of the foregoing related applications, in their entirety, are incorporated herein by reference.

Field of the Invention

The present invention relates to an improved process and apparatus for selecting an item from a database, and more particularly, but not exclusively, relates to a method and apparatus for rapidly selecting items from a list of items identified by a text field.

Background of the Invention

There are many applications on computing devices which require selection from a list where the item identifier for the list is text based. These include selecting a contact from an address book, selecting a record from a database, selecting a word from a dictionary, etc.

The user of such systems has to enter enough information to narrow a search of the list down to a single entry to be selected. This usually entails entering several of the

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initial letters of the search term resulting in a smaller subset of the list, then scrolling through the subset to manually point out the desired item.

This can be a cumbersome process requiring the user to be able to enter any letter in their language's alphabet as well as possibly numbers and other symbols. This is particularly onerous on small, hand held devices such as mobile phones, personal digital assistants (PDAs), remote controls, etc.

On hand held devices with a keypad such as mobile phones (Figure 1), the entry of alphabetic characters as well as numerics and symbols is achieved through a cumbersome system of multiply pressing the 12 number keys (0 to 9 and "*" and "#"). This method has the disadvantages of:

- Being a complicated, unnatural system which needs to be learnt,
- Requiring accurate presses of generally very small buttons resulting in accidental pressing of adjacent buttons,
- Requiring the user to be able to read and discern very small labels on the buttons,
- Requiring constant shift of gaze between buttons and screen to track the input,
- Only allowing the entry of one character at a time, not a group of characters at a time.

Other handheld devices take input through a touch screen such as PDAs (Figure 2). These allow text input through generally two methods: an on-screen keyboard and handwriting recognition.

The on-screen keyboard method involves presenting an image of a keyboard on the screen. The buttons on this on-screen keyboard are too small to be selected using fingers so a stylus is required. This results in a slow, error prone selection of individual characters with the disadvantages:

- Access to numbers and additional symbols usually requiring at least two presses as they require the keyboard to go into another mode to allow access to them,
- Small key images are hard to see for those with any impairment of vision and hard to select for those with limited dexterity,
- Characters are only entered one at a time.

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Handwriting recognition systems have the disadvantage of a high error rate in recognizing characters unless either the system is trained with the user's handwriting or the user learns a set of distinctive ways to input letters that are amenable to the device's programming. This method has the disadvantages of:

- Needing a stylus for input,
- Being slow to enter each letter,
- Requiring a constant cycle of entry, checking of accuracy of the entry and correction of misinterpretation of entries,
- Characters are only entered one at a time.

Even using a fully fledged keyboard to specify the characters to select an object has disadvantages:

- It is still necessary to enter one character at a time,
- It is still necessary to enter enough characters to generate a manageable subset list and then select from it, the alternative would be to enter sufficient characters each time to uniquely identify the entry which may require almost all of the entry to be specified,
- Except for adept touch typists there is still a need to constantly move one's gaze between the keyboard and the screen.

There is need for an improved method of selecting items from a list.

Summary of the Invention

In accordance with a first aspect, the present invention provides a method of selecting database items from a database, the database items being indexed by a list of item identifiers, the method comprising the steps of:

generating an initial display including one or more parts of item identifiers for selection,

enabling selection of the one or more parts and in response to selection of the one or more parts,

generating a display of a further one or more parts for selection, and

enabling selection of the further one or more parts in order to add to the selected one or more parts to build a larger part or whole of an item identifier.

In one embodiment, the invention entails a method of selecting an item from a list indexed by a text based field. Preferably, the invention allows for selection from the list

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by presenting one or more word sections, (the item identifier parts in this embodiment), containing one or more characters, at a time in a list for the user to select from.

Preferably, the word sections presented are based on a knowledge of the text indices in the list and the likelihood of the word sections to be the ones the user wants to enter.

Preferably, where the list of expected word sections does not contain the desired entry the user is given an option to list "more" word sections and is presented with a new list which indicates the next most likely set of word sections.

Preferably, when a word section is selected, a new list of word sections is presented to form a continuation of the text selection based on the word sections selected so far being the start of the desired selection

Preferably, once all the word sections have been selected, the item in the list is identified and any associated action, such as presenting a telephone book contact's contact details, is carried out.

Preferably, the word sections are presented as labels on the screen to be selected by various methods depending on the type of device.

Preferably, where the device is a PC, the word sections would be selected by mouse presses or mapping to keyboard keys.

Preferably, where the device has a touch screen such as PDA or Tablet PC, the word sections would be selected by pointing at the labels with either a finger or stylus.

Preferably, where the device has a small screen and a joystick such as a mobile telephone or watch sized device, the word sections should be selectable from a menu which indicates which word section is selected for corresponding movements of the joystick.

Preferably, where the device has function keys with the ability to associate an on-screen label with a button press the word sections would be presented for selection as labels with corresponding function keys.

In accordance with a second aspect, the present invention provides a method of selecting database items from a database, the database items being indexed by a list of item identifiers, comprising the steps of enabling a display of one or more parts of item identifiers for selection, the item identifiers being generated on a display being chosen for generation in accordance with predetermined criteria.

In accordance with a third aspect, the present invention provides an apparatus for selecting database items from a database, the database items being indexed by a list of

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item identifiers, the apparatus comprising a display, an input means, a generating means for generating an initial display including one or more parts of item identifiers for selection, means for enabling selection via the input means of the one or more parts, means responsive to selection of the one or more parts for generating a display of a further one or more parts for selection, means enabling selection via the input means of the further one or more parts, and addition means to add the further one or more parts to the selected one or more parts to build a larger, or whole of an item identifier.

In accordance with a fourth aspect, the present invention provides an apparatus for selecting database items from a database, the database items being indexed by a list of item identifiers, comprising a means enabling a display of one or more parts of item identifiers for selection, the means selecting the item identifiers for display in accordance with predetermined criteria.

Brief Description of the Drawings

Features and advantages of the present invention will become apparent from the following description of embodiments thereof, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 is a representation of a traditional mobile telephone layout.

Figure 2 is a representation of a touch screen input device.

Figure 3 is a representation of a traditional address book at start of selection process. Image shows first four entries in address book with selection indicator over first one. There is no entry in search refinement field.

Figure 4 is a representation of a selection from reduced list of contacts from an address book using a traditional selection process. Image shows user has entered "je" to refine the search to a manageable number of entries and then used the cursor to move the highlight to specify "Jessie Lares"

Figure 5 is a representation of an opening joystick based selection menu using the present invention.

Figure 6 is a representation name partially specified using the present invention.

Figure 7 is a representation of an example table of words.

Figure 8 is a representation of an example structure of tree for words in example table.

Figure 9 is a representation of a touch screen option selection.

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Description of Preferred Embodiment

The following description of the present invention relates to selection of a contact from an address book of a mobile telephone. The invention is however not limited to this application and may be implemented on any device with computational processing ability on any list which is indexed by a text based value.

The conventional way of selecting a contact from an address book on a mobile telephone entails the user following the sequence:

1. The user starts the address book application and is presented with a the full list of all contacts in the address book, (Figure 3)
2. Using the multi-tap feature on the device to enter characters with multiple presses of keypad keys, the user enters the first letter of the name they want to find,
3. This results in the list of names presented changing from the entire address book to only those names starting with the specified letter,
4. The user can now decide to use the joystick to move the selection to the desired contact and select it (Figure 4), if however the list is still too long the user goes back to step 2 above to enter the next character and proceeds until the list is short enough to find the contact,
5. Once the contact is selected, their information is presented and the user is given the option of calling them, emailing them, etc.

In an embodiment of the current invention the above process can be streamlined greatly by presenting the user with the following sequence:

1. The user starts the address book application which is implemented based on the present invention, the user is presented with 4 strings in a circular menu indicating the strings are selected by movements of the joystick in the directions left, right, up and down (Figure 5), these initial four options are the four most likely word sections in the database at the start of a contact name based on an analysis of the frequency of words in the address book;
2. If the user sees the word section that starts, or is a continuation of, the contact they want to select they move the joystick in the indicated direction to select that word section, appending it to the name thus far

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specified. The next set of most likely word sections which continue the name thus far specified are then presented (Figure 6), if the selection is not complete the user repeats this step 2;

3. If the word section the user desires is not presented they activate the "more" function, in this case a press in of the joystick to be presented with the next most likely set of four options to continue the name thus far specified, the user then repeats step 2;
4. Once the user has completed the name the user is then presented with their information and the user is given the option of calling them, emailing them, etc.

Using an address book application implemented with the present invention as described above has the following advantages over the traditional system as described previously:

- There are significantly less key presses or movements of the joystick as the mostly letters are presented first and it is likely that it will be possible to specify several letters of the name at a time,
- Only the joystick has been used so there is no need to transfer the thumb or finger between buttons and risk mis-hitting buttons,
- The labels selected from are presented on the screen rather than being printed on the buttons meaning the user is able to maintain their gaze on the screen the entire time rather than constantly flick between the screen and the keypad,
- Another advantage of on-screen labels is that it is possible to increase the size of the labels to make them more readable for those with vision impairment, an option not possible for labels on small keypad keys.

It should be obvious to someone skilled in the art that the present invention has much broader application than just the example listed above, as well as a mobile phone, the present invention can be used to improve list selection on other devices including but not limited to personal computers, tablet PCs, PDAs, remote controls and small watch sized devices.

Also, as well as the above sample application the present invention can be used to select an item from any list which is indexed by a text based value. The list could be of any size from a handful of entries to a large database of thousands or even millions of

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entries. The list does not just have to be contacts in an address book, applications could include but are not limited to selection from any text indexed database, for example a list of products in an inventory, selection of word definitions from a dictionary, selection of answers from an FAQ (Frequently Asked Question) document, etc.

Implementation

Preferably the present invention would be implemented as software within an application which maintains or allows viewing of some list of information. The list would be accessible through an index field which is text based. The text may be based on any language or symbolic system as long as it can be represented on the screen for selection.

Table of Values

Figure 7 shows an example table of words which may be the text string indices from which a selection is to be made.

Hierarchical Tree

In order to facilitate selection from the list of text indices using the present invention, the list needs to be processed as a hierarchical tree of word sections. In one variation of the implementation of the present invention in software there may be a pre-processing phase where the list of indices is analysed and the hierarchical tree is generated and stored in some computer accessible memory to assist processing.

The hierarchical tree of word sections is an internal representation of the structure of the words in the list. Where words share the same starting letter or letters those words are added under the same node, where words diverge a branch in the hierarchical tree is formed. This process continues to form further entries and branches down the tree to correspond with the subsequent letters in the words.

As an example, the logical hierarchical tree structure for the list in Figure 7 is illustrated in Figure 8. As can be seen, where words have common letters in sequence they share a node in the tree structure, where the characters diverge (for example after the first "n" for "Andrew Jones" and "Anne Parkes") a branch in the tree is formed.

Node Rankings

Associated with each end node is a ranking value. In the most basic of systems this value would be one for each end node but in other systems it could be any number

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representing a ranking, for instance for a phone book application the number could be the number of times that contact was accessed giving more frequently used contacts higher priority.

For the branch nodes in the tree their rankling value is the sum of all the ranking values of the nodes immediately below them in the tree.

Presenting Options

In an implementation of the present invention, the system presents word section options. The number of options presented depends on the mode by which the options are being selected. On a touch screen the options may be in a 3 by 2 grid to be selected by a stylus (Figure 9)—in this case the system would be generating up to 5 word sections at a time leaving the sixth menu option to indicate "more" where none of the presented 5 options is applicable.

In the case of a menu driven by a joystick such as that which is commonly found on a mobile phone the system could present up to 4 word section options indicated by presses of the joystick in the four directions (left, right, up and down) and having a press in of the joystick to indicate "more".

Each word section option presented corresponds to a node in the notional hierarchical tree. In order to determine which nodes to present the system will use the following logic:

1. Exclude nodes which have already been presented (i.e. they have been presented to the user and the user has selected "more" to indicate none of those presented are appropriate)
2. Select the nodes with the highest ranking values
3. When assessing the ranking value subtract the ranking value of any nodes below this node in the tree that have been selected. For example, in Figure 8 ranking value for the node with the string "J" is 5 but if the node for "ohn_" is included in the selection the ranking for "J" should be treated as 2, the sum of the rankings of the unselected nodes.
4. Point 3 above means some iterations may be performed to select the optimum node set
5. Select up to the number of menu choices that are presentable.

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Thus for our example tree in Figure 8 if four word section are to be selected for a joystick based interface, the first four options would be:

WORD SECTION	RANKING VALUE
"An"	2
"John_"	3
"J"	2 (ranking of "J" minus ranking of "ohn_" which is presented separately)
"Peter Smith"	1

Figure 5 shows how this selection set may be represented on a joystick based interface.

If the user was to select the "John_" option then the options to be presented would be:

WORD SECTION	RANKING
"Smith"	1
"Sykes"	1
"Jones"	1

Figure 6 shows how this selection set may be represented on a joystick based interface.

If the user was to select the "An" option from the original menu then the options to be presented would be:

WORD SECTION	RANKING VALUE
"drew_Jones"	1
"ne_Parkes"	1

Once the user selects a word section that takes them to the end of the index then the item has been uniquely specified and the system can then perform the processing applicable to the application. In the example of a phone book system the user may be presented with options to initiate a phone call or send a text message to the contact.

As can be seen from the above example, even using just a joystick it is possible to very rapidly narrow a text based search to a single entry with very few joystick actions

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using the present invention. While the example presented is based on a trivial number of entries, the present invention provides a significant increase in efficiency of selections from lists with many more items as well.

It will be appreciated by persons skilled in the art that numerous variations and/or modifications may be made to the invention as shown in the specific embodiments without departing from the spirit or scope of the invention as broadly described. The present embodiments are, therefore, to be considered in all respects as illustrative and not restrictive.

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CLAIMS:

1. A method of selecting database items from a database, the database items being indexed by a list of item identifiers, the method comprising the steps of:

generating an initial display including one or more parts of item identifiers for selection,

enabling selection of the one or more parts and in response to selection of the one or more parts,

generating a display of a further one or more parts for selection, and

enabling selection of the further one or more parts in order to add to the selected one or more parts to build a larger part or whole of an item identifier.

2. A method in accordance with Claim 1, comprising the further step of iterating the selection steps until an item identifier is completed, and enabling selection of the item identifier to select the database item.

3. A method in accordance with Claim 1 or Claim 2, wherein the step of generating the initial display includes selecting the one or more parts to be displayed based on predetermined criteria.

4. A method in accordance with Claim 3, wherein the predetermined criteria is the frequency of selection of database items associated within the item identifier parts.

5. A method in accordance with Claim 3 or Claim 4, wherein the predetermined criteria is a ranking of the one or more parts in relation to a tree hierarchy classification of one or more parts of item identifiers.

6. A method in accordance with any one of the preceding claims, wherein the step of enabling display of one or more parts of item identifiers includes the step of displaying a plurality of parts of item identifiers.

7. A method in accordance with any one of the preceding claims, wherein the step of generating the display includes the step of generating a display of an entire item

identifier.

8. A method in accordance with any one of the preceding claims, wherein the item identifier includes one or more alphanumerics.

9. A method in accordance with Claim 8, wherein the item identifier is a text string.

10. A method in accordance with Claim 9, wherein the item identifier is a word.

11. A method in accordance with any one of the preceding claims, wherein the database is stored in a memory of a computing device.

12. A method in accordance with Claim 11, wherein the computing device is a mobile telephone.

13. A method in accordance with Claim 11, wherein the computing device is a PDA.

14. A method in accordance with Claim 12 or Claim 13, wherein the step of enabling selection allows selection of the one or more parts by way of a joystick.

15. A method of selecting database items from a database, the database items being indexed by a list of item identifiers, comprising the steps of enabling a display of one or more parts of item identifiers for selection, the item identifiers being generated on a display being chosen for generation in accordance with predetermined criteria.

16. A method in accordance with Claim 14, wherein a predetermined criteria is frequency of selection of the database item associated with the item identifier.

17. An apparatus for selecting database items from a database, the database items being indexed by a list of item identifiers, the apparatus comprising a display, an input means, a generating means for generating an initial display including one or more parts

of item identifiers for selection, means for enabling selection via the input means of the one or more parts, means responsive to selection of the one or more parts for generating a display of a further one or more parts for selection, means enabling selection via the input means of the further one or more parts, and addition means to add the further one or more parts to the selected one or more parts to build a larger, or whole of an item identifier.

18. An apparatus in accordance with Claim 17, the means enabling selection being arranged to enable iteration of the selection steps until an item identifier is completed, and also to enable selection of the item identifier when completed, in order to select the database item.

19. An apparatus in accordance with Claim 17 or Claim 18, wherein the means for generating the initial display is arranged to select the one or more parts to be displayed based on predetermined criteria.

20. An apparatus in accordance with Claim 19, wherein the predetermined criteria is the frequency of selection of database items associated with the item identifier parts.

21. An apparatus in accordance with Claim 19 or Claim 20, wherein predetermined criteria is a ranking of the one or more parts in relation to a tree hierarchy classification of one or more parts of item identifiers.

22. An apparatus in accordance with Claim 21, including memory means storing the tree hierarchy.

23. An apparatus in accordance with any one of Claims 17 to 22, wherein the means enabling the display of one or more parts of item identifiers is arranged to display a plurality of parts of item identifiers.

24. An apparatus in accordance with any one of Claims 17 to 23, wherein the means enabling the display is arranged to enable a display of entire item identifier.

25. An apparatus in accordance with any one of Claims 17 to 24, wherein the item identifier includes one or more alphanumerics.

26. An apparatus in accordance with Claim 24, wherein the item identifier is a text string.

27. An apparatus in accordance with Claim 25, wherein the item identifier is a word.

28. An apparatus in accordance with any one of Claims 17 to 27, including memory means storing the database.

29. An apparatus in accordance with Claim 28, being a mobile telephone.

30. An apparatus in accordance with Claim 27, being a PDA.

31. An apparatus in accordance with Claim 29 or Claim 30, wherein the input means is a joystick.

32. An apparatus for selecting database items from a database, the database items being indexed by a list of item identifiers, comprising a means enabling a display of one or more parts of item identifiers for selection, the means selecting the item identifiers for display in accordance with predetermined criteria.

33. An apparatus in accordance with Claim 32, wherein the predetermined criteria is frequency of selection of the database item associated with the item identifier.

34. A computer programme including instructions for controlling a computing device to implement a method in accordance with any one of Claims 1 to 16.

35. A computer readable medium providing a programme in accordance with Claim 34.

ABSTRACT OF THE DISCLOSURE

The present invention relates to a method and apparatus for selecting database items from a database, where the database items are indexed by a list of item identifiers. The item identifiers may be in the form of text. An initial display is generated which includes one or more parts of the item identifiers. Selection of the one or more parts may be made and results in the generation of a display of a further one or more parts for selection. The further one or more parts may be selected in order to add to the selected one or more parts to build a larger part or whole of an item identifier. Selection from a large list of item identifiers may be carried out in a relatively short time period.

DECLARATION BY INVENTOR UNDER 37 C.F.R. §1.63 FOR PATENT UTILITY APPLICATION

for use with Application Data Sheet (PTO/AIA/14) – Equivalent to PTO/AIA/01

Title of Invention	Improved Process and Apparatus for Selecting an Item from A Database

As the below named inventor, I hereby declare that:

This Declaration is directed to:

- ☐ the attached application, or
- ☑ United States Application or PCT International Application No. 13/736,548 filed on January 8, 2013

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby state that I have reviewed and understand the contents of the above-identified application, including the claims. I acknowledge the duty to disclose all information known to me to be material to patentability as defined in 37 C.F.R. §1.56.

I hereby acknowledge that any willful false statement made in this Declaration is punishable under 18 U.S.C. §1001 by fine or imprisonment of not more than five (5) years, or both, and that any willful false statement may further jeopardize the validity of this application or any patent issued thereon.

Legal Name of Inventor

Inventor: Kevin W. Dinn Date: 28 Jan 2013

Signature:

Attorney Reference: 011844-0015-999 Client Reference:

Electronic Acknowledgement Receipt

EFS ID:	36861828
Application Number:	16539501
International Application Number:	
Confirmation Number:	1802
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First Named Inventor/Applicant Name:	Kevin W. Dinn
Customer Number:	20583
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	0118440029999ADS.pdf	1256758 d169ddf70dccdc8bd8437a358962fd18ba96dc75	no	9

Warnings:

Information:					
2	Drawings-only black and white line drawings	0118440029999Drwgs.pdf	202672 88cf70f264086c9405b1babdea2ae1a8c689d670	no	9
Warnings:					
Information:					
3		0118440029999Application.PDF	749674 c2d32eedfcefc4d83ae45ca2608e09447747dffd	yes	18

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal of New Application	1	1
	Specification	2	12
	Claims	13	16
	Abstract	17	17
	Oath or Declaration filed	18	18

Warnings:	
Information:	
Total Files Size (in bytes):	2209104

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	011844-0029-999
	Application Number	
Title of Invention	Improved Process and Apparatus for Selecting an Item From a Database	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 — Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Kevin	W.	Dinn	

Residence Information (Select One) US Residency ● Non US Residency Active US Military Service

City	Mount Kuring-Gai, New South Wales	Country of Residence i	AU

Mailing Address of Inventor:

Address 1	2 Glenlee Close
Address 2	
City	Mount Kuring-Gai, New South Wales
State/Province	
Postal Code	2080
Country i	AU

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	20853		
Email Address		Add Email	Remove Email

Application Information:

Title of the Invention	Improved Process and Apparatus for Selecting an Item From a Database		
Attorney Docket Number	011844-0029-999	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	9	Suggested Figure for Publication (if any)	1

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	011844-0029-999
	Application Number	
Title of Invention	Improved Process and Apparatus for Selecting an Item From a Database	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	● Customer Number	US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	20583		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	16/226109	2018-12-19

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	011844-0029-999
	Application Number	
Title of Invention	Improved Process and Apparatus for Selecting an Item From a Database	

Prior Application Status	Abandoned		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
16/226109	Continuation of	15/791992	2017-10-24
Prior Application Status	Patented		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD) / Patent Number / Issue Date (YYYY-MM-DD)
15/791992	Continuation of	15/232511	2016-08-09 / 9836489 / 2017-12-05
Prior Application Status	Patented		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD) / Patent Number / Issue Date (YYYY-MM-DD)
15/232511	Continuation of	14/627914	2015-02-20 / 9436354 / 2015-06-18
Prior Application Status	Patented		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD) / Patent Number / Issue Date (YYYY-MM-DD)
14/627914	Continuation of	14/166465	2014-01-28 / 8996579 / 2015-03-31
Prior Application Status	Patented		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD) / Patent Number / Issue Date (YYYY-MM-DD)
14/166465	Continuation of	13/736548	2013-01-08 / 8676852 / 2014-03-18
Prior Application Status	Patented		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD) / Patent Number / Issue Date (YYYY-MM-DD)
13/736548	Continuation of	13/349204	2012-01-12 / 8375058 / 2013-02-12
Prior Application Status	Patented		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD) / Patent Number / Issue Date (YYYY-MM-DD)
13/349204	Continuation of	11/990338	2009-08-26 / 8140560 / 2012-03-20
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
11/990338	a 371 of international	PCT/AU2006/001151	2006-08-11

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button. Add

Foreign Priority Information:

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	011844-0029-999
	Application Number	
Title of Invention	Improved Process and Apparatus for Selecting an Item From a Database	

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)[i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove

Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)
2005904378	AU	2005-08-12	

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button. Add

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	011844-0029-999
	Application Number	
Title of Invention	Improved Process and Apparatus for Selecting an Item From a Database	

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	011844-0029-999
	Application Number	
Title of Invention	Improved Process and Apparatus for Selecting an Item From a Database	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1 Remove

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

● Assignee	Legal Representative under 35 U.S.C. 117	Joint Inventor
Person to whom the inventor is obligated to assign.	Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☒

Organization Name	Kannuu Pty Ltd.		
Mailing Address Information For Applicant:			
Address 1	2 Glenlee Close		
Address 2			
City	Mount Kuring-Gai, New South Wales	**State/Province**	
Country	AU	Postal Code	2080
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button. Add

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	011844-0029-999
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Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

Remove

If the Assignee or Non-Applicant Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1			
Address 2			
City		**State/Province**	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button. Add

Signature:

Remove

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Vishal V Khatri/			Date (YYYY-MM-DD)	2019-08-13
First Name	Vishal	Last Name	Khatri	Registration Number	51873

Additional Signature may be generated within this form by selecting the Add button. Add

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	011844-0029-999
	Application Number	
Title of Invention	Improved Process and Apparatus for Selecting an Item From a Database	

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1 The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3 A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent CooperationTreaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

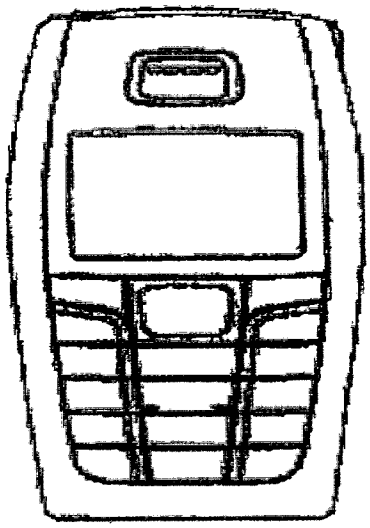

FIGURE 1

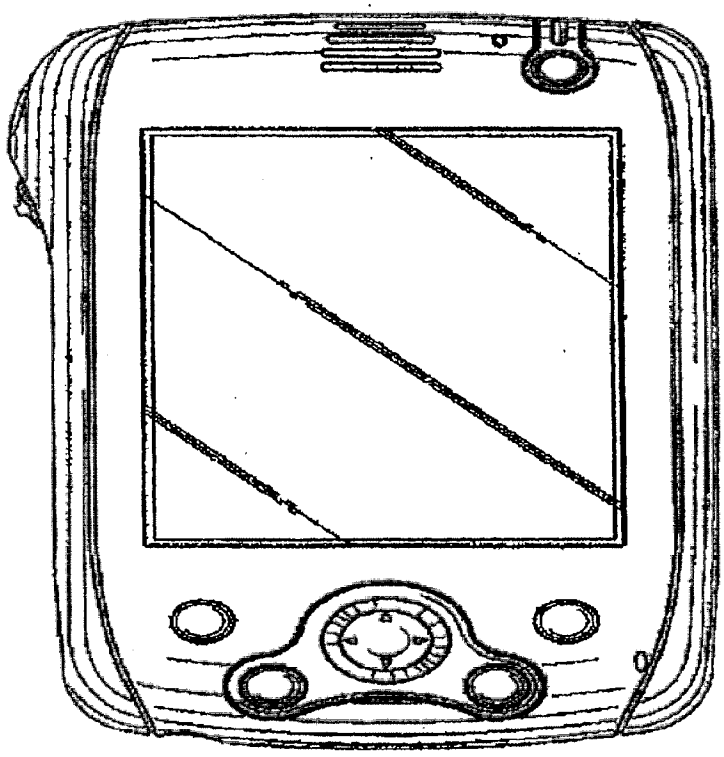

FIGURE 2

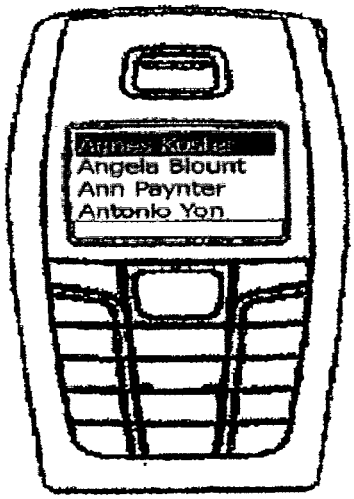

FIGURE 3

FIGURE 4

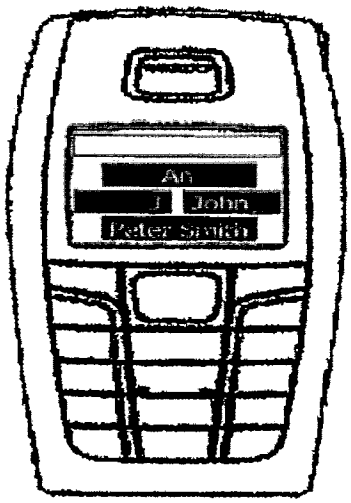

FIGURE 5

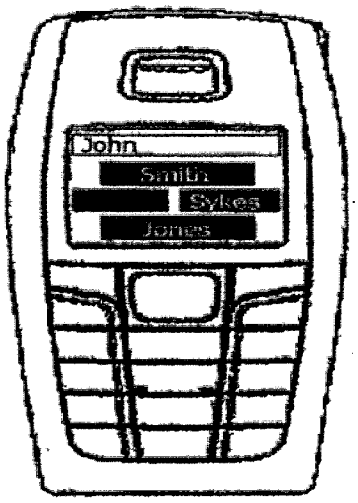

FIGURE 6

Andre Jones
Anne Parkes
John Smith
John Sykes
John Jones
Jane Smith
Jim Cook
Peter Smith

FIGURE 7

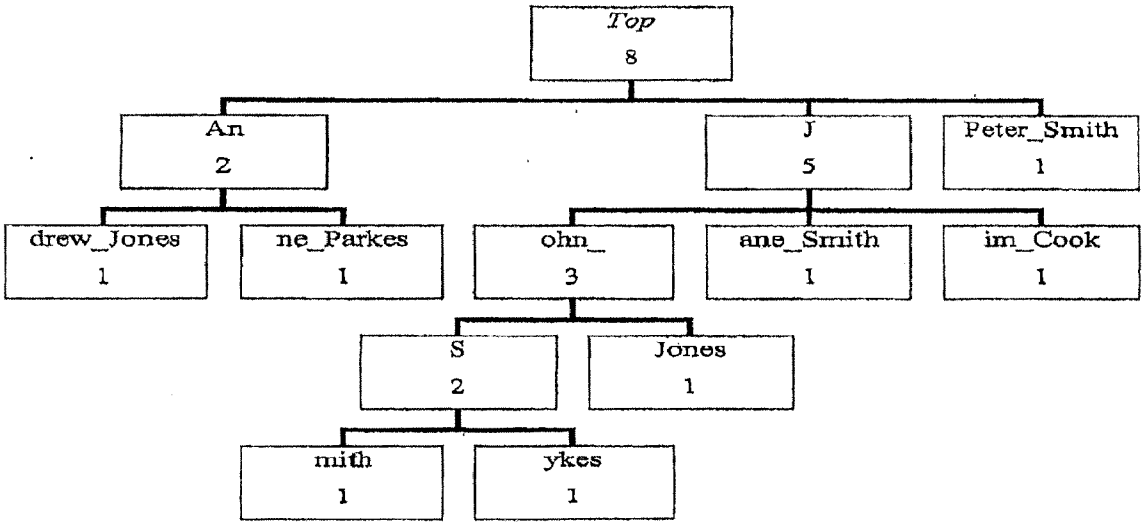
Top
8
An
2
J
5
Peter_Smith
1
drew_Jones
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FIGURE 8

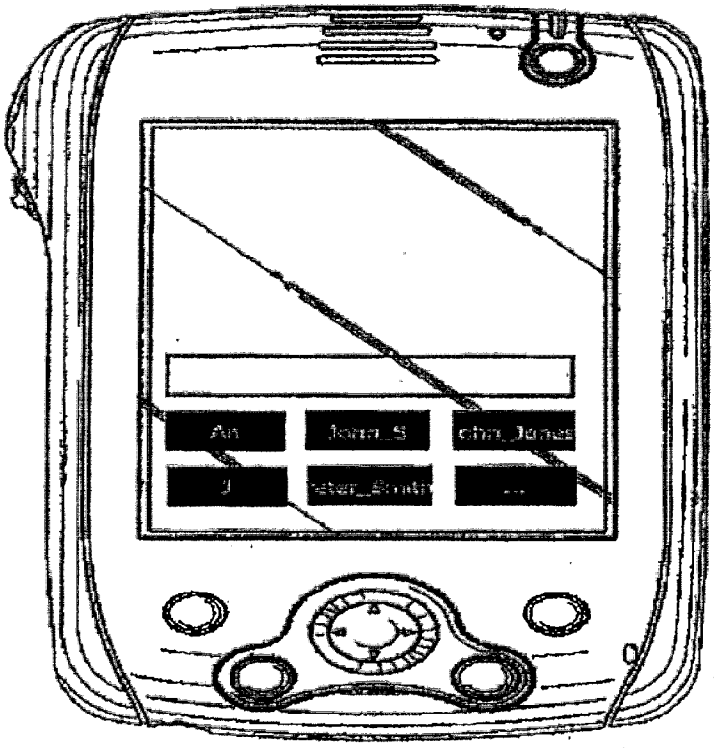

FIGURE 9