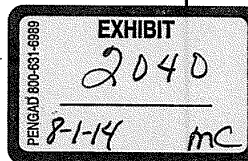

Docket No.
01-172

Declaration and Power of Attorney For Patent Application

English Language Declaration

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,



I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled
METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION

the specification of which

(check one)

☐ is attached hereto.

☒ was filed on March 13, 2001 as United States Application No. or PCT International

Application Number 09/804,728

and was amended on _____

(if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d) or Section 365(b) of any foreign application(s) for patent or inventor's certificate, or Section 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

Priority Not Claimed

_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/>
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/>
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/>

I hereby claim the benefit under 35 U.S.C. Section 119(e) of any United States provisional application(s) listed below:

<u>60/188,890</u>	<u>March 13, 2000</u>
(Application Serial No.)	(Filing Date)

_____	_____
(Application Serial No.)	(Filing Date)

_____	_____
(Application Serial No.)	(Filing Date)

I hereby claim the benefit under 35 U. S. C. Section 120 of any United States application(s), or Section 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. Section 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, C. F. R., Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

_____	_____	_____
(Application Serial No.)	(Filing Date)	(Status)
		(patented, pending, abandoned)

_____	_____	_____
(Application Serial No.)	(Filing Date)	(Status)
		(patented, pending, abandoned)

_____	_____	_____
(Application Serial No.)	(Filing Date)	(Status)
		(patented, pending, abandoned)

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.

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. *(list name and registration number)*

Thomas C. Wettach	Reg. No. 24,455
Christine L. Wettach	Reg. No. 41,373
Gerald J. Iwanejko, Jr.	Reg. No. 38,501
Frederick L. Tolhurst	Reg. No. 28,123

Send Correspondence to: **Cohen & Grigsby, P.C.**
11 Stanwix Street, 15th Floor
Pittsburgh, Pennsylvania 15222

Direct Telephone Calls to: *(name and telephone number)*
Gerald J. Iwanejko, Jr. (412) 297-4900

Full name of sole or first inventor Kannan Srinivasan	
Sole or first inventor's signature	Date
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Citizenship Indian	
Post Office Address 1056 Old Orchard Drive	
Gibsonia, Pennsylvania 15044	

Full name of second inventor, if any Michael I. Shamos	
Second inventor's signature	Date
Residence Pittsburgh, Pennsylvania	
Citizenship USA	
Post Office Address 605 Devonshire Street	
Pittsburgh, Pennsylvania 15213	

696.005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re Application of : Srinivasan et al.
Serial No. : 09/804,728 Examiner : J. Yehdega
Filed : March 13, 2001 Art Unit : 3622
For : METHOD AND APPARATUS FOR INTERNET
CUSTOMER RETENTION

**REVOCATION OF POWER OF ATTORNEY WITH NEW POWER OF ATTORNEY
AND CHANGE OF CORRESPONDENCE ADDRESS**

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

Sir:

Applicants hereby revoke all powers of attorney previously given.

Applicants hereby appoint Stanley D. Ference III (Reg. No. 33,879), an attorney
admitted to one or more bars of the states of the United States, their attorney to prosecute this
application and transact all business in the Patent and Trademark Office connected therewith.

Please change the correspondence address for the above-identified application to the
address associated with **Customer Number 35195**.

July 20,
Dated: June __, 2004
KS

Kannan Srinivasan
Kannan Srinivasan, Applicant

Dated: June __, 2004

Michael I. Shamos, Applicant

696.005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Srinivasan et al.
Serial No. : 09/804,728 Examiner : J. Yehdega
Filed : March 13, 2001 Art Unit : 3622
For : METHOD AND APPARATUS FOR INTERNET
CUSTOMER RETENTION

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Please change the correspondence address for the above-identified application to the address associated with Customer Number 35195.

Dated: June __, 2004

Kannan Srinivasan, Applicant

Dated: Aug 3
June __, 2004
Michael I. Shamos, Applicant

Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:		METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION		
First Named Inventor/Applicant Name:		Kannan Srinivasan		
Filer:		Stanley D. Ference/Rachel Lemke		
Attorney Docket Number:		696.005_CON		
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility application filing	1011	1	380	380
Utility Search Fee	1111	1	620	620
Utility Examination Fee	1311	1	250	250
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

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Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1250

Electronic Acknowledgement Receipt	
EFS ID:	13751012
Application Number:	13617581
International Application Number:	
Confirmation Number:	9286
Title of Invention:	METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION
First Named Inventor/Applicant Name:	Kannan Srinivasan
Customer Number:	35195
Filer:	Stanley D. Ference/Rachel Lemke
Filer Authorized By:	Stanley D. Ference
Attorney Docket Number:	696.005_CON
Receipt Date:	14-SEP-2012
Filing Date:	
Time Stamp:	15:33:58
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes				
Payment Type	Credit Card				
Payment was successfully received in RAM	\$1250				
RAM confirmation Number	3117				
Deposit Account					
Authorized User					
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

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1	Transmittal of New Application	696-005-CON-Transmittal.pdf	44326 cd3c07a07eeca0c0dfff391a63c320a6fb038a aa0	no	2
Warnings:					
Information:					
2	Specification	696-005-CON-Specification.pdf	1541020 d6a0145dc28ba3b049ec11821e3d4c7ab48 07d07	no	28
Warnings:					
Information:					
3	Claims	696-005-CON-Claims.pdf	59444 72dd810e17ad0a0c2d118938edbd77787 d8c830	no	2
Warnings:					
Information:					
4	Abstract	696-005-CON-Abstract.pdf	25720 48ed641c630b5a4aea39c199f10ca639193 996ef	no	1
Warnings:					
Information:					
5	Miscellaneous Incoming Letter	696-005-CON-Remarks.pdf	27959 8aeba22f61a6bdf9da0a08c0dc52d3eab08 695c3	no	2
Warnings:					
Information:					
6	Drawings-only black and white line drawings	696-005-CON-Drawings.pdf	84156 45a116bec98a319a6c08c075c784b2c4b05 9b94f	no	4
Warnings:					
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7	Oath or Declaration filed	696-005-CON-Declaration.pdf	79903 96ca418e8e6d73903b61329e91bd7c5ea41 a570f	no	3
Warnings:					
Information:					
8	Power of Attorney	696-005-CON-POA.pdf	62963 c9c49b2146c406c061e36d0e619b08078a09 57713	no	2
Warnings:					
Information:					
9	Fee Worksheet (SB06)	fee-info.pdf	32884 cc8461d5ea6f9da6dfce795cbf140b1fb00d 8620	no	2
Warnings:					
Information:					

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Total Files Size (in bytes):

1958375

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

Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

CONTINUATION FILING TRANSMITTAL

This is a request for the filing of a continuation application under 37 C.F.R. 1.53(b) of the following prior pending application:

Serial No.: 09/804,728
Filed on: March 13, 2001
of: Kannan Srinivasan et. al.
For: METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION

to which it claims priority under 35 U.S.C. § 120 and is assigned to Intellions, Inc., Mars, Pennsylvania, and who should be listed on any patent application publication as the Assignee of this continuation application.

Assignment

☒ The parent application (09/804,728) has been assigned to Intellions, Inc., and the assignment is recorded at Reel 015413 and Frame 0109 on November 29, 2004.

Correspondence Address Designation

☒ Please address all further communications to the address associated with **Customer No. 35195**.

ENCLOSURES

☒ Enclosed is a new specification which is fully supported and disclosed in the parent application. This specification comprises:

- ☒ 28 - pages of written description;
- ☒ 2 - pages of claims;
- ☒ 1 - pages of abstract;
- ☒ 4 - sheets of formal drawings;
- ☐ - sheets of informal drawings;

☒ Enclosed is a copy of the executed Declaration and Power of Attorney from the parent application (09/804,728); a Revocation of Power of Attorney With New Power of Attorney and Change of Correspondence Address to the undersigned from the parent application is also enclosed.

plus

- ☐ Information Disclosure Statement;
- ☐ PTO Form 1449
- ☐ Copies of all references listed on the PTO 1449 are not provided. Those references for which copies are not provided were cited in the parent application. 37 CFR 1.98(d).

- ☐ A preliminary amendment;
☒ Other: Remarks Accompanying Filing of Continuation Application;

FEE CALCULATION

The filing fee has been calculated as shown below:

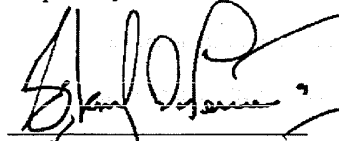
	SMALL ENTITY OR		OTHER THAN A	FEE
	SMALL ENTITY		SMALL ENTITY	
BASIC FEE Utility Patent	\$190	\$	\$380	\$380
SEARCH FEE Utility Patent	\$310	\$	\$620	\$620
EXAMINATION FEE Utility Patent	\$125	\$	\$250	\$250
ADDITIONAL FEES	RATE	FEE	RATE	FEE
TOTAL CLAIMS 11 MINUS 20 = 0	x 30 =	\$	x 60 =	\$
INDEP. CLAIMS 1 MINUS 3 = 0	x 125 =	\$	x 250 =	\$
<input type="checkbox"/> MULTIPLE DEP. CLAIMS	+ 195 =	\$	+ 390 =	\$
<input type="checkbox"/> ASSIGNMENT	+ 40 =	\$	+ 40 =	\$
<input type="checkbox"/> RULE 53 SURCHARGE	+ 65 =	\$	+ 130 =	\$

TOTAL \$1,250

FEE PAYMENT

- ☒ Applicant is paying by credit card the amount of \$1,250, to cover the filing fee. In the event of non-payment or improper payment of a required fee, the Commissioner is authorized to charge or credit **Deposit Account No. 05-5017** as required to correct the error.

Respectfully submitted,


Stanley D. Ference III
Reg. No. 33,779

Dated: September 14, 2012

Customer No. 35195
FERENCE & ASSOCIATES LLC
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Pittsburgh, Pennsylvania 15143
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09304733 031304

UNITED STATES PATENT APPLICATION

OF

Kannan SRINIVASAN

and

Michael I. SHAMOS

FOR

METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION

1-P1/75608. 2

1

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METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation of U.S. Patent Application Serial No. 09/804,728, entitled METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION, filed on March 13, 2001, which claims priority to U.S. Provisional Patent Application Serial No. 60/188,890, both of which are incorporated herein in their entirety.

[0002]

BACKGROUND OF THE INVENTION

Field of the Invention

[0003] The disclosed invention relates to marketing goods and services over the Internet and, in particular, detecting through controlled experiments a rate of loss of customers based on waiting time or purchase frequency.

Description of the Background

[0004] The Internet is growing at a prodigious rate. According to current estimates the amount of information transmitted over the Internet is doubling approximately every 100 days. This makes it likely that visitors to websites will encounter congestion and possibly lengthy waiting times to obtain service. Customers who are impatient will balk (leave the website), possibly in favor of a competitive site. It is desirable, therefore, to detect impatient customers and ensure that they are served prior to leaving.

[0005] Marketing in the Internet is of a very different character than traditional marketing. Visiting a physical store requires an investment of time on the part of the customer, and there are costs associated with leaving the stores, including the time to locate an alternative store, travel to the alternative store, and develop a new buyer/seller relationship. On the Internet, each of these functions is only a click away, and a customer once lost may never be regained. Such traditional forces as geographic proximity, which draw customer to brick-and-mortar stores, are absent on the Internet.

[0006] It is known in queuing at airports, for example, to provide separate queues for first-class and coach passengers. The reason is to provide a benefit to those who pay higher airfares, not to prevent balking. It is also known to divide airplane passengers into groups for boarding so the rear of the plane can be filled first to simplify loading. Here the reason is not to prevent balking but to optimize the time required to prepare the plane for takeoff.

[0007] It is known in the art of Internet marketing to observe when an existing customer has failed to make a purchase within a certain period of time, after which it is assumed that the customer has been "lost" or has gone inactive. Efforts are then made to awaken or recapture the customer with promotions, email or other contact. By that time, however, the customer may be irretrievably gone and may be purchasing regularly from another source.

[0008] It is not taught or suggested in the prior art to observe the customer's behavior dynamically during his period of interaction with the website to anticipate a possible defection and take steps to prevent it. The present invention comprises a method and apparatus for detecting and forestalling a defection before it occurs, as opposed to attempting to recapture the customer after he has gone.

[0009] In addition, with traditional commerce, customer retention methods are typically static, with change only occurring with major market changes. This has resulted in part because the costs associated with establishing and printing advertisements and coupons. Furthermore, it is difficult to offer different promotions to different purchasers in a traditional setting in which promotions are published or made publicly available.

[0010] However, e-commerce does not have to be so restricted. The introduction of e-commerce on the Internet has made it easier for Internet merchants to change customer retention methods by simply updating a Web page, email coupon or appropriate database/systems. The costs associated with printing catalogs and marking goods in a bricks-and-mortar setting are typically not present in eCommerce. In addition, it is also possible to offer different promotions to different customers without either customer learning the price that has been offered to the other.

[0011] Although it is possible for Internet merchants to update promotional offers at any time, typically they have not done so. One reason for sticking to static customer retention strategies is that is the accepted marketing strategy. Merchants are accustomed to keeping promotional offers static for a significant period of time. Moreover, in some cases, merchants have both brick-and-mortar shops and web shops, and want to keep prices, promotions and customer other retention methods in alignment. However, the primary reason why Internet merchants do not dynamically adjust customer retention methods with the ever-changing marketplace is that the merchants do not have the ability to dynamically determine optimal promotional levels.

[0012] The Internet is a dynamic marketplace. As e-commerce becomes a dominant force, the ability to dynamically adjust to and exploit changes in the Internet marketplace becomes critical. An enormous amount of detailed, disaggregate information is being routinely captured during Internet transactions. The ability to gather real-time information on transactions conducted on the Internet means that Internet merchants could use the information to dynamically update their websites to take advantage of market conditions. In particular, the availability of real-time transaction information opens up the possibility of dynamic pricing and marketing.

[0013] However, using the information to determine the dynamic, optimal price or promotional level is problematic. Although a great deal of real-time transactional information is available, businesses have no current method of analyzing the information in a manner that provides guidance to dynamically update pricing, marketing, promotions and other key market variables.

[0014] As enterprises move into high velocity environments in a networked economy, decisions based on data are ever more critical and can be leveraged to affect the bottom line. In this environment, information is highly valuable but comes with a high discount rate. That is, the value of the information rapidly depreciates. Current generation data analysis, profiling, and data mining methods do not effectively deal with this type of information, as current methods rely on a time-

consuming sequential process of data gathering, analysis, implementation and feedback.

[0015] Current systems, including data mining methodologies, are typically retrospective, creating a significant lag in analysis time. The dynamic nature of the Internet makes even recent information utilized in those methods obsolete.

[0016] Some efforts have been made to use computer systems to estimate supply and demand, to adjust prices to perceived market conditions, or to vary prices based on the identity and purchasing history of the customer.

[0017] U.S. Pat. No. 5,752,238 discloses a consumer-driven electronic information pricing mechanism including a pricing modulator and pricing interface contained with a client system. However, in this reference, the customer selects from a menu of pricing options. It does not disclose or teach a real-time determination of price sensitivities.

[0018] U.S. Pat. Nos. 5,822,736 and 5,987,425 disclose a variable margin pricing system and method that generates retail prices based on customer price sensitivity in which products are grouped into pools from a first pool for the most price sensitive products to a last pool for the least price sensitive products. However, the price sensitivities are determined manually by the storekeeper based on his subjective impressions and are not obtained in real-time.

[0019] U.S. Pat. No. 5,878,400 discloses a method and apparatus for computing a price to be offered to an organization based on the identity of the organization and the product sought, but does not teach or suggest real-time price determination.

[0020] U.S. Pat. No. 5,918,209 discloses a method and system for determining marginal values for perishable resources expiring at a future time, such as an airline seat, hotel room night, or rental car day for use in a perishable resource revenue management system. Data for the perishable resources and composite resources is loaded from the perishable resource revenue management system into the marginal value system. The marginal values for the perishable resources are determined using a continuous optimization function using interdependencies among the perishable resources and the composite resources in the internal data

structures. However, this reference does not disclose or teach elicitation of price sensitivities based on measuring customer behavior.

[0021] U.S. Pat. No. 5,926,817 discloses a client-server system and method for providing real-time access to a variety of database systems, one application of which is "dynamic price quoting." However, the reference uses this phrase to mean computing a single price to be quoted to a customer based on information about the user's requirements and data contained in the supplier's databases. It does not teach or suggest experimentation to determine marketplace customer price sensitivity.

[0022] In general, the prior art teaches that it is useful to attempt to measure supply and demand as an aid in determining prices and promotional levels to retain customers. It is also known to utilize previously accumulated facts about a purchaser to influence the price or discounted price at which a particular product should be offered to him. However, the applicants are not aware of any prior art in which price, promotional level, and other market sensitivities are measured directly through use of controlled real-time experiments.

[0023] In view of the foregoing, it can be appreciated that a substantial need exists for a method and system for dynamically determining optimal promotional levels, promotional timing, and customer retention methods for products and services.

SUMMARY OF THE INVENTION

[0024] The inability to effectively exploit Internet transaction information is overcome by the method and system of the present invention, which enable Internet businesses to conduct real-time, online experiments on a sample of transactions and determine marketplace sensitivities. Analysis of the results of the experiments reveal optimal values of key market decision variables such as price, content of banner ads, promotion levels, quantity discount schemes, etc. The experiments may be automatically conducted on an on-going basis, or may be conducted on a periodic basis. The resulting optimal values may also be implemented automatically. The system offers total flexibility to the users to conduct and control the experiments. The experimental process is based upon

rigorous statistical and econometric principles.

[0025] A manager using the method and system of the present invention can control the extent and speed with which market strategies are updated. The method and system of the present invention preferably allows managers to modify the nature of the experiment and the propagation of optimal values. Managers make the key business decisions, which are silently and seamlessly translated into the Internet merchant's eCommerce system.

[0026] For example, the profit-maximizing promotional offer determined from the dynamic experiment conducted by the system of the present invention might be 5% higher than the currently offered promotional offer. The manager might use this information for purely diagnostic purposes and thus gain insights into the price sensitivity of the market. Alternatively, the manager might automate the process of changing the offered promotion to the optimum promotion amount determined by the system of the present invention whenever the optimal profit for the promotion, for example, is 20% or more than current settings. In yet another embodiment, optimum promotional amounts may be constantly updated and implemented as the optimal amount changes. Thus, the method and system of the current invention can be used for a pure diagnostic purpose or to automate the setting of key market variables.

[0027] The dynamic experimentation used by the inventive system reveals the relative stability (or instability) of the networked market within which the business operates. The translation of an optimal value for a key variable (for example, promotional level or timing) to the entire market can be done on a real-time basis.

[0028] Continuous real-time modeling with appropriate integration to existing systems on critical factors like price, promotion, financing, content, discount schemes and product bundling give companies using the method and system of the present invention a huge competitive advantage.

[0029] The present invention includes a method of dynamically optimizing customer retention for a web marketing site is provided. That method includes specifying a permissible defunct threshold, specifying a range of offers to be included in a set of promotions, determining a probability that a customer will

become defunct in a predetermined period of time since the last interaction of that customer with the web site, and providing a promotion to a customer if the probability that the customer will become defunct in the predetermined period of time since the last interaction of that customer with the web site is greater than a predetermined threshold.

[0030] With these and other advantages and features of the invention that will become apparent hereinafter, the nature of the invention may be more clearly understood by reference to the following detailed description of the invention, to the appended claims and to the several drawings attached herein.

BRIEF DESCRIPTION OF THE DRAWINGS

[0031] The accompanying drawings, which are included to provide a further understanding of the invention and are incorporated in and constitute a part of this specification, illustrate embodiments of the invention and together with the description serve to explain the principles of the invention.

[0032] Figure 1 is a diagram illustrating the relationship between the sampling engine of the present invention and various applications that use the sampling engine;

[0033] Figure 2 illustrates one embodiment of a system architecture that may be used by the method and system of the present invention;

[0034] Figure 3 illustrates one embodiment of a software system data flow in the method and system of the present invention; and

[0035] Figure 4 is a flowchart illustrating the process used to perform dynamic customer retention by the method and system of the present invention.

DETAILED DESCRIPTION

[0036] Reference will now be made in detail to the embodiments of the invention, examples of which are illustrated in the accompanying drawings. Wherever possible, the same reference numbers will be used throughout the drawings to refer to the same or like components.

[0037] It is worth noting that any reference in the specification to "one embodiment" or "an embodiment" means that a particular feature, structure or characteristic described in connection with the embodiment is included in at least

one embodiment of the invention. The appearances of the phrase "in one embodiment" in various places in the specification are not necessarily all referring to the same embodiment.

[0038] Figure 2 illustrates one embodiment of a system architecture for the system of the present invention. In this embodiment, a potential customer visits a website run by an Internet merchant and conducts eCommerce by purchasing one or more products from the Internet merchant through the website.

[0039] In the embodiment shown, the customer uses an Internet browser 201 on his computer to access an eCommerce site operated by an Internet merchant. The Internet browser 201 may be any known to those skilled in the art, such as Microsoft Explorer or Netscape Communicator, for example. Preferably, HyperText Transfer Protocol (HTTP) or its more secure version HTTPS is used to communicate with the website. These are popular communication protocols used on the Internet to exchange information. Other communication protocols are known to those skilled in the art, and are intended to come within the scope of the present invention.

[0040] In an alternative embodiment not shown, the customer may be using a wireless handheld device to access the website.

[0041] Once the customer has accessed the eCommerce website, he can request information, such as current prices, from the website. The request sent by the browser might include information specific to the customer using the browser. Such information may include, for example, information derived from user logins, cookies stored on the user's machine and through the user's IP address.

[0042] The customer's browser 201 communicates with an Internet merchant's eCommerce system 205. The eCommerce system 205 is an integrated system that comprises different kinds of hardware and software sub-systems. The eCommerce system performs the functions needed to run the Internet merchant's Website.

[0043] Webservers are usually the entry point into an eCommerce system 205 from the perspective of a software program. The Webserver 210 on the eCommerce system is mainly responsible for delivering webpages to a browser

across the Internet. Webpages are the pages that the user sees in the browser. The Webserver 210 runs software that receives and processes requests for webpages from users. The webpages may be stored as files on a storage disk that the Webserver reads and sends to the requesting browser. This is shown by 216. Alternatively, Webserver 210 may generate the webpage by gathering information from other sources, such as software programs, and then send it to the browser. For example, Webpages are often generated with data retrieved from an Application Server 230.

[0044] The Webserver 210 may be any type of known webserver, such as Microsoft IIS, or Netscape NES. The architecture shown in Figure 2 also shows an optional database 220. The database may be used by the eCommerce system 205 to store Internet merchant information, such as customer account records. The database 220 may be any known database type, such as Oracle, Sybase, DB2, etc.

[0045] In addition, the Internet merchant may have one or more Legacy Systems 235. For example, all customer data may be stored on a Legacy System.

[0046] In many cases eCommerce systems interact with external systems, as shown by 240. For example, a trading exchange may receive catalogs from several external systems and store them in its own system. It may then present items from the catalogs to interested buyers. The eCommerce system 205 may communicate with external systems over the Internet or through a dedicated Frame Relay Circuit, or any other type of connection mechanism.

[0047] Because Webservers usually do not perform business logic data processing, the architecture typically includes an Application Server 230. The Application Server 230 may perform most business specific logic operations and send data to the Webserver, which processes the data and sends formatted output to the user for display. For example, the Application Server may retrieve a customer's bank account information, which is used as part of an Order Confirmation webpage generated by the Webserver.

[0048] Interprocess communications between the Application Server and the Webserver are typically supported by the underlying operating system. For

example, for JAVA based platforms, the communication protocol may be RMI/IOP (Remote Method Invocation/Internet Inter-ORB Protocol). The programs communicating via these methods may or may not reside on the same physical computer. Similar methods may be used for the communications between the Applications Server and the Client Module, which is described below.

[0049] Communications between a Legacy System and Application Server may be accomplished using commercially available software, such as IBM's MQ, Microsoft's MSMQ or Tibco software. The software used depends on the needs and the underlying operating systems.

[0050] The manager's console 265 contains software similar to browser software for displaying output from the inventive system to an employee of the Internet merchant, typically a management-level employee. It is used to manage the experiments run by the inventive system. It is used to configure experiments and display run-time progress data on the experiment. It may also be used to display data on past experiments.

[0051] The client module 250 of the present invention is integrated in the eCommerce system 205. Client Module 250 typically consists of an Integration Layer 251 and a Client Side Processing module 252. Collectively, it takes as input experiment parameter values and sends them to the Server Module 260 for processing. It receives output from the Server Module 260, and disseminates the output to the Application Server 230 and/or the Manager's Console 265 for display.

[0052] The Client Side Processing Module 252 is responsible for processing all the input received from the eCommerce System, typically through the Application Server 230, and delivering it to the Server Module 260. The input is typically a continuous stream of parameters used to conduct and manage an ongoing experiment. The Client Processing Module 252 establishes and maintains a secure communication channel with the Server Module and may also perform session management.

[0053] The Integration layer 251 helps the Client Side Processing module 252 run on a variety of systems. It acts as an interpreter between the eCommerce System and the Client Side Processing module 252. It may be different for

different systems. This enables the Client Side Processing module 252 to remain the same, no matter what type of operating system is being used. In an alternative embodiment, the Client Side Processing module may be developed for a specific eCommerce system and runs without an Integration Layer.

[0054] Communications between the Client Module 250 and the Server Module 260 typically use HTTPS to ensure security. Data may also be transmitted in other formats including eXtensible Markup Language (XML) format.

[0055] The Dynamic Optimization System 270 includes sub-systems, computers and communications systems, including Server Module 260, that are used to perform the sampling and resultant analysis. It receives input data, performs statistical calculations and feeds the output to the eCommerce system 205. Typically, the output from the Dynamic Optimization System 270 is used by the Application Server 230 in performing the business specific logic.

[0056] Server Module 260 may contain Logic Module 261, Sampling Engine 262 and Communications Module 263. Server Module 260 is responsible for receiving input from Client Module 250, performing the experimentation and analysis, and outputting results to Client Module 250. These actions may all be performed in a secure environment.

[0057] Dynamic Sampling Engine 262 contains statistical functionality that may perform the various experiments described herein. Logic Module 261 contains the algorithms that are used to perform various types of analyses on the sampled data.

[0058] The Communications module 263 is responsible for securely communicating data to and from the Client Module.

[0059] Database 275 may be used to store historical data and other data regarding the experiments for processing, report generation and future retrieval.

[0060] The architecture shown in Figure 2 is an ASP-based solution, where the Server Module 270 is hosted on a remote system with a network connection to the eCommerce system 205. In an alternative embodiment, the Dynamic Optimization System 270 may reside within the eCommerce system 205.

[0061] Figure 3 illustrates how data may flow through the inventive system. As shown by entity 360, an operator, who may be a management-level employee for

the Internet merchant, using the inventive system configures the Dynamic Optimization System 270 by inputting parameters into the system. For example, the employee may enter a promotional offer range and number of samples to be used in the experiments. The employee may also actively monitor the performance of the experiment(s).

[0062] These parameters are used as input into the Dynamic Optimization System 270 as shown by data 365. These parameters thus configure the sampling engine subsystem of the Dynamic Optimization System 270.

[0063] As shown by entity 301, a customer uses a browser to access an eCommerce website. When the customer makes a request, several different types of data items may be sent to the Webserver, as shown by 305. The Webserver processes the information at step 310. If the request from the customer does not require Application Server processing, then the Webserver can go ahead and generate the appropriate Webpage, as shown by steps 312-315. However, if additional processing is needed, the Webserver will pass on information to the Application Server at step 320. Based on the information provided by the Webserver, the Application Server processes the input and performs any needed calculations at step 325.

[0064] During step 325, the Application Server will determine whether it needs the Dynamic Optimization System 270 to process data. For example, the Dynamic Optimization System 270 may process data when there is a current ongoing experiment to determine the optimal price, optimal advertising content, or optimal promotion level, etc.

[0065] If the Application Server does not need the Dynamic Optimization System 270 to process information, it composes the requested information using input from its own calculations, databases and/or legacy systems, as shown by steps 330-335.

[0066] Otherwise, the Application Server makes a request to the Dynamic Optimization System 270 and passes on any information required by the Dynamic Optimization System 270 for performing the statistical calculations, as shown by step 340.

[0067] The Dynamic Optimization System 270 may use historical data in its calculations as shown by data 350. In addition, the parameters 365 entered by the Internet Merchant are used in the calculations that the Dynamic Optimization System 270 performs.

[0068] The Dynamic Optimization System 270 performs the calculations as required, and outputs the resulting data at step 345. The Application Server composes the requested information at step 335 using the output from 345.

[0069] If the manager is actively monitoring the progress of the experiment, he will be informed of the progress as shown by steps 370-360.

[0070] The sampling engine 262 of the Dynamic Optimization System 270 may be used by many different applications to obtain information about current market conditions. These applications use the sampling data to determine optimal pricing, promotions level, promotion timing, product bundling, lead time discounts, quantity discounts, price versus financing and type and content of banner ads, for example. The Logic Module contains the algorithms to perform the different types of analyses required by different applications. Other applications of the sampling data will be known to those skilled in the art and are intended to come within the scope of the present invention.

[0071] The dynamic sampling engine may be considered the core of the inventive system. As shown by Figure 1, it can be translated into modules for pricing, promotions, product bundling, yield management, lead time discounts, quantity discounts, price versus financing and banner advertisement content.

[0072] A promotion module is described below.

[0073] ***Dynamic Promotion to Mitigate Customer Defection or Attrition***

[0074] It is easy to change eCommerce promotions by simply updating a Web page. In addition, it is possible to present different promotions to different online customers without either customer learning the promotion that has been offered to the other. This may be accomplished by presenting different levels of promotion to different potential customers, for example. Because of these reasons, it is possible to perform controlled, real-time experiments on samples of the customer population to determine customer promotion sensitivities. This information can then be used

to determine real-time optimal promotion strategies for an entire customer population or for selected segments of the customer population. In addition, merchants may learn from the online experiments, and apply this learning to offline counterpart market strategies.

[0075] The sampling experiments conducted by the method and system of the present invention are designed to measure different customer inclinations. For example, one area of measurement may be to measure customer inclination to purchase a product at differing promotional levels. In this application, the amount of the promotion is deliberately varied by the inventive system during a sampling period, and statistics are kept by the system to determine what percentage of customers are likely to buy or exhibit interest in the product at the different promotional levels. The statistics typically include, for example, the number of customers who actually purchased the product at each promotional level.

[0076] Given the percentage of customers who buy, or who exhibit a quantifiable interest in, the product at each promotional level, the system is able to compute an optimal or near-optimal promotional level for the product. The optimal promotional level determined by the system is intended to optimize an economic variable, such as customer retention or profit. The economic variable to be optimized may be financial, such as profit or revenue. Alternatively, the economic variable may be another quantity of interest, such as market share, customer satisfaction, customer retention at the website, or utilization of manufacturing or shipping resources, for example. The optimization typically determines the promotion at which an economic variable is maximized, although other types of optimization, such as minimizing an economic variable, are possible using the method and system of the present invention.

[0077] In one embodiment, the objective function may weigh multiple criterions. For example, the user may be trying to optimize both profit and market share. The objective function may be defined to be 75% weighted toward profit optimization and 25% toward customer retention. The inventive system in this case will determine which price optimizes this weighted multi-criterion function.

[0078] The dynamic promotional level application allows companies to

determine optimal promotional level by running continuous real-time models on an appropriate sample population, which may be determined automatically by the sampling engine.

[0079] The present invention operates on the concept that the likelihood that a customer will return to a website decreases as the elapsed time from the last access of that website by that customer increases. Thus, the present invention includes a method and system of determining the likelihood that a customer will not return to a website and a method and system of providing an incentive to that customer to return to the website.

[0080] To determine the likelihood that a customer will not return to a website based on the length of time since that customer last accessed or transacted with the site, the present invention may perform a statistical analysis of past customer access frequency and the likelihood of retaining those customers based on that access frequency. Managers of the firm may explicitly state a time interval by which if a customer had failed to interact with the site, the customer is deemed to be defunct, wherein "defunct" indicates that the client is not expected to return to the web site. The term "interaction" may be defined as a visit to the site or purchase of an item or service from the site. (Based on historical data, the probability of defection conditional on lapsed time since last interaction can be calculated by determining the percentage of customers that return to the site after having no interaction with the site for a selected time period.) Typically the probability that a customer will return decreases as the lapse time increases.

[0081] In an example where a web merchant considers any customer who has not interacted with the site for six or more months to be defunct. Based on historical data, the probability that a customer becomes defunct when the customer has not interacted for one month may be, for example, 0.3. The probability of the customer becoming defunct rises to 0.6 by the end of three months.

[0082] Furthermore in this example, the merchant may select that when a probability of the customer becoming defunct is equal to 0.6, a threshold has been surpassed. Henceforth, that threshold will be referred to as a "critical threshold." Thus, the merchant may decide that when the likelihood of a customer not

returning to interact with the site exceeds a 0.6 likelihood, the merchant will take steps to retain that customer rather than permit the customer to become defunct. When a customer, therefore, has not interacted with the web site for a period of time corresponding to the time when historically only 0.6, or 60% of customers will return to interact with the web site, the merchant may offer a promotion to the customer to attract the customer back to the site to interact.

[0083] In a certain embodiment of the present invention, a method of providing an incentive to that customer to return to the website is provided. That method uses the critical threshold, which may have been determined by a user, and the defunct probability obtained through the previously described analysis of historical data. The method minimizes the cost of customer retention.

[0084] In one embodiment of the present invention, a customer that has not accessed the site within the defunct threshold period is proactively sought out and provided with an incentive to access the site and make a purchase therefrom. In that embodiment, the customer may be provided an electronic coupon by way, for example, of an email inviting the customer to accept a discount on a purchase made by the customer. Like any coupon, the electronic coupon may be redeemable only for selected goods or services and may be valid for a limited period of time.

[0085] In a certain embodiment of the present invention, the promotion level, or amount of discount offered in a coupon is sampled. Such sampling may be conducted by offering different amounts of discounts to various random samples of customers whose defunct probability exceeds the thresholds. For example, managers may consider a promotional discount from six to eight dollars for all customers with a defunct probability of 0.6 or higher. Sampling increments may then be determined. For example, if a sampling increment of one dollar is desired, discounts of six dollars, seven dollars, and eight dollars may be offered to three random samples of customers exceeding the threshold. Alternately, if a sampling increment of fifty cents is desired, discounts of six dollars, six dollars and fifty cents, seven dollars, seven dollars and fifty cents, and eight dollars may be offered to five different groups of customers.

[0086] The size of the random sample is determined based on the manager's levels of confidence intervals. These methods are known to those skilled in the art. Furthermore, the following statistical references are incorporated by reference in their entirety: (a) Ross (1997), A First Course in Probability, Prentice Hall, Upper Saddle River, NJ; (b) Gelman A., J. B. Carlin, H.S. Stern and D.B. Rubin (1995), Bayesian Data Analysis, Chapman & Hall, New York, NY; (c) Malhotra, N.K. (1993), Marketing Research, Prentice Hall, Englewood Cliffs, NJ; (d) Wedel, M and W.A. Kamakura (1998), Market Segmentation: Conceptual and Methodological Foundations, Kluwer Academic Publishers, Boston, MA; (e) Pudney (1989), Modeling Individual Choice: The Econometrics of Corners, Kinks and Holes, Basil Blackwell Limited, Oxford, United Kingdom; (f) Cinclair E. (1975), Introduction to Stochastic Processes, Prentice-Hall, Englewood Cliffs, NJ; (g) Kalbfleisch, J.D. and R.L. Prentice, The Statistical Analysis of Failure Time Data, John Wiley & Sons, New York, NY; and (h) Mitchell, T.M (1997), Machine Learning, McGraw- Hill, New York, NY. Those references describe statistical methods that may be utilized by the present invention.

[0087] Figure 4 illustrates a method of optimizing customer retention. At 410, the operator of the present invention determines whether he is interested in maximizing customer retention or maximizing profit by providing customers who are likely to become defunct with an incentive, such as a promotion, to return to interact with the web site. The operator specifies a permissible defunct threshold over which the loss of customers is unacceptably high. The operator may define defunct thresholds by segment where necessary. For example, the acceptable defunct threshold for customers purchasing more than \$1000 from the site in the past may be lower than the acceptable defunct threshold for customers purchasing more than \$50 from the site in the past. Thus, the sample may be divided by segments having different defunct thresholds. The operator will also specify the level, range and interval of the promotion to be offered for each segment.

[0088] At 415, the operator uses historical data to identify the probability that a customer will become defunct, or exit as a customer, for each segment to be sampled at a particular time since the customer last interacted with the site.

[0089] At 420, the operator determines whether the probability that an existing customer or group of customers will become defunct exceeds the desired defunct threshold based on the amount of time that has lapsed since their last interaction with the site. If the probability that the customer or group of customers are likely to have become defunct does not exceed the defunct threshold, then the present invention will wait an additional period of time at 423 and save data related to whether those customers interact with the web site during that time period at 425. If a customer does interact during that time, then there is no need to provide an incentive for that customer to return. Thus, the system will drop a customer who returns to interact from that sample at 428. That customer may be included in future iterations of the present invention; however, the time since last interaction will begin to toll once again from the most recent interaction time.

[0090] When a customer does not return to the site after the additional waiting period, the present invention will once again determine the likelihood that the customer will not return at 415.

[0091] When the defunct threshold is exceeded at 420, that customer may be passed to the dynamic sampling engine 262 described hereinbefore for a determination of the optimum promotional level to be offered. Experimentation utilizing the dynamic sampling engine 262 may be repeated periodically to ensure that the optimal promotion is dynamically optimized to regularly compensate for market changes. Thus, experiments utilizing the dynamic sampling engine 262 may be run monthly, weekly, daily, hourly, or more often, until the experimentation becomes, practically speaking, continuous. Dynamic optimization, therefore, is a result of continuous experimentation. The optimum promotion may, furthermore, be propagated to the web at 435 for offering to customers each time a new optimum promotion level is discovered by the dynamic sampling engine. Alternately either the system or the operator may propagate the optimum promotion each time the optimum promotion level changes by a particular amount from the previous promotion level such as, for example, \$0.25. Data from the web 432, such as purchase, timing, and use of promotions by customers may also be provided from the web 435 to the dynamic sampling engine for use in future

samples.

[0092] The result of the experimentation performed by the dynamic sampling engine is an indication of the current probability that a customer will exit the site and not return to the site conditioned on the lapse time since the last interaction by the customer and the amount of the promotion offered at 440. At 445, the process 400 ends, however, the process 400 may be repeated at regular intervals.

[0093] As an example of the operation of the dynamic sampling engine, let "CPRj" be the Cost of Promotion for product j ("PRj"). Let the random sample for each promotion be a constant "m". Let "fj" be the fraction of sample customers who accept the promotion in the defined time and interact with the site. Let "V" be the lifetime value or expected profit to be made from the returning customer calculated from historical data. Based on the experimental information, the objective is to maximize profit which may be defined by the equation: Maximum Profit for Product PRj is equal to the number of customers sampled times the fraction of customers who accept the promotion times the difference between the normal profit made from the product less the profit lost through the promotion or $m f_j (PR_j - CPR_j)$.

[0094] It is noted that the profit lost through the promotion may not be the entire amount offered but, rather, may be equal to the ratio of cost to sales price. Thus, a promotion of \$8 will include a lost profit of \$6.40 where cost of the product is 80% of the sales price.

[0095] Taking a specific example, consider promotions of six, seven and eight dollars. The costs of the promotions to the firms are \$4.8, \$5.6 and \$6.4, respectively. Given the constant sample size of 1000 for each promotion, the experiment reveals that 0.3, 0.4 and 0.41 fractions of the samples respond to the promotions. The lifetime value or profit of a returning customer is \$25 which has been obtained from historical data. Therefore, the profit for various promotions are as follows: the profit of a promotion of \$6 = $(1000 \times 0.3 \times [25 - 4.8]) = \6060 , the profit of a promotion of \$7 = $1000 \times 0.4 \times [25 - 5.6] = \7760 ; and the profit of a promotion of \$8 = $1000 \times 0.41 [25 - 6.4] = 7626$, therefore, the optimal promotion is at the \$7 level because that level offers the highest profit.

[0096] The Internet merchant may also determine the customer population. In one embodiment, the population may include every potential customer that visits the web site. Alternatively, the customer population may be clustered or segmented, and only customers who meet a certain profile are sampled. As an example, customers may be clustered into socioeconomic groups, and only customers in certain groups are sampled when determining an optimal price. Alternatively, the entire customer population may be segmented, with separate experiments run on each segment determining an optimal price for each segment. As another example, customers may be identified for sampling based upon purchasing history or other accumulated data. For example, the segmentation scheme may cluster customers based on purchase history: heavy buyers, light buyers and non-buyers. Segments may be determined from a combination of demographic variables and prior purchase histories.

[0097] The result of utilizing that method is a determination of how long to wait before offering a discount in order to retain a customer and what the optimal promotional offer is.

[0098] The representative may then input promotion amounts to be sampled. Those sample promotion amounts typically include the current promotion amount being offered, and a number of specified optional promotion amounts both above and below the current promotion amount. Preferably, a sufficiently large number of promotion amount points are tested so that there are enough promotion amount points to determine a smooth curve in the profit function. In an alternative embodiment, the representative may enter a range of promotional amounts to be sampled, and sampling intervals and the system may determine individual promotional amounts to be sampled in that range at specified intervals. The optimal promotion may be automatically propagated to the entire population of customers who exceed the defunct probability.

[0099] The option should clearly state the objective function. The objective function, for example, can be maximized customer attention or, as in the numerical example we presented hereinbefore, it could be maximum profit from defunct customers. It is also important for the managers to specify the exit-probability

thresholds. For example, they might determine that if the threshold probability is 0.3, that means that any time the probability of defunct exceeds 0.3, they should immediately adopt more promotions so that they can pull the defunct customers back and attract them to the site.

[0100] The probabilities might furthermore change by the segments. For example, large important customers might have thresholds of 0.3, while less important people who buy less could have a threshold of 0.5. Thus, the operator maybe willing to accept a higher probability of exit with customers who buy less because these customers are not so important. The threshold could be based on purchase history, that is somebody that bought a lot in the past is more important and the operator may wish to accept a threshold of 0.3. Others buy less, so the operator may be willing to accept a high threshold of 0.5. Another sample could be based on pure segmentation. For example, high-income customers may be important because they are potentially highly profitable, therefore, operators accept a very low threshold of their exit. An operator may specify this for each segment if they are doing a segment basis analysis. The third item that they may specify is the range of promotion, which in this example, will be \$6 through \$8. Next, the operator will determine the intervals. Those intervals may, for example, be in \$1 increments such that the samples would include \$6, \$7, and \$8. Alternately, the intervals may be in \$0.5 increments providing samples of \$6, \$6.50, \$7, \$7.50 and, \$8. They may also specify the desired levels of confidence intervals. The next step is to use the historical data to identify the probability of exit or the probability of a customer becoming defunct and not returning to the site. That may be done on a segment-by-segment basis based on the historical data. For example, for a given customer at a point in time, a determination may be made as to whether the exit or defunct probability exceeds the desired threshold. Again, taking the example of a customer for whom the defunct probability is 0.3, if that is the threshold and it has reached 0.3, then we move on to perform dynamic sampling. Dynamic sampling is the process by which various promotions are offered to various subsamples of customers as we denoted in the previous experimental example. We may also find the optimum promotion based on maximizing the profit from defunct customers. In

the interactive site given to the operators, we show what the historical probabilities of exit that we have calculated are and then we indicate what fraction of customers respond to various promotions and how the profit changes at various promotion levels indicating what the optimal profit is. The optimal promotion may then be automatically propagated to the website. Suppose the probability does not exceed the threshold so we would wait for one more unit period of time. There is a possibility that the customer could have been interacted at that point of time because we are waiting for an additional amount of time. We may then ask whether the customer interacted. If the customer has interacted, we know the customer has returned and we will not have to worry about that customer. If the customer did not interact, then we have to again go back and ask what is the probability of that customer being defunct now and return to a determination of whether the threshold has been exceeded.

[0101] In another embodiment, the present invention monitors the Internet interaction between a selling organization and its customers based on a variety of indicators of performance. These indicators are used to predict when the buyer/seller relationship is degrading and a defection of the customer has become more likely so the seller may take measures to prevent such defection.

[0102] The present invention comprises a computer system that collects data about customers who leave a website prior to obtaining service in an effort to develop a profile of such customers so that later customers who visit the site and conform to the profile can be served more quickly. Such favored treatment is possible on the Internet because the various individuals who are waiting for service at a website are unknown and invisible to one another. In a real physical store it would be undesirable to serve customers out of the order in which they arrived because of the risk of offending customers not so chosen.

[0103] The quality of a buyer/seller relationship can be measured in many ways, some of which are specific to particular industries. For example, the rate at which a customer places orders, either in number of orders per month or dollar volume per month, is such an indication. A customer whose purchases are tailing off may have become dissatisfied with the goods or the supplier and may cease purchasing

altogether in the future. A customer whose rate of purchasing is tailing off may likewise be considering defection. In some cases more subtle information may have to be considered. An increase in the volume of complaints about product quality from the same customer may suggest that the relationship is troubled.

[0104] In many cases, the supplier has the ability to retain the customer prior to defection if the potential for defection is noted and the cause can be determined. The supplier may then take steps to preserve the relationship. In the Internet world, however, the number of customers may be huge (millions or tens of millions) and the average order may be small (tens of dollars). It is impractical to have human beings monitor such a large number of interactions on an individual basis. This process must be automated.

[0105] The present invention monitors variables believed by the seller to be indicative of potential defection, performs statistical analysis to determine whether the observed variables are within normal statistical variance or suggest potential defection, and alerts the seller of such a possibility.

[0106] The invention initially performs sampling to gauge the impatience or tendency to balk over time, of the space of visitors and segments them by chosen variables. For example, visitors deemed to be wealthy may be more impatient than other visitors, but can be expected to spend more money at a site. Once a visitor is known to be wealthy, by being identified or by having his worth inferred, his impatience can be estimated from the statistical model built by the invention.

[0107] When subsequent visitors arrive at the site, estimates of their impatience or the expected profit to be obtained from them as the service time increases can be estimated. The assignment of customers to queues and their ordering within queues can be adjusted to maximize an objective function.

[0108] Various different objective functions may be used. One is to minimize the number of visitors who will balk. By estimating the expected service time necessary to serve a particular impatient visitor, it is possible to estimate the number of queued visitors who will leave the site prior to being served. If the impatience of the fourth visitor in the queue is known, then the probability that the fourth visitor will balk can be computed.

[0109] For example, the time between logins ("inter-login time") is a random variable thought to be closely related to defection. In fact, an infinite inter-login time is the very indicator of a permanent defection. However, even a dedicated regular customer may exhibit significant variance in inter-login times due to vacations, business seasonality, short-term concerns, and the like. It is unrealistic to treat every rise in inter-login time as a potential defection. What is important is how the recent distribution and sequence of inter-login times compares to the previous or expected behavior of the customer.

[0110] The method of the present invention comprises:

[0111] 1. Collecting information about visitors to a website, including information about the length of time said visitors remain at the site without receiving service.

[0112] 2. Segmenting said visitors by impatience.

[0113] 3. In a website that maintains service queues, determine of each visitor a degree of impatience based on a segment to which he belongs.

[0114] 4. In said website, assign said visitor to a service queue and to a suitable position within said queue to maximize a given objective function.

[0115] In an improvement of the present invention, a visitor who is about to be forced to wait beyond the time when he can be expected to balk may automatically be offered a premium, such as a discount on a product or a credit toward future purchases, in return for his willingness to remain in the queue.

[0116] The visitor segmentation and estimates produced by the data can be subjected to constant dynamic update based on actual measurements of balking time.

[0117] It is in general not possible to determine when a visitor "leaves" a website. This is a result of the stateless nature of the Hypertext Transfer Protocol (HTML – Hypertext Mark-up Language) used to request and deliver web pages, under which there is no direct connection between the visitor and the site. The visitor occasionally requests a web page and the site delivers it. What the user is doing between requests is not known to the site. Therefore, it is not a well-defined event for a user to "leave."

[0118] For the purposes of the present invention, a visitor will be deemed to have "left" a website when he has failed to request a new page or has not sent data to the site for a defined period of time. Said time period may be set by the user of the invention.

[0119] The problem of determining when a visitor leaves a site will become easier with subsequent engineering changes to the Internet. Later versions of the Internet Protocol will establish an express link between client and server that will facilitate determining when a visitor has "left" a website.

[0120] It is possible to trap and foil efforts to leave a website in favor of another. The visitor can then be required to click a virtual button to indicate that he wants to exit the site, which will give a positive indication of such an event. Even with this expedient, however, it is not possible to detect when the user has moved to another window on a computer display or whether he is simply absent from the room in which the computer is located. To do this one may combine the technique of forcing an express exit click and measuring the time between clicks to infer whether a visitor has "exited."

[0121] In a preferred embodiment, an Internet computer system for interacting with customers (e.g. a web server serving content and affording an opportunity to place orders) already exists. The present invention is used as add-on software that connects to the pre-existing system to monitor interactions.

[0122] In a further embodiment, the system is provided with training data (either in advance or as the system is being used) indicating whether a particular customer in fact defected. The system can then use prior art methods, such as neural networks, to train the system to recognize patterns similar to those in the training data and thereby sharpen its predicative ability.

[0123] In said embodiment, the computer method of the present invention is as follows:

[0124] 1. Provide the system with training data indicating previous defections and the values of the indicator variables for each such case.

[0125] 2. Train the system on the training data to predict probability of next purchase and probability of defection based on the time sequence of indicator

variables.

[0126] 3. Observe the indicator variable for each identified customer in real-time.

[0127] 4. If the defection probability is outside control levels, alert the seller to the possibility of defection.

[0128] In a further embodiment, automatic remedial action may be taken when the defection probability exceeds a defined level. For example, the customer may be offered a discount or other promotion, or email may be sent. This can be done without human intervention or involvement. The effectiveness of the automated methods may themselves be monitored and the parameters altered dynamically based on actual experience.

[0129] In a further embodiment, the customers are segmented via clustering techniques into groups whose correlation between indicator variables and defections are similar. The system then attempts to categorize each customer by the segment to which it belongs. In this manner the defection characteristics of the segmented group can be used to predict defection by an individual, in the absence of detailed information about a specific customer. Segmentation may be done by past purchase history, payment history, geographic location, socioeconomic status, or any other method that results in meaningful clusters.

[0130] In a further embodiment, the seller is provided with a graphic interface for real-time monitoring of its web activities, impending defections (either on a case-by-case or aggregated statistical basis), and effectiveness of defection countermeasures.

[0131] It is a benefit of the present invention that Internet customer defection can be detected without human intervention or attention.

[0132] It is a benefit of the present invention that the impatient behavior of visitors to a website can be elicited through experimental sampling.

[0133] It is a benefit of the present invention that the general level of satisfaction of visitors to a website can be increased by reducing the time required to service impatient individuals but without the need to reduce average service times.

[0134] It is a benefit of the present invention that managers can be provided

with actual data concerning the impatient behavior of website visitors.

[0135] It is a further benefit of the present invention that measurement of impatience and resulting queuing adjustments can be made continuously and, therefore, a website can respond to changing usage and visitor population patterns.

[0136] It is a further benefit of the invention that detected Internet customer defections can be prevented without human intervention or attention.

[0137] It should be apparent that references to the Internet only comprise a subset of the potential embodiments of the present invention and that all that is required is some means for monitoring the relevant variable indicative of defection so that potential defections can be anticipated and dealt with. Said monitoring means may include, but are not limited to, private leased networks, local area networks, wide area networks, cable television systems, cellular telephone systems, wireless communication systems, infrared systems, and satellite systems.

[0138] While the invention has been described in detail and with reference to specific embodiments thereof, it will be apparent to one skilled in the art that various changes and modifications can be made therein without departing from the spirit and scope thereof. Thus, it is intended that the present invention cover the modifications and variations of this invention provided they come within the scope of the appended claims and their equivalents.

WHAT IS CLAIMED IS:

- [0139]** 1. A method of dynamically optimizing customer retention for a web marketing site, comprising:
- specifying a permissible defunct threshold;
 - specifying a range of offers to be included in a set of promotions;
 - determining a probability that a customer will become defunct in a predetermined period of time since the last interaction of that customer with the web site; and
 - providing a promotion to a customer if the probability that the customer will become defunct in the predetermined period of time since the last interaction of that customer with the web site is greater than a predetermined threshold.
- [0140]** 2. The method of claim 1, further comprising segmenting the sample population based on a characteristic of the customers sampled.
- [0141]** 3. The method of claim 2, wherein the characteristic is an amount that the customers spent at the web site in the past.
- [0142]** 4. The method of claim 1, wherein the last interaction includes accessing the web site.
- [0143]** 5. The method of claim 1, wherein the last interaction includes making a purchase from the web site.
- [0144]** 6. The method of claim 1, further comprising maximizing profit by optimizing an amount of discount offered in the promotion.
- [0145]** 7. The method of claim 6, wherein optimizing is performed continuously.
- [0146]** 8. The method of claim 6,
- wherein optimizing includes sampling responses received from customers that are offered promotions of varying amounts; and
 - optimizing the promotion amount provided to other customers based

on the optimum promotion amount discovered in the sample.

[0147] 9. The method of claim 1, wherein data related to whether a customer has interfaced with the web site is stored in the database.

[0148] 10. The method of claim 1, wherein an amount spent by a customer is stored in a database.

[0149] 11. The method of claim 9, wherein a customer is segmented for random sampling based on the amount spent by that customer.

METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION

ABSTRACT OF THE INVENTION

[0150] A method of dynamically optimizing customer retention for a web marketing site is provided. That method includes specifying a permissible defunct threshold, specifying a range of offers to be included in a set of promotions, determining a probability that a customer will become defunct in a predetermined period of time since the last interaction of that customer with the web site, and providing a promotion to a customer if the probability that the customer will become defunct in the predetermined period of time since the last interaction of that customer with the web site is greater than a predetermined threshold.

Patent 6,240,240

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Kannan Srinivasan et al.
Serial No. : Not yet assigned Examiner : Not yet assigned
Filed : Herewith Art Unit : Not yet assigned
For : METHOD AND APPARATUS FOR INTERNET
CUSTOMER RETENTION

September 14, 2012

REMARKS ACCOMPANYING FILING OF CONTINUATION APPLICATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicant submits in this continuation application Claims 1-11 which were presented for examination in parent application serial number 09/804,728 filed on March 13, 2001, as Claims 1-11.

In the parent case, Claims 1-20 were finally rejected in the Office Action dated August 25, 2008. Claims 1-20 were cancelled in the Amendment dated December 24, 2008, and new claims (21-40) were introduced. Additional claims were subsequently introduced and certain claims were cancelled. Claims 27, 29, 31, 33, 37, 39, 40, 45-49, and 51-59 have been allowed.

Applicants believe they are entitled to the claims now presented in this continuation application and which were present in the originally filed parent application.

Applicants rescind any disclaimer in the parent application that may have resulted from the amendment or cancellation of these claims therein requests that the Examiner reconsider the claims now presented.

Respectfully submitted,



Stanley D. Ference III
Registration No. 33,879

Customer No. 35195
FERENCE & ASSOCIATES LLC
409 Broad Street
Pittsburgh, Pennsylvania 15143
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(412) 741-9292 - Facsimile

Attorneys for Applicants

Fig. 1

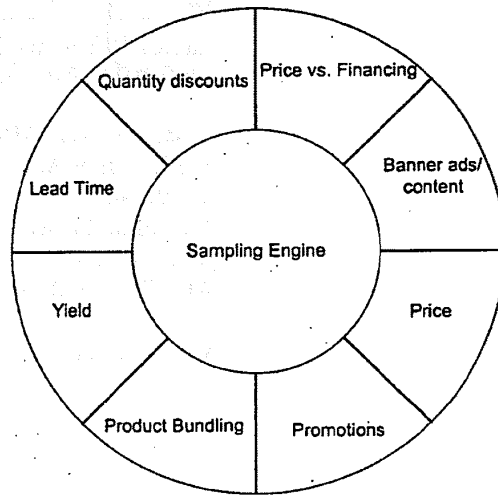
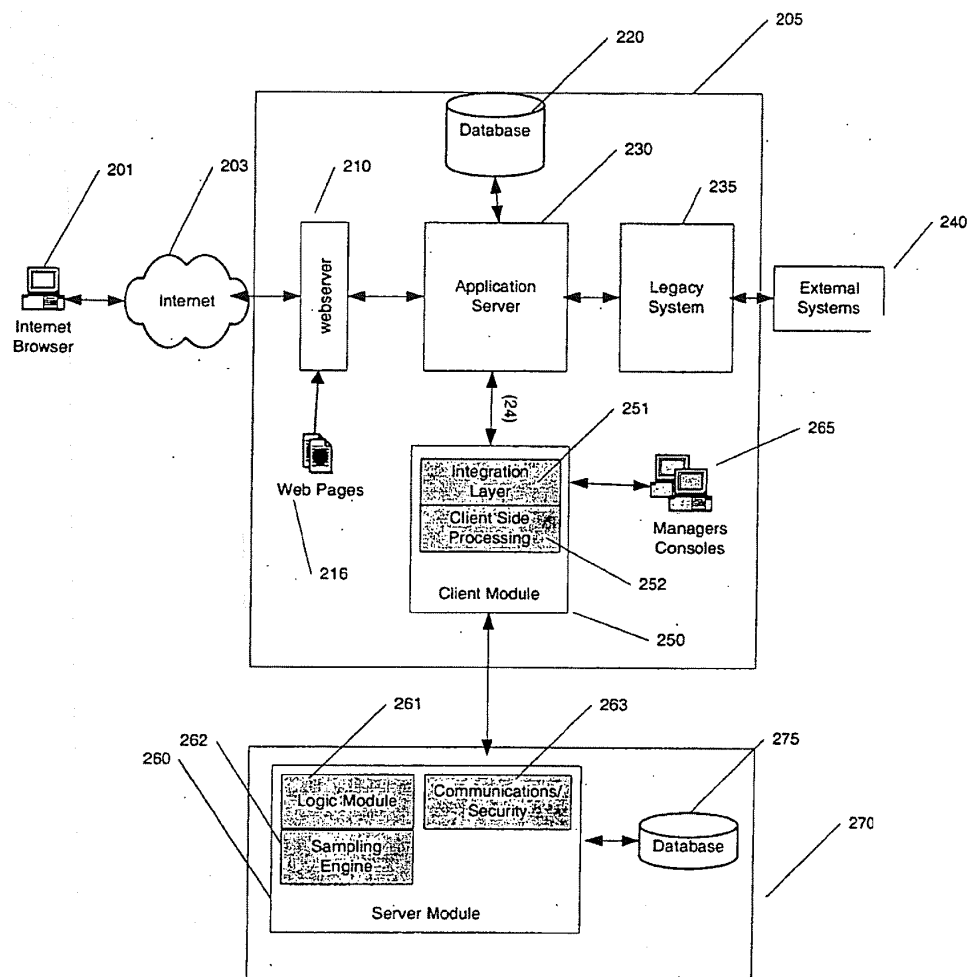


Fig. 2



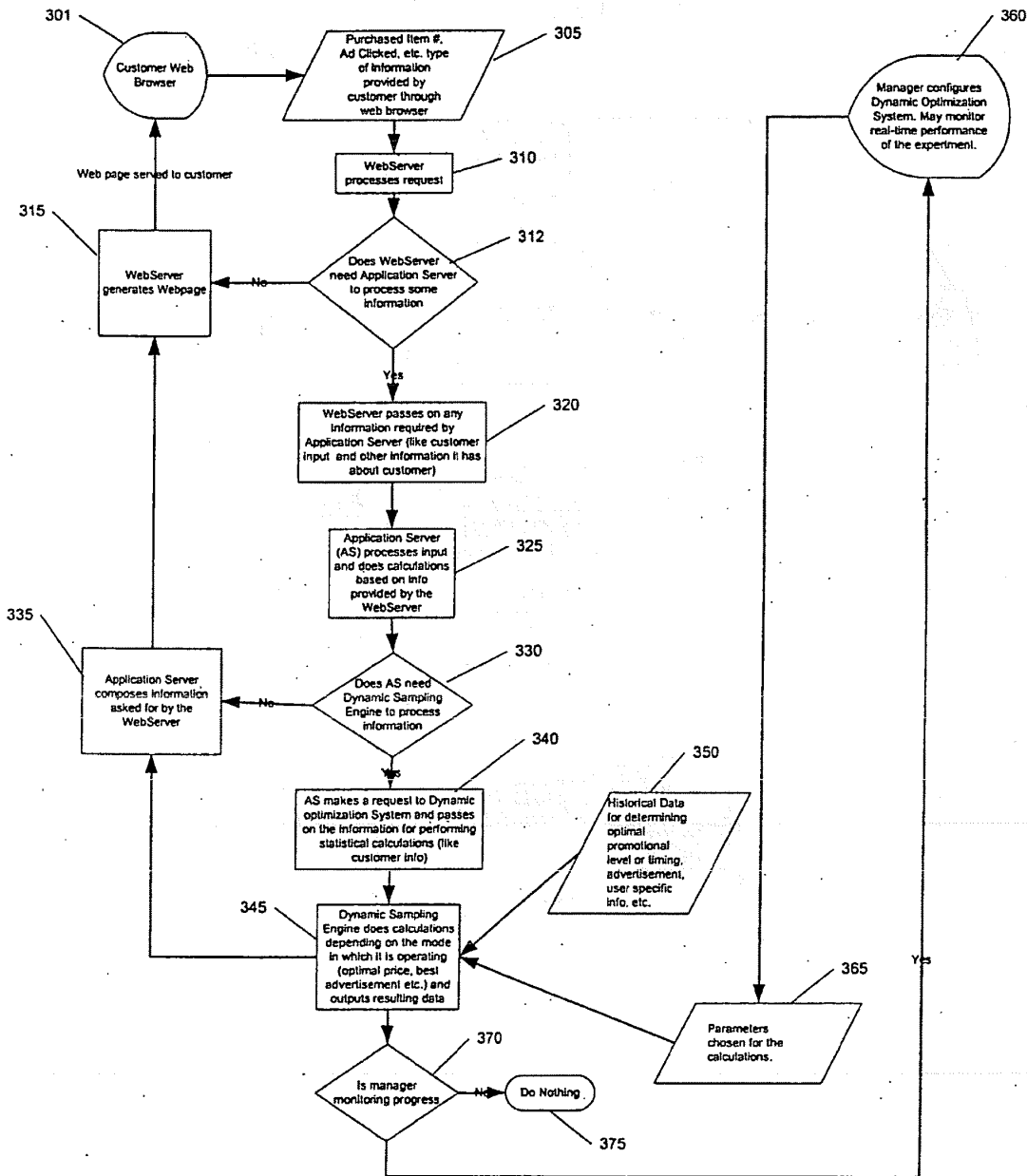


Fig. 3

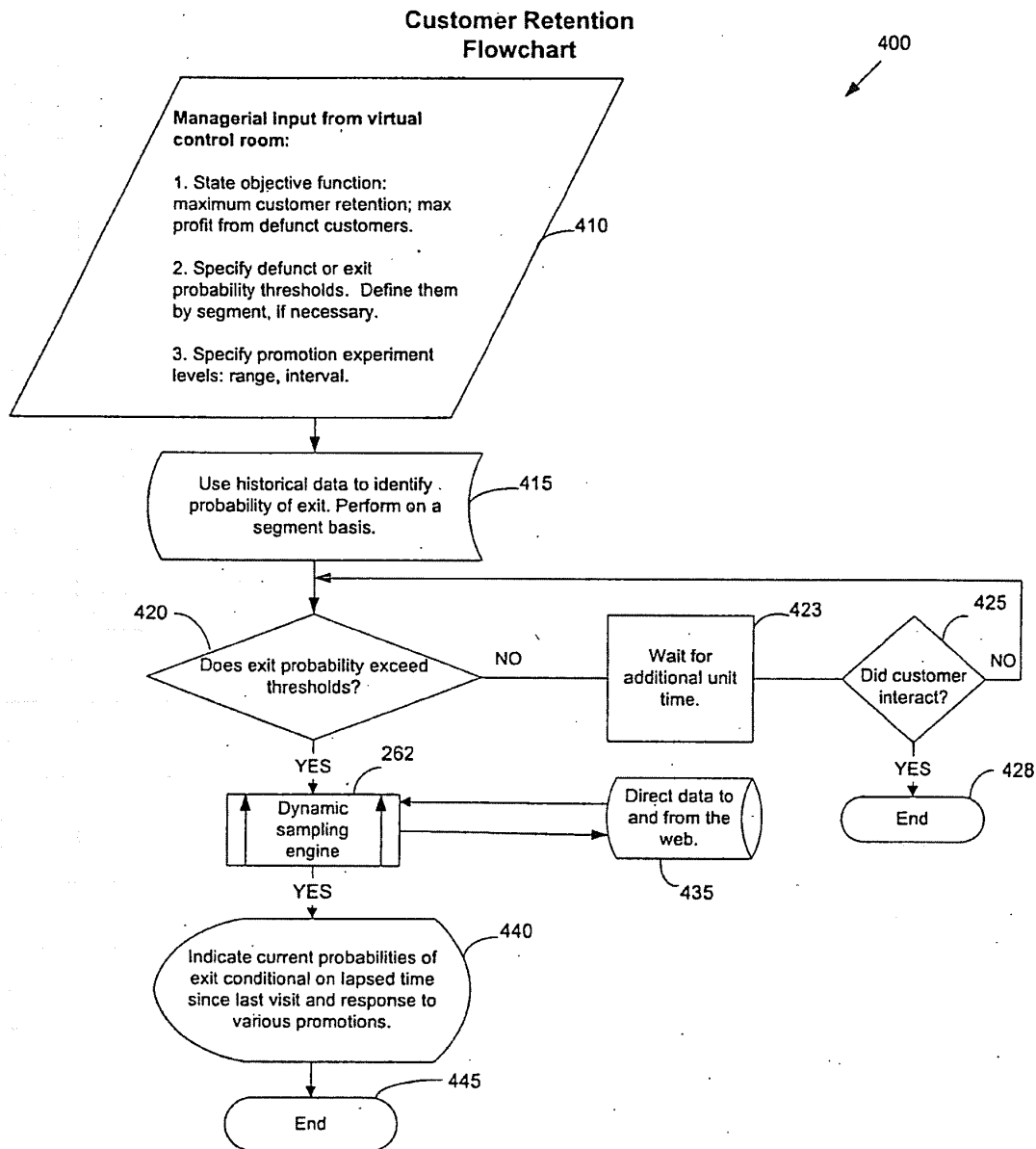


Fig. 4

PATENT APPLICATION FEE DETERMINATION RECORD						Application or Docket Number 13/617,581				
Substitute for Form PTO-875										
APPLICATION AS FILED - PART I										
(Column 1)		(Column 2)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY				
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)			
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	380			
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A	620			
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	250			
TOTAL CLAIMS (37 CFR 1.16(i))	11	minus 20 =				x 60 =	0.00			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1	minus 3 =				x 250 =	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			
				TOTAL		TOTAL	1250			
* If the difference in column 1 is less than zero, enter "0" in column 2.										
APPLICATION AS AMENDED - PART II										
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY		
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=		x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=		x	=
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
						TOTAL ADD'L FEE			TOTAL ADD'L FEE	
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=		x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=		x	=
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
						TOTAL ADD'L FEE			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
13/617,581	09/14/2012	3622	1250	696.005_CON	11	1

CONFIRMATION NO. 9286

FILING RECEIPT



OC000000056811197

Date Mailed: 10/03/2012

35195
FERENCE & ASSOCIATES LLC
409 BROAD STREET
PITTSBURGH, PA 15143

Receipt is acknowledged of this non-provisional 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 APPLICANT, 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 Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections 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**

Inventor(s)

Kannan Srinivasan, Gibsonia, PA;
Michael I. Shamos, Pittsburgh, PA;

Applicant(s)

Kannan Srinivasan, Gibsonia, PA;
Michael I. Shamos, Pittsburgh, PA;

Assignment For Published Patent Application

Intellions, Inc., Mars, PA

Power of Attorney:

Stanley Ference III--33879

Domestic Priority data as claimed by applicant

This application is a CON of 09/804,728 03/13/2001 PAT 8280773
which claims benefit of 60/188,890 03/13/2000

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.)

If Required, Foreign Filing License Granted: 09/27/2012

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/617,581**

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

page 1 of 3

Patent Owner CheckFree - 51

Title

METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION

Preliminary Class

705

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 (1-866-999-4158).

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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page 2 of 3

Patent Owner CheckFree - 52

set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

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NOT GRANTED

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/617,581	09/14/2012	Kannan Srinivasan	696.005_CON

CONFIRMATION NO. 9286

FORMALITIES LETTER



OC000000056811198

Date Mailed: 10/03/2012

35195
REFERENCE & ASSOCIATES LLC
409 BROAD STREET
PITTSBURGH, PA 15143

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 oath or declaration is unsigned.

The application is informal since it does not comply with the regulations for the reason(s) indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- Replacement drawings in compliance with 37 CFR 1.84 and 37 CFR 1.121(d) are required. The drawings submitted are not acceptable because:
 - Numbers, letters, and reference characters on the drawings must measure at least 0.32 cm (1/8 inch) in height. See Figure(s) 3.

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

The applicant needs to satisfy supplemental fees problems indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- A surcharge (for late submission of the basic filing fee, search fee, examination fee or inventor's oath or declaration) as set forth in 37 CFR 1.16(f) of \$ **130** for a non-small entity, must be submitted.

SUMMARY OF FEES DUE:

Total fee(s) required within **TWO MONTHS** from the date of this Notice is \$ **130** for a non-small entity

- \$ **130** Surcharge.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
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If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

/anguyen/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/617,581	09/14/2012	Kannan Srinivasan	696.005_CON

CONFIRMATION NO. 9286

POA ACCEPTANCE LETTER



OC000000056791319

Date Mailed: 10/03/2012

35195
FERENCE & ASSOCIATES LLC
409 BROAD STREET
PITTSBURGH, PA 15143

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 09/14/2012.

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.

/hnguyen/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

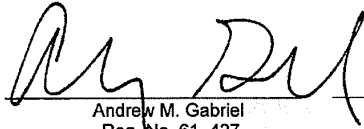
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Kannan Srinivasan et al.
Serial No. : 13/617,581 Examiner : Not yet assigned
Filed : September 14, 2012 Art Unit : 3622
For : METHOD AND APPARATUS FOR INTERNET
CUSTOMER RETENTION

December 3, 2012

RESPONSE TO NOTICE TO FILE MISSING PARTS

I hereby certify that this correspondence (along with any documents referred to as being attached or enclosed) is being transmitted by EFS-WEB to the Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on December 3, 2012.



Andrew M. Gabriel
Reg. No. 61, 427

December 3, 2012
Date of Signature

Mail Stop:
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Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

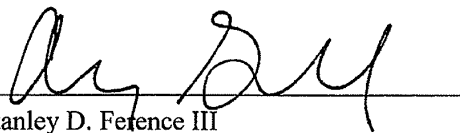
Sir:

Responsive to the Notice to File Missing Parts dated October 3, 2012, Applicants submit herewith a copy of the duly executed oath/declaration from the parent application and three (3) replacement sheets for FIG. 3. Although FIG. 3 originally comprised only one (1) sheet, upon enlarging the letters and reference characters thereof in compliance with the Notice to File Missing Parts, the illustration is now in three (3) sheets.

Applicants respectfully submit that no new matter has been entered.

Applicants are paying the \$130 surcharge due by way of credit card in the EFS-
WEB system. If any additional fees are due for the filing of this response, the
Commissioner is hereby authorized to charge payment of any filing fees associated with
this communication, or credit any overpayment, to **Deposit Account No. 50-5017**.

Respectfully submitted,



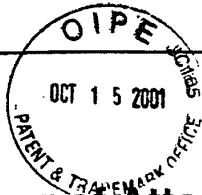
Stanley D. Ference III
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(412) 741-8400
(412) 741-9292 - Facsimile

Attorneys for Applicants

Enclosure(s): Three (3) Replacement Sheets



Docket No.
01-172

Declaration and Power of Attorney For Patent Application

English Language Declaration

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled
METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION

the specification of which

(check one)

☐ is attached hereto.

☒ was filed on March 13, 2001 as United States Application No. or PCT International Application Number 09/804,728 and was amended on _____

(if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d) or Section 365(b) of any foreign application(s) for patent or inventor's certificate, or Section 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

Priority Not Claimed

_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/>
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/>
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/>

I hereby claim the benefit under 35 U.S.C. Section 119(e) of any United States provisional application(s) listed below:

<u>60/188,890</u>	<u>March 13, 2000</u>
(Application Serial No.)	(Filing Date)

<u> </u>	<u> </u>
(Application Serial No.)	(Filing Date)

<u> </u>	<u> </u>
(Application Serial No.)	(Filing Date)

I hereby claim the benefit under 35 U. S. C. Section 120 of any United States application(s), or Section 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. Section 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, C. F. R., Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

<u> </u>	<u> </u>	<u> </u>
(Application Serial No.)	(Filing Date)	(Status)
		(patented, pending, abandoned)

<u> </u>	<u> </u>	<u> </u>
(Application Serial No.)	(Filing Date)	(Status)
		(patented, pending, abandoned)

<u> </u>	<u> </u>	<u> </u>
(Application Serial No.)	(Filing Date)	(Status)
		(patented, pending, abandoned)

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.

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. *(list name and registration number)*

Thomas C. Wettach	Reg. No. 24,455
Christine L. Wettach	Reg. No. 41,373
Gerald J. Iwanejko, Jr.	Reg. No. 38,501
Frederick L. Tolhurst	Reg. No. 28,123

Send Correspondence to: **Cohen & Grigsby, P.C.**
11 Stanwix Street, 15th Floor
Pittsburgh, Pennsylvania 15222

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Sole or first inventor's signature		Date
Residence Gibsonia, Pennsylvania		
Citizenship Indian		
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Full name of second inventor, if any Michael I. Shamos		
Second inventor's signature <i>Michael I. Shamos</i>		6/26/01
Residence Pittsburgh, Pennsylvania		
Citizenship USA		
Post Office Address 605 Devonshire Street		
Pittsburgh, Pennsylvania 15213		

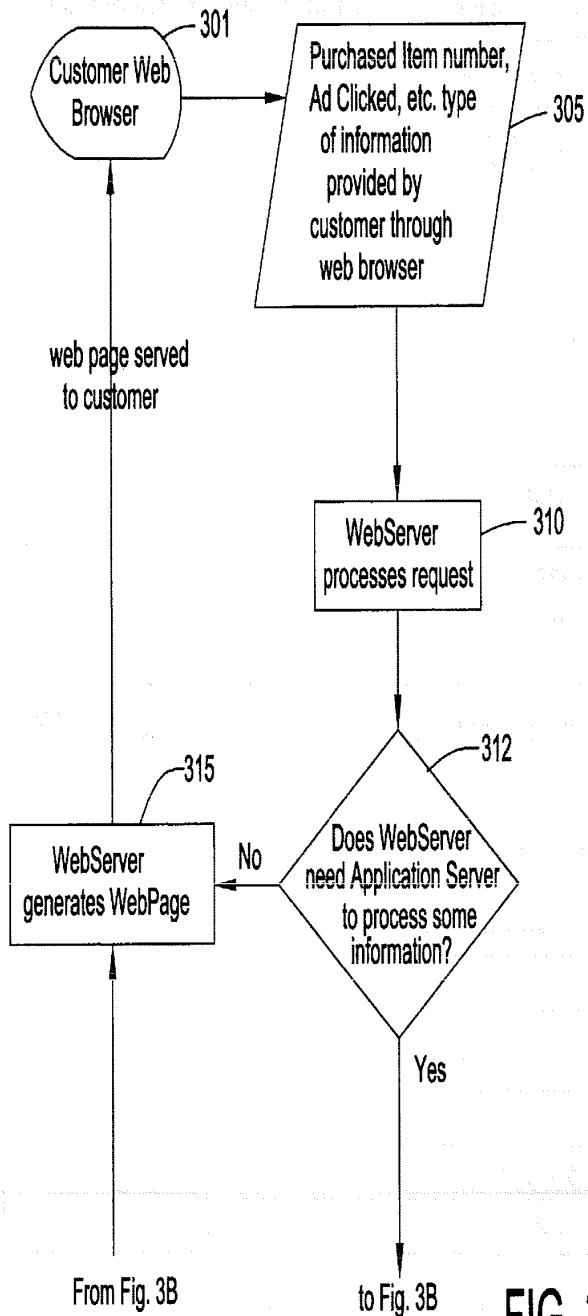
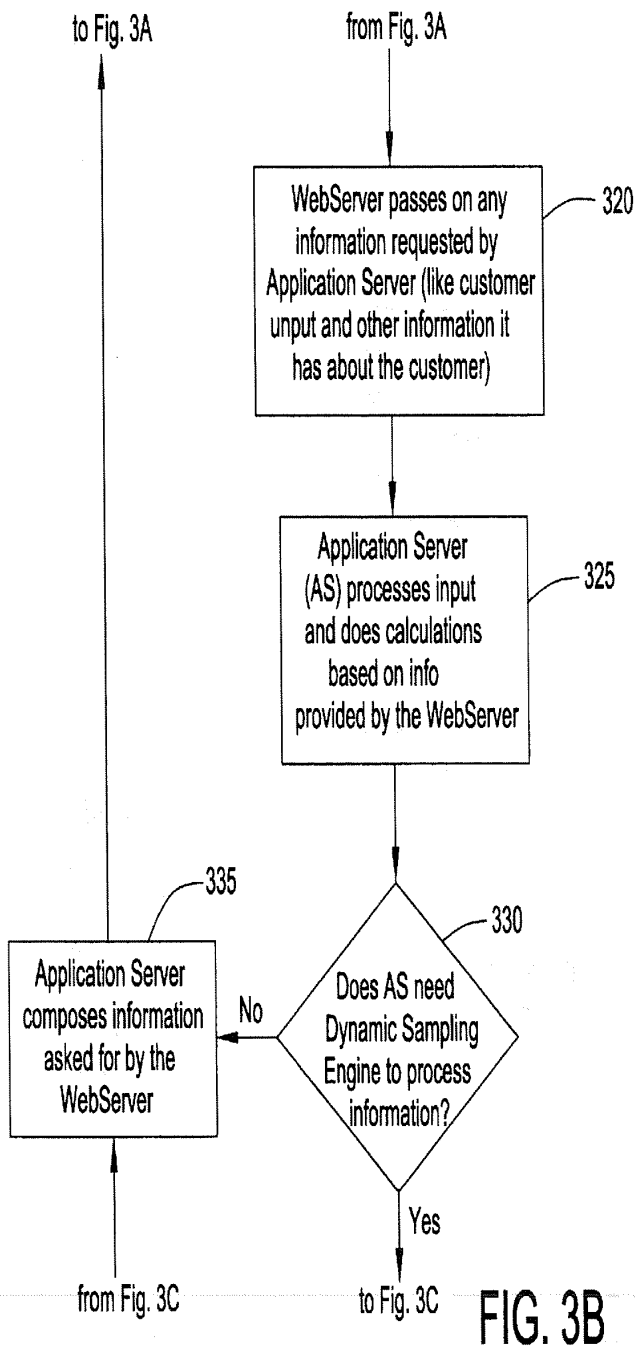


FIG. 3A



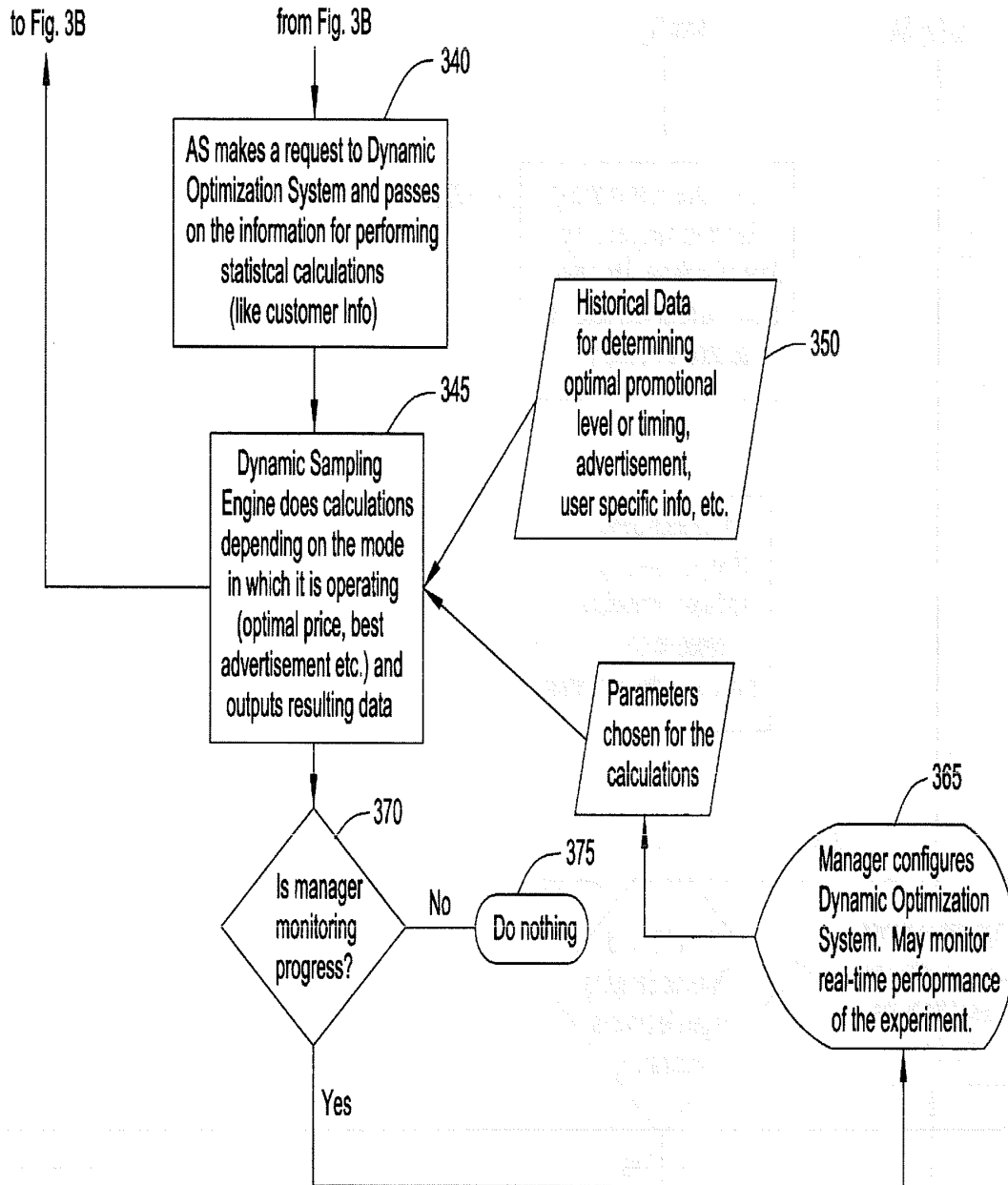


FIG. 3C

Electronic Patent Application Fee Transmittal				
Application Number:		13617581		
Filing Date:		14-Sep-2012		
Title of Invention:		METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION		
First Named Inventor/Applicant Name:		Kannan Srinivasan		
Filer:		Stanley D. Ference/Kristen Durkin		
Attorney Docket Number:		696.005_CON		
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Late filing fee for oath or declaration	1051	1	130	130
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

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Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				130

Patent Owner CheckFree - 66

Electronic Acknowledgement Receipt	
EFS ID:	14366880
Application Number:	13617581
International Application Number:	
Confirmation Number:	9286
Title of Invention:	METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION
First Named Inventor/Applicant Name:	Kannan Srinivasan
Customer Number:	35195
Filer:	Stanley D. Ference/Kristen Durkin
Filer Authorized By:	Stanley D. Ference
Attorney Docket Number:	696.005_CON
Receipt Date:	03-DEC-2012
Filing Date:	14-SEP-2012
Time Stamp:	14:47:33
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes				
Payment Type	Credit Card				
Payment was successfully received in RAM	\$ 130				
RAM confirmation Number	1158				
Deposit Account					
Authorized User					
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

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1	Applicant Response to Pre-Exam Formalities Notice	696-005-CON-ResponsetoMissingParts-12-3-2012.pdf	48746 7103a63f9f450f5fe407ac8eab268f1d752da85d	no	2
Warnings:					
Information:					
2	Oath or Declaration filed	696-005-CON-ExecutedDeclaration-12-3-2012.pdf	130486 13bea4e7f9791bbe0b6735c62f5f637ec863c33c	no	3
Warnings:					
Information:					
3	Drawings-only black and white line drawings	696-005-CON-ReplacementDrawing-12-3-2012.pdf	143963 7b887d3c43768db57c28e771593a6d352c34b5fb	no	3
Warnings:					
The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing					
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4	Fee Worksheet (SB06)	fee-info.pdf	30111 7fdaa70c19e6c97f6bfa37b6f35cd38c969fadcb	no	2
Warnings:					
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Total Files Size (in bytes):			353306		
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 13/617,581	
APPLICATION AS FILED - PART I							
(Column 1)		(Column 2)		SMALL ENTITY		OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	390
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A	620
EXAMINATION FEE (37 CFR 1.16(e), (p), or (q))	N/A	N/A	N/A			N/A	250
TOTAL CLAIMS (37 CFR 1.16(i))	11	minus 20 =				x 62 =	0.00
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1	minus 3 =				x 250 =	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	1260
APPLICATION AS AMENDED - PART II							
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)
	Total (37 CFR 1.16(i))	Minus **	=	x	=		x
	Independent (37 CFR 1.16(h))	Minus ***	=	x	=		x
	Application Size Fee (37 CFR 1.16(s))						
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
				TOTAL ADD'L FEE			
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)
	Total (37 CFR 1.16(i))	Minus **	=	x	=		x
	Independent (37 CFR 1.16(h))	Minus ***	=	x	=		x
	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. ** 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
13/617,581	09/14/2012	3622	1380	696.005_CON	11	1

CONFIRMATION NO. 9286

UPDATED FILING RECEIPT



OC000000057979597

35195

FERENCE & ASSOCIATES LLC
409 BROAD STREET
PITTSBURGH, PA 15143

Date Mailed: 12/07/2012

Receipt is acknowledged of this non-provisional 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 APPLICANT, 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 Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections 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**

Inventor(s)

Kannan Srinivasan, Gibsonia, PA;
Michael I. Shamos, Pittsburgh, PA;

Applicant(s)

Kannan Srinivasan, Gibsonia, PA;
Michael I. Shamos, Pittsburgh, PA;

Assignment For Published Patent Application

Intellions, Inc., Mars, PA

Power of Attorney:

Stanley Ference III--33879

Domestic Priority data as claimed by applicant

This application is a CON of 09/804,728 03/13/2001 PAT 8280773
which claims benefit of 60/188,890 03/13/2000

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

If Required, Foreign Filing License Granted: 09/27/2012

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/617,581**

Projected Publication Date: Perfected

Non-Publication Request: No

page 1 of 3

Patent Owner CheckFree - 70

CBM2013-00028

Metavante & Fidelity v. CashEdge, Inc.

Ex. 2040 - p. 70

Early Publication Request: No
Title

METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION

Preliminary Class

705

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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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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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Title 37, Code of Federal Regulations, 5.11 & 5.15

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CBM2013-00028
Metavante & Fidelity v. CashEdge, Inc.
Ex. 2040 - p. 71

the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 13/617,581	
APPLICATION AS FILED - PART I							
(Column 1)		(Column 2)		SMALL ENTITY		OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)
BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A			N/A	390
SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>	N/A	N/A	N/A			N/A	620
EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A			N/A	250
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	11 minus 20 =	*				x 62 =	0.00
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	1 minus 3 =	*				x 250 =	0.00
APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	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 <small>(37 CFR 1.16(j))</small>							0.00
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL		TOTAL	1260
APPLICATION AS AMENDED - PART II							
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)
	Total <small>(37 CFR 1.16(i))</small>	Minus **	=	x	=		x
	Independent <small>(37 CFR 1.16(h))</small>	Minus ***	=	x	=		x
	Application Size Fee <small>(37 CFR 1.16(s))</small>						
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						
				TOTAL ADD'L FEE		TOTAL ADD'L FEE	
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)
	Total <small>(37 CFR 1.16(i))</small>	Minus **	=	x	=		x
	Independent <small>(37 CFR 1.16(h))</small>	Minus ***	=	x	=		x
	Application Size Fee <small>(37 CFR 1.16(s))</small>						
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						
				TOTAL ADD'L FEE		TOTAL ADD'L FEE	
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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
13/617,581	09/14/2012	3622	1380	696.005_CON	11	1

CONFIRMATION NO. 9286

UPDATED FILING RECEIPT



OC000000057979597

35195

ERENCE & ASSOCIATES LLC
409 BROAD STREET
PITTSBURGH, PA 15143

Date Mailed: 12/11/2012

Receipt is acknowledged of this non-provisional 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 APPLICANT, 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 Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections 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**

Inventor(s)

Kannan Srinivasan, Gibsonia, PA;
Michael I. Shamos, Pittsburgh, PA;

Applicant(s)

Kannan Srinivasan, Gibsonia, PA;
Michael I. Shamos, Pittsburgh, PA;

Assignment For Published Patent Application

Intellions, Inc., Mars, PA

Power of Attorney:

Stanley Ference III--33879

Domestic Priority data as claimed by applicant

This application is a CON of 09/804,728 03/13/2001 PAT 8280773
which claims benefit of 60/188,890 03/13/2000

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Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

If Required, Foreign Filing License Granted: 09/27/2012

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Projected Publication Date: 03/21/2013

Non-Publication Request: No

page 1 of 3

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Early Publication Request: No
Title

METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION

Preliminary Class

705

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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 Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/617,581	09/14/2012	Kannan Srinivasan	696.005_CON	9286
35195 7590 01/24/2013 FERENCE & ASSOCIATES LLC 409 BROAD STREET PITTSBURGH, PA 15143			EXAMINER RETTA, YEHDEGA	
			ART UNIT 3622	PAPER NUMBER
			MAIL DATE 01/24/2013	DELIVERY MODE PAPER

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.

Office Action Summary	Application No. 13/617,581	Applicant(s) SRINIVASAN ET AL.	
	Examiner YEHDEGA RETTA	Art Unit 3622	

-- 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 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, 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 14 September 2012.

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) 1-11 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) 1-11 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).

a) ☐ All b) ☐ Some * c) ☐ None of:

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

2. ☐ Certified copies of the priority documents have been received in Application No. ____.

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/08)
Paper No(s)/Mail Date ____.

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

4) ☐ Other: ____.

Claim Rejections - 35 USC § 112

The following is a quotation of 35 U.S.C. 112(b):

(B) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 recites the limitation "segmenting the sample population based on a characteristic of the customers sampled". There is insufficient antecedent basis for this limitation in the claim. Claim 1 does not recite sample population or sampled customers.

Claim Rejections - 35 USC § 103

The following is a quotation of 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 negated by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's background further in view of Herz et al. U.S. Application No. US 2001/0014868.

Regarding claims 1, 9 and 10, Applicant's background teaches specifying a permissible defunct threshold; specifying a range of offers to be included in a set of promotions; determining a probability that a customer will become defunct in a predetermined period of time since the last interaction of that customer with the web site. Applicant's background teaches that it is known in

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the art of Internet to observe when an existing customer has failed to make a purchase within a certain period of time (defunct threshold) after which it is assumed that the customer has been "lost" or has gone inactive. Herz teaches providing a promotion to a customer if the probability that the customer will become defunct in a predetermined period of time (*elapsed time period*) since the last interaction of that customer with the web site is greater than a predetermined threshold (for example six month). Herz also teaches "[r]ecall that we can characterize a user not only by the responsiveness of the user to certain offers but also by many other attributes, including the loyalty and consistency factor. Example of such user profile attributes (largely numeric) include: elapsed time period since the last purchase, elapsed time period between purchases (average), ranges elapsed period to previous offers, total amount spent over the past 6 months, maximum volume spent on a single shopping spree. If a customer (particularly a long term customer) has recently been lost the system may find it advantageous to use the most aggressive promotional offers possible in order to reinitiate lost loyalties. Conversely, somewhat less aggressive discounting may be appropriate for very loyal customers (such as frequent buyer programs, long term customer rewards etc.). By the system these types of incentive based promotions are geared towards instilling customer interest and loyalty". It would have been obvious to one of ordinary skill in the art at the time of the invention to provide promotion to the customer in order to reinitiate lost loyalties, as taught in Herz.

Regarding claims 2 and 11, Applicant's background does not explicitly teach segmenting the sample population based characteristics. Herz teaches sampling population based on a characteristic (see [0006]-[007], [0205]-[0222]). Herz teaches sampling customers to determine a promotion to offer a particular customer. Herz teaches the likelihood of acceptance can be

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calculated by counting what fraction of shoppers (similar shoppers) who were presented with the offer (similar offers) chose to accept (see [0037]-[0039]). It would have been obvious to one of ordinary skill in the art at the time of the invention to determine a promotion to offer to a particular customer by sampling customers (similar shoppers) in order to select offers that the shopper is likely to accept and would result in profitable sale, as taught in Herz.

Regarding claim 3, Applicant's background and Herz teach wherein the characteristic is an amount that the customers spent at the web site in the past (see applicant's background col. 1 line 50 to col. 2 line 46 and Herz [0112]-[0137], [0246]).

Regarding claims 4 and 5, Applicant's background and Herz teaches wherein the last interaction includes accessing the web site; wherein the last interaction includes making a purchase from the web site. (see applicant's background col. 1 line 50 to col. 2 line 46 and Herz [0112]-[0137], [0246]).

Regarding claims 6-8, Herz teaches maximizing profit by optimizing an amount of discount offered in the promotion; wherein optimizing is performed continuously (see [0003], [0046], wherein optimizing includes sampling responses received from customers that are offered promotions of varying amounts; and optimizing the promotion amount provided to other customers based on the optimum promotion amount discovered in the sample (see [0165]-[0166],[0169]). It would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the amount by providing different offers (also based price that maximizes profit) to different consumer groups and based on the feedback from the consumers.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YEHDEGA RETTA whose telephone number is (571)272-6723.

The examiner can normally be reached on Monday through Thursday from 8 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Stamber can be reached on (571) 272-6724. 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.

YR

/Yehdega Retta/

Primary Examiner, Art Unit 3622

Notice of References Cited	Application/Control No. 13/617,581	Applicant(s)/Patent Under Reexamination SRINIVASAN ET AL.	
	Examiner YEHDEGA RETTA	Art Unit 3622	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2001/0014868 A1	08-2001	HERZ et al.	705/14
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	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.



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/617,581	09/14/2012	Kannan Srinivasan	696.005_CON

CONFIRMATION NO. 9286

PUBLICATION NOTICE



OC00000005995924

35195
REFERENCE & ASSOCIATES LLC
409 BROAD STREET
PITTSBURGH, PA 15143

Title:METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION

Publication No.US-2013-0073379-A1

Publication Date:03/21/2013

NOTICE OF PUBLICATION OF APPLICATION

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 publicly available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently <http://www.uspto.gov/patft/>.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently <http://pair.uspto.gov/>. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

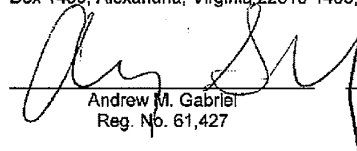
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Srinivasan et al.
Serial No. : 13/617,581 Examiner : Retta
Filed : September 14, 2012 Art Unit : 3622
For : METHOD AND APPARATUS FOR INTERNET
CUSTOMER RETENTION

May 24, 2013

AMENDMENT

I hereby certify that this correspondence and any documents referred to as enclosed therewith are being filed with the Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, by EFS Web on May 24, 2013.


Andrew M. Gabriel
Reg. No. 61,427
May 24, 2013
Date of Signature

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

Sir:

Responsive to the Office Action dated January 24, 2013, please amend the above-identified application as follows.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 6 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A method of dynamically optimizing customer retention for a web marketing site, comprising:

specifying a permissible defunct threshold for a customer;

~~specifying a range of offers to be included in a set of promotions;~~

determining a probability that ~~[[a]]~~ the customer will become defunct in a predetermined period of time since the last interaction of ~~that~~ the customer with the web site, ~~the probability being determined based on one or more of: past interactions of the customer with the web site and past interactions of a group of customers with the web site similar to the customer;~~ and

proactively providing a promotion communication to [[a]] the customer to incentivize the customer to return to the web site if the probability that the customer will become defunct in the predetermined period of time since the last interaction of that the customer with the web site is greater than a predetermined the permissible defunct threshold.

2. **(Currently Amended)** The method of claim 1, further comprising segmenting ~~the sample population~~ customers based on a characteristic of the customers to be sampled for determining the probability.

3. **(Original)** The method of claim 2, wherein the characteristic is an amount that the customers spent at the web site in the past.

4. **(Original)** The method of claim 1, wherein the last interaction includes accessing the web site.

5. **(Original)** The method of claim 1, wherein the last interaction includes making a purchase from the web site.

6. **(Currently Amended)** The method of claim 1, further comprising maximizing profit by optimizing an amount of discount offered in the ~~promotion~~ in the communication.

7. **(Original)** The method of claim 6, wherein optimizing is performed continuously.

8. **(Original)** The method of claim 6, wherein optimizing includes sampling responses received from customers that are offered promotions of varying amounts; and optimizing the promotion amount provided to other customers based on the optimum promotion amount discovered in the sample.

9. **(Original)** The method of claim 1, wherein data related to whether a customer has interfaced with the web site is stored in the database.

10. **(Original)** The method of claim 1, wherein an amount spent by a customer is stored in a database.

11. **(Original)** The method of claim 9, wherein a customer is segmented for random sampling based on the amount spent by that customer.

12. **(New)** A method, comprising:

for a customer of a web site, determining a time since last interaction for the customer;

specifying different permissible defunct thresholds for segments of customers to the web site, the segments being determined based on interaction history of the customers with the web site stored as historical data in a database;

determining, using at least one processor, a probability that the customer will become defunct given the amount of time determined since the last interaction of the customer with the web site, the probability being determined based on past interactions of the customer with the web site stored as historical data in the database; and

proactively providing a communication over a network to the customer to incentivize the customer to return to the web site if the probability that the customer will become defunct given the amount of time determined since the last interaction of the customer with the web site is greater than a permissible defunct threshold for the customer.

13. **(New)** A method, comprising:

storing, using at least one processor and a database, web site interactions of customers of a web site;

analyzing, using the at least one processor, the web site interactions of the customers of the web site;

determining, using the at least one processor, a probability that the customer will become defunct given the amount of time determined since a last interaction of the customer with the web site, and

prior to determining that the customer has become defunct, proactively providing a communication over a network to the customer to incentivize the customer to return to the web site responsive to a determination that the probability that the customer will become defunct given the amount of time determined since the last interaction of the customer with the web site is greater than a permissible defunct threshold for the customer.

14. **(New)** The method of claim 13, wherein the communication contents are based on the web site interactions of other customers of the web site.

15. **(New)** The method of claim 14, wherein the other customers of the web site are grouped with the customer based on a similarity characteristic.

REMARKS

Applicants and the undersigned are most grateful for the time and effort accorded the instant application by the Examiner. The Office is respectfully requested to reconsider the rejection present in the outstanding Office Action in light of the following remarks.

On May 17, 2013 Applicants' representative conducted a telephone interview with the Examiner and an inventor, Kannan Srinivasan. The claims were discussed as was the Herz reference. Applicants' representative, the inventor, and the Examiner discussed the inventive concept and the Herz reference at a general level in effort to clarify issues in the case. No specific agreements were reached and Applicants' representative indicated that a formal, written response would be forthcoming.

It should be noted that Applicants are not conceding in this application the claims amended herein are not patentable over the art cited by the Examiner, as the present claim amendments are only for facilitating expeditious prosecution. Applicants respectfully reserve the right to pursue these and other claims in one or more continuations and/or divisional patent applications. Applicants specifically state no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Rejections under 35 U.S.C. § 112

Claim 2 stands rejected under 35 U.S.C. § 112, second paragraph, as having insufficient antecedent basis. Applicants have amended claim 2 herein and respectfully request reconsideration and withdrawal of the rejection under § 112.

Rejections under 35 U.S.C. § 103(a)

Claims 1-11 stand rejected under 35 USC § 103(a) as obvious over Herz et al. (hereinafter “Herz”). Reconsideration and withdrawal of the present rejections are hereby respectfully requested.

Applicants respectfully submit that the reference fails to teach or suggest all the claim limitations. The Office is kindly reminded that “[w]hen determining whether a claim is obvious, an examiner must make a searching comparison of the claimed invention – *including all its limitations* – with the teaching of the prior art. Thus, obviousness requires a suggestion of all limitations in a claim. Moreover, as the Supreme Court recently stated, *there must be some articulated reasoning* with some rational underpinning to support the legal conclusion of obviousness.” Ex parte H. Garrett Wada et al., pp. 7, Appeal No. 2007-3733 (BPAI January 14, 2008) (internal quotation marks and citations omitted) (emphasis in original) (reversing Examiner’s obviousness rejection).

Applicants respectfully disagree with the Office’s characterization of the Applicants’ own disclosure. Moreover, Applicants respectfully submit that Herz did not render the originally presented claims obvious at least because Herz fails to teach or

suggest "...determining a probability that a customer will become defunct in a predetermined period of time since the last interaction of that customer with the web site." Claim 1. Applicants respectfully submit that Herz, particularly at the portion quoted by the Office, is focused on determining which characteristics of a customer may be used to determine various promotions offered to the customers. See Herz at [0154] (stating: "The process can be repeated to determine as many attributes of the new offer as desired, by whatever methods are available, although it is ordinarily stopped after a small number of attributes, to avoid the burden of determining too many attributes") (emphasis added).

In fact, Herz does not take into account customer status until after the customer has been lost, and again this is in the context of determining an appropriate offer, not a timing of communication to the customer based on a probability that the customer will be lost. See Herz at [0246] (stating: "If a customer (particularly a long term customer) has recently been lost the system may find it advantageous to use the most aggressive promotional offers possible in order to reinitiate lost loyalties.") (emphasis added). Accordingly, Applicants respectfully submit that Herz does not contemplate "...determining a probability that a customer will become defunct in a predetermined period of time since the last interaction of that customer with the web site." Claim 1.

Nonetheless, solely in the interest of facilitating compact prosecution of this case, Applicants have amended the claims herein. Support for these claim amendments can be found throughout the specification, particularly at paragraphs [0087] – [0089], [0090] – [0097] and [0100]. Applicants respectfully submit that the claims, particularly as

amended, are readily distinguishable from the reference of record and the state of the art at the time of filing.

Specifically, Applicants respectfully submit that the reference of record and the state of the art did not teach or suggest, *inter alia*, "...determining a probability that the customer will become defunct in a predetermined period of time since the last interaction of the customer with the web site, the probability being determined based on one or more of: past interactions of the customer with the web site and past interactions of a group of customers with the web site similar to the customer; and proactively providing a communication to the customer to incentivize the customer to return to the web site if the probability that the customer will become defunct in the predetermined period of time since the last interaction of the customer with the web site is greater than the permissible defunct threshold." Claim 1.

New Claims

Applicants have presented new claims 12-15 herewith. The new claims are directed to features of embodiments as taught by the specification at least at paragraphs [0087] – [0089], [0090] – [0097] and [0100]. Applicants respectfully submit that no new matter has been entered and that these new claims are presently in condition for allowance.

/

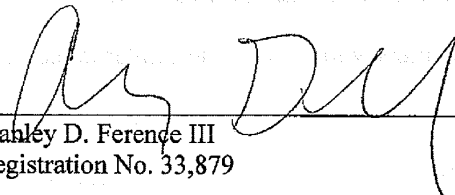
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/

Conclusion

In summary, it is respectfully submitted that the instant application, including Claims 1-15, are presently in condition for allowance. A Notice of Allowance is hereby earnestly solicited. Applicants' undersigned attorney would welcome further discussion with the Office in the event there are any further issues in this application.

Respectfully submitted,


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Attorneys for Applicants

Electronic Patent Application Fee Transmittal				
Application Number:		13617581		
Filing Date:		14-Sep-2012		
Title of Invention:		METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION		
First Named Inventor/Applicant Name:		Kannan Srinivasan		
Filer:		Stanley D. Ference/Jennifer Lineberry		
Attorney Docket Number:		696.005_CON		
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
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:				
Extension - 1 month with \$0 paid	1251	1	200	200

Patent Owner CheckFree - 95

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				200

Patent Owner CheckFree - 96

Electronic Acknowledgement Receipt	
EFS ID:	15869435
Application Number:	13617581
International Application Number:	
Confirmation Number:	9286
Title of Invention:	METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION
First Named Inventor/Applicant Name:	Kannan Srinivasan
Customer Number:	35195
Filer:	Stanley D. Ference/Jennifer Lineberry
Filer Authorized By:	Stanley D. Ference
Attorney Docket Number:	696.005_CON
Receipt Date:	24-MAY-2013
Filing Date:	14-SEP-2012
Time Stamp:	16:21:39
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes				
Payment Type	Credit Card				
Payment was successfully received in RAM	\$200				
RAM confirmation Number	4174				
Deposit Account					
Authorized User					
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

Patent Owner CheckFree - 97

1	Transmittal Letter	696-005-CON-AmdtTransmittal-5-24-2013.pdf	42537 8ad9f25a15439307171f92bd1ffcd3abd92422e	no	2
Warnings:					
Information:					
2	Extension of Time	696-005-CON-EOT-5-24-2013.pdf	34985 09c7030b10325874c149369652b9ed6afbf61a1a8	no	2
Warnings:					
Information:					
3	Amendment/Req. Reconsideration-After Non-Final Reject	696-005-CON-Amendment-5-4-2013.pdf	16846 ad955a2251309d4a2d625775b83618c2ff993dad	no	1
Warnings:					
Information:					
4	Claims	696-005-CON-AmdtClaims-5-24-2013.pdf	82224 c1bd5e88bbf390339bb3c56b5344432b49398db	no	4
Warnings:					
Information:					
5	Applicant Arguments/Remarks Made in an Amendment	696-005-CON-AmdtRemarks-5-24-2013.pdf	113253 a46ff16dad2c45ef0856cc6c13c669fb7a40c988	no	5
Warnings:					
Information:					
6	Fee Worksheet (SB06)	fee-info.pdf	30604 b6b9add51ca0ec52c1f2bc6b9f9b3300847c3cd	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			320449		

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.

REFERENCE & ASSOCIATES LLC
Amendment Transmittal

Atty. Docket No. 696.005_CON

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Srinivasan et al.
Serial No. : 13/617,581 Examiner: Yehdega Retta
Filed : September 14, 2012 Group Art Unit: 3622
For : METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION

COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

Transmitted herewith is an Amendment in the above-identified application.

1. ☒ Applicant requests an extension of time to respond to the outstanding Office Action. A Petition for an extension of time is enclosed.
- OR
2. ☐ In the event that an extension of time is required, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.
3. ☐ Small Entity status of this application has been established by a verified statement previously submitted.
4. ☐ A verified statement to establish Small Entity status is enclosed.

CERTIFICATE OF TRANSMISSION

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being transmitted by EFS-WEB on May 24, 2013, to the Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Andrew M. Gabriel

(Type or print name of person mailing paper or fee)

(Signature of person mailing paper or fee)

Page 1 of 2

Patent Owner CheckFree - 100

CBM2013-00028
Metavante & Fidelity v. CashEdge, Inc.
Ex. 2040 - p. 100

FERENCE & ASSOCIATES LLC
Amendment Transmittal

Atty. Docket No. 696.005_CON

5. ☐ Also enclosed: _____
6. ☐ No additional filing fee is required.
7. ☐ An additional filing fee is required.
8. ☒ The filing fee has been calculated as shown below:

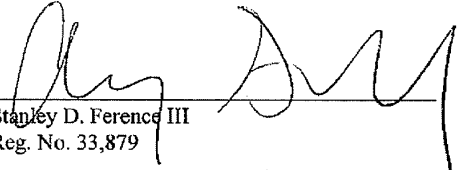
	Claims Remaining After Amendment (Col. 1)		Highest No. Prev. paid for (Col. 2)		Present Extra (Col. 3)		<u>SMALL ENTITY</u>				<u>OTHER THAN A SMALL ENTITY</u>	
							<u>RATE</u>	<u>FEE</u>			<u>RATE</u>	<u>FEE</u>
Total Claims	15	-	** 20	=	* 0	x	\$40	=	OR	x	\$ 80	= 0
Ind. Claims	3	-	*** 3	=	* 0	x	\$210	=	OR	x	\$420	= 0
<input type="checkbox"/> Multiple Dependent Claims Presented						+	\$390	=	OR	+	\$780	= 0
							<u>TOTAL</u>	= \$_____	OR		<u>TOTAL</u>	= \$0.00

* If the entry in Col. 1 is less than the entry in Col. 2, write "0" in Col. 3.
** If the "Highest No. Prev. paid for" in this space is less than 20, write "20" in this space
*** If the "Highest No. Prev. paid for" in this space is less than 3, write "3" in this space.

9. ☐ Applicants are paying by credit card via EFS-WEB in the amount of \$____.00 to cover the filing fees.
10. ☐ The Commissioner is hereby authorized to charge the \$0.00 filing fee to Deposit Account No. 50-5017.
11. ☒ The Commissioner is hereby authorized to charge payment of any additional filing fees associated with this communication or credit any overpayment to Deposit Account No. 50-5017.

Respectfully submitted,

FERENCE & ASSOCIATES LLC

By 
Stanley D. Ference III
Reg. No. 33,879

Andrew M. Gabriel
Reg. No. 61,427

Dated: May 24, 2013

Mailing Address:

Customer No. 35195
FERENCE & ASSOCIATES LLC
409 Broad Street
Pittsburgh, Pennsylvania 15143
(412) 741-8400
(412) 741-9292 - Facsimile

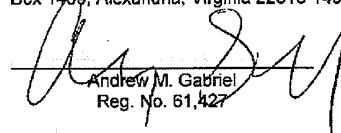
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Srinivasan et al.
Serial No. : 13/617,581 Examiner : Retta
Filed : September 14, 2012 Art Unit : 3622
For : METHOD AND APPARATUS FOR INTERNET
CUSTOMER RETENTION

May 24, 2013

**PETITION AND FEE FOR EXTENSION OF TIME
PURSUANT TO 37 C.F.R. § 1.136(a)**

I hereby certify that this correspondence and any documents referred to as
enclosed therewith are being filed with the Commissioner for Patents, P.O.
Box 1450, Alexandria, Virginia 22313-1450, by EFS Web on May 24, 2013.



Andrew M. Gabriel
Reg. No. 61,427
May 24, 2013
Date of Signature

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

Sir:

Applicant(s) hereby petitions for an extension of time for a total period of three
(3) months through and including May 24, 2013 to respond to the Office Action mailed
on January 24, 2013. If an additional extension of time is required to insure that this
paper is timely filed, please consider this a petition therefor.

The Response for which this extension is requested is filed herewith.

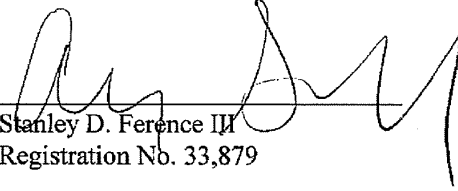
Applicant is a small entity and the extension fee required under 37 C.F.R. §

1.17(a)-(d) is calculated below:

		large entity	small entity
(X)	one month	\$200	\$100
()	two months	\$600	\$300
()	three months	\$1400	\$700
()	four months	\$2200	\$1100
()	five months	\$3000	\$1500

Applicants are paying the extension of time fee by credit card via EFS-WEB. The Commissioner is hereby authorized to charge payment of any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-5017.

Respectfully submitted,


Stanley D. Ference III
Registration No. 33,879

Andrew M. Gabriel
Registration No. 61,427

Mailing Address:

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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.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 13/617,581		Filing Date 09/14/2012		<input type="checkbox"/> To be Mailed	
---	--	--	--	---	--	----------------------------------	--	---------------------------------------	--

ENTITY: <input checked="" type="checkbox"/> LARGE <input type="checkbox"/> SMALL <input type="checkbox"/> MICRO									
APPLICATION AS FILED – PART I									
(Column 1)		(Column 2)							
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)	
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A			
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (l), or (m))		N/A		N/A		N/A			
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A			
TOTAL CLAIMS (37 CFR 1.16(j))		minus 20 =		*		X \$ =			
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =		*		X \$ =			
<input type="checkbox"/> 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).							
<input type="checkbox"/> 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	05/24/2013		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)	
									ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(j))		* 15 Minus		** 20		= 0		X \$80 =	
	Independent (37 CFR 1.16(h))		* 3 Minus		*** 3		= 0		X \$420 =	
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))									
	<input type="checkbox"/> 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(j))		* Minus		**		=		X \$ =	
	Independent (37 CFR 1.16(h))		* Minus		***		=		X \$ =	
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))									
	<input type="checkbox"/> 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.
 ** 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 number found in the appropriate box in column 1.

LIE
/PAULA BRITTON/

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.

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UNITED STATES PATENT AND TRADEMARK OFFICE

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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/617,581	09/14/2012	Kannan Srinivasan	696.005_CON	9286
35195 7590 07/25/2013 FERENCE & ASSOCIATES LLC 409 BROAD STREET PITTSBURGH, PA 15143			EXAMINER RETTA, YEHDEGA	
			ART UNIT 3622	PAPER NUMBER
			MAIL DATE 07/25/2013	DELIVERY MODE PAPER

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.

Office Action Summary	Application No. 13/617,581	Applicant(s) SRINIVASAN ET AL.	
	Examiner YEHDEGA RETTA	Art Unit 3622	AIA (First Inventor to File) 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 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, 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 2013.
☐ 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) 1-15 is/are pending in the application.
5a) Of the above claim(s) 12-15 is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1-11 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☒ Claim(s) 1-15 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. ____.
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) <input type="checkbox"/> Notice of References Cited (PTO-892) | 3) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 4) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

This office action is in response to amendment filed May 24, 2013. Claims 1, 2, 6 are amended and claims 12-15 have been added.

Election/Restrictions

Newly submitted claims 12-15 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-11, drawn to providing communication (discount), classified in class 705, subclass 14.39.
- II. Claims 12, drawn to specifying different permissible defunct threshold for segments of customers, classified in class 705, subclass 7.33.
- III. Claim 13-15, drawn to analyzing web site interactions, classified in class 705, subclass 7.29.

The inventions are distinct, each from the other because of the following reasons:

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II, III are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because “for a customer of a web site, determining a time since last interaction for the customer; specifying different permissible defunct thresholds for segments of customers to the

web site, the segments being determined based on interaction history of the customers with the web site stored as historical data in a database;" is the particular feature of the subcombination which is not a limitation for the independently claimed combination I. The subcombination has separate utility such as profiling customers of a web site. Because the combination, as independently claimed does not require the particulars of the subcombination of the Group II and III, this group shows a distinct relationship with each combination and subcombination. Examiner considers that since applicant independently claim the invention of this group, it is prima facie showing that the inventions are intended to be independent and distinct and are shown to be separately usable.

Inventions II and III are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because "storing, using at least one processor and a database, web site interactions of customers of a web site; analyzing, using the at least one processor, the web site interactions of the customers of the web site;" is the particular feature of the subcombination which is not a limitation for the independently claimed combination II. The subcombination has separate utility such as targeting customers of a web site. Because the combination, as independently claimed does not require the particulars of the subcombination of the Group III, this group shows a distinct relationship with each combination and subcombination. Examiner considers that since

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applicant independently claim the invention of this group, it is prima facie showing that the inventions are intended to be independent and distinct and are shown to be separately usable.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 12-15 (Group II and III) withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-11 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 1 is directed to a method for dynamically optimizing customer retention comprising a plurality of steps (specifying, determining and providing). However, the claim lacks of a physical hardware to carry out the invention. Based on the Office's guidance to Examiners is that a 35USC101 process must (1) be tied to another statutory class (such as a particular apparatus) or (2) transform underlying subject matter (such as an article or materials) to a different state or thing. Thus, to qualify as a

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35USC101 statutory process, the claim should positively recite the other statutory class (the thing or product) to which it is tied, for example, by identifying the apparatus that accomplishes the method steps, or positively recite the subject matter that is being transformed, for example, by identifying the material that is being changed to a different state.

Dependent claims 2-11 are also rejected for the same reason.

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 obviousness-type double patenting rejection is appropriate where the conflicting claims 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

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ground provided the conflicting 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.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-15 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-21 of U.S. Patent No. 8,280,773 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are obvious variations of each other.

Claim Rejections - 35 USC § 103

The following is a quotation of 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 negated by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's background further in view of Herz et al. U.S. Application No. US 2001/0014868.

Regarding claims 1, 9 and 10, Applicant's background teaches specifying a permissible defunct threshold; specifying a range of offers to be included in a set of promotions; determining a probability that a customer will become defunct in a predetermined period of time since the last interaction of that customer with the web site. Applicant's background teaches that it is known in the art of Internet to observe (*past interaction of the customer with a web site*) when an existing

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customer has failed to make a purchase within a certain period of time (defunct threshold) after which it is assumed that the customer has been "lost" or has gone inactive. Herz teaches providing a promotion (*communication*) to a customer if the probability that the customer will become defunct in a predetermined period of time (*elapsed time period*) since the last interaction of that customer with the web site is greater than a predetermined threshold (for example six month). Herz also teaches "[r]ecall that we can characterize a user not only by the responsiveness of the user to certain offers but also by many other attributes, including the loyalty and consistency factor. Example of such user profile attributes (largely numeric) include: elapsed time period since the last purchase, elapsed time period between purchases (average), ranges elapsed period to previous offers, total amount spent over the past 6 months, maximum volume spent on a single shopping spree. If a customer (particularly a long term customer) has recently been lost (**more than six month**) the system may find it *advantageous to use the most aggressive promotional offers possible in order to reinitiate lost loyalties*. Conversely, somewhat less aggressive discounting may be appropriate for very loyal customers (such as frequent buyer programs, long term customer rewards etc.). By the system these types of incentive based promotions are geared towards instilling customer interest and loyalty". It would have been obvious to one of ordinary skill in the art at the time of the invention to provide promotion to the customer in order to reinitiate lost loyalties, as taught in Herz.

Regarding claims 2 and 11, Applicant's background does not explicitly teach segmenting customers based on characteristics. Herz teaches sampling population based on a characteristic (see [0006]-[007], [0205]-[0222]). Herz teaches sampling customers to determine a promotion to offer a particular customer. Herz teaches the likelihood of acceptance can be calculated by

counting what fraction of shoppers (similar shoppers) who were presented with the offer (similar offers) chose to accept (see [0037]-[0039]). It would have been obvious to one of ordinary skill in the art at the time of the invention to determine a promotion to offer to a particular customer by sampling customers (similar shoppers) in order to select offers that the shopper is likely to accept and would result in profitable sale, as taught in Herz.

Regarding claim 3, Applicant's background and Herz teach wherein the characteristic is an amount that the customers spent at the web site in the past (see applicant's background col. 1 line 50 to col. 2 line 46 and Herz [0112]-[0137], [0246]).

Regarding claims 4 and 5, Applicant's background and Herz teaches wherein the last interaction includes accessing the web site; wherein the last interaction includes making a purchase from the web site. (see applicant's background col. 1 line 50 to col. 2 line 46 and Herz [0112]-[0137], [0246]).

Regarding claims 6-8, Herz teaches maximizing profit by optimizing an amount of discount offered in the promotion (communication); wherein optimizing is performed continuously (see [0003], [0046], wherein optimizing includes sampling responses received from customers that are offered promotions of varying amounts; and optimizing the promotion amount provided to other customers based on the optimum promotion amount discovered in the sample (see [0165]-[0166],[0169]). It would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the amount by providing different offers (also based price that maximizes profit) to different consumer groups and based on the feedback from the consumers.

Response to Arguments

Applicant's arguments filed May 24, 2013 have been fully considered but they are not persuasive.

Applicant argues that the reference of record and the state of the art did not teach or suggest, inter alia, ...determining a probability that the customer will become defunct in a predetermined period of time since the last interaction of the customer with the web site, ... and proactively provide a communication to the customer together.

However, Applicant's background teaches that it is known in the art of Internet to observe (*past interaction of the customer with a web site*) when an existing customer has failed to make a purchase within a certain period of time (defunct threshold) after which it is assumed that the customer has been "lost" or has gone inactive. Herz teaches providing a promotion (*communication*) to a customer if the probability that the customer will become defunct in a predetermined period of time (*elapsed time period*) since the last interaction of that customer with the web site is greater than a predetermined threshold (for example six month). Herz also teaches "[r]ecall that we can characterize a user not only by the responsiveness of the user to certain offers but also by many other attributes, including the loyalty and consistency factor. Example of such user profile attributes (largely numeric) include: elapsed time period since the last purchase, elapsed time period between purchases (average), ranges elapsed period to previous offers, total amount spent over the past 6 months, maximum volume spent on a single shopping spree. If a customer (particularly a long term customer) has recently been lost (**more than six month**) the system may find it *advantageous to use the most aggressive promotional offers possible in order to reinitiate lost loyalties*. Conversely, somewhat less aggressive

discounting may be appropriate for very loyal customers (such as frequent buyer programs, long term customer rewards etc.). By the system these types of incentive based promotions are geared towards instilling customer interest and loyalty". It would have been obvious to one of ordinary skill in the art at the time of the invention to provide promotion to the customer in order to reinitiate lost loyalties, as taught in Herz.

Conclusion

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.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YEHDEGA RETTA whose telephone number is (571)272-6723. The examiner can normally be reached on Monday through Thursday from 8 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Stamber can be reached on (571) 272-6724. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 13/617,581

Page 11

Art Unit: 3622

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.

YR

/Yehdega Retta/

Primary Examiner, Art Unit 3622

Patent Owner CheckFree - 116

REFERENCE & ASSOCIATES LLC
Request for Continued Examination

Atty. Docket No. 696.005_CON

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Srinivasan et al.
Serial No. : 13/617,581 Examiner : Retta
Filed : September 14, 2012 Art Unit : 3622
For : METHOD AND APPARATUS FOR INTERNET CUSTOMER
RETENTION

COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

This is a Request for Continued Examination (RCE) in the above-identified application.

1.

Extension of Time

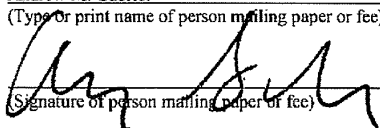
- ☐ No extension of time is needed.
- ☒ Applicant requests an extension of time to respond to the outstanding Office Action. A Petition for an extension of time is enclosed.
- ☐ In the event that an extension of time is required, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

CERTIFICATE OF TRANSMISSION

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being transmitted to the United States Patent and Trademark Office by EFS-Web on December 23, 2013.

Andrew M. Gabriel

(Type or print name of person mailing paper or fee)


(Signature of person mailing paper or fee)

Page 1 of 3

Patent Owner CheckFree - 117

CBM2013-00028
Metavante & Fidelity v. CashEdge, Inc.
Ex. 2040 - p. 117

2 **Submission Required Under 37 CFR 1.114**

- ☐ Previously submitted
- ☐ Please enter the amendment(s)/reply under 37 CFR 1.116 previously filed on _____.
- ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____.
- ☐ Other _____.

- ☒ Enclosed
- ☒ Amendment/Reply
- ☐ Affidavit(s)/Declaration(s)
- ☐ Information Disclosure Statement (IDS)
- ☐ Other _____.

- ☒ The filing fee has been calculated as shown below:

	Claims Remaining After Amendment (Col. 1)	Highest No. Prev. paid for (Col. 2)	Present Extra (Col. 3)	SMALL ENTITY			OTHER THAN A SMALL ENTITY	
				RATE	FEE		RATE	FEE
Total Claims	16	** 20	= * 0	x \$40	=	O x	\$80	= 0
Ind. Claims	3	*** 3	= * 0	x \$210	=	O x	\$420	= 0
<input type="checkbox"/> Multiple Dependent Claim Presented				+ \$390	=	O +	\$780	= 0
				TOTAL	= \$	O	TOTAL	= \$0.00

- * If the entry in Col. 1 is less than the entry in Col. 2, write "0" in Col. 3.
- ** If the "Highest No. Prev. paid for" in this space is less than 20, write "20" in this space.
- *** If the "Highest No. Prev. paid for" in this space is less than 3, write "3" in this space.

3. **Miscellaneous**

- ☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of _____ months.
- ☐ Other _____.

ERENCE & ASSOCIATES LLC
Request for Continued Examination

Atty. Docket No. 696.005_CON

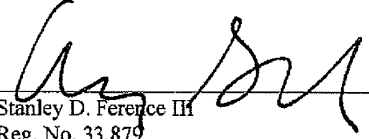
4. ☐ Fees

- ☒ Applicants are paying by credit card via EFS-WEB the RCE fee as noted below:
- ☒ \$1,200 for the first request RCE fee required under 37 CFR 1.114.
☐ \$1,700 for the second and subsequent request RCE fee required under 37 CFR 1.114.
- ☐ The Commissioner is hereby authorized to charge the **Deposit Account No. 50-5017** for the RCE fee as noted below:
- ☐ \$1,200 for the first request RCE fee required under 37 CFR 1.114.
☐ \$1,700 for the second and subsequent request RCE fee required under 37 CFR 1.114.
- ☒ The Commissioner is hereby authorized to charge payment of any additional fees associated with this communication or credit any overpayment to **Deposit Account No. 50-5017**.

Respectfully submitted,

ERENCE & ASSOCIATES LLC

Dated: December 23, 2013

By 
Stanley D. Ference III
Reg. No. 33,879

Andrew M. Gabriel
Reg. No. 61,427

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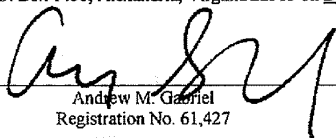
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Srinivasan et al.
Serial No. : 13/617,581 Examiner : Retta
Filed : September 14, 2012 Art Unit : 3622
For : METHOD AND APPARATUS FOR INTERNET
CUSTOMER RETENTION

December 23, 2013

**PETITION AND FEE FOR EXTENSION OF TIME
PURSUANT TO 37 C.F.R. § 1.136(a)**

I hereby certify that this correspondence and any documents referred to as enclosed
therewith are being transmitted via EFS WEB to the Commissioner for Patents,
P.O. Box 1450, Alexandria, Virginia 22313 on December 23, 2013.


Andrew M. Gabriel
Registration No. 61,427

December 23, 2013
Date of Signature

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

Sir:

Applicant hereby petitions for an extension of time for a total period of two (2)
months through and including December 23, 2013 to respond to the Office Action mailed
on July 25, 2013. If an additional extension of time is required to insure that this paper is
timely filed, please consider this a petition therefor.

The Response for which this extension is requested is filed herewith.


Applicant is a large entity and the extension fee required under 37 C.F.R. §

1.17(a)-(d) is calculated below:

		large entity	small entity
()	one month	\$200	\$100
(X)	Two months	\$600	\$300
()	Three months	\$1,400	\$700
()	Four months	\$2,200	\$1,100
()	Five months	\$3,000	\$1,500

Applicant is paying the \$600 extension of time fee for two (2) months by credit card through the EFS-WEB system. The Commissioner is hereby authorized to charge payment of any additional filing fees associated with this communication or credit any overpayment to **Deposit Account No. 50-5017**.

Respectfully submitted,


Stanley D. Ference
Reg. No. 33, 879

Andrew M. Gabriel
Registration No. 61,427

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(412) 741-9292 - Facsimile

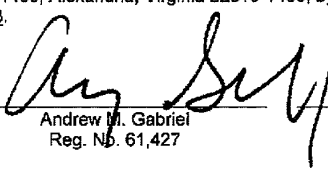
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Srinivasan et al.
Serial No. : 13/617,581 Examiner : Retta
Filed : September 14, 2012 Art Unit : 3622
For : METHOD AND APPARATUS FOR INTERNET
CUSTOMER RETENTION

December 23, 2013

AMENDMENT

I hereby certify that this correspondence and any documents referred to as enclosed therewith are being filed with the Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, by EFS Web on December 23, 2013.


Andrew M. Gabriel
Reg. No. 61,427

December 23, 2013
Date of Signature

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

Sir:

Responsive to the Office Action dated July 25, 2013, please amend the above-identified application as follows.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 6 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. **(Currently Amended)** A method of dynamically optimizing customer retention for a web site, comprising:

specifying a permissible defunct threshold for a customer;

determining, using a processor, a probability that the customer will become defunct in a predetermined period of time since the last interaction of the customer with the web site, the probability being determined based on one or more of: past interactions of the customer with the web site and past interactions of a group of customers with the web site similar to the customer; and

determining, using a processor, when to proactively providing provide a communication to the customer to incentivize the customer to return to the web site based on a determination that [[if]] the probability that the customer will become defunct in the predetermined period of time since the last interaction of the customer with the web site is greater than the permissible defunct threshold.

2. **(Previously Presented)** The method of claim 1, further comprising segmenting customers based on a characteristic of the customers to be sampled for determining the probability.

3. **(Original)** The method of claim 2, wherein the characteristic is an amount that the customers spent at the web site in the past.

4. **(Original)** The method of claim 1, wherein the last interaction includes accessing the web site.

5. **(Original)** The method of claim 1, wherein the last interaction includes making a purchase from the web site.

6. **(Previously Presented)** The method of claim 1, further comprising maximizing profit by optimizing an amount of discount offered in the in the communication.

7. **(Original)** The method of claim 6, wherein optimizing is performed continuously.

8. **(Original)** The method of claim 6, wherein optimizing includes sampling responses received from customers that are offered promotions of varying amounts; and optimizing the promotion amount provided to other customers based on the optimum promotion amount discovered in the sample.

9. **(Original)** The method of claim 1, wherein data related to whether a customer has interfaced with the web site is stored in the database.

10. **(Original)** The method of claim 1, wherein an amount spent by a customer is stored in a database.

11. **(Original)** The method of claim 9, wherein a customer is segmented for random sampling based on the amount spent by that customer.

12. **(Withdrawn)** A method, comprising:

for a customer of a web site, determining a time since last interaction for the customer;

specifying different permissible defunct thresholds for segments of customers to the web site, the segments being determined based on interaction history of the customers with the web site stored as historical data in a database;

determining, using at least one processor, a probability that the customer will become defunct given the amount of time determined since the last interaction of the customer with the web site, the probability being determined based on past interactions of the customer with the web site stored as historical data in the database; and

proactively providing a communication over a network to the customer to incentivize the customer to return to the web site if the probability that the customer will become defunct given the amount of time determined since the last interaction of the customer with the web site is greater than a permissible defunct threshold for the customer.

13. **(Withdrawn)** A method, comprising:

storing, using at least one processor and a database, web site interactions of customers of a web site;

analyzing, using the at least one processor, the web site interactions of the customers of the web site;

determining, using the at least one processor, a probability that the customer will become defunct given the amount of time determined since a last interaction of the customer with the web site, and

prior to determining that the customer has become defunct, proactively providing a communication over a network to the customer to incentivize the customer to return to the web site responsive to a determination that the probability that the customer will become defunct given the amount of time determined since the last interaction of the customer with the web site is greater than a permissible defunct threshold for the customer.

14. **(Withdrawn)** The method of claim 13, wherein the communication contents are based on the web site interactions of other customers of the web site.

15. **(Withdrawn)** The method of claim 14, wherein the other customers of the web site are grouped with the customer based on a similarity characteristic.

16. **(New)** The method of claim 1, wherein to proactively provide comprises providing the communication prior to the user becoming defunct.

REMARKS

Applicants and the undersigned are most grateful for the time and effort accorded the instant application by the Examiner.¹ The Office is respectfully requested to reconsider the rejections present in the outstanding Office Action.

It should be noted that Applicants are not conceding in this application the claims amended herein are not patentable over the art cited by the Examiner, as the present claim amendments are only for facilitating expeditious prosecution. Applicants respectfully reserve the right to pursue these and other claims in one or more continuations and/or divisional patent applications. Applicants specifically state no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Rejections under 35 U.S.C. § 101

Claims 1-11 stand rejected under § 101 as being directed to non-statutory subject matter. Applicants respectfully disagree at least because the Office's interpretation of the claims is contrary to an interpretation of the claims in view of the specification, which necessarily ties the method to a particular machine.

Nonetheless, Applicants have amended the claims herein solely in the interest of facilitating compact prosecution of this case. Applicants respectfully submit that the claims, particularly as amended, are fully compliant with the requirements of § 101 and are directed to statutory subject matter.

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejections under § 101.

Double Patent Rejections

Applicants respectfully submit that the double patenting rejections have been made in error for similar reasoning stated by the Office in alleging that claims 12-15 should be considered distinct inventions from that originally claimed. Moreover, Applicants respectfully submit that the claim amendments made herewith render these rejections moot.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the double patent rejections applied to claims 1-15.

Rejections under 35 U.S.C. § 103(a)

Claims 1-11 stand rejected under 35 USC § 103(a) as obvious over Applicants' background and further in view of Herz et al. (hereinafter "Herz"). Applicants respectfully disagree.

Applicants respectfully submit that the reference fails to teach or suggest all the claim limitations. The Office is kindly reminded that "[w]hen determining whether a claim is obvious, an examiner must make a searching comparison of the claimed invention – *including all its limitations* – with the teaching of the prior art. Thus, obviousness requires a suggestion of all limitations in a claim. Moreover, as the Supreme Court recently stated, *there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.*" Ex parte H. Garrett Wada

et al., Slip Opinion, p. 7, Appeal No. 2007-3733 (BPAI January 14, 2008) (internal quotation marks and citations omitted) (emphasis in original) (reversing Examiner's obviousness rejection).

Applicants respectfully disagree with the Office's characterization of the Applicants' own disclosure. Specifically, Applicants respectfully submit that the Office confuses the "customer lost" scenario, discussed in the background with the fact that "it is not taught or suggested in the prior art to observe the customer's behavior dynamically during his period of interaction with the website to anticipate a possible defection and take steps to prevent it", i.e., prior to customer becoming defunct or "lost". Specification at [0008]. What is clear from Applicants' background is that there is no teaching or suggestion of "determining a probability that the customer will become defunct in a predetermined period of time since the last interaction of the customer with the web site", as claimed. Claim 1.

Moreover, Herz does not take into account customer status until after the customer has been lost, and again this is in the context of determining an appropriate offer, not a timing of communication to the customer based on a probability that the customer will become lost. *See Herz* at [0246] (stating: "If a customer (particularly a long term customer) has recently been lost the system may find it advantageous to use the most aggressive promotional offers possible in order to reinitiate lost loyalties") (emphasis added).

In other words, Herz teaches that promotional levels (e.g., amount of a discount) can be adjusted based on attributes of an already lost customer. For example, Herz

instructs that if a loyal customer has been lost, this would suggest a more “aggressive” discount be provided. In contrast, Applicants’ claims are directed at determining when to proactively communicate with the customer. Claim 1. Accordingly, Applicants respectfully submit that Herz does not contemplate “...determining a probability that a customer will become defunct in a predetermined period of time since the last interaction of that customer with the web site” or “proactively providing a communication to the customer to incentivize the customer to return to the web site.” Claim 1 (as previously presented).

Nonetheless, solely in the interest of facilitating compact prosecution of this case, Applicants have amended the claims herein. Support for these claim amendments can be found throughout the specification, particularly at paragraphs [0087] – [0089], [0090] – [0097] and [0100]. Applicants respectfully submit that the claims, particularly as amended, are readily distinguishable from the reference of record and the state of the art at the time of filing.

Specifically, Applicants respectfully submit that the reference of record and the state of the art did not teach or suggest, *inter alia*, “...determining when to proactively provide a communication to the customer to incentivize the customer to return to the web site.” Claim 1 (as amended).

New Claims

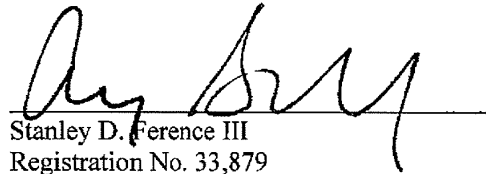
Applicants have presented new claim 16 herewith. The new claim is directed to features of embodiments as taught by the specification at least at paragraphs [0087] –

[0089], [0090] – [0097] and [0100]. Applicants respectfully submit that no new matter has been entered and that the new claim is presently in condition for allowance.

Conclusion

In summary, it is respectfully submitted that the instant application is presently in condition for allowance. A Notice of Allowance is hereby earnestly solicited. Applicants' undersigned attorney would welcome further discussion with the Office in the event there are any further issues in this application.

Respectfully submitted,



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Attorneys for Applicants

Electronic Patent Application Fee Transmittal				
Application Number:	13617581			
Filing Date:	14-Sep-2012			
Title of Invention:	METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION			
First Named Inventor/Applicant Name:	Kannan Srinivasan			
Filer:	Stanley D. Ference/Jennifer Lineberry			
Attorney Docket Number:	696.005_CON			
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
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:				
Extension - 2 months with \$0 paid	1252	1	600	600

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Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Request for Continued Examination	1801	1	1200	1200
Total in USD (\$)				1800

Electronic Acknowledgement Receipt

EFS ID:	17738897
Application Number:	13617581
International Application Number:	
Confirmation Number:	9286
Title of Invention:	METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION
First Named Inventor/Applicant Name:	Kannan Srinivasan
Customer Number:	35195
Filer:	Stanley D. Ference/Jennifer Lineberry
Filer Authorized By:	Stanley D. Ference
Attorney Docket Number:	696.005_CON
Receipt Date:	23-DEC-2013
Filing Date:	14-SEP-2012
Time Stamp:	12:12:03
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes				
Payment Type	Credit Card				
Payment was successfully received in RAM	\$1800				
RAM confirmation Number	16289				
Deposit Account					
Authorized User					
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

Patent Owner CheckFree - 134

1		696-005-CON-RCE-12-23-2013.pdf	294006 bf55930f1ad29aef46212945bc2cc526db9cc2d	yes	15
Multipart Description/PDF files in .zip description					
	Document Description	Start	End		
	Request for Continued Examination (RCE)	1	3		
	Extension of Time	4	5		
	Amendment Submitted/Entered with Filing of CPA/RCE	6	6		
	Claims	7	10		
	Applicant Arguments/Remarks Made in an Amendment	11	15		
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	32447 79ad381934f523ed2f291a5536184e6aeced209c	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			326453		
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> 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.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> 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.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> 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.</p>					

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 13/617,581		Filing Date 09/14/2012		<input type="checkbox"/> To be Mailed	
ENTITY: <input checked="" type="checkbox"/> LARGE <input type="checkbox"/> SMALL <input type="checkbox"/> MICRO									
APPLICATION AS FILED – PART I									
(Column 1)		(Column 2)							
FOR	NUMBER FILED	NUMBER EXTRA			RATE (\$)	FEE (\$)			
<input checked="" type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A			N/A	380			
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A			N/A				
<input type="checkbox"/> 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 \$ =				
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*			X \$ =				
<input type="checkbox"/> 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).								
<input type="checkbox"/> 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	380			
APPLICATION AS AMENDED – PART II									
(Column 1)		(Column 2)		(Column 3)					
AMENDMENT	12/23/2013	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 16	Minus	** 20	= 0	X \$80 =		0	
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0	X \$420 =		0	
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))								
	<input type="checkbox"/> 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 \$ =			
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =			
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))								
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE			
<p>* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.</p> <p>** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".</p> <p>*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".</p> <p>The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.</p>									

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.

Patent Owner CheckFree - 136



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 NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/617,581	09/14/2012	Kannan Srinivasan	696.005_CON	9286
35195 7590 01/24/2014 FERENCE & ASSOCIATES LLC 409 BROAD STREET PITTSBURGH, PA 15143			EXAMINER RETTA, YEHDEGA	
			ART UNIT 3622	PAPER NUMBER
			MAIL DATE 01/24/2014	DELIVERY MODE PAPER

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.

Office Action Summary	Application No. 13/617,581	Applicant(s) SRINIVASAN ET AL.	
	Examiner YEHDEGA RETTA	Art Unit 3622	AIA (First Inventor to File) 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 12/23/13.
☐ 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) 1-11 and 16 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) 1-11 and 16 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. _____.

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: _____.

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

Claim Rejections - 35 USC § 103

The following is a quotation of 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 negated by the manner in which the invention was made.

Claims 1-11 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's background further in view of Herz et al. U.S. Application No. US 2001/0014868.

Regarding claims 1, 9, 10 and 16, Applicant's background teaches specifying a permissible defunct threshold; specifying a range of offers to be included in a set of promotions; determining a probability that a customer will become defunct in a predetermined period of time since the last interaction of that customer with the web site. Applicant's background teaches that it is known in the art of Internet to observe (*past interaction of the customer with a web site*) when an existing customer has failed to make a purchase within a certain period of time (defunct threshold) after which it is assumed that the customer has been "lost" or has gone inactive.

Same as Applicant's background, Herz also teaches providing a promotion (*communication*) to a customer if the probability that the customer will become defunct in a predetermined period of time (*elapsed time period*) since the last interaction of that customer with the web site is greater than a predetermined threshold (for example six month). Herz also teaches "[r]ecall that we can characterize a user not only by the responsiveness of the user to certain offers but also by many other attributes, including the loyalty and consistency factor. Example of such user profile attributes (largely numeric) include: elapsed time period since the

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last purchase, elapsed time period between purchases (average), ranges elapsed period to previous offers, total amount spent over the past 6 months, maximum volume spent on a single shopping spree. If a customer (particularly a long term customer) has recently been lost (**more than six month**) the system may find it *advantageous to use the most aggressive promotional offers possible in order to reinitiate lost loyalties*. Conversely, *somewhat less aggressive discounting may be appropriate for very loyal customers* (such as frequent buyer programs, long term customer rewards etc.). By the system these types of incentive based promotions are geared towards instilling customer interest and loyalty". Herz teaches when to provide a communication (after six month) to customer based on the determination that the ... greater than the threshold (six month). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide promotion to the customer in order to reinitiate lost loyalties, as taught in Herz. Herz also teaches providing communication prior to the user becoming defunct (lost) *somewhat less aggressive discounting may be appropriate for very loyal customers* (such as frequent buyer programs, long term customer rewards etc.).

Regarding claims 2 and 11, Applicant's background does not explicitly teach segmenting customers based on characteristics. Herz teaches sampling population based on a characteristic (see [0006]-[007], [0205]-[02222]). Herz teaches sampling customers to determine a promotion to offer a particular customer. Herz teaches the likelihood of acceptance can be calculated by counting what fraction of shoppers (similar shoppers) who were presented with the offer (similar offers) chose to accept (see [0037]-[0039]). It would have been obvious to one of ordinary skill in the art at the time of the invention to determine a promotion to offer to a particular customer

by sampling customers (similar shoppers) in order to select offers that the shopper is likely to accept and would result in profitable sale, as taught in Herz.

Regarding claim 3, Applicant's background and Herz teach wherein the characteristic is an amount that the customers spent at the web site in the past (see applicant's background col. 1 line 50 to col. 2 line 46 and Herz [0112]-[0137], [0246]).

Regarding claims 4 and 5, Applicant's background and Herz teaches wherein the last interaction includes accessing the web site; wherein the last interaction includes making a purchase from the web site. (see applicant's background col. 1 line 50 to col. 2 line 46 and Herz [0112]-[0137], [0246]).

Regarding claims 6-8, Herz teaches maximizing profit by optimizing an amount of discount offered in the promotion (communication); wherein optimizing is performed continuously (see [0003], [0046], wherein optimizing includes sampling responses received from customers that are offered promotions of varying amounts; and optimizing the promotion amount provided to other customers based on the optimum promotion amount discovered in the sample (see [0165]-[0166],[0169]). It would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the amount by providing different offers (also based price that maximizes profit) to different consumer groups and based on the feedback from the consumers.

Response to Arguments

Applicant's arguments filed 12/23/13 have been fully considered but they are not persuasive. Applicant argues states "What is clear from Applicants' background is that there is no teaching or suggestion of "determining a probability that the customer will become defunct in

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a predetermined period of time since the last interaction of the customer with the web site", as claimed. Examiner disagrees. Applicant background teaches that when an existing customer has failed to make a purchase within a certain period of time, after which is assumed that the customer has been lost ... Therefore, the probability is high after a certain period of time is passed. Herz also teaches when customer has recently been lost (**more than six month**) the system may find it *advantageous to use the most aggressive promotional offers possible in order to reinitiate lost loyalties*. Conversely, somewhat *less aggressive discounting may be appropriate for very loyal customers* (such as frequent buyer programs, long term customer rewards etc.).

The claim recites determining a probability that the customer will become defunct (i.e. the more than six month the chance is high that the customer would not come back, but before the six month the chance is lower), and providing a communication when the period of time is higher than the defunct threshold (six month).

Applicant also states "In contrast, Applicants' claims are directed at determining when to proactively communicate with the customer. Claim 1. Accordingly, Applicants respectfully submit that Herz does not contemplate "...determining a probability that a customer will become defunct in a predetermined period of time since the last interaction of that customer with the web site" or "proactively providing a communication to the customer to incentivize the customer to return to the web site."

Examiner would like to point out that the claim recites "determining when to provide communication **to incentivize the customer to return to the web site**", which is understood to mean that the determination is on how to incentivize the customer (which means depending on

the type of promotion or the frequency the promotion). If applicant's intention is that the communication is provided only when the determination is made i.e. no communication is sent to the customer until it is determined that the probability of the customer will become defunct (greater than the permissible defunct threshold), then there is no support in the specification for the claimed feature and would be considered new matter.

Herz also teaches proactively communicating or providing promotion before the consumer is considered lost (*less aggressive discounting may be appropriate for very loyal customers* (such as frequent buyer programs, long term customer rewards etc.)).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YEHDEGA RETTA whose telephone number is (571)272-6723. The examiner can normally be reached on Monday through Thursday from 8 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Stamber can be reached on (571) 272-6724. 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

Application/Control Number: 13/617,581

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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.

YR
/YEHDEGA RETTA/
Primary Examiner, Art Unit 3622

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/617,581	09/14/2012	Kannan Srinivasan	696.005_CON	9286
35195 7590 04/25/2014 FERENCE & ASSOCIATES LLC 409 BROAD STREET PITTSBURGH, PA 15143			EXAMINER RETTA, YEHDEGA	
			ART UNIT 3622	PAPER NUMBER
			MAIL DATE 04/25/2014	DELIVERY MODE PAPER

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.

Applicant-Initiated Interview Summary	Application No.		Applicant(s)	
	13/617,581		SRINIVASAN ET AL.	
	Examiner		Art Unit	
		YEHDEGA RETTA	3622	

All participants (applicant, applicant's representative, PTO personnel):

(1) YEHDEGA RETTA. (3) Kannan Srinivasan.

(2) Andrew Gabriel. (4) _____.

Date of Interview: 22 April 2013.

Type: ☒ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☒ No.
If Yes, brief description: _____.

Issues Discussed ☐101 ☐112 ☐102 ☒103 ☐Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: 1.

Identification of prior art discussed: Herz US 2001/0014868.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

Proposed amendment for claim 1 was discussed. In order to overcome the prior art Applicant might amend the claim. No agreement was reached on how to further amend the claim.

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the 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.

☐ Attachment

/YEHDEGA RETTA/ Primary Examiner, Art Unit 3622	
--	--

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

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CBM2013-00028

Metavante & Fidelity v. CashEdge, Inc.

Ex. 2040 - p. 147

MEMORY TRANSMISSION REPORT

TIME : 04-16-2014 10:22
FAX NO.1 : 14127419292
NAME :

FILE NO. : 183
DATE : 04.16 10:21
TO : 15712736723
DOCUMENT PAGES : 4
START TIME : 04.16 10:21
END TIME : 04.16 10:22
PAGES SENT : 4
STATUS : OK

SUCCESSFUL TX NOTICE

FERENCE & ASSOCIATES LLC

409 Broad Street
Pittsburgh, Pennsylvania 15143
Phone: (412) 741-8400
Fax: (412) 741-9292
Web: www.ferencelaw.com

FACSIMILE COVER SHEET

To: Examiner Retta
INFORMAL COMMUNICATION
Interview Agenda

Fax Number: 1-571-279-9729

From: Ference & Associates LLC

Date: April 15, 2014

Pages: 4 pages (including this cover sheet)

MESSAGE:

U.S. Patent Application Serial No: 13/617,581

Title: METHOD AND APPARATUS FOR INTERNET CUSTOMER
RETENTION

Please find attached an Interview Agenda for an upcoming interview on Tuesday, April
22, 2014 at 11:00 a.m.

Patent Owner CheckFree - 148

FERENCE & ASSOCIATES LLC

409 Broad Street
Pittsburgh, Pennsylvania 15143
Phone: (412) 741-8400
Fax: (412) 741-9292
Web: www.ferencelaw.com

FACSIMILE COVER SHEET

To: Examiner Retta
INFORMAL COMMUNICATION
Interview Agenda

Fax Number: 1- 571-273-6723

From: Ference & Associates LLC
Date: April 15, 2014
Pages: 4 pages (including this cover sheet)

MESSAGE:

U.S. Patent Application Serial No: 13/617,581

Title: METHOD AND APPARATUS FOR INTERNET CUSTOMER
RETENTION

Please find attached an Interview Agenda for an upcoming interview on Tuesday, April
22, 2014 at 11:00 a.m.

INFORMAL COMMUNICATION FOR DISCUSSION PURPOSES ONLY

METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION

Appln. Serial No. 13/617,581
(Atty. Docket No. 696.005_CON)

Interview Agenda

Interview Date: To Be Determined
Interview Time: To Be Determined

Confirmed Participants: Yehdega Retta – Examiner
Stanley Ference – Attorney
Andrew Gabriel – Attorney

Posture of Case: Non-Final Office Action

Status of Claims: All claims stand rejected under 35 U.S.C. § 103.

Topic: Applicants' representatives would like to discuss the attached claim language as a discussion point.

Applicants note that the inclusion of the attached claim language should not be construed as an admission that the claims are to be amended in any particular way or at all, and further state that the attached claim language is not an indication that the claims will be amended as set forth in the attached claim language. Applicants include the attached claim language to facilitate a productive discussion in the interview. If any amendments are to be made, those amendments will be included in a formal, written response.

1. (Currently Amended) A method of dynamically optimizing customer retention for a web site, comprising:

maintaining, in a database, a history of past interactions with a web site for at least one customer;

determining, using a processor, a period of time elapsed since the at least one customer last interacted with the web site;

specifying, using a processor and the data base, a permissible defunct threshold for a customer period of time after which a customer should be prompted to return to the web site;

wherein the specifying is based on one or more of past interactions of the customer with the web site and past interactions of a group of customers similar to the customer with the web site;

~~determining, using a processor, a probability that the customer will become defunct in a predetermined period of time since the last interaction of the customer with the web site, the probability being determined based on one or more of: past interactions of the customer with the web site and past interactions of a group of customers with the web site similar to the customer; and~~

determining, using a processor, ~~when whether~~ to proactively provide a communication to the customer to incentivize the customer to return to the web site based on a determination that the probability that the customer will become defunct in the predetermined in accordance with the specified period of time after which a customer

should be prompted to return to the web site since the last interaction of the customer
with the web site is greater than the permissible defunct threshold.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Srinivasan et al.
Serial No. : 13/617,581 Examiner : Retta
Filed : September 14, 2012 Art Unit : 3622
For : METHOD AND APPARATUS FOR INTERNET
CUSTOMER RETENTION

May 27, 2014

AMENDMENT

I hereby certify that this correspondence and any documents referred to as enclosed therewith are being filed with the Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, by EFS Web on May 27, 2014.

/Andrew M. Gabriel/

Andrew M. Gabriel
Reg. No. 61,427

May 27, 2014
Date of Signature

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

Sir:

Responsive to the Office Action dated January 24, 2014, please amend the above-identified application as follows.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 5 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. **(Currently Amended)** A method of dynamically optimizing customer retention for a web site, comprising:

maintaining, in a database, a history of past login behavior with respect to a web site for a customer;

determining, using a processor, a period of time elapsed since the customer last logged into the web site;

specifying, using a processor and the data base, a permissible defunct threshold for a customer period of time after which the customer should be prompted to return to the web site based on one or more of:

the history of past login behavior of the customer; and

a history of past login behavior of a group of customers similar to the customer;

determining, using a processor, a probability that the customer will become defunct in a predetermined period of time since the last interaction of the customer with the web site, the probability being determined based on one or more of: past interactions of the customer with the web site and past interactions of a group of customers with the web site similar to the customer; and

determining, using a processor, when to ~~proactively provide~~ providing a communication to the customer to incentivize the customer to return to the web site based on a determination that the probability that the customer will become defunct in the ~~predetermined~~ after the specified period of time has elapsed since the last interaction of the customer with the web site is greater than the permissible defunct threshold.

2. **(Currently Amended)** The method of claim 1, further comprising segmenting customers based on a characteristic of the customers to be sampled for ~~determining the probability~~ specifying the period of time.

3. **(Original)** The method of claim 2, wherein the characteristic is an amount that the customers spent at the web site in the past.

4. **(Currently Amended)** The method of claim 1, wherein the ~~last interaction~~ login behavior includes accessing the web site.

5. **(Currently Amended)** The method of claim 1, wherein the ~~last interaction~~ login behavior includes making a purchase from the web site.

6. **(Previously Presented)** The method of claim 1, further comprising maximizing profit by optimizing an amount of discount offered in the in the communication.

7. **(Original)** The method of claim 6, wherein optimizing is performed continuously.

8. **(Original)** The method of claim 6, wherein optimizing includes sampling responses received from customers that are offered promotions of varying amounts; and

optimizing the promotion amount provided to other customers based on the optimum promotion amount discovered in the sample.

9. (Cancelled)

10. (Original) The method of claim 1, wherein an amount spent by a customer is

stored in a database.

11. (Currently Amended) The method of claim ~~[[9]]~~ 10, wherein a customer is

segmented for random sampling based on the amount spent by that customer.

12 – 15. (Cancelled).

16. (Previously Presented) The method of claim 1, wherein ~~to proactively~~

~~provide~~ providing a communication comprises providing the communication prior to the user customer becoming ~~defunct~~ lost.

REMARKS

The fact that May 24, 2014, May 25, 2014 and May 26, 2014 fell on a Saturday, a Sunday and a federal holiday, respectively, ensures this paper is timely filed on May 27, 2014, the next business day.

Applicants and the undersigned are most grateful for the time and effort accorded the instant application by the Examiner. The Office is respectfully requested to reconsider the rejections present in the outstanding Office Action.

On April 22, 2014 Applicants' representative conducted a telephone interview with the Examiner. Claim 1 was discussed as were potential changes to the claims, such as those contained in the claim amendments submitted herewith. The Herz reference (cited in the outstanding Office Action and referenced below) was also discussed. No specific agreements were reached and Applicants' representative indicated that a formal, written response would be forthcoming.

It should be noted that Applicants are not conceding in this application the claims amended herein (including claim cancellations) are not patentable over the art cited by the Examiner, as the present claim amendments are only for facilitating expeditious prosecution. Applicants respectfully reserve the right to pursue these and other claims in one or more continuations and/or divisional patent applications. Applicants specifically state that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Rejections under 35 U.S.C. § 103(a)

Claims 1-11 and 16 stand rejected under 35 USC § 103(a) as obvious over Applicants' background and further in view of Herz et al. (hereinafter "Herz"). Applicants respectfully disagree.

Applicants respectfully submit that the reference fails to teach or suggest all the claim limitations, as is required. Ex parte H. Garrett Wada et al., Slip Opinion, p. 7, Appeal No. 2007-3733 (BPAI January 14, 2008).

Applicants again respectfully disagree with the Office's characterization of the Applicants' own disclosure and the claims. Applicants respectfully incorporate their prior remarks by reference, as they remain applicable here.

Applicants have amended the claims in an effort to facilitate compact prosecution of this case. Specifically, Applicants respectfully submit that the cited reference focuses on a "customer lost" scenario, such as that discussed in the background of Applicants' own specification, whereas Applicants' claims are directed to a context where "it is not taught or suggested in the prior art to observe the customer's behavior dynamically during his period of interaction with the website to anticipate a possible defection and take steps to prevent it", i.e., prior to customer becoming defunct or "lost". Specification at [0008].

Applicants respectfully submit that there is no teaching or suggestion in the cited reference or the state of the art at the time of filing of "specifying, using a processor and the data base, a period of time after which the customer should be prompted to return to

the web site based on one or more of: the history of past login behavior of the customer; and a history of past login behavior of a group of customers similar to the customer; and providing a communication to the customer to incentivize the customer to return to the web site after the specified period of time has elapsed”, as claimed. Claim 1 (as amended). Support for these amendments is found at least at paragraph [0109] of the original specification.

Herz does not take into account customer history in order to communicate with the customer on an adjusted basis. Rather, Hertz waits until *after the customer has been lost*, and again this is in the context of determining an appropriate offer, not a timing of communication to the customer based on a probability that the customer *will become lost*. See Herz at [0246] (stating: “If a customer (particularly a long term customer) has recently been lost the system may find it advantageous to use the most aggressive promotional offers possible in order to reinitiate lost loyalties”) (emphasis added).

Thus, Applicants respectfully submit that the claims, particularly as amended, are readily distinguishable from the teachings of Herz and the state of the art at the time of filing and thus are in condition for immediate allowance.

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/

/

Conclusion

In summary, it is respectfully submitted that the instant application is presently in condition for allowance. A Notice of Allowance is hereby earnestly solicited. Applicants' undersigned attorney would welcome further discussion with the Office in the event there are any further issues in this application.

Respectfully submitted,

/Andrew M. Gabriel/

Stanley D. Ference III
Registration No. 33,879

Andrew M. Gabriel
Registration No. 61,427

Customer No. 35195
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409 Broad Street
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Attorneys for Applicants

Electronic Patent Application Fee Transmittal				
Application Number:		13617581		
Filing Date:		14-Sep-2012		
Title of Invention:		METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION		
First Named Inventor/Applicant Name:		Kannan Srinivasan		
Filer:		Stanley D. Ference/Jennifer Lineberry		
Attorney Docket Number:		696.005_CON		
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
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:				
Extension - 1 month with \$0 paid	1251	1	200	200

Patent Owner CheckFree - 161

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				200

Patent Owner CheckFree - 162

Electronic Acknowledgement Receipt	
EFS ID:	19134760
Application Number:	13617581
International Application Number:	
Confirmation Number:	9286
Title of Invention:	METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION
First Named Inventor/Applicant Name:	Kannan Srinivasan
Customer Number:	35195
Filer:	Stanley D. Ference/Jennifer Lineberry
Filer Authorized By:	Stanley D. Ference
Attorney Docket Number:	696.005_CON
Receipt Date:	27-MAY-2014
Filing Date:	14-SEP-2012
Time Stamp:	16:32:49
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes				
Payment Type	Credit Card				
Payment was successfully received in RAM	\$200				
RAM confirmation Number	3903				
Deposit Account					
Authorized User					
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

Patent Owner CheckFree - 163

1		696-005-CON- AmendmentResponsetoOA-5-2 7-2014.pdf	215138 f74e1bd4a368bcae517f1f188a9ae4be03ab3 c9ec	yes	12
Multipart Description/PDF files in .zip description					
	Document Description	Start	End		
	Extension of Time	1	2		
	Transmittal Letter	3	4		
	Amendment/Req. Reconsideration-After Non-Final Reject	5	5		
	Claims	6	8		
	Applicant Arguments/Remarks Made in an Amendment	9	12		
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30603 ca8d5f44a845cde7bb5c2b432328766a634 2776e	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			245741		
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> 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.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> 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.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> 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.</p>					

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Srinivasan et al.
Serial No. : 13/617,581 Examiner : Retta
Filed : September 14, 2012 Art Unit : 3622
For : METHOD AND APPARATUS FOR INTERNET
CUSTOMER RETENTION

May 27, 2014

**PETITION AND FEE FOR EXTENSION OF TIME
PURSUANT TO 37 C.F.R. § 1.136(a)**

I hereby certify that this correspondence and any documents referred to as enclosed
therewith are being transmitted via EFS WEB to the Commissioner for Patents,
P.O. Box 1450, Alexandria, Virginia 22313 on May 27, 2014.

/Andrew M. Gabriel/

Andrew M. Gabriel
Registration No. 61,427

May 27, 2014
Date of Signature

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

Sir:

Applicant hereby petitions for an extension of time for a total period of one (1)
month through and including May 27, 2014 to respond to the Office Action mailed on
January 24, 2014. The fact that May 24, 2014 and May 25, 2014 fell on a Saturday and a
Sunday and May 26, 2014 was a Federal Holiday ensures this paper is timely filed on
May 27, 2014, the next business day. If an additional extension of time is required to
insure that this paper is timely filed, please consider this a petition therefor.

The Response for which this extension is requested is filed herewith.

Applicant is a large entity and the extension fee required under 37 C.F.R. §

1.17(a)-(d) is calculated below:

		large entity	small entity
(X)	one month	\$200	\$100
()	Two months	\$600	\$300
()	Three months	\$1,400	\$700
()	Four months	\$2,200	\$1,100
()	Five months	\$3,000	\$1,500

Applicant is paying the \$200 extension of time fee for one (1) month by credit card through the EFS-WEB system. The Commissioner is hereby authorized to charge payment of any additional filing fees associated with this communication or credit any overpayment to **Deposit Account No. 50-5017**.

Respectfully submitted,

/Andrew M. Gabriel/

Stanley D. Ference
Reg. No. 33, 879

Andrew M. Gabriel
Registration No. 61,427

Mailing Address:
Customer No. 35195
FERENCE & ASSOCIATES LLC
409 Broad Street
Pittsburgh, Pennsylvania 15143
(412) 741-8400
(412) 741-9292 - Facsimile

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Srinivasan et al.
Serial No. : 13/617,581 Examiner : Retta
Filed : September 14, 2012 Art Unit : 3622
For : METHOD AND APPARATUS FOR INTERNET CUSTOMER
RETENTION

COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

Transmitted herewith is an Amendment in the above-identified application.

1. ☒ Applicant requests an extension of time to respond to the outstanding Office Action. A Petition for an extension of time is enclosed.
- OR
2. ☐ In the event that an extension of time is required, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.
3. ☐ Small Entity status of this application has been established by a verified statement previously submitted.
4. ☐ A verified statement to establish Small Entity status is enclosed.

CERTIFICATE OF TRANSMISSION

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being transmitted by EFS-WEB on May 27, 2014, to the Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Andrew M. Gabriel

(Type or print name of person mailing paper or fee)

/Andrew M. Gabriel/

(Signature of person mailing paper or fee)

FERENCE & ASSOCIATES LLC
Amendment Transmittal

Atty. Docket No. 696.005_CON

5. ☐ Also enclosed: _____
6. ☐ No additional filing fee is required.
7. ☐ An additional filing fee is required.
8. ☒ The filing fee has been calculated as shown below:

	Claims Remaining After Amendment (Col. 1)	-	Highest No. Prev. paid for (Col. 2)	=	Present Extra (Col. 3)	x	<u>SMALL ENTITY</u>		OR	x	<u>OTHER THAN A SMALL ENTITY</u>	
					<u>RATE</u>		<u>FEE</u>	<u>RATE</u>			<u>FEE</u>	
Total Claims	11	-	** 20	=	* 0	x	\$40	=	OR	x	\$ 80	= 0
Ind. Claims	1	-	*** 3	=	* 0	x	\$210	=	OR	x	\$420	= 0
<input type="checkbox"/> Multiple Dependent Claims Presented						+	\$390	=	OR	+	\$780	= 0
							<u>TOTAL</u>	= \$	OR	<u>TOTAL</u>	= \$0.00	

* If the entry in Col. 1 is less than the entry in Col. 2, write "0" in Col. 3.

** If the "Highest No. Prev. paid for" in this space is less than 20, write "20" in this space

*** If the "Highest No. Prev. paid for" in this space is less than 3, write "3" in this space.

9. ☐ Applicants are paying by credit card via EFS-WEB in the amount of \$____.00 to cover the filing fees.
10. ☐ The Commissioner is hereby authorized to charge the \$0.00 filing fee to **Deposit Account No. 50-5017**.
11. ☒ The Commissioner is hereby authorized to charge payment of any additional filing fees associated with this communication or credit any overpayment to **Deposit Account No. 50-5017**.

Respectfully submitted,

FERENCE & ASSOCIATES LLC

Dated: May 27, 2014

By /Andrew M. Gabriel/
Stanley D. Ference III
Reg. No. 33,879

Mailing Address:

Customer No. 35195
FERENCE & ASSOCIATES LLC
409 Broad Street
Pittsburgh, Pennsylvania 15143
(412) 741-8400
(412) 741-9292 - Facsimile

Applicant Initiated Interview Request Form

Application No.: 13/617,581 First Named Applicant: Kannan Srinivasan
 Examiner: Yehdega Retta Art Unit: 3622 Status of Application: Response to Non Final Office Action

Tentative Participants:

(1) Andrew M. Gabriel (Attorney) (2) Yehdega Retta (Examiner)
 (3) Kannan Srinivasan (Inventor) (4) _____

Proposed Date of Interview: TBD Proposed Time: TBD (AM/PM)

Type of Interview Requested:

(1) ☐ Telephonic (2) ☒ Personal (3) ☐ Video Conference

Exhibit To Be Shown or Demonstrated: ☐ YES ☐ NO

If yes, provide brief description: _____

Issues To Be Discussed

Issues (Rej., Obj., etc)	Claims/ Fig. #s	Prior Art	Discussed	Agreed	Not Agreed
(1) _____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(2) _____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(3) _____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(4) _____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

☐ Continuation Sheet Attached ☐ Proposed Amendment or Arguments Attached

Brief Description of Arguments to be Presented: Applicants would like to discuss the amendment filed on 5/27/2014.

An interview was conducted on the above-identified application on _____

NOTE: This form should be completed and filed by applicant in advance of the interview (see MPEP § 713.01). If this form is signed by a registered practitioner not of record, the Office will accept this as an indication that he or she is authorized to conduct an interview on behalf of the principal (37 CFR 1.32(a)(3)) pursuant to 37 CFR 1.34. This is not a power of attorney to any above named practitioner. See the Instruction Sheet for this form, which is incorporated by reference. By signing this form, applicant or practitioner is certifying that he or she has read the Instruction Sheet. After the interview is conducted, applicant is advised to file a statement of the substance of this interview (37 CFR 1.133(b)) as soon as possible. This application will not be delayed from issue because of applicant's failure to submit a written record of this interview.

Applicant/Applicant's Representative Signature

Andrew M. Gabriel

Typed/Printed Name of Applicant or Representative

61,427

Registration Number, if applicable

Examiner/SPE Signature

This collection of information is required by 37 CFR 1.133. 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 24 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.

Patent Owner CheckFree - 169

CBM2013-00028

Metavante & Fidelity v. CashEdge, Inc.

Ex. 2040 - p. 169

Electronic Acknowledgement Receipt	
EFS ID:	19592069
Application Number:	13617581
International Application Number:	
Confirmation Number:	9286
Title of Invention:	METHOD AND APPARATUS FOR INTERNET CUSTOMER RETENTION
First Named Inventor/Applicant Name:	Kannan Srinivasan
Customer Number:	35195
Filer:	Stanley D. Ference/Kristen Durkin
Filer Authorized By:	Stanley D. Ference
Attorney Docket Number:	696.005_CON
Receipt Date:	16-JUL-2014
Filing Date:	14-SEP-2012
Time Stamp:	10:52:18
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	Letter Requesting Interview with Examiner	696-005-CON-InterviewRequestForm-7-16-2014.pdf	134211 ce4dfaec09a49c2c8410e791e0d9a8f7c8ac7a25	no	1
Warnings:					
Information:					

Patent Owner CheckFree - 170

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.



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 NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/617,581	09/14/2012	Kannan Srinivasan	696.005_CON	9286

35195 7590 07/23/2014
FERENCE & ASSOCIATES LLC
409 BROAD STREET
PITTSBURGH, PA 15143

EXAMINER
RETTA, YEHDEGA

ART UNIT	PAPER NUMBER
3622	

MAIL DATE	DELIVERY MODE
07/23/2014	PAPER

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.

Office Action Summary	Application No. 13/617,581	Applicant(s) SRINIVASAN ET AL.	
	Examiner YEHDEGA RETTA	Art Unit 3622	AIA (First Inventor to File) 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 5/27/14.
☐ 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) 1-8, 10, 11 and 16 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) 1-8, 10, 11 and 16 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. _____.

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: _____.

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

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-8, 10, 11 and 16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter (abstract idea). The rationale for this finding is explained below.

In the instant case, the claims are directed towards maintaining login history. Maintaining or keeping record of user's logins are fundamental economic practices and thus, the claims include an abstract idea. The claims do not include limitations that are "significantly more" than the abstract idea because the claims do not include an improvement to another technology or technical field, an improvement to the functioning of the computer itself, or meaningful limitations beyond generally linking the use of an abstract idea to a particular technological environment. Note, that the limitations, in the instant claims, are done by the generically recited processor. The limitations are merely instructions to implement the abstract idea on a computer and require no more than a generic computer to perform generic computer functions that are well-understood, routine and conventional activities previously known to the industry. Therefore, claims 1-8, 10, 11 and 16 are rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112(a):

(a) IN GENERAL.—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 or joint inventor of carrying out the invention.

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.

Claims 1-8, 10, 11 and 16 are rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor or a joint inventor, or for pre-AIA the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claim recites:

maintaining, in a database, a history of past login behavior with respect to a web site for a customer;

determining, using a processor, *a period of time elapsed since the customer last logged into the web site;*

specifying, using a processor and the data base, *a permissible period of time after which the customer should be prompted to return to the web site based on one or more of:*

the history of past login behavior of the customer; and

Art Unit: 3622

providing a communication to the customer to incentivize the customer to return to the web site after the specified period of time has elapsed

a history of past login behavior of a group of customers similar to the customer;

The term login is mention in Applicant's specification in the following two paragraphs.

[0042] Once the customer has accessed the eCommerce website, he can request information, such as current prices, from the website. The request sent by the browser might include information specific to the customer using the browser. Such information may include, for example, information derived from user logins, cookies stored on the user's machine and through the user's IP address.

[0110] For example, the time between logins ("inter -login time") is a random variable thought to be closely related to defection. In fact, an infinite inter -login time is the very indicator of a permanent defection. However, even a dedicated regular customer may exhibit significant variance in inter -login times due to vacations, business seasonality, short-term concerns, and the like. It is unrealistic to treat every rise in inter -login time as a potential defection. *What is important is how the recent distribution and sequence of inter -login times compares to the previous or expected behavior of the customer.*

Nowhere in the specification is disclosed maintaining history of past login, period of time elapsed since the customer last login, specifying period of time ... based on login history of the customer or the group of other customers.

Regarding claim 5, the specification teaches collecting information about visitors to a website and purchase history but does not teach the login behavior includes the purchase history.

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

Claim Rejections - 35 USC § 103

The following is a quotation of 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

Art Unit: 3622

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 negated by the manner in which the invention was made.

Claims 1-11 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerace (US 5,848,396) further in view of Herz et al. U.S. Application No. US 2001/0014868.

Regarding claims 1, 4, 5, 9 and 16, maintaining, in a database, a history of past login behavior of a website and determining a period of time elapsed since the last login (see col. 6 lines 40-67, col. 13 lines 62-67, col. 13 lines 19-29, col. 18 lines 26-35); Gerace teaches the user action history includes date and time of action, sequence or order number of the action ... viewing history including date and time of screen opening and closing (see col. 6 line 46 to col. 7 line 22); determining when the customer should be prompted to return to the web site based on one or more of: the history of past login behavior of the customer and providing a communication to the customer (see abstract col. 2 lines 1-62, col. 14 lines 24-35). Gerace teaches that each time user logs on, program 31 features items that are more interesting to the user (see col. 17 lines 1-37).

Applicant's background teaches that it is known in the art of Internet to observe (*past interaction of the customer with a web site*) when an existing customer has failed to make a purchase within a certain period of time (defunct threshold) after which it is assumed that the customer has been "lost" or has gone inactive. Same as Applicant's background, Herz also teaches specifying a period of time after which the customer should be prompted to return to the web site based on user history (*elapsed time period*) since the last interaction of that customer with the web site (for example six month). Herz also teaches "[r]ecall that we can characterize a user not only by the responsiveness of the user to certain offers but also by many other attributes, including the loyalty and consistency factor. Example of such user profile attributes (largely

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numeric) include: elapsed time period since the last purchase, elapsed time period between purchases (average), ranges elapsed period to previous offers, total amount spent over the past 6 months, maximum volume spent on a single shopping spree. If a customer (particularly a long term customer) has recently been lost (**more than six month**) the system may find it *advantageous to use the most aggressive promotional offers possible in order to reinitiate lost loyalties*. Conversely, *somewhat less aggressive discounting may be appropriate for very loyal customers* (such as frequent buyer programs, long term customer rewards etc.). By the system these types of incentive based promotions are geared towards instilling customer interest and loyalty". Herz teaches when to provide a communication (after six month) to customer based on the determination that the ... greater than the threshold (six month). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide promotion to the customer after the period of time elapsed in order to reinitiate lost loyalties, as taught in Herz. Herz also teaches providing communication prior to the user becoming defunct (lost) *somewhat less aggressive discounting may be appropriate for very loyal customers* (such as frequent buyer programs, long term customer rewards etc.).

Regarding claims 2 and 11, Herz teaches sampling population for determining user's action (see [0006]-[0007], [0205]-[0222]). Herz teaches the likelihood of acceptance can be calculated by counting what fraction of shoppers (similar shoppers) performed the action (see [0037]-[0039]). It would have been obvious to one of ordinary skill in the art at the time of the invention to include sampling customers (similar shoppers) in Gerace's advertisement system in order to determine user's unknown action.

Regarding claims 3, 10, Gerace teaches wherein the characteristic is an amount that the customers spent at the web site (see col. 23 lines 19-67, Herz [0112]-[0137], [0246]).

Regarding claims 6-8, Herz teaches maximizing profit by optimizing an amount of discount offered in the promotion (communication); wherein optimizing is performed continuously (see [0003], [0046], wherein optimizing includes sampling responses received from customers that are offered promotions of varying amounts; and optimizing the promotion amount provided to other customers based on the optimum promotion amount discovered in the sample (see [0165]-[0166],[0169])). It would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the amount by providing different offers (also based on price that maximizes profit) to different consumer groups and based on the feedback from the consumers.

Response to Arguments

Applicant's arguments with respect to claims 1-8, 10, 11 and 16 have been considered but are moot because the arguments do not apply to any of the references being used in the current rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). 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

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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 date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YEHDEGA RETTA whose telephone number is (571)272-6723. The examiner can normally be reached on Monday through Thursday from 8 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Stamber can be reached on (571) 272-6724. 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.

YR
/YEHDEGA RETTA/
Primary Examiner, Art Unit 3622

Patent Owner CheckFree - 180

Notice of References Cited	Application/Control No. 13/617,581	Applicant(s)/Patent Under Reexamination SRINIVASAN ET AL.	
	Examiner YEHDEGA RETTA	Art Unit 3622	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-5,848,396 A	12-1998	Gerace, Thomas A.	705/7.33
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	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.