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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
15/480,293 04/05/2017 Vasudevan Ganesan HAVA-00506 4902

28960 7590 01/16/2018
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Table with 1 column: EXAMINER

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Table with 2 columns: ART UNIT, PAPER NUMBER

2649

Table with 2 columns: MAIL DATE, DELIVERY MODE

01/16/2018

PAPER

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DETAILED ACTION

DOUBLE PATENTING

Claims 17-44, are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 7,991,399 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1 of the Patent contains more limitations than the present claims 17 and 33 and its dependent claims, and claim 9 of the Patent contains more limitations than the present claim 45 and its dependent claims. It would have been obvious to one of ordinary skill in the art to remove these limitations from the patented claim to arrive at the claimed invention.

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.

Claim 24 is 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 “the group consisting of a personal computer, a laptop computer, a computer workstation, a server, a mainframe computer, a handheld computer, a personal digital assistant, a smart appliance, a gaming console, a digital camera, a digital camcorder, a camera phone, a tablet, a video player, transportation

vehicle computer and transportation vehicle communication device”, 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.

Claims 26-32, 33-44, 48-55 and 58-63 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 “secured and unsecured telephone call, fixed broadband, mobile broadband, broadband content, secured and unsecured telephone data”, 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.

Claims 46-47 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 a mobile communication device comprises a first and second Wi-Fi modules, 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.

Claim Rejections - 35 USC § 103

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

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, 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 17-20, 24-26 and 31-32 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Dorenbosch et al. (US Pub. 2004/0030791, IDS dated 11/02/17) in view of Jagadeesan et al. (US Pub. 2005/0059400, , IDS dated 11/02/17).

Regarding claim 17, Dorenbosch et al. discloses a mobile communication device comprising:

a cellular communication module adapted to communicate with a wireless cellular network (fig.8 element 809);

a Wi-Fi communication module adapted to communicate with an access point associated with a Wi-Fi network (fig.8 element 808, par.019); and

a switching circuit to switch (par.043 “switching the time critical communication over to the second IP connection”) operation between the cellular communication module and the Wi-Fi communication module (par.043, fig. 8 element 811).

Dorenbosch et al. discloses a handoff when the connection with a cellular base station is weakening (par.035). However, Dorendosch fails to teach during an established cellular communication if the Wi-Fi signal monitor detects that the Wi-Fi signal level is greater than a first predefined threshold value V_{th1} , the established cellular communication is switched to a Wi-Fi communication over the Wi-Fi network.

Jagadeesan discloses during an established cellular communication if the Wi-Fi signal monitor detects that the Wi-Fi signal level is greater than a first predefined threshold value V_{th1} , (fig.3 element 114 “handoff trigger threshold”) the established

cellular communication is switched to a Wi-Fi communication over the Wi-Fi network (fig.3 element 116). Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date to modify the system of Dorenbosch with the above teaching of Jagadeesan in order to prevent ping-pong of the call between the networks after a handoff occurs as suggested by Jagadeesan (par.008).

Regarding claim 18, the modified Dorenbosch does not mention a tear-down signal causes the cellular communication module to go into a sleep mode. The Examiner takes an official notice the concept of a tear-down signal causes the cellular communication module to go into a sleep mode as known at the time the invention was made. It would have been obvious after the handoff, the cellular module is not actively communicate with the cellular base station would be turned off to save battery.

Regarding claim 19, the modified Dorenbosch does not mention upon activation of a timer, the switching circuit causes the Wi-Fi communication module to change state from a sleep mode to an active mode. The Examiner takes an official notice the concept of upon activation of a timer, the switching circuit causes the Wi-Fi communication module to wake up from a sleep mode. It would have been obvious before the handoff, the Wi-Fi module was previously not communicated with an access point is now power up to ready for active connection for handoff from cellular network to Wi-Fi network.

Regarding claim 20, the modified Dorenbosch discloses a timer (Jagadeesan, fig.3 element 114 "pickup-up count duration"); and

a Wi-Fi signal monitor; wherein if the Wi-Fi signal monitor detects that a first Wi-Fi signal level is greater than the first predefined threshold value V_{th1} , the timer is

activated to establish a first time window of a first predefined size T_1 (Jagadeesan, fig.3 element 114 “trigger threshold” plus “pickup-up count duration”, wherein if during T_1 , the Wi-Fi signal monitor detects that a second Wi-Fi signal level is equal to or greater than V_{th1} , at the expiration of the first time window (Jagadeesan, fig.3 elements 112 and 114 is loop back algorithm, the signal is continue to be monitored when the signal is still below the threshold level), the switching circuit sends a tear-down signal to the cellular communication module and a link-up signal to the Wi-Fi communication module, wherein said tear-down signal causes the cellular communication module to discontinue handling the established cellular communication and wherein said link-up signal causes the Wi-Fi communication module to handle the established cellular communication via a VoIP network (Jagadeesan, fig.3 element 115 “handoff” is implied to drop connection from cellular network and make connection to Wi-Fi network, par.014 “call with IP phone 26”).

Regarding claim 24, the modified Dorenbosch discloses the group consisting of a video viewing device, a cellular/mobile telephone (Dorenbosch, par.019 “video conferencing”, fig. 1 element 105), laptop PDA, computer (Jagadeesan, par.024).

Regarding claims 25 and 31, the modified Dorenbosch discloses the communications comprise a secured telephone call (Jagadeesan, par.022 “authentication protocols”, Dorenbosch, par.043 “IP connection is favorable security”).

Regarding claims 26 and 32, the modified Dorenbosch discloses the communications comprise an unsecured telephone call (Jagadeesan, par.021 “a public WLAN”).

Claims 27-30 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Dorenbosch et al. (US Pub. 2004/0030791) in view of Jagadeesan et al. (US Pub. 2005/0059400) and further in view of Dorenbosch et al. (US Pub. 2005/0239498, herein Dorenbosch II).

Regarding claims 27-30, the modified Dorenbosch discloses secured and unsecured call and data transmission. However, the modified Dorenbosch fails to disclose a transmission broadband content.

Dorenbosch II discloses a transmission of broadband (par.029 "IP broadband connections). Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date to modify the system of Dorenbosch with the above teaching of Dorenbosch II in order to be capable to support IP.

Claims 35, 56-59 and 64-65 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Jagadeesan et al. (US Pub. 2005/0059400) in view of Chaskar et al. (US Pub. 2004/0137902, IDS dated 11/02/17).

Regarding claim 35, Jagadeesan et al. fails to teach if the second detected Wi-Fi signal level falls below the first predefined threshold value, then searching for alternative Wi-Fi signals having signal level above the first predefined threshold value; if the alternative Wi-Fi signal level is above the first predefined threshold value V_{thi} , then switching a Wi-Fi communication in progress to a source of the alternative Wi-Fi signal; and if no alternative Wi-Fi signal level is above the first predefined threshold value V_{thi} , then switching a Wi-Fi communication in progress to the cellular wireless network.

Chaskar et al. discloses if the second detected Wi-Fi signal level falls below the first predefined threshold value (par.057 “detect signal strength is less than a predetermined threshold”), then searching for alternative Wi-Fi signals having signal level above the first predefined threshold value (fig.060 “Th2 typically should be bigger than Th1”); if the alternative Wi-Fi signal level is above the first predefined threshold value V_{th1} , then switching a Wi-Fi communication in progress to a source of the alternative Wi-Fi signal (par.060 “inter-technology handoff is initiated immediately”); and if no alternative Wi-Fi signal level is above the first predefined threshold value V_{th1} , then switching a Wi-Fi communication in progress to the cellular wireless network (par.004 the user also wants the connectivity to be seamlessly handed over to the cellular network when WLAN coverage is not available anymore”). Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date to modify the system of Jagadeesan with the above teaching of Chaskar in order to provide border detection threshold for inter-technology handoff is initiated immediately to avoid latency as suggested by Chaskar (par.058).

Regarding claim 56, the modified Jagadeesan discloses everything as claims 33 and 35 above.

Regarding claim 57, the modified Jagadeesan discloses continuing a Wi-Fi communication without change if the second detected Wi-Fi signal level is equal to or greater than the first predefined threshold value (Chaskar, par.071).

Regarding claims 58 and 64, the modified Dorenbosch discloses the communications comprise a secured telephone call (Jagadeesan, par.022 “authentication protocols”, Dorenbosch, par.043 “IP connection is favorable security”).

Regarding claims 59 and 65, the modified Dorenbosch discloses the communications comprise an unsecured telephone call (Jagadeesan, par.021 “a public WLAN”).

Claim 39-42 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Jagadeesan et al. (US Pub. 2005/0059400) in view of Dorenbosch et al. (US Pub. 2005/0239498, herein Dorenbosch II).

Regarding claim 39-42, Jagadeesan fails to disclose a transmission broadband content.

Dorenbosch II discloses a transmission of broadband (par.029 “IP broadband connections). Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date to modify the system of Jagadeesan with the above teaching of Dorenbosch II in order to capable to support IP.

Claims 45, 48-49 and 54 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Dorenbosch et al. (US Pub. 2004/0030791) in view of Chaskar et al. (US Pub. 2004/0137902).

Regarding claim 45, Dorenbosch et al. discloses a mobile communication device comprising:

a first communication module adapted to communicate with a first wireless network (par.038 “a conventional wireless transceiver 803”);

a second communication module adapted to communicate with an access point associated with a second network (fig. 8 element 808, par. 039 “require a wireless IP transceiver 808 and may require an additional local area network transceiver 809”).

and a switching circuit to switch operation between the first communication module and the second communication module (par. 043 “switching the time critical communication over to the second IP connection”), a second communication type is initiated (par. 003 “initiating handoffs from and to cellular or cellular like system”).

Dorenbosh discloses the handoff when a first wireless connection is weakening and loading levels for the second connection are favorable. However, Dorenbosch fails to teach a signal level is equal to or greater than a first threshold value and wherein if the signal monitor detects that the signal level is equal to or greater than a third threshold value, the second communication type is continued without switching.

Chaskar et al. discloses a handoff if a signal monitor detects that a signal level is equal to or greater than a first threshold value (fig. 5 “Set Threshold-Th1”), and wherein if the signal monitor detects that the signal level is equal to or greater than a third threshold value, the second communication type is continued without switching (par. 057 “the detected WLAN signal strength is less than a predetermined threshold” is implied to Applicant second threshold, par. 071 “the detected WLAN signal strength is larger than a predetermined threshold Th2, the mobile node remains in a waiting state“, Th2 is implied to Applicant third threshold value). Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date to modify the system of Dorenbosch with the above teaching of Chaskar in order to provide border detection

threshold for inter-technology handoff is initiated immediately to avoid latency as suggested by Chaskar (par.058).

Regarding claims 48-49 and 54, the modified Dorenbosch discloses the communications comprise a secured telephone call (Dorenbosch, 003, 023, 032 “authentication”), par.043 “IP connection is favorable security”).

Claim 55 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Dorenbosch et al. (US Pub. 2004/0030791) in view of Chaskar et al. (US Pub. 2004/0137902) and further in view of Jagadeesan.

Regarding claim 55, the modified Dorenbosch fails to disclose the communications comprise an unsecured data transmission.

Jagadeesan discloses unsecured data transmission (par.021 “a public WLAN”). Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date to modify the system of Dorenbosch with the above teaching of Jagadeesan in order to provide WLAN at places such as coffee shops, airports restaurant.

Claims 50-53 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Dorenbosch et al. (US Pub. 2004/0030791) in view of Chaskar et al. (US Pub. 2004/0137902) and further in view of Dorenbosch II.

Regarding claim 50-53, Dorenbosch fails to disclose a transmission broadband content.

Dorenbosch II discloses a transmission of broadband (par.029 “IP broadband connections). Therefore, it would have been obvious to one of ordinary skill in the art before the effective filling date to modify the system of Dorenbosch with the above teaching of Dorenbosch II in order to capable to support IP.

Claims 60-63 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Jagadeesan in view of Chaskar et al. (US Pub. 2004/0137902) and further in view of Dorenbosch II.

Regarding claim 50-53, Jagadeesan fails to disclose a transmission broadband content.

Dorenbosch II discloses a transmission of broadband (par.029 “IP broadband connections). Therefore, it would have been obvious to one of ordinary skill in the art before the effective filling date to modify the system of Jagadeesan with the above teaching of Dorenbosch II in order to capable to support IP.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 33-34, 37-38 and 43-44 are rejected under pre-AIA 35 U.S.C. 102(e) as being anticipated by Jagadeesan et al. (US Pub. 2005/0059400).

Regarding claim 33, Jagadeesan et al. discloses a method comprising:
detecting a first Wi-Fi signal level (fig.3 element 114 “handoff trigger threshold”);

activating a timer Jagadeesan, fig.3 element 114 “pickup-up count duration”) to establish a first time window of a first predefined size T (fig.3 element 114 “pick-up count duration”) if the detected first Wi-Fi signal level is greater than a first predefined threshold value V_{th1} ; detecting a second Wi-Fi signal level during the first time window (Jagadeesan, fig.3 elements 112 and 114 is loop back algorithm, the signal is continue to be monitored when the signal is still below the threshold level); and

automatically (par.030 “code 56 may include an algorithm for making such determination and such handoff “) switching a communication in progress via a cellular wireless network to a communication via a Wi-Fi network if the second detected Wi-Fi signal level is equal to or greater than the first predefined threshold value (fig.3 elements 112-116).

Regarding claim 34, Jagadeesan et al. discloses continuing a Wi-Fi communication without change if the second detected Wi-Fi signal level is equal to or greater than the first predefined threshold value (fig.3 elements 100-104).

Regarding claims 37 and 43, Jagadeesan discloses the communications comprise a secured telephone call (par.022 “authentication protocols).

Regarding claims 38 and 44, Jagadeesan discloses the communications comprise an unsecured telephone call (par.021).

Allowable Subject Matter

Claims 21-23 and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tu Nguyen whose telephone number is (571)272-7883. The examiner can normally be reached on 8AM-5PM Eastern Time.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, Applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, SPE can be reached on 571-272-7899. 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.

/TU X NGUYEN/
Primary Examiner, Art Unit 2649



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15/480,293	04/05/2017	Vasudevan Ganesan	HAVA-00506	4902

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DOUBLE PATENTING

Claims 17-44, are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 of U.S. Patent No. 7,991,399. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1, 9 of the patent contains more limitations than the present claims 17 and 33 and its dependent claims, it would have been obvious to one of ordinary skill in the art to remove these limitations from the patented claim to arrive at the claimed invention.

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.

Claims 17-19, 43 and 76 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 “context being preferred over a context within a set of known networks” 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.

Claim 79 is 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 “a plurality of technology stacks” 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.

Claim Rejections - 35 USC § 103

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

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, 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 17, 25, 27-28, 30, 45-47, 50-51, 54, 74-78, 80-84 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Dorenbosch et al. (US Pub. 2004/0030791) in view of Jagadeesan et al. (US Pub. 2005/00594000).

Regarding claims 17 and 76, Dorenbosch et al. discloses a switching system to switch (par.024 "the wireless station A learns that is within coverage of another BSS...and expects that it may have to switch") operation between a first communication module (fig.8 element 808) and a second communication module (fig.8 element 809, par.039 "a wireless IP transceiver 808 and may require an additional cellular or local area network transceiver 809"), wherein during an established communication if a context changes (par.035 "a signal from the cellular base station is weakening"), the established communication is switched to a second communication over a second network (par.042 "a wireless IP access point can include associating with one of and 802.11 access point"), wherein switching is based on detecting a context being preferred over the

context within a set of known networks (consideration is optional. However, par.033 is also disclose "the wireless station A may even be able to use SIM card for authentication" and "there may...a roaming agreement between the cellular SP and the operator of the BSS" which is implied to a known network) or from a newly discovered network (par.019 "coffee shops", par.021 "bookstore").

Dorenbosch et al. disclose a first context (a signal from the cellular base station is weakening". However Dorenbosch et al. fails to disclose a second context.

Jagadeesan disclose a second context (fig.3 element 112, 114). Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date to modify the system of Dorenbosch with the above teaching of Jagadeesan in order to provide monitor quality of WLAN signal above a threshold level before hand off.

Regarding claims 18-19, the modified Rosenbosch et al. discloses a tear-down signal causes the cellular communication module to go into a sleep mode (par.025 "the first connection with the origination AP would be in ~~either the active or~~ power save mode").

Regarding claims 25 and 48, the modified Dorenbosch discloses the communications comprise a telephone call (Dorenbosch, par.028 "real-time voice communications").

Regarding claims 27 and 50, the modified Dorenbosch discloses the communications comprise a transmission of content (Dorenbosch, par.019).

Regarding claims 28 and 51, the modified Dorenbosch discloses the content comprises at least one of fixed and mobile (Dorenbosch, par.019).

Regarding claims 30 and 54, the modified Dorenbosch discloses the communications comprise a data exchange (Dorenbosch, par.019 "Voice over IP and video conferencing").

Regarding claim 45, the modified Dorenbosch discloses everything as claim 17 above. More specifically, the modified Dorenbosch discloses the communication module is activated (Dorenbosch, par.025 "active") and if the context does not change, the second communication type is continued without switching (Jagadeesan, fig.3 elements 100-106).

Regarding claim 46, the modified Dorenbosch discloses the first communication module comprises a first Wi-Fi communication module, and the first wireless network comprises a first Wi-Fi network access point (Jagadeesan, fig.3 element 100 "WLAN").

Regarding claim 47, the modified Dorenbosch discloses the second communication module comprises a second Wi-Fi communication module (Dorenbosch, fig.8 element 809), and the second wireless network comprises a second Wi-Fi network access point (Dorenbosch, fig.7 element 517).

Regarding claims 74 and 84, the modified Dorenbosch discloses the previously established communication comprises: a cellular communication, a VoIP communication / session (par.019 "Voice over IP"), a voice communication / session, a video communication / session, a multimedia communication /session, a data communication / session, a SIP or IMS based communication and/or a WiFi communication.

Regarding claim 75, the modified Rosenbosch et al. discloses the previously established communication is proprietary (Dorenbosch, par.019 "coffee shops") or

standard (Dorenbosch, par.018 "access points according to various standards and technologies").

Regarding claim 77, the modified Rosenbosch et al. discloses the network is operated by a different network provider (par.002 "cellular systems", par.019 wireless access point at coffee shops).

Regarding claim 78, the modified Rosenbosch et al. discloses the network includes a plurality of access points, and the established communication is switched between the plurality of access points (Rosenbosch, par.021 "roam from the coffee shop into a neighboring bookstore").

Regarding claim 79, the modified Rosenbosch et al. discloses the network includes a plurality of technology stacks, and the established communication is switched between the plurality of technology stacks (par.016, par.044 "transport layers").

Regarding claim 80, the modified Rosenbosch et al. discloses a terminal, a mobile device (par.015 "a mobile wireless communications unit"), a sensor, an access point, and/or a controller device.

Regarding claim 81, the modified Rosenbosch et al. discloses the first communication comprises a first WiFi communication and the second communication comprises a second WiFi communication (Rosenbosch, par.021 "roam from the coffee shop into a neighboring bookstore").

Regarding claim 82, the modified Rosenbosch et al. discloses the first communication comprises a first cellular communication and the second communication comprises a second cellular communication (par.011 CDMA, UMTS).

Regarding claim 83, the modified Rosenbosch et al. discloses the first communication comprises a cellular communication and the second communication comprises a WiFi communication, or the first communication comprises the WiFi communication and the second communication comprises the cellular communication (Jagadeesan, par.008 "WLAN to a cellular network and vice versa").

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 33, 37, 39-40, 43, 56-58, 66-73 and 85-86 are rejected under pre-AIA 35 U.S.C. 102(e) as being anticipated by Jagadeesan et al. (US Pub. 2005/0059400).

Regarding claim 33, Jagadeesan et al. discloses a method comprising:

determining a context (fig.3 element 106 "cellular link quality threshold");

activating a timer to establish a first time window of a first predefined size T_1 based on the detected first context (fig.3 element 110 "dwell timer"),

determining a second context during the first time window (fig.3 element 114); and
automatically switching a communication in progress via a wireless network to a

communication via a Wi-Fi network based on the second detected context (fig.3 element 114).

Regarding claims 37 and 58, Jagadeesan et al. discloses the communications comprise telephone call (par.007 "actively connected with the cellular network on the call", par.024).

Regarding claims 39 and 60, Jagadeesan et al. discloses the communications comprise a transmission of content (par.016).

Regarding claims 40 and 61, Jagadeesan et al. discloses the content comprises at least one of fixed and mobile (par.016).

Regarding claims 43 and 64, Jagadeesan et al. discloses the communications comprise a data exchange (par.016).

Regarding claims 56 and 85, Jagadeesan et al. discloses everything as claim 33 above. More specifically, Jagadeesan discloses a server (fig.2 elements 22, 24).

Regarding claim 57, Jagadeesan et al. discloses continuing a Wi-Fi communication without change if the second detected context is equal to or greater than the first predefined threshold value (fig.3 elements 112, 114).

Regarding claim 66, Jagadeesan et al. discloses the context comprises a signal level (par.033 "signal strength and level of background noise or interference").

Regarding claim 67, Jagadeesan et al. discloses the determining and switching are performed, in part, by a mobile communication device (par.006 "a mobile comprising a controller...the controller is also operable to hand off the call from...").

Regarding claim 68, Jagadeesan et al. discloses the determining and switching are performed, in part, by a server (par.019 "the base transceiver stations may operate as a series of complex radio modems and may assist in performing a handover execution process").

Regarding claim 69, Jagadeesan et al. discloses the server comprises a network-based device (par.018 "MSC 20").

Regarding claim 70, Jagadeesan et al. discloses the server comprises a switch and/or router (par.018 "MSC 20").

Regarding claim 71, Jagadeesan et al. discloses the server comprises a network-based switch and/or router (par.018 "MSC 20").

Regarding claim 72, Jagadeesan et al. discloses the server comprises an access point or a base station (par.020).

Regarding claim 73, Jagadeesan et al. discloses the server comprises software, firmware and/or hardware (par.019).

Regarding claim 86, Jagadeesan et al. discloses the established communication comprises a cellular communication or a WiFi communication, and the second communication comprises a cellular communication or a WiFi communication (par.008 "WLAN to a cellular network and vice versa").

Allowable Subject Matter

Claims 21-23, 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims and Double Patent rejection of Patent 7,991,399 claim 9 is resolved.

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 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 Examiner Tu Nguyen whose telephone number is (571)272-7883. The examiner can normally be reached on 8AM-5PM Eastern Time.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, Applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, SPE can be reached on 571-272-7899. 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.

/TU X NGUYEN/
Primary Examiner, Art Unit 2649

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	Group Art Unit: 2649
Vasudevan Ganesan	)	Examiner: Nguyen, Tu X.
Application No.: 15/480,293)	
Filed: April 5, 2017	)	AMENDMENT AND REQUEST FOR
	)	CONTINUED EXAMINATION (RCE)
For: TELEPHONE WITH AUTOMATIC)	
SWITCHING BETWEEN	)	162 North Wolfe Road
CELLULAR AND VOIP	)	Sunnyvale, California 94086
NETWORKS	)	(408) 530-9700
)	
	)	Customer No. 28960

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

AMENDMENTS

Prior to an examination on the merits please amend the subject application as follows:

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

Remarks/Arguments begin on page 11 of this paper.

Amendments to the Claims:

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

Claims 1-16 (canceled)

17. (currently amended) A device comprising:
a switching system to switch operation between a first communication module and a second communication module, wherein during an established communication if a context changes, the established communication is switched to a second communication over a second network, wherein switching is based on detecting a second context being preferred over the context within a set of ~~known networks or from a newly discovered network~~, wherein upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size.
18. (previously presented) The device of claim 17, wherein a tear-down signal causes the communication module to go into a sleep mode.
19. (canceled)
20. (canceled)
21. (currently amended) The device of claim ~~[[19]]~~ 17, wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 , wherein a third predefined threshold value V_{th3} is smaller than V_{th2} .
22. (previously presented) The device of claim 21 wherein if during time window T_2 , the Wi-Fi signal monitor detects that the Wi-Fi signal level is smaller than V_{th3} , upon expiration of time window T_2 , the timer unit is activated to establish a third time window of a third predefined size T_3 , where T_3 is smaller than T_2 , wherein if during time window T_3 the Wi-Fi signal monitor detects that the Wi-Fi signal level is smaller than V_{th3} , the

switching circuit sends a tear-down signal to the Wi-Fi communication module and a link-up signal to the cellular communication module, wherein said tear-down signal causes the Wi-Fi communication module to discontinue handling a previously established communication over the Wi-Fi network and wherein said link-up signal causes the cellular communication module to handle the previously established communication over the Wi-Fi network via a cellular network.

23. (previously presented) The device of claim 22 wherein at the expiration of the predefined time period T_2 , the network switching circuit causes the cellular communication module to change state from a sleep mode to an active mode.
24. (canceled)
25. (previously presented) The device of claim 17, wherein the communications comprise a telephone call.
26. (canceled)
27. (previously presented) The device of claim 17, wherein the communications comprise a transmission of content.
28. (previously presented) The device of claim 27, wherein the content comprises at least one of fixed and mobile.
29. (canceled)
30. (canceled)
31. (previously presented) The device of claim 17, wherein the communications comprise a data exchange.
32. (canceled)

33. (currently amended) A method comprising:
determining a first context;
activating a timer to establish a first time window of a first predefined size T_1 based on the detected first context;
determining a second context during the first time window; ~~and~~
automatically switching a communication in progress via a wireless network to a communication via a Wi-Fi network based on the second detected context;
detecting a third context;
establishing a second time window of a second predefined size T_2 , if the third detected context falls below a second predefined threshold value V_{th2} ;
detecting a fourth context during the second time window; and
continuing a Wi-Fi communication without change if the fourth detected context is equal to or greater than a third predefined threshold value V_{th3} , wherein V_{th3} is smaller than V_{th2} .
34. (canceled)
35. (canceled)
36. (canceled)
37. (previously presented) The method of claim 33, wherein the communication comprises a telephone call.
38. (canceled)
39. (previously presented) The method of claim 33, wherein the communication comprises a transmission of content.
40. (previously presented) The method of claim 39, wherein the content comprises at least one of fixed and mobile.
41. (canceled)

42. (canceled)
43. (canceled)
44. (canceled)
45. (currently amended) A mobile communication device comprising:
a first communication module adapted to communicate with a first wireless network;
a second communication module adapted to communicate with an access point associated with a second network; and
a switching system to switch operation between the first communication module and the second communication module, wherein if a context changes, the second communication module is activated and a second communication type is initiated, wherein if the context does not change, the second communication type is continued without switching, wherein switching is based on detecting a second context being preferred over the context within a set of known networks or from a newly discovered network, wherein upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size.
46. (previously presented) The mobile communication device of claim 45, wherein the first communication module comprises a first Wi-Fi communication module, and the first wireless network comprises a first Wi-Fi network access point.
47. (previously presented) The mobile communication device of claim 46, wherein the second communication module comprises a second Wi-Fi communication module, and the second wireless network comprises a second Wi-Fi network access point.
48. (previously presented) The mobile communication device of claim 45, wherein the communication comprises a telephone call.
49. (canceled)

50. (previously presented) The mobile communication device of claim 45, wherein the communication comprises a transmission of content.
51. (previously presented) The mobile communication device of claim 50, wherein the content comprises at least one of fixed and mobile.
52. (canceled)
53. (canceled)
54. (previously presented) The mobile communication device of claim 45, wherein the communication comprises a data exchange.
55. (canceled)
56. (currently amended) A method comprising:
determining, with a server, a first signal level;
activating, with the server, a timer to establish a first time window of a first predefined size T_1 if the detected first signal level is greater than a first predefined threshold value;
determining, with the server, a second signal level during the first time window;
if the second detected signal level falls below the first predefined threshold value, then searching for alternative Wi-Fi signals having signal level above the first predefined threshold value, with the server;
if [[the]] an alternative signal level is above the first predefined threshold value, then switching a Wi-Fi communication in progress to a source of the alternative Wi-Fi signal, with the server; and
if no alternative signal level is above the first predefined threshold value, then switching a Wi-Fi communication in progress to the wireless network, with the server, wherein if a signal monitor detects that the alternative signal level is below a second predefined threshold value, a timer is activated to establish a second time window of a second predefined size, wherein a third predefined threshold value is smaller than a second predefined threshold value.

57. (currently amended) The method of claim 56, further comprising:
continuing a Wi-Fi communication without change if the second detected ~~context~~ signal
is equal to or greater than the first predefined threshold value.
58. (previously presented) The method of claim 56, wherein the communication comprises a
telephone call.
59. (canceled)
60. (previously presented) The method of claim 56, wherein the communication comprises a
transmission of content.
61. (previously presented) The method of claim 60, wherein the content comprises at least
one of fixed and mobile.
62. (canceled)
63. (canceled)
64. (previously presented) The method of claim 56, wherein the communication comprises a
data exchange.
65. (canceled)
66. (previously presented) The mobile communication device of claim 45 wherein the context
comprises a signal level.
67. (previously presented) The method of claim 33 wherein the determining and switching
are performed, in part, by a mobile communication device.
68. (previously presented) The method of claim 33 wherein the determining and switching
are performed, in part, by a server.

69. (previously presented) The method of claim 68 wherein the server comprises a network-based device.
70. (previously presented) The method of claim 68 wherein the server comprises a switch and/or router.
71. (previously presented) The method of claim 68 wherein the server comprises a network-based switch and/or router.
72. (previously presented) The method of claim 68 wherein the server comprises an access point or a base station.
73. (previously presented) The method of claim 68 wherein the server comprises software, firmware and/or hardware.
74. (previously presented) The device of claim 17 wherein the previously established communication comprises: a cellular communication, a VoIP communication / session, a voice communication / session, a video communication / session, a multimedia communication /session, a data communication / session, a SIP or IMS based communication and/or a WiFi communication.
75. (previously presented) The device of claim 74 wherein the previously established communication is proprietary or standard.
76. (currently amended) A device comprising:
a switching system to switch operation between a first communication module and a second communication module, wherein during an established communication if a signal monitor detects that a context changes, the established communication is switched to a second communication over a network, wherein switching is based on detecting a second context being preferred over the context within a set of known networks ~~or from a newly discovered network~~, wherein upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size.

77. (previously presented) The device of claim 76 wherein the network is operated by a different network provider.
78. (previously presented) The device of claim 76 wherein the network includes a plurality of access points, and the established communication is switched between the plurality of access points.
79. (canceled)
80. (previously presented) The device of claim 76 wherein the device comprises a terminal, a mobile device, a sensor, an access point, and/or a controller device.
81. (previously presented) The device of claim 76 wherein the first communication comprises a first WiFi communication and the second communication comprises a second WiFi communication.
82. (previously presented) The device of claim 76 wherein the first communication comprises a first cellular communication and the second communication comprises a second cellular communication.
83. (previously presented) The device of claim 76 wherein the first communication comprises a cellular communication and the second communication comprises a WiFi communication, or the first communication comprises the WiFi communication and the second communication comprises the cellular communication.
84. (previously presented) The device of claim 76 wherein the first communication and the second communication comprise at least one of: a cellular communication, a VoIP communication / session, a voice communication / session, a video communication / session, a multimedia communication / session, a data communication / session, a SIP or IMS based communication and/or a WiFi communication.

85. (currently amended) A method comprising:
 monitoring a context of a first communication link;
 when a network is detected as available with a second communication link with a context preferable to the first communication link, notifying an interface server and establishing the second communication link between the interface server and an end destination device without disrupting the first communication link; and
 re-directing the second communication link from the interface server to a mobile communication device, thereby establishing the second communication link between the communication device and a second network, wherein upon activation of a timer, a switching system causes a second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size.
86. (previously presented) The device of claim 17 wherein the established communication comprises a cellular communication or a WiFi communication, and the second communication comprises a cellular communication or a WiFi communication.

REMARKS

Applicants respectfully request further examination and reconsideration in view of the arguments set forth fully below. Claims 17-19, 21-23, 25, 27, 28, 31, 33, 36, 37, 39, 40, 43, 45-48, 50, 51, 54, 56-58, 60, 61, 64 and 66-86 were pending in this application. By the above amendments, Claims 17, 21, 33, 45, 56, 57, 76 and 85 have been amended, and Claims 19, 36, 43 and 79 have been canceled. Accordingly, Claims 17, 18, 21-23, 25, 27, 28, 31, 33, 37, 39, 40, 45-48, 50, 51, 54, 56-58, 60, 61, 64, 66-78 and 80-86 are currently pending.

Rejections Under 35 U.S.C. § 112, first paragraph

Within the Office Action, Claims 17-19, 43, 76 and 79 have been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Applicants respectfully disagree.

Regarding the limitation: “context being preferred over a context within a set of known networks,” support can be found at least at paragraph 19 of the Present Specification, in addition, Claims 17 and 76 have been amended for clarification.

Regarding Claims 43 and 79, by the above amendments, those claims have been canceled. Thus, the rejections should be withdrawn.

Rejections Under 35 U.S.C. § 103

Within the Office Action, Claims 17, 25, 27, 28, 30, 45-47 50, 51, 54, 74-78 and 80-84 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2005/0059400 by Jagadeesan et al. (hereinafter Jagadeesan) in view of U.S. Patent Application Publication No. 2004/0030791 by Dorenbosch et al. (hereinafter Dorenbosch). Applicants respectfully disagree.

Specifically, by the above amendments, the independent Claims have been amended to include allowable subject matter from the dependent Claim 21.

Jagadeesan is directed to a method and system for triggering handoff of a call between networks. [Jagadeesan, Abstract] Jagadeesan is cited as teaching wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is equal to or greater than a third predefined threshold value V_{th3} , a previously established communication over the Wi-Fi network continues without switching. However, Jagadeesan does not teach wherein upon activation of a timer, the

switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size.

Dorenbosch teaches a method of and wireless communications unit for effecting a handoff from a first Internet Protocol (IP) connection to a second IP connection for a time critical communication is disclosed. The method includes communicating between a first wireless station and a second station using the first IP connection and a first IP address for the first wireless station; setting up the second IP connection with a second IP address for the first wireless station, the first IP connection being a primary connection and the second IP connection being a secondary connection, both existing concurrently; determining that the second IP connection should be the primary connection; and changing the second IP connection to the primary connection by informing the second station that the second IP address is the primary address using stream control transmission protocol (SCTP) messages, wherein the time critical communication is immediately switched over to the second IP connection. [Dorenbosch, Abstract] However, Dorenbosch does not teach wherein upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size.

In contrast to the combination of Jagadeesan and Dorenbosch, the presently claimed invention teaches a mobile communication module configured to switch between a cellular communication module and a Wi-Fi communication module. The presently claimed invention teaches a Wi-Fi signal monitor that detects that a Wi-Fi signal level is equal to or greater than a third predefined threshold value V_{th3} . As described above, Jagadeesan, Dorenbosch and their combination do not teach wherein upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size.

The independent Claim 17 is directed to a device. The device of Claim 17 comprises a switching system to switch operation between a first communication module and a second communication module, wherein during an established communication if a context changes, the established communication is switched to a second communication over a second network, wherein switching is based on detecting a second context being preferred over the context within a set of known networks or from a newly discovered network, wherein upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size. As described above, Jagadeesan, Dorenbosch and their combination do not

wherein upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size. For at least these reasons, the independent Claim 17 is allowable over the teachings of Jagadeesan, Dorenbosch and their combination.

By the above amendments, Claim 30 has been canceled. Claims 25, 27, 28, 74 and 75 are all dependent upon the independent Claim 17. As discussed above, the independent Claim 17 is allowable over Jagadeesan, Dorenbosch and their combination. Accordingly, Claims 25, 27, 74 and 75 are all also allowable as being dependent upon an allowable base claim.

The independent Claim 45 is directed to a mobile communication device. The mobile communication device of Claim 45 comprises a first communication module adapted to communicate with a first wireless network, a second communication module adapted to communicate with an access point associated with a second network and a switching system to switch operation between the first communication module and the second communication module, wherein if a context changes, the second communication module is activated and a second communication type is initiated, wherein if the context does not change, the second communication type is continued without switching, wherein switching is based on detecting a second context being preferred over the context within a set of known networks or from a newly discovered network, wherein upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size. As described above, Jagadeesan, Dorenbosch and their combination do not wherein upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size. For at least these reasons, the independent Claim 45 is allowable over the teachings of Jagadeesan, Dorenbosch and their combination.

Claims 46, 47, 50, 51 and 54 are all dependent upon the independent Claim 45. As discussed above, the independent Claim 45 is allowable over Jagadeesan, Dorenbosch and their combination. Accordingly, Claims 46, 47, 50, 51 and 54 are all also allowable as being dependent upon an allowable base claim.

The independent Claim 76 is directed to a device. The device of Claim 76 comprises a switching system to switch operation between a first communication module and a second communication module, wherein during an established communication if a signal monitor detects that a context changes, the established communication is switched to a second communication

over a network, wherein switching is based on detecting a second context being preferred over the context within a set of known networks or from a newly discovered network, wherein upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size. As described above, Jagadeesan, Dorenbosch and their combination do not wherein upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size. For at least these reasons, the independent Claim 76 is allowable over the teachings of Jagadeesan, Dorenbosch and their combination.

Claims 77, 78 and 80-84 are all dependent upon the independent Claim 76. As discussed above, the independent Claim 76 is allowable over Jagadeesan, Dorenbosch and their combination. Accordingly, Claims 77, 78 and 80-84 are all also allowable as being dependent upon an allowable base claim.

Rejections Under 35 U.S.C. § 102

Within the Office Action, Claims 33, 37, 39, 40, 43, 56-58, 66-73, 85 and 86 have been rejected under 35 U.S.C. 102(e) as being anticipated by Jagadeesan. Applicants respectfully disagree.

As described above, Jagadeesan does not teach determining a first context, activating a timer to establish a first time window of a first predefined size T_1 based on the detected first context, determining a second context during the first time window and automatically switching a communication in progress via a wireless network to a communication via a Wi-Fi network based on the second detected context. Jagadeesan also does not teach detecting a third context, establishing a second time window of a second predefined size T_2 if the third detected context falls below a second predefined threshold value V_{th2} , detecting a fourth context during the second time window and continuing a Wi-Fi communication without change if the fourth detected context is equal to or greater than a third predefined threshold value V_{th3} , wherein V_{th3} is smaller than V_{th2} . Jagadeesan does not teach wherein if a signal monitor detects that the alternative signal level is below a second predefined threshold value, a timer is activated to establish a second time window of a second predefined size, wherein a third predefined threshold value is smaller than a second predefined threshold value. Jagadeesan further does not teach wherein upon activation of a timer, a switching system causes a second communication module to change

state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size.

The independent Claim 33 is directed to a method. The method of Claim 33 comprises determining a first context, activating a timer to establish a first time window of a first predefined size T_1 based on the detected first context, determining a second context during the first time window and automatically switching a communication in progress via a wireless network to a communication via a Wi-Fi network based on the second detected context, detecting a third context, establishing a second time window of a second predefined size T_2 if the third detected context falls below a second predefined threshold value V_{th2} , detecting a fourth context during the second time window and continuing a Wi-Fi communication without change if the fourth detected context is equal to or greater than a third predefined threshold value V_{th3} , wherein V_{th3} is smaller than V_{th2} . As described above, Jagadeesan does not teach determining a first context, activating a timer to establish a first time window of a first predefined size T_1 based on the detected first context, determining a second context during the first time window and automatically switching a communication in progress via a wireless network to a communication via a Wi-Fi network based on the second detected context. Jagadeesan also does not teach detecting a third context, establishing a second time window of a second predefined size T_2 if the third detected context falls below a second predefined threshold value V_{th2} , detecting a fourth context during the second time window and continuing a Wi-Fi communication without change if the fourth detected context is equal to or greater than a third predefined threshold value V_{th3} , wherein V_{th3} is smaller than V_{th2} . For at least these reasons, the independent Claim 33 is allowable over the teachings of Jagadeesan.

By the above amendments, Claim 43 has been canceled. Claims 37, 39, 40 and 67-73 are dependent upon the independent Claim 33. As discussed above, the independent Claim 33 is allowable over Jagadeesan. Accordingly, Claims 37, 39, 40 and 67-73 are all also allowable as being dependent upon an allowable base claim.

The independent Claim 56 is directed to a method. The method of Claim 56 comprises determining, with a server, a first signal level, activating, with the server, a timer to establish a first time window of a first predefined size T_1 if the detected first signal level is greater than a first predefined threshold value, determining, with the server, a second signal level during the first time window, if the second detected signal level falls below the first predefined threshold value, then searching for alternative Wi-Fi signals having signal level above the first predefined threshold value, with the server, if an alternative signal level is above the first predefined

threshold value, then switching a Wi-Fi communication in progress to a source of the alternative Wi-Fi signal, with the server and if no alternative signal level is above the first predefined threshold value, then switching a Wi-Fi communication in progress to the wireless network, with the server, wherein if a signal monitor detects that the alternative signal level is below a second predefined threshold value, a timer is activated to establish a second time window of a second predefined size, wherein a third predefined threshold value is smaller than a second predefined threshold value. As described above, Jagadeesan does not teach wherein if a signal monitor detects that the alternative signal level is below a second predefined threshold value, a timer is activated to establish a second time window of a second predefined size, wherein a third predefined threshold value is smaller than a second predefined threshold value. For at least these reasons, the independent Claim 56 is allowable over the teachings of Jagadeesan.

Claims 57 and 58 are dependent upon the independent Claim 56. As discussed above, the independent Claim 56 is allowable over Jagadeesan. Accordingly, Claims 57 and 58 are both also allowable as being dependent upon an allowable base claim.

The independent Claim 85 is directed to a method. The method of Claim 85 comprises monitoring a context of a first communication link, when a network is detected as available with a second communication link with a context preferable to the first communication link, notifying an interface server and establishing the second communication link between the interface server and an end destination device without disrupting the first communication link and re-directing the second communication link from the interface server to a mobile communication device, thereby establishing the second communication link between the communication device and a second network, wherein upon activation of a timer, a switching system causes a second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size. As described above, Jagadeesan does not teach wherein upon activation of a timer, a switching system causes a second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size. For at least these reasons, the independent Claim 85 is allowable over the teachings of Jagadeesan.

Claim 86 is dependent upon the independent Claim 85. As discussed above, the independent Claim 85 is allowable over Jagadeesan. Accordingly, Claim 86 is also allowable as being dependent upon an allowable base claim.

Allowable Subject Matter

Within the Office Action, it is indicated that Claims 21-23 and 36 are objected to as being dependent upon a rejected base claim.

Claim 33 has been amended to include the limitations of the dependent Claim 36.

Claims 21-23 are dependent upon the independent Claim 17. As discussed above, the independent Claim 17 is allowable over Jagadeesan, Dorenbosch and their combination. Accordingly, Claims 21-23 are all also allowable as being dependent upon an allowable base claim.

Applicants respectfully submit that the claims, as amended, are now in a condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, they are encouraged to call the undersigned at (408) 530-9700 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,
HAVERSTOCK & OWENS LLP

Dated: June 25, 2018

By: /Jonathan O. Owens/
Jonathan O. Owens
Reg. No.: 37,902
Attorneys for Applicant



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/480,293	04/05/2017	Vasudevan Ganesan	HAVA-00506	4902
28960	7590	09/12/2018	EXAMINER	
HAVERSTOCK & OWENS LLP 162 NORTH WOLFE ROAD SUNNYVALE, CA 94086			NGUYEN, TU X	
			ART UNIT	PAPER NUMBER
			2649	
			MAIL DATE	DELIVERY MODE
			09/12/2018	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. 15/480,293	Applicant(s) Ganesan, Vasudevan	
	Examiner TU X NGUYEN	Art Unit 2649	AIA 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 25 June 2018.
 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) See Continuation Sheet 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) See Continuation Sheet is/are rejected.
- 8) Claim(s) 21-23 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 See Continuation Sheet 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: _____.

Continuation of Disposition of Claims* 5) Claim(s) is/are pending in the application: 1-18,21-24,27-28,31,33,37,39-40,45-48,50-51,54,56-58,60-64,66-78 and 80-86

Continuation of Disposition of Claims* 7) Claim(s) is/are rejected: 17-18,25,27-28,31,33,37,39-40,45-48,50-51,54,56-58,60-61,64,66,74-78,80-84 and 86

Continuation of Application Papers 11): 05 April 2017

DETAILED ACTION

DOUBLE PATENTING

Claims 33, 37, 39-40, 56-58, 60-61, 64 and 67-73, are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 15 and 29 of U.S. Patent No. 7,991,399. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 15 and 29 of the patent contains more limitations than the present independent claims 33 and 56, it would have been obvious to one of ordinary skill in the art to remove these limitations from the patented claim to arrive at the claimed invention.

Response to Amendment

Applicant's arguments with respect to claims 17, 45 and 76 have been considered but are moot because the arguments do not apply to any of the references being used in the current rejection.

Claim Rejections - 35 USC § 103

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

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, 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 17-18, 25, 27-28, 31, 45-48, 50-51, 54, 66, 74-78, 80-84 and 86 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Jagadeesan et al. (US Pub. 2005/0059400) in view of Krantz et al. (US Pub. 2004/0153676).

Regarding claims 17 and 76, Jagadeesan discloses switching system to switch operation between a first communication and a second communication, wherein during an established communication if a context changes, the established communication is switched to a second communication over a second network, wherein switching is based on detecting a second context being preferred over the context within a set of networks (par.025 “the mobile station to be handed off between cellular network 14 and WLAN 16, depending on the quality of the wireless links between mobile station 12 and such networks”).

Jagadeesan fails to teach upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size.

Krantz discloses upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size (par.036 “These levels are on state, doze state, and off state”, par.042 “the power management module 202 sets a timer for the delayed sleep time.....If the power management module determines that the network interface module cannot remain in the doze state for longer than a beacon interval, the power management module will set the network interface module to the powered up state to receive a beacon. Otherwise, the network interface module remains in the doze state until the delayed sleep timer expires”, par.053 “The roaming component 812 also has an impact on power management. If the 802.11 network interface module is the active network connection, the power

management translator 802 specifies to the other power management modules 814, 818, 822 that their network interface modules should be powered off"). Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date to modify the system of Jagadeesan with the above teaching of Krantz in order to conserve battery power of the mobile device.

Regarding claim 18, the modified Jagadeesan discloses a tear-down signal causes the communication module to go into a sleep mode (Krantz, par.008 "sends a notification to an access point that the network interface module is going to be set to the doze state").

Regarding claims 25 and 48, the modified Jagadeesan discloses communications comprise a telephone call (Jagadeesan, par.024).

Regarding claims 27, 31, 50 and 54, the modified Jagadeesan discloses the communications comprise a transmission of content (Jagadeesan, par.024 "video conference", "data exchange").

Regarding claims 28 and 51, the modified Jagadeesan discloses content comprises at least one of fixed and mobile (Jagadeesan, par.023).

Regarding claim 45, Jagadeesan discloses a mobile communication device comprising:

switching system to switch operation between the first communication module and the second communication module, wherein if a context changes, the second communication is activated and a second communication type is initiated, wherein if context does not change, the second communication type is continued without switching, wherein switching is based on detecting a second context being

preferred over the context within a set of known networks or from a newly discovered network (par.041 “a preferred or default network”).

Jagadeesan fails to teach upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size.

Krantz discloses upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size (par.036 “These levels are on state, doze state, and off state”, par.042 “the power management module 202 sets a timer for the delayed sleep time..... If the power management module determines that the network interface module cannot remain in the doze state for longer than a beacon interval, the power management module will set the network interface module to the powered up state to receive a beacon. Otherwise, the network interface module remains in the doze state until the delayed sleep timer expires”, par.053 “The roaming component 812 also has an impact on power management. If the 802.11 network interface module is the active network connection, the power management translator 802 specifies to the other power management modules 814, 818, 822 that their network interface modules should be powered off”). Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date to modify the system of Jagadeesan with the above teaching of Krantz in order to conserve battery power of the mobile device.

Regarding claims 46 and 86, the modified Jagadeesan discloses the first communication module comprises a first Wi-Fi communication module, and the first wireless network comprises a first Wi-Fi network access point (Krantz, par.003).

Regarding claims 47 and 82, the modified Jagadeesan discloses the second communication module comprises a second Wi-Fi communication module, and the second wireless network comprises a second Wi-Fi network access point (Krantz, par.003).

Regarding claim 66, the modified Jagadeesan discloses the context comprises a signal level (Jagadeesan, par.033).

Regarding claim 67, the modified Jagadeesan discloses the determining and switching are performed, in part, by a mobile communication device (Jagadeesan, par.025).

Regarding claim 68, the modified Jagadeesan discloses the determining and switching are performed, in part, by a server (Jagadeesan, par.019).

Regarding claim 69, the modified Jagadeesan discloses the server comprises a network-based device (Jagadeesan, par.018).

Regarding claim 70, the modified Jagadeesan discloses the server comprises a switch (Jagadeesan, par.020) and/or router.

Regarding claim 71, the modified Jagadeesan discloses the server comprises a network-based switch (Jagadeesan, par.020) and/or router.

Regarding claim 72, the modified Jagadeesan discloses the server comprises an access point or a base station (Jagadeesan, par.020).

Regarding claim 73, the modified Jagadeesan discloses the server comprises software, firmware and/or hardware (Jagadeesan, par.019).

Regarding claims 74 and 84, the modified Jagadeesan discloses a cellular communication (Jagadeesan, par.017), a VoIP communication / session, a voice communication / session, a video communication / session, a multimedia communication /session, a data communication / session, a SIP or IMS based communication and/or a WiFi communication.

Regarding claim 75, the modified Jagadeesan discloses the previously established communication is proprietary or standard (Jagadeesan, par.021-023).

Regarding claim 77, the modified Jagadeesan discloses the network is operated by a different network provider (Jagadeesan, par.017 "CDMA", "GSM").

Regarding claim 78, the modified Jagadeesan discloses the network includes a plurality of access points, and the established communication is switched between the plurality of access points (Jagadeesan, par.021).

Regarding claim 80, the modified Jagadeesan discloses the device comprises a terminal, a mobile device (par.021 "mobile station 12"), a sensor, an access point, and/or a controller device.

Regarding claim 81, the modified Jagadeesan discloses the first communication comprises a first WiFi communication and the second communication comprises a second WiFi communication (Krantz, par.003).

Regarding claim 83, the modified Jagadeesan discloses the first communication comprises a cellular communication and the second communication comprises a

WiFi communication, or the first communication comprises the WiFi communication and the second communication comprises the cellular communication (Jagadeesan, fig.3).

Regarding claim 85, the modified Jagadeesan discloses everything as claim 17 above. More specifically, the modified Jagadeesan discloses notifying an interface server and establishing the second communication link between the interface server and an end destination device without disrupting the first communication link (Krantz, par.008 "sends a notification to an access point that network interface module is going to be set to the doze state").

Allowable Subject Matter

Claims 33, 37, 39-40, 56-58, 60-61, 64 are allowed if the Double Patent rejection is resolved.

Claims 21-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 33 and 56, the prior art fails to teach "establishing a second time window of a second predefined size T, if the third detected context falls below a second predefined threshold value V_{th2} ; detecting a fourth context during the second time window; and continuing a Wi-Fi communication without change if the fourth detected context is equal to or greater than a third predefined threshold value V_{th3} , wherein V_{th3} is smaller than V_{th2} .", in linking with other subject matters in the claim

Regarding claim 56, the prior art fails to teach “a timer is activated to establish a second time window of a second predefined size, wherein a third predefined threshold value is smaller than a second predefined threshold value”, in linking with other subject matters in the claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tu Nguyen whose telephone number is (571)272-7883. The examiner can normally be reached on 8AM-5PM Eastern Time.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, Applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, SPE can be reached on 571-272-7899. 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.

/TU X NGUYEN/
Primary Examiner, Art Unit 2649

Notice of References Cited	Application/Control No. 15/480,293	Applicant(s)/Patent Under Reexamination Ganesan, Vasudevan	
	Examiner TU X NGUYEN	Art Unit 2649	Page 1 of 1

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A US-20040153676-A1	08-2004	Krantz, Anton W.	G06F1/3203	713/300
B					
C					
D					
E					
F					
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I					
J					
K					
L					
M					

FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

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

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	Group Art Unit: 2649
Vasudevan Ganesan	)	Examiner: Nguyen, Tu X.
Application No.: 15/480,293)	
Filed: April 5, 2017	)	AMENDMENT AND RESPONSE TO
For: TELEPHONE WITH AUTOMATIC	)	OFFICE ACTION MAILED ON
SWITCHING BETWEEN	)	September 12, 2018
CELLULAR AND VOIP	)	162 North Wolfe Road
NETWORKS	)	Sunnyvale, California 94086
	)	(408) 530-9700
)	
	)	Customer No. 28960

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

AMENDMENTS

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

Remarks/Arguments begin on page 11 of this paper.

Amendments to the Claims:

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

Claims 1-16 (canceled)

17. (currently amended) A device comprising:

a switching system to switch operation between a first communication module and a second communication module, wherein during an established communication if a context changes, the established communication is switched to a second communication over a second network, wherein switching is based on detecting a second context being preferred over the context within a set of networks, wherein upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size, wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 , wherein a third predefined threshold value V_{th3} is smaller than V_{th2} .

18. (previously presented) The device of claim 17, wherein a tear-down signal causes the communication module to go into a sleep mode.

19. (canceled)

20. (canceled)

21. (canceled)

22. (currently amended) The device of claim [[21]] 17 wherein if during time window T_2 , the Wi-Fi signal monitor detects that the Wi-Fi signal level is smaller than V_{th3} , upon expiration of time window T_2 , the timer unit is activated to establish a third time window of a third predefined size T_3 , where T_3 is smaller than T_2 , wherein if during time window T_3 the Wi-Fi signal monitor detects that the Wi-Fi signal level is smaller than V_{th3} , the switching circuit sends a tear-down signal to the Wi-Fi communication module and a

link-up signal to the cellular communication module, wherein said tear-down signal causes the Wi-Fi communication module to discontinue handling a previously established communication over the Wi-Fi network and wherein said link-up signal causes the cellular communication module to handle the previously established communication over the Wi-Fi network via a cellular network.

23. (previously presented) The device of claim 22 wherein at the expiration of the predefined time period T_2 , the network switching circuit causes the cellular communication module to change state from a sleep mode to an active mode.
24. (canceled)
25. (previously presented) The device of claim 17, wherein the communications comprise a telephone call.
26. (canceled)
27. (previously presented) The device of claim 17, wherein the communications comprise a transmission of content.
28. (previously presented) The device of claim 27, wherein the content comprises at least one of fixed and mobile.
29. (canceled)
30. (canceled)
31. (previously presented) The device of claim 17, wherein the communications comprise a data exchange.
32. (canceled)

33. (previously presented) A method comprising:
determining a first context;
activating a timer to establish a first time window of a first predefined size T_1 based on the detected first context;
determining a second context during the first time window;
automatically switching a communication in progress via a wireless network to a communication via a Wi-Fi network based on the second detected context;
detecting a third context;
establishing a second time window of a second predefined size T_2 if the third detected context falls below a second predefined threshold value V_{th2} ;
detecting a fourth context during the second time window; and
continuing a Wi-Fi communication without change if the fourth detected context is equal to or greater than a third predefined threshold value V_{th3} , wherein V_{th3} is smaller than V_{th2} .
34. (canceled)
35. (canceled)
36. (canceled)
37. (previously presented) The method of claim 33, wherein the communication comprises a telephone call.
38. (canceled)
39. (previously presented) The method of claim 33, wherein the communication comprises a transmission of content.
40. (previously presented) The method of claim 39, wherein the content comprises at least one of fixed and mobile.
41. (canceled)

42. (canceled)
43. (canceled)
44. (canceled)
45. (currently amended) A mobile communication device comprising:
a first communication module adapted to communicate with a first wireless network;
a second communication module adapted to communicate with an access point associated with a second network; and
a switching system to switch operation between the first communication module and the second communication module, wherein if a context changes, the second communication module is activated and a second communication type is initiated, wherein if the context does not change, the second communication type is continued without switching, wherein switching is based on detecting a second context being preferred over the context within a set of known networks or from a newly discovered network, wherein upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size, wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 .
46. (previously presented) The mobile communication device of claim 45, wherein the first communication module comprises a first Wi-Fi communication module, and the first wireless network comprises a first Wi-Fi network access point.
47. (previously presented) The mobile communication device of claim 46, wherein the second communication module comprises a second Wi-Fi communication module, and the second wireless network comprises a second Wi-Fi network access point.
48. (previously presented) The mobile communication device of claim 45, wherein the communication comprises a telephone call.
49. (canceled)

50. (previously presented) The mobile communication device of claim 45, wherein the communication comprises a transmission of content.
51. (previously presented) The mobile communication device of claim 50, wherein the content comprises at least one of fixed and mobile.
52. (canceled)
53. (canceled)
54. (previously presented) The mobile communication device of claim 45, wherein the communication comprises a data exchange.
55. (canceled)
56. (previously presented) A method comprising:
 - determining, with a server, a first signal level;
 - activating, with the server, a timer to establish a first time window of a first predefined size T_1 if the detected first signal level is greater than a first predefined threshold value;
 - determining, with the server, a second signal level during the first time window;
 - if the second detected signal level falls below the first predefined threshold value, then searching for alternative Wi-Fi signals having signal level above the first predefined threshold value, with the server;
 - if an alternative signal level is above the first predefined threshold value, then switching a Wi-Fi communication in progress to a source of the alternative Wi-Fi signal, with the server; and
 - if no alternative signal level is above the first predefined threshold value, then switching a Wi-Fi communication in progress to the wireless network, with the server, wherein if a signal monitor detects that the alternative signal level is below a second predefined threshold value, a timer is activated to establish a second time window of a second predefined size, wherein a third predefined threshold value is smaller than a second predefined threshold value.

57. (previously presented) The method of claim 56, further comprising:
continuing a Wi-Fi communication without change if the second detected signal is equal to or greater than the first predefined threshold value.
58. (previously presented) The method of claim 56, wherein the communication comprises a telephone call.
59. (canceled)
60. (previously presented) The method of claim 56, wherein the communication comprises a transmission of content.
61. (previously presented) The method of claim 60, wherein the content comprises at least one of fixed and mobile.
62. (canceled)
63. (canceled)
64. (previously presented) The method of claim 56, wherein the communication comprises a data exchange.
65. (canceled)
66. (previously presented) The mobile communication device of claim 45 wherein the context comprises a signal level.
67. (previously presented) The method of claim 33 wherein the determining and switching are performed, in part, by a mobile communication device.
68. (previously presented) The method of claim 33 wherein the determining and switching are performed, in part, by a server.

69. (previously presented) The method of claim 68 wherein the server comprises a network-based device.
70. (previously presented) The method of claim 68 wherein the server comprises a switch and/or router.
71. (previously presented) The method of claim 68 wherein the server comprises a network-based switch and/or router.
72. (previously presented) The method of claim 68 wherein the server comprises an access point or a base station.
73. (previously presented) The method of claim 68 wherein the server comprises software, firmware and/or hardware.
74. (previously presented) The device of claim 17 wherein the previously established communication comprises: a cellular communication, a VoIP communication / session, a voice communication / session, a video communication / session, a multimedia communication /session, a data communication / session, a SIP or IMS based communication and/or a WiFi communication.
75. (previously presented) The device of claim 74 wherein the previously established communication is proprietary or standard.
76. (currently amended) A device comprising:
a switching system to switch operation between a first communication module and a second communication module, wherein during an established communication if a ~~signal~~ monitor detects that a context changes, the established communication is switched to a second communication over a network, wherein switching is based on detecting a second context being preferred over the context within a set of known networks, wherein upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size, wherein if the monitor detects that a signal level is below a second predefined

threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 .

77. (previously presented) The device of claim 76 wherein the network is operated by a different network provider.
78. (previously presented) The device of claim 76 wherein the network includes a plurality of access points, and the established communication is switched between the plurality of access points.
79. (canceled)
80. (previously presented) The device of claim 76 wherein the device comprises a terminal, a mobile device, a sensor, an access point, and/or a controller device.
81. (previously presented) The device of claim 76 wherein the first communication comprises a first WiFi communication and the second communication comprises a second WiFi communication.
82. (previously presented) The device of claim 76 wherein the first communication comprises a first cellular communication and the second communication comprises a second cellular communication.
83. (previously presented) The device of claim 76 wherein the first communication comprises a cellular communication and the second communication comprises a WiFi communication, or the first communication comprises the WiFi communication and the second communication comprises the cellular communication.
84. (previously presented) The device of claim 76 wherein the first communication and the second communication comprise at least one of: a cellular communication, a VoIP communication / session, a voice communication / session, a video communication / session, a multimedia communication /session, a data communication / session, a SIP or IMS based communication and/or a WiFi communication.

85. (previously presented) A method comprising:
 monitoring a context of a first communication link;
 when a network is detected as available with a second communication link with a context preferable to the first communication link, notifying an interface server and establishing the second communication link between the interface server and an end destination device without disrupting the first communication link; and
 re-directing the second communication link from the interface server to a mobile communication device, thereby establishing the second communication link between the communication device and a second network, wherein upon activation of a timer, a switching system causes a second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size.
86. (previously presented) The device of claim 17 wherein the established communication comprises a cellular communication or a WiFi communication, and the second communication comprises a cellular communication or a WiFi communication.

REMARKS

Applicants respectfully request further examination and reconsideration in view of the arguments set forth fully below. Claims 17, 18, 21-23, 25, 27, 28, 31, 33, 37, 39, 40, 45-48, 50, 51, 54, 56-58, 60, 61, 64, 66-78 and 80-86 have been rejected. By the above amendments, Claims 17, 22, 45 and 76 have been amended, and Claim 21 has been canceled. Accordingly, Claims 17, 18, 22, 23, 25, 27, 28, 31, 33, 37, 39, 40, 45-48, 50, 51, 54, 56-58, 60, 61, 64, 66-78 and 80-86 are currently pending.

Double Patenting

Within the Office Action, Claims 33, 37, 39, 40, 56-58, 60, 61, 64 and 67-73 have been rejected on the grounds of nonstatutory obviousness-type double patenting. A terminal disclaimer is filed herewith. Thus, the rejection should be withdrawn.

Rejections Under 35 U.S.C. § 103

Within the Office Action, Claims 17, 18, 25, 27, 28, 31, 45-48, 50, 51, 54, 66, 74-78, 80-84 and 86 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2005/0059400 by Jagadeesan et al. (hereinafter Jagadeesan) in view of U.S. Patent Application Publication No. 2004/0153676 by Krantz et al. (hereinafter Krantz). Applicants respectfully disagree.

Specifically, by the above amendments, the independent Claims have been amended to include allowable subject matter from the dependent Claim 21.

Jagadeesan is directed to a method and system for triggering handoff of a call between networks. [Jagadeesan, Abstract] Jagadeesan is cited as teaching wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is equal to or greater than a third predefined threshold value V_{th3} , a previously established communication over the Wi-Fi network continues without switching. However, Jagadeesan does not teach wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 , wherein a third predefined threshold value V_{th3} is smaller than V_{th2} .

Krantz teaches a method and system for managing power consumption in a portable computing device having a network interface module is presented. A power management module receives inputs from other modules and determines when the network interface module is to be

put in a doze state for a predetermined number of beacon intervals to conserve power consumption in the network interface module. The network interface module in a device that is associated with a network is put in the doze state after an event has occurred including when a scan has been performed, after a delayed sleep timer has expired, and after a beacon transmission has been completed and no traffic is buffered for the device. The delayed sleep-time is set based on the estimated round trip time of a packet. However, Krantz does not teach wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 , wherein a third predefined threshold value V_{th3} is smaller than V_{th2} .

In contrast to the combination of Jagadeesan and Krantz, the presently claimed invention teaches a mobile communication module configured to switch between a cellular communication module and a Wi-Fi communication module. The presently claimed invention teaches a Wi-Fi signal monitor that detects that a Wi-Fi signal level is equal to or greater than a third predefined threshold value V_{th3} . As described above, Jagadeesan, Krantz and their combination do not teach wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 , wherein a third predefined threshold value V_{th3} is smaller than V_{th2} .

The independent Claim 17 is directed to a device. The device of Claim 17 comprises a switching system to switch operation between a first communication module and a second communication module, wherein during an established communication if a context changes, the established communication is switched to a second communication over a second network, wherein switching is based on detecting a second context being preferred over the context within a set of known networks or from a newly discovered network, wherein upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size, wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 , wherein a third predefined threshold value V_{th3} is smaller than V_{th2} . As described above, Jagadeesan, Krantz and their combination do not wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 , wherein a third predefined threshold value V_{th3} is smaller than V_{th2} . For at least these reasons, the

independent Claim 17 is allowable over the teachings of Jagadeesan, Krantz and their combination.

Claims 18, 25, 27, 28, 74, 75 and 86 are all dependent upon the independent Claim 17. As discussed above, the independent Claim 17 is allowable over Jagadeesan, Krantz and their combination. Accordingly, Claims 18, 25, 27, 28, 74, 75 and 86 are all also allowable as being dependent upon an allowable base claim.

The independent Claim 45 is directed to a mobile communication device. The mobile communication device of Claim 45 comprises a first communication module adapted to communicate with a first wireless network, a second communication module adapted to communicate with an access point associated with a second network and a switching system to switch operation between the first communication module and the second communication module, wherein if a context changes, the second communication module is activated and a second communication type is initiated, wherein if the context does not change, the second communication type is continued without switching, wherein switching is based on detecting a second context being preferred over the context within a set of known networks or from a newly discovered network, wherein upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size, wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 . As described above, Jagadeesan, Krantz and their combination do not teach wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 . For at least these reasons, the independent Claim 45 is allowable over the teachings of Jagadeesan, Krantz and their combination.

Claims 46, 47, 50, 51 and 54 are all dependent upon the independent Claim 45. As discussed above, the independent Claim 45 is allowable over Jagadeesan, Krantz and their combination. Accordingly, Claims 46, 47, 50, 51 and 54 are all also allowable as being dependent upon an allowable base claim.

The independent Claim 76 is directed to a device. The device of Claim 76 comprises a switching system to switch operation between a first communication module and a second communication module, wherein during an established communication if a signal monitor detects that a context changes, the established communication is switched to a second communication

over a network, wherein switching is based on detecting a second context being preferred over the context within a set of known networks or from a newly discovered network, wherein upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size, wherein if the monitor detects that a signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 . As described above, Jagadeesan, Krantz and their combination do not teach wherein if the monitor detects that a signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 . For at least these reasons, the independent Claim 76 is allowable over the teachings of Jagadeesan, Krantz and their combination.

Claims 77, 78 and 80-84 are all dependent upon the independent Claim 76. As discussed above, the independent Claim 76 is allowable over Jagadeesan, Krantz and their combination. Accordingly, Claims 77, 78 and 80-84 are all also allowable as being dependent upon an allowable base claim.

Allowable Subject Matter

Within the Office Action, it is indicated that Claims 33, 37, 39, 40, 56-58, 60, 61 and 64 are allowed if the double patenting rejection is resolved.

Within the Office Action, it is indicated that Claims 21-23 are objected to as being dependent upon a rejected base claim.

By the above amendments, Claim 21 has been canceled. Claims 22 and 23 are dependent upon the independent Claim 17. As discussed above, the independent Claim 17 is allowable over Jagadeesan, Krantz and their combination. Accordingly, Claims 22 and 23 are both also allowable as being dependent upon an allowable base claim.

Applicants respectfully submit that the claims, as amended, are now in a condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, they are encouraged to call the undersigned at (408) 530-9700 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,
HAVERSTOCK & OWENS LLP

Dated: December 12, 2018

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/480,293	04/05/2017	Vasudevan Ganesan	HAVA-00506	4902
28960	7590	01/09/2019	EXAMINER	
HAVERSTOCK & OWENS LLP			NGUYEN, TU X	
162 NORTH WOLFE ROAD			ART UNIT	PAPER NUMBER
SUNNYVALE, CA 94086			2649	
			MAIL DATE	DELIVERY MODE
			01/09/2019	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.

DETAILED ACTION

Response to Amendment

Applicant's arguments filed 12/12/18 have been fully considered but they are not persuasive.

Regarding claims 45 and 76, Applicant argues that Jagadeesan fails to teach a second predefined threshold value V_{th2} (fig3 element 114 "trigger threshold") the timer is activated to establish a second time window of a second predefined size T_2 . The Examiner disagrees. Jagadeesan discloses the first threshold context and the first predetermine interval for switching network is fig.3 element 104. The second threshold context and the second predetermine interval for switching to WiFi network is fig.3 element 114.

Claim Rejections - 35 USC § 103

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

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, 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 45-48, 50-51, 54, 77-78, 80-84 and 85-86 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Jagadeesan et al. (US Pub. 2005/0059400) in view of Krantz et al. (US Pub. 2004/0153676).

Regarding claims 45 and 76, Jagadeesan discloses switching system to switch operation between a first communication and a second communication, wherein during an established communication if a context changes, the established communication is switched to a second communication over a second network, wherein switching is based on detecting a second context being preferred over the context within a set of networks of known networks or from a newly discovered network (par.025 “the mobile station to be handed off between cellular network 14 and WLAN 16, depending on the quality of the wireless links between mobile station 12 and such networks”, par.041 “default network of mobile station 12 is WLAN 16”), wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is below a second predefined threshold value V_{th2} (fig3 element 114 “trigger threshold”) the timer is activated to establish a second time window of a second predefined size T_2 (fig.3 element 114 “pick-up count duration”).

Jagadeesan fails to teach upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size.

Krantz discloses upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size (par.036 “These levels are on state, doze state, and off state”, par.042 “the power management module 202 sets a timer for the delayed sleep time..... If the power management module determines that the network interface module cannot remain in the doze state for longer than a beacon interval, the power management module will set the network

interface module to the powered up state to receive a beacon. Otherwise, the network interface module remains in the doze state until the delayed sleep timer expires”,
par.053 “The roaming component 812 also has an impact on power management. If the 802.11 network interface module is the active network connection, the power management translator 802 specifies to the other power management modules 814, 818, 822 that their network interface modules should be powered off”). Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date to modify the system of Jagadeesan with the above teaching of Krantz in order to conserve battery power of the mobile device.

Regarding claims 46 and 86, the modified Jagadeesan discloses the first communication module comprises a first Wi-Fi communication module, and the first wireless network comprises a first Wi-Fi network access point (Krantz, par.003).

Regarding claims 47 and 82, the modified Jagadeesan discloses the second communication module comprises a second Wi-Fi communication module, and the second wireless network comprises a second Wi-Fi network access point (Krantz, par.003).

Regarding claim 48, the modified Jagadeesan discloses communications comprise a telephone call (Jagadeesan, par.024).

Regarding claims 50 and 54, the modified Jagadeesan discloses the communications comprise a transmission of content (Jagadeesan, par.024 “video conference”, “data exchange”).

Regarding claim 51, the modified Jagadeesan discloses content comprises at least one of fixed and mobile (Jagadeesan, par.023).

Regarding claim 77, the modified Jagadeesan discloses the network is operated by a different network provider (Jagadeesan, par.017 "CDMA", "GSM").

Regarding claim 78, the modified Jagadeesan discloses the network includes a plurality of access points, and the established communication is switched between the plurality of access points (Jagadeesan, par.021).

Regarding claim 80, the modified Jagadeesan discloses the device comprises a terminal, a mobile device (Jagadeesan, par.021 "mobile station 12"), a sensor, an access point, and/or a controller device.

Regarding claim 81, the modified Jagadeesan discloses the first communication comprises a first WiFi communication and the second communication comprises a second WiFi communication (Krantz, par.003).

Regarding claim 83, the modified Jagadeesan discloses the first communication comprises acellular communication and the second communication comprises a WiFi communication, or the first communication comprises the WiFi communication and the second communication comprises the cellular communication (Jagadeesan, fig.3).

Regarding claim 84, the modified Jagadeesan discloses acellular communication (Jagadeesan, par.017), a VoIP communication / session, a voice communication / session, a video communication / session, a multimedia communication /session, a data communication / session, a SIP or IMS based communication and/or a WiFi communication.

Regarding claim 85, the modified Jagadeesan discloses everything as claim 45 above. More specifically, the modified Jagadeesan discloses notifying an interface server and establishing the second communication link between the interface

server and an end destination device without disrupting the first communication link (Krantz, par.008 “sends a notification to an access point that network interface module is going to be set to the doze state”).

Allowable Subject Matter

Claims 17-18, 22-23, 25, 27-28, 31, 33, 37, 39-40 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 17, the prior art fails to teach “wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is below a second predefined threshold value V_{th2} ; the timer is activated to establish a second time window of the second predefined size T_2 , wherein a third predefined threshold value V_{th3} is smaller than V_{th2} .”, in linking with other subject matters in the claim.

Regarding claim 33, the prior art fails to teach “establishing a second time window of a second predefined size T , if the third detected context falls below a second predefined threshold value V_{th2} ; detecting a fourth context during the second time window; and continuing a Wi-Fi communication without change if the fourth detected context is equal to or greater than a third predefined threshold value V_{th3} , wherein V_{th3} is smaller than V_{th2} .”, in linking with other subject matters in the claim.

Regarding claim 56, the prior art fails to teach “a timer is activated to establish a second time window of a second predefined size, wherein a third predefined threshold value is smaller than a second predefined threshold value”, in linking with other subject matters in the claim.

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 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 Examiner Tu Nguyen whose telephone number is (571)272-7883. The examiner can normally be reached on 8AM-5PM Eastern Time.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, Applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, SPE can be reached on 571-272-7899. 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.

/TU X NGUYEN/
Primary Examiner, Art Unit 2649

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	Group Art Unit: 2649
Vasudevan Ganesan	)	Examiner: Nguyen, Tu X.
Application No.: 15/480,293)	
Filed: April 5, 2017	)	AMENDMENT AND RESPONSE TO
	)	OFFICE ACTION MAILED ON
	)	January 9, 2019
For: TELEPHONE WITH AUTOMATIC)	
SWITCHING BETWEEN)	162 North Wolfe Road
CELLULAR AND VOIP)	Sunnyvale, California 94086
NETWORKS)	(408) 530-9700
)	
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AMENDMENTS

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

Remarks/Arguments begin on page 11 of this paper.

Amendments to the Claims:

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

Claims 1-16 (canceled)

17. (previously presented) A device comprising:
a switching system to switch operation between a first communication module and a second communication module, wherein during an established communication if a context changes, the established communication is switched to a second communication over a second network, wherein switching is based on detecting a second context being preferred over the context within a set of networks, wherein upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size, wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 , wherein a third predefined threshold value V_{th3} is smaller than V_{th2} .
18. (previously presented) The device of claim 17, wherein a tear-down signal causes the communication module to go into a sleep mode.
19. (canceled)
20. (canceled)
21. (canceled)
22. (previously presented) The device of claim 17 wherein if during time window T_2 , the Wi-Fi signal monitor detects that the Wi-Fi signal level is smaller than V_{th3} , upon expiration of time window T_2 , the timer unit is activated to establish a third time window of a third predefined size T_3 , where T_3 is smaller than T_2 , wherein if during time window T_3 the Wi-Fi signal monitor detects that the Wi-Fi signal level is smaller than V_{th3} , the switching circuit sends a tear-down signal to the Wi-Fi communication module and a

link-up signal to the cellular communication module, wherein said tear-down signal causes the Wi-Fi communication module to discontinue handling a previously established communication over the Wi-Fi network and wherein said link-up signal causes the cellular communication module to handle the previously established communication over the Wi-Fi network via a cellular network.

23. (previously presented) The device of claim 22 wherein at the expiration of the predefined time period T_2 , the network switching circuit causes the cellular communication module to change state from a sleep mode to an active mode.
24. (canceled)
25. (previously presented) The device of claim 17, wherein the communications comprise a telephone call.
26. (canceled)
27. (previously presented) The device of claim 17, wherein the communications comprise a transmission of content.
28. (previously presented) The device of claim 27, wherein the content comprises at least one of fixed and mobile.
29. (canceled)
30. (canceled)
31. (previously presented) The device of claim 17, wherein the communications comprise a data exchange.
32. (canceled)

33. (previously presented) A method comprising:
 - determining a first context;
 - activating a timer to establish a first time window of a first predefined size T_1 based on the detected first context;
 - determining a second context during the first time window;
 - automatically switching a communication in progress via a wireless network to a communication via a Wi-Fi network based on the second detected context;
 - detecting a third context;
 - establishing a second time window of a second predefined size T_2 if the third detected context falls below a second predefined threshold value V_{th2} ;
 - detecting a fourth context during the second time window; and
 - continuing a Wi-Fi communication without change if the fourth detected context is equal to or greater than a third predefined threshold value V_{th3} , wherein V_{th3} is smaller than V_{th2} .
34. (canceled)
35. (canceled)
36. (canceled)
37. (previously presented) The method of claim 33, wherein the communication comprises a telephone call.
38. (canceled)
39. (previously presented) The method of claim 33, wherein the communication comprises a transmission of content.
40. (previously presented) The method of claim 39, wherein the content comprises at least one of fixed and mobile.
41. (canceled)

42. (canceled)
43. (canceled)
44. (canceled)
45. (currently amended) A mobile communication device comprising:
a first communication module adapted to communicate with a first wireless network;
a second communication module adapted to communicate with an access point associated with a second network; and
a switching system to switch operation between the first communication module and the second communication module, wherein if a context changes, the second communication module is activated and a second communication type is initiated, wherein if the context does not change, the second communication type is continued without switching, wherein switching is based on detecting a second context being preferred over the context within a set of known networks or from a newly discovered network, wherein upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size, wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 , wherein a third predefined threshold value V_{th3} is smaller than V_{th2} .
46. (previously presented) The mobile communication device of claim 45, wherein the first communication module comprises a first Wi-Fi communication module, and the first wireless network comprises a first Wi-Fi network access point.
47. (previously presented) The mobile communication device of claim 46, wherein the second communication module comprises a second Wi-Fi communication module, and the second wireless network comprises a second Wi-Fi network access point.
48. (previously presented) The mobile communication device of claim 45, wherein the communication comprises a telephone call.

49. (canceled)
50. (previously presented) The mobile communication device of claim 45, wherein the communication comprises a transmission of content.
51. (previously presented) The mobile communication device of claim 50, wherein the content comprises at least one of fixed and mobile.
52. (canceled)
53. (canceled)
54. (previously presented) The mobile communication device of claim 45, wherein the communication comprises a data exchange.
55. (canceled)
56. (previously presented) A method comprising:
determining, with a server, a first signal level;
activating, with the server, a timer to establish a first time window of a first predefined size T_1 if the detected first signal level is greater than a first predefined threshold value;
determining, with the server, a second signal level during the first time window;
if the second detected signal level falls below the first predefined threshold value, then searching for alternative Wi-Fi signals having signal level above the first predefined threshold value, with the server;
if an alternative signal level is above the first predefined threshold value, then switching a Wi-Fi communication in progress to a source of the alternative Wi-Fi signal, with the server; and
if no alternative signal level is above the first predefined threshold value, then switching a Wi-Fi communication in progress to the wireless network, with the server, wherein if a signal monitor detects that the alternative signal level is below a second predefined threshold value, a timer is activated to establish a second time window of a second predefined size, wherein a third predefined threshold value is smaller than a second predefined threshold value.

57. (previously presented) The method of claim 56, further comprising:
continuing a Wi-Fi communication without change if the second detected signal is equal to or greater than the first predefined threshold value.
58. (previously presented) The method of claim 56, wherein the communication comprises a telephone call.
59. (canceled)
60. (previously presented) The method of claim 56, wherein the communication comprises a transmission of content.
61. (previously presented) The method of claim 60, wherein the content comprises at least one of fixed and mobile.
62. (canceled)
63. (canceled)
64. (previously presented) The method of claim 56, wherein the communication comprises a data exchange.
65. (canceled)
66. (previously presented) The mobile communication device of claim 45 wherein the context comprises a signal level.
67. (previously presented) The method of claim 33 wherein the determining and switching are performed, in part, by a mobile communication device.
68. (previously presented) The method of claim 33 wherein the determining and switching are performed, in part, by a server.

69. (previously presented) The method of claim 68 wherein the server comprises a network-based device.
70. (previously presented) The method of claim 68 wherein the server comprises a switch and/or router.
71. (previously presented) The method of claim 68 wherein the server comprises a network-based switch and/or router.
72. (previously presented) The method of claim 68 wherein the server comprises an access point or a base station.
73. (previously presented) The method of claim 68 wherein the server comprises software, firmware and/or hardware.
74. (previously presented) The device of claim 17 wherein the previously established communication comprises: a cellular communication, a VoIP communication / session, a voice communication / session, a video communication / session, a multimedia communication /session, a data communication / session, a SIP or IMS based communication and/or a WiFi communication.
75. (previously presented) The device of claim 74 wherein the previously established communication is proprietary or standard.
76. (currently amended) A device comprising:
a switching system to switch operation between a first communication module and a second communication module, wherein during an established communication if a ~~signal~~ monitor detects that a context changes, the established communication is switched to a second communication over a network, wherein switching is based on detecting a second context being preferred over the context within a set of known networks, wherein upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size, wherein if the monitor detects that a signal level is below a second predefined

threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 , wherein a third predefined threshold value V_{th3} is smaller than V_{th2} .

77. (previously presented) The device of claim 76 wherein the network is operated by a different network provider.
78. (previously presented) The device of claim 76 wherein the network includes a plurality of access points, and the established communication is switched between the plurality of access points.
79. (canceled)
80. (previously presented) The device of claim 76 wherein the device comprises a terminal, a mobile device, a sensor, an access point, and/or a controller device.
81. (previously presented) The device of claim 76 wherein the first communication comprises a first WiFi communication and the second communication comprises a second WiFi communication.
82. (previously presented) The device of claim 76 wherein the first communication comprises a first cellular communication and the second communication comprises a second cellular communication.
83. (previously presented) The device of claim 76 wherein the first communication comprises a cellular communication and the second communication comprises a WiFi communication, or the first communication comprises the WiFi communication and the second communication comprises the cellular communication.
84. (previously presented) The device of claim 76 wherein the first communication and the second communication comprise at least one of: a cellular communication, a VoIP communication / session, a voice communication / session, a video communication / session, a multimedia communication /session, a data communication / session, a SIP or IMS based communication and/or a WiFi communication.

85. (currently amended) A method comprising:
monitoring a context of a first communication link;
when a network is detected as available with a second communication link with a context preferable to the first communication link, notifying an interface server and establishing the second communication link between the interface server and an end destination device without disrupting the first communication link; and
re-directing the second communication link from the interface server to a mobile communication device, thereby establishing the second communication link between the communication device and a second network, wherein upon activation of a timer, a switching system causes a second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size, wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 , wherein a third predefined threshold value V_{th3} is smaller than V_{th2} .
86. (previously presented) The device of claim 17 wherein the established communication comprises a cellular communication or a WiFi communication, and the second communication comprises a cellular communication or a WiFi communication.

REMARKS

Applicants respectfully request further examination and reconsideration in view of the arguments set forth fully below. Claims 17, 18, 22, 23, 25, 27, 28, 31, 33, 37, 39, 40, 45-48, 50, 51, 54, 56-58, 60, 61, 64, 66-78 and 80-86 have been rejected. By the above amendments, Claims 45, 76 and 85 have been amended. Accordingly, Claims 17, 18, 22, 23, 25, 27, 28, 31, 33, 37, 39, 40, 45-48, 50, 51, 54, 56-58, 60, 61, 64, 66-78 and 80-86 are currently pending.

Rejections Under 35 U.S.C. § 103

Within the Office Action, Claims 45-48, 50, 51, 54, 74-78, 80-84, 85 and 86 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2005/0059400 by Jagadeesan et al. (hereinafter Jagadeesan) in view of U.S. Patent Application Publication No. 2004/0153676 by Krantz et al. (hereinafter Krantz). Applicants respectfully disagree.

By the above amendments, the independent Claims have been amended to include allowable subject matter. Specifically, the Claims have been amended to include: wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 , wherein a third predefined threshold value V_{th3} is smaller than V_{th2} .

Jagadeesan is directed to a method and system for triggering handoff of a call between networks. [Jagadeesan, Abstract] Jagadeesan is cited as teaching wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is equal to or greater than a third predefined threshold value V_{th3} , a previously established communication over the Wi-Fi network continues without switching. However, Jagadeesan does not teach wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 , wherein a third predefined threshold value V_{th3} is smaller than V_{th2} .

Krantz teaches a method and system for managing power consumption in a portable computing device having a network interface module is presented. A power management module receives inputs from other modules and determines when the network interface module is to be put in a doze state for a predetermined number of beacon intervals to conserve power consumption in the network interface module. The network interface module in a device that is associated with a network is put in the doze state after an event has occurred including when a

scan has been performed, after a delayed sleep timer has expired, and after a beacon transmission has been completed and no traffic is buffered for the device. The delayed sleep-time is set based on the estimated round trip time of a packet. However, Krantz does not teach wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 , wherein a third predefined threshold value V_{th3} is smaller than V_{th2} .

In contrast to the combination of Jagadeesan and Krantz, the presently claimed invention teaches a mobile communication module configured to switch between a cellular communication module and a Wi-Fi communication module. The presently claimed invention teaches a Wi-Fi signal monitor that detects that a Wi-Fi signal level is equal to or greater than a third predefined threshold value V_{th3} . As described above, Jagadeesan, Krantz and their combination do not teach wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 , wherein a third predefined threshold value V_{th3} is smaller than V_{th2} .

The independent Claim 45 is directed to a mobile communication device. The mobile communication device of Claim 45 comprises a first communication module adapted to communicate with a first wireless network, a second communication module adapted to communicate with an access point associated with a second network and a switching system to switch operation between the first communication module and the second communication module, wherein if a context changes, the second communication module is activated and a second communication type is initiated, wherein if the context does not change, the second communication type is continued without switching, wherein switching is based on detecting a second context being preferred over the context within a set of known networks or from a newly discovered network, wherein upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size, wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 , wherein a third predefined threshold value V_{th3} is smaller than V_{th2} . As described above, Jagadeesan, Krantz and their combination do not teach wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 , wherein a third predefined threshold value V_{th3} is

smaller than V^{th2} . For at least these reasons, the independent Claim 45 is allowable over the teachings of Jagadeesan, Krantz and their combination.

Claims 46-48, 50, 51 and 54 are all dependent upon the independent Claim 45. As discussed above, the independent Claim 45 is allowable over Jagadeesan, Krantz and their combination. Accordingly, Claims 46, 47, 50, 51 and 54 are all also allowable as being dependent upon an allowable base claim.

The independent Claim 76 is directed to a device. The device of Claim 76 comprises a switching system to switch operation between a first communication module and a second communication module, wherein during an established communication if a signal monitor detects that a context changes, the established communication is switched to a second communication over a network, wherein switching is based on detecting a second context being preferred over the context within a set of known networks or from a newly discovered network, wherein upon activation of a timer, the switching system causes the second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size, wherein if the monitor detects that a signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 , wherein a third predefined threshold value V_{th3} is smaller than V_{th2} . As described above, Jagadeesan, Krantz and their combination do not teach wherein if the monitor detects that a signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 , wherein a third predefined threshold value V_{th3} is smaller than V_{th2} . For at least these reasons, the independent Claim 76 is allowable over the teachings of Jagadeesan, Krantz and their combination.

Claims 77, 78 and 80-84 are all dependent upon the independent Claim 76. As discussed above, the independent Claim 76 is allowable over Jagadeesan, Krantz and their combination. Accordingly, Claims 77, 78 and 80-84 are all also allowable as being dependent upon an allowable base claim.

The independent Claim 85 is directed to a method. The method of Claim 85 comprises monitoring a context of a first communication link, when a network is detected as available with a second communication link with a context preferable to the first communication link, notifying an interface server and establishing the second communication link between the interface server and an end destination device without disrupting the first communication link and re-directing the second communication link from the interface server to a mobile communication device, thereby establishing the second communication link between the communication device and a

second network, wherein upon activation of a timer, a switching system causes a second communication module to change state from a sleep mode to an active mode, wherein the timer is activated to establish a time window of a predefined size, wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 , wherein a third predefined threshold value V_{th3} is smaller than V_{th2} . As described above, Jagadeesan, Krantz and their combination do not teach wherein if the monitor detects that a signal level is below a second predefined threshold value V_{th2} , the timer is activated to establish a second time window of a second predefined size T_2 , wherein a third predefined threshold value V_{th3} is smaller than V_{th2} . For at least these reasons, the independent Claim 85 is allowable over the teachings of Jagadeesan, Krantz and their combination.

Allowable Subject Matter

Within the Office Action, it is indicated that Claims 17, 18, 22, 23, 25, 27, 28, 31, 33, 37, 39, and 40 are allowed.

Claims 56-58, 60, 61 and 64 were allowed in the previous Office Action, but are not mentioned in the current Office Action. Applicants assume that these claims are still allowed.

Additionally, Claims 67-75 are dependent on the independent Claim 33 which is allowed, and thus are also allowable as being dependent upon an allowable base claim.

Claim 86 is dependent on the independent Claim 17 which is allowed, and thus is also allowable as being dependent upon an allowable base claim.

Applicants respectfully submit that the claims, as amended, are now in a condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, they are encouraged to call the undersigned at (408) 530-9700 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,
HAVERSTOCK & OWENS LLP

Dated: March 8, 2019

By: /Jonathan O. Owens/
Jonathan O. Owens
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Attorneys for Applicant



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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
Row 1: 15/480,293, 04/05/2017, Vasudevan Ganesan, HAVA-00506, 4902
Row 2: 28960, 7590, 03/15/2019, EXAMINER NGUYEN, TU X
Row 3: HAVERSTOCK & OWENS LLP, 162 NORTH WOLFE ROAD, SUNNYVALE, CA 94086, ART UNIT 2649, PAPER NUMBER

DATE MAILED: 03/15/2019

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

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

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

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

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

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

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

Privacy Act Statement

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

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

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

Notice of Allowability	Application No. 15/480,293	Applicant(s) Ganesan, Vasudevan	
	Examiner TU X NGUYEN	Art Unit 2649	AIA (FITF) Status No

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

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

1. This communication is responsive to 3/08/19.
 A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.
2. An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. The allowed claim(s) is/are See Continuation Sheet. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

- a) All b) Some *c) None of the:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

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

5. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Examiner's Amendment/Comment |
| 2. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____. | 6. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| 3. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material _____. | 7. <input type="checkbox"/> Other _____. |
| 4. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. | |

/TU X NGUYEN/
Primary Examiner, Art Unit 2649

Continuation of 3. The allowed claim(s) is/are: 17-18,22-23,25,27-28,31,33,37,39-40,45-48,50-51,54,56-58,60-61,64,66-78 and 80-86

DETAILED ACTION

Allowable Subject Matter

Claims 17-18, 22-23, 25, 27-28, 31, 33, 37, 39-40, 45-48, 50-51, 54, 56-58, 60-61, 64, 66-78 and 80-86 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 17, 45, 76 and 85, the prior art fails to teach “wherein if a Wi-Fi signal monitor detects that a Wi-Fi signal level is below a second predefined threshold value V_{th2} ; the timer is activated to establish a second time window of the second predefined size T_2 , wherein a third predefined threshold value V_{th3} is smaller than V_{th2} .”, in linking with other subject matters in the claim.

Regarding claim 33, the prior art fails to teach “establishing a second time window of a second predefined size T , if the third detected context falls below a second predefined threshold value V_{th2} ; detecting a fourth context during the second time window; and continuing a Wi-Fi communication without change if the fourth detected context is equal to or greater than a third predefined threshold value V_{th3} , wherein V_{th3} is smaller than V_{th2} .”, in linking with other subject matters in the claim.

Regarding claim 56, the prior art fails to teach “a timer is activated to establish a second time window of a second predefined size, wherein a third predefined threshold value is smaller than a second predefined threshold value”, in linking with other subject matters in the claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tu Nguyen whose telephone number is (571)272-7883. The examiner can normally be reached on 8AM-5PM Eastern Time.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, Applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, SPE can be reached on 571-272-7899. 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.

/TU X NGUYEN/
Primary Examiner, Art Unit 2649