

HEWLETT-PACKARD COMPANY
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Fort Collins, Colorado 80528

PATENT APPLICATION

RECORD ID: 83068177

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Anticipated Classification of this application:

Class 379 Subclass 088.170

Prior Application:

Examiner: Gerald Gauthier

Art Unit: 2614

Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

REQUEST FOR A CONTINUING APPLICATION UNDER 37 CFR 1.53(b)

This is a request for filing a continuation application under 37 CFR 1.53(b) a:

continuation application

divisional application of:

Pending Prior Application

Application No.: 12/901376

Filed: October 8, 2010

Title: **METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS**

Name of Applicant(s): **David Champlin, Kirin Prasad, Larry Chen, Rajan Ranga, Robert Haitani**

Copy of Application

Enclosed is a copy of the prior application, including the drawings.

Enclosed is a new specification, including new drawings.

Oath or Declaration

Enclosed is a copy of the prior Declaration (37 CFR 1.63(d)).

Enclosed is a newly executed Declaration (original or copy).

Foreign Priority - 35 USC 119

Foreign priority under 35 U.S.C 119 has been claimed in prior Application No. _____
filed on _____ in _____

The certified copy has been filed in prior Application No. _____

A separate paper claiming direct priority to a foreign application is enclosed herewith. A certified copy of the foreign application will be provided in due course.

CONTINUING APPLICATION UNDER 37 CFR 1.53(b)
(continued)

RECORD ID: 83068177

Relate Back - 35 USC 120

Cross Reference To Related Application(s):

continuation divisional

of copending application number: **12/901376** Filed On: **October 8, 2010**
which is hereby incorporated by reference herein.

Inventorship Statement

Delete the following named individuals as inventors in this application in accordance with 37 CFR 1.53(b) as a result of a change in subject matter: _____

Communications

Send Correspondence to:
Customer Number **022879**
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
3404 E. Harmony Road
Mail Stop 35
Ft. Collins, Colorado 80528

Direct telephone calls to:
Scott Andrew Pojunas
+1 703 742 1099

Other Amendments

Enter the enclosed Preliminary Amendment. The filing fee is calculated on the basis of the amended claims.

Fee Calculation

The filing fee is calculated below for Utility Design

Other

Fee\$

CLAIMS AS FILED BY OTHER THAN A SMALL ENTITY				
(1) FOR	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) TOTALS
TOTAL CLAIMS	15 — 20	0	X \$60	\$ 0
INDEPENDENT CLAIMS	3 — 3	0	X \$250	\$ 0
ANY MULTIPLE DEPENDENT CLAIMS			\$450	\$ 0
BASIC FILING FEE:				\$ 1,250
OTHER FEES:				\$
TOTAL CHARGES TO DEPOSIT ACCOUNT:				\$ 1,250

Charge \$ **1,250** to Deposit Account 08-2025. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees.

Respectfully submitted,

David Champlin, et al

By: /Hyonje Choi/

Hyonje Choi

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Reg No. : 63519

Date : Sep 7, 2012

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(continued)

RECORD ID: 83068177

Relate Back - 35 USC 120

Cross Reference To Related Application(s):

continuation divisional

of copending application number: **12/901376** Filed On: **October 8, 2010**

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Respectfully submitted,

David Champlin, et al

By: /Hyonje Choi/

Hyonje Choi

Attorney/Agent for Applicant(s)

Reg No. : 63519

Date : Sep 7, 2012

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METHOD AND DEVICE FOR ENABLING MESSAGE
RESPONSES TO INCOMING PHONE CALLS

Inventor(s):
David Champlin
Kirin Prasad
Larry Chen
Rajan Ranga
Robert Haitani

PRIORITY APPLICATIONS

[0001] This application is a Continuation of U.S. Patent Application No. 12/901,376, filed October 8, 2010, entitled "Method and Device for Enabling Message Responses to Incoming Phone Calls", which is a Continuation of U.S. Patent Application No. 11/200,511, filed August 8, 2005, now U.S. Patent No. 7,844,037, each of which is hereby incorporated by reference in its entirety for all purposes.

TECHNICAL FIELD

[0002] The disclosed embodiments relate generally to the field of messaging, and more particularly, to a method and apparatus for enabling message responses to incoming calls.

BACKGROUND

[0003] Communication devices have evolved to include numerous types of communication capabilities and functionality. For example, handheld devices exist that operate as cellular phones, messaging terminals, Internet devices, while including personal information management (PIM) software and photo-management applications. Additionally, Internet Protocol services exist that can transform Internet-enabled machines into telephony devices. Even stand-alone telephones that connect to traditional Public Switched Telephone Networks (PSTN) now carry software to assist the user in making and managing phone calls.

[0004] Mobile phone networks have traditionally been limited to voice communications, but new technologies such as GSM (Global System for Mobile Communications) have enabled mobile phone networks to also include data communications. For example, SMS (Short Message Service) messaging provides a software-independent protocol to send short text messages composed of either: 160-7 bit characters; 70-16 bit characters; or 140 octets of binary data. Individual SMS messages thus require a relatively small network bandwidth and devices can receive messages, even when connected to a voice call. The number of SMS messages a user receives has continually increased because many new types of network devices have joined mobile phone networks. These devices include, for example, PDAs, hybrid PDA / mobile phone devices, and other text messaging devices using GSM networks. Additionally, PSTN devices also exist that support messaging applications such as SMS.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] FIG. 1 is a diagram illustrating a computing device issuing a message response to an incoming caller, according to one or more embodiments of the invention.

[0006] FIG. 2 illustrates components for use in a computing device configured according to an embodiment of the invention.

[0007] FIG. 3 is a hardware diagram for use with one or more embodiments of the invention.

[0008] FIG. 4 illustrates a method for handling incoming calls with message replies, under an embodiment of the invention.

[0009] FIG. 5 illustrates an optional process that may be performed in order to determine or verify that a caller is using a message-enabled device, under an embodiment of the invention.

[0010] FIG. 6A and FIG. 6B illustrate timelines for different usage scenarios, under one or more embodiments of the invention.

DETAILED DESCRIPTION

[0011] Embodiments described herein enable message replies to be made to incoming callers. In an embodiment, a device that receives an incoming phone call, for example, may be used to transmit a message as a reply to the caller. For example, rather than pick up a phone call or forward the phone call to voicemail, the user may simply generate a text (or other form of) message to the caller.

[0012] Embodiments of the invention recognize that in some cases, a user answering or not answering a phone call is inconvenient, either to the recipient of the phone call, or the caller, As such, embodiments described herein provide an alternative of messaging the caller of an incoming phone call, rather answering the phone call or forwarding the phone call to voicemail.

[0013] Embodiments described herein have particular application to mobile computing devices that offer voice and data capabilities on cellular networks. In this context, embodiments described herein allow the user of the device handling the incoming call to communicate with the caller without actually accepting the call. This can save both the caller and the recipient time, and "minutes" on their respective cellular plans. Furthermore, if the recipient of the incoming call cannot accept the incoming call, the recipient is saved the trouble of having to respond to a voicemail message or having to find the time to return a call.

[0014] While one or more embodiments of the invention are described for use with mobile, cellular devices, other telephony and computing devices are contemplated for use with embodiments of the invention. For example, some phones that connect to traditional wireline phone networks have capability to transmit and receive messages.

[0015] In one embodiment, a computing device is configured to receive an incoming communication from another computing device. The incoming communication may be for purpose of initiating a voice-exchange session. In response to receiving the incoming call, the computing device may identify or determine a message identifier of the other computing device. The message identifier is determined based at least in part on data provided with the incoming communication. The computing device may programmatically address a message to the other computing device using the message identifier determined from the incoming communication.

[0016] According to an embodiment, a computing device is configured to provide a message reply to an incoming phone call. In one embodiment, the computing device identifies a phone number of a caller of the incoming call. The computing device may prompt the user of the computing device to generate a message reply to the incoming phone call. The computing device may then initiate the message reply by opening a message and addressing the message to the phone number of the caller of the incoming phone call.

[0017] A voice-exchange includes any data transfer method in which a user's speech or utterance is transmitted across a network to the location of another device or user in real-time (e.g. instantaneous) or near real-time (e.g. less than three seconds). Examples of voice-exchange includes standard telephony practice. Another example of voice-exchange is when a voice transmission is recorded and transmitted as an instant message or file to be received and played back at the recipient. In the latter case, the recipient may not be able to interrupt the speaker, due to time delay, while in the former case, the recipient can interact with the speaker as if they were standing next to each other.

[0018] As used herein, the term "instant message" or "instant messaging" means messages that when transmitted to a recipient, or rendered on a device of the recipient immediately, nearly immediately, or alternatively without user-action.

[0019] Numerous types of computer telephony devices exist. One type of computer telephony device for use with an embodiment is a wireless, mobile computing device, sometimes called the "smart phone". Such devices are generally small to fit in one hand, and provide cellular telephony features in combination with other applications, such as contact applications for managing contact records, calendar applications for managing and scheduling events, task applications for keeping lists, and camera applications for capturing images. Another type of computer telephony

device contemplated with an embodiment is a desktop computer that is configured to include real-time voice data exchange (e.g. through use of Internet Protocol telephony). Still further, other types of computer telephony devices exist, including standalone devices that connect directly to a telephone network (whether Internet Protocol or Public Switch Telephony System) and provide software interfaces and applications.

[0020] Embodiments provide that methods, techniques and actions performed by the communication device are performed programmatically, or as a computer-implemented method. Programmatically means through the use of code, or computer-executable instructions. A programmatically performed step may or may not be automatic.

[0021] One or more embodiments described herein may be implemented using modules. A module may include a program, a subroutine, a portion of a program, or a software component or a hardware component capable of performing one or more stated tasks or functions. As used herein, a module can exist on a hardware component independently of other modules, or a module can be a shared element or process of other modules, programs or machines. A module may reside on one machine, such as on a client or on a server, or a module may be distributed amongst multiple machines, such as on multiple clients or server machines.

[0022] Furthermore, one or more embodiments described herein may be implemented through the use of instructions that are executable by one or

more processors. These instructions may be carried on a computer-readable medium. Machines shown in figures below provide examples of processing resources and computer-readable mediums on which instructions for implementing embodiments of the invention can be carried and/or executed. In particular, the numerous machines shown with embodiments of the invention include processor(s) and various forms of memory for holding data and instructions. Examples of computer-readable mediums include permanent memory storage devices, such as hard drives on personal computers or servers. Other examples of computer storage mediums include portable storage units, such as CD or DVD units, flash memory (such as carried on many cell phones and personal digital assistants (PDAs)), and magnetic memory. Computers, terminals, network enabled devices (e.g. mobile devices such as cell phones) are all examples of machines and devices that utilize processors, memory, and instructions stored on computer-readable mediums.

[0023] FIG. 1 is a diagram illustrating a computing device issuing a message response to an incoming caller, according to one or more embodiments of the invention. In FIG. 1, an initiating computing device 120 ("calling device") places a call 112 to a recipient computing device 110. Rather than answer the call or perform some other action like forwarding the call to voicemail, one or more embodiments described herein provide that the recipient computing device 110 issues a message response 122 to the

calling device 120. In one embodiment, the message response 122 is an alternative to the user of the recipient device 110 having to decline or not answer the incoming call 112.

[0024] In an embodiment, the message response 122 is an instant message, meaning that the contents of the message are rendered immediately when received on the calling device 110. One implementation provides that a content of the message response is text. For example, the user of the receiving device 110 may insert or compose a text message (e.g. "Call me later"). A text message response may be provided using a Short Message Service (SMS) format and application. Other embodiments provide for other types of content data to be included in the message, including MMS (Multimedia Messaging Service), EMS (Enhanced Messaging Service), or any data protocol capable of encapsulating messages for transport between networked devices. Thus, one alternative implementation provides that the user may send an image that communicates information. For example, the user may send an image of a clock showing a particular time, indicating that user's desire to be called back at a particular time. Still further, the user may include audio in the message response 122. For example, the user may send a voice blurb or a chime to indicate a message to the user of the caller device 120.

[0025] FIG. 1 illustrates implementation of embodiments of the invention with cellular telephony devices, since such devices normally handle

both message transmissions and/or receptions over cellular networks.

However, there are telephones VoIP (voice-over IP) phones and phones that connect to Public Switched Telephony Networks (PSTN) that can handle messaging. For example, some PSTN phones may support SMS message handling. Thus, embodiments of the invention may extend to devices and networks other than those that are used on cellular networks.

[0026] Furthermore, telephone calls are just one example of a voice-exchange session. Embodiments of the invention may be implemented in the context of other types of voice-exchange sessions. For example, caller device 120 may initially communicate a walkie-talkie communication to the recipient device 110, for which recipient device 110 sends back, for example, a text message response.

[0027] COMPONENT OVERVIEW

[0028] FIG. 2 illustrates components for use in a computing device configured according to an embodiment of the invention. In FIG. 2, a computing device 200 includes a phone application 210 and a messaging component 220. A message response module 250 may be incorporated to operate in connection with both the phone application 210 and the messaging component 220. According to an embodiment, the message response module 250 triggers initiation of a message response 254 to the incoming call 204. In one implementation, computing device 200 corresponds to a hybrid mobile device having telephonic and messaging

capability over cellular networks (sometimes called a "smart phone"). The phone application 210 may correspond to a software element that manages voice data exchanged over one or more wireless communication components 318 (see FIG. 3). In one embodiment, messaging component 220 is an instant messaging application.

[0029] One example of a messaging application that is suitable for use with an embodiment is an SMS application, for sending and receiving text instant messages. Alternative instant text messaging applications may also be used. As another example, the messaging application 220 may correspond to a media-based messaging application, such as a Multimedia Messaging Service (MMS) application, for sending and receiving image data.

[0030] With reference to FIG. 2, computing device 200 may receive an incoming call 204, which is handled by the phone application 210. At an initial time, the incoming call 204 may include call data 212, which is identified by the phone application 210. In one embodiment, call data 212 includes identification information of the caller (e.g. "Caller ID" information). As such, call data 212 may include (i) a name of the caller, and/or (ii) a phone number used by the caller. The phone application 210 may identify call data 212 from the incoming call 204 while causing transmission of audio rings/chimes, rendering of image data containing the Caller ID information on a display of the device, and/or other incoming call notification (e.g. vibration).

[0031] The act of sending message response 254 to incoming call 204 may involve the following operations: (i) opening a new message for message response 254, (ii) addressing the message, (iii) including a message content 242 or body for the message, and (iv) instructing the messaging component 220 to send the message response. The message response module 230 may perform at least some of these operations by communicating message creation data 222 to the messaging component 220. The message creation data 222 may be generated at one time, or submitted in spurts based on the occurrence of other events. As such, some or all of the steps of sending the message response 254 may be performed automatically.

[0032] Alternatively, some or all of the steps of sending the message response 254 may be performed automatically, after input triggers are provided from the user 202. For example, in one case, the user may designate a setting on the computing device 200 to handle all incoming calls with a message response (e.g. "on vacation").

[0033] As another alternative, in one implementation, the message creation data 222 is generated in response to a trigger from a user 202. The phone application 210, message response module 230, or some other component may prompt the user to message respond to a caller in response to receipt of call data 202. The prompt may occur shortly after the incoming call 204 is received, such as with or before the first "ring" generated on the

computing device 200 for the incoming call. For example, the user may be able to elect message response as one option along with other options of answering or declining the incoming call 204.

[0034] The message creation data 222 may be based on call data 212. In one embodiment, the message creation data 222 may include (i) control data to cause the messaging application 220 to open a new message, and (ii) an address along with other data/instructions for addressing the newly created message. The message content 242 may be provided by a programmatic source 244, and/or by the user 202. In one embodiment, user 202 provides all of the message content 244. In another embodiment, the programmatic source 244 generates the content, in response to a user-input or other trigger. For example, the programmatic source 244 may generate a macro message in response to a user selecting to have incoming call 202 handled by the message response 254. Alternatively, content 242 may be a combination of content provided by the programmatic source 244 and the user. For example, the programmatic source may provide a template content that the user fills in. To illustrate, a portion of the message content 244 may correspond to "please call me in ___ minutes." The portion of the message content 244 provided by user 202 may correspond to "5".

[0035] An embodiment provides that the address provided by the message creation data 222 is a phone number of the incoming caller. In one embodiment, no verification or check is performed to determine if the device

used by the caller is message enabled. For example, the user may manually make this selection in response to seeing the number being used by the caller. If the user recognizes the number as belonging to a cell phone, for example, the user may be assured that the caller's device is message-enabled. Otherwise, the message response 254 may be transmitted, but not received by the caller.

[0036] In another embodiment, a programmatic verification step is performed to see if the caller's device is enabled to receive the message response 254. In one embodiment, the message response module 250 (or other programmatic element) may match the number of the caller to a field of a given contact record stored with a contact database 230 on the computing device. If, for example, the contact record information identifies the number of the incoming call as belonging to a "mobile" number, the messaging response module 250 may do one or more of the following: (i) provide an indication that message response is available, (ii) enable the user to elect message response option, and/or (iii) programmatically initiate a new message addressed to the number of the caller.

[0037] Conversely, if the number of the incoming call is not identifiable as being message-enabled, embodiments provide that (i) a message or other indication is provided to the user warning that the caller's device is not message enabled, or (ii) the message response feature is disabled. One embodiment may distinguish between not knowing whether the device of the

caller can receive messages, and knowing definitively that the caller's device cannot receive incoming messages. For example, in the former case, no action may be taken so that the message response feature is enabled, or a warning may be provided to the user indicating that the caller's device may not be message-enabled. In the latter case, message response may be disabled. Numerous other scenarios are possible and contemplated under embodiments of the invention.

[0038] **HARDWARE DIAGRAM**

[0039] FIG. 3 is a hardware diagram for use with one or more embodiments of the invention. In FIG. 3, a computing device 300 includes one or more processors 310, one or more memory components 320, and a display 330. One or more communication components 318 may enable receipt of call data 204 (FIG. 2), voice exchanges, and message responses 254 (FIG. 2). In one embodiment, the communication components 318 are for wireless communications, and cellular network communications in particular.

[0040] The communication components 318 may configure computing device 300 to transmit and receive communications on Code Division Multiple Access (CDMA) networks, Global System for Mobile Communications (GSM) networks, and/or other types of cellular networks. The communication components 318 may include a Subscriber Identity Module (SIM) card, an input/output controller, a radio frequency transceiver, and an

input/output controller. Combined, communication components 318 may enable voice-exchange, as well as text and other kinds of message data exchanges.

[0041] The processors 310 may retrieve from the memory components 320 instructions (“application instructions 322”) for executing operations such as described in FIG. 2. With reference to FIG. 2, the application instructions 322 may correspond to execution of phone application 210, messaging application 220 and message response module 230. Phone and/or message data 332 generated from execution of these applications may be signaled to the display 330 so that they can be viewed by the user.

[0042] Input mechanisms 340 may enable the user to enter message input 342. The message input 342 may correspond to input triggers, corresponding to, for example: (i) decisions of the user to message reply to an incoming call, (ii) to include a specific pre-formulated message content 242, and/or (iii) to send the message response 254. As an alternative or additional functionality, message input 342 generated by the input mechanisms may include one or more manual entry items, including for example: (i) address and/or phone number of the recipient, and (ii) some or all of the message content 242 (FIG. 2).

[0043] When used to compose message content 242 (FIG. 2), input mechanisms 340 may have any one of a variety of forms. For example, input mechanisms 340 may correspond to a set of hard or soft keys (soft keys

may be iconic in form and displayed through use of a contact-sensitive display) arranged in the form of a QWERTY keyboard or other layout. The message input 342 may correspond to alphanumeric content, including phrases, keywords, or images that can be generated through use of keyboards (e.g. happy face). As another example, input mechanism 340 may correspond to a microphone, so that the message input is a voice file. Still further, the input mechanism 340 may correspond to a camera or other image capturing device, which captures an image for the message response 354.

[0044] According to one embodiment, components 318 receive call data 352 when a phone call or other voice-exchange session is initiated. Subsequently, such as in response to a call pick-up, voice data 362 may be received and transmitted. In one embodiment, a message 354 is transmitted as an alternative to the voice data 362 being exchanged. In another implementation, the message 354 is provided prior to the voice data exchange 362. For example, as described below, transmission of message 354 may result in an understanding between the caller and the recipient that the call pick-up will be delayed.

[0045] METHODOLOGY

[0046] FIG. 4 illustrates a message for handling incoming calls with message replies, under an embodiment of the invention. An embodiment such as described in FIG. 4 may be performed using components and

elements such as described in FIG. 2 and other figures. Accordingly, reference may be made to elements of other figures for purpose of illustrating a suitable element or component for performing a step or sub-step being described.

[0047] In step 410, an incoming call is received. The call may be transmitted over a cellular network, from one mobile device to another.

[0048] Step provides that caller information is identified on the recipient device. This information may correspond to "Caller ID" information, which may include a name of the caller, and a phone number of the device being used to make the call.

[0049] According to one embodiment, reply options are provided to the user in step 430. For example, the user may be provided the options of answering the call, declining the call, or message responding to the call. Under one implementation, a graphic-user interface may be generated to enable the user to make the decision on how the call should be answered. The user may signal his or her decision by actuating, for example, a soft key that indicates one of the actions.

[0050] A decision is made in step 435 as to whether the user has elected the message response. If the message response was not elected, step 440 provides an elected or default reply action is performed. This may correspond to the phone call being answered, or forwarding the phone call to another phone number or voicemail.

[0051] If the user makes a decision in step 435 to message reply to the incoming call, then step 450 provides that a corresponding one of the messaging applications is opened, or otherwise presented in a state of use for the user.

[0052] In step 460, a message reply is addressed to the incoming caller. This step may include a new message being created and then addressed. Alternatively, an existing message (such as one stored in a draft folder) may be addressed. In an embodiment such as shown by FIG. 2, the message response module 250 may signal control data to the message application 210 to cause the message creation, and to cause the message application to use the phone number of the incoming caller in the address field of the newly created message.

[0053] Step 470 provides that the message body is inserted. Depending on the implementation, the message body may be created by (i) user-input, (ii) programmatically, or (iii) through a combination of user-input and programmatic creation. Programmatic content in the message body may be, for example, in the form of a template (text or image) or in the form of a macro. The macro may be triggered by user-input.

[0054] In step 480, the message is transmitted to the caller. The message may be transmitted automatically in response to an event, such upon completion of the message. Alternatively, the message may be transmitted through manual input from the user.

[0055] FIG. 5 illustrates an optional process that may be performed in order to determine or verify that a caller using a message-enabled device, under an embodiment of the invention. In step 510, the caller's phone number is identified. As mentioned, an embodiment provides that the Caller ID information may be used to identify the phone number used by the caller of the incoming call.

[0056] In step 520, a database of contact records may be accessed to determine (i) a contact record that contains the phone number of the incoming call, and (ii) information provided in the contact record that indicates whether the device is message-enabled. With reference to FIG. 1, contact records stored in, for example, contact database 130 may be scanned for a contact record that contains the phone number of the incoming caller. The field assigned to the identified phone number may be the indicator of whether the device of the caller is message-enabled.

[0057] In step 525, the determination is made as to whether the device of the caller is message-enabled. For example, if the phone number of the incoming call is matched to a contact record, and the number is listed in the contact record as belonging to a mobile, cellular device, the determination in step 525 may be that the caller's device is message-enabled. Step 540 provides that a message response feature is provided as an option to the user if the determination in step 535 is that the caller's device is message-enabled.

[0058] One embodiment provides that if the determination in step 525 is negative, then step 530 provides that no message- response options are provided to the user. For example, step 530 may be performed in response to the determination that (i) that the caller's device is not message-enabled, or (ii) unknown. Alternatively, unknown numbers may be treated as message-enabled.

[0059] While an embodiment such as described with FIG. 4 illustrates the use of multiple reply options, alternative implementations may be used where no reply option is provided. For example, the user may designate (i) message replies are to be generated for all incoming calls, or (ii) message replies are to be generated for all callers whom are known to be using a message-enabled device; or (iii) message replies are to be generated for a specific caller or set of callers. Thus, the user may remove the need to decide through manual input whether a particular call should be message replied. Additionally, message generation may correspond to (i) the message being created and addressed, or (ii) the message being created, addressed, and transmitted. In the latter case, pre-formulated or programmatically generated content may be inserted as message content 242 (FIG. 2).

[0060] USAGE SCENARIOS

[0061] FIG. 6A and FIG. 6B illustrate timelines for different usage scenarios, under one or more embodiments of the invention. In particular, FIG. 6A and FIG. 6B illustrate different show message responses where the

manner in which an incoming phone call is resolved differently. In the case of FIG. 6A, the incoming call is declined, while in FIG. 6B, the incoming call is answered.

[0062] In FIG. 6A, a timeline is shown for an embodiment in which the user can message response the user in connection with declining to answer the incoming call. At an initial time, the incoming call 602 is received. One embodiment provides that a call notification 606 is generated. The call notification 606 may display, for example, information on the caller or the caller's number. The call notification 606 may also present options as to whether the user can answer the call, decline the call, and/or message reply the call. In the scenario shown by FIG. 6A, the user elects to message reply the user with an SMS message 608. In one implementation, the SMS message 608 may occur at a later time in order to give the user a chance to enter input as part of the message body. The SMS message 608 may include content entered or selected by the user that communicates the user's intent to have the caller call back at a later time. At a time when the caller receives the SMS message 608, termination 610 may occur, at the option of the user.

[0063] FIG. 6B illustrates a timeline where a message response is provided in connection with the recipient of an incoming call answering the call. At the initial time, the incoming call 612 is received. As with the previous scenario, the call notification 616 may occur to provide the user with the opportunity to answer, decline, or message reply to the incoming

call. In the scenario shown, the user replies to the incoming call with a SMS message 618 subsequent to the call notification 616 occurring. In this scenario, the user wants to answer the call, but would like to have more time. The SMS message 618 may communicate this intent through content entered or selected by the user. At a delayed interval, the all pickup 620 occurs. In a scenario shown by FIG. 6B, the user may need to delay voicemail forwarding or pickup, so that the incoming call and "ring" for an extended duration.

[0064] Numerous other usage scenarios are contemplated with embodiments of the invention. For example, a user may elect to automatically message reply all incoming calls when the user is unavailable (e.g. "on vacation"). Alternatively, the user may elect to have all calls from a particular caller message replied automatically, with a standard message for that caller or class of callers (e.g. "use my other number"). Examples such as described enable users the convenience of initiating a communication with a phone call, but communicating using less intrusive or more rapid communication responses as a substitute for a conversation. Still further, the user may maintain a list of preformed text message responses. In response to an incoming call, the user may scroll the device and select one of the preformed responses, such as "Call back" or "Try me tomorrow at home".

[0065] Although illustrative embodiments of the invention have been described in detail herein with reference to the accompanying drawings, it is to be understood that the invention is not limited to those precise embodiments. As such, many modifications and variations will be apparent to practitioners skilled in this art. Accordingly, it is intended that the scope of the invention be defined by the following claims and their equivalents. Furthermore, it is contemplated that a particular feature described either individually or as part of an embodiment can be combined with other individually described features, or parts of other embodiments, even if the other features and embodiments make no mention of the particular feature. This, the absence of describing combinations should not preclude the inventor from claiming rights to such combinations.

What is claimed is:

1. A method for operating a first computing device, the method being performed by one or more processors and comprising:
 - receiving an incoming call to initiate a voice-exchange session from a second computing device;
 - providing a notification of the incoming call on a display of the first computing device, the notification including (i) an identifier associated with the second computing device, and (ii) a first feature that is selectable to answer the incoming call and a second feature that is selectable to send a message response without answering the incoming call;
 - receiving a user input to select the second feature to send a message to the second computing device; and
 - in response to receiving the user input, enabling the user to select a pre-formulated message content for the message or compose a message content for the message.
2. The method of Claim 1, further comprising transmitting the message to the second computing device, the messaging including the pre-formulated message content or the composed message content.
3. The method of Claim 2, wherein transmitting the message to the second computing device includes using a phone number of the second computing device as an address for the message.
4. The method of Claim 1, wherein the message is a Short Message Service (SMS) text message.

5. The method of Claim 1, further comprising in response to receiving the incoming call, determining a message identifier associated with the second computing device using data provided with the incoming call.

6. The method of Claim 1, wherein the identifier associated with the second computing device includes a name associated with the second computing device or a phone number associated with the second computing device.

7. A mobile computing device comprising:
a transceiver to transmit and receive communications over a cellular network;
a display;
an input mechanism;
one or more processors coupled to the transceiver and the display, the one or more processors to:
receive an incoming call to initiate a voice-exchange session from another computing device;
provide a notification of the incoming call on the display, the notification including (i) an identifier associated with the other computing device, and (ii) a first feature that is selectable to answer the incoming call and a second feature that is selectable to send a message response without answering the incoming call;
receiving a user input to select the second feature, via the input mechanism, to send a message to the other computing device; and
in response to receiving the user input, enabling the user to select a pre-formulated message content for the message or compose a message content for the message.

8. The mobile computing device of Claim 7, wherein the one or more processors further transmit the message to the other computing device using the cellular network, the messaging including the pre-formulated message content or the composed message content.

9. The mobile computing device of Claim 8, wherein the one or more processors transmit the message to the second computing device by using a phone number of the other computing device as an address for the message.

10. The mobile computing device of Claim 7, wherein the message is a Short Message Service (SMS) text message.

11. The mobile computing device of Claim 7, wherein the one or more processors further, in response to receiving the incoming call, determine a message identifier associated with the other computing device using data provided with the incoming call.

12. The mobile computing device of Claim 7, wherein the identifier associated with the other computing device includes a name associated with the other computing device or a phone number associated with the other computing device.

13. The mobile computing device of Claim 7, wherein the display is a touch-sensitive display, and the input mechanism is at least a part of the touch-sensitive display.

14. A non-transitory computer readable medium storing instructions that, when executed by one or more processors, causes the one or more processors of a first computing device to perform steps comprising:

receiving an incoming call to initiate a voice-exchange session from a second computing device;

providing a notification of the incoming call on a touch-sensitive display of the first computing device, the notification including (i) an identifier associated with the second computing device, and (ii) a first feature that is selectable to answer the incoming call and a second feature that is selectable to send a message response without answering the incoming call;

receiving a user input to select the second feature, via the touch-sensitive display, to send a message to the second computing device; and

in response to receiving the user input, enabling the user to select a pre-formulated message content for the message or compose a message content for the message.

15. The non-transitory computer readable medium of Claim 14, wherein the instructions further cause the one or more processors to transmit the message to the second computing device using a phone number of the second computing device as an address for the message, the messaging including the pre-formulated message content or the composed message content.

ABSTRACT

A computing device is configured to receive an incoming communication from another computing device. The incoming communication may be for purpose of initiating a voice-exchange session. In response to receiving the incoming call, the computing device may identify or determine a message identifier of the other computing device. The message identifier is determined based at least in part on data provided with the incoming communication. The computing device may programmatically address a message to the other computing device using the message identifier determined from the incoming communication.

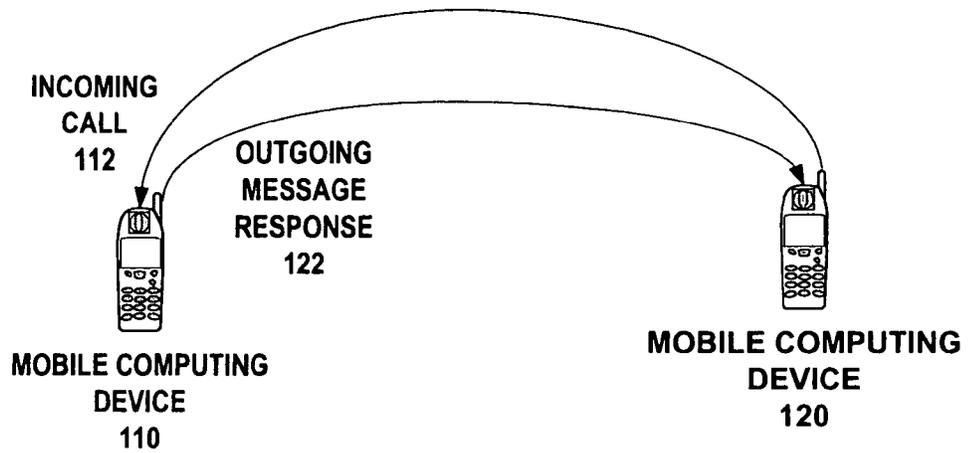


FIG. 1

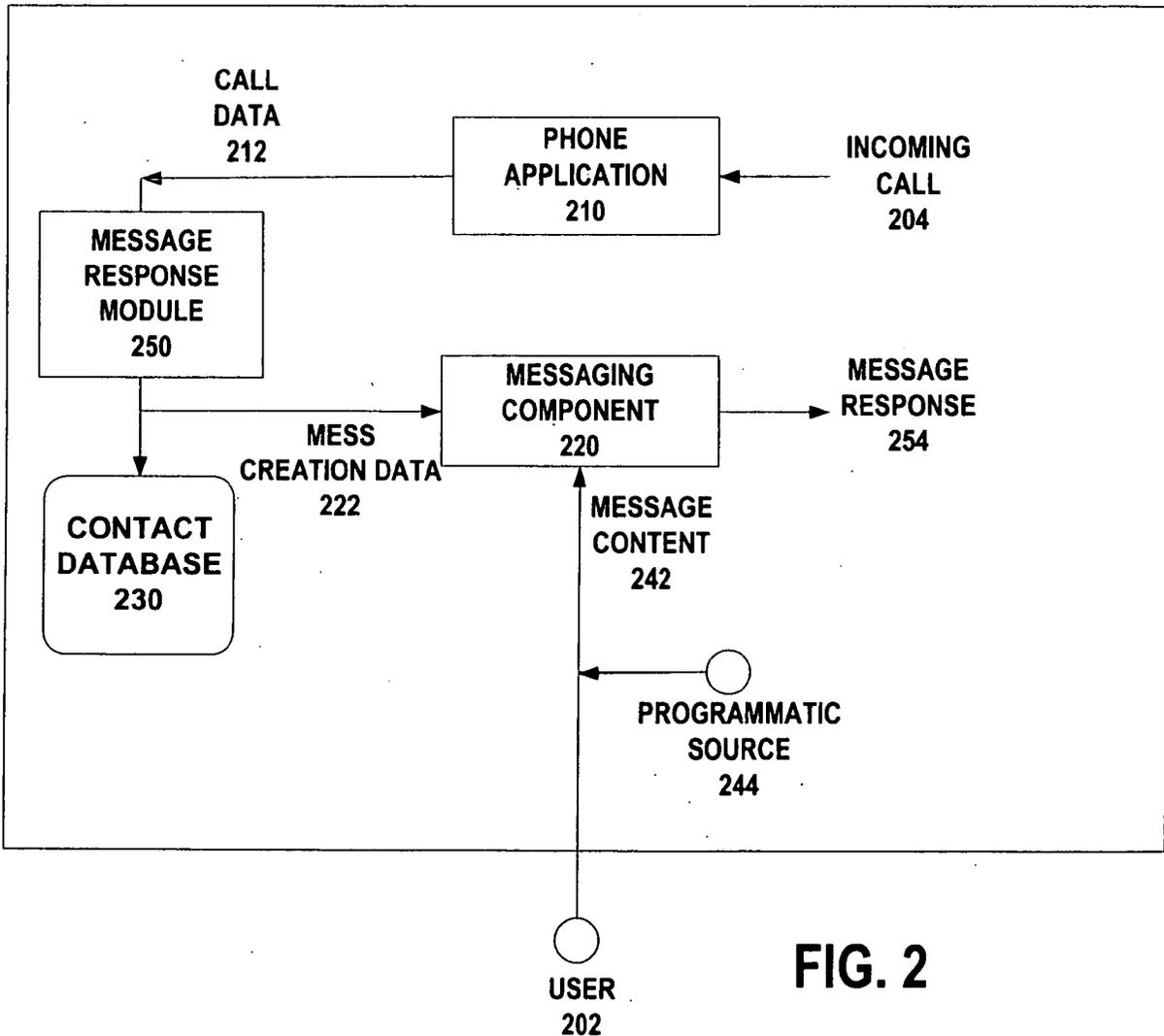


FIG. 2

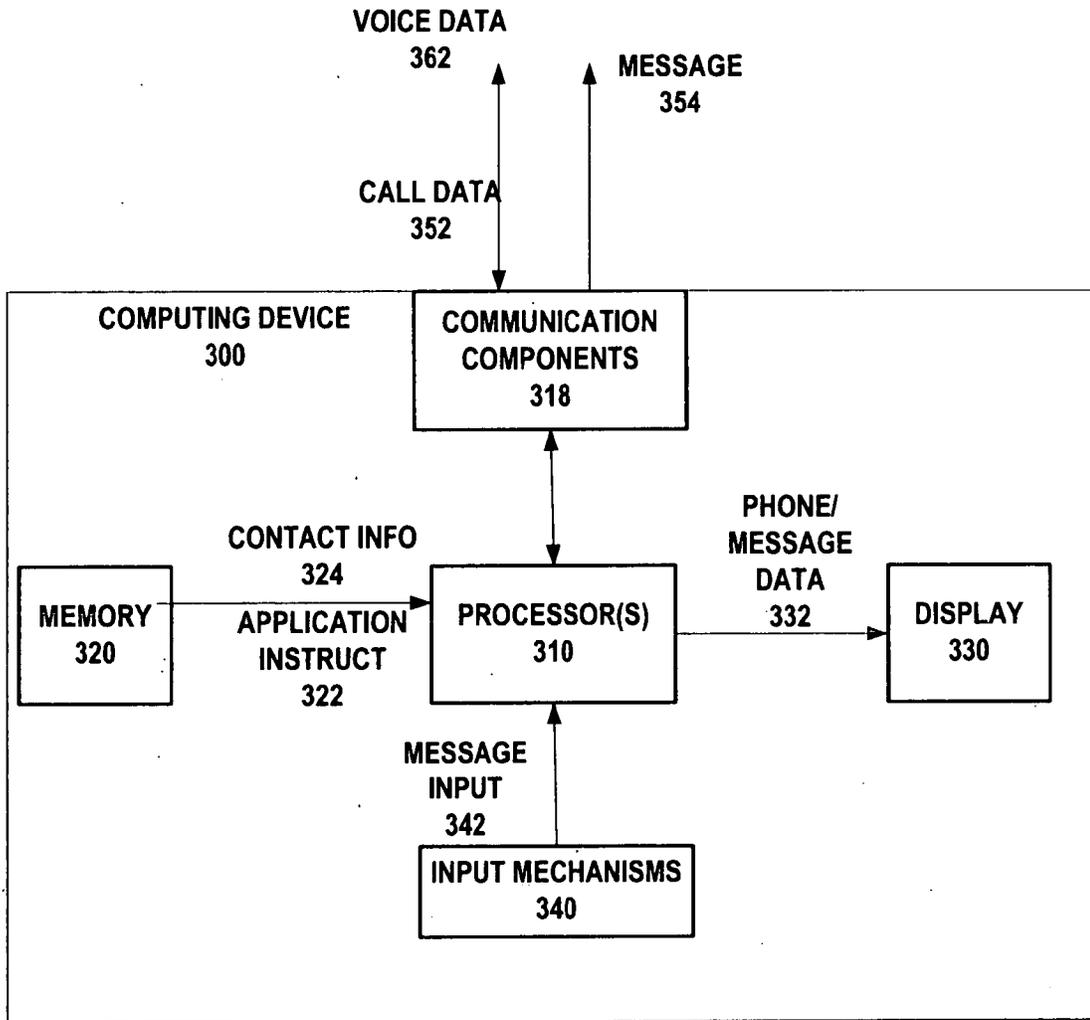


FIG. 3

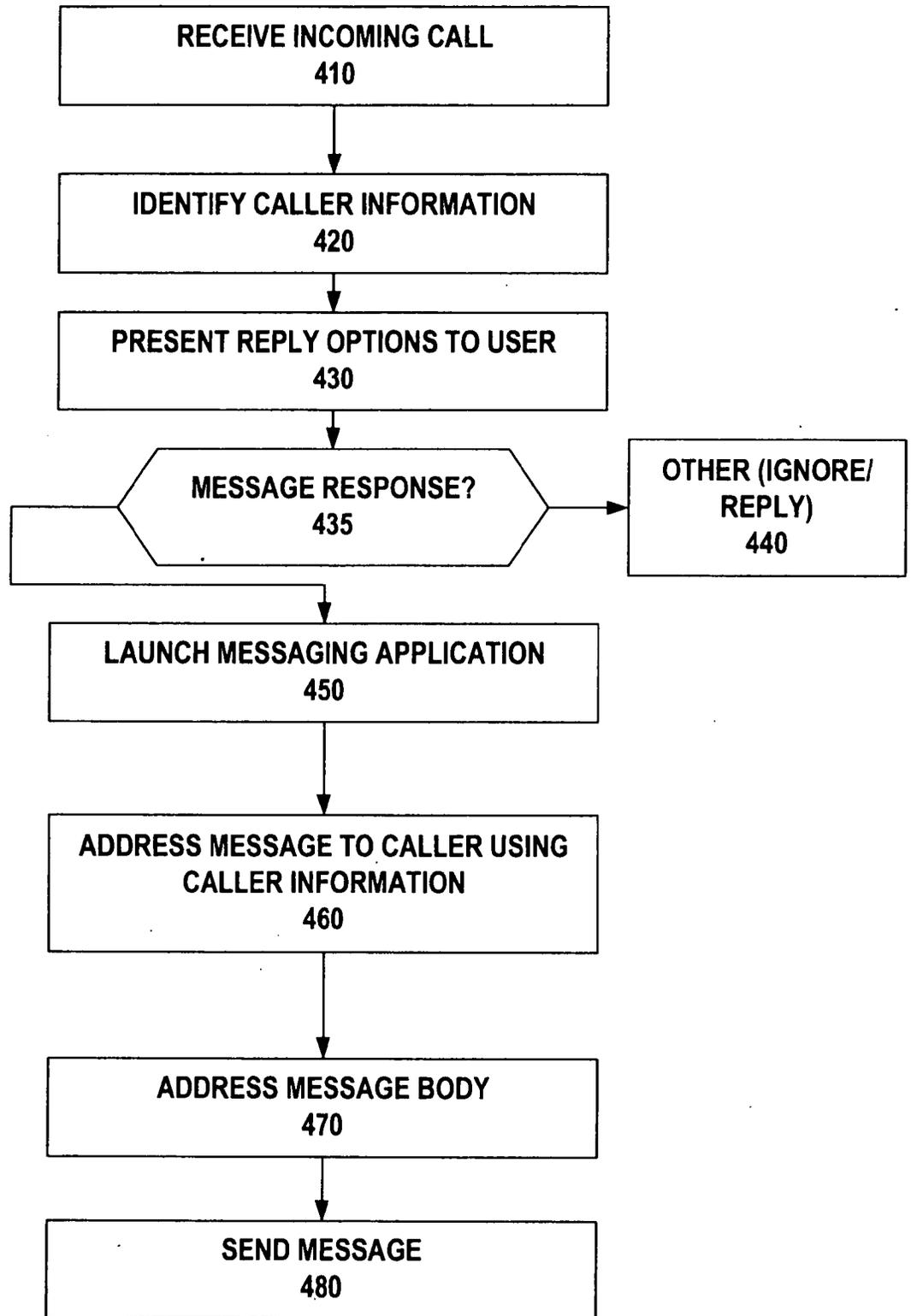


FIG. 4

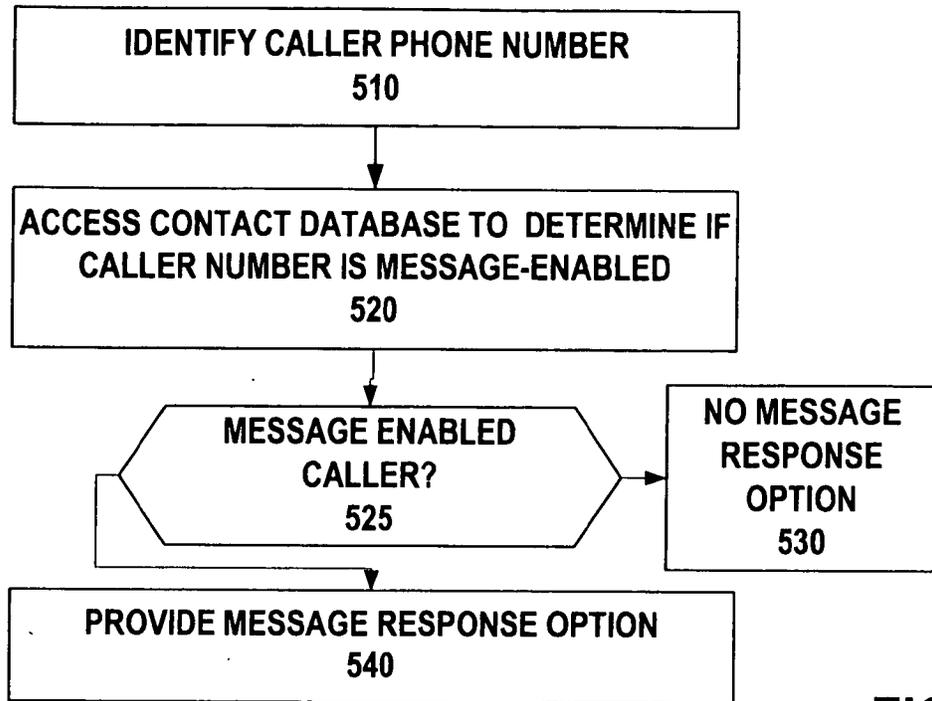


FIG. 5

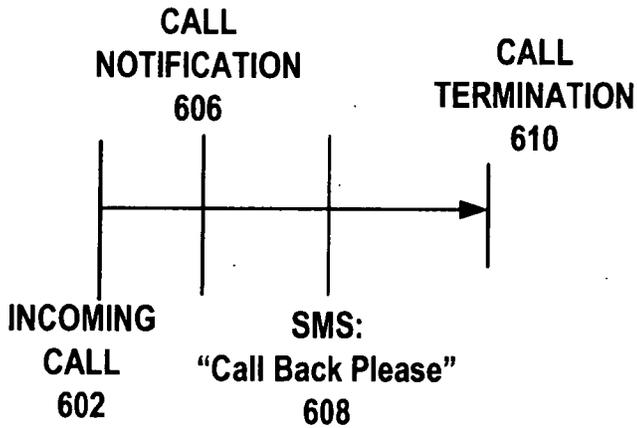


FIG. 6A

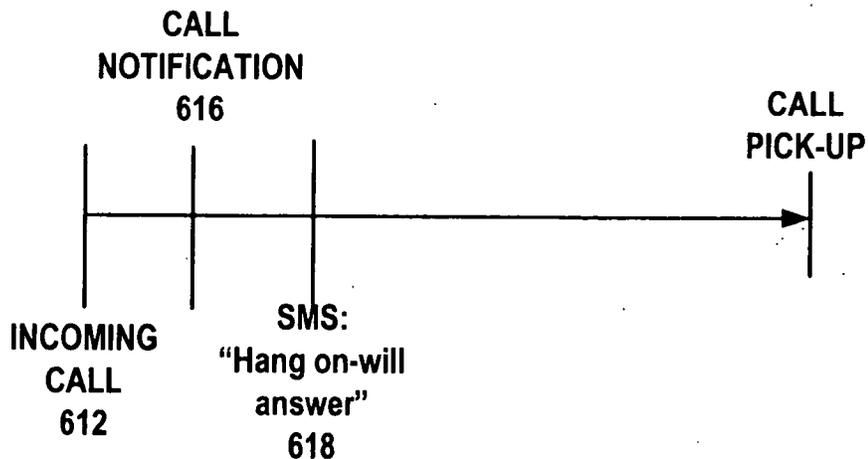


FIG. 6B



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Attorney Docket Number	PALM-0962
First Named Inventor	David CHAMPLIN et al.
<i>COMPLETE IF KNOWN</i>	
Application Number	11/200,511
Filing Date	August 8, 2005
Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned

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(Title of the Invention)

the specification of which

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			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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[Page 1 of 2]

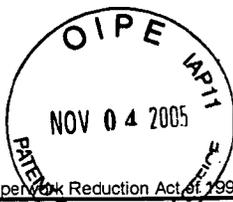
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David		Champlin
Inventor's Signature		Date
<i>David Champlin</i>		10/25/2005
Residence: City	State	Country
Menlo Park	CA	USA
Mailing Address		Citizenship
2225 Sharon Road Apt. #224		US Citizen
City	State	Zip
Menlo Park	CA	94025
NAME OF SECOND INVENTOR:		<input type="checkbox"/> A petition has been filed for this unsigned inventor
Given Name (first and middle [if any])		Family Name or Surname
Srikiran		Prasad
Inventor's Signature		Date
Residence: City		State
Cupertino	CA	USA
Mailing Address		Citizenship
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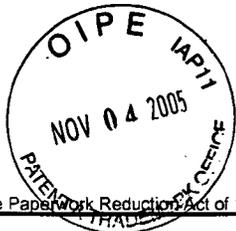
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Lang		Chen	
Inventor's Signature			Date
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2537 Scenic Avenue Mailing Address			
Oakland City	CA State	94602 Zip	USA Country
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
Rajan		Ranga	
Inventor's Signature			Date
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915 Bautista Court Mailing Address			
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Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
Robert		Haitani	
Inventor's Signature			Date
Menlo Park Residence: City	CA State	USA Country	US Citizen Citizenship
2315 Crest Lane Mailing Address			
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	First Named Inventor	David CHAMPLIN et al.
	<i>COMPLETE IF KNOWN</i>	
	Application Number	11/200,511
	Filing Date	August 8, 2005
	Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned	

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Each inventor's residence, mailing address, and citizenship are as stated below next to their name.

I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

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(Title of the Invention)

the specification of which

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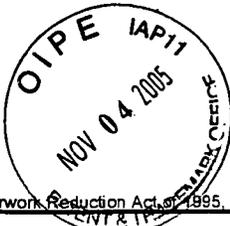
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NAME OF SOLE OR FIRST INVENTOR:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle [if any])		Family Name or Surname	
David		Champlin	
Inventor's Signature			Date
Residence: City	State	Country	Citizenship
Menlo Park	CA	USA	US Citizen
Mailing Address 2225 Sharon Road Apt. #224			
City	State	Zip	Country
Menlo Park	CA	94025	USA
NAME OF SECOND INVENTOR:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle [if any])		Family Name or Surname	
Srikiran		Prasad	
Inventor's Signature			Date
			10/26/05
Residence: City	State	Country	Citizenship
Cupertino	CA	USA	US Citizen
Mailing Address 5600 Stevens Creek Blvd. #108			
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Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
Lang		Chen	
Inventor's Signature <i>[Signature]</i>			Date <i>11/12/05</i>
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Rajan		Ranga	
Inventor's Signature			Date
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Robert		Haitani	
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[Page 1 of 2]

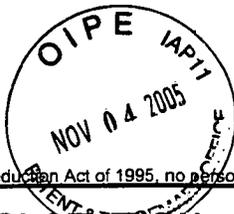
This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance completing the form, call 1-800-PTO-9199 and select option 2.

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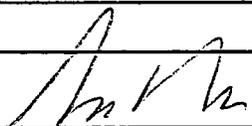
DECLARATION — Utility or Design Patent Application

Direct all correspondence to:		<input checked="" type="checkbox"/> The address associated with Customer Number:	30554	OR	<input type="checkbox"/> Correspondence address below
Name					
Address					
City		State		ZIP	
Country		Telephone		Email	
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.					
NAME OF SOLE OR FIRST INVENTOR:			<input type="checkbox"/> A petition has been filed for this unsigned inventor		
Given Name (first and middle [if any])			Family Name or Surname		
David			Champlin		
Inventor's Signature				Date	
Residence: City		State	Country	Citizenship	
Menlo Park		CA	USA	US Citizen	
Mailing Address					
2225 Sharon Road Apt. #224					
City		State		Zip	Country
Menlo Park		CA		94025	USA
NAME OF SECOND INVENTOR:			<input type="checkbox"/> A petition has been filed for this unsigned inventor		
Given Name (first and middle [if any])			Family Name or Surname		
Srikiran			Prasad		
Inventor's Signature				Date	
Residence: City		State	Country	Citizenship	
Cupertino		CA	USA	US Citizen	
Mailing Address					
5600 Stevens Creek Blvd. #108					
City		State		Zip	Country
Cupertino		CA		95014	USA
<input checked="" type="checkbox"/> Additional inventors or a legal representative are being named on the 1 supplemental sheet(s) PTO/SB/02A or 02LR attached hereto.					



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DECLARATION **ADDITIONAL INVENTOR(S)**
Supplemental Sheet Page 1 of 1

Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
Lang		Chen	
Inventor's Signature		Date	
Oakland Residence: City	CA State	USA Country	US Citizen Citizenship
2537 Scenic Avenue Mailing Address			
Oakland City	CA State	94602 Zip	USA Country
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
Rajan		Ranga	
Inventor's Signature 		Date 10/19/2005	
Palo Alto Residence: City	CA State	USA Country	US Citizen Citizenship
915 Bautista Court Mailing Address			
Palo Alto City	CA State	94303 Zip	USA Country
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
Robert		Haitani	
Inventor's Signature		Date	
Menlo Park Residence: City	CA State	USA Country	US Citizen Citizenship
2315 Crest Lane Mailing Address			
Menlo Park City	CA State	94025 Zip	USA Country

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If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



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DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63) <input type="checkbox"/> Declaration Submitted With Initial Filing OR <input checked="" type="checkbox"/> Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16 (e)) required)	Attorney Docket Number	PALM-0962
	First Named Inventor	David CHAMPLIN et al.
	<i>COMPLETE IF KNOWN</i>	
	Application Number	11/200,511
	Filing Date	August 8, 2005
	Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned	

I hereby declare that:

Each inventor's residence, mailing address, and citizenship are as stated below next to their name.

I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Method and Device for Enabling Message Responses to Incoming Phone Calls

(Title of the Invention)

the specification of which

is attached hereto

OR

was filed on (MM/DD/YYYY) 08/08/2005 as United States Application Number or PCT International Application Number 11/200,511 and was amended on (MM/DD/YYYY) (if applicable).

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

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

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

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				YES	NO
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

[Page 1 of 2]

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DECLARATION — Utility or Design Patent Application

Direct all correspondence to:	<input checked="" type="checkbox"/> The address associated with Customer Number:	<input type="checkbox"/> OR	<input type="checkbox"/> Correspondence address below
		30554	
Name			
Address			
City		State	ZIP
Country	Telephone		Email
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NAME OF SOLE OR FIRST INVENTOR:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle [if any])		Family Name or Surname	
David		Champlin	
Inventor's Signature			Date
Residence: City	State	Country	Citizenship
Menlo Park	CA	USA	US Citizen
Mailing Address 2225 Sharon Road Apt. #224			
City	State	Zip	Country
Menlo Park	CA	94025	USA
NAME OF SECOND INVENTOR:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle [if any])		Family Name or Surname	
Srikiran		Prasad	
Inventor's Signature			Date
Residence: City	State	Country	Citizenship
Cupertino	CA	USA	US Citizen
Mailing Address 5600 Stevens Creek Blvd. #108			
City	State	Zip	Country
Cupertino	CA	95014	USA
<input checked="" type="checkbox"/> Additional inventors or a legal representative are being named on the 1 supplemental sheet(s) PTO/SB/02A or 02LR attached hereto.			



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DECLARATION	ADDITIONAL INVENTOR(S) Supplemental Sheet
	Page 1 of 1

Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
Lang		Chen	
Inventor's Signature		Date	
Oakland Residence: City	CA State	USA Country	US Citizen Citizenship
2537 Scenic Avenue Mailing Address			
Oakland City	CA State	94602 Zip	USA Country
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
Rajan		Ranga	
Inventor's Signature		Date	
Palo Alto Residence: City	CA State	USA Country	US Citizen Citizenship
915 Bautista Court Mailing Address			
Palo Alto City	CA State	94303 Zip	USA Country
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
Robert		Haitani	
Inventor's Signature		Date	
<i>Robert Haitani</i>		10/25/05	
Menlo Park Residence: City	CA State	USA Country	US Citizen Citizenship
2315 Crest Lane Mailing Address			
Menlo Park City	CA State	94025 Zip	USA Country

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

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POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

I hereby appoint:

Practitioners associated with the Customer Number:

22879

OR

Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to:

The address associated with Customer Number:

22879

OR

<input type="checkbox"/> Firm or Individual Name			
Address			
City	State	Zip	
Country			
Telephone	Email		

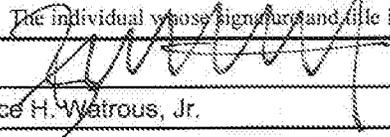
Assignee Name and Address:

Hewlett-Packard Development Company, L.P.
 11445 Compaq Center Drive West
 Houston, TX 77070

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee.

Signature		Date	1/12/11
Name	Bruce H. Weirous, Jr.	Telephone	(650) 857-4973
Title	Manager, HPQ Holdings, LLC, General Partner		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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.

STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Hewlett-Packard Development Company, L.P.

Application No./Patent No.: 12/901,376 Filed/Issue Date: 10/8/2010

Titled: METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS

Hewlett-Packard Development Company, L.P., a Limited Partnership
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

- 1. the assignee of the entire right, title, and interest in;
- 2. an assignee of less than the entire right, title, and interest in
(The extent (by percentage) of its ownership interest is _____ %); or
- 3. the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)

the patent application/patent identified above, by virtue of either:

A. An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy therefore is attached.

OR

B. A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: David Champlin et al. To: PALM, INC.

The document was recorded in the United States Patent and Trademark Office at
Reel 017355, Frame 0334, or for which a copy thereof is attached.

2. From: PALM, INC. To: Hewlett-Packard Development Company, L.P.

The document was recorded in the United States Patent and Trademark Office at
Reel 025204, Frame 0809, or for which a copy thereof is attached.

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

Additional documents in the chain of title are listed on a supplemental sheet(s).

As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Ted McCullough/
Signature

3/17/11
Date

Theodore. C. McCullough
Printed or Typed Name

Senior IP Counsel
Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Electronic Acknowledgement Receipt

EFS ID:	13691316
Application Number:	13607419
International Application Number:	
Confirmation Number:	8864
Title of Invention:	METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS
First Named Inventor/Applicant Name:	David CHAMPLIN
Customer Number:	22879
Filer:	Hyonje Choi/Drew Herndon
Filer Authorized By:	Hyonje Choi
Attorney Docket Number:	83068177
Receipt Date:	07-SEP-2012
Filing Date:	
Time Stamp:	19:12:32
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal of New Application	PALM_P0962C2_Continuation_Transmittal_AF.pdf	25738 47ff1e3aac4f1f0e7dc2d8b78f27490ab7d433d3	no	2

Warnings:

Information:

2		PALM_P0962C2_Application_A F.pdf	116169 6865960752303e9d637b69858857b3ef3d7 ec598	yes	30
Multipart Description/PDF files in .zip description					
		Document Description	Start	End	
		Specification	1	25	
		Claims	26	29	
		Abstract	30	30	
Warnings:					
Information:					
3	Drawings-only black and white line drawings	PALM_P0962C2_Figures_AF. pdf	253927 7481ee95b918c9362a95cc3342d840279db 875d8	no	4
Warnings:					
Information:					
4	Oath or Declaration filed	PALM_P0962C2_Declaration_fr om_parent_AF.pdf	2311932 e0b30fefc754f6b5af2a3b419c1649ddf92e7 df1	no	16
Warnings:					
Information:					
5	Power of Attorney	PALM_P0962C2_POA_and_3-7 3b_AF.pdf	398344 b633ec369032afe2d1c6c5b84563db0793d 85fc5	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			3106110		

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Complete if Known		
			Application Number	13/607,419	
			Filing Date	September 07, 2012	
			First Named Inventor	David Champlin	
			Art Unit	Unknown	
			Examiner Name	Not Yet Assigned	
Sheet	1	Of	3	Attorney Docket Number	83068177

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (# Known)			
		US 2001/00038226	06-14-2001	Iwata	
		US-2002/0067714 A1	06-06-2002	Crain et al.	
		US 2002/0187794 A1	12-12-2002	Fostick et al.	
		US-2003/0218975 A1	11-27-2003	Niizato et al.	
		US 2004/0203794 A1	10-14-2004	Brown et al.	
		US-2004/0230494 A1	11-18-2004	Lotvin et al.	
		US-2005/0201533 A1	09-15-2005	Emam et al.	
		US-2005/0216949 A1	09-29-2005	Candelora et al.	
		US-2005/0227740 A1	10-13-2005	Orbach	
		US-2006/0015644 A1	01-19-2006	Cernohous et al.	
		US-2006/0020993 A1	01-26-2006	Hannum et al.	
		US-2006/0041470 A1	02-23-2006	Fiho et al.	
		US-2006/0215829 A1	09-28-2006	Schwartz	
		US-2006/0270419	11-30-2006	Crowley et al.	
		US-2007/0003027 A1	01-04-2007	Brandt	
		US-2007/0036286 A1	02-15-2007	Champlin et al.	
		US-2007/0081657 A1	04-12-2007	Turner	
		US-2007-0121607 A1	05-31-2007	Gao	
		US-2007/0143429 A1	06-21-2007	Venkataraman et al.	
		US-2007/0258567 A1	11-08-2007	Koch	
		US-2007/0287411	12-13-2007	Kim et al.	
		US-2008/0253549 A1	10-16-2008	Loveland	
		US-2009/0005023 A1	01-01-2009	Toorn	
		US-2009/0061833 A1	03-05-2009	Ho et al.	
		US-2011/0028168 A1	02-03-2011	Champlin et al.	
		US-4,922,526	05-01-1990	Morganstein et al.	
		US-4,996,704	02-26-1991	Brunson	
		US-5,396,544	03-07-1995	Gilbert et al.	
		US-5,581,604 A	12-03-1996	Robinson et al.	
		US-5,585,749	12-17-1996	Pace et al.	
		US-5,724,408	03-03-1998	Morganstein et al.	
		US-5,748,100	05-05-1998	Gutman et al.	
		US-5,751,707	05-12-1998	Voit et al.	
		US-5,799,066 A	08-25-1998	Joyce et al.	
		US-5,805,978	09-08-1998	Souissi et al.	
		US-5,844,967	12-01-1998	Lee	
		US-5,884,193	03-16-1999	Kaplan	
		US-5,894,505	04-13-1999	Koyama	
		US-5,930,700 A	07-27-1999	Pepper et al.	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

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

¹ Applicant's unique citation designation number (optional). ² See Kind Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two letter code (WIPO Standard St. 3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard St. 16 if possible. ⁶ Applicant is to place a check mark here if English language translation is attached.

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Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Complete if Known		
			Application Number	13/607,419	
			Filing Date	September 07, 2012	
			First Named Inventor	David Champlin	
			Art Unit	Unknown	
			Examiner Name	Not Yet Assigned	
Sheet	2	Of	3	Attorney Docket Number	83068177

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Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (# known)			
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Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kind Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard St.16 if possible. ⁶ Applicant is to place a check mark here if English language translation is attached.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Complete if Known			
			Application Number	13/607,419		
			Filing Date	September 07, 2012		
			First Named Inventor	David Champlin		
			Art Unit	Unknown		
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U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
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		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
		EP-0611239 A1	08-17-1994	IBM Corporation		
		KR10-2006-009313	08-24-2006	Pantech Co., Ltd		
		KR10-2007-007836	07-31-2007	LG Electronics Inc.		

NON PATENT LITERATURE DOCUMENTS						
Examiner Initials*	Cite No. ¹	Include name of author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.				T ⁶
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Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kind Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard St.16 if possible. ⁶ Applicant is to place a check mark here if English language translation is attached.



EUROPEAN PATENT APPLICATION

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Method and system for automatically updating telephone response mechanisms.

A telephone response mechanism provides a response to a caller and an opportunity for the caller to leave a message. The telephone response mechanism is utilized when a telephone call arrives with no one to answer it.

The response is made up of three portions. A first portion is automatically generated by a data processing system based upon the time of day, e.g. "Good morning".

A second portion is a recorded message identifying the person being called, e.g. "This is John Doe. I am not currently available." The third portion is created from information obtained from a database on the data processing system, such as a calendar database or a personnel database. The third portion explains to the caller where the user (the person being called) is or when the user will return. The third portion is automatically updated whenever the user updates the database. A lockout feature is provided to deny the telephone response mechanism access to selected entries in the database.

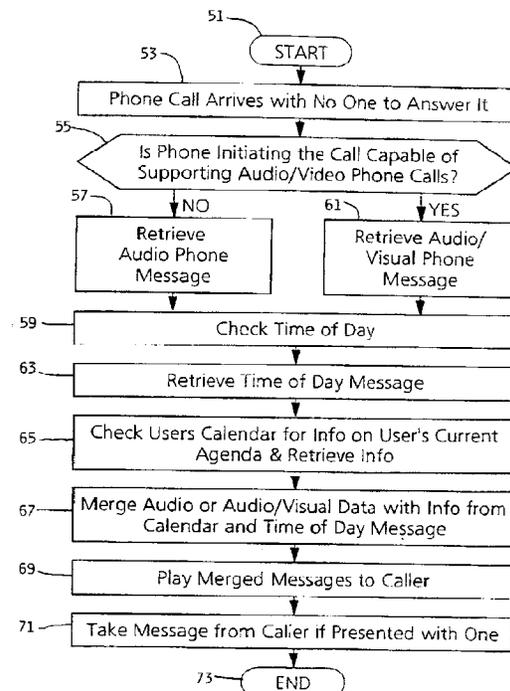


Fig. 2

Jouve, 18, rue Saint-Denis, 75001 PARIS

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Field Of The Invention

The present invention relates to method and system that automatically provide a response to unanswered telephone calls, such as with electronic phone mail systems.

Background Of The Invention

Electronic phone mail systems provide answering capabilities for incoming telephone calls. An incoming telephone call triggers a response mechanism in the electronic phone mail system that provides a prerecorded response to the caller and that provides an opportunity for the caller to leave a message for the phone mail user who is being called.

The prerecorded response typically identifies the person being called and provides other information to elicit the caller to leave a message. For example, the system generated response could say: "Hello. John Doe is not currently available. Please leave a message after you hear the tone." Alternatively, the user can record a more personal message in the user's own voice. For example, the response could say: "Hello. This is John Doe. I am not currently available. Please leave a message after you hear the tone."

Frequently, a user desires to provide more information to a caller. The message recorded by the user can provide limited information on the whereabouts of the user, such as: "Hello. This is John Doe. I am in the office today, but either on the telephone or away from my desk. Please leave a message after you hear the tone." However, with this type of response providing a caller with information on the user, effective phone mail use requires the user to update the phone mail response each day. Updating requires the user to dial in a series of codes or passwords. This process takes several minutes each day. Many users perceive this as a bother and provide callers only with identifying information. Furthermore, prior art telephone response mechanisms do not inform the caller when the user will be available.

Therefore, what is needed is a phone mail response mechanism that would provide useful information to a caller, and that would automatically update this information without the user.

Summary of the Invention

It is an object of the present invention to provide a telephone response mechanism that provides information to a caller, such as when the caller will be available.

It is a further object of the present invention to provide a method and system for automatically updating the information provided by a telephone response mechanism.

The method of the present invention automatically updates a telephone response mechanism. The telephone response mechanism provides a response to a caller and an opportunity for the caller to leave a message. The method includes retrieving a first response portion. The method also retrieves information from a preselected database on a data processing system and creates a second response portion from the information. Then, the method plays the first response portion and the second response portion to the caller.

In one aspect of the present invention, the step of retrieving a first response portion further includes the step of retrieving a prerecorded message. In another aspect, the step of retrieving information from the preselected database further includes the step of retrieving the information from a calendar of a user who is being called. In still another aspect of the present invention, the method further includes the step of determining if access to the information on the database by the telephone response mechanism is authorized and if authorized, then the information is retrieved from the database.

The system of the present invention is for automatically updating a telephone response mechanism. The system includes means for retrieving a first response portion. There is also means for retrieving information from a preselected database on a data processing system and for creating a second response portion from the information. The system further includes means for playing the first response portion and the second response portion to the caller.

With the present invention, a caller is provided with information that assists the caller in communicating with the user. By selecting the database that is accessed by the telephone response mechanism, the user can provide a caller with information on the whereabouts of the user, when the user is likely to return, and even telephone numbers where the user can be currently reached.

The telephone response mechanism is automatically updated whenever the database is updated. This simplifies the use of the telephone response mechanism by the user, encouraging its use. The user need only be concerned with providing or denying access to specific entries to the telephone response mechanism.

The present invention combines recorded messages (recorded by either a data processing system or a user) with system generated data such as time of day and also with information retrieved from databases. A

single response is played to a caller by merging the various portions together.

Brief Description Of The Drawings

- 5 Fig. 1 is a schematic diagram of a data processing system on which the present invention can be practiced.
 Fig. 2 is a flow chart showing the method of the present invention, in accordance with a preferred embodiment.

Description of the Preferred Embodiment

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In Fig. 1, there is shown a schematic diagram of a data processing system 11, upon which the present invention can be practiced. The data processing system 11 includes plural individual computers 13 which are connected together in a local area network (LAN) 15. Each computer 13 includes a user interface, which has a display screen 17 and a keyboard 19. Each computer 13 may also be coupled to a storage device 21 and to a printer or output device 23. One or more of such storage devices 21 may be utilized, in accordance with the present invention, to store applications or resource objects which may be periodically accessed by any user within the data processing system 11.

The data processing system 11 may also include a mainframe computer 25 that is coupled to one of the computers 13 by a communication link 27. The mainframe computer 25 may also be coupled to a storage device 29 which may serve as a remote storage for the computers.

A first telephone 31 is connected to the data processing system 11. The first telephone 31 is also connected to a second telephone 33 over a conventional telephone line 35. The telephone line may be of the plain old telephone type (POTS) which utilizes audio carrier frequencies, or it may be of the multiplexed type which utilizes a digital carrier such as T-1. The telephones 31, 33 may support, in addition to audio capabilities, visual capabilities.

The data processing system 11 provides a telephone response mechanism, or phone mail system, for the telephone 31. The telephone response mechanism is automatically activated upon the occurrence of the first telephone 31 receiving a call from another telephone such as the second telephone 33. When activated, the telephone response mechanism provides a message or response to the caller. This response generally contains a greeting and identifies the user who has been called. After playing the response to the caller, the telephone response mechanism provides an opportunity for the caller to leave a message for the user.

With the present invention, the response provided to the caller is made up of several portions, which the user may configure. A first portion of the response provides a greeting based upon the time of day. A second portion of the response identifies the user to the caller. A third portion of the response provides information to the caller, which information is drawn from a data base on the data processing system 11. All of the portions are merged together to provide the response.

The first portion is automatically provided by the data processing system, based upon the time of day. The data processing system 11 has a clock which allows the data processing system to determine the time of day. Once the time of day is known, then the data processing system generates the first portion of the response. For example, in the morning, the first portion would be "Good morning". In the afternoon, the first portion would be "Good after-noon".

The second portion of the response identifies the user. Many phone mail systems have a default message for each user. If a user does nothing, then the second portion could be: "John Doe is not currently available." The default second portion is generated by the data processing system in a common voice for all users.

Alternatively, the user can record a personal message which is played in the user's voice instead of the default for the second portion. To record a personal second portion, the user accesses the phone mail system through either the telephone 31 or through one of the computers 13. The user then records a personal phone mail greeting stub. For example, this could be, "This is John Doe. I am not currently available."

The third portion of the response is automatically drawn from a database on the data processing system 11. The user provides the information to the telephone response mechanism whenever the database is updated. For example, the telephone response mechanism can utilize the calendar of the user to provide a caller information on when the user will be available, or information on where the user is.

The user might make the following typical entries into the calendar database for a particular day:

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9-10am, meeting with boss, room 256,	phone access = YES
12-1pm, lunch,	phone access = YES
2-3pm, new product meeting, room 211,	phone access = NO.

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As the user makes entries into the calendar, the user determines if the information in the individual entries can be supplied to a caller. This is done by setting phone access to either YES or NO. A YES setting permits the telephone response mechanism to access and provide the information to a caller. A NO setting precludes the telephone response mechanism from accessing and providing the information to a caller.

The response is typically audio. However, the response can include visual messages if the telephone equipment in use supports visual capabilities.

Referring now to Fig. 2, the method for answering a telephone call to the user's telephone 31 will be described. In the flow chart of Fig. 2, the following graphical conventions are observed: a rectangle for either a process or function and a diamond (step 55 is a stretched diamond) for a decision. These conventions are well understood by programmers skilled in the art of data processing and user interfaces and the flow charts are sufficient to enable a programmer skilled in the art to write code in any suitable computer programming language, such as BASIC, PASCAL or C for a computer such as the IBM Personal System / 2 (PS/2) family of computers which supports these languages.

The method starts, step 51. A phone call arrives at the telephone 31 with no one to answer it, step 53. The method proceeds to step 55, wherein the method determines if the phone initiating the call is capable of supporting audio/visual phone calls. If NO, then the method proceeds to step 57 to retrieve the audio phone message. This is the second portion of the response, which in the example is "This is John Doe. I am not currently available." The method then proceeds to step 59. If the result of step 55 is YES, then the method proceeds to step 61 to retrieve an audio/visual phone message. Then method then proceeds to step 59.

In step 59, the method checks the time of day. In step 63, the method retrieves the time of day message, which is either "good morning", "good afternoon" or some other time of day greeting.

In step 65, the method checks the specified database such as the user's calendar for information on the user's current agenda and retrieves the information, if permitted, to provide the third portion of the message. The time of day is used to determine which entry from the calendar is utilized. If the time of day is 9:30am, then the entry from 9-10am is utilized to create the third portion. If Phone Access = YES, then the calendar entry is utilized to make up the third portion of the response. If Phone Access = NO, then the calendar entry is not utilized. The third portion instead asks the caller to leave a message.

The first, second and third portions are all merged together in the respective order in step 67. Then, the merged message portions are played to the caller, step 69. For example, if a call is made at 9:30am, the response would be:

"Good morning!" (This is the first portion of the response obtained from the time of day.) "This is John Doe. I am not currently available." (This is the second portion obtained from the recording by the user.) "I am in a meeting that will end at 10:00am. Please call me then or leave a message now." (This is the third portion which is created from the calendar entry by the data processing system.)

Alternatively, the third portion could provide even more information. For example, "I am in a meeting in room 256 until 10:00am. Please call me there, leave a message or call me later."

If the call is made at 12:30pm, then the response would be:
 "Good afternoon!" (This is the first portion of the response.) "This is John Doe. I am not currently available." (This is the second portion of the response.) "I am at lunch. I will be back at 1:00. Please call me then or leave a message now." (This is the third portion of the response.)

If the call is made at 2:30pm, then the response would be: "Good afternoon!" (This is the first portion of the response.) "This is John Doe. I am not currently available." (This is the second portion of the response.) "Please leave a message after you hear the tone." (This is the third portion of the response.)

The third portion of the response is a default message that is utilized when access to the calendar entry is denied. Likewise, if the call is made at 4:00pm, the response is the same as for a call made at 2:30pm. This is because there is no calendar entry at 4:00pm from which to make the third portion of the response.

Thus, the present invention provides a caller with additional information regarding the user who is being called. This additional information assists the caller in communicating with the user.

The present invention requires only a minimal amount of effort from the user to maintain an updated response. This is because the user need only maintain the database in an updated condition, something that the user is likely to do irregardless of the telephone response mechanism. The present invention automatically updates the response of the telephone response mechanism based upon the data-base. For each entry in the

database, the user can either allow or block access to the entry by the telephone response mechanism.

Although the present invention has been described as providing a response with first, second and third portions, variations in the response are certainly possible. For example, the first portion (e.g. "Good morning") need not be provided at all. Instead, the second portion of the response could include a greeting such as: "Hello. This is John Doe..."

Although the present invention has been described with a calendar as the database that is used to provide the information for a telephone response, other databases can be used as well. For example, a personnel database could be utilized to automatically refer a caller to a user's secretary, associate or supervisor by name and telephone number.

The audio information making up each portion of the response can be generated by the data processing system, using for example, text-to-speech conversions. Alternatively, the user can record the first and second portions. The user can also record a set or library of words or sounds for the data processing to use to generate the third portion, as the information in the third portion is typically varied and wide ranging. For example, to generate the third portion from the information obtained from the calendar database, a standard third portion could be utilized: "I am . I will be back at . Please call me then or leave a message." The first blank is filled with the type of engagement noted on the calendar, e.g. "at a meeting". The second blank is filled with the time that the engagement is scheduled to end, e.g. "10:00am".

The foregoing disclosure and the showings made in the drawings are merely illustrative of the principles of this invention and are not to be interpreted in a limiting sense.

Claims

1. A method of automatically updating a telephone response mechanism, said telephone response mechanism providing a response to a caller and an opportunity for the caller to leave a message, characterized in that it comprises the steps of:
 - a) retrieving a first response portion;
 - b) retrieving information from a preselected data-base on a data processing system and creating a second response portion from said information; and
 - c) playing said first response portion and said second response portion to said caller.
2. The method of claim 1 wherein said step of retrieving a first response portion further comprises the step of retrieving a prerecorded message.
3. The method of claim 1 or 2 wherein said step of retrieving information from said preselected database further comprises the step of retrieving said information from a calendar of a user who is being called, or from a personnel database.
4. The method of claims 1 to 3 further comprising the step of determining if access to said information on said data base by said telephone response mechanism is authorized and if authorized, then retrieving said information from said data base.
5. The method of claim 1 to 4 further comprising the steps of:
 - a) determining the time of day when said caller calls;
 - b) creating a third response portion relating to the time of day; and
 - c) playing said third response portion along with said first and second response portions.
6. A system for automatically updating a telephone response mechanism, said telephone response mechanism providing a response to a caller and an opportunity for the caller to leave a message, said system characterized in that it comprises :
 - a) means for retrieving a first response portion;
 - b) means for retrieving information from a preselected database on a data processing system and creating a second response portion from said information; and
 - c) means for playing said first response portion and said second response portion to said caller.
7. The system of claim 7 wherein said means for retrieving a first response portion further comprises means for retrieving a prerecorded message.
8. The system of claim 6 or 7 wherein said means for retrieving information from said preselected database

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further comprises means for retrieving said information from a calendar of a user who is being called, or from a personnel database.

- 5
- 9.** The system of claims 6 to 8 further comprising means for determining if access to said information on said database by said telephone response mechanism is authorized and if authorized, then for retrieving said information from said database.
- 10.** The system of claims 6 to 9 further comprising:
- 10
- a) means for determining the time of day when said caller calls;
 - b) means for creating a third response portion relating to the time of day; and
 - c) means for playing said third response portion along with said first and second response portions.
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- 35
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- 45
- 50
- 55

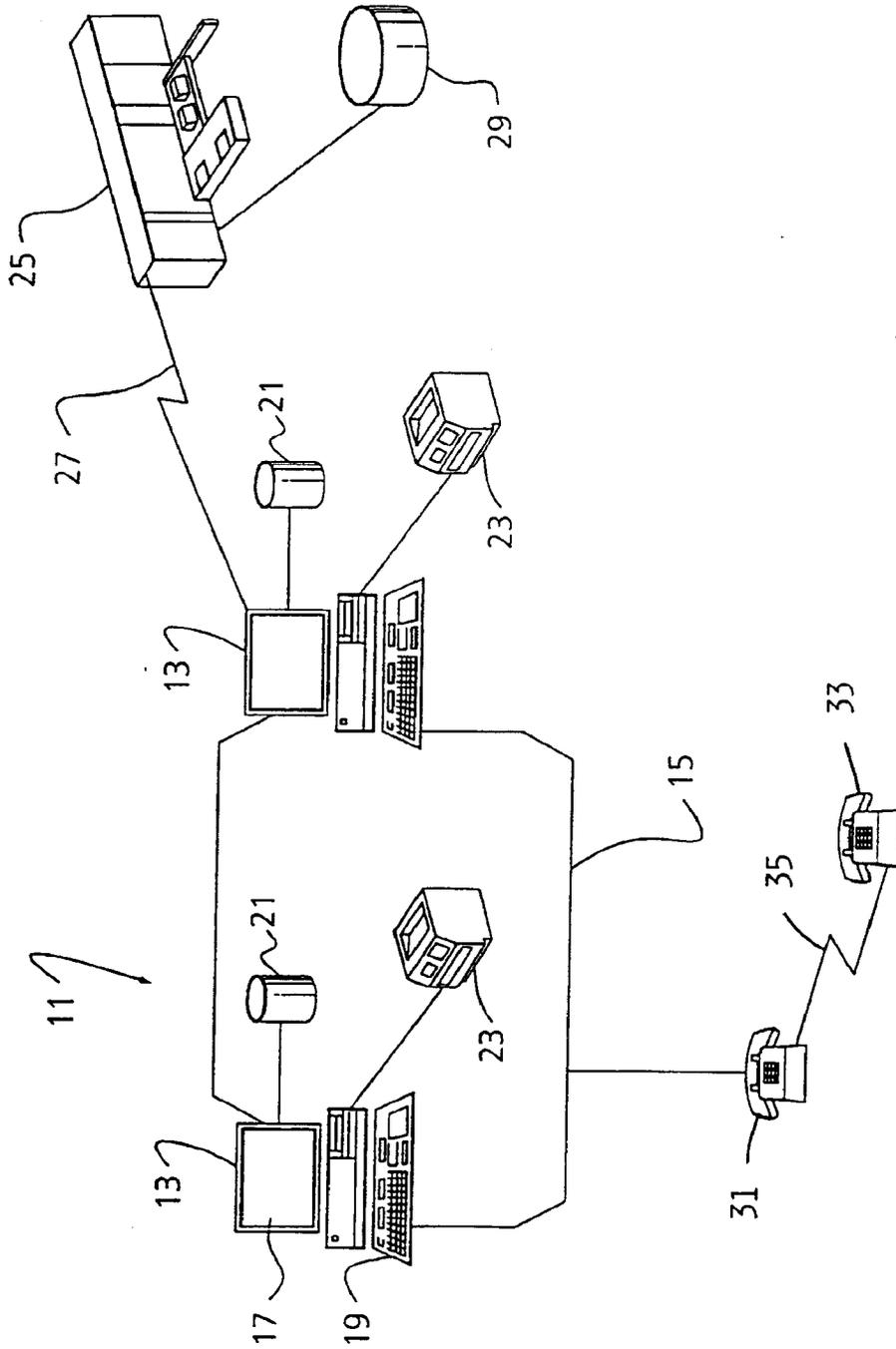


Fig. 1

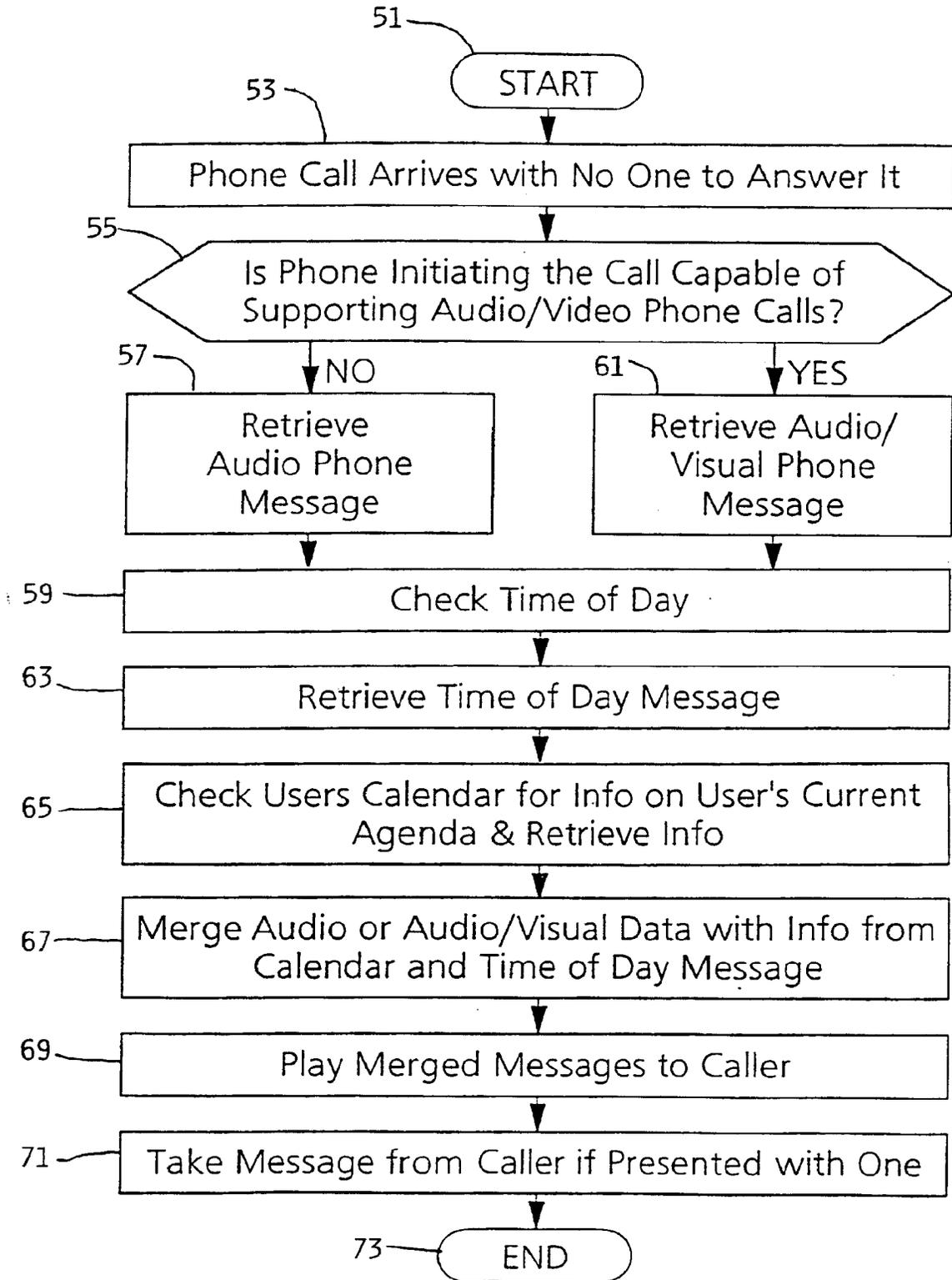


Fig. 2



European Patent Office

EUROPEAN SEARCH REPORT

Application Number

DOCUMENTS CONSIDERED TO BE RELEVANT		EP 94480004.4	
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A	<p><u>US - A - 4 327 251</u> (FOMENKO et al.) * Abstract; column 1, line 6 - column 2, line 20; fig. 1; claim 1 *</p>	1,6	H 04 M 3/00
A	<p><u>DE - A - 3 541 898</u> (GRUNDIG E.M.V.) * Absftract; column 1, line 52 - column 2, line 36; claim 1 *</p>	1,6	
A	<p><u>US - A - 5 036 533</u> (CARTER et. al.) * Abstract; column 1, lines 14-55; fig. 1-3; claim 1 *</p>	1,6	
			<p>TECHNICAL FIELDS SEARCHED (Int. Cl.5)</p> <p>H 04 M</p>
<p>The present search report has been drawn up for all claims</p>			
VIENNA		<p>Date of completion of the search</p> <p>17-05-1994</p>	<p>Examiner</p> <p>BADICS</p>
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p>		<p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document</p>	

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(19) 대한민국특허청(KR)
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(51) Int. Cl.

H04L 12/18

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H04B 7/28

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(72) 발명자	정윤수 서울 관악구 봉천10동 872-10 김성국 서울 강서구 방화2동 방화12단지 1201동 505호
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(54) 이동통신 단말기의 지피에스 기능을 이용한 홈 네트워크 시스템 및 방법

요약

본 발명은 이동통신 단말기의 지피에스 기능을 이용한 홈 네트워크 시스템 및 방법에 관한 것이다.

본 발명은 생활가전, 주방기기, 방범/보안 등 정보가전기기와 안방, 부엌, 거실, 현관 등 집안의 각 공간을 인터넷을 통해 연결하여 상호간에 정보를 전달해 유선전화, 이동통신 단말기 등을 통해서 관리하고 작동제어하는 홈 네트워크 서버를 구비한 네트워크 시스템에 있어서, 지피에스(GPS, Global Positioning System) 기능에 따라 자신의 위치정보를 획득하며, 상기 홈 네트워크 서버가 설치된 특정의 위치를 등록하고 상기 홈 네트워크 서버에서 수행하고자 하는 이벤트를 설정한 후, 상기 획득한 자신의 위치정보에 의해 상기 홈 네트워크 서버로부터 소정의 반경 거리 내에 도달하였음이 확인되면, 상기 이벤트 내용 및 그 실행명령을 나타내는 단문 메시지를 작성하여 전송하는 이동통신 단말기와; 상기 이동통신 단말기와 연동하여 홈 네트워크 서버 및 이동중인 해당 단말기의 위치정보를 전송하는 지피에스 시스템과; 상기 이동통신 단말기의 요청에 따라 단문 메시지를 상기 홈 네트워크 서버로 라우팅하는 단문 메시지 센터를 포함하는 시스템 및 그 방법을 구비하여 구성된다.

따라서, 본 발명은 지피에스 기능(GPS, Global Positioning System)을 제공하는 이동통신 단말기에 있어서, 지피에스 기능을 이용하여 사용자가 홈 네트워크 서버가 구비된 집 근처 소정 반경 내에 도달하였는지 여부를 파악하고, 그에 따라 홈 네트워크 서버로 단문 메시지를 전송하여 사용자가 집에 도착하기 이전에 특정의 이벤트를 미리 실행하게 함으로써, 사용자의 위치에 따라 특정의 이벤트를 자동으로 실행하여 예약 설정에 의한 이벤트 실행에 비해 사용자의 정확한 도착시간을 예측할 수 있어 효율적으로 홈 네트워크를 제어할 수 있고, 인터넷망이나 전력선 모뎀을 이용하지 않고 무선망을 이용하여 자동으로 홈 네트워크 서버를 제어 및 관리할 수 있는 효과가 있다.

도표도

도1

명세서

도면의 간단한 설명

도1은 도1은 본 발명 이동통신 단말기의 지피에스 기능을 이용한 홈 네트워크 시스템을 보인 블록도.
 도2는 본 발명 이동통신 단말기의 지피에스 기능을 이용한 홈 네트워크 방법의 동작과정을 보인 순서도.

도면의 주요 부분에 대한 부호의 설명

- 10 : 이동통신 단말기
- 20 : 이동통신망
- 30 : 지피에스 시스템
- 40 : 지피에스 위성
- 50 : 단문 메시지 센터
- 60 : 인터넷망
- 70 : 홈 네트워크 서버
- 80 : 각종 정보가전기기

발명의 상세한 설명

발명의 목적

발명이 속하는 기술분야 및 그 분야의 종래기술

본 발명은 이동통신 단말기에 관한 것으로, 특히 지피에스 기능(GPS, Global Positioning System)을 제공하는 이동통신 단말기에 있어서, 지피에스 기능을 이용하여 사용자가 홈 네트워크 서버가 구비된 집 근처 소정 반경 내에 도달하였는지 여부를 파악하고, 그에 따라 홈 네트워크 서버로 단문 메시지를 전송하여 사용자가 집에 도착하기 이전에 특정의 이벤트를 미리 실행하게 함으로써, 사용자의 위치에 따라 특정의 이벤트를 자동으로 실행하여 예약 설정에 의한 이벤트 실행에 비해 사용자의 정확한 도착시간을 예측할 수 있어 효율적으로 홈 네트워크를 제어할 수 있고, 인터넷망이나 전력선 모뎀을 이용하지 않고 무선망을 이용하여 자동으로 홈 네트워크 서버를 제어 및 관리할 수 있는 이동통신 단말기의 지피에스 기능을 이용한 홈 네트워크 시스템 및 방법에 관한 것이다.

홈 네트워크(Home Network)란 TV, 냉장고, 에어컨 등 집안의 가전제품과 안방, 부엌, 거실, 현관 등 집안의 각 공간을 인터넷을 통해 연결하여 상호간에 정보를 전달해 유선전화, 이동통신 단말기 등을 통해서도 작동제어가 가능하도록 하는 미래형 가전 시스템을 말하는 것으로, 홈 네트워크는 가정 내의 정보가전기기가 네트워크로 연결돼 기기, 시간, 장소에 구애받지 않고 서비스가 이뤄지는 미래 가정환경을 구현한다.

현재 홈 네트워크 인터페이스 기술은 블루투스, 홈 RF, IrDA 등의 무선기술과 홈 PNA, IEEE1394, PLC, 이더넷 등의 유선기술이 보완과 경쟁관계를 형성하면서 기술 및 컨텐츠가 개발되고 있으며, 이때 각 정보가전기기 간에는 전화선, 동축 케이블, UTP, 무선채널, 전력선 등을 이용하여 네트워크를 구현한다.

예를 들어, 홈 네트워크를 설치하면 방에 앉아서 초인종을 누른 사람이나 세탁 종료 여부 등을 확인 할 수 있는 것은 물론, 유선전화, PDA(Personal Digital Assistants)나 이동통신 단말기를 이용하여 집에서 리모콘으로 TV를 조정하듯 외부에서 자신의 집을 모니터링 할 수 있고 퇴근 전에 사무실에서 집안 온도를 조정하고 바깥에서 신호를 통해 밥을 짓거나 건강 검진도 자동으로 받아 볼 수 있게 된다.

그런데, 종래 홈 네트워크 상에서 사용자가 유선전화, PDA, 이동통신 단말기 등을 이용하여 홈 네트워크를 제어하는 서버에 접속한 경우에만, 사용자의 명령에 따라 각종 정보가전기기가 동작하도록 설정되어 있어, 사용자가 집 근처에 도달하였을 경우 사용자가 서버에 접속하는 것을 잊거나 접속하지 않더라도 사용자가 지정한 명령에 따라 동작하지 않아 불편한 문제점이 있었다.

발명이 이루고자 하는 기술적 과제

따라서, 본 발명은 상기와 같은 종래의 문제점을 해결하기 위하여 제안한 것으로, 지피에스 기능(GPS, Global Positioning System)을 제공하는 이동통신 단말기에 있어서, 지피에스 기능을 이용하여 사용자가 홈 네트워크 서버가 구비된 집 근처 소정 반경 내에 도달하였는지 여부를 파악하고, 그에 따라 홈 네트워크 서버로 단문 메시지를 전송하여 사용자가 집에 도착하기 이전에 특정의 이벤트를 미리 실행하도록 하는 시스템 및 방법을 제공함에 그 목적이 있다.

발명의 구성 및 작동

이와 같은 목적을 달성하기 위한 본 발명은, 생활가전, 주방기기, 방범/보안 등 정보가전기기와 안방, 부엌, 거실, 현관 등 집안의 각 공간을 인터넷을 통해 연결하여 상호간에 정보를 전달해 유선전화, 이동통신 단말기 등을 통해서 관리하고 작동제어하는 홈 네트워크 서버를 구비한 네트워크 시스템에 있어서, 지피에스 기능에 따라 자신의 위치정보를 획득하며, 상기 홈 네트워크 서버가 설치된 특정의 위치를 등록하고 상기 홈 네트워크 서버에서 수행하고자 하는 이벤트를 설정한 후, 상기 획득한 자신의 위치정보에 의해 상기 홈 네트워크 서버로부터 소정의 반경 거리 내에 도달하였음이 확인되면, 상기 이벤트 내용 및 그 실행명령을 나타내는 단문 메시지를 작성하여 전송하는 이동통신 단말기와; 상기 이동통신 단말기와 연동하여 홈 네트워크 서버 및 이동통신망 해당 단말기의 위치정보를 전송하는 지피에스 시스템과; 상기 이동통신 단말기의 요청에 따라 단문 메시지를 상기 홈 네트워크 서버로 라우팅하는 단문 메시지 센터를 포함하는 것을 특징으로 한다.

또한, 본 발명은 이동통신 단말기를 이용하여 홈 네트워크 서버가 설치된 특정 위치를 등록하고 해당 홈 네트워크 서버에서 수행하고자 하는 이벤트를 설정하는 단계와; 이동통신 단말기에서 현재 자신의 위치를

파악하는 단계와; 상기 파악 결과, 이동통신 단말기가 상기 홈 네트워크 서버로부터 소정의 반경 거리 내에 도달하면, 홈 네트워크 서버로 이벤트 내용을 포함하는 단문 메시지를 전송하여 해당 이벤트를 실행하는 단계를 포함하는 것을 특징으로 한다.

이하, 본 발명에 따른 일 실시예를 첨부한 도면을 참조하여 상세히 설명하면 다음과 같다.

도1은 본 발명 이동통신 단말기의 지피에스 기능을 이용한 홈 네트워크 시스템을 보인 블록도로서, 이에 도시한 바와 같이, 이동통신 단말기(10), 이동통신망(20), 지피에스(GPS, Global Positioning System) 시스템(30), 지피에스 위성(40), 단문 메시지 센터(SMSC, Short Message Service Center)(50), 인터넷망(60), 홈 네트워크 서버(70), 각종 정보가전기기(80)로 구성한다.

이동통신 단말기(10)는 지피에스 기능을 지원하여 지피에스 위성(40) 및 지피에스 시스템(30)과의 연동을 통해 자신의 위치정보를 획득할 수 있으며, 본 발명에 따라 홈 네트워크 서버(70)가 설치된 특정의 위치를 등록하고 해당 홈 네트워크 서버(70)에서 수행하고자 하는 이벤트를 설정한 후, 상기 획득된 자신의 위치 정보에 의해 상기 홈 네트워크 서버(70)로부터 소정의 반경 거리 내에 도달하였는지 여부를 파악하여 상기 이벤트 내용 및 그 실행을 명령하는 단문 메시지를 상기 홈 네트워크 서버(70)로 전송함으로써, 상기 이벤트에 따라 상기 홈 네트워크 서버(70)를 제어한다.

즉, 지피에스 수신부(11)는 지피에스 위성(40)으로부터 지피에스 위성신호를 수신하고, 무선 송수신부(12)는 안테나를 통해 이동통신 시스템측과 무선신호를 송수신하며, 코덱(codec)부(13)는 무선신호로부터 추출하여 신호처리된 디지털 음성신호를 아날로그 음성신호로 변환하여 스피커(14)를 통해 출력하거나 마이크(15)로부터 아날로그 음성신호를 입력받아 그 역의 동작을 수행한다.

메모리부(16)는 운영 프로그램 및 각종 응용 프로그램, 각종 데이터를 저장하고, 키패드부(17)는 각종 키 입력 및 명령을 입력받으며, 디스플레이부(18)는 액정화면을 통해 키 입력 및 명령 처리 결과를 표시한다.

그리고, 주제어부(19)는 음성통화, 데이터 통신 등 단말기의 운용과 관련된 전반적인 제어를 담당하고, 본 발명에 따라 홈 네트워크 제어 모드를 위한 사용자 인터페이스를 제공하여 사용자가 홈 네트워크 서버(70)가 설치된 위치를 등록하고 해당 홈 네트워크 서버(70)에서 수행하고자 하는 이벤트를 설정받으며, 해당 단말기(10)가 홈 네트워크 서버(70)의 위치로부터 소정의 반경 거리 내에 도달한 경우 사용자가 기설정된 이벤트의 내용 및 그 실행을 나타내는 단문 메시지를 작성한 후 상기 작성된 단문 메시지를 상기 홈 네트워크 서버(70)로 전송한다.

즉, 상기 주제어부(19)는 지피에스 수신부(11)에서 지피에스 위성(40)로부터 수신한 지피에스 위성신호를 소정 시간 주기로 이동통신망(20)을 통해 지피에스 시스템(30)으로 전송한 후 다시 상기 지피에스 시스템(30)으로부터 현재 자신의 위치정보를 전달받아 현재 자신의 위치를 파악하고, 그 파악된 위치를 홈 네트워크 서버(70)의 위치간의 거리를 비교하여 상기 홈 네트워크 서버(70)와 소정의 반경 거리 내에 도달하게 되면, 단문 메시지 처리부(미도시)를 제어하여 사용자가 기설정된 이벤트의 내용 및 그 실행을 나타내는 단문 메시지를 작성하여 단문 메시지 서버(50)와 연동을 통해 상기 홈 네트워크 서버(70)로 전송하게 된다.

이동통신망(20)은 기지국(BTS/BSC), 교환기(MSC), 홈위치등록기(HLR), 가입자 데이터베이스 등을 포함하여 인터넷망(60)과 연동하여 이동통신 서비스를 제공하고, 지피에스 시스템(30)은 지피에스 수신기가 탑재된 단말기로부터 지피에스 위성의 지피에스 위성신호에 따라 계산한 해당 단말기의 위치정보 및 그와 관련한 다양한 콘텐츠를 제공하며, 지피에스 위성(40)은 지피에스 수신기가 탑재된 블록정의 단말기로 지피에스 위성신호를 전송한다.

단문 메시지 센터(SMSC, Short Message Service Center)(50)는 단문 메시지를 라우팅하는 역할을 하고, 홈 네트워크 서버(70)는 TV, 냉장고, 에어컨 등 집안의 가전제품과 안방, 부엌, 거실, 현관 등 집안의 각 공간을 인터넷을 통해 연결하여 상호간에 정보를 전달해 유선전화, 이동통신 단말기 등을 통해서 관리하고 작동제어하는 역할을 한다.

한편, 도2는 본 발명 이동통신 단말기의 지피에스 기능을 이용한 홈 네트워크 방법의 동작과정을 보인 순서도로서, 이에 도시한 바와 같이, 이동통신 단말기를 이용하여 홈 네트워크 서버가 설치된 특정 위치를 등록하고 해당 홈 네트워크 서버에서 수행하고자 하는 이벤트를 설정하는 단계(S20)와; 이동통신 단말기에서 현재 자신의 위치를 파악하는 단계(S21)와; 상기 파악 결과, 이동통신 단말기가 상기 홈 네트워크 서버로부터 소정의 반경 거리 내에 도달하면, 홈 네트워크 서버로 이벤트 내용을 포함하는 단문 메시지를 전송하여 해당 이벤트를 실행하는 단계(S22, S23)로 구성한다.

본 발명이 적용된 이동통신 단말기는 '홈 네트워크 제어 모드'라는 메뉴를 추가하여, 사용자가 사용자 인터페이스를 통해 관리하고자 하는 홈 네트워크 서버(70)가 설치된 위치를 등록하거나 상기 홈 네트워크 서버(70)에서 수행하고자 하는 이벤트를 설정할 수 있도록 하는 응용프로그램을 추가된 것으로 가정한다.

따라서, 사용자는 이동통신 단말기의 메뉴를 이동하여 '홈 네트워크 제어 모드'로 진입한 후, 홈 네트워크 서버(70)가 설치된 자신의 집이나 기타 특정의 위치를 등록하고, 상기 홈 네트워크 서버(70)에서 수행하고자 하는 소정의 이벤트를 설정한다(S20).

여기서, 사용자는 지피에스 시스템(30) 및 지피에스 위성(40)과 연동하여 자신이 위치한 홈 네트워크 서버(70)의 위치정보를 획득하여 등록하게 되며, 상기 소정의 이벤트는 특정 생활가전 혹은 주방기기를 동작시키거나 냉난방을 가동하는 등의 홈 네트워크 서버(70)의 제어에 의해 구동되는 이벤트를 말한다.

그 다음, 이동통신 단말기(10)에서 지피에스 시스템(30) 및 지피에스 위성(40)과의 연동을 통해 이동통신 자신의 현재 위치를 파악하여(S21), '홈 네트워크 제어 모드'에서 등록한 홈 네트워크 서버(70)의 위치를 기준으로 이동통신 단말기를 소유한 사용자가 소정의 반경 거리 내에 도달하였는지 여부를 확인한다(S22).

즉, 상기 이동통신 단말기(10)의 주제어부(19)에서 지피에스 위성(40)으로부터 수신한 지피에스 위성신호를 소정 시간 주기로 이동통신망(20)을 통해 지피에스 시스템(30)으로 전송한 후 상기 지피에스 시스템(30)에서 계산된 현재 자신의 위치정보를 전달받아 위치를 파악한 다음, 그 파악된 위치정보와 상기 단계(S20)에서 홈 네트워크 서버(70)에 대하여 등록된 위치간의 거리를 소정 시간 간격으로 비교하여 상기 홈 네트워크 서버(70)의 소정의 반경 거리 내에 해당 이동통신 단말기(10)가 도달하는지 여부를 확인함으로써, 사용자가 외출후 귀가하는 도중에 소정의 반경 거리 내에 이르르게 되면 상기 홈 네트워크 서버(70)에서 기설정된 이벤트를 실행할 수 있도록 준비를 한다.

그 다음, 사용자의 이동통신 단말기(10)가 홈 네트워크 서버(70)의 위치로부터 소정의 반경 거리 내에 도달하게 되면, 주제어부(19)에서 단문 메시지 처리부(미도시)를 제어하여 사용자가 기설정된 이벤트의 내용 및 그 실행을 나타내는 단문 메시지를 작성하여 이동통신망(20)을 통해 단문 메시지 서버(50)로 요청하고, 이에 상기 단문 메시지 서버(50)에서 해당 단문 메시지를 홈 네트워크 서버(70)로 라우팅함으로써, 상기 홈 네트워크 서버(70)에서 해당 단문 메시지를 확인 후 디코딩 등의 처리를 하여 해당 단문 메시지에 포함된 명령대로 사용자가 등록된 이벤트를 실행하게 된다(S23).

따라서, 본 발명에 의해 홈 네트워크 서버(70)는 사용자가 집에 도착하기 이전에 특정의 이벤트를 미리 실행함으로써, 사용자의 위치에 따라 특정의 이벤트를 자동으로 실행하여 예약 설정에 의한 이벤트 실행에 비해 사용자의 정확한 도착시간을 예측하고, 그에 따라 각종 정보가전기(80)를 효율적으로 관리할 수 있게 된다.

발명의 효과

이상에서 설명한 바와 같이, 본 발명은 지피에스 기능(GPS, Global Positioning System)을 제공하는 이동통신 단말기에 있어서, 지피에스 기능을 이용하여 사용자가 홈 네트워크 서버가 구비된 집 근처 소정 반경 내에 도달하였는지 여부를 파악하고, 그에 따라 홈 네트워크 서버로 단문 메시지를 전송하여 사용자가 집에 도착하기 이전에 특정의 이벤트를 미리 실행하게 함으로써, 사용자의 위치에 따라 특정의 이벤트를 자동으로 실행하여 예약 설정에 의한 이벤트 실행에 비해 사용자의 정확한 도착시간을 예측할 수 있어 효율적으로 홈 네트워크를 제어할 수 있고, 인터넷망이나 전력선 모뎀을 이용하지 않고 무선망을 이용하여 자동으로 홈 네트워크 서버를 제어 및 관리할 수 있는 효과가 있다.

경구의 범위

청구항 1

생활가전, 주방기기, 방범/보안 등 정보가전기기와 안방, 부엌, 거실, 현관 등 집안의 각 공간을 인터넷을 통해 연결하여 상호간에 정보를 전달해 유선전화, 이동통신 단말기 등을 통해서 관리하고 작동제어하는 홈 네트워크 서버를 구비한 네트워크 시스템에 있어서, 지피에스(GPS, Global Positioning System) 기능에 따라 자신의 위치정보를 획득하며, 상기 홈 네트워크 서버가 설치된 특정의 위치를 등록하고 상기 홈 네트워크 서버에서 수행하고자 하는 이벤트를 설정한 후, 상기 획득한 자신의 위치정보에 의해 상기 홈 네트워크 서버로부터 소정의 반경 거리 내에 도달하였음이 확인되면, 상기 이벤트 내용 및 그 실행명령을 나타내는 단문 메시지를 작성하여 전송하는 이동통신 단말기와; 상기 이동통신 단말기와 연동하여 홈 네트워크 서버 및 이동통신망 해당 단말기의 위치정보를 전송하는 지피에스 시스템과; 상기 이동통신 단말기의 요청에 따라 단문 메시지를 상기 홈 네트워크 서버로 라우팅하는 단문 메시지 센터를 포함하는 것을 특징으로 하는 이동통신 단말기의 지피에스 기능을 이용한 홈 네트워크 시스템.

청구항 2

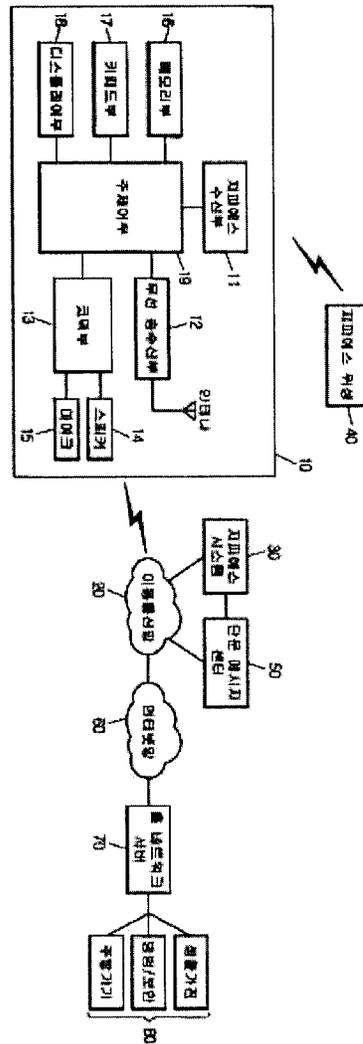
이동통신 단말기를 이용하여 홈 네트워크 서버가 설치된 특정 위치를 등록하고 해당 홈 네트워크 서버에서 수행하고자 하는 이벤트를 설정하는 단계와; 이동통신 단말기에서 현재 자신의 위치를 파악하는 단계와; 상기 파악 결과, 이동통신 단말기가 상기 홈 네트워크 서버로부터 소정의 반경 거리 내에 도달하면, 홈 네트워크 서버로 이벤트 내용을 포함하는 단문 메시지를 전송하여 해당 이벤트를 실행하는 단계를 포함하는 것을 특징으로 하는 이동통신 단말기의 지피에스 기능을 이용한 홈 네트워크 방법.

청구항 3

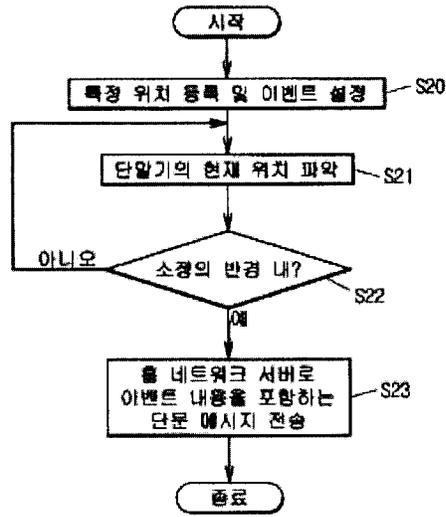
제2항에 있어서, 상기 이동통신 단말기에서 현재 자신의 위치를 파악하는 단계는, 주제어부에서 지피에스 위성으로부터 수신한 지피에스 위성신호를 소정 시간 주기로 이동통신망을 통해 지피에스 시스템으로 전송한 후 상기 지피에스 시스템에서 계산된 현재 자신의 위치정보를 전달받아 위치를 파악하는 것을 특징으로 하는 이동통신 단말기의 지피에스 기능을 이용한 홈 네트워크 방법.

도면

도면1



도면2



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(54) 위치정보 시스템에서의 단말간 트리거 위치 서비스요청방법

요약

본 발명은 SUPL(Secure User Plane Location) 기반의 위치정보 시스템에서 단말간 트리거 위치 서비스 요청방법에 관한 것이다. 본 발명은 제1단말로부터 특정 영역에서 제2단말의 트리거 서비스가 요청되면 상기 제1단말의 네트워크가 제2단말의 제2네트워크로 상기 트리거 서비스 요청을 전달하고, 상기 제2네트워크는 제2단말과 측위 세션을 개시하고, 측위 메시지를 교환하여 상기 제2단말의 위치를 계산한 후 상기 계산된 위치를 제1단말이 지정한 특정 영역과 비교하여, 특정 영역에서의 지역 이벤트 발생을 제1단말로 통지한다.

도표도

도8

색인어

SUPL, 트리거 위치 서비스, 측위 세션

명세서

도면의 간단한 설명

- 도 1은 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제1실시예.
- 도 2는 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제2실시예.
- 도 3은 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제3실시예.
- 도 4는 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제4실시예.
- 도 5는 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제5실시예.
- 도 6은 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제6실시예.
- 도 7은 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제7실시예로서, 위치관련 요청이 지역 이벤트(area event)인 경우를 나타낸 도면.
- 도 8은 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제8실시예로서, 위

치관련 요청이 주기적인(periodic) 경우를 나타낸 도면.

발명의 상세한 설명

발명의 목적

발명이 속하는 기술분야 및 그 분야의 종래기술

본 발명은 SUPL(Secure User Plane Location) 기반의 위치정보 시스템에 관한 것으로서, 특히 두 단말간의 트리거 위치 서비스(Triggered Location Service) 요청 방법에 관한 것이다.

이동통신 시스템에서는 단말의 위치를 계산하기 위한 관련 기능부를 이동통신 네트워크에 구비하여, 주기적으로 또는 요청에 따라 단말의 위치를 일정 개체(entity)에 전달하는 위치 서비스(Location Service)를 제공하고 있다.

상기 위치 서비스와 관련된 네트워크 구조는 3GPP나 3GPP2등의 내부 네트워크 구조에 따라 상이하며, 현재 단말의 위치를 계산하는 방법으로는 단말이 속한 셀의 ID를 전달하는 셀-ID 방식, 단말로부터 각 기지국으로 전파가 도달되는 시간을 측정 후 삼각측량을 이용하여 단말의 위치를 계산하는 방법 및 GPS를 이용한 방법등이 있다.

그런데, 상기 위치 서비스를 사용자에게 제공하기 위해서는 상당한 시그널링과 위치(location) 정보가 이동 단말과 위치 서버사이에서 전달되어야 한다. 최근 위치 서비스를 제공하기 위한 표준화된 위치 기술들(Positioning technologies), 즉, 이동 단말의 위치에 기반한 위치 서비스가 빠르게 확산되고 있다. 상기 위치 기술들은 통상 사용자 평면과 제어평면을 통하여 제공될 수 있는데, 상기 위치기술의 일 예로 사용자 평면을 통해 위치 서비스를 제공하는 SUPL(secure User Plane Location)이 알려져 있다.

상기 SUPL은 이동국의 위치 계산에 필요한 위치 정보를 전달하는 효율적인 방법으로, GPS 어시스턴스(assistance)와 같은 위치 어시스턴스 정보를 전달하기 위해 그리고 이동 단말과 네트워크사이에서 위치 기술(Positioning technology) 관련 프로토콜을 운반하기 위하여, 사용자 평면 데이터 베어러(bearer)를 사용한다.

일반적으로 위치 정보 시스템에서 위치 서비스와 관련된 SPUL 네트워크는 크게 SUPL 에이전트(Agent), SLP(SUPL Location Platform) 및 SET(SUPL Enabled Terminal)등을 포함한다. 상기 SUPL 에이전트는 실제 측정된 위치정보를 사용하는 논리적(logical)인 서비스 액세스 포인트를 나타내고, 상기 SLP는 위치정보를 얻기 위하여 네트워크 자원들을 액세스하는 네트워크 부분의 SUPL 서비스 액세스 포인트를 나타낸다. 또한, 상기 SET는 SUPL인터페이스를 사용하는 SUPL 네트워크와 통신할 수 있는 소자로서, 예를들어 UMTS의 UE(User Terminal), GSM의 MS (이동국), IS-95 MS 또는 SET 기능이 내재된 랩탑 컴퓨터(Laptop Computer) 나 PDA (Personal Digital Assistants)등 중의 하나일 수 있다. 또한 상기 SET는 WLAN(Wideband LAN)을 통해 접속하는 다양한 이동 단말일 수도 있다. 상기 SET는 사용자 평면 베어러를 통해 네트워크와 연동되어 SUPL에서 정의하는 절차들을 지원한다.

위치정보 시스템과 같은 이동통신 시스템에서 사용자가 원래 등록된 홈 네트워크(Home Network)라고 하고 사용자가 이동하며 상기 홈 네트워크가 아닌 다른 지역에 위치하였을 때 해당 지역의 네트워크를 방문 네트워크(Visited Network)라고 한다. 그리고, 상기 홈 네트워크내의 SLP를 H-SLP라고 하고 상기 방문 네트워크내의 SLP를 V-SLP라고 한다. 이때 네트워크에서 SUPL절차를 시작하는 경우 외부 클라이언트가 처음 접속하는 SLP를 R-SLP(Requesting SLP)라고 하며, 이것은 논리적인 개체로서 H-SLP와 동일할 수도 있고 그렇지 않을 수도 있다. 아울러 현재 위치추적을 목표로 하는 SET를 목표(target) SET로 정의한다.

또한, 상기 트워크에서 위치서버인 SLP는 실제 위치를 계산하는 개체인 SPC(SUPL Positioning Center)와 위치정보를 계산하는 미외의 SLP의 역할, 예를들어 로밍 및 자원 관리등의 역할을 담당하는 SLC(SUPL Location Center)로 구성된다. 따라서, SET는 SLC를 거쳐 SPC와의 통신을 통해 위치정보를 계산할 수도 있고(Proxy mode), 상기 SPC와 바로 접속을 열어 위치정보를 계산할 수도 있다(non-proxy mode).

그러나, 종래 SUPL을 기반으로 하는 트리거 위치 서비스(Triggered Location Service)에서는 사용자 단말을 통해 원하는 상대방의 트리거 위치 서비스를 요청하는 방법을 제시하지 못하고 있다.

또한, 종래 SUPL을 기반으로 한 지역 이벤트(area event) 관련 트리거 위치 서비스에서는 자신의 위치와 관련된 영역을 정의하여 트리거 위치 서비스 (Triggered Location Service)를 요청하는 방법은 제시하지 못하고 있다.

발명이 이루고자 하는 기술적 과제

따라서, 본 발명의 목적은 사용자 단말을 통해 원하는 상대방의 트리거 위치 서비스를 요청할 수 있는 방법을 제공하는데 있다.

본 발명의 다른 목적은 단말의 위치와 관련된 영역을 정의하여 트리거 위치 서비스(Triggered Location Service)를 요청하는 방법을 제공하는데 있다.

상기와 같은 목적을 달성하기 위하여, 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법은, 제1단말이 특정 영역에서 제2단말의 트리거 서비스를 요청하는 단계와; 상기 제1단말의 네트워크가 제2단말의 제2네트워크로 상기 트리거 서비스 요청을 전달하는 단계와; 상기 제2네트워크가 제2단말과 측위 세션을 개시하고, 측위 메시지를 교환하여 상기 제2단말의 위치를 계산하는 단계와; 상기 제2네트워크가 상기 계산된 위치를 제1단말이 지정한 특정 영역과 비교하여, 특정 영역에서의 지역 이벤트 발생을 제1단말로 통지하는 단계를 포함한다.

바람직하게, 상기 제1,제2네트워크는 위치서버를 나타내고, 상기 제1,제2단말은 SET(SUPL Enabled

Terminal)를 나타낸다.

바람직하게, 상기 트리거 서비스는 세션 시작 메시지를 통해 요청된다.

바람직하게, 상기 세션 시작 메시지는 session-id, SET capabilities, 위치식별자, msid, request type, defined area 및 event type을 포함한다.

바람직하게, 상기 request type은 서비스 요청이 특정 위치와 관련된 트리거 서비스를 나타낸다.

바람직하게, 상기 defined area는 특정 지역을 나타내며, 상기 event type은 어떠한 지역 이벤트를 원하는 지를 나타낸다. 이때, 상기 defined area는 좌표나 지역이름을 포함한다.

바람직하게, 상기 트리거 서비스 요청은 RLP메시지를 통해 제1네트워크에서 제2네트워크로 전달된다.

바람직하게, 상기 방법은 제2단말과의 측위 세션이 개시되면 제2네트워크가 RLP메시지를 통해 제1네트워크로 트리거 세션이 시작되었음을 알리는 단계와; 상기 제1네트워크가 제1단말로 세션 종료 메시지를 전송하여 제1단말과 제1네트워크간의 연결을 종료하는 단계를 추가로 포함한다.

상기와 같은 목적을 달성하기 위하여, 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법은, 제1단말이 제1위치서버로 제2단말의 트리거 서비스를 요청하는 단계와; 상기 제1위치서버가 제2위치서버로 트리거 서비스 요청을 전달하는 단계와; 상기 제2위치서버가 제2단말과 측위 세션을 개시하여 제2단말의 위치를 계산하는 단계와; 상기 제2위치서버가 상기 제1단말의 트리거 서비스 요청타입에 따라 상기 제1위치서버를 통해 주기적인 위치추적 서비스 또는 지역관련 위치추적 서비스를 제공하는 단계를 포함한다.

바람직하게, 상기 트리거 서비스는 SET 초기화 메시지를 통해 요청된다.

바람직하게, 상기 SET 초기화 메시지는 session-id, 목표 SETid, 트리거 모드, 트리거 정보를 포함한다.

바람직하게, 상기 트리거 모드는 다른 SET의 트리거 서비스(SET initiated trigger service of another SET type)를 나타내며, 주기적 이벤트(Periodic event) 또는 지역 이벤트(area event) 파라미터를 포함한다.

바람직하게, 상기 트리거 정보는 트리거 세션의 파라미터를 나타내며, 주기적 파라미터와 지역 이벤트 파라미터를 포함한다.

바람직하게, 상기 주기적 파라미터는 주기정보를 포함하고, 상기 지역 이벤트 파라미터는 defined area 및 event type을 포함한다.

바람직하게, 상기 제1위치서버는 SET 초기화 메시지에 포함된 제2단말의 식별자를 이용하여 제2위치서버를 결정한다.

바람직하게, 상기 제2위치서버는 제1단말의 트리거 서비스 요청을 분석하여, 제1단말이 주기적인 트리거 서비스를 요청한 것으로 판단되면 각 주기마다 상기 제2단말의 위치를 제1위치서버를 통해 제1단말로 보고한다.

바람직하게, 상기 제2위치서버는 상기 제1단말이 지역이벤트 트리거 서비스를 요청한 것으로 판단되면, 상기 계산된 위치를 제1단말이 지정한 특정 영역과 비교하여, 특정 영역에서의 지역 이벤트 발생을 제1단말로 통지한다.

상기와 같은 목적을 달성하기 위하여, 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법은, 제1단말이 SET 초기화 메시지를 통해 제1위치서버로 제2단말의 위치추적을 요청하는 단계와; 상기 제1위치서버가 위치 요청 메시지를 통해 제2서버로 제2단말의 위치추적 요청을 전달하는 단계와; 상기 제2위치서버가 주기적으로 제2단말과 위치추적절차를 수행하여 제2단말의 위치를 계산하는 단계와; 상기 제1위치서버가 제2위치서버에서 계산된 제2단말의 위치값들을 각 위치 응답 메시지를 통해 수신하여, 상기 제1단말로 보고하는 단계를 포함한다.

바람직하게, 상기 제1위치서버는 SET 초기화 메시지에 포함된 제2단말의 식별자를 이용하여 제2위치서버를 결정한다.

바람직하게, 상기 제1,제2위치서버는 각각 제1,제2단말의 홈 네트워크에 존재하며, SLP(SUPL Location Platform)를 나타낸다.

바람직하게, 상기 SET 초기화 메시지는 session-id, 제2단말의 id, 트리거 모드 및 트리거 정보를 포함한다.

바람직하게, 상기 트리거 모드는 다른 SET의 트리거 서비스(SET initiated trigger service of another SET type)를 나타내며, 주기적 이벤트(Periodic event) 또는 지역 이벤트(area event) 파라미터를 포함한다.

바람직하게, 상기 트리거 정보는 트리거 세션의 파라미터를 나타내며, 주기적 파라미터와 지역 이벤트 파라미터를 포함한다.

발명의 구성 및 작용

본 발명은 SUPL 네트워크에서 구현된다. 그러나, 본 발명은 다른 표준에 따라 동작하는 무선 통신 시스템에도 적용되어 질 수 있다. 이하, 본 발명의 바람직한 실시 예들을 자세히 설명하면 다음과 같다.

본 발명은 SUPL 기반의 위치정보 시스템에서, 사용자가 단말을 통해 원하는 상대방의 지역 이벤트(area event)에 관련된 트리거 위치 서비스 (Triggered Location Service)를 요청하는 방법을 제안한다. 이를 위하여 사용자는 지역 이벤트 관련 트리거 위치 서비스를 요청할 때, 상기 지역 이벤트를 위한 영역을 현

재 자신의 위치와 관련된 일정 영역 또는 자신의 위치와 상관없는 특정 영역을 지정할 수 있다.

도 1은 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스(Triggered Location Service) 요청방법의 제1실시예를 나타낸다. 특히 본 발명의 제1실시예는 서비스를 요청하는 SET1의 현재 위치와 관련된 일정 영역에서 SET2의 지역 이벤트를 확인하는 방법을 나타낸다. 이때, 상기 SLP는 네트워크측에 해당하고, SET는 단말측에 해당한다.

도 1에 도시된 바와같이, 먼저 SET1에 있는 SUPLEM이전트는 SET1에서 동작하고 있는 어플리케이션으로부터 위치관련 요청을 수신한다.

상기 위치관련 요청이 수신되면, SET1은 현재 어떤 네트워크에도 데이터 접속이 설정되어 있지 않은 경우 패킷 데이터 네트워크에 연결한다(S10).

일단 데이터 접속이 설정되면, SET1은 네트워크로부터 제공된 기본주소(default address)를 이용하여 위치 서버인 SLP1과 안전한(secure) IP연결을 설정하고, 상기 SLP1과 측위(위치측정) 세션을 시작하기 위하여 세션시작 메시지 즉, SUPL START메시지를 전송한다(S11). 상기 SUPL START메시지에는 session-id, SET capabilities, 위치 식별자(location identifier : lid), msid, 요청타입(request type), 정의된 지역(defined area) 및 이벤트 타입(event type)등이 포함되어 있다. 여기서, 상기 요청타입(request type)은 서비스 요청이 SET1의 위치와 관련된 트리거 서비스를 나타내며, 상기 정의된 지역(defined area)은 SET1의 위치로부터 얼마의 영역을 정의하는지를 나타내며, 상기 이벤트 타입(event type)은 어떠한 지역 이벤트(나감, 들어감 또는 존재)인지를 나타낸다. 또한, 상기 SET capabilities에는 지원하는 측위방식(예를 들어, SET-Assisted A-GPS, SET Based A-GPS)과 그와 관련된 측위 프로토콜(예를 들어 RRLP, RRC, TIA-801)이 포함되어 있다. 그리고, 만약 이전에 계산한 위치가 SET1이 요청한 QoP(Quality of Position)를 만족하면 SLP1은 바로 단계(S16)로 진행한다.

만약, 이전에 계산한 위치가 요청한 QoP를 만족하지 않으면 SLP1은 라우팅 정보를 이용하여 SET1이 로밍되지 않았음을 확인하고(현재 서비스 지역내에 있음)(S12), 상기 수신한 msid에 기초하여 SET2와 관련된 위치서버 즉, SLP2를 결정한다.

이후 SLP1은 상기 SUPL START메시지에 포함되어 있는 SET1이 지원하는 측위방식과의 일관성을 유지하기 위해 적절한 측위방식을 결정하고, 그 결정된 측위방식에서 요구된다면 SLP1은 SUPL START메시지에 포함된 지원 가능한 측위 프로토콜(예를 들어, RRLP, RRC, TIA-801)을 사용한다. 이러한 일련의 동작이 끝나면 SLP1은 상기 결정된 측위방식이 포함된 세션응답 메시지 즉, SUPL RESPONSE메시지를 SET1으로 전송한다(S13). 상기 SUPL RESPONSE메시지에는 session-id는 포함되어 있지만 SET1이 새로운 연결을 설정할 필요가 없기 때문에 SLP1의 주소는 포함되지 않는다.

또한, 상기 SUPL START메시지에 포함된 정보 즉 lid에 의해 계산된 대략적인(coarse) 위치결과가 SET1이 요청한 QoP를 만족하면, SLP1은 바로 단계(S16)로 진행한다.

상기 SUPL RESPONSE메시지를 수신한 SET1은 응답으로 세션 측위 초기화 메시지 즉, SUPL POS INIT를 SLP1으로 전송한다(S14). 상기 SUPL POS INIT메시지에는 적어도 session-id, SET capabilities 및 위치 식별자(lid)가 포함되어 있다.

상기 SUPL POS INIT메시지를 수신한 SLP1은 SET1과 측위절차 메시지(SUPL POS메시지) 연속적으로 교환하며 SET의 위치를 계산한다(S15). 이때, 상기 위치 계산은 SLP1이 SET1으로부터 수신한 측정값을 기초로 수행하거나(SET-Assisted), SET1이 SLP1으로부터 획득된 어시스턴스 데이터를 기초로 수행한다(SET-Based).

SUPL 측위(positioning) 절차가 완료되면 SLP1은 RLP프로토콜 메시지(RLP SSRILR)를 이용하여 SET2의 위치서버인 SLP2에게 트리거 서비스(Triggered Service)를 요청한다(S16). 상기 RLP SSRILR메시지에는 session-id, msid, request type, defined area 및 event type을 포함되어 있다. 상기 request type은 상기 서비스 요청이 SET1의 위치와 관련된 트리거 서비스를 나타내며, 상기 defined area는 상기 계산된 SET1의 위치와 그 위치로부터 얼마의 영역을 정의하는지를 나타내며, 상기 event type은 어떠한 지역 이벤트(나감, 들어감, 존재)를 원하는지를 나타낸다. 만약, SET1이 요청한 트리거 서비스에 대해 권한이 있는 경우 SLP2는 수신한 client-id를 통해 SET1을 인증하고, 수신한 msid를 통해 가입자 프라이버시를 적용한다.

상기 RLP SSRILR메시지를 수신한 SLP2는 SET 목록 테이블을 이용하여 SET2가 SUPL을 지원하는지 확인하고, 라우팅 정보를 이용하여 SET2가 현재 서비스 지역내에 있는지(SET가 로밍되었는지) 확인한다(S17).

확인결과 SET2가 SUPL을 지원하고 로밍되지 않은 경우 SLP2는 세션 초기화 메시지(SUPL INIT)를 이용하여 SET2와 위치 세션을 개시한다(S18). 상기 SUPL INIT메시지에는 적어도 session-id, proxy/non proxy mode indicator, 사용할 positioning방법(posmethod), 지역 이벤트 트리거 서비스를 나타내는 서비스 타입(service type)이 포함되어 있다. 또한, 상기 SUPL INIT메시지에는 희망하는 QoP가 포함될 수도 있다.

상기 SUPL INIT메시지를 수신한 SET2는 현재 자신이 어떤 네트워크에도 데이터 접속이 설정되어 있지 않은 경우 패킷 데이터 네트워크에 연결하고(S19), 상기 SLP2와 측위 세션을 시작하기 위하여 세션 트리거 시작 메시지(SUPL TRIGGERED START)를 전송한다(S20). 상기 SUPL TRIGGERED START메시지에는 적어도 session-id, SET capabilities 및 위치 식별자(lid)가 포함된다.

만약, 수신한 SUPL TRIGGERED START메시지에 포함된 정보(e.g., lid)에 의해 계산된 대략적인(coarse)가 위치결과가 SET2가 요청한 QoP를 만족하면, SLP2는 단계(S21)를 수행한 후 SUPL POS절차를 수행하지 않은 상태에서 바로 상기 대략적인 위치결과와 SLP1으로부터 수신한 지정된 위치 이벤트를 비교한다(S22).

반면에 상기 계산된 대략적인(coarse)가 위치결과가 SET2가 요청한 QoP를 만족하지 않으면, SLP2는 트리거 세션이 개시되었음을 알리기 위하여 SET2로 SUPL TRIGGERED RESPONSE메시지를 전송한다. 상기 SUPL TRIGGERED RESPONSE메시지에는 트리거 세션에서 사용될 측위방식이 포함된다.

이후 SET2와 SLP2사이에는 주기적으로 측위 세션이 발생되는데(S22), 상기 측위 세션이 시작되면 SET2와

SLP2사이에서 성공적으로 측위 절차 메시지(SUPL POS)들이 교환된다. 이때, 상기 위치 계산은 SLP2가 SET2으로부터 수신한 측정값을 기초로 수행하거나(SET-Assisted), SET2가 SLP2으로부터 획득된 머시스턴스 데이터를 기초로 수행한다(SET-Based). 각 측위세션이 종료되면 SLP2는 계산된 SET2의 위치와 상기 SLP1으로부터 수신한 지정된 위치를 비교한다. 비교결과 상기 계산된 SET2의 위치가 상기 SET1이 지정하여 SLP1을 통해 수신된 위치값인 defined area에 해당하면 다음 단계로 진행하고 해당하지 않으면 상기 단계(S22)를 반복적으로 수행한다.

만약, 상기 계산된 SET2의 위치가 상기 SET1이 지정하여 SLP1을 통해 수신된 위치인 defined area에 해당하면, SLP2는 SET2로 세션 종료 메시지(SUPL END)를 전송하여 측위 세션을 종료하고(S23), 상기 SET2의 위치비교 결과값(posresult)을 RLP SSRLIR 메시지에 포함시켜 SLP1으로 전송한다(S24).

따라서, SLP1은 SET2의 위치비교 결과값(posresult)을 SUPL END 메시지에 포함시켜 SET1으로 전송하고(S25), 상기 SET1은 SLP1과 안전한 IP연결을 해지하고, 이 세션과 관련된 모든 자원을 해제한다.

도 2는 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제2실시예를 나타낸다. 본 발명의 제2실시예는 상기 제1실시예와 아주 유사하지만 SLP2로 RLP 메시지를 전송하기 전에 SLP1과 SET1간의 연결을 종료하는 점이 상이하다. 즉, 제1실시예에서는 SET1과 SLP1간의 IP연결이 단계(S25)가 수행될 때까지 유지되어 불필요하게 무선자원이 낭비되기 때문에, 본 발명의 제2실시예에서는 측위절차가 종료되면 바로 SUPL END 메시지를 전송하여 SET1과 SLP1간의 IP연결을 종료한다.

따라서, SET1과 SLP1간의 측위 절차가 완료되면 SLP1은 SET1과 SLP1간의 연결을 종료하기 위하여 SUPL END 메시지를 SET1으로 전송한 후(S30) RLP 프로토콜 메시지(RLP SSRLIR)를 이용하여 SET2의 위치서버인 SLP2에게 트리거 서비스(Triggered Service)를 요청한다. 이하 단계(S16~S24)는 제1실시예와 동일하며 그 상세한 설명은 생략하기로 한다.

이후, SLP2로부터 원하는 SET2의 트리거 결과(posresult)가 수신되면(S24), SLP1은 해당 트리거 결과를 SUPL 보고 메시지(SUPL REPORT)를 통해 SET1에게 전송한다(S31). 상기 SUPL REPORT 메시지는 WAP PUSH 또는 SMS 트리거 등을 통해 전송된다.

도 3은 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제3실시예를 나타낸다. 본 발명의 제3실시예는 SUPL END 메시지를 전송하여 SET1과 SLP1간의 IP연결을 종료한다는 점에서 상기 제2실시예와 유사하지만, 상기 SUPL END 메시지를 전송하는 시점이 다르다.

즉, 본 발명의 제2실시예에서는 SLP1과 SET1간의 측위절차가 종료된 후에 바로 SUPL END 메시지가 전송되지만, 본 발명의 제3실시예에서는 SLP2로부터 SLP2와 SET1간의 측위세션이 시작될 것이라는 확인되었을 때만 바로 전송된다. 이러한 확인은 SLP2가 SET2로부터 SUPL TRIGGERED START 메시지를 수신하여 SLP2가 SLP1으로 RLP SSRLIR END 메시지를 수신함으로써 달성된다.

따라서, SET2로부터 SUPL TRIGGERED START 메시지가 수신되면 SLP1으로 RLP SSRLIR END 메시지를 전송한 후(S40) SLP2는 트리거 세션이 개시되었음을 알리기 위하여 SET2로 SUPL TRIGGERED RESPONSE 메시지를 전송한다(S41). 이후의 동작(S21~S24)은 제2실시예와 동일하며 그 상세한 설명은 생략한다.

상기 RLP SSRLIR END 메시지를 수신한 SLP1은 SET1과 SLP1간의 연결을 종료하기 위하여 SUPL END 메시지를 SET1으로 전송하고(S41), 이후, 상기 SLP2로부터 원하는 SET2의 트리거 결과(posresult)가 수신되면(S24) 해당 트리거 결과를 SUPL 보고 메시지(SUPL REPORT)를 통해 SET1에게 전송한다(S42). 상기 SUPL REPORT 메시지는 WAP PUSH 또는 SMS 트리거 등을 통해 전송된다.

도 4는 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제4실시예를 나타낸다. 특히 본 발명의 제4실시예는 SET1이 지정된 특정 영역에서 SET2의 지역 이벤트를 확인하는 방법으로서, SET1과 SLP1간의 측위절차가 수행되지 않는다.

도 4에 도시된 바와같이, SET1에 있는 SUPL 에이전트는 SET1에서 동작하고 있는 어플리케이션으로부터 위치 관련 요청을 수신한다. 상기 위치관련 요청이 수신되면, SET1은 현재 어떤 네트워크에도 데이터 접속이 설정되어 있지 않은 경우 패킷 데이터 네트워크에 연결한다(S50).

일단 데이터 접속이 설정되면, SET1은 네트워크로부터 제공된 기본주소를 이용하여 위치서버인 SLP1과 안전한 IP연결을 설정하고, 상기 SLP1과 측위(위치측정) 세션을 시작하기 위하여 SUPL START 메시지를 전송한다(S51). 상기 SUPL START 메시지는 session-id, SET capabilities, lid, msid, request type, defined area 및 event type 등이 포함되어 있다. 여기서, 상기 request type은 상기 서비스 요청이 특정 위치와 관련된 트리거 서비스를 나타내며, 상기 defined area는 특정 지역을 나타내며, 상기 event type은 SET1이 어떠한 지역 이벤트(나감, 들어감 또는 존재)인지를 원하는지를 나타낸다. 바람직하게, 상기 defined area는 예를들면 좌표 나 지역이름등을 포함한다.

또한, 상기 SET capabilities에는 지원하는 측위방식(예를들어, SET-Assisted A-GPS, SET Based A-GPS)과 그와 관련된 측위 프로토콜(예를들어 RRLP, RRC, TIA-801)이 포함되어 있다.

상기 SUPL START 메시지를 수신한 SLP1은 라우팅 정보를 이용하여 SET1이 로밍되지 않았음을 확인하고(현재 서비스 지역내에 있음)(S52), 상기 수신한 msid에 기초하여 SET2와 관련된 위치서버 즉, SLP2를 결정한다.

상기 SLP1은 RLP 프로토콜 메시지(RLP SSRLIR)를 이용하여 SET2의 위치서버인 SLP2에게 트리거 서비스(Triggered Service)를 요청한다(S53). 상기 RLP SSRLIR 메시지는 session-id, msid, request type, defined area 및 event type을 포함되어 있다. 상기 request type은 상기 서비스 요청이 특정 위치와 관련된 트리거 서비스를 나타내며, 상기 defined area는 특정 지역을 나타내며, 상기 event type은 SET1이 어떠한 지역 이벤트(나감, 들어감, 존재)를 원하는지를 나타낸다. 만약, SET1이 요청한 트리거 서비스에 대해 권한이 있는 경우 SLP2는 수신한 client-id를 통해 SET1을 인증하고, 수신한 msid를 통해 가입자 프라이버시를 적용한다.

상기 RLP SSRLIR 메시지를 수신한 SLP2는 SET 특이 테이블을 이용하여 SET2가 SUPL을 지원하는지 확인하고,

라우팅 정보를 이용하여 SET2가 현재 서비스 지역내에 있는지(SET가 로밍되었는지) 확인한다(S54).

확인결과 SET2가 SUPL을 지원하고 로밍되지 않은 경우 SLP2는 세션 초기화 메시지(SUPL INIT)를 이용하여 SET2와 위치 세션을 개시한다(S55). 상기 SUPL INIT메시지에는 적어도 session-id, proxy/non proxy mode indicator, 사용할 positioning방법(posmethod), 지역 이벤트 트리거 서비스임을 나타내는 서비스 타입(service type)이 포함되어 있다. 또한, 상기 SUPL INIT메시지에는 희망하는 QoP가 포함될 수도 있다.

상기 SUPL INIT메시지를 수신한 SET2는 현재 자신이 어떤 네트워크에도 데이터 접속이 설정되어 있지 않은 경우 패킷 데이터 네트워크에 연결하고(S56), 상기 SLP2와 측위 세션을 시작하기 위하여 세션 트리거 시작 메시지(SUPL TRIGGERED START)를 전송한다(S57). 상기 SUPL TRIGGERED START메시지에는 적어도 session-id, SET capabilities 및 위치 식별자(lid)가 포함된다.

만약, 수신한 SUPL TRIGGERED START메시지에 포함된 정보(e.g., lid)에 의해 계산된 대략적인(coarse)가 위치결과가 SET2가 요청한 QoP를 만족하면, 단계(S58)를 수행한 후 SUPL POS철차를 수행하지 않은 상태에서 바로 상기 위치결과와 SLP1으로부터 수신한 지정된 위치 이벤트를 비교한다(S59).

반면에 상기 계산된 대략적인(coarse)가 위치결과가 SET2가 요청한 QoP를 만족하지 않으면, SLP2는 트리거 세션이 개시되었음을 알리기 위하여 SET2로 SUPL TRIGGERED RESPONSE메시지를 전송한다(S58). 상기 SUPL TRIGGERED RESPONSE메시지에는 트리거 세션에서 사용될 측위방식이 포함된다.

이후 SET2와 SLP2사이에는 주기적으로 측위 세션이 발생되는데(S59), 상기 측위 세션이 시작되면 SET2와 SLP2사이에서 성공적으로 측위 절차 메시지(SUPL POS)들이 교환된다. 이때, 상기 위치 계산은 SLP2가 SET2로부터 수신한 측정값을 기초로 수행하거나(SET-Assisted), SET2가 SLP2로부터 획득된 머시스턴스 데이터를 기초로 수행한다(SET-Based). 각 측위세션이 종료되면 SLP2는 계산된 SET2의 위치와 상기 SLP1으로부터 수신한 위치인 defined area를 비교한다. 비교결과 상기 계산된 SET2의 위치가 상기 defined area에 해당하면 다음 단계로 진행하고 해당하지 않으면 상기 단계(S59)를 반복적으로 수행한다.

만약, 상기 계산된 SET2의 위치가 상기 SET1이 지정한 특정 위치에 해당하면, SLP2는 SET2로 세션 종료 메시지(SUPL END)를 전송하여 측위 세션을 종료하고(S60), 상기 SET2의 위치비교 결과값(posresult)을 RLP SSRILR메시지에 포함시켜 SLP1으로 전송한다(S61).

따라서, SLP1은 SET2의 위치비교 결과값(posresult)을 SUPL END메시지에 포함시켜 SET1으로 전송하고(S62), 상기 SET1은 SLP1과 안전한 IP연결을 해지하고, 이 세션과 관련된 모든 자원을 해제한다.

도 5는 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제5실시예를 나타낸다. 본 발명의 제5실시예는 상기 제4실시예와 아주 유사하지만 SLP2로 RLP메시지를 전송하기 전에 SLP1과 SET1간의 연결을 종료하는 점이 상이하다. 즉, 제4실시예에서는 단계(S62)가 수행될 때까지 SET1과 SLP1간의 IP연결이 유지되어 불필요하게 무선자원이 낭비된다.

따라서, SLP1은 SET1으로 SUPL END메시지를 전송하여 SET1과 SLP1간의 IP연결을 종료한 후(S70) RLP프로토콜 메시지(RLP SSRILR)를 이용하여 SET2의 위치서버인 SLP2에게 트리거 서비스(Triggered Service)를 요청한다. 이하 단계(S53-S61)는 제4실시예와 동일하며 그 상세한 설명은 생략하기로 한다.

이후, SLP2로부터 원하는 SET2의 트리거 결과(posresult)가 수신되면(S53), SLP1은 해당 트리거 결과를 SUPL 보고 메시지(SUPL REPORT)를 통해 SET1에게 전송한다(S71). 상기 SUPL REPORT메시지는 WAP PUSH 또는 SMS 트리거 등을 통해 전송된다.

도 6은 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제6실시예를 나타낸다. 본 발명의 제6실시예는 SUPL END메시지를 전송하여 SET1과 SLP1간의 IP연결을 종료한다는 점에서 상기 제5실시예와 유사하지만, 상기 SUPL END메시지를 전송하는 시점이 다르다.

즉, 본 발명의 제5실시예에서는 SLP1과 SET1간의 측위절차가 종료된 후에 바로 SUPL END메시지가 전송되지만, 본 발명의 제6실시예에서는 SLP2로부터 SLP2와 SET2간의 측위세션이 시작될 것이 확인되었을 때만 바로 전송된다. 이러한 확인은 SLP2가 SET2로부터 SUPL TRIGGERED START메시지를 수신하여 SLP2가 SLP1으로 RLP SSRILR END메시지를 수신함으로써 달성된다.

따라서, SET2로부터 SUPL TRIGGERED START메시지가 수신되면 SLP1으로 RLP SSRILR END메시지를 전송한 후(S80) SLP2는 트리거 세션이 개시되었음을 알리기 위하여 SET2로 SUPL TRIGGERED RESPONSE메시지를 전송한다(S81). 이후의 동작(S58-S61)은 제5실시예와 동일하며 그 상세한 설명은 생략한다.

상기 RLP SSRILR END메시지를 수신한 SLP1은 SET1과 SLP1간의 연결을 종료하기 위하여 SUPL END메시지를 SET1으로 전송하고(S81), 이후, 상기 SLP2로부터 원하는 SET2의 트리거 결과(posresult)가 수신되면(S61) 해당 트리거 결과를 SUPL 보고 메시지(SUPL REPORT)를 통해 SET1에게 전송한다(S82). 상기 SUPL REPORT메시지는 WAP PUSH 또는 SMS 트리거 등을 통해 전송된다.

도 7은 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제7실시예를 나타낸다.

도 7에 도시된 바와같이, SET1에 있는 SUPL 에이전트는 SET1에서 동작하고 있는 어플리케이션으로부터 목표(target) SET의 위치관련 요청을 수신한다. 바람직하게, 상기 위치관련 요청은 SET2의 위치를 위한 주기적인(periodic) 또는 지역적(area)인 이벤트 요청을 의미한다. 이때 도 7은 위치관련 요청이 지역적(area)인 이벤트 요청인 경우를 나타낸다.

상기 위치관련 요청이 수신되면, SET1은 현재 어떤 네트워크에도 데이터 접속이 설정되어 있지 않은 경우 패킷 데이터 네트워크에 연결한다(S90).

상기 데이터 접속이 설정되면, SET1은 홈 네트워크로부터 제공된 기본(default)주소를 이용하여 위치서버인 SLP1과 안전한 IP연결을 설정하고, 목표 SET2의 측위 세션을 시작하기 위하여 상기 SLP1으로 SET초기화(SUPL SET INIT) 메시지를 전송한다(S91).

상기 SUPL SET INIT메시지에는 session-id, target SETid, 트리거 모드(triggered mode) 및 트리거 정보(trigger information)등이 포함되어 있다. 여기서, 상기 target SETid는 목표 SET2의 식별자이고, 상기 트리거 모드는 다른 SET의 트리거 서비스(SET initiated trigger service of another SET type)를 나타내며, 주기적 이벤트(Periodic event) 또는 지역 이벤트(area event) 파라미터를 포함한다. 상기 triggered service mode는 도 1~도 6에 도시된 요청 타입과 동일하게 사용된다. 상기 트리거 정보는 트리거 세션의 파라미터들을 나타내며, 주기적 파라미터들(Periodic Parameters)과 지역 이벤트 파라미터들(Area Event Parameters)을 포함한다. 일 예로 주기적 파라미터에는 트리거 주기가 포함되며, 상기 지역 이벤트 파라미터는 defined area 및 event type를 포함한다.

상기 SLP1은 상기 트리거 서비스 요청을 받았음을 확인하기(acknowledge)위하여 SUPL END메시지를 SET1으로 전송하고(S92), 상기 SUPL END메시지에 따라 SET1은 안전한 IP연결을 해제하고 이 세션에 관련된 모든 무선자원을 해제한다. 또한, 상기 SLP1은 SUPL SET INIT메시지에 포함된 목표 SETid(라우팅 정보)를 이용하여 목표 SET2의 위치서버(SLP2)를 결정한다(S93). 즉, SLP1은 로컬 DNS서버 또는 SET2 어드레스 정보를 SLP2 접촉(contact)에 사용할 수 있는 정보로 해석(translate)할 수 있는 다른 개체에 접촉하여 SLP2를 결정한다.

일단 SLP2가 결정되면, SLP1은 목표 SET2의 위치서버(SLP2)로 트리거 위치 요청 메시지(triggered location request message)를 전송한다(S94). 상기 트리거 위치 요청 메시지에는 상기 session-id, target SETid, 트리거 모드(triggered mode) 및 트리거 정보(trigger information)등이 포함될 것이다.

따라서, 상기 트리거 위치 요청 메시지르 수신한 SLP2는 수신한 트리거 모드(triggered mode) 및 트리거 정보(trigger information)를 이용하여 상기 SET1이 요청한 트리거 서비스 종류(Periodic 또는 area event)를 판단할 수 있다. 이러한 판단을 기초로 도 7에 도시된 실시예 또는 후술할 도 8에 도시된 실시예를 수행한다.

상기 SLP2는 SET1이 요청한 트리거 서비스에 대해 권한이 있는 경우 상기 SET1을 인증하고 SET1에 대하여 가입자 프라이버시를 적용한다. 만약, SET1이 인증되고 통지 및 검증이 요구되면, SLP2는 SET2로 트리거 위치 요청(network initiated triggered location request) 메시지를 전송하여, SET2의 위치를 계산하기 위하여 SUPL 위치측정 방법(SUPL positioning method)를 이용하여 측위절차(network initiated positioning procedures)를 수행한다(S95).

그런데, 만약 이전에 계산한 위치가 SET1이 요청한 QoP(Quality of Position)를 만족하고, 통지 및 검증이 요구되지 않은 경우 SLP2는 상기 단계(S95)를 수행하지 않고 바로 다음 단계(S96)로 진행한다.

상기 SET2의 위치계산이 완료되면 SLP2는 상기 계산된 위치를 트리거 정보의 defined area와 비교하여, 해당 영역에서 지역 이벤트가 발생되었는지 체크한다. 체크결과, 지역 이벤트가 발생되면 SLP2는 SLP1으로 트리거 위치 응답(triggered location response) 메시지를 전송하고(S96), 상기 SLP1은 수신한 SET2의 위치정보(Position information)를 SUPL REPORT메시지를 통해 SET1으로 전송한다(S97).

도 8은 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제8실시예로서, 도 7에서 위치관련 요청이 주기적인(periodic) 경우를 나타낸다.

즉, SET1에 있는 SUPL 에이전트는 SET1에서 동작하고 있는 어플리케이션으로부터 주기적인(periodic) 이벤트 요청을 수신한다.

상기 주기적인 위치요청이 수신되면, SET1은 패킷 데이터 네트워크에 연결한후(S100), 홈 네트워크로부터 제공된 기본 주소를 이용하여 SLP1과 안전한 IP연결을 설정하고, 목표 SET2의 측위 세션을 시작하기 위해 SLP1으로 SUPL SET INIT 메시지를 전송한다(S101).

상기 SUPL SET INIT메시지에는 도 7에서와 같이 session-id, target SETid, 트리거 모드(triggered mode) 및 트리거 정보(trigger information)등이 포함된다. 여기서, 상기 트리거 모드는 주기적 이벤트(Periodic event)로 설정되고, 상기 트리거 정보는 주기적 파라미터들(Periodic Parameters), 예를들면 트리거 주기가 포함된다.

상기 SLP1은 SUPL SET INIT메시지에 포함된 목표 SETid(라우팅 정보)를 이용하여 목표 SET2의 위치서버(SLP2)를 결정한다(S102)

일단 SLP2가 결정되면, SLP1은 목표 SET2의 위치서버(SLP2)로 트리거 위치 요청 메시지(triggered location request message)를 전송한다(S103). 상기 트리거 위치 요청 메시지에는 상기 session-id, target SETid, 트리거 모드(triggered mode) 및 트리거 정보(trigger information)등이 포함된다.

상기 SLP2는 SET1을 인증하고 SET1에 대하여 가입자 프라이버시를 적용하는데, 만약, SET1이 인증되고 통지 및 검증이 요구되면, SLP2는 SET2로 트리거 위치 요청(network initiated triggered location request) 메시지를 전송하여, SET2의 위치를 계산하기 위한 측위절차(network initiated positioning procedures)를 수행한다(S104).

그런데, 만약 이전에 계산한 위치가 SET1이 요청한 QoP(Quality of Position)를 만족하고, 통지 및 검증이 요구되지 않은 경우 SLP2는 상기 단계(S95)를 수행하지 않고 바로 다음 단계(S109)로 진행한다.

따라서, SLP2는 상기 트리거 정보에 포함된 주기정보를 근거로 각 주기마다 SET2의 위치를 계산하며, 그 계산된 위치를 트리거 위치 응답(triggered location response) 메시지에 포함시켜 SLP1으로 전송하고(S105, S107)로 전송하고, 상기 SLP1은 수신한 SET2의 위치를 SUPL REPORT메시지를 통해 SET1으로 전송한다(S106, S108).

이후 마지막 주기에서 상기 SET2의 위치계산이 종료되면, 마찬가지로 SLP2는 그 계산된 위치를 트리거 위치 응답 메시지를 통해 SLP1으로 전송하고(S109)로 전송하고, 상기 SLP1은 수신한 SET2의 위치를 SUPL REPORT메시지를 통해 SET1으로 전송한다(S110). 여기서 인덱스(index)는 각 주기를 나타낸다.

본 발명에서 SET는 SUPL네트워크와 통신할 수 있는 소자로서, UMTS의 UE(User Equipment), GSM의 MS(Mobile Station) 또는 IS-95 MS 중의 하나일 수 있으며, 본 발명에서는 단말과 동일한 의미로 사용된다.

발명의 효과

상술한 바와같이 본 발명은 SUPL에 기반한 위치정보 시스템에서 사용자가 자신의 단말을 이용하여 원하는 상대방의 트리거 위치 서비스(Triggered Location Service)를 요청함으로써 사용자에게 보다 편리함을 제공할 수 있다.

본 발명은 도면에 도시된 실시예를 참고로 설명되었으나 이는 예시적인 것에 불과하며, 본 기술 분야의 통상의 지식을 가진 자라면 이로부터 다양한 변형 및 균등한 타 실시예가 가능하다는 점을 이해할 것이다. 따라서, 본 발명의 진정한 기술적 보호 범위는 첨부된 특허청구범위의 기술적 사상에 의해 정해져야 할 것이다.

청구의 범위

청구항 1

제1단말이 특정 영역에서 제2단말의 트리거 서비스를 요청하는 단계와;

상기 제1단말의 제1네트워크가 제2단말의 제2네트워크로 상기 트리거 서비스 요청을 전달하는 단계와;

상기 제2네트워크가 제2단말과 측위 세션을 개시하여 제2단말의 위치를 계산하는 단계와;

상기 제2네트워크가 상기 계산된 위치를 제1단말이 지정한 특정 영역과 비교하여, 특정 영역에서의 지역 이벤트 발생을 제1단말로 통지하는 단계를 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 2

제1항에 있어서, 상기 제1, 제2네트워크는

위치서버를 나타내는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 3

제1항에 있어서, 상기 제1, 제2단말은

SET(SUPL Enabled Terminal)를 나타내는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 4

제2항에 있어서, 상기 위치서버는

SLP(SUPL Location Platform)를 나타내는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 5

제3항에 있어서, 상기 SET는

UMTS의 UE(User Equipment), GSM의 MS(Mobile Station) 또는 IS-95 MS 중의 어느 하나인 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 6

제1항에 있어서, 상기 트리거 서비스는

세션 시작 메시지를 통해 요청되는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 7

제6항에 있어서, 상기 세션 시작 메시지는

session-id, SET capabilities, 위치식별자, msid, request type, defined area 및 event type을 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 8

제7항에 있어서, 상기 request type은

서비스 요청이 특정 위치와 관련된 트리거 서비스임을 나타내는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 9

제7항에 있어서, 상기 defined area는 특정 지역을 나타내며, 상기 event type은 어떠한 지역 이벤트를 원하는지를 나타내는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 10

제9항에 있어서, 상기 defined area는 좌표나 지역이름을 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청 방법.

청구항 11

제1항에 있어서, 상기 트리거 서비스 요청은 RLP메시지를 통해 제1네트워크에서 제2네트워크로 전달되는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 12

제1항에 있어서, 상기 제2단말과의 측위 세션이 개시되면 제2네트워크가 RLP메시지를 통해 제1네트워크로 트리거 세션이 시작되었음을 알리는 단계와;

상기 제1네트워크가 제1단말로 세션 종료 메시지를 전송하여 제1단말과 제1네트워크간의 연결을 종료하는 단계를 추가로 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 13

제1항에 있어서, 상기 제2네트워크는

상기 계산된 위치가 상기 제1단말이 지정한 특정 영역에 해당할 때까지 제2단말의 위치계산 및 비교동작을 반복적으로 수행하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 14

제1항에 있어서, 상기 제1네트워크는

세션 보고 메시지를 통해 상기 결과값을 제1단말로 전달하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 15

제14항에 있어서, 상기 세션 보고 메시지는

WAP PUSH 또는 SMS 트리거 등을 통해 전송되는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 16

제1항에 있어서, 상기 통지 단계는

제2네트워크가 상기 계산된 위치가 제1단말이 지정한 특정 영역에 해당하는지 비교하는 단계와;

상기 계산된 위치가 상기 제1단말이 지정한 특정 영역에 해당할 경우 그 결과값을 제1네트워크를 통해 제1단말로 전송하는 단계를 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 17

제1단말이 제1위치서버로 제2단말의 트리거 서비스를 요청하는 단계와;

상기 제1위치서버가 제2위치서버로 트리거 서비스 요청을 전달하는 단계와;

상기 제2위치서버가 제2단말과 측위 세션을 개시하여 제2단말의 위치를 계산하는 단계와;

상기 제2위치서버가 상기 제1단말의 트리거 서비스 타입에 따라 상기 제1위치서버를 통해 주기적인 위치추적 서비스 또는 지역관련 위치추적 서비스를 제공하는 단계를 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 18

제17항에 있어서, 상기 제1위치서버가 상기 트리거 서비스를 요청한 제2단말의 ID를 이용하여 제2위치서버를 결정하는 단계를 추가로 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 19

제17항에 있어서, 상기 제1, 제2위치서버는

SLP(SUPL Location Platform)을 나타내는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 20

제17항에 있어서, 상기 트리거 서비스는

SET 초기화 메시지를 통해 요청되는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스

스 요청방법.

청구항 21

제17항에 있어서, 상기 SET 초기화 메시지는

session-id, 목표 SETid, 트리거 모드, 트리거 정보를 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 22

제21항에 있어서, 상기 트리거 모드는

다른 SET의 트리거 서비스를 나타내며, 주기적 이벤트 또는 지역 이벤트 파라미터를 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 23

제21항에 있어서, 상기 트리거 정보는

트리거 세션의 파라미터들을 나타내며, 주기적 파라미터와 지역 이벤트 파라미터를 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 24

제23항에 있어서, 상기 주기적 파라미터는

주기정보를 포함하고, 상기 지역 이벤트 파라미터는 특정 지역을 나타내는 defined area 및 어떠한 지역 이벤트를 원하는지를 나타내는 이벤트 타입(event type)을 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 25

제24항에 있어서, 상기 defined area는

좌표나 지역이름을 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 26

제17항에 있어서, 상기 제2위치서버는

제1단말의 트리거 서비스 요청을 분석하여, 제1단말이 주기적인 트리거 서비스를 요청한 것으로 판단되면 각 주기마다 상기 제2단말의 위치를 제1위치서버를 통해 제1단말로 보고하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 27

제17항에 있어서, 상기 제2위치서버는

상기 제1단말이 지역이벤트 트리거 서비스를 요청한 것으로 판되면, 상기 계산된 위치를 제1단말이 지정한 특정 영역과 비교하여, 특정 영역에서의 지역 이벤트 발생을 제1단말로 통지하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 28

제1단말이 SET 초기화 메시지를 통해 제1위치서버로 제2단말의 위치추적을 요청하는 단계와;

상기 제1위치서버가 위치 요청 메시지를 통해 제2서버로 제2단말의 위치추적 요청을 전달하는 단계와;

상기 제2위치서버가 주기적으로 제2단말과 위치추적절차를 수행하여 제2단말의 위치를 계산하는 단계와;

상기 제1위치서버가 제2위치서버에서 계산된 제2단말의 위치값들을 각 위치 응답 메시지를 통해 수신하며, 상기 제1단말로 보고하는 단계를 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 29

제28항에 있어서, 상기 제2위치서버가 상기 계산된 제2단말의 위치를 제1위치서버로 전송하는 단계를 추가로 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 30

제28항에 있어서, 상기 제2위치서버로부터 제2단말의 마지막 위치가 수신되면, 제1위치서버가 해당 위치값을 포함하는 세션 종료 메시지를 제1단말로 전송하는 단계를 추가로 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법

청구항 31

제28항에 있어서, 상기 제1위치서버가 상기 SET 초기화 메시지에 포함된 제2단말의 식별자를 이용하여 제2위치서버를 결정하는 단계를 추가로 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 32

제28항에 있어서, 상기 제1,제2위치서버는

각각 제1,제2단말의 홈 네트워크에 존재하며, SLP(SUPL Location Platform)을 나타내는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 33

제28항에 있어서, 상기 SET 초기화 메시지는

session-id, 제2단말의 id, 트리거 모드 및 트리거 정보를 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 34

제33항에 있어서, 상기 트리거 모드는

다른 SET의 트리거 서비스를 나타내며, 주기적 이벤트 또는 지역 이벤트 파라미터를 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 35

제33항에 있어서, 상기 트리거 정보는

트리거 세션의 파라미터들을 나타내며, 주기적 파라미터와 지역 이벤트 파라미터를 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 36

제34항에 있어서, 상기 주기적 파라미터는

주기정보를 포함하며, 상기 지역 이벤트 파라미터는 특정 지역을 나타내는 defined area 및 어떠한 지역 이벤트를 원하는지를 나타내는 이벤트 타입(event type)을 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

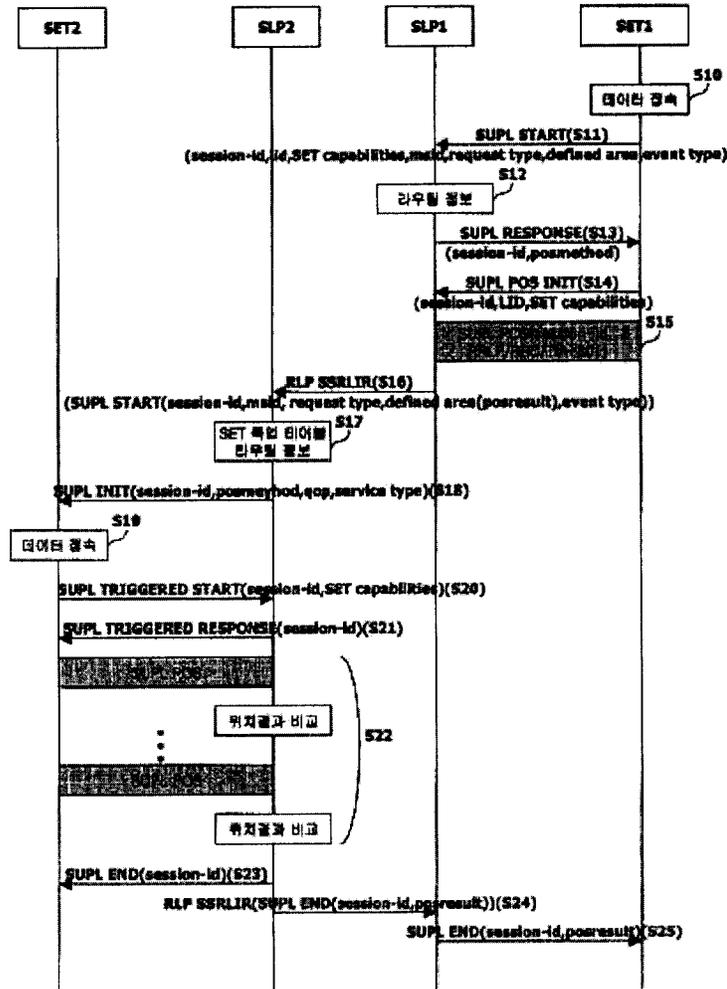
청구항 37

제36항에 있어서, 상기 defined area는

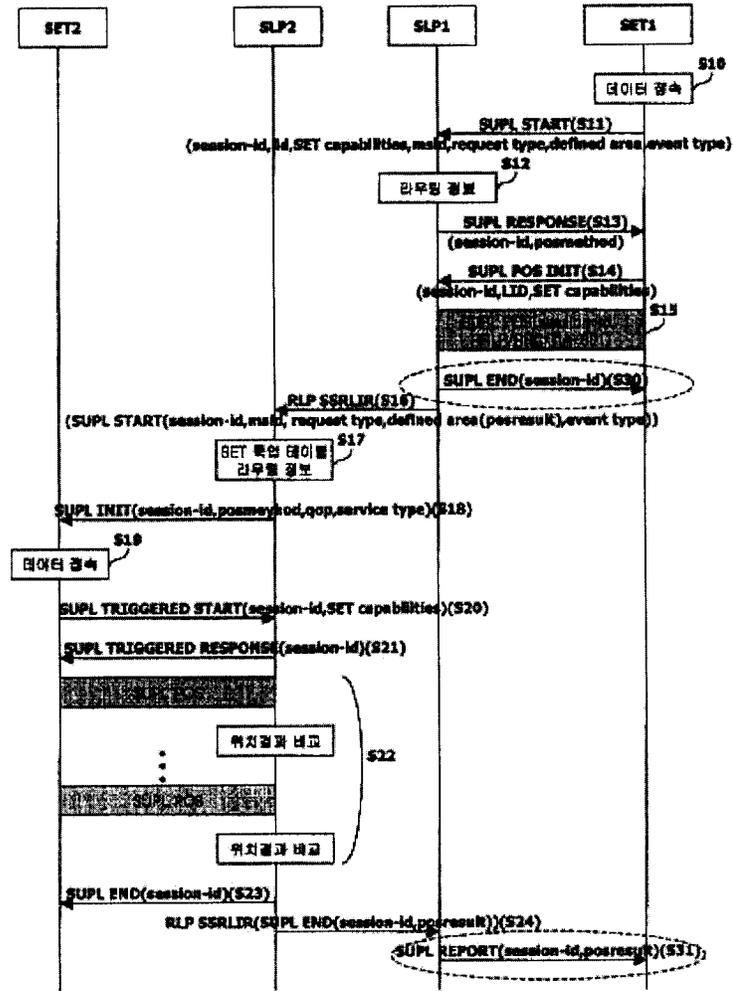
좌표나 지역이름을 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

도면

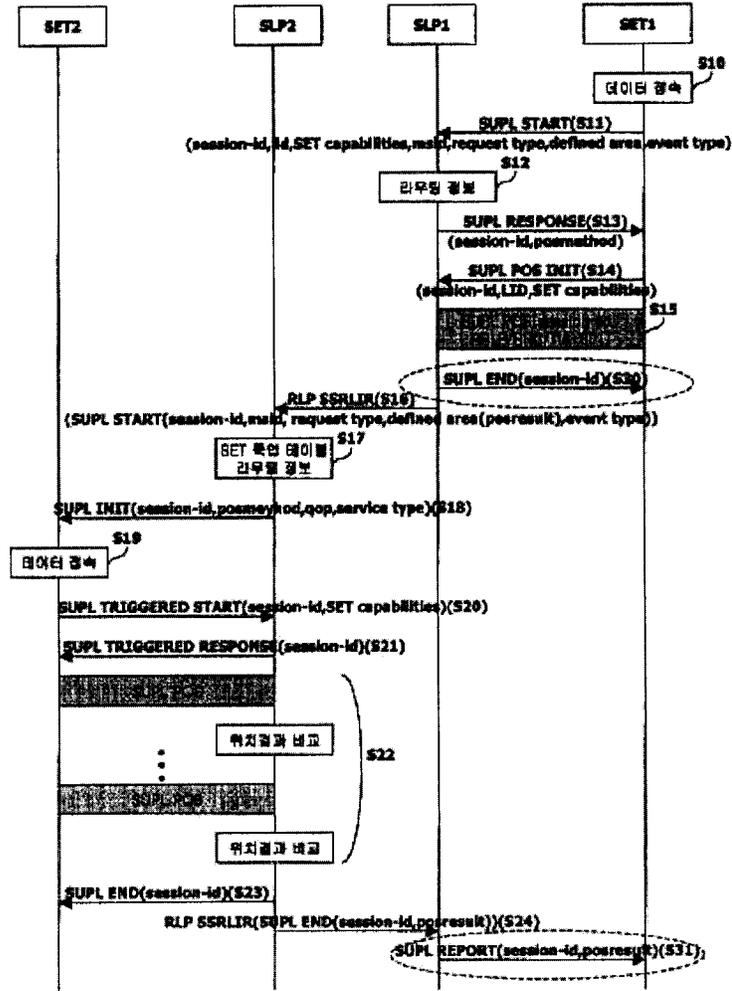
도면 1



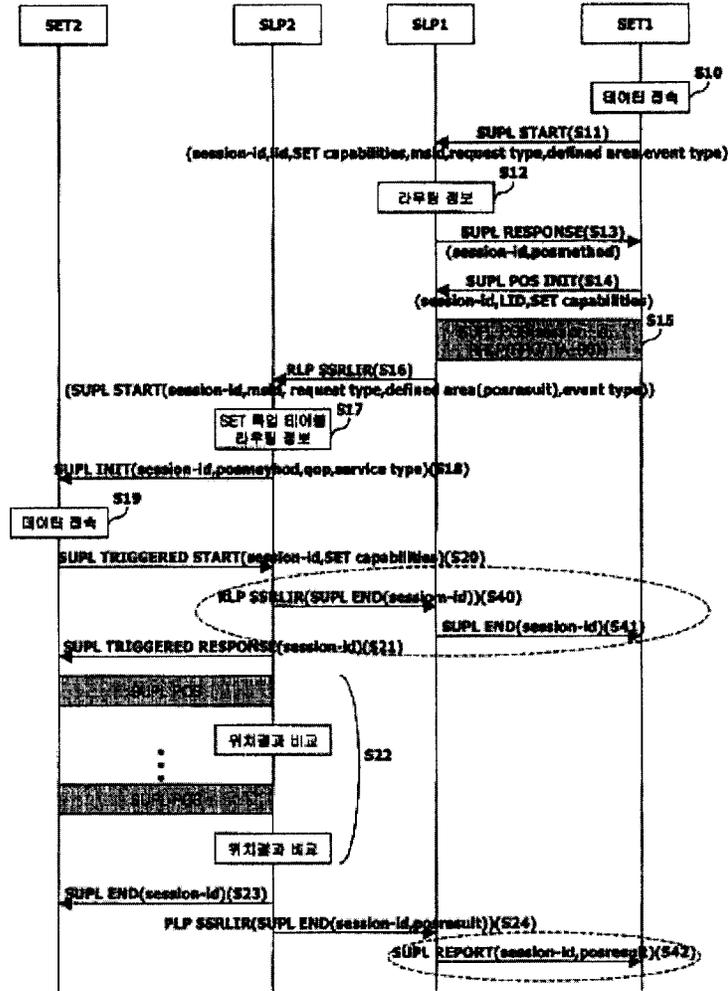
도면2



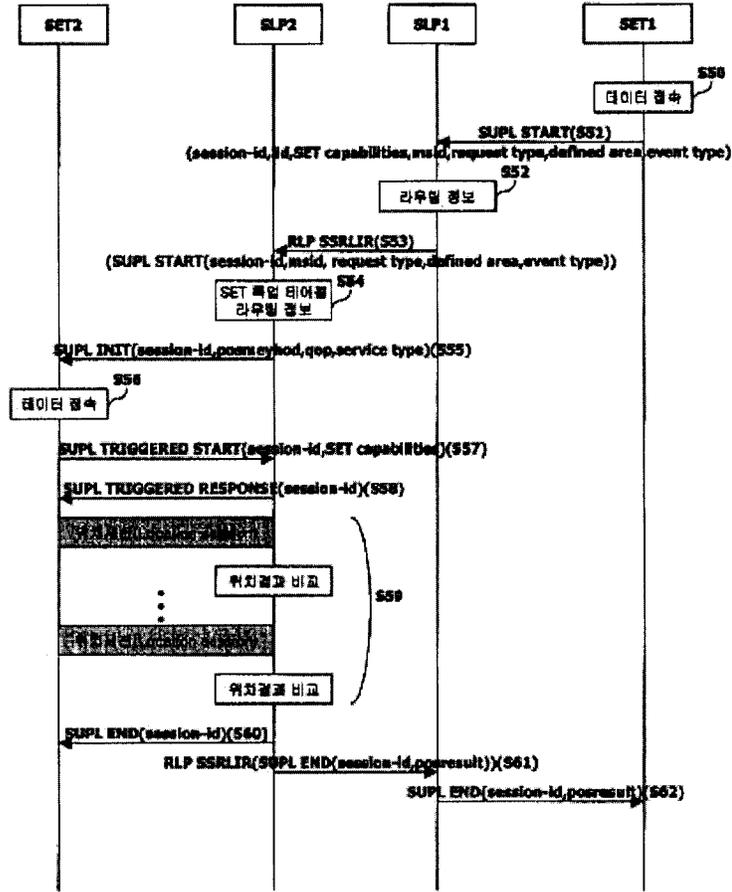
도면2



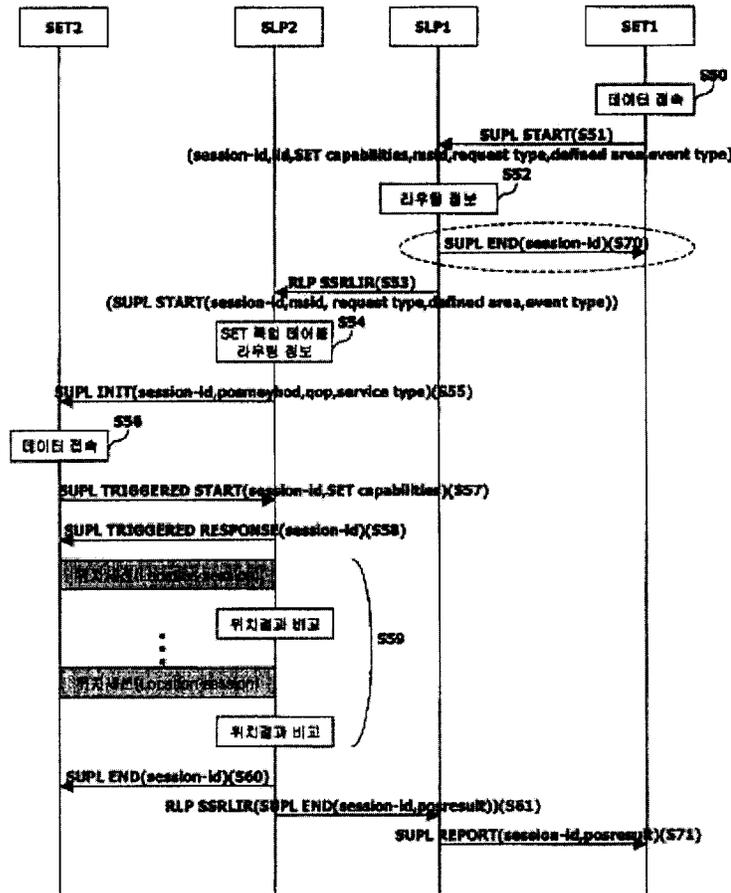
도면3



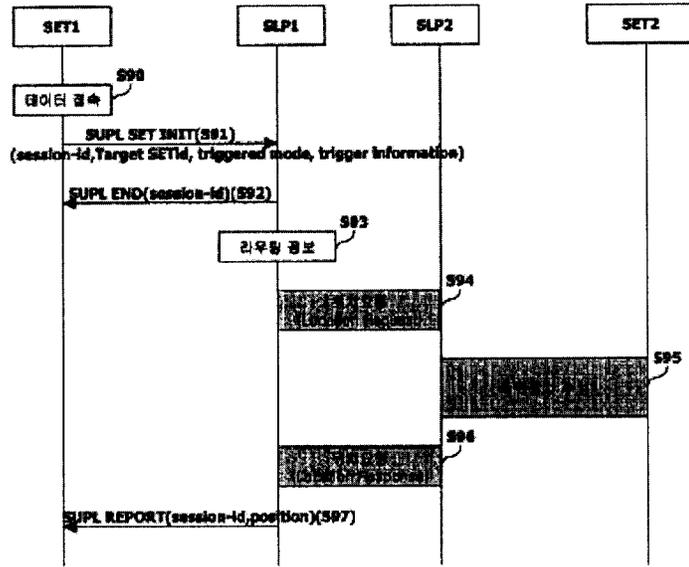
도면4



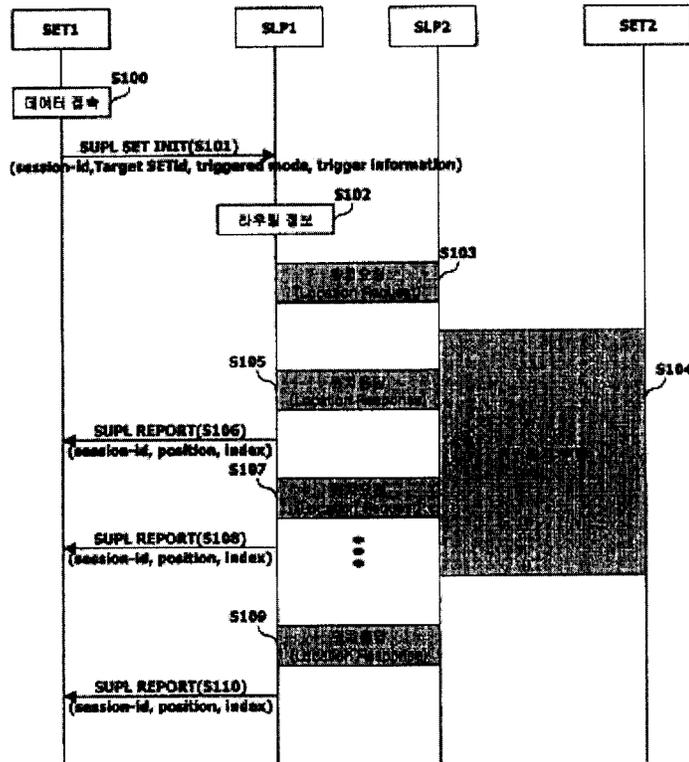
도면5



도 87



도 88



PATENT COOPERATION TREATY

PALM962WO
Shemwell Mahamedi

Received
JAN 22 2007

From the INTERNATIONAL SEARCHING AUTHORITY

PCT Intellectual Property Law

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT AND THE WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY, OR THE DECLARATION

To:
SHEMWELL MAHAMEDI LLP
Attn. Mahamedi, Van
4880 Stevens Creek Blvd., Suite 201
San Jose, CA 95129
ETATS-UNIS D'AMERIQUE

(PCT Rule 44.1)

Date of mailing (day/month/year)	15/01/2007
-------------------------------------	------------

Applicant's or agent's file reference PALM.0962WO 4060.PALM.PCT	FOR FURTHER ACTION See paragraphs 1 and 4 below
--	--

International application No. PCT/US2006/030827	International filing date (day/month/year) 07/08/2006
--	--

Applicant
PALM, INC. David Champion et al.

1. The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

When? The time limit for filing such amendments is normally two months from the date of transmittal of the International Search Report.

Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes
1211 Geneva 20, Switzerland, Fascimile No.: (41-22) 338.82.70

For more detailed instructions, see the notes on the accompanying sheet.

2. The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. Reminders

Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the International Searching Authority
European Patent Office, P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer
Alistair Finnie

DDK [Signature]
Action *sent search report*
Due Date *30 days past*
Final Date
Report Out

NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the *PCT Applicant's Guide*, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions, respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report and the written opinion of the International Searching Authority, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only (see *PCT Applicant's Guide*, Volume I/A, Annexes B1 and B2).

The attention of the applicant is drawn to the fact that amendments to the claims under Article 19 are not allowed where the International Searching Authority has declared, under Article 17(2), that no international search report would be established (see *PCT Applicant's Guide*, Volume I/A, paragraph 296).

What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference PALM.0962WO	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2006/030827	International filing date (day/month/year) 07/08/2006	(Earliest) Priority Date (day/month/year) 08/08/2005
Applicant PALM, INC.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

- the international application in the language in which it was filed
- a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. **Certain claims were found unsearchable** (See Box No. II)

3. **Unity of invention is lacking** (see Box No III)

4. With regard to the **title**,

- the text is approved as submitted by the applicant
- the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- the text is approved as submitted by the applicant
- the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 1
 - as suggested by the applicant
 - as selected by this Authority, because the applicant failed to suggest a figure
 - as selected by this Authority, because this figure better characterizes the invention
- b. none of the figures is to be published with the abstract

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2006/030827

A. CLASSIFICATION OF SUBJECT MATTER
INV. H04L12/58 H04Q7/22

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
H04L H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	NOKIA: "Nokia 6630 User's Guide"[Online] 28 March 2005 (2005-03-28), pages 1-109, XP002413106 Retrieved from the Internet: URL: http://www.vodafone.com.fj/_resources/phone%20manuals/Nokia/Nokia_6630_APAC_UG_en.pdf [retrieved on 2007-01-03]	1-7, 12-26, 31-59
A	----- pages 21,83 -/--	8-11, 27-30

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

4 January 2007

Date of mailing of the international search report

15/01/2007

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Ramenzoni, Stefano

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2006/030827

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>"Internet telephony Manager (ITM) User guide"[Online] 1 December 1996 (1996-12-01), pages 1-5, XP002413107 Retrieved from the Internet: URL:http://www.cs.columbia.edu/{hgs/teachi ng/ais/1996/projects/itm/usernew.html}> [retrieved on 2007-01-03] the whole document</p>	<p>1, 20, 39, 44, 49, 55, 56</p>
X	<p>EP 0 611 239 A1 (IBM [US]) 17 August 1994 (1994-08-17)</p> <p>abstract page 2, line 30 - line 66 page 3, line 21 - page 4, line 10 page 4, line 20 - line 54 figure 2</p>	<p>1-3, 7-12, 17-21, 26-31, 35-39, 42-44, 49, 55, 56</p>
X	<p>SHARMA A K ET AL: "Intelligent agents in call management system" INTEGRATION OF KNOWLEDGE INTENSIVE MULTI-AGENT SYSTEMS, 2005. INTERNATIONAL CONFERENCE ON WESTIN HOTEL, WALTHAM, MA, USA APRIL 18-21, 2005, PISCATAWAY, NJ, USA, IEEE, 18 April 2005 (2005-04-18), pages 9-14, XP010793134 ISBN: 0-7803-9013-X page 10, right-hand column, line 7 - line 15 page 10, right-hand column, line 29 - page 11, left-hand column, line 16 figures 2,5</p>	<p>1, 20, 39, 44, 49, 55, 56</p>

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2006/030827

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0611239	A1	17-08-1994	
		DE 69417279 D1	29-04-1999
		DE 69417279 T2	14-10-1999
		JP 2699995 B2	19-01-1998
		JP 6253002 A	09-09-1994
		US 5555291 A	10-09-1996

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**
(PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2006/030827

International filing date (day/month/year)
07.08.2006

Priority date (day/month/year)
08.08.2005

International Patent Classification (IPC) or both national classification and IPC
INV. H04L12/58 H04Q7/22

Applicant
PALM, INC.

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1 (a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Date of completion of
this opinion

see form
PCT/ISA/210

Authorized Officer

Ramenzoni, Stefano

Telephone No. +49 89 2399-7146



Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - the international application in the language in which it was filed
 - a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - a sequence listing
 - table(s) related to the sequence listing
 - b. format of material:
 - on paper
 - in electronic form
 - c. time of filing/furnishing:
 - contained in the international application as filed.
 - filed together with the international application in electronic form.
 - furnished subsequently to this Authority for the purposes of search.
3. In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	8-11, 27-30
	No: Claims	1-7, 12-26, 31-59
Inventive step (IS)	Yes: Claims	
	No: Claims	8-11, 27-30
Industrial applicability (IA)	Yes: Claims	1-59
	No: Claims	

2. Citations and explanations

see separate sheet

Reference is made to the following documents:

- D1:** "Nokia 6630 User's Guide"; 28.03.2005; pages 1-109; XP002413106
- D2:** "Internet Telephony Manager (ITM) User guide"; 1.12.1996; pages 1-5; XP002413107
- D3:** EP-A-0 611 239
- D4:** Sharma A K; Juneja D; Bishnoi C; "Intelligent agents in call management system"; Integration of Knowledge Intensive Multi-Agent Systems, 2005. International Conference on Westin Hotel, Waltham, MA, USA April 18-21, 2005, Piscataway, NJ, USA, IEEE; 2005-04-18; pages 9-14; XP010793134

A. Remarks made in respect of the present application:

1. The application does not meet the requirements of Article 6 PCT, because claims **1, 4, 7, 8, 12, 13, 16 to 18, 20, 31, 32, 35 to 37, 39, 44, 49, 58 and 59** are not clear.
 - 1.1 Although **claims 1 and 44**, related to a method, and **claims 20, 39 and 49**, related to a computing device, have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought and in respect of the terminology used for the features of that subject-matter. The aforementioned claims therefore lack conciseness and as such do not meet the requirements of Article 6 PCT.
 - 1.2 The expression "**message identifier of the other computing device**" used in **independent claims 1 and 20** is unclear and leaves the reader in doubt as to the meaning of the technical features to which it refers, precisely it is not clear if this "identifier" is used for identifying a specific message ("message identifier") or the computing device ("identifier of the other computing device"), thereby rendering the definition of the subject-matter of said claims unclear, Article 6 PCT.
 - 1.3 The expression "**programmatically automatically**" used in **claims 1, 4, 7, 12, 13, 18, 31 and 37** is vague and unclear and leaves the reader in doubt as to the meaning

of the technical features to which it refers, thereby rendering the definition of the subject-matter of said claim unclear, Article 6 PCT.

- 1.4 **Claim 1** does not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined. The expression "**the incoming call**" in line 5 lacks an antecedent and does not enable the skilled person to determine which relation exists between this "incoming call" and the previously defined "incoming communication".
- 1.5 The dependency of **claims 4, 8, 13 and 16 to 18** is not correct: "...method of **any** preceding **claim 1**..."
Since it is not clear how to determine the correct dependency of these claims, lack of clarity of these claims as a whole arises, and the requirement of Article 6 PCT is not met.
- 1.6 The dependency of **claims 13 and 32** (on claims 1 and 20) and of **claims 16, 17, 35 and 36** (on claims 1 and 20) is not correct with respect to the features "... as the address for **a new instant message**" and "... **the** computing **telephony** device", respectively, because these features are not present in claim 1 and claim 20, respectively. Thus, Rule 6.4 (b), (c) PCT is not met.
Since it is not clear how to determine the correct dependency of these claims, lack of clarity of these claims as a whole arises, and the requirement of Article 6 PCT is not met.
- 1.7 **Independent claims 58 and 59** contain a reference to the description and the drawings. According to Rule 6.2(a) PCT, claims should not contain such references except where absolutely necessary, which is not the case here.

B. Citations and explanations made in respect of paragraph V:

1. Document **D1** discloses, according to the **all** the features of **claim 1**, a method for operating a computing device, the method comprising:
receiving an incoming communication from another computing device to initiate

a voice-exchange session (see in particular page 21, chapter "Answering or rejecting a call");

in response to receiving the incoming **communication**, determining a message identifier of the other computing device, wherein the message identifier is determined based at least in part on data provided with the incoming communication (see in particular page 21, chapter "Answering or rejecting a call"; page 83, chapter "Call settings"); and

programmatically automatically addressing a message to the other computing device using the message identifier determined from the incoming communication (see in particular page 21, chapter "Answering or rejecting a call"; page 83, chapter "Call settings").

The subject-matter of claim 1 is therefore **not new** (see Article 33 (2) PCT).

It should furthermore be noted that **even if** novelty of claim 1 were argued based on a slightly different interpretation of the features of said claim and those disclosed in document **D1**, the subject-matter of claim 1 would **not involve an inventive step**, Article 33 (3) PCT, having regard to the disclosure of document **D1** and the normal knowledge of a person skilled in the art of communication devices and related call control techniques.

2. The same objections as made in above paragraph 1 can be based also on the disclosure of documents **D2** (see in particular page 2, chapter "Let ITM know your activity from CM (Passive Mode)"), which describes an application managing Internet telephony, **D3** (see in particular abstract; page 2, lines 30 to 66; page 3, line 21 to page 4, line 10; page 4, lines 20 to 54; Figure 2), which describes a method for automatically responding messages to a calling party, or **D4** (see page 10, right column, lines 7 to 15; page 10, right column, line 29 to page 11, left column, line 16 - "... SMS will be sent to all the callers."; Figures 2 and 5) which describes a call management systems architecture based on intelligent software agents.
3. The same considerations as made in above paragraphs 1 and 2 regarding claim 1

are also valid for **independent claims 20, 39, 44, 49, 55 and 56** since claims 20, 39, 44, 49, 55 and 56 include the same feature combination as claim 1 in terms of claims relating to a "method" (claim 44), a "computing device" (claims 20, 39 and 49), a "computer program" (claim 55) and a "carrier medium" (claim 56).

4. **Dependent claims 2 to 19, 21 to 38, 40 to 43, 45 to 48, 50 to 54 and 57** do not contain any additional features which, in combination with the features of any claim to which they refer, involve an inventive step for the reason that the subject-matter of said claims is **either in principle** directly derivable from the disclosure of documents **D1, D2, D3, D4**, or represents simple design details which are generally known to the person skilled in the field of communication devices and related call control techniques.

Dependent claims 2 to 19, 21 to 38, 40 to 43, 45 to 48, 50 to 54 and 57 therefore **do not** meet the requirements of Article 33 (3) PCT.

C. Further remarks made in respect of the present application:

1. To meet the requirements of Rule 5.1 (a) (ii) PCT, documents **D1, D3 and D4** which represent a relevant state of the art with regard to the present invention, should be identified in the opening part of the description and the relevant background art disclosed therein should be briefly discussed, making clear what is the inventive contribution of the claimed invention over the prior art.
2. To meet the requirements of Rule 6.3 (b) PCT, any independent claim should be **correctly** cast in the **two-part form**, with those features which in combination are part of the nearest prior art being placed in the preamble.
3. The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).
4. The opening part of the description should be **brought into conformity** with the

wording of any new or amended independent claim(s), Rule 5.1 (a) (iii) PCT.

5. The sentence " ... means messages that when transmitted to a recipient, **or rendered** on a device ...immediately, ..." in the description, paragraph [017], should be reformulated.
6. The attention of the Applicant is drawn to the fact that the application may **not** be amended in such a way that it contains subject-matter which extends **beyond** the content of the application as filed, Article 34 (2) (b) PCT.

In his letter of reply, the Applicant should indicate the parts of the originally filed application serving as a basis for subject-matter newly introduced into the claims.

7. The Applicant is requested to file amendments by way of **replacement pages** in accordance with Rule 66.8 PCT.

Bitte beachten Sie, dass angeführte Nichtpatentliteratur (wie z. B. wissenschaftliche oder technische Dokumente) je nach geltendem Recht dem Urheberrechtsschutz und/oder anderen Schutzarten für schriftliche Werke unterliegen könnte. Die Vervielfältigung urheberrechtlich geschützter Texte, ihre Verwendung in anderen elektronischen oder gedruckten Publikationen und ihre Weitergabe an Dritte ist ohne ausdrückliche Zustimmung des Rechtsinhabers nicht gestattet.

Veillez noter que les ouvrages de la littérature non-brevets qui sont cités, par exemple les documents scientifiques ou techniques, etc., peuvent être protégés par des droits d'auteur et/ou toute autre protection des écrits prévue par les législations applicables. Les textes ainsi protégés ne peuvent être reproduits ni utilisés dans d'autres publications électroniques ou imprimées, ni rediffusés sans l'autorisation expresse du titulaire du droit d'auteur.

Please be aware that cited works of non-patent literature such as scientific or technical documents or the like may be subject to copyright protection and/or any other protection of written works as appropriate based on applicable laws. Copyrighted texts may not be copied or used in other electronic or printed publications or re-distributed without the express permission of the copyright holder.

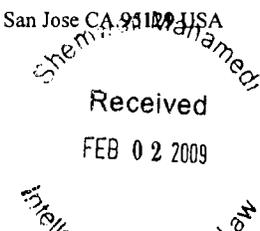
PATENT COOPERATION TREATY

 **COPY**

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

To:
 MAHAMEDI, Van
 Suite 201 4880 Stevens Creek Blvd. San Jose CA 95129 USA


 Received
 FEB 02 2009

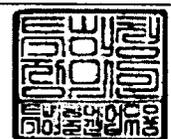
**NOTIFICATION OF TRANSMITTAL OF
 THE INTERNATIONAL SEARCH REPORT AND
 THE WRITTEN OPINION OF THE INTERNATIONAL
 SEARCHING AUTHORITY, OR THE DECLARATION**

(PCT Rule 44.1)

Date of mailing (day/month/year) 29 JANUARY 2009 (29.01.2009)	
Applicant's or agent's file reference PALM_1009WO 4297 PALM PCT	FOR FURTHER ACTION See paragraphs 1 and 4 below
International application No. PCT/US2008/074320	International filing date (day/month/year) 26 AUGUST 2008 (26.08.2008)
Applicant PALM INC. et al	

- The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.
Filing of amendments and statement under Article 19:
 The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):
When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.
Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes
 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70
For more detailed instructions, see the notes on the accompanying sheet.
 - The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.
 - With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:
 - the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.
 - no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.
- 4. Reminders**
 Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.
- The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.
- Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.
- In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.
- See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the ISA/KR  Korean Intellectual Property Office Government Complex-Daejeon, 139 Seonsa-ro, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer COMMISSIONER Telephone No. 82-42-481-8552
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NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under Article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the *PCT Applicant's Guide*, a publication of WIPO.

In these Notes, "Article", "Rule" and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions, respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report and the written opinion of the International Searching Authority, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only (see *PCT Applicant's Guide*, Volume I/A, Annexes B1 and B2).

The attention of the applicant is drawn to the fact that amendments to the claims under Article 19 are not allowed where the International Searching Authority has declared, under Article 17(2), that no international search report would be established (see *PCT Applicant's Guide*, Volume I/A, paragraph 296).

What parts of the international application may be amended ?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Preliminary Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When ? Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments ?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

How ? Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments ?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:
"Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
2. [Where originally there were 15 claims and after amendment of all claims there are 11]:
"Claims 1 to 15 replaced by amended claims 1 to 11."
3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
"Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
"Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
4. [Where various kinds of amendments are made]:
"Claims 1 - 10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under Article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international application is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments and any accompanying statement, under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the time of filing the amendments (and any statement) with the International Bureau, also file with the International Preliminary Examining Authority a copy of such amendments (and of any statement) and, where required, a translation of such amendments for the procedure before that Authority (see Rules 55.3(a) and 62.2, first sentence). For further information, see the Notes to the demand form (PCT/IPEA/401).

If a demand for international preliminary examination is made, the written opinion of the International Searching Authority will, except in certain cases where the International Preliminary Examining Authority did not act as International Searching Authority and where it has notified the International Bureau under Rule 66.1 *bis*(b), be considered to be a written opinion of the International Preliminary Examining Authority. If a demand is made, the applicant may submit to the International Preliminary Examining Authority a reply to the written opinion together, where appropriate, with amendments before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later (Rule 43 *bis*.1(c)).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see the *PCT Applicant's Guide*, Volume II.

* Attention

Copies of the documents cited in the international search report can be searched in the following Korean Intellectual Property Office English website for three months from the date of mailing of the international search report.

<http://www.kipo.go.kr/kpo/eng/> => Patent Search => PCT-Service

ID : PCT international application number
PW : **A4YE3PJG**

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:
MAHAMEDI, Van

Suite 201 4880 Stevens Creek Blvd. San Jose CA 95129 USA

PCT

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) **29 JANUARY 2009 (29.01.2009)**

Applicant's or agent's file reference PALM_1009WO	FOR FURTHER ACTION See paragraph 2 below
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International application No. PCT/US2008/074320	International filing date (day/month/year) 26 AUGUST 2008 (26.08.2008)	Priority date(day/month/year) 30 AUGUST 2007 (30.08.2007)
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International Patent Classification (IPC) or both national classification and IPC

H04B 1/40(2006.01);

Applicant
PALM INC. et al

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.
For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

 <p>Name and mailing address of the ISA/KR Korean Intellectual Property Office Government Complex-Daejeon, 139 Seonsa-ro, Seo-gu, Daejeon 302 -701, Republic of Korea Facsimile No. 82-42-472-7140</p>	<p>Date of completion of this opinion 29 JANUARY 2009 (29.01.2009)</p>	<p>Authorized officer JANG, JIN HWAN Telephone No.82-42-481-5711</p> 
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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2008/074320

Box No. 1 Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of :
 - the international application in the language in which it was filed
 - a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))
2. This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of:
 - a. type of material
 - a sequence listing
 - table(s) related to the sequence listing
 - b. format of material
 - on paper
 - in electronic form
 - c. time of filing/furnishing
 - contained in the international application as filed.
 - filed together with the international application in electronic form.
 - furnished subsequently to this Authority for the purposes of search.
4. In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2008/074320

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-25</u>	YES
	Claims	<u>NONE</u>	NO
Inventive step (IS)	Claims	<u>NONE</u>	YES
	Claims	<u>1-25</u>	NO
Industrial applicability (IA)	Claims	<u>1-25</u>	YES
	Claims	<u>NONE</u>	NO

2. Citations and explanations :

The following documents are referred to:

D1: US 2006-0041470 A1 23 February 2006

D2: KR 10-2007-0078369 A 31 July 2007

The present invention relates to a mobile computing device processing a message incoming into or outgoing from the mobile computing device. A trigger may be detected in association with the message and an operation. The mobile computing device automatically performs or initiates the operation in response to detecting the trigger.

D1 discloses a method and apparatus, including computer program products, for supporting the transmission of short messages between mobile communication devices and computing systems. The computer program product at a first computing system includes techniques for receiving a notification of a triggering event, generating a short message based on the notification, the generated short message including advertisement content, and sending the generated short message to a mobile communications device.

D2 discloses that a method for requesting a triggered location service between terminals in a location information system is provided to allow a user to request a triggered location service of a desired party by using his/her terminal

1. Novelty

Claim 1 differs from D1 and D2 in the features of "detecting_location information, and automatically performing the location-based function using the location information".

Therefore, claim 1 meets the requirements of PCT Article 33(2) with respect to novelty.

Claims 8, 12, 16 and 20 also meet the criteria set out in PCT Article 33(2) because these claims have specific features corresponding to those of claim 1.

Dependent claims 2-7, 9-11, 13-15, 17-19, and 21-25 are also novel because these claims have additional features to independent claims 1, 8, 12, 16 and 20, respectively.

2. Inventive Step

2.1 Concerning Claims 1-7

Claim 1 discloses a method for performing a location-based function, the method comprising: detecting location information in a body of the incoming message; and in response to detecting the location information, automatically performing the location.

However, D1 shows a method comprising: in a first computing system, receiving a notification of a triggering event; generating a short message based on the notification, the generated short message including advertisement content; and sending the generated short message to a mobile communications device (see Fig.3 and corresponding specifications in D1).

(Continued on Supplemental Box)

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2008/074320

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claim 18, referring to claim 16, is not clear because claim 16 does not include the data element described in claim 18. Thus, it is understood that claim 18 should refer to claim 17 instead of claim 16.

Therefore, claim 18 does not meet the requirements of PCT Article 6.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2008/074320

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of :

(Box V)

D2 shows a method for requesting a triggered location service related to an area event. When a triggered service of a second terminal is requested in a certain area from a first terminal, a network of the first terminal transfers the triggered service request to a second network of the second terminal. The second network initiates a positioning session with the second terminal, exchanges positioning messages and calculates a location of the second terminal, then compares the calculated location with a certain area set by the first terminal, and notifies area event occurrence in the certain area to the first terminal (see claim 1 in D2).

Thus, it is obvious to a person skilled in the art to arrive at the present invention by applying the features in D1 and D2.

Therefore, claim 1 is not inventive, nor does it meet the criteria of PCT Article 33(3).

Claim 2 specifies the features of cited claim 1, detecting location information including detecting a trigger that indicates a presence of the location information. However, D2 shows that a service request is a triggered service related to a certain location. Thus, it is obvious to a person skilled in the art to arrive at the present invention by applying the features in D1 and D2.

Therefore, claim 2 is not inventive, nor does it meet the criteria of PCT Article 33(3).

Claims 3-5 specify the features of cited claims 2, 3, and 1 respectively, trigger (claim 3), the designated set of characters (claim 4), and receiving the incoming message (claim 5). However, D1 and D2 show that the event triggering can be obtained by using a message. Thus, it is obvious to a person skilled in the art to arrive at the present invention by applying the features in D1 and D2.

Therefore, claims 3-5 are not inventive, nor do they meet the criteria of PCT Article 33(3).

Claims 6-7 specify the features of cited claims 1 and 6 respectively, detecting the location information (claim 6) and performing the location function (claim 7). However, D2 shows event triggering by using location information. Thus, it is obvious to a person skilled in the art to arrive at the present invention by applying the features in D1 and D2.

Therefore, claims 6-7 are not inventive, nor do they meet the criteria of PCT Article 33(3).

2.2 Concerning Claims 8-11

Claim 8 discloses a method for performing a location-based function on a mobile computing device, the method comprising: detecting an outgoing message, detecting a trigger for performing location based function; responsive to detecting the trigger, performing the location based function to generate a result; and including data corresponding to the result in the outgoing message.

However, D1 shows a method comprising: receiving a notification of a triggering event; generating a short message based on the notification, the generated short message including advertisement content; and sending the generated short message to a mobile communications device. D2 shows a triggered service related to a certain location.

Thus, it is obvious to a person skilled in the art to arrive at the present invention by applying the features in D1 and D2. Therefore, claim 8 is not inventive, nor does it meet the criteria of PCT Article 33(3).

(Continued on Supplemental Box)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2008/074320

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of :

(Supplemental Box)

Claims 9-11 specify the features of cited claim 8, detecting one of an SMS, an instant message, an email, or MMS (claim 9), detecting a trigger (claim 10), and performing the location based function (claim 11). However, D1 and D2 show that the service triggering request can be obtained by using a message. D2 shows event triggering by using location information. Thus, it is obvious to a person skilled in the art to arrive at the present invention by applying the features in D1 and D2.

Therefore, claim 9-11 are not inventive, nor do they meet the criteria of PCT Article 33(3).

2.3 Concerning Claims 12-15

Claim 12 discloses a message stored in a computer-readable medium, the message comprising: a body of the message having a text content; a data element included in a header or in the body of the message that is recognizable, by a device that handles the messages, as a trigger to initiate or automatically perform a function identified or associated with the trigger. However, D1 shows generating a short message based on the notification of a triggering event. In addition, D2 shows that the service triggering request can be obtained by using an RLP message. Thus, it is obvious to a person skilled in the art to arrive at the present invention by applying the features in D1 and D2.

Therefore, claim 12 is not inventive, nor does it meet the criteria of PCT Article 33(3).

Claims 13-15 specify the features of cited claim 12 that the trigger corresponds to a set of one or more characters (claim 13), the message is one of an SMS or MMS type message (claim 14), and the text content is a pre-formulated message (claim 15). However, these features are well known in the field of message transmission for mobile communications. Thus, it is obvious to a person skilled in the art to arrive at the present invention by applying the features in D1 and D2.

Therefore, claim 13-15 are not inventive, nor do they meet the criteria of PCT Article 33(3).

2.4 Concerning Claims 16-19

Claims 16-17 disclose a method for performing message operations on a mobile computing device, and the features of the method of claims 16-17 essentially correspond to those of the message of claim 12. The same reasoning as in claim 12 applies to claims 16 and 17. Thus, it is obvious to a person skilled in the art to arrive at the present invention by applying the features in D1 and D2.

Therefore, claims 16 and 17 are not inventive, nor do they meet the criteria of PCT Article 33(3).

Claims 18 and 19 specify the features of cited claims 16 and 18, respectively. However, these features are well known in the field of message transmission for mobile communications(Considering the context, it is understood that claim 18 should refer to claim 17 instead of claim 16. Thus, this written opinion considered that claim 18 refers to claim 17).

Thus, it is obvious to a person skilled in the art to arrive at the present invention by applying the features in D1 and D2.

Therefore, claims 18 and 19 are not inventive, nor do they meet the criteria of PCT Article 33(3).

(Continued on Supplemental Box)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2008/074320

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of :

(Supplemental Box)

2.5 Concerning Claims 20-25

Claim 20 discloses a mobile computing device comprising: processing resources, a memory, a wireless communication sub-system, a message application to be operable on the mobile computing device, a trigger detect component, and one or more action components. However, processing resources, a memory, and a wireless communication sub-system are well known components for a person skilled in the art of wireless communications. And the features of the device of claim 20 essentially correspond to those of the method of claim 16. Thus, the same reasoning as in claim 16 applies to claim 20.

It is obvious to a person skilled in the art to arrive at the present invention by applying the features in D1 and D2. Therefore, claim 20 is not inventive, nor does it meet the criteria of PCT Article 33(3).

Claim 21 specifies the features of cited claim 20 that the processing resources enable a trigger insert component that inserts a trigger into an outgoing message for causing another device receiving the outgoing message to initiate or automatically perform a corresponding action.

D2 shows that the triggered location service request is transferred from the first network to the second network through an RLP message. Thus, it is obvious to a person skilled in the art to arrive at the present invention by applying the features in D1 and D2.

Therefore, claim 21 is not inventive, nor does it meet the criteria of PCT Article 33(3).

Claim 22 specifies the features of the cited claim 20 that the processing resources enable the trigger detect component to inspect an outgoing message for presence of another trigger, and another action component is configured to initiate or perform an action identified by the detected trigger of the outgoing message. However, these features are slight constructional changes in the technology of triggering an event in D1 and D2, which come within the scope of the customary practice followed by person skilled in the art.

Therefore, claim 22 is not inventive, nor does it meet the criteria of PCT Article 33(3).

Claims 23 and 24 specify the features of the cited claim 20. However, these features are well known in the field of message transmission for mobile communications. Thus, it is obvious to a person skilled in the art to arrive at the present invention by applying the features in D1 and D2.

Therefore, claims 23 and 24 are not inventive, nor do they meet the criteria of PCT Article 33(3).

Claim 25 specifies the features of cited claim 24 that the data provided in the incoming message is location information provided by a GPR, and the action is a location-based function. However, D2 shows event triggering by using location information. Thus, it is obvious to a person skilled in the art to arrive at the present invention by applying the features in D1 and D2.

Therefore, claim 25 is not inventive, nor does it meet the criteria of PCT Article 33(3).

3. Industrial Applicability

Claims 1-25 have industrial applicability and meet the requirement of PCT Article 33(4).

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference PALM_1009WO	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2008/074320	International filing date (<i>day/month/year</i>) 26 AUGUST 2008 (26.08.2008)	(Earliest) Priority Date (<i>day/month/year</i>) 30 AUGUST 2007 (30.08.2007)
Applicant PALM INC. et al		

This International search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of :

- the international application in the language in which it was filed
 a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. **Certain claims were found unsearchable** (See Box No. II)

3. **Unity of invention is lacking** (See Box No. III)

4. With regard to the **title**,

- the text is approved as submitted by the applicant.
 the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- the text is approved as submitted by the applicant.
 the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 1
 as suggested by the applicant.
 because the applicant failed to suggest a figure.
 because this figure better characterizes the invention.
- b. none of the figure is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2008/074320

A. CLASSIFICATION OF SUBJECT MATTER
H04B 1/40(2006.01)i
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
Minimum documentation searched (classification system followed by classification symbols)
IPC H04B 1/40

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean Utility models and applications for Utility Models since 1975
Japanese Utility models and applications for Utility Models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKIPASS(KIPO internal) "mobile, trigger, message, event, location, GPS"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2006-0041470 A1 (NEWTON MEYER FLEURY FILHO et al.) 23 February 2006 See abstract, figures 1-3, paragraphs [0007]-[0047], and claims 1-16.	1-25
Y	KR 10-2007-0078369 A (LG ELECTRONICS INC.) 31 July 2007 See abstract, figures 1-8 and corresponding specifications, and claims 1-16.	1-25
A	US 6484036 B1 (GREGORY B. SORKIN et al.) 19 November 2002 See abstract, figures 1-2, column 1 line 44-column 6 line 12, and claims 1-13.	1-25
A	KR 10-2006-0093183 A (PANTECH CO., LTD.) 24 August 2006 See abstract, figures 1-2 and corresponding specifications, and claims 1-3.	1-25

Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:
 "A" document defining the general state of the art which is not considered to be of particular relevance
 "E" earlier application or patent but published on or after the international filing date
 "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
 "O" document referring to an oral disclosure, use, exhibition or other means
 "P" document published prior to the international filing date but later than the priority date claimed
 "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
 "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
 "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
 "&" document member of the same patent family

Date of the actual completion of the international search: 29 JANUARY 2009 (29.01.2009)
 Date of mailing of the international search report: 29 JANUARY 2009 (29.01.2009)

Name and mailing address of the ISA/KR: Korean Intellectual Property Office, Government Complex-Daejeon, 139 Seonsa-ro, Seo-gu, Daejeon 302-701, Republic of Korea
 Facsimile No. 82-42-472-7140
 Authorized officer: JANG, JIN HWAN
 Telephone No. 82-42-481-5711

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2008/074320

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2006-041470 A1	23.02.2006	None	
KR 10-2007-0078369 A	31.07.2007	WO 2007-086702 A1	02.08.2007
US 6484036 B1	19.11.2002	None	
KR 10-2006-0093183 A	24.08.2006	None	

Electronic Acknowledgement Receipt

EFS ID:	13728726
Application Number:	13607419
International Application Number:	
Confirmation Number:	8864
Title of Invention:	METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS
First Named Inventor/Applicant Name:	David CHAMPLIN
Customer Number:	22879
Filer:	Zurvan Mahamedi/Drew Herndon
Filer Authorized By:	Zurvan Mahamedi
Attorney Docket Number:	83068177
Receipt Date:	12-SEP-2012
Filing Date:	
Time Stamp:	19:46:25
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	PALM_P096C2_IDS_AF.pdf	18338 <small>e4332f4b3aab98dad5d4975ff83e6474c5cb2e1d</small>	no	1

Warnings:

Information:

2	Information Disclosure Statement (IDS) Form (SB08)	PALM_P096C2_SB08_AF.pdf	67822 ca47a608a9653f2a0621f5638ce4426480c5190	no	3
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Foreign Reference	EP_0611239_A1.pdf	1290445 a404257ed593ca1fef21f27db452321e1fb910a8	no	10
Warnings:					
Information:					
4	Foreign Reference	KR10_2006_009313.pdf	796017 d66e45e4f3eb2eab758ff222be6fbcf68380c49	no	6
Warnings:					
Information:					
5	Foreign Reference	KR10_2007_007836.pdf	2535102 d8c92637752b4d3f10a2c164e66e63b790800629	no	19
Warnings:					
Information:					
6	Non Patent Literature	1_PALMP0962_ISR.pdf	1258787 0aaa4ee43ecc9ec7df0b8a7fc440adecfd45ddd5	no	15
Warnings:					
Information:					
7	Non Patent Literature	P1009WO_ISR_WritOpin_012909.pdf	1292459 03dac2d79149baafc6de23858717eccaa122089	no	14
Warnings:					
Information:					
8	Non Patent Literature	3_ITM_UserGuide.pdf	841089 efaf69d53f1cdae4fad028f0379345dfda0a0d0a	no	6
Warnings:					
Information:					
9	Non Patent Literature	4_Nokia6630UserGuide.pdf	5582060 d9d5065dacf8292a0187b5a1c936d75bc389756	no	110
Warnings:					
Information:					
10	Non Patent Literature	5_Intell_Agents.pdf	763783 6f462aa2bcadfb6613a9b4a92e7fb8c13a919094d	no	6

Warnings:	
Information:	
Total Files Size (in bytes):	14445902
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>	

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
3404 E. Harmony Road
Mail Stop 35
Fort Collins, Colorado 80528

PATENT APPLICATION

RECORD ID: 83068177

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): David Champlin, et al

Confirmation No.: 8864

Application No.: 13/607419

Examiner: Unknown

Filing Date: Sep 07, 2012

Group Art Unit: Unknown

Title: METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS

Mail Stop Amendment
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

This Information Disclosure Statement is submitted:

- under 37 CFR 1.97 (b), or
(Within three months of filing national application; or date of entry of national application; or before mailing date of first action on the merits; whichever occurs last)
- under 37 CFR 1.97 (c), together with either a:
 Statement under 37 CFR 1.97 (e), or
 a \$180 fee under 37 CFR 1.17 (p), or
(After the CFR 1.97 (b) time period, but before final action or notice of allowance, whichever occurs first)
- under 37 CFR 1.97 (d), together with a:
 Statement under 37 CFR 1.97 (e)(1) or (2), and
 a \$180 fee set forth in 37 CFR 1.17 (p)
(Filed after final action, a notice of allowance, on or before payment of the issue fee)

Please charge to Deposit Account **08-2025** the sum of \$ 0.00 . At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account **08-2025** pursuant to 37 CFR 1.25.

Applicant(s) submit herewith form PTO/SB/08B - Information Disclosure Statement together with any required copies of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

- A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on PTO/SB/08B, as presently understood by the individual(s) designated in 37 CFR 1.56 (c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an english language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on form PTO/SB/08B and is enclosed.

It is requested that the information disclosed herein be made of record in this application.

Respectfully submitted,

David Champlin, et al

By: /Zurvan Mahamedi/

Zurvan Mahamedi

Attorney/Agent for Applicant(s)

Reg No. : 42,828

Date : Sep 12, 2012

Telephone : +1 408-551-6632

SN13607419

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
3404 E. Harmony Road
Mail Stop 35
Fort Collins, Colorado 80528

PATENT APPLICATION

RECORD ID: 83068177

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Anticipated Classification of this application:

Class 379 Subclass 088.170

09/18/2012 ABALINAH 00000014 082025 13607419

Prior Application:

Examiner: Gerald Gauthier

01 FC:1011 380.00 DA

Art Unit: 2614

02 FC:1111 620.00 DA

03 FC:1311 250.00 DA

Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

REQUEST FOR A CONTINUING APPLICATION UNDER 37 CFR 1.53(b)

This is a request for filing a continuation application under 37 CFR 1.53(b) a:

- continuation application
- divisional application of:

Pending Prior Application

Application No.: 12/901376

Filed: October 8, 2010

Title: METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS

Name of Applicant(s): David Champlin, Kirin Prasad, Larry Chen, Rajan Ranga, Robert Haitani

Copy of Application

- Enclosed is a copy of the prior application, including the drawings.
- Enclosed is a new specification, including new drawings.

Oath or Declaration

- Enclosed is a copy of the prior Declaration (37 CFR 1.63(d)).
- Enclosed is a newly executed Declaration (original or copy).

Foreign Priority - 35 USC 119

- Foreign priority under 35 U.S.C 119 has been claimed in prior Application No. _____
filed on _____ in _____
- The certified copy has been filed in prior Application No. _____
- A separate paper claiming direct priority to a foreign application is enclosed herewith. A certified copy of the foreign application will be provided in due course.

CONTINUING APPLICATION UNDER 37 CFR 1.53(b)
(continued)

RECORD ID: 83068177

Relate Back - 35 USC 120

Cross Reference To Related Application(s):

continuation divisional

of copending application number: **12/901376** Filed On: **October 8, 2010**

which is hereby incorporated by reference herein.

Inventorship Statement

Delete the following named individuals as inventors in this application in accordance with 37 CFR 1.53(b) as a result of a change in subject matter: _____

Communications

Send Correspondence to:

Customer Number **022879**
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
3404 E. Harmony Road
Mail Stop 35
Ft. Collins, Colorado 80528

Direct telephone calls to:

Scott Andrew Pojunas
+1 703 742 1099

Other Amendments

Enter the enclosed Preliminary Amendment. The filing fee is calculated on the basis of the amended claims.

Fee Calculation

The filing fee is calculated below for Utility Design

Other

Fee\$

CLAIMS AS FILED BY OTHER THAN A SMALL ENTITY				
(1) FOR	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) TOTALS
TOTAL CLAIMS	15 — 20	0	X \$60	\$ 0
INDEPENDENT CLAIMS	3 — 3	0	X \$250	\$ 0
ANY MULTIPLE DEPENDENT CLAIMS			\$450	\$ 0
BASIC FILING FEE:				\$ 1,250
OTHER FEES:				\$
TOTAL CHARGES TO DEPOSIT ACCOUNT:				\$ 1,250

Charge \$ 1,250 to Deposit Account 08-2025. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees.

Respectfully submitted,

David Champlin, et al

By: /Hyonje Choi/

Hyonje Choi

Attorney/Agent for Applicant(s)

Reg No. : 63519

Date : Sep 7, 2012

Telephone : 408-236-6638

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number
13/607,419

APPLICATION AS FILED - PART I

(Column 1) (Column 2)

FOR	NUMBER FILED	NUMBER EXTRA
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A
TOTAL CLAIMS (37 CFR 1.16(j))	15	minus 20 = *
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3	minus 3 = *
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).	
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))		

SMALL ENTITY

RATE(\$)	FEE(\$)
N/A	
N/A	
N/A	
TOTAL	

OR OTHER THAN SMALL ENTITY

RATE(\$)	FEE(\$)
N/A	380
N/A	620
N/A	250
x 60 =	0.00
x 250 =	0.00
	0.00
	0.00
TOTAL	1250

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED - PART II

(Column 1) (Column 2) (Column 3)

AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total (37 CFR 1.16(j))	*	Minus	**	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=
	Application Size Fee (37 CFR 1.16(s))				
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					

SMALL ENTITY

RATE(\$)	ADDITIONAL FEE(\$)
x =	
x =	
TOTAL ADD'L FEE	

OR OTHER THAN SMALL ENTITY

RATE(\$)	ADDITIONAL FEE(\$)
x =	
x =	
TOTAL ADD'L FEE	

(Column 1) (Column 2) (Column 3)

AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total (37 CFR 1.16(j))	*	Minus	**	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=
	Application Size Fee (37 CFR 1.16(s))				
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					

SMALL ENTITY

RATE(\$)	ADDITIONAL FEE(\$)
x =	
x =	
TOTAL ADD'L FEE	

OR OTHER THAN SMALL ENTITY

RATE(\$)	ADDITIONAL FEE(\$)
x =	
x =	
TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
 ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
 *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
 The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 7 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY. DOCKET NO, TOT CLAIMS, IND CLAIMS. Row 1: 13/607,419, 09/07/2012, 2614, 1250, 83068177, 15, 3

CONFIRMATION NO. 8864

FILING RECEIPT



22879
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
3404 E. Harmony Road
Mail Stop 35
FORT COLLINS, CO 80528

Date Mailed: 09/20/2012

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections

Inventor(s)

David CHAMPLIN, Menlo Park, CA;
Srikiran PRASAD, Cupertino, CA;
Lang CHEN, Oakland, CA;
Rajan RANGA, Palo Alto, CA;
Robert HAITANI, Menlo Park, CA;

Applicant(s)

David CHAMPLIN, Menlo Park, CA;
Srikiran PRASAD, Cupertino, CA;
Lang CHEN, Oakland, CA;
Rajan RANGA, Palo Alto, CA;
Robert HAITANI, Menlo Park, CA;

Power of Attorney: The patent practitioners associated with Customer Number 22879

Domestic Priority data as claimed by applicant

This application is a CON of 12/901,376 10/08/2010
which is a CON of 11/200,511 08/08/2005 PAT 7844037

Foreign Applications (You may be eligible to benefit from the Patent Prosecution Highway program at the USPTO. Please see http://www.uspto.gov for more information.)

If Required, Foreign Filing License Granted: 09/18/2012

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US 13/607,419

Projected Publication Date: 12/27/2012

Non-Publication Request: No

Early Publication Request: No
Title

METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS

Preliminary Class

379

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/607,419	09/07/2012	David CHAMPLIN	83068177

CONFIRMATION NO. 8864

POA ACCEPTANCE LETTER



22879
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
3404 E. Harmony Road
Mail Stop 35
FORT COLLINS, CO 80528

Date Mailed: 09/20/2012

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 09/07/2012.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/jchery/

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



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 4 columns: APPLICATION NUMBER (13/607,419), FILING OR 371(C) DATE (09/07/2012), FIRST NAMED APPLICANT (David CHAMPLIN), ATTY. DOCKET NO./TITLE (83068177)

CONFIRMATION NO. 8864

PUBLICATION NOTICE



22879
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
3404 E. Harmony Road
Mail Stop 35
FORT COLLINS, CO 80528

Title:METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS

Publication No.US-2012-0329494-A1
Publication Date:12/27/2012

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

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

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

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

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

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
3404 E. Harmony Road
Mail Stop 35
Fort Collins, Colorado 80528

PATENT APPLICATION

RECORD ID: 83068177

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): David Champlin, et al

Confirmation No.: 8864

Application No.: 13/607419

Examiner: GAUTHIER, GERALD

Filing Date: Sep 07, 2012

Group Art Unit: 2653

Title: METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS

Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

TERMINAL DISCLAIMER RESPONSIVE TO A DOUBLE PATENTING REJECTION

Petitioner, Hewlett-Packard Development Company, L.P. is the owner of 100 percent interest in the instant application. Petitioner hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application, which would extend beyond the expiration date of the full statutory term defined in 35 U.S.C. 154 and 173 as shortened by any terminal disclaimer of prior Patent No. 8311189 to Hewlett-Packard Development Company, L.P. which issued on 13 Nov 2012 and is commonly owned by Petitioner. Petitioner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, petitioner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of the prior patent as shortened by any terminal disclaimer filed prior to the patent grant, in the event that any such granted patent: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as shortened by any terminal disclaimer filed prior to its grant.

For submissions on behalf of an organization (e.g., corporation), the undersigned is empowered to act on behalf of the organization.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Please charge the required fee set forth in 37 CFR 1.20(d) of **\$160.00** to Deposit Account 08-2025. At any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees.

Note: An attorney or agent of record must sign this document

Respectfully submitted, /Chun-Liang Kuo, Reg. # 61,672/

Chun-Liang Kuo

Attorney/Agent for Applicant(s)

Reg No. : 61672

Date : Jan 12, 2013

Telephone : +1 281 5142386

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
3404 E. Harmony Road
Mail Stop 35
Fort Collins, Colorado 80528

PATENT APPLICATION

RECORD ID: 83068177

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): David Champlin, et al

Confirmation No.: 8864

Application No.: 13/607419

Examiner: GAUTHIER, GERALD

Filing Date: Sep 07, 2012

Group Art Unit: 2653

Title: METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS

Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

TERMINAL DISCLAIMER RESPONSIVE TO A DOUBLE PATENTING REJECTION

Petitioner, Hewlett-Packard Development Company, L.P. is the owner of 100 percent interest in the instant application. Petitioner hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application, which would extend beyond the expiration date of the full statutory term defined in 35 U.S.C. 154 and 173 as shortened by any terminal disclaimer of prior Patent No. 7844037 to Hewlett-Packard Development Company, L.P. which issued on 30 Nov 2010 and is commonly owned by Petitioner. Petitioner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, petitioner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of the prior patent as shortened by any terminal disclaimer filed prior to the patent grant, in the event that any such granted patent: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as shortened by any terminal disclaimer filed prior to its grant.

For submissions on behalf of an organization (e.g., corporation), the undersigned is empowered to act on behalf of the organization.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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Note: An attorney or agent of record must sign this document

Respectfully submitted, /Chun-Liang Kuo, Reg. # 61,672/

Chun-Liang Kuo

Attorney/Agent for Applicant(s)

Reg No. : 61672

Date : Jan 12, 2013

Telephone : +1 281 5142386

Electronic Acknowledgement Receipt

EFS ID:	14684812
Application Number:	13607419
International Application Number:	
Confirmation Number:	8864
Title of Invention:	METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS
First Named Inventor/Applicant Name:	David CHAMPLIN
Customer Number:	22879
Filer:	Chun-Liang Kuo/Be Henry
Filer Authorized By:	Chun-Liang Kuo
Attorney Docket Number:	83068177
Receipt Date:	12-JAN-2013
Filing Date:	07-SEP-2012
Time Stamp:	21:17:49
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Terminal Disclaimer Filed	83068177-8311189- TerminalDisclaimer.pdf	27435 <small>74f58b61156fe8fb7dea6bf39bf4d7f285660b56</small>	no	1

Warnings:

Information:

2	Terminal Disclaimer Filed	83068177-7844037- TerminalDisclaimer.pdf	27440 a51a26d34a101261d991e1e12bc9925a2ea 0923e	no	1
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Warnings:

Information:

Total Files Size (in bytes):	54875
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New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

Document code: WFEE

United States Patent and Trademark Office
Sales Receipt for Accounting Date: 01/16/2013

JBRIDGER SALE #00000002 Mailroom Dt: 01/12/2013 082025 13607419
01 FC : 1814 320.00 DA

Application Number 	Application/Control No. 13/607,419	Applicant(s)/Patent under Reexamination CHAMPLIN ET AL.

Document Code - DISQ	Internal Document – DO NOT MAIL
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TERMINAL DISCLAIMER	<input checked="" type="checkbox"/> APPROVED	<input type="checkbox"/> DISAPPROVED
Date Filed : 12 JAN 2013	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:

Two TDs filed and approved.

JAB

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Substitute for form 1449/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Application Number	13/607419
		Filing Date	09-07-2012
		First Named Inventor	David G Champlin
		Art Unit	2653
		Examiner Name	Gerald Gauthier
		Attorney Docket Number	83068177
Sheet	1	of	1

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	1	"MobileBurn Forms - PDF/Smartphone - S60 - 6630 Owners", Dec. 13, 2004, XP055058120, URL: http://forums.mobileburn.com/archive/index.php/t-6676.html [retrieved 01-03-2007].	
	2	EPO, Office Action dated April 5, 2013, related EP App No. 06800929.9.	

Examiner Signature	Date Considered
-------------------------------	----------------------------

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

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. 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 2 hours 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, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Electronic Acknowledgement Receipt

EFS ID:	15766162
Application Number:	13607419
International Application Number:	
Confirmation Number:	8864
Title of Invention:	METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS
First Named Inventor/Applicant Name:	David CHAMPLIN
Customer Number:	22879
Filer:	Chun-Liang Kuo/Be Henry
Filer Authorized By:	Chun-Liang Kuo
Attorney Docket Number:	83068177
Receipt Date:	14-MAY-2013
Filing Date:	07-SEP-2012
Time Stamp:	01:49:09
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	83068177-IDS-Transmittal.pdf	24140 <small>39d76f62f337a911eedfe7a8c4b753c176c8e3b</small>	no	1

Warnings:

Information:

2	Information Disclosure Statement (IDS) Form (SB08)	83068177-IDS-sb08a.pdf	51071	no	1
			490b3e621308fabe1c76248f24fc3ebd01d5122a		

Warnings:

Information:

This is not an USPTO supplied IDS fillable form

3	Non Patent Literature	83068177-MobileBurn.pdf	109451	no	1
			29bda75face2cae1ad04fd758a418a1f267368d		

Warnings:

Information:

4	Non Patent Literature	83068177-EPO-ExaminationReport.pdf	139320	no	6
			c372e6b322f9e3afa61b7ad8f407fcc070ee710ec		

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Information:

Total Files Size (in bytes):	323982
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New Applications Under 35 U.S.C. 111

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

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

New International Application Filed with the USPTO as a Receiving Office

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

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
3404 E. Harmony Road
Mail Stop 35
Fort Collins, Colorado 80528

PATENT APPLICATION

RECORD ID: 83068177

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): David Champlin, et al

Confirmation No.: 8864

Application No.: 13/607419

Examiner: GAUTHIER, GERALD

Filing Date: Sep 07, 2012

Group Art Unit: 2653

Title: METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS

Mail Stop Amendment
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

This Information Disclosure Statement is submitted:

- under 37 CFR 1.97 (b), or
(Within three months of filing national application; or date of entry of national application; or before mailing date of first action on the merits; whichever occurs last)
- under 37 CFR 1.97 (c), together with either a:
 Statement under 37 CFR 1.97 (e), or
 a \$180 fee under 37 CFR 1.17 (p), or
(After the CFR 1.97 (b) time period, but before final action or notice of allowance, whichever occurs first)
- under 37 CFR 1.97 (d), together with a:
 Statement under 37 CFR 1.97 (e)(1) or (2), and
 a \$180 fee set forth in 37 CFR 1.17 (p)
(Filed after final action, a notice of allowance, on or before payment of the issue fee)

Please charge to Deposit Account **08-2025** the sum of \$ 0.00 . At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account **08-2025** pursuant to 37 CFR 1.25.

Applicant(s) submit herewith form PTO/SB/08B - Information Disclosure Statement together with any required copies of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

- A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on PTO/SB/08B, as presently understood by the individual(s) designated in 37 CFR 1.56 (c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an english language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on form PTO/SB/08B and is enclosed.

It is requested that the information disclosed herein be made of record in this application.

Respectfully submitted,

David Champlin, et al

By: /Chun-Liang Kuo, Reg. # 61,672/

Chun-Liang Kuo

Attorney/Agent for Applicant(s)

Reg No. : 61672

Date : May 14, 2013

Telephone : +1 281 5142386



NOTICE OF ALLOWANCE AND FEE(S) DUE

22879 7590 10/15/2013
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
3404 E. Harmony Road
Mail Stop 35
FORT COLLINS, CO 80528

Table with 2 columns: EXAMINER, GAUTHIER, GERALD; ART UNIT, PAPER NUMBER

DATE MAILED: 10/15/2013

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

13/607,419 09/07/2012 David CHAMPLIN 83068177 8864
TITLE OF INVENTION: METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS

Table with 7 columns: APPLN. TYPE, ENTITY STATUS, ISSUE FEE DUE, PUBLICATION FEE DUE, PREV. PAID ISSUE FEE, TOTAL FEE(S) DUE, DATE DUE

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

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

HOW TO REPLY TO THIS NOTICE:

- I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.
If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.
If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".
For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

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

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

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 or Fax (571)-273-2885**

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

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

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

22879 7590 10/15/2013
HEWLETT-PACKARD COMPANY
 Intellectual Property Administration
 3404 E. Harmony Road
 Mail Stop 35
 FORT COLLINS, CO 80528

Certificate of Mailing or Transmission

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

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/607,419	09/07/2012	David CHAMPLIN	83068177	8864

TITLE OF INVENTION: METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1780	\$300	\$0	\$2080	01/15/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
GAUTHIER, GERALD	2653	379-088170

<p>1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).</p> <p><input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.</p> <p><input type="checkbox"/> "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.</p>	<p>2. For printing on the patent front page, list</p> <p>(1) the names of up to 3 registered patent attorneys or agents OR, alternatively, _____ 1</p> <p>(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. _____ 2</p> <p>_____ 3</p>
---	---

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

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

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

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

<p>4a. The following fee(s) are submitted:</p> <p><input type="checkbox"/> Issue Fee</p> <p><input type="checkbox"/> Publication Fee (No small entity discount permitted)</p> <p><input type="checkbox"/> Advance Order - # of Copies _____</p>	<p>4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)</p> <p><input type="checkbox"/> A check is enclosed.</p> <p><input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.</p> <p><input type="checkbox"/> The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).</p>
---	---

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

Applicant certifying micro entity status. See 37 CFR 1.29

NOTE: Absent a valid certification of Micro Entity Status (see form PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

Applicant asserting small entity status. See 37 CFR 1.27

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information 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 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, 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.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
13/607,419 09/07/2012 David CHAMPLIN 83068177 8864

22879 7590 10/15/2013
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
3404 E. Harmony Road
Mail Stop 35
FORT COLLINS, CO 80528

EXAMINER
GAUTHIER, GERALD

ART UNIT 2653
PAPER NUMBER

DATE MAILED: 10/15/2013

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

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

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

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

Privacy Act Statement

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

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

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

**Notices of Allowance and Fee(s) Due mailed between October 1, 2013 and
December 31, 2013**

(Addendum to PTOL-85)

If the “Notice of Allowance and Fee(s) Due” has a mailing date on or after October 1, 2013 and before January 1, 2014, the following information is applicable to this application.

If the issue fee is being timely paid on or after January 1, 2014, the amount due is the issue fee and publication fee in effect January 1, 2014. On January 1, 2014, the issue fees set forth in 37 CFR 1.18 decrease significantly and the publication fee set forth in 37 CFR 1.18(d)(1) decreases to \$0.

If an issue fee or publication fee has been previously paid in this application, applicant is not entitled to a refund of the difference between the amount paid and the amount in effect on January 1, 2014.

Notice of Allowability	Application No. 13/607,419	Applicant(s) CHAMPLIN ET AL.	
	Examiner GERALD GAUTHIER	Art Unit 2653	AIA (First Inventor to File) 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 09/07/2012 Amendment.
 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 1-15. 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 checked="" 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 <u>05/14/2013, 09/12/2012</u> | 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 _____. | |

/Gerald Gauthier/
Primary Examiner, Art Unit 2653

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements submitted on September 13, 2012 and May 14, 2013 are in compliance with the provisions of 37 CFR 1.97. Accordingly the information disclosure statement is being considered by the examiner, except where lined through.

Allowable Claims

2. **Claims 1-15** are allowed.

3. The following is an examiner's statement of reasons for allowance:

Urban et al. (8,073,121 B2) discloses methods, systems, and apparatuses for caller identification messaging are disclosed. According to one embodiment, a calling party uses a Caller ID Messaging Device that supplants the incoming calling line identification (ICLID) signal with a Caller ID Messaging Signal and transmits the Caller ID Messaging Signal to a destination communications address. An alternate embodiment provides that the calling party may use a conventional telephone to access a communications network, activate Caller ID Messaging Services, compose or retrieve a stored Caller ID Message of the Caller ID Messaging Signal, and transmit the Caller ID Messaging Signal to the destination communications address. The Caller ID

Art Unit: 2653

Message and Caller ID Messaging Signal may include text, video, voice, and/or digital data

4. As to **claims 1, 7 and 14**, in combination with other limitations of the claims, the prior art of record fails to disclose or specifically suggested receiving an incoming call to initiate a voice-exchange session from a second computing device, providing a notification of the incoming call on a display of the first computing device, the notification including (i) an identifier associated with the second computing device, and (ii) a first feature that is selectable to answer the incoming call and a second feature that is selectable to send a message response without answering the incoming call, receiving a user input to select the second feature to send a message to the second computing device, and in response to receiving the user input enabling the user to select a pre-formulated message content for the message or compose a message content for the message.

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

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to GERALD GAUTHIER whose telephone number is (571)272-7539. The examiner can normally be reached on 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (571) 272-7547. 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.

/Gerald Gauthier/
Primary Examiner, Art Unit 2653

October 9, 2013

Notice of References Cited	Application/Control No. 13/607,419	Applicant(s)/Patent Under Reexamination CHAMPLIN ET AL.	
	Examiner GERALD GAUTHIER	Art Unit 2653	Page 1 of 2

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification	
*	A	US-5,325,419 A	06-1994	Connolly et al.	455/435.1
*	B	US-6,035,018 A	03-2000	Kaufman, Steven B.	379/88.17
*	C	US-2002/0052225 A1	05-2002	Davis et al.	455/567
*	D	US-2002/0094073 A1	07-2002	Falkoff et al.	379/201.01
*	E	US-2002/0142803 A1	10-2002	Yamamoto, Toshifumi	455/557
*	F	US-6,529,500 B1	03-2003	Pandharipande, Milind Manohar	370/352
*	G	US-2003/0078071 A1	04-2003	Uchiyama, Koji	455/557
*	H	US-6,580,786 B1	06-2003	Yarlagadda, Madhu	379/88.17
*	I	US-2004/0058676 A1	03-2004	Kato et al.	455/422.1
*	J	US-6,816,578 B1	11-2004	Kredo et al.	379/88.17
*	K	US-6,842,448 B1	01-2005	Norris et al.	370/352
*	L	US-2006/0087993 A1	04-2006	Sengupta et al.	370/310
*	M	US-2007/0036286 A1	02-2007	Champlin et al.	379/067.1

FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

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

Notice of References Cited	Application/Control No. 13/607,419	Applicant(s)/Patent Under Reexamination CHAMPLIN ET AL.	
	Examiner GERALD GAUTHIER	Art Unit 2653	Page 2 of 2

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-7,496,348 B2	Srey et al.	455/410
*	B	US-7,571,100 B2	Lenir et al.	704/270.1
*	C	US-7,844,037 B2	Champlin et al.	379/88.17
*	D	US-2011/0028168 A1	Champlin et al.	455/466
*	E	US-7,936,861 B2	Knott et al.	379/72
*	F	US-7,983,242 B2	Nasielski et al.	370/352
*	G	US-8,073,121 B2	Urban et al.	379/142.01
*	H	US-8,139,725 B2	Cohen et al.	379/88.14
*	I	US-8,175,233 B2	Vaghar et al.	379/88.28
*	J	US-8,233,593 B2	Liu et al.	379/88.17
*	K	US-8,311,189 B2	Champlin et al.	379/88.17
*	L	US-2012/0329494 A1	CHAMPLIN et al.	455/466
	M	US-		

FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

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

Issue Classification 	Application/Control No. 13607419	Applicant(s)/Patent Under Reexamination CHAMPLIN ET AL.
	Examiner GERALD GAUTHIER	Art Unit 2653

<input checked="" type="checkbox"/> Claims renumbered in the same order as presented by applicant																<input type="checkbox"/> CPA		<input checked="" type="checkbox"/> T.D.		<input type="checkbox"/> R.1.47	
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original						
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15	15																				

NONE		Total Claims Allowed:	
		15	
(Assistant Examiner)	(Date)	O.G. Print Claim(s)	O.G. Print Figure
/GERALD GAUTHIER/ Primary Examiner.Art Unit 2653	10/07/2013	1	4
(Primary Examiner)	(Date)		

EAST Search History

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L4	1	receiv\$3 same incoming same call same initiat\$3 same (voice adj exchange) same second same device same provid\$3 same notification same display\$3 same first same identifier same feature same answer\$3 same message same response same input same select\$3 same user same enabl\$3 same (pre- formulated compos\$3) same content.clm.	US- PGPUB; USPAT; UPAD	OR	ON	2013/10/07 09:26

10/ 7/ 2013 9:27:58 AM

H:\workspaces\13607419.wsp

Search Notes 	Application/Control No. 13607419	Applicant(s)/Patent Under Reexamination CHAMPLIN ET AL.
	Examiner GERALD GAUTHIER	Art Unit 2653

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
370	310, 352	10/7/2013	GG
379	72, 88.14, 88.17, 88.28, 142.01, 201.01	10/7/2013	GG
455	410, 422.1, 435.1, 466, 557, 567	10/7/2013	GG
704	270.1	10/7/2013	GG

SEARCH NOTES		
Search Notes	Date	Examiner
EAST (US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	10/7/2013	GG
Inventor's Name Search (edan)	10/7/2013	GG

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
370	310, 352	10/7/2013	GG
379	72, 88.14, 88.17, 88.28, 142.01, 201.01	10/7/2013	GG
455	410, 422.1, 435.1, 466, 557, 567	10/7/2013	GG
704	270.1	10/7/2013	GG
	Interference Search History (see attached)	10/7/2013	GG

	/GERALD GAUTHIER/ Primary Examiner.Art Unit 2653
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UNITED STATES PATENT AND TRADEMARK OFFICE

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BIB DATA SHEET

CONFIRMATION NO. 8864

SERIAL NUMBER 13/607,419	FILING or 371(c) DATE 09/07/2012 RULE	CLASS 379	GROUP ART UNIT 2653	ATTORNEY DOCKET NO. 83068177	
APPLICANTS David CHAMPLIN, Menlo Park, CA; Sriikiran PRASAD, Cupertino, CA; Lang CHEN, Oakland, CA; Rajan RANGA, Palo Alto, CA; Robert HAITANI, Menlo Park, CA;					
** CONTINUING DATA ***** This application is a CON of 12/901,376 10/08/2010 PAT 8311189 which is a CON of 11/200,511 08/08/2005 PAT 7844037					
** FOREIGN APPLICATIONS *****					
** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 09/18/2012					
Foreign Priority claimed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 35 USC 119(a-d) conditions met <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Verified and Acknowledged <u>/GERALD GAUTHIER/</u> Examiner's Signature	<input type="checkbox"/> Met after Allowance Initials	STATE OR COUNTRY CA	SHEETS DRAWINGS 4	TOTAL CLAIMS 15	INDEPENDENT CLAIMS 3
ADDRESS HEWLETT-PACKARD COMPANY Intellectual Property Administration 3404 E. Harmony Road Mail Stop 35 FORT COLLINS, CO 80528 UNITED STATES					
TITLE METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS					
FILING FEE RECEIVED 1250	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit		

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	214	enabl\$3 near5 message near5 response near5 call	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/07 08:25
L2	20	1 near5 incoming	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/07 08:26
L3	1	receiv\$3 same incoming same call same initiat\$3 same (voice adj exchange) same second same device same provid\$3 same notification same display\$3 same first same identifier same feature same answer\$3 same message same response same input same select\$3 same user same enabl\$3 same (pre-formulated compos\$3) same content	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/07 09:25
S1	846	enabl\$3 same message same response same incoming same call	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/16 09:05
S2	86	S1 same notification	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/16 09:17
S3	26	S2 same select\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/16 09:30
S4	1115	(379/88.17).CCLS.	USPAT; USOCR	OR	OFF	2012/12/16 09:56
S5	189	S4 and (select\$3 near5 response)	US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	2012/12/16 09:56

			JPO; DERWENT; IBM_TDB			
S6	85	S5 and (incoming near call)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/16 11:07
S7	21	S5 and (answer\$3 near incoming near call)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/16 11:13

10/7/2013 9:28:54 AM

H:\workspaces\13607419.wsp

Index of Claims 	Application/Control No. 13607419	Applicant(s)/Patent Under Reexamination CHAMPLIN ET AL.
	Examiner GERALD GAUTHIER	Art Unit 2653

✓	Rejected
=	Allowed

-	Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

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

CLAIM		DATE								
Final	Original	10/07/2013								
1	1	=								
2	2	=								
3	3	=								
4	4	=								
5	5	=								
6	6	=								
7	7	=								
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9	9	=								
10	10	=								
11	11	=								
12	12	=								
13	13	=								
14	14	=								
15	15	=								

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Complete if Known		
			Application Number	13/607,419	
			Filing Date	September 07, 2012	
			First Named Inventor	David Champlin	
			Art Unit	Unknown	
			Examiner Name	Not Yet Assigned	
Sheet	1	Of	3	Attorney Docket Number	83068177

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (# Known)			
		US 2001/00038226	06-14-2001	Iwata	
		US-2002/0067714 A1	06-06-2002	Crain et al.	
		US 2002/0187794 A1	12-12-2002	Fostick et al.	
		US-2003/0218975 A1	11-27-2003	Niizato et al.	
		US 2004/0203794 A1	10-14-2004	Brown et al.	
		US-2004/0230494 A1	11-18-2004	Lotvin et al.	
		US-2005/0201533 A1	09-15-2005	Emam et al.	
		US-2005/0216949 A1	09-29-2005	Candelora et al.	
		US-2005/0227740 A1	10-13-2005	Orbach	
		US-2006/0015644 A1	01-19-2006	Cernohous et al.	
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		US-2006/0041470 A1	02-23-2006	Fiho et al.	
		US-2006/0215829 A1	09-28-2006	Schwartz	
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		US-2007/0143429 A1	06-21-2007	Venkataraman et al.	
		US-2007/0258567 A1	11-08-2007	Koch	
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		US-2008/0253549 A1	10-16-2008	Loveland	
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		US-2009/0061833 A1	03-05-2009	Ho et al.	
		US-2011/0028168 A1	02-03-2011	Champlin et al.	
		US-4,922,526	05-01-1990	Morganstein et al.	
		US-4,996,704	02-26-1991	Brunson	
		US-5,396,544	03-07-1995	Gilbert et al.	
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		US-5,585,749	12-17-1996	Pace et al.	
		US-5,724,408	03-03-1998	Morganstein et al.	
		US-5,748,100	05-05-1998	Gutman et al.	
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		US-5,799,066 A	08-25-1998	Joyce et al.	
		US-5,805,978	09-08-1998	Souissi et al.	
		US-5,844,967	12-01-1998	Lee	
		US-5,884,193	03-16-1999	Kaplan	
		US-5,894,505	04-13-1999	Koyama	
		US-5,930,700 A	07-27-1999	Pepper et al.	

Examiner Signature	/Gerald Gauthier/	Date Considered	10/07/2013
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¹ Applicant's unique citation designation number (optional). ² See Kind Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard St.16 if possible. *Applicant is to place a check mark here if English language translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH /GG/

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			Application Number	13/607,419	
			Filing Date	September 07, 2012	
			First Named Inventor	David Champlin	
			Art Unit	Unknown	
			Examiner Name	Not Yet Assigned	
Sheet	2	Of	3	Attorney Docket Number	83068177

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (# known)			
		US-5,943,401	08-24-1999	Risner et al.	
		US-5,946,386 A	08-31-1999	Rogers et al.	
		US-5,963,626 A	10-05-1999	Nabkel	
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		US-6,018,671 A	01-25-2000	Bremer	
		US-6,047,057 A	04-04-2000	Wieshut et al.	
		US-6,055,305	04-25-2000	Norman et al.	
		US-6,081,845	06-27-2000	Kanemaki et al.	
		US-6,219,413 B1	04-17-2001	Burg	
		US-6,229,878 B1	05-08-2001	Moganti	
		US-6,404,860 B1	06-11-2002	Casellini	
		US-6,430,271 B1	08-06-2002	DeJesus et al.	
		US-6,463,131, B1	10-08-2002	French-St. George et al.	
		US-6,484,036	11-19-2006	Sorkin et al.	
		US-6,504,912 B1	01-07-2003	Glossbrenner	
		US-6,519,326 B1	02-11-2003	Milewski et al.	
		US-6,647,108 B1	11-11-2003	Wurster et al.	
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		US-6,697,473 B2	02-24-2004	Batten	
		US-6,768,789 B1	07-27-2004	Wilk	
		US-6,795,530 B1	09-21-2004	Gilbert et al.	
		US-6,804,334 B1	10-12-2004	Beasely et al.	
		US-6,823,184 B1	11-23-2004	Nelson	
		US-6,839,877 B2	01-04-2005	Iwata	
		US-7,009,990 B1	03-07-2006	Adams et al.	
		US-7,010,288 B2	03-07-2006	Brown et al.	
		US-7,023,979 B1	04-04-2006	Wu et al.	
		US-7,027,583 B2	04-11-2006	Uranaka et al.	
		US-7,051,099 B2	05-23-2006	Ziegler et al.	
		US-7,136,466 B1	11-14-2006	Gao	
		US-7,200,387	04-03-2007	Ephraim et al.	
		US-7,218,710 B1	05-15-2007	Ali et al.	
		US-7,272,220	09-18-2007	Zhang et al.	
		US-7,286,649 B1	10-23-2007	Nelson et al.	
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		US-7,471,946	12-30-2008	Adamczyk et al.	
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		US-7,571,458 B1	08-04-2009	Eyal	
		US-7,634,069 B2	12-15-2009	Randall et al.	

Examiner Signature	/Gerald Gauthier/	Date Considered	10/07/2013
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			Filing Date	September 07, 2012		
			First Named Inventor	David Champlin		
			Art Unit	Unknown		
			Examiner Name	Not Yet Assigned		
Sheet	3	Of	3	Attorney Docket Number	83068177	

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		Number-Kind Code ² (if known)			
		US-7,676,034 B1	03-09-2010	Wu et al.	
		US-7,684,910	03-23-2010	Inbarajan	
		US-7,756,616	07-13-2010	Helm	
		US-7,844,037 B2	11-30-2010	Champlin et al.	
		US-8,046,470 B2	10-25-2011	Lewis et al.	
		US-8,050,387 B1	11-01-2011	Putnam et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
		EP-0611239 A1	08-17-1994	IBM Corporation		
		KR10-2006-009313	08-24-2006	Pantech Co., Ltd		
		KR10-2007-007836	07-31-2007	LG Electronics Inc.		

NON PATENT LITERATURE DOCUMENTS						
Examiner Initials*	Cite No. ¹	Include name of author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.				T ⁶
		International Search Report and Written Opinion mailed January 15, 2007 for PCT/US2006/030827 [PALM.P0962WO] 15 pgs.				
		International Search Report and Written Opinion mailed January 29, 2009 for PCT/US2008/074320 [PALM.P1009WO] 14 pgs.				
		Internet Telephony Manager (ITM) User Guide, XP002413107, December 1, 1996, pgs 1-5				
		Nokia 6630 Users Guide, XP002413106, March 28, 2005, pgs 1-109				
		Sharma et a., "Intelligent Agents in Call Management System," Integration of Knowledge Intensive Multi-Agent Systems International Conference, XP010793134, April 18, 2005 pgs 9-14.				

Examiner Signature	/Gerald Gauthier/	Date Considered	10/07/2013
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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH /GG/

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): David G Champlin

Confirmation No.: 8864

Application No.: 13/607419

Examiner: GAUTHIER, GERALD

Filing Date: Sep 07, 2012

Group Art Unit: 2653

Title: METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS

Mail Stop RCE
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

REQUEST FOR CONTINUED EXAMINATION (RCE) 37 CFR 1.114

Subsection (b) of 35 U.S.C. 132, effective on May 29, 2000, provides for continued examination of a utility or plant application filed on or after June 8, 1995.

See The American Inventors Protection Act of 1999 (AIPA).

This is a Request for Continued Examination (RCE) under CFR 1.114 of the above-identified application.

NOTE: 37 CFR 1.114 is effective on May 20, 2000. If the above- application was filed prior to May 29, 2000, applicant may wish to consider filing a continued prosecution application (CPA) under CFR 1.53(d) (PTO/SB/29) instead of a RCE to be eligible for the patent term adjustment provisions of the AIPA. See Changes to Application Examination and Provisional Application Practice, Interim Rule, 65 Fed. Reg. 14865 (Mar. 20, 2000), 1233 off. Gaz. Pat. Office

Submission under 37 CFR 1.114

Previously submitted

Consider the amendment(s)/reply under 37 CFR 1.116 previously filed on _____ .
(Any unentered amendment(s) referred to above will be entered).

Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____ .

Other _____

Enclosed

Amendment/Reply

Affidavit(s)/Declaration(s)

Information Disclosure Statement (IDS)

Other _____

Miscellaneous

Suspension of action is requested under 37 CFR 1.103(c) for a period of _____ months.
The fee for this Suspension is (37 CFR 1.17(i)) \$140.00

Other _____

- Request for continued examination (RCE) - 1st Request (see 37 CFR 1.114)

- Request for continued examination (RCE) - 2nd and subsequent request(see 37 CFR 1.114)

- A Petition for Extension of Time
 - 1st Month \$200
 - 2nd Month \$600
 - 3rd Month \$1400
 - 4th Month \$2200

Please charge to Deposit Account 08-2025 the sum of \$ 1200 . At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees.

Respectfully submitted,
David Champlin, et al

By: /Chun-Liang Kuo, Reg. # 61,672/

Chun-Liang Kuo
Attorney/Agent for Applicant(s)

Reg No. : 61672

Date: 12/15/2013

Telephone : +1 512 432 7010

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13607419	
	Filing Date		2012-09-07	
	First Named Inventor	Champlin, David		
	Art Unit	2653		
	Examiner Name	Gauthier, Gerald		
	Attorney Docket Number	83068177		

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6400814	B1	2002-06-04	Adams, Joel	

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20010003826	A1	2001-06-14	Iwata, Shinichiro	

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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1	10-2006-0093183	KR	A	2006-08-24	Pantech Co., Ltd.	English Abstract submitted.	<input type="checkbox"/>
	2	10-2007-0078369	KR	A	2007-07-31	LG Electronics, Inc.	English Abstract submitted.	<input type="checkbox"/>

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NON-PATENT LITERATURE DOCUMENTS

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	13607419
	Filing Date	2012-09-07
	First Named Inventor	Champlin, David
	Art Unit	2653
	Examiner Name	Gauthier, Gerald
	Attorney Docket Number	83068177

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	EP Application No. 06800929.9, Office Action mailed on November 23, 2010, 3 pages.	<input type="checkbox"/>
	2	International Application No. PCT/US2006/030827, International Preliminary Report on Patentability mailed on March 24, 2010, 10 pages.	<input type="checkbox"/>
	3	U.S. Patent Application No. 11/200,511, Final Office Action mailed on June 17, 2010, 9 pages.	<input type="checkbox"/>
	4	U.S. Patent Application No. 11/200,511, Non-Final Office Action mailed on February 27, 2009, 10 pages.	<input type="checkbox"/>
	5	U.S. Patent Application No. 11/200,511, Non-Final Office Action mailed on January 26, 2010, 11 pages.	<input type="checkbox"/>
	6	U.S. Patent Application No. 11/200,511, Non-Final Office Action mailed on July 24, 2009, 12 pages.	<input type="checkbox"/>
	7	U.S. Patent Application No. 11/200,511, Notice of Allowance mailed on September 23, 2010, 7 pages.	<input type="checkbox"/>
	8	U.S. Patent Application No. 11/848,216, Non-Final Office Action mailed on September 16, 2010, 12 pages.	<input type="checkbox"/>
	9	U.S. Patent Application No. 12/901,376, Non-Final Office Action mailed on April 18, 2012, 9 pages.	<input type="checkbox"/>
	10	U.S. Patent Application No. 12/901,376, Notice of Allowance mailed on July 25, 2012, 9 pages.	<input type="checkbox"/>

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	Art Unit	2653
	Examiner Name	Gauthier, Gerald
	Attorney Docket Number	83068177

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EXAMINER SIGNATURE

Examiner Signature		Date Considered	
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	First Named Inventor	Champlin, David
	Art Unit	2653
	Examiner Name	Gauthier, Gerald
	Attorney Docket Number	83068177

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	_/Chun-Liang Kuo, Reg. # 61,672/	Date (YYYY-MM-DD)	2013-12-15
Name/Print	Chun-Liang Kuo	Registration Number	61,672

This collection of information is required by 37 CFR 1.97 and 1.98. 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 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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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.

S/N 13/607,419

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Champlin et al.

Examiner: Gauthier, Gerald

Serial No.: 13/607,419

Group Art Unit: 2653

Filed: September 7, 2012

Docket: 83068177

Title: METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS

INFORMATION DISCLOSURE STATEMENT

Filed Via EFS

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with 37 C.F.R. §§ 1.97 *et. seq.*, the enclosed materials are brought to the attention of the Examiner for consideration in connection with the above-identified patent application. Applicant respectfully requests that this Information Disclosure Statement be entered and the documents listed on the attached SB/08a form be considered by the Examiner and made of record. Pursuant to the provisions of MPEP 609, Applicant requests that a copy of the SB/08a form, initialed as being considered by the Examiner, be returned to the Applicant with the next official communication.

Pursuant to 37 C.F.R. §1.97(b), it is believed that no fee or statement is required with the Information Disclosure Statement. However, if an Office Action on the merits has been mailed, the Commissioner is hereby authorized to charge the required fees to Deposit Account No. 08-2025 in order to have this Information Disclosure Statement considered.

Pursuant to 37 C.F.R. § 1.98(d), copies of the listed documents are not provided as these references were previously cited by or submitted to the U.S. Patent Office in connection with Applicant's prior U.S. application, Serial No. 12/901,376, filed on October 08, 2010 and 11/200,511, filed on August 08, 2005 which is relied upon for an earlier filing date under 35 U.S. C. § 120.

Pursuant to 37 C.F.R. 1.98(a)(2), Applicant believes that copies of cited U.S. Patents and Published Applications are no longer required to be provided to the Office. Notification of this change was provided in the United States Patent and Trademark Office OG Notices dated

October 12, 2004. Thus, Applicant has not included copies of any US Patents or Published Applications cited with this submission. Should the Office require copies to be provided, Applicant respectfully requests that notice of such requirement be directed to Applicant's below Signed representative. Applicant acknowledges the requirement to submit copies of foreign patent documents and non-patent literature in accordance with 37 C.F.R. 1.98(a)(2).

The Examiner is invited to contact the Applicant's Representative at the below-listed telephone number if there are any questions regarding this communication.

Respectfully submitted,

Date: 12/15/2013

By: /Chun-Liang Kuo, Reg. # 61,672/

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KOREAN PATENT ABSTRACTS XX

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KOREAN PATENT ABSTRACTS

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(72) Inventor: ● CHUNG, YUN SOO
● KIM, SUNG KUK(51) Int. Cl: H04L 12/16
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(54) HOME NETWORK SYSTEM USING A GPS FUNCTION OF A MOBILE TERMINAL AND A METHOD THEREOF, CAPABLE OF EFFECTIVELY CONTROLLING A HOME NETWORK BY AUTOMATICALLY EXECUTING A PARTICULAR EVENT ACCORDING TO A LOCATION OF A USER TO ESTIMATE AN ACCURATE ARRIVAL TIME OF THE USER

(57) Abstract:

PURPOSE: A home network system using a GPS function of a mobile terminal and a method thereof are provided to automatically control and manage a home network server by using a wireless network without using the Internet and a power line modem.

CONSTITUTION: A particular position where a home network is installed is registered by using a mobile terminal and an event to be performed at the corresponding home network server is set(S20). The mobile terminal recognizes its current location (S21). When the mobile terminal reaches a position within a certain radius distance from the home network server, it transmits a short messages including event contents to execute the corresponding event(S22,S23).

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(54) 이동통신 단말기의 지피에스 기능을 이용한 홈 네트워크 시스템 및 방법

요약

본 발명은 이동통신 단말기의 지피에스 기능을 이용한 홈 네트워크 시스템 및 방법에 관한 것이다.

본 발명은 생활가전, 주방기기, 방범/보안 등 정보가전기기와 안방, 부엌, 거실, 현관 등 집안의 각 공간을 인터넷을 통해 연결하여 상호간에 정보를 전달해 유선전화, 이동통신 단말기 등을 통해서 관리하고 작동제어하는 홈 네트워크 서버를 구비한 네트워크 시스템에 있어서, 지피에스(GPS, Global Positioning System) 기능에 따라 자신의 위치정보를 획득하며, 상기 홈 네트워크 서버가 설치된 특정의 위치를 등록하고 상기 홈 네트워크 서버에서 수행하고자 하는 이벤트를 설정한 후, 상기 획득한 자신의 위치정보에 의해 상기 홈 네트워크 서버로부터 소정의 반경 거리 내에 도달하였음이 확인되면, 상기 이벤트 내용 및 그 실행명령을 나타내는 단문 메시지를 작성하여 전송하는 이동통신 단말기와; 상기 이동통신 단말기와 연동하여 홈 네트워크 서버 및 이동중인 해당 단말기의 위치정보를 전송하는 지피에스 시스템과; 상기 이동통신 단말기의 요청에 따라 단문 메시지를 상기 홈 네트워크 서버로 라우팅하는 단문 메시지 센터를 포함하는 시스템 및 그 방법을 구비하여 구성된다.

따라서, 본 발명은 지피에스 기능(GPS, Global Positioning System)을 제공하는 이동통신 단말기에 있어서, 지피에스 기능을 이용하여 사용자가 홈 네트워크 서버가 구비된 집 근처 소정 반경 내에 도달하였는지 여부를 파악하고, 그에 따라 홈 네트워크 서버로 단문 메시지를 전송하여 사용자가 집에 도착하기 이전에 특정의 이벤트를 미리 실행하게 함으로써, 사용자의 위치에 따라 특정의 이벤트를 자동으로 실행하여 예약 설정에 의한 이벤트 실행에 비해 사용자의 정확한 도착시간을 예측할 수 있어 효율적으로 홈 네트워크를 제어할 수 있고, 인터넷망이나 전력선 모뎀을 이용하지 않고 무선망을 이용하여 자동으로 홈 네트워크 서버를 제어 및 관리할 수 있는 효과가 있다.

대표도

도 1

명세서

도면의 간단한 설명

도1은 도1은 본 발명 이동통신 단말기의 지피에스 기능을 이용한 홈 네트워크 시스템을 보인 블록도.

도2는 본 발명 이동통신 단말기의 지피에스 기능을 이용한 홈 네트워크 방법의 동작과정을 보인 순서도.

도면의 주요 부분에 대한 부호의 설명

10: 이동통신 단말기 20: 이동통신망

30: 지피에스 시스템 40: 지피에스 위성

50: 단문 메시지 센터 60: 인터넷망

70: 홈 네트워크 서버 80: 각종 정보가전기기

발명의 상세한 설명

발명의 목적

발명이 속하는 기술 및 그 분야의 종래기술

본 발명은 이동통신 단말기에 관한 것으로, 특히 지피에스 기능(GPS, Global Positioning System)을 제공하는 이동통신 단말기에 있어서, 지피에스 기능을 이용하여 사용자가 홈 네트워크 서버가 구비된 집 근처 소정 반경 내에 도달하였는지 여부를 파악하고, 그에 따라 홈 네트워크 서버로 단문 메시지를 전송하여 사용자가 집에 도착하기 이전에 특정의 이벤트를 미리 실행하게 함으로써, 사용자의 위치에 따라 특정의 이벤트를 자동으로 실행하여 예약 설정에 의한 이벤트 실행에 비해 사용자의 정확한 도착시간을 예측할 수 있어 효율적으로 홈 네트워크를 제어할 수 있고, 인터넷망이나 전력선 모뎀을 이용하지 않고 무선망을 이용하여 자동으로 홈 네트워크 서버를 제어 및 관리할 수 있는 이동통신 단말기의 지피에스 기능을 이용한 홈 네트워크 시스템 및 방법에 관한 것이다.

홈 네트워크(Home Network)란 TV, 냉장고, 에어컨 등 집안의 가전제품과 안방, 부엌, 거실, 현관 등 집안의 각 공간을 인터넷을 통해 연결하여 상호간에 정보를 전달해 유선전화, 이동통신 단말기 등을 통해서도 작동제어가 가능하도록 하는 미래형 가전 시스템을 말하는 것으로, 홈 네트워크는 가정 내의 정보가전기기가 네트워크로 연결돼 기기, 시간, 장소에 구애받지 않고 서비스가 이뤄지는 미래 가정환경을 구현한다.

현재 홈 네트워크 인터페이스 기술은 블루투스, 홈 RF, IrDA 등의 무선기술과 홈 PNA, IEEE1394, PLC, 인터넷 등의 유선기술이 보완과 경쟁관계를 형성하면서 기술 및 콘텐츠가 개발되고 있으며, 이때 각 정보가전기기 간에는 전화선, 동축 케이블, UTP, 무선채널, 전력선 등을 이용하여 네트워크를 구현한다.

예를 들어, 홈 네트워크를 설치하면 방에 앉아서 초인종을 누른 사람이나 세탁 종료 여부 등을 확인 할 수 있는 것은 물론, 유선전화, PDA(Personal Digital Assistants)나 이동통신 단말기를 이용하여 집에서 리모콘으로 TV를 조정하듯 외부에서 자신의 집을 모니터링 할 수 있고 퇴근 전에 사무실에서 집안 온도를 조정하고 바깥에서 신호를 통해 빔을 쬐거나 건강검진도 자동으로 받아 볼 수 있게 된다.

그런데, 종래 홈 네트워크 상에서 사용자가 유선전화, PDA, 이동통신 단말기 등을 이용하여 홈 네트워크를 제어하는 서버에 접속한 경우에만, 사용자의 명령에 따라 각종 정보가전기기가 동작하도록 설정되어 있어, 사용자가 집 근처에 도달하였을 경우 사용자가 서버에 접속하는 것을 잊거나 접속하지 않더라도 사용자가 지정한 명령에 따라 동작하지 않아 불편한 문제점이 있었다.

발명이 이루고자 하는 기술적 과제

따라서, 본 발명은 상기와 같은 종래의 문제점을 해결하기 위하여 제안한 것으로, 지피에스 기능(GPS, Global Positioning System)을 제공하는 이동통신 단말기에 있어서, 지피에스 기능을 이용하여 사용자가 홈 네트워크 서버가 구비된 집 근처 소정 반경 내에 도달하였는지 여부를 파악하고, 그에 따라 홈 네트워크 서버로 단문 메시지를 전송하여 사용자가 집에 도착하기 이전에 특정의 이벤트를 미리 실행하도록 하는 시스템 및 방법을 제공함에 그 목적이 있다.

발명의 구성 및 작용

이와 같은 목적을 달성하기 위한 본 발명은, 생활가전, 주방기기, 방범/보안 등 정보가전기와 안방, 부엌, 거실, 현관 등 집안의 각 공간을 인터넷을 통해 연결하여 상호간에 정보를 전달해 유선전화, 이동통신 단말기 등을 통해서 관리하고 작동 제어하는 홈 네트워크 서버를 구비한 네트워크 시스템에 있어서, 지피에스 기능에 따라 자신의 위치정보를 획득하며, 상기 홈 네트워크 서버가 설치된 특정의 위치를 등록하고 상기 홈 네트워크 서버에서 수행하고자 하는 이벤트를 설정한 후, 상기 획득한 자신의 위치정보에 의해 상기 홈 네트워크 서버로부터 소정의 반경 거리 내에 도달하였음이 확인되면, 상기 이벤트 내용 및 그 실행명령을 나타내는 단문 메시지를 작성하여 전송하는 이동통신 단말기와; 상기 이동통신 단말기와 연동하여 홈 네트워크 서버 및 이동중인 해당 단말기의 위치정보를 전송하는 지피에스 시스템과; 상기 이동통신 단말기의 요청에 따라 단문 메시지를 상기 홈 네트워크 서버로 라우팅하는 단문 메시지 센터를 포함하는 것을 특징으로 한다.

또한, 본 발명은 이동통신 단말기를 이용하여 홈 네트워크 서버가 설치된 특정 위치를 등록하고 해당 홈 네트워크 서버에서 수행하고자 하는 이벤트를 설정하는 단계와; 이동통신 단말기에서 현재 자신의 위치를 파악하는 단계와; 상기 파악 결과, 이동통신 단말기가 상기 홈 네트워크 서버로부터 소정의 반경 거리 내에 도달하면, 홈 네트워크 서버로 이벤트 내용을 포함하는 단문 메시지를 전송하여 해당 이벤트를 실행하는 단계를 포함하는 것을 특징으로 한다.

이하, 본 발명에 따른 일 실시예를 첨부한 도면을 참조하여 상세히 설명하면 다음과 같다.

도1은 본 발명 이동통신 단말기의 지피에스 기능을 이용한 홈 네트워크 시스템을 보인 블록도로서, 이에 도시한 바와 같이, 이동통신 단말기(10), 이동통신망(20), 지피에스(GPS, Global Positioning System) 시스템(30), 지피에스 위성(40), 단문 메시지 센터(SMSC, Short Message Service Center)(50), 인터넷망(60), 홈 네트워크 서버(70), 각종 정보가전기기(80)로 구성한다.

이동통신 단말기(10)는 지피에스 기능을 지원하여 지피에스 위성(40) 및 지피에스 시스템(30)과의 연동을 통해 자신의 위치정보를 획득할 수 있으며, 본 발명에 따라 홈 네트워크 서버(70)가 설치된 특정의 위치를 등록하고 해당 홈 네트워크 서버(70)에서 수행하고자 하는 이벤트를 설정한 후, 상기 획득된 자신의 위치정보에 의해 상기 홈 네트워크 서버(70)로부터 소정의 반경 거리 내에 도달하였는지 여부를 파악하여 상기 이벤트 내용 및 그 실행을 명령하는 단문 메시지를 상기 홈 네트워크 서버(70)로 전송함으로써, 상기 이벤트에 따라 상기 홈 네트워크 서버(70)를 제어한다.

즉, 지피에스 수신부(11)는 지피에스 위성(40)으로부터 지피에스 위성신호를 수신하고, 무선 송수신부(12)는 안테나를 통해 이동통신 시스템측과 무선신호를 송수신하며, 코덱(codec)부(13)는 무선신호로부터 추출하여 신호처리된 디지털 음성신호를 아날로그 음성신호로 변환하여 스피커(14)를 통해 출력하거나 마이크(15)로부터 아날로그 음성신호를 입력받아 그 역의 동작을 수행한다.

메모리부(16)는 운영 프로그램 및 각종 응용 프로그램, 각종 데이터를 저장하고, 키페드부(17)는 각종 키 입력 및 명령을 입력받으며, 디스플레이부(18)는 액정화면을 통해 키 입력 및 명령 처리 결과를 표시한다.

그리고, 주제어부(19)는 음성통화, 데이터 통신 등 단말기의 운용과 관련된 전반적인 제어를 담당하고, 본 발명에 따라 홈 네트워크 제어 모드를 위한 사용자 인터페이스를 제공하여 사용자가 홈 네트워크 서버(70)가 설치된 위치를 등록하고 해당 홈 네트워크 서버(70)에서 수행하고자 하는 이벤트를 설정받으며, 해당 단말기(10)가 홈 네트워크 서버(70)의 위치로부터 소정의 반경 거리 내에 도달한 경우 사용자가 기설정된 이벤트의 내용 및 그 실행을 나타내는 단문 메시지를 작성한 후 상기 작성된 단문 메시지를 상기 홈 네트워크 서버(70)로 전송한다.

즉, 상기 주제어부(19)는 지피에스 수신부(11)에서 지피에스 위성(40)로부터 수신한 지피에스 위성신호를 소정 시간 주기로 이동통신망(20)을 통해 지피에스 시스템(30)으로 전송한 후 다시 상기 지피에스 시스템(30)으로부터 현재 자신의 위치정보를 전달받아 현재 자신의 위치를 파악하고, 그 파악된 위치를 홈 네트워크 서버(70)의 위치간의 거리를 비교하여 상기

홈 네트워크 서버(70)와 소정의 반경 거리 내에 도달하게 되면, 단문 메시지 처리부(미도시)를 제어하여 사용자가 기설정된 이벤트의 내용 및 그 실행을 나타내는 단문 메시지를 작성하여 단문 메시지 서버(50)와 연동을 통해 상기 홈 네트워크 서버(70)로 전송하게 된다.

이동통신망(20)은 기지국(BTS/BSC), 교환기(MSC), 홈위치등록기(HLR), 가입자 데이터베이스 등을 포함하여 인터넷망(60)과 연동하여 이동통신 서비스를 제공하고, 지피에스 시스템(30)은 지피에스 수신기가 탑재된 단말기로부터 지피에스 위성의 지피에스 위성신호에 따라 계산한 해당 단말기의 위치정보 및 그와 관련한 다양한 컨텐츠를 제공하며, 지피에스 위성(40)은 지피에스 수신기가 탑재된 불특정의 단말기로 지피에스 위성신호를 전송한다.

단문 메시지 센터(SMSC, Short Message Service Center)(50)는 단문 메시지를 라우팅하는 역할을 하고, 홈 네트워크 서버(70)는 TV, 냉장고, 에어컨 등 집안의 가전제품과 안방, 부엌, 거실, 현관 등 집안의 각 공간을 인터넷을 통해 연결하여 상호간에 정보를 전달해 유선전화, 이동통신 단말기 등을 통해서 관리하고 작동제어하는 역할을 한다.

한편, 도2는 본 발명 이동통신 단말기의 지피에스 기능을 이용한 홈 네트워크 방법의 동작과정을 보인 순서도로서, 이에 도시한 바와 같이, 이동통신 단말기를 이용하여 홈 네트워크 서버가 설치된 특정 위치를 등록하고 해당 홈 네트워크 서버에서 수행하고자 하는 이벤트를 설정하는 단계(S20)와; 이동통신 단말기에서 현재 자신의 위치를 파악하는 단계(S21)와; 상기 파악 결과, 이동통신 단말기가 상기 홈 네트워크 서버로부터 소정의 반경 거리 내에 도달하면, 홈 네트워크 서버로 이벤트 내용을 포함하는 단문 메시지를 전송하여 해당 이벤트를 실행하는 단계(S22, S23)로 구성한다.

본 발명이 적용된 이동통신 단말기는 '홈 네트워크 제어 모드'라는 메뉴를 추가하여, 사용자가 사용자 인터페이스를 통해 관리하고자 하는 홈 네트워크 서버(70)가 설치된 위치를 등록하거나 상기 홈 네트워크 서버(70)에서 수행하고자 하는 이벤트를 설정할 수 있도록 하는 응용프로그램을 추가된 것으로 가정한다.

따라서, 사용자는 이동통신 단말기의 메뉴를 이동하여 '홈 네트워크 제어 모드'로 진입한 후, 홈 네트워크 서버(70)가 설치된 자신의 집이나 기타 특정의 위치를 등록하고, 상기 홈 네트워크 서버(70)에서 수행하고자 하는 소정의 이벤트를 설정한다(S20).

여기서, 사용자는 지피에스 시스템(30) 및 지피에스 위성(40)과 연동하여 자신이 위치한 홈 네트워크 서버(70)의 위치정보를 획득하여 등록하게 되며, 상기 소정의 이벤트는 특정 생활가전 혹은 주방기기를 동작시키거나 냉난방을 가동하는 등의 홈 네트워크 서버(70)의 제어에 의해 구동되는 이벤트를 말한다.

그 다음, 이동통신 단말기(10)에서 지피에스 시스템(30) 및 지피에스 위성(40)과의 연동을 통해 이동중인 자신의 현재 위치를 파악하여(S21), '홈 네트워크 제어 모드'에서 등록된 홈 네트워크 서버(70)의 위치를 기준으로 이동통신 단말기를 소유한 사용자가 소정의 반경 거리 내에 도달하였는지 여부를 확인한다(S22).

즉, 상기 이동통신 단말기(10)의 주제어부(19)에서 지피에스 위성(40)으로부터 수신한 지피에스 위성신호를 소정 시간 주기로 이동통신망(20)을 통해 지피에스 시스템(30)으로 전송한 후 상기 지피에스 시스템(30)에서 계산된 현재 자신의 위치정보를 전달받아 위치를 파악한 다음, 그 파악된 위치정보와 상기 단계(S20)에서 홈 네트워크 서버(70)에 대하여 등록된 위치간의 거리를 소정 시간 간격으로 비교하여 상기 홈 네트워크 서버(70)의 소정의 반경 거리 내에 해당 이동통신 단말기(10)가 도달하는지 여부를 확인함으로써, 사용자가 외출후 귀가하는 도중에 소정의 반경 거리 내에 이르게 되면 상기 홈 네트워크 서버(70)에서 기설정된 이벤트를 실행할 수 있도록 준비를 한다.

그 다음, 사용자의 이동통신 단말기(10)가 홈 네트워크 서버(70)의 위치로부터 소정의 반경 거리 내에 도달하게 되면, 주제어부(19)에서 단문 메시지 처리부(미도시)를 제어하여 사용자가 기설정된 이벤트의 내용 및 그 실행을 나타내는 단문 메시지를 작성하여 이동통신망(20)을 통해 단문 메시지 서버(50)로 요청하고, 이에 상기 단문 메시지 서버(50)에서 해당 단문 메시지를 홈 네트워크 서버(70)로 라우팅함으로써, 상기 홈 네트워크 서버(70)에서 해당 단문 메시지를 확인 후 니코딩 등의 처리를 하여 해당 단문 메시지에 포함된 명령대로 사용자가 등록된 이벤트를 실행하게 된다(S23).

따라서, 본 발명에 의해 홈 네트워크 서버(70)는 사용자가 집에 도착하기 이전에 특정의 이벤트를 미리 실행함으로써, 사용자의 위치에 따라 특정의 이벤트를 자동으로 실행하여 예약 설정에 의한 이벤트 실행에 비해 사용자의 정확한 도착시간을 예측하고, 그에 따라 각종 정보가전기(80)를 효율적으로 관리할 수 있게 된다.

발명의 효과

이상에서 설명한 바와 같이, 본 발명은 지피에스 기능(GPS, Global Positioning System)을 제공하는 이동통신 단말기에 있어서, 지피에스 기능을 이용하여 사용자가 홈 네트워크 서버가 구비된 집 근처 소정 반경 내에 도달하였는지 여부를 파악하고, 그에 따라 홈 네트워크 서버로 단문 메시지를 전송하여 사용자가 집에 도착하기 이전에 특정의 이벤트를 미리 실행하게 함으로써, 사용자의 위치에 따라 특정의 이벤트를 자동으로 실행하여 예약 설정에 의한 이벤트 실행에 비해 사용자의 정확한 도착시간을 예측할 수 있어 효율적으로 홈 네트워크를 제어할 수 있고, 인터넷망이나 전력선 모뎀을 이용하지 않고 무선망을 이용하여 자동으로 홈 네트워크 서버를 제어 및 관리할 수 있는 효과가 있다.

(57) 청구의 범위

청구항 1.

생활가전, 주방기기, 방법/보안 등 정보가전기기과 안방, 부엌, 거실, 현관 등 집안의 각 공간을 인터넷을 통해 연결하여 상호간에 정보를 전달해 유선전화, 이동통신 단말기 등을 통해서 관리하고 작동제어하는 홈 네트워크 서버를 구비한 네트워크 시스템에 있어서, 지피에스(GPS, Global Positioning System) 기능에 따라 자신의 위치정보를 획득하며, 상기 홈 네트워크 서버가 설치된 특정의 위치를 등록하고 상기 홈 네트워크 서버에서 수행하고자 하는 이벤트를 설정한 후, 상기 획득한 자신의 위치정보에 의해 상기 홈 네트워크 서버로부터 소정의 반경 거리 내에 도달하였음이 확인되면, 상기 이벤트 내용 및 그 실행명령을 나타내는 단문 메시지를 작성하여 전송하는 이동통신 단말기와; 상기 이동통신 단말기와 연동하여 홈 네트워크 서버 및 이동중인 해당 단말기의 위치정보를 전송하는 지피에스 시스템과; 상기 이동통신 단말기의 요청에 따라 단문 메시지를 상기 홈 네트워크 서버로 라우팅하는 단문 메시지 센터를 포함하는 것을 특징으로 하는 이동통신 단말기의 지피에스 기능을 이용한 홈 네트워크 시스템.

청구항 2.

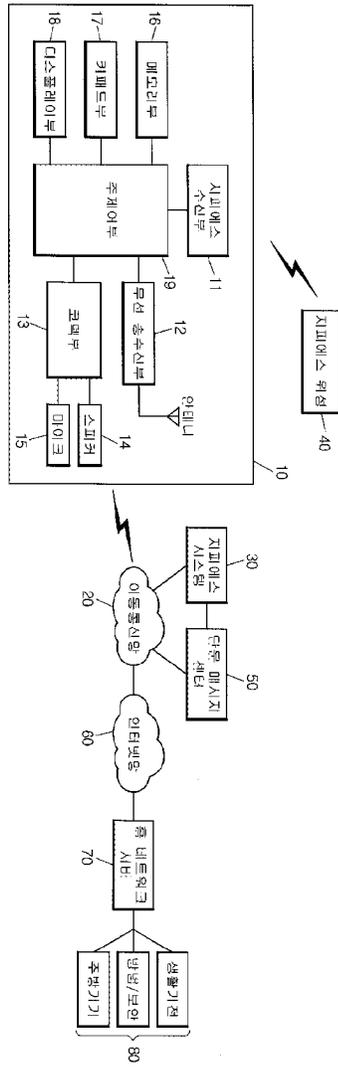
이동통신 단말기를 이용하여 홈 네트워크 서버가 설치된 특정 위치를 등록하고 해당 홈 네트워크 서버에서 수행하고자 하는 이벤트를 설정하는 단계와; 이동통신 단말기에서 현재 자신의 위치를 파악하는 단계와; 상기 파악 결과, 이동통신 단말기가 상기 홈 네트워크 서버로부터 소정의 반경 거리 내에 도달하면, 홈 네트워크 서버로 이벤트 내용을 포함하는 단문 메시지를 전송하여 해당 이벤트를 실행하는 단계를 포함하는 것을 특징으로 하는 이동통신 단말기의 지피에스 기능을 이용한 홈 네트워크 방법.

청구항 3.

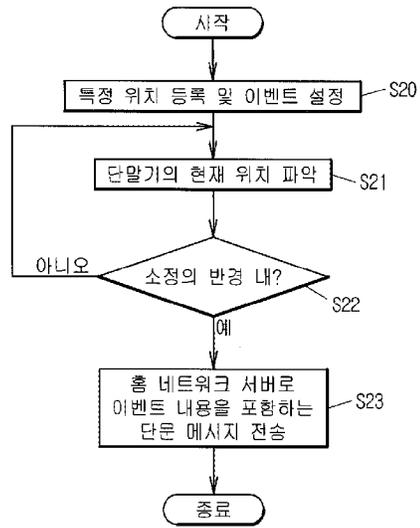
제2항에 있어서, 상기 이동통신 단말기에서 현재 자신의 위치를 파악하는 단계는, 주제어부에서 지피에스 위성으로부터 수신한 지피에스 위성신호를 소정 시간 주기로 이동통신망을 통해 지피에스 시스템으로 전송한 후 상기 지피에스 시스템에서 계산된 현재 자신의 위치정보를 전달받아 위치를 파악하는 것을 특징으로 하는 이동통신 단말기의 지피에스 기능을 이용한 홈 네트워크 방법.

도면

도면 1



도면2





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(57) 요약

본 발명은 SUPL(Secure User Plane Location) 기반의 위치정보 시스템에서 단말간 트리거 위치 서비스 요청방법에 관한 것이다. 본 발명은 제1단말로부터 특정 영역에서 제2단말의 트리거 서비스가 요청되면 상기 제1단말의 네트워크가 제2단말의 제2네트워크로 상기 트리거 서비스 요청을 전달하고, 상기 제2네트워크는 제2단말과 측위 세션을 개시하고, 측위 메시지를 교환하여 상기 제2단말의 위치를 계산한 후 상기 계산된 위치를 제1단말이 지정한 특정 영역과 비교하여, 특정 영역에서의 지역 이벤트 발생을 제1단말로 통지한다.

대표도

도 8

특허청구의 범위

청구항 1.

제1단말이 특정 영역에서 제2단말의 트리거 서비스를 요청하는 단계와;

상기 제1단말의 제1네트워크가 제2단말의 제2네트워크로 상기 트리거 서비스 요청을 전달하는 단계와;

상기 제2네트워크가 제2단말과 측위 세션을 개시하여 제2단말의 위치를 계산하는 단계와;

상기 제2네트워크가 상기 계산된 위치를 제1단말이 지정한 특정 영역과 비교하여, 특정 영역에서의 지역 이벤트 발생을 제1단말로 통지하는 단계를 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 2.

제1항에 있어서, 상기 제1, 제2네트워크는

위치서버를 나타내는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 3.

제1항에 있어서, 상기 제1, 제2단말은

SET(SUPL Enabled Terminal)를 나타내는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청 방법.

청구항 4.

제2항에 있어서, 상기 위치서버는

SLP(SUPL Location Platform)를 나타내는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청 방법.

청구항 5.

제3항에 있어서, 상기 SET는

UMTS의 UE(User Equipment), GSM의 MS(Mobile Station) 또는 IS-95 MS 중의 어느 하나인 것을 특징으로 하는 위치 정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 6.

제1항에 있어서, 상기 트리거 서비스는

세션 시작 메시지를 통해 요청되는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 7.

제6항에 있어서, 상기 세션 시작 메시지는

session-id, SET capabilities, 위치식별자, msid, request type, defined area 및 event type을 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 8.

제7항에 있어서, 상기 request type은

서비스 요청이 특정 위치와 관련된 트리거 서비스임을 나타내는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 9.

제7항에 있어서, 상기 defined area는 특정 지역을 나타내며, 상기 event type은 어떠한 지역 이벤트를 원하는지를 나타내는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 10.

제9항에 있어서, 상기 defined area는

좌표나 지역이름을 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 11.

제1항에 있어서, 상기 트리거 서비스 요청은

RLP메시지를 통해 제1네트워크에서 제2네트워크로 전달되는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 12.

제1항에 있어서, 상기 제2단말과의 측위 세션이 개시되면 제2네트워크가 RLP메시지를 통해 제1네트워크로 트리거 세션이 시작되었음을 알리는 단계와;

상기 제1네트워크가 제1단말로 세션 종료 메시지를 전송하여 제1단말과 제1네트워크간의 연결을 종료하는 단계를 추가로 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 13.

제1항에 있어서, 상기 제2네트워크는

상기 계산된 위치가 상기 제1단말이 지정한 특정 영역에 해당할 때까지 제2단말의 위치계산 및 비교동작을 반복적으로 수행하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 14.

제1항에 있어서, 상기 제1네트워크는

세션 보고 메시지를 통해 상기 결과값을 제1단말로 전달하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 15.

제14항에 있어서, 상기 세션 보고 메시지는

WAP PUSH 또는 SMS 트리거 등을 통해 전송되는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 16.

제1항에 있어서, 상기 통지 단계는

제2네트워크가 상기 계산된 위치가 제1단말이 지정한 특정 영역에 해당하는지 비교하는 단계와;

상기 계산된 위치가 상기 제1단말이 지정한 특정 영역에 해당할 경우 그 결과값을 제1네트워크를 통해 제1단말로 전송하는 단계를 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 17.

제1단말이 제1위치서버로 제2단말의 트리거 서비스를 요청하는 단계와;

상기 제1위치서버가 제2위치서버로 트리거 서비스 요청을 전달하는 단계와;

상기 제2위치서버가 제2단말과 측위 세션을 개시하여 제2단말의 위치를 계산하는 단계와;

상기 제2위치서버가 상기 제1단말의 트리거 서비스 타입에 따라 상기 제1위치서버를 통해 주기적인 위치추적 서비스 또는 지역관련 위치추적 서비스를 제공하는 단계를 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 18.

제17항에 있어서, 상기 제1위치서버가 상기 트리거 서비스를 요청한 제2단말의 ID를 이용하여 제2위치서버를 결정하는 단계를 추가로 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 19.

제17항에 있어서, 상기 제1, 제2위치서버는

SLP(SUPL Location Platform)을 나타내는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 20.

제17항에 있어서, 상기 트리거 서비스는

SET 초기화 메시지를 통해 요청되는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 21.

제17항에 있어서, 상기 SET 초기화 메시지는

session-id, 목표 SETid, 트리거 모드, 트리거 정보를 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 22.

제21항에 있어서, 상기 트리거 모드는

다른 SET의 트리거 서비스를 나타내며, 주기적 이벤트 또는 지역 이벤트 파라미터를 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 23.

제21항에 있어서, 상기 트리거 정보는

트리거 세션의 파라미터들을 나타내며, 주기적 파라미터와 지역 이벤트 파라미터를 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 24.

제23항에 있어서, 상기 주기적 파라미터는

주기정보를 포함하고, 상기 지역 이벤트 파라미터는 특정 지역을 나타내는 defined area 및 어떠한 지역 이벤트를 원하는지를 나타내는 이벤트 타입(event type)을 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 25.

제24항에 있어서, 상기 defined area는

좌표나 지역이름을 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 26.

제17항에 있어서, 상기 제2위치서버는

제1단말의 트리거 서비스 요청을 분석하여, 제1단말이 주기적인 트리거 서비스를 요청한 것으로 판단되면 각 주기마다 상기 제2단말의 위치를 제1위치서버를 통해 제1단말로 보고하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 27.

제17항에 있어서, 상기 제2위치서버는

상기 제1단말이 지역이벤트 트리거 서비스를 요청한 것으로 판되면, 상기 계산된 위치를 제1단말이 지정한 특정 영역과 비교하여, 특정 영역에서의 지역 이벤트 발생을 제1단말로 통지하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 28.

제1단말이 SET 초기화 메시지를 통해 제1위치서버로 제2단말의 위치추적을 요청하는 단계와;

상기 제1위치서버가 위치 요청 메시지를 통해 제2서버로 제2단말의 위치추적 요청을 전달하는 단계와;

상기 제2위치서버가 주기적으로 제2단말과 위치추적절차를 수행하여 제2단말의 위치를 계산하는 단계와;

상기 제1위치서버가 제2위치서버에서 계산된 제2단말의 위치값들을 각 위치 응답 메시지를 통해 수신하여, 상기 제1단말로 보고하는 단계를 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 29.

제28항에 있어서, 상기 제2위치서버가 상기 계산된 제2단말의 위치를 제1위치서버로 전송하는 단계를 추가로 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 30.

제28항에 있어서, 상기 제2위치서버로부터 제2단말의 마지막 위치가 수신되면, 제1위치서버가 해당 위치값을 포함하는 세션 종료 메시지를 제1단말로 전송하는 단계를 추가로 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법

청구항 31.

제28항에 있어서, 상기 제1위치서버가 상기 SET 초기화 메시지에 포함된 제2단말의 식별자를 이용하여 제2위치서버를 결정하는 단계를 추가로 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 32.

제28항에 있어서, 상기 제1,제2위치서버는

각각 제1,제2단말의 홈 네트워크에 존재하며, SLP(SUPL Location Platform)을 나타내는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 33.

제28항에 있어서, 상기 SET 초기화 메시지는

session-id, 제2단말의 id, 트리거 모드 및 트리거 정보를 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 34.

제33항에 있어서, 상기 트리거 모드는

다른 SET의 트리거 서비스를 나타내며, 주기적 이벤트 또는 지역 이벤트 파라미터를 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 35.

제33항에 있어서, 상기 트리거 정보는

트리거 세션의 파라미터들을 나타내며, 주기적 파라미터와 지역 이벤트 파라미터를 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 36.

제34항에 있어서, 상기 주기적 파라미터는

주기정보를 포함하며, 상기 지역 이벤트 파라미터는 특정 지역을 나타내는 defined area 및 어떠한 지역 이벤트를 원하는지를 나타내는 이벤트 타입(event type)을 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

청구항 37.

제36항에 있어서, 상기 defined area는

좌표나 지역이름을 포함하는 것을 특징으로 하는 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법.

명세서

발명의 상세한 설명

발명의 목적

발명이 속하는 기술 및 그 분야의 종래기술

본 발명은 SUPL(Secure User Plane Location) 기반의 위치정보 시스템에 관한 것으로서, 특히 두 단말간의 트리거 위치 서비스(Triggered Location Service) 요청 방법에 관한 것이다.

이동통신 시스템에서는 단말의 위치를 계산하기 위한 관련 기능부를 이동통신 네트워크에 구비하여, 주기적으로 또는 요청에 따라 단말의 위치를 일정 개체(entity)에 전달하는 위치 서비스(Location Service)를 제공하고 있다.

상기 위치 서비스와 관련된 네트워크 구조는 3GPP나 3GPP2등의 내부 네트워크 구조에 따라 상이하며, 현재 단말의 위치를 계산하는 방법으로는 단말이 속한 셀의 ID를 전달하는 셀-ID 방식, 단말로부터 각 기지국으로 전파가 도달되는 시간을 측정 후 삼각측량을 이용하여 단말의 위치를 계산하는 방법 및 GPS를 이용한 방법등이 있다.

그런데, 상기 위치 서비스를 사용자에게 제공하기 위해서는 상당한 시그널링과 위치(location) 정보가 이동 단말과 위치 서버사이에서 전달되어야 한다. 최근 위치 서비스를 제공하기 위한 표준화된 위치 기술들(Positioning technologies), 즉,

이동 단말의 위치에 기반한 위치 서비스가 빠르게 확산되고 있다. 상기 위치 기술들은 통상 사용자 평면과 제어평면을 통하여 제공될 수 있는데, 상기 위치기술의 일 예로 사용자 평면을 통해 위치 서비스를 제공하는 SUPL(secure User Plane Location)이 알려지고 있다.

상기 SUPL은 이동국의 위치 계산에 필요한 위치 정보를 전달하는 효율적인 방법으로서, GPS 어시스턴스(assistance)와 같은 위치 어시스턴스 정보를 전달하기 위해 그리고 이동 단말과 네트워크사이에서 위치 기술(Positioning technology) 관련 프로토콜을 운반하기 위하여, 사용자 평면 데이터 베어러(bearer)를 사용한다.

일반적으로 위치 정보 시스템에서 위치 서비스와 관련된 SPUL 네트워크는 크게 SUPL 에이전트(Agent), SLP(SUPL Location Platform) 및 SET(SUPL Enabled Terminal)등을 포함한다. 상기 SUPL 에이전트는 실제 측정된 위치정보를 사용하는 논리적(logical)인 서비스 액세스 포인트를 나타내고, 상기 SLP는 위치정보를 얻기 위하여 네트워크 자원들을 액세스하는 네트워크 부분의 SUPL 서비스 액세스 포인트를 나타낸다. 또한, 상기 SET는 SUPL인터페이스를 사용하는 SUPL 네트워크와 통신할 수 있는 소자로서, 예를들어 UMTS의 UE(User Terminal), GSM의 MS (이동국),IS-95 MS 또는 SET 기능이 내재된 랩탑 컴퓨터(Laptop Computer)나 PDA (Personal Digital Assistants)등 중의 하나일 수 있다. 또한 상기 SET는 WLAN (Wideband LAN)을 통해 접속하는 다양한 이동 단말일 수도 있다. 상기 SET는 사용자 평면 베어러를 통해 네트워크와 연동되어 SUPL에서 정의하는 절차들을 지원한다.

위치정보 시스템과 같은 이동통신 시스템에서 사용자가 원래 등록된 홈 네트워크(Home Network)라고 하고 사용자가 이동하여 상기 홈 네트워크가 아닌 다른 지역에 위치하였을 때 해당 지역의 네트워크를 방문 네트워크(Visited Network)라고 한다. 그리고, 상기 홈 네트워크내의 SLP를 H-SLP라고 하고 상기 방문 네트워크내의 SLP를 V-SLP라고 한다. 이때 네트워크에서 SUPL절차를 시작하는 경우 외부 클라이언트가 처음 접속하는 SLP를 R-SLP(Requesting SLP)라고 하며, 이것은 논리적인 개체로서 H-SLP와 동일할 수도 있고 그렇지 않을 수도 있다. 아울러 현재 위치추적을 목표로 하는 SET를 목표(target) SET로 정의한다.

또한, 상기 트윈크에서 위치서버인 SLP는 실제 위치를 계산하는 개체인 SPC(SUPL Positioning Center)와 위치정보를 계산하는 이외의 SLP의 역할, 예를들어 로밍 및 자원 관리등의 역할을 담당하는 SLC(SUPL Location Center)로 구성된다. 따라서, SET는 SLC를 거쳐 SPC와의 통신을 통해 위치정보를 계산할 수도 있고(Proxy mode), 상기 SPC와 바로 접속을 열어 위치정보를 계산할 수도 있다(non-proxy mode).

그러나, 종래 SUPL을 기반으로 하는 트리거 위치 서비스(Triggered Location Service)에서는 사용자 단말을 통해 원하는 상대방의 트리거 위치 서비스를 요청하는 방법을 제시하지 못하고 있다.

또한, 종래 SUPL을 기반으로 한 지역 이벤트(area event) 관련 트리거 위치 서비스에서는 자신의 위치와 관련된 영역을 정의하여 트리거 위치 서비스 (Triggered Location Service)를 요청하는 방법은 제시하지 못하고 있다.

발명이 이루고자 하는 기술적 과제

따라서, 본 발명의 목적은 사용자 단말을 통해 원하는 상대방의 트리거 위치 서비스를 요청할 수 있는 방법을 제공하는데 있다.

본 발명의 다른 목적은 단말의 위치와 관련된 영역을 정의하여 트리거 위치 서비스(Triggered Location Service)를 요청하는 방법을 제공하는데 있다.

상기와 같은 목적을 달성하기 위하여, 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법은, 제1 단말이 특정 영역에서 제2단말의 트리거 서비스를 요청하는 단계와; 상기 제1단말의 네트워크가 제2단말의 제2네트워크로 상기 트리거 서비스 요청을 전달하는 단계와; 상기 제2네트워크가 제2단말과 측위 세션을 개시하고, 측위 메시지를 교환하여 상기 제2단말의 위치를 계산하는 단계와; 상기 제2네트워크가 상기 계산된 위치를 제1단말이 지정한 특정 영역과 비교하여, 특정 영역에서의 지역 이벤트 발생을 제1단말로 통지하는 단계를 포함한다.

바람직하게, 상기 제1,제2네트워크는 위치서버를 나타내고, 상기 제1,제2단말은 SET(SUPL Enabled Terminal)를 나타낸다.

바람직하게, 상기 트리거 서비스는 세션 시작 메시지를 통해 요청된다.

바람직하게, 상기 세션 시작 메시지는 session-id, SET capabilities, 위치식별자, msid, request type, defined area 및 event type을 포함한다.

바람직하게, 상기 request type은 서비스 요청이 특정 위치와 관련된 트리거 서비스임을 나타낸다.

바람직하게, 상기 defined area는 특정 지역을 나타내며, 상기 event type은 어떠한 지역 이벤트를 원하는지를 나타낸다. 이때, 상기 defined area는 좌표나 지역이름을 포함한다.

바람직하게, 상기 트리거 서비스 요청은 RLP메시지를 통해 제1네트워크에서 제2네트워크로 전달된다.

바람직하게, 상기 방법은 제2단말과의 측위 세션이 개시되면 제2네트워크가 RLP메시지를 통해 제1네트워크로 트리거 세션이 시작되었음을 알리는 단계와; 상기 제1네트워크가 제1단말로 세션 종료 메시지를 전송하여 제1단말과 제1네트워크 간의 연결을 종료하는 단계를 추가로 포함한다.

상기와 같은 목적을 달성하기 위하여, 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법은, 제1 단말이 제1위치서버로 제2단말의 트리거 서비스를 요청하는 단계와; 상기 제1위치서버가 제2위치서버로 트리거 서비스 요청을 전달하는 단계와; 상기 제2위치서버가 제2단말과 측위 세션을 개시하여 제2단말의 위치를 계산하는 단계와; 상기 제2위치서버가 상기 제1단말의 트리거 서비스 요청타입에 따라 상기 제1위치서버를 통해 주기적인 위치추적 서비스 또는 지역관련 위치추적 서비스를 제공하는 단계를 포함한다.

바람직하게, 상기 트리거 서비스는 SET 초기화 메시지를 통해 요청된다.

바람직하게, 상기 SET 초기화 메시지는 session-id, 목표 SETid, 트리거 모드, 트리거 정보를 포함한다.

바람직하게, 상기 트리거 모드는 다른 SET의 트리거 서비스(SET initiated trigger service of another SET type)를 나타내며, 주기적 이벤트(Periodic event) 또는 지역 이벤트(area event) 파라미터를 포함한다.

바람직하게, 상기 트리거 정보는 트리거 세션의 파라미터들을 나타내며, 주기적 파라미터와 지역 이벤트 파라미터를 포함한다.

바람직하게, 상기 주기적 파라미터는 주기정보를 포함하고, 상기 지역 이벤트 파라미터는 defined area 및 event type을 포함한다.

바람직하게, 상기 제1위치서버는 SET 초기화 메시지에 포함된 제2단말의 식별자를 이용하여 제2위치서버를 결정한다.

바람직하게, 상기 제2위치서버는 제1단말의 트리거 서비스 요청을 분석하여, 제1단말이 주기적인 트리거 서비스를 요청한 것으로 판단되면 각 주기마다 상기 제2단말의 위치를 제1위치서버를 통해 제1단말로 보고한다.

바람직하게, 상기 제2위치서버는 상기 제1단말이 지역이벤트 트리거 서비스를 요청한 것으로 판단되면, 상기 계산된 위치를 제1단말이 지정한 특정 영역과 비교하여, 특정 영역에서의 지역 이벤트 발생을 제1단말로 통지한다.

상기와 같은 목적을 달성하기 위하여, 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법은, 제1 단말이 SET 초기화 메시지를 통해 제1위치서버로 제2단말의 위치추적을 요청하는 단계와; 상기 제1위치서버가 위치 요청 메시지를 통해 제2서버로 제2단말의 위치추적 요청을 전달하는 단계와; 상기 제2위치서버가 주기적으로 제2단말과 위치추적절차를 수행하여 제2단말의 위치를 계산하는 단계와; 상기 제1위치서버가 제2위치서버에서 계산된 제2단말의 위치값들을 각 위치 응답 메시지를 통해 수신하여, 상기 제1단말로 보고하는 단계를 포함한다.

바람직하게, 상기 제1위치서버는 SET 초기화 메시지에 포함된 제2단말의 식별자를 이용하여 제2위치서버를 결정한다.

바람직하게, 상기 제1, 제2위치서버는 각각 제1, 제2단말의 홈 네트워크에 존재하며, SLP(SUPL Location Platform)을 나타낸다.

바람직하게, 상기 SET 초기화 메시지는 session-id, 제2단말의 id, 트리거 모드 및 트리거 정보를 포함한다.

바람직하게, 상기 트리거 모드는 다른 SET의 트리거 서비스(SET initiated trigger service of another SET type)를 나타내며, 주기적 이벤트(Periodic event) 또는 지역 이벤트(area event) 파라미터를 포함한다.

바람직하게, 상기 트리거 정보는 트리거 세션의 파라미터들을 나타내며, 주기적 파라미터와 지역 이벤트 파라미터를 포함한다.

발명의 구성

본 발명은 SUPL 네트워크에서 구현된다. 그러나, 본 발명은 다른 표준에 따라 동작하는 무선 통신 시스템에도 적용되어 질 수 있다. 이하, 본 발명의 바람직한 실시 예들을 자세히 설명하면 다음과 같다.

본 발명은 SUPL 기반의 위치정보 시스템에서, 사용자가 단말을 통해 원하는 상대방의 지역 이벤트(area event)에 관련된 트리거 위치 서비스 (Triggered Location Service)를 요청하는 방법을 제안한다. 이를 위하여 사용자는 지역 이벤트 관련 트리거 위치 서비스를 요청할 때, 상기 지역 이벤트를 위한 영역을 현재 자신의 위치와 관련된 일정 영역 또는 자신의 위치와 상관없는 특정 영역을 지정할 수 있다.

도 1은 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스(Triggered Location Service) 요청방법의 제1 실시예를 나타낸다. 특히 본 발명의 제1 실시예는 서비스를 요청하는 SET1의 현재 위치와 관련된 일정 영역에서 SET2의 지역 이벤트를 확인하는 방법을 나타낸다. 이때, 상기 SLP는 네트워크측에 해당하고, SET는 단말측에 해당한다.

도 1에 도시된 바와같이, 먼저 SET1에 있는 SUPL 에이전트는 SET1에서 동작하고 있는 어플리케이션으로부터 위치관련 요청을 수신한다.

상기 위치관련 요청이 수신되면, SET1은 현재 어떤 네트워크에도 데이터 접속이 설정되어 있지 않은 경우 패킷 데이터 네트워크에 연결한다(S10).

일단 데이터 접속이 설정되면, SET1은 네트워크로부터 제공된 기본주소(default address)를 이용하여 위치서버인 SLP1과 안전한(secure) IP연결을 설정하고, 상기 SLP1과 측위(위치측정) 세션을 시작하기 위하여 세션시작 메시지 즉, SUPL START 메시지를 전송한다(S11). 상기 SUPL START 메시지에는 session-id, SET capabilities, 위치 식별자(location identifier : lid), msid, 요청타입(request type), 정의된 지역(defined area) 및 이벤트 타입(event type) 등이 포함되어 있다. 여기서, 상기 요청타입(request type)은 서비스 요청이 SET1의 위치와 관련된 트리거 서비스임을 나타내며, 상기 정의된 지역(defined area)은 SET1의 위치로부터 얼마의 영역을 정의하는지를 나타내며, 상기 이벤트 타입(event type)은 어떠한 지역 이벤트(나감,들어감 또는 존재)인지를 나타낸다. 또한, 상기 SET capabilities에는 지원하는 측위방식(예를 들어, SET-Assisted A-GPS, SET Based A-GPS)과 그와 관련된 측위 프로토콜(예를 들어 RRLP, RRC, TIA-801)이 포함되어 있다. 그리고, 만약 이전에 계산한 위치가 SET1이 요청한 QoP(Quality of Position)를 만족하면 SLP1은 바로 단계(S16)로 진행한다.

만약, 이전에 계산한 위치가 요청한 QoP를 만족하지 않으면 SLP1은 라우팅 정보를 이용하여 SET1이 로밍되지 않았음을 확인하고(현재 서비스 지역내에 있음)(S12), 상기 수신한 msid에 기초하여 SET2와 관련된 위치서버 즉, SLP2를 결정한다.

이후 SLP1은 상기 SUPL START 메시지에 포함되어 있는 SET1이 지원하는 측위방식과의 일관성을 유지하기 위해 적절한 측위방식을 결정하고, 그 결정된 측위방식에서 요구된다면 SLP1은 SUPL START 메시지에 포함된 지원 가능한 측위 프로토콜(예를 들어, RRLP, RRC, TIA-801)을 사용한다. 이러한 일련의 동작이 끝나면 SLP1은 상기 결정된 측위방식이 포함된 세션응답 메시지 즉, SUPL RESPONSE 메시지를 SET1으로 전송한다(S13). 상기 SUPL RESPONSE 메시지는 session-id는 포함되어 있지만 SET1이 새로운 연결을 설정할 필요가 없기 때문에 SLP1의 주소는 포함되지 않는다.

또한, 상기 SUPL START 메시지에 포함된 정보 즉 lid에 의해 계산된 대략적인(coarse) 위치결과가 SET1이 요청한 QoP를 만족하면, SLP1은 바로 단계(S16)로 진행한다.

상기 SUPL RESPONSE 메시지를 수신한 SET1은 응답으로 세션 측위 초기화 메시지 즉, SUPL POS INIT를 SLP1으로 전송한다(S14). 상기 SUPL POS INIT 메시지는 적어도 session-id, SET capabilities 및 위치 식별자(lid)가 포함되어 있다.

상기 SUPL POS INIT메시지를 수신한 SLP1은 SET1과 측위절차 메시지(SUPL POS메시지) 연속적으로 교환하여 SET의 위치를 계산한다(S15). 이때, 상기 위치 계산은 SLP1이 SET1으로부터 수신한 측정값을 기초로 수행하거나(SET-Assisted), SET1이 SLP1으로부터 획득된 어시스턴스 데이터를 기초로 수행한다(SET-Based).

SUPL 측위(positioning) 절차가 완료되면 SLP1은 RLP프로토콜 메시지(RLP SSRLIR)를 이용하여 SET2의 위치서버인 SLP2에게 트리거 서비스(Triggered Service)를 요청한다(S16). 상기 RLP SSRLIR메시지에는 session-id, msid, request type, defined area 및 event type을 포함되어 있다. 상기 request type은 상기 서비스 요청이 SET1의 위치와 관련된 트리거 서비스를 나타내고, 상기 defined area는 상기 계산된 SET1의 위치와 그 위치로부터 얼마의 영역을 정의하는지를 나타내며, 상기 event type은 어떠한 지역 이벤트(나감,들어감,존재)를 원하는지를 나타낸다. 만약, SET1이 요청한 트리거 서비스에 대해 권한이 있는 경우 SLP2는 수신한 client-id를 통해 SET1을 인증하고, 수신한 msid를 통해 가입자 프라이버시를 적용한다.

상기 RLP SSRLIR메시지를 수신한 SLP2는 SET 록업 테이블을 이용하여 SET2가 SUPL을 지원하는지 확인하고, 라우팅 정보를 이용하여 SET2가 현재 서비스 지역내에 있는지(SET가 로밍되었는지) 확인한다(S17).

확인결과 SET2가 SUPL을 지원하고 로밍되지 않은 경우 SLP2는 세션 초기화 메시지(SUPL INIT)를 이용하여 SET2와 위치 세션을 개시한다(S18). 상기 SUPL INIT메시지에는 적어도 session-id, proxy/non proxy mode indicator, 사용할 positioning방법(posmethod), 지역 이벤트 트리거 서비스를 나타내는 서비스 타입(service type)이 포함되어 있다. 또한, 상기 SUPL INIT메시지에는 희망하는 QoP가 포함될 수도 있다.

상기 SUPL INIT메시지를 수신한 SET2는 현재 자신이 어떤 네트워크에도 데이터 접속이 설정되어 있지 않은 경우 패킷 데이터 네트워크에 연결하고(S19), 상기 SLP2와 측위 세션을 시작하기 위하여 세션 트리거 시작 메시지(SUPL TRIGGERED START)를 전송한다(S20). 상기 SUPL TRIGGERED START메시지에는 적어도 session-id, SET capabilities 및 위치 식별자(lid)가 포함된다.

만약, 수신한 SUPL TRIGGERED START메시지에 포함된 정보(e.g.,lid)에 의해 계산된 대략적인(coarse)가 위치결과가 SET2가 요청한 QoP를 만족하면, SLP2는 단계(S21)를 수행한 후 SUPL POS절차를 수행하지 않은 상태에서 바로 상기 대략적인 위치결과와 SLP1으로부터 수신한 지정된 위치 이벤트를 비교한다(S22).

반면에 상기 계산된 대략적인(coarse)가 위치결과가 SET2가 요청한 QoP를 만족하지 않으면, SLP2는 트리거 세션이 개시되었음을 알리기 위하여 SET2로 SUPL TRIGGERED RESPONSE메시지를 전송한다. 상기 SUPL TRIGGERED RESPONSE메시지에는 트리거 세션에서 사용될 측위방식이 포함된다.

이후 SET2와 SLP2사이에는 주기적으로 측위 세션이 발생되는데(S22), 상기 측위 세션이 시작되면 SET2와 SLP2사이에 성공적으로 측위 절차 메시지(SUPL POS)들이 교환된다. 이때, 상기 위치 계산은 SLP2가 SET2으로부터 수신한 측정값을 기초로 수행하거나(SET-Assisted), SET2가 SLP2으로부터 획득된 어시스턴스 데이터를 기초로 수행한다(SET-Based). 각 측위세션이 종료되면 SLP2는 계산된 SET2의 위치와 상기 SLP1으로부터 수신한 지정된 위치를 비교한다. 비교결과 상기 계산된 SET2의 위치가 상기 SET1이 지정하여 SLP1을 통해 수신된 위치값인 defined area에 해당하면 다음 단계로 진행하고 해당하지 않으면 상기 단계(S22)를 반복적으로 수행한다.

만약, 상기 계산된 SET2의 위치가 상기 SET1이 지정하여 SLP1을 통해 수신된 위치인 defined area에 해당하면, SLP2는 SET2로 세션 종료 메시지(SUPL END)를 전송하여 측위 세션을 종료하고(S23), 상기 SET2의 위치비교 결과값(posresult)을 RLP SSRLIR메시지에 포함시켜 SLP1으로 전송한다(S24).

따라서, SLP1은 SET2의 위치비교 결과값(posresult)을 SUPL END메시지에 포함시켜 SET1으로 전송하고(S25), 상기 SET1은 SLP1과 안전한 IP연결을 해지하고, 이 세션과 관련된 모든 자원을 해제한다.

도 2는 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제2실시예를 나타낸다. 본 발명의 제2실시예는 상기 제1실시예와 아주 유사하지만 SLP2로 RLP메시지를 전송하기 전에 SLP1과 SET1간의 연결을 종료하는 점이 상이하다. 즉, 제1실시예에서는 SET1과 SLP1간의 IP연결이 단계(S25)가 수행될 때까지 유지되어 불필요하게 무선자원이 낭비되기 때문에, 본 발명의 제2실시예에서는 측위절차가 종료되면 바로 SUPL END메시지를 전송하여 SET1과 SLP1간의 IP연결을 종료한다.

따라서, SET1과 SLP1간의 측위 절차가 완료되면 SLP1은 SET1과 SLP1간의 연결을 종료하기 위하여 SUPL END메시지를 SET1으로 전송한 후(S30) RLP프로토콜 메시지(RLP SSRLIR)를 이용하여 SET2의 위치서버인 SLP2에게 트리거 서비스(Triggered Service)를 요청한다. 이하 단계(S16~S24)는 제1실시예와 동일하며 그 상세한 설명은 생략하기로 한다.

이후, SLP2로부터 원하는 SET2의 트리거 결과(posresult)가 수신되면(S24), SLP1은 해당 트리거 결과를 SUPL 보고 메시지(SUPL REPORT)를 통해 SET1에게 전송한다(S31). 상기 SUPL REPORT메시지는 WAP PUSH 또는 SMS 트리거 등을 통해 전송된다.

도 3은 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제3실시예를 나타낸다. 본 발명의 제3실시예는 SUPL END메시지를 전송하여 SET1과 SLP1간의 IP연결을 종료한다는 점에서 상기 제2실시예와 유사하지만, 상기 SUPL END메시지를 전송하는 시점이 다르다.

즉, 본 발명의 제2실시예에서는 SLP1과 SET1간의 측위절차가 종료된 후에 바로 SUPL END메시지가 전송되지만, 본 발명의 제3실시예에서는 SLP2로부터 SLP2와 SET1간의 측위세션이 시작될 것이라는 확인되었을 때만 비로소 전송된다. 이러한 확인은 SLP2가 SET2로부터 SUPL TRIGGERED START메시지를 수신하여 SLP2가 SLP1으로 RLP SSRLIR END메시지를 수신함으로써 달성된다.

따라서, SET2로부터 SUPL TRIGGERED START메시지가 수신되면 SLP1으로 RLP SSRLIR END메시지를 전송한 후(S40) SLP2는 트리거 세션이 개시되었음을 알리기 위하여 SET2로 SUPL TRIGGERED RESPONSE메시지를 전송한다(S41). 이후의 동작(S21~S24)은 제2실시예와 동일하며 그 상세한 설명은 생략한다.

상기 RLP SSRLIR END메시지를 수신한 SLP1은 SET1과 SLP1간의 연결을 종료하기 위하여 SUPL END메시지를 SET1으로 전송하고(S41), 이후, 상기 SLP2로부터 원하는 SET2의 트리거 결과(posresult)가 수신되면(S24) 해당 트리거 결과를 SUPL 보고 메시지(SUPL REPORT)를 통해 SET1에게 전송한다(S42). 상기 SUPL REPORT메시지는 WAP PUSH 또는 SMS 트리거 등을 통해 전송된다.

도 4는 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제4실시예를 나타낸다. 특히 본 발명의 제4실시예는 SET1이 지정한 특정 영역에서 SET2의 지역 이벤트를 확인하는 방법으로서, SET1과 SLP1간의 측위 절차가 수행되지 않는다.

도 4에 도시된 바와같이, SET1에 있는 SUPL 에이전트는 SET1에서 동작하고 있는 어플리케이션으로부터 위치관련 요청을 수신한다. 상기 위치관련 요청이 수신되면, SET1은 현재 어떤 네트워크에도 데이터 접속이 설정되어 있지 않은 경우 패킷 데이터 네트워크에 연결한다(S50).

일단 데이터 접속이 설정되면, SET1은 네트워크로부터 제공된 기본주소를 이용하여 위치서버인 SLP1과 안전한 IP연결을 설정하고, 상기 SLP1과 측위(위치측정) 세션을 시작하기 위하여 SUPL START메시지를 전송한다(S51). 상기 SUPL START메시지에는 session-id, SET capabilities, lid, msid, request type, defined area 및 event type 등이 포함되어 있다. 여기서, 상기 request type은 상기 서비스 요청이 특정 위치와 관련된 트리거 서비스임을 나타내며, 상기 defined area는 특정 지역을 나타내며, 상기 event type은 SET1이 어떠한 지역 이벤트(나감, 들어감 또는 존재)인지를 원하는지를 나타낸다. 바람직하게, 상기 defined area는 예를들면 좌표 나 지역이름등을 포함한다.

또한, 상기 SET capabilities에는 지원하는 측위 방식(예를들어, SET-Assisted A-GPS, SET Based A-GPS)과 그와 관련된 측위 프로토콜(예를들어 RRLP, RRC, TIA-801)이 포함되어 있다.

상기 SUPL START메시지를 수신한 SLP1은 라우팅 정보를 이용하여 SET1이 로밍되지 않았음을 확인하고(현재 서비스 지역내에 있음)(S52), 상기 수신한 msid에 기초하여 SET2와 관련된 위치서버 즉, SLP2를 결정한다.

상기 SLP1은 RLP프로토콜 메시지(RLP SSRLIR)를 이용하여 SET2의 위치서버인 SLP2에게 트리거 서비스(Triggered Service)를 요청한다(S53). 상기 RLP SSRLIR메시지에는 session-id, msid, request type, defined area 및 event type 을 포함되어 있다. 상기 request type은 상기 서비스 요청이 특정 위치와 관련된 트리거 서비스임을 나타내고, 상기

defined area는 특정 지역을 나타내며, 상기 event type은 SET1이 어떠한 지역 이벤트(나감,들어감,존재)를 원하는지를 나타낸다. 만약, SET1이 요청한 트리거 서비스에 대해 권한이 있는 경우 SLP2는 수신한 client-id를 통해 SET1을 인증하고, 수신한 msid를 통해 가입자 프라이버시를 적용한다.

상기 RLP SSRLIR메시지를 수신한 SLP2는 SET 특업 테이블을 이용하여 SET2가 SUPL을 지원하는지 확인하고, 라우팅 정보를 이용하여 SET2가 현재 서비스 지역내에 있는지(SET가 로밍되었는지) 확인한다(S54).

확인결과 SET2가 SUPL을 지원하고 로밍되지 않은 경우 SLP2는 세션 초기화 메시지(SUPL INIT)를 이용하여 SET2와 위치 세션을 개시한다(S55). 상기 SUPL INIT메시지에는 적어도 session-id, proxy/non proxy mode indicator, 사용할 positioning방법(posmethod), 지역 이벤트 트리거 서비스임을 나타내는 서비스 타입(service type)이 포함되어 있다. 또한, 상기 SUPL INIT메시지에는 희망하는 QoP가 포함될 수도 있다.

상기 SUPL INIT메시지를 수신한 SET2는 현재 자신이 어떤 네트워크에도 데이터 접속이 설정되어 있지 않은 경우 패킷 데이터 네트워크에 연결하고(S56), 상기 SLP2와 측위 세션을 시작하기 위하여 세션 트리거 시작 메시지(SUPL TRIGGERED START)를 전송한다(S57). 상기 SUPL TRIGGERED START메시지에는 적어도 session-id, SET capabilities 및 위치 식별자(lid)가 포함된다.

만약, 수신한 SUPL TRIGGERED START메시지에 포함된 정보(e.g.,lid)에 의해 계산된 대략적인(coarse)가 위치결과가 SET2가 요청한 QoP를 만족하면, 단계(S58)를 수행한 후 SUPL POS결과를 수행하지 않은 상태에서 바로 상기 위치결과와 SLP1으로부터 수신한 지정된 위치 이벤트를 비교한다(S59).

반면에 상기 계산된 대략적인(coarse)가 위치결과가 SET2가 요청한 QoP를 만족하지 않으면, SLP2는 트리거 세션이 개시되었음을 알리기 위하여 SET2로 SUPL TRIGGERED RESPONSE메시지를 전송한다(S58). 상기 SUPL TRIGGERED RESPONSE메시지에는 트리거 세션에서 사용될 측위방식이 포함된다.

이후 SET2와 SLP2사이에는 주기적으로 측위 세션이 발생되는데(S59), 상기 측위 세션이 시작되면 SET2와 SLP2사이에 성공적으로 측위 절차 메시지(SUPL POS)들이 교환된다. 이때, 상기 위치 계산은 SLP2가 SET2으로부터 수신한 측정값을 기초로 수행하거나(SET-Assisted), SET2가 SLP2으로부터 획득된 어시스턴스 데이터를 기초로 수행한다(SET-Based). 각 측위세션이 종료되면 SLP2는 계산된 SET2의 위치와 상기 SLP1으로부터 수신한 위치인 defined area를 비교한다. 비교결과 상기 계산된 SET2의 위치가 상기 defined area에 해당하면 다음 단계로 진행하고 해당하지 않으면 상기 단계(S59)를 반복적으로 수행한다.

만약, 상기 계산된 SET2의 위치가 상기 SET1이 지정된 특정 위치에 해당하면, SLP2는 SET2로 세션 종료 메시지(SUPL END)를 전송하여 측위 세션을 종료하고(S60), 상기 SET2의 위치비교 결과값(posresult)을 RLP SSRLIR메시지에 포함시켜 SLP1으로 전송한다(S61).

따라서, SLP1은 SET2의 위치비교 결과값(posresult)을 SUPL END메시지에 포함시켜 SET1으로 전송하고(S62), 상기 SET1은 SLP1과 안전한 IP연결을 해지하고, 이 세션과 관련된 모든 자원을 해제한다.

도 5는 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제5실시예를 나타낸다. 본 발명의 제5실시예는 상기 제4실시예와 아주 유사하지만 SLP2로 RLP메시지를 전송하기 전에 SLP1과 SET1간의 연결을 종료하는 점이 상이하다. 즉, 제4실시예에서는 단계(S62)가 수행될 때까지 SET1과 SLP1간의 IP연결이 유지되어 불필요하게 무선자원이 낭비된다.

따라서, SLP1은 SET1으로 SUPL END메시지를 전송하여 SET1과 SLP1간의 IP연결을 종료한 후(S70) RLP프로토콜 메시지(RLP SSRLIR)를 이용하여 SET2의 위치서버인 SLP2에게 트리거 서비스(Triggered Service)를 요청한다. 이하 단계(S53~S61)는 제4실시예와 동일하며 그 상세한 설명은 생략하기로 한다.

이후, SLP2로부터 원하는 SET2의 트리거 결과(posresult)가 수신되면(S53), SLP1은 해당 트리거 결과를 SUPL 보고 메시지(SUPL REPORT)를 통해 SET1에게 전송한다(S71). 상기 SUPL REPORT메시지는 WAP PUSH 또는 SMS 트리거 등을 통해 전송된다.

도 6은 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제6실시예를 나타낸다. 본 발명의 제6실시예는 SUPL END메시지를 전송하여 SET1과 SLP1간의 IP연결을 종료한다는 점에서 상기 제5실시예와 유사하지만, 상기 SUPL END메시지를 전송하는 시점이 다르다.

즉, 본 발명의 제5실시예에서는 SLP1과 SET1간의 측위절차가 종료된 후에 바로 SUPL END메시지가 전송되지만, 본 발명의 제6실시예에서는 SLP2로부터 SLP2와 SET간의 측위세션이 시작될 것이 확인되었을 때만 비로소 전송된다. 이러한 확인은 SLP2가 SET2로부터 SUPL TRIGGERED START메시지를 수신하여 SLP2가 SLP1으로 RLP SSRLIR END메시지를 수신함으로써 달성된다.

따라서, SET2로부터 SUPL TRIGGERED START메시지가 수신되면 SLP1으로 RLP SSRLIR END메시지를 전송한 후 (S80) SLP2는 트리거 세션이 개시되었음을 알리기 위하여 SET2로 SUPL TRIGGERED RESPONSE메시지를 전송한다 (S81). 이후의 동작(S58~S61)은 제5실시예와 동일하며 그 상세한 설명은 생략한다.

상기 RLP SSRLIR END메시지를 수신한 SLP1은 SET1과 SLP1간의 연결을 종료하기 위하여 SUPL END메시지를 SET1으로 전송하고(S81), 이후, 상기 SLP2로부터 원하는 SET2의 트리거 결과(posresult)가 수신되면(S61) 해당 트리거 결과를 SUPL 보고 메시지(SUPL REPORT)를 통해 SET1에게 전송한다(S82). 상기 SUPL REPORT메시지는 WAP PUSH 또는 SMS 트리거 등을 통해 전송된다.

도 7은 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제7실시예를 나타낸다.

도 7에 도시된 바와같이, SET1에 있는 SUPL 에이전트는 SET1에서 동작하고 있는 어플리케이션으로부터 목표(target) SET의 위치관련 요청을 수신한다. 바람직하게, 상기 위치관련 요청은 SET2의 위치를 위한 주기적인(periodic) 또는 지역적(area)인 이벤트 요청을 의미한다. 이때 도 7은 위치관련 요청이 지역적(area)인 이벤트 요청인 경우를 나타낸다.

상기 위치관련 요청이 수신되면, SET1은 현재 어떤 네트워크에도 데이터 접속이 설정되어 있지 않은 경우 패킷 데이터 네트워크에 연결한다(S90).

상기 데이터 접속이 설정되면, SET1은 홈 네트워크로부터 제공된 기본(default)주소를 이용하여 위치서버인 SLP1과 안전한 IP연결을 설정하고, 목표 SET2의 측위 세션을 시작하기 위하여 상기 SLP1으로 SET초기화(SUPL SET INIT) 메시지를 전송한다(S91).

상기 SUPL SET INIT메시지에는 session-id, target SETid, 트리거 모드(triggered mode) 및 트리거 정보(trigger information)등이 포함되어 있다. 여기서, 상기 target SETid는 목표 SET2의 식별자이고, 상기 트리거 모드는 다른 SET의 트리거 서비스(SET initiated trigger service of another SET type)를 나타내며, 주기적 이벤트(Periodic event) 또는 지역 이벤트(area event) 파라미터를 포함한다. 상기 triggered service mode는 도 1~도 6에 도시된 요청 타입과 동일하게 사용된다. 상기 트리거 정보는 트리거 세션의 파라미터들을 나타내며, 주기적 파라미터들(Periodic Parameters)과 지역 이벤트 파라미터들(Area Event Parameters)을 포함한다. 일 예로 주기적 파라미터에는 트리거 주기가 포함되며, 상기 지역 이벤트 파라미터는 defined area 및 event type을 포함한다.

상기 SLP1은 상기 트리거 서비스 요청을 받았음을 확인하기(acknowledge)위하여 SUPL END메시지를 SET1으로 전송하고(S92), 상기 SUPL END메시지에 따라 SET1은 안전한 IP연결을 해제하고 이 세션에 관련된 모든 무선자원을 해제한다. 또한, 상기 SLP1은 SUPL SET INIT메시지에 포함된 목표 SETid(라우팅 정보)를 이용하여 목표 SET2의 위치서버(SLP2)를 결정한다(S93). 즉, SLP1은 로컬 DNS서버 또는 SET2 어드레스 정보를 SLP2 접속(contact)에 사용될 수 있는 정보로 해석(translate)할 수 있는 다른 개체에 접속하여 SLP2를 결정한다.

일단 SLP2가 결정되면, SLP1은 목표 SET2의 위치서버(SLP2)로 트리거 위치 요청 메시지(triggered location request message)를 전송한다(S94). 상기 트리거 위치 요청 메시지에는 상기 session-id, target SETid, 트리거 모드(triggered mode) 및 트리거 정보(trigger information)등이 포함될 것이다.

따라서, 상기 트리거 위치 요청 메시지로 수신한 SLP2는 수신한 트리거 모드(triggered mode) 및 트리거 정보(trigger information)를 이용하여 상기 SET1이 요청한 트리거 서비스 종류(Periodic 또는 area event)를 판단할 수 있다. 이러한 판단을 기초로 도 7에 도시된 실시예 또는 후술할 도 8에 도시된 실시예를 수행한다.

상기 SLP2는 SET1이 요청한 트리거 서비스에 대해 권한이 있는 경우 상기 SET1을 인증하고 SET1에 대하여 가입자 프라이버시를 적용한다. 만약, SET1이 인증되고 통지 및 검증이 요구되면, SLP2는 SET2로 트리거 위치 요청(network initiated triggered location request) 메시지를 전송하여, SET2의 위치를 계산하기 위하여 SUPL 위치측정 방법(SUPL positioning method)를 이용하여 측위절차(network initiated positioning procedures)를 수행한다(S95).

그런데, 만약 이전에 계산한 위치가 SET1이 요청한 QoP(Quality of Position)를 만족하고, 통지 및 검증이 요구되지 않은 경우 SLP2는 상기 단계(S95)를 수행하지 않고 바로 다음 단계(S96)로 진행한다.

상기 SET2의 위치계산이 완료되면 SLP2는 상기 계산된 위치를 트리거 정보의 defined area와 비교하여, 해당 영역에서 지역 이벤트가 발생되었는지 체크한다. 체크결과, 지역 이벤트가 발생되면 SLP2는 SLP1으로 트리거 위치 응답(triggered location response) 메시지를 전송하고(S96), 상기 SLP1은 수신한 SET2의 위치정보(Position information)를 SUPL REPORT메시지를 통해 SET1으로 전송한다(S97).

도 8은 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제8실시예로서, 도 7에서 위치관련 요청이 주기적인(periodic) 경우를 나타낸다.

즉, SET1에 있는 SUPL 에이전트는 SET1에서 동작하고 있는 어플리케이션으로부터 주기적인(periodic) 이벤트 요청을 수신한다.

상기 주기적인 위치요청이 수신되면, SET1은 패킷 데이터 네트워크에 연결한후(S100), 홈 네트워크로부터 제공된 기본 주소를 이용하여 SLP1과 안전한 IP연결을 설정하고, 목표 SET2의 측위 세션을 시작하기 위해 SLP1으로 SUPL SET INIT 메시지를 전송한다(S101).

상기 SUPL SET INIT메시지에는 도 7에서와 같이 session-id, target SETid, 트리거 모드(triggered mode) 및 트리거 정보(trigger information)등이 포함된다. 여기서, 상기 트리거 모드는 주기적 이벤트(Periodic event)로 설정되고, 상기 트리거 정보는 주기적 파라미터들(Periodic Parameters), 예를들면 트리거 주기가 포함된다.

상기 SLP1은 SUPL SET INIT메시지에 포함된 목표 SETid(라우팅 정보)를 이용하여 목표 SET2의 위치서버(SLP2)를 결정한다(S102)

일단 SLP2가 결정되면, SLP1은 목표 SET2의 위치서버(SLP2)로 트리거 위치 요청 메시지(triggered location request message)를 전송한다(S103). 상기 트리거 위치 요청 메시지에는 상기 session-id, target SETid, 트리거 모드(triggered mode) 및 트리거 정보(trigger information)등이 포함된다.

상기 SLP2는 SET1을 인증하고 SET1에 대하여 가입자 프라이버시를 적용하는데, 만약, SET1이 인증되고 통지 및 검증이 요구되면, SLP2는 SET2로 트리거 위치 요청(network initiated triggered location request) 메시지를 전송하여, SET2의 위치를 계산하기 위한 측위절차(network initiated positioning procedures)를 수행한다(S104).

그런데, 만약 이전에 계산한 위치가 SET1이 요청한 QoP(Quality of Position)를 만족하고, 통지 및 검증이 요구되지 않은 경우 SLP2는 상기 단계(S95)를 수행하지 않고 바로 다음 단계(S109)로 진행한다.

따라서, SLP2는 상기 트리거 정보에 포함된 주기정보를 근거로 각 주기마다 SET2의 위치를 계산하여, 그 계산된 위치를 트리거 위치 응답(triggered location response) 메시지에 포함시켜 SLP1으로 전송하고(S105, S107)로 전송하고, 상기 SLP1은 수신한 SET2의 위치를 SUPL REPORT메시지를 통해 SET1으로 전송한다(S106, S108).

이후 마지막 주기에서 상기 SET2의 위치계산이 종료되면, 마찬가지로 SLP2는 그 계산된 위치를 트리거 위치 응답 메시지를 통해 SLP1으로 전송하고(S109)로 전송하고, 상기 SLP1은 수신한 SET2의 위치를 SUPL REPORT메시지를 통해 SET1으로 전송한다(S110). 여기서 인덱스(index)는 각 주기를 나타낸다.

본 발명에서 SET는 SUPL네트워크와 통신할 수 있는 소자로서, UMTS의 UE(User Equipment), GSM의 MS(Mobile Station) 또는 IS-95 MS 중의 하나일 수 있으며, 본 발명에서는 단말과 동일한 의미로 사용된다.

발명의 효과

상술한 바와같이 본 발명은 SUPL에 기반한 위치정보 시스템에서 사용자가 자신의 단말을 이용하여 원하는 상대방의 트리거 위치 서비스(Triggered Location Service)를 요청함으로써 사용자에게 보다 편리함을 제공할 수 있다.

본 발명은 도면에 도시된 실시예를 참고로 설명되었으나 이는 예시적인 것에 불과하며, 본 기술 분야의 통상의 지식을 가진 자라면 이로부터 다양한 변형 및 균등한 타 실시예가 가능하다는 점을 이해할 것이다. 따라서, 본 발명의 진정한 기술적 보호 범위는 첨부된 특허청구범위의 기술적 사상에 의해 정해져야 할 것이다.

도면의 간단한 설명

도 1은 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제1실시예.

도 2는 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제2실시예.

도 3은 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제3실시예.

도 4는 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제4실시예.

도 5는 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제5실시예.

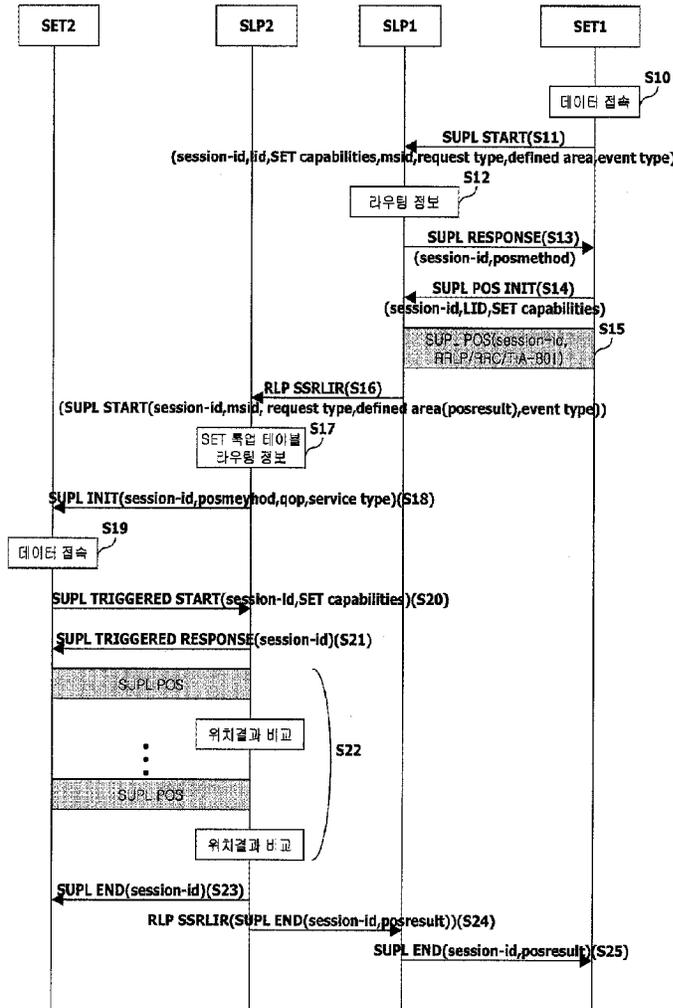
도 6은 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제6실시예.

도 7은 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제7실시예로서, 위치관련 요청이 지역 이벤트(area event)인 경우를 나타낸 도면.

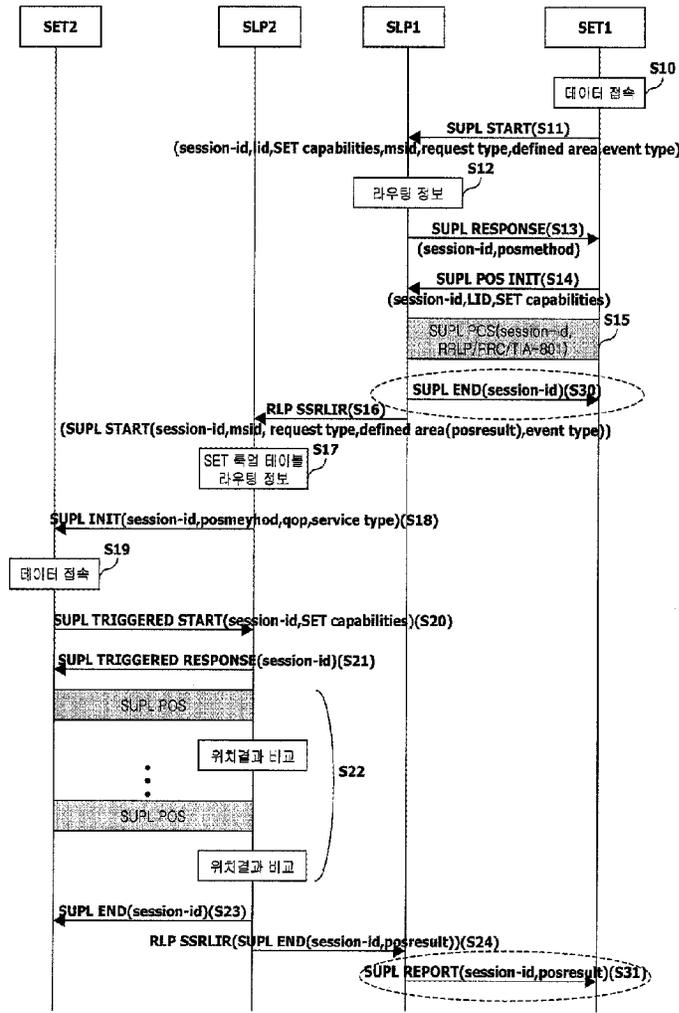
도 8은 본 발명에 따른 위치정보 시스템에서의 단말간 트리거 위치 서비스 요청방법의 제8실시예로서, 위치관련 요청이 주기적인(periodic) 경우를 나타낸 도면.

도면

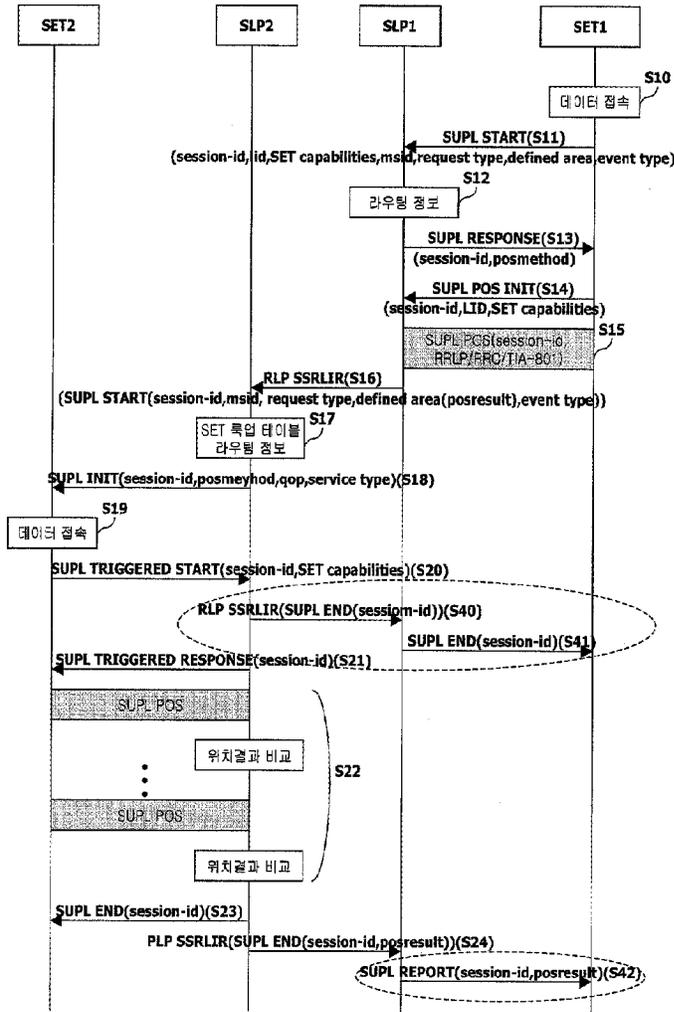
도면1



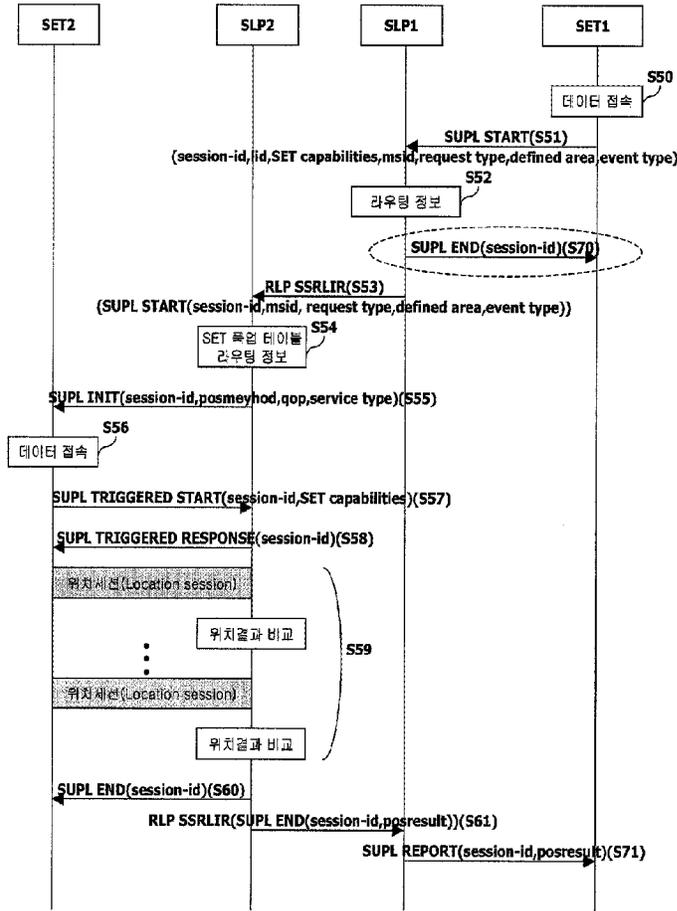
도면2



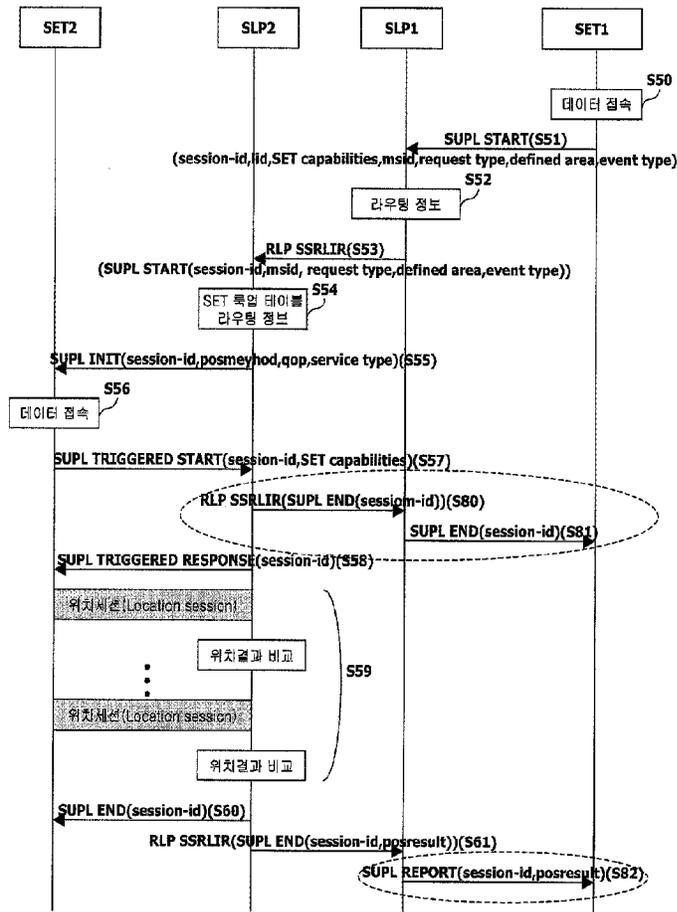
도면3



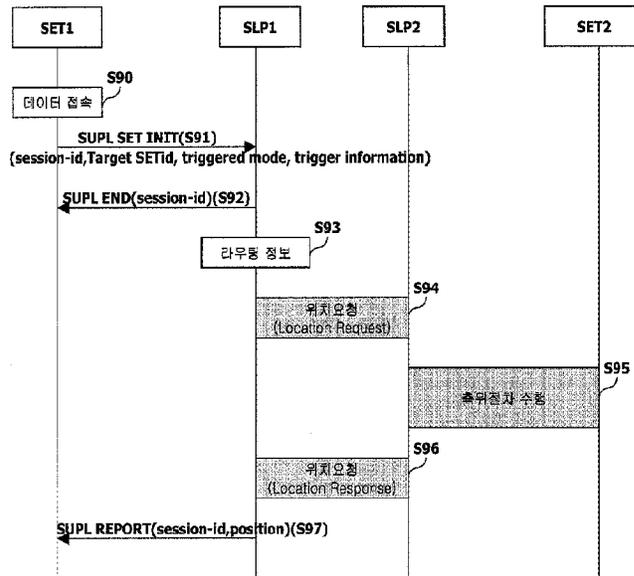
도면5



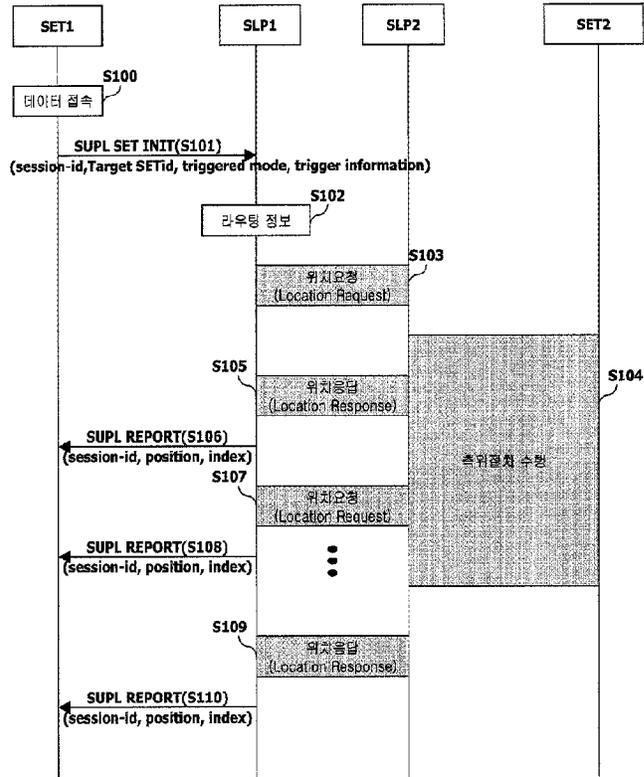
도면6



도면7



도면8



Electronic Acknowledgement Receipt

EFS ID:	17662400
Application Number:	13607419
International Application Number:	
Confirmation Number:	8864
Title of Invention:	METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS
First Named Inventor/Applicant Name:	David CHAMPLIN
Customer Number:	22879
Filer:	Chun-Liang Kuo/Joanna Keyt
Filer Authorized By:	Chun-Liang Kuo
Attorney Docket Number:	83068177
Receipt Date:	15-DEC-2013
Filing Date:	07-SEP-2012
Time Stamp:	13:09:58
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	83068177_RCE.pdf	30489 <small>fe1f5446681fe97ff80c55434355bfafe2270ee</small>	no	2

Warnings:

This is not a USPTO supplied RCE SB30 form.

Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	83068177_IDS_SB08a.pdf	33658 3fd1bedbf91cd2e5d63feb517aa827fee5960	no	5
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Transmittal Letter	83068177_IDS_Communication.pdf	95974 3cb515dcf9969186ac5716dd095b491ecffcdada1	no	2
Warnings:					
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4	Non Patent Literature	13607419_NPL1.pdf	55464 e15b731f7316c25e04582469717152db37eef60	no	3
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Information:					
			Total Files Size (in bytes):	4292608	
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					



NOTICE OF ALLOWANCE AND FEE(S) DUE

22879 7590 01/13/2014
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
3404 E. Harmony Road
Mail Stop 35
FORT COLLINS, CO 80528

Table with 2 columns: EXAMINER, GAUTHIER, GERALD; ART UNIT, PAPER NUMBER

DATE MAILED: 01/13/2014

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

13/607,419 09/07/2012 David CHAMPLIN 83068177 8864
TITLE OF INVENTION: METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS

Table with 7 columns: APPLN. TYPE, ENTITY STATUS, ISSUE FEE DUE, PUBLICATION FEE DUE, PREV. PAID ISSUE FEE, TOTAL FEE(S) DUE, DATE DUE

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

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

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.
If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.
If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".
For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

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

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

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 or Fax (571)-273-2885**

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

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

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22879 7590 01/13/2014
HEWLETT-PACKARD COMPANY
 Intellectual Property Administration
 3404 E. Harmony Road
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Certificate of Mailing or Transmission

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

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/607,419	09/07/2012	David CHAMPLIN	83068177	8864

TITLE OF INVENTION: METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	04/14/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
GAUTHIER, GERALD	2653	379-088170

<p>1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).</p> <p><input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.</p> <p><input type="checkbox"/> "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.</p>	<p>2. For printing on the patent front page, list</p> <p>(1) The names of up to 3 registered patent attorneys or agents OR, alternatively, _____ 1</p> <p>(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. _____ 2</p> <p>_____ 3</p>
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3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

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

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

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

<p>4a. The following fee(s) are submitted:</p> <p><input type="checkbox"/> Issue Fee</p> <p><input type="checkbox"/> Publication Fee (No small entity discount permitted)</p> <p><input type="checkbox"/> Advance Order - # of Copies _____</p>	<p>4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)</p> <p><input type="checkbox"/> A check is enclosed.</p> <p><input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.</p> <p><input type="checkbox"/> The Director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).</p>
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5. Change in Entity Status (from status indicated above)

Applicant certifying micro entity status. See 37 CFR 1.29

Applicant asserting small entity status. See 37 CFR 1.27

Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

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

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____



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www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
13/607,419 09/07/2012 David CHAMPLIN 83068177 8864

22879 7590 01/13/2014
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
3404 E. Harmony Road
Mail Stop 35
FORT COLLINS, CO 80528

EXAMINER
GAUTHIER, GERALD

ART UNIT 2653
PAPER NUMBER

DATE MAILED: 01/13/2014

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

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

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

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the 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 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

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

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

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

Notice of Allowability	Application No. 13/607,419	Applicant(s) CHAMPLIN ET AL.	
	Examiner GERALD GAUTHIER	Art Unit 2653	AIA (First Inventor to File) 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 12/15/2013 RCE.
 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 1-15. 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/oph/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 checked="" 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 <u>12/15/2013</u> | 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 _____. | |

/GERALD GAUTHIER/
Primary Examiner, Art Unit 2653

DETAILED ACTION

Notice of Pre-AIA or AIA Status

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

Information Disclosure Statement

2. The information disclosure statement submitted on December 15, 2013 is in compliance with the provisions of 37 CFR 1.97. Accordingly the information disclosure statement is being considered by the examiner, except where lined through.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on December 15, 2013 has been entered.

Allowable Claims

4. **Claims 1-15** are allowed.

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

As to **claims 1, 7 and 14**, in combination with other limitations of the claims, the prior art of record fails to disclose or specifically suggested receiving an incoming call to initiate a voice-exchange session from a second computing device, providing a notification of the incoming call on a display of the first computing device, the notification including (i) an identifier associated with the second computing device, and (ii) a first feature that is selectable to answer the incoming call and a second feature that is selectable to send a message response without answering the incoming call, receiving a user input to select the second feature to send a message to the second computing device, and in response to receiving the user input enabling the user to select a pre-formulated message content for the message or compose a message content for the message.

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

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to GERALD GAUTHIER whose telephone number is (571)272-7539. The examiner can normally be reached on 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (571) 272-7547. 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.

/GERALD GAUTHIER/
Primary Examiner, Art Unit 2653

January 8, 2014

Application/Control Number: 13/607,419
Art Unit: 2653

Page 5

Notice of References Cited	Application/Control No. 13/607,419	Applicant(s)/Patent Under Reexamination CHAMPLIN ET AL.	
	Examiner GERALD GAUTHIER	Art Unit 2653	Page 1 of 1

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification	
*	A	US-5,822,416 A	10-1998	Goodacre et al.	379/142.07
*	B	US-6,438,216 B1	08-2002	Aktas, Christoph	379/88.01
*	C	US-2005/0117733 A1	06-2005	Widger et al.	379/221.05
*	D	US-2005/0148890 A1	07-2005	Hastings, David C.	600/509
*	E	US-7,023,979 B1	04-2006	Wu et al.	379/265.11
*	F	US-2006/0182245 A1	08-2006	Steinmetz, Daphna	379/127.01
*	G	US-7,124,175 B1	10-2006	Wolfe et al.	709/219
*	H	US-2011/0212737 A1	09-2011	Isidore, Eustace P.	455/466
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

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

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13607419	
	Filing Date		2012-09-07	
	First Named Inventor	Champlin, David		
	Art Unit	2653		
	Examiner Name	Gauthier, Gerald		
	Attorney Docket Number	83068177		

U.S.PATENTS						
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
/GG/	1	6400814	B1	2002-06-04	Adams, Joel	

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS						
Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
/GG/	1	20010003826	A1	2001-06-14	Iwata, Shinichiro	

If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS								
Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T ⁵
/GG/	1	10-2006-0093183	KR	A	2006-08-24	Pantech Co., Ltd.	English Abstract submitted.	<input type="checkbox"/>
/GG/	2	10-2007-0078369	KR	A	2007-07-31	LG Electronics, Inc.	English Abstract submitted.	<input type="checkbox"/>

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS								
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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	13607419
Filing Date	2012-09-07
First Named Inventor	Champlin, David
Art Unit	2653
Examiner Name	Gauthier, Gerald
Attorney Docket Number	83068177

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
/GG/	1	EP Application No. 06800929.9, Office Action mailed on November 23, 2010, 3 pages.	<input type="checkbox"/>
/GG/	2	International Application No. PCT/US2006/030827, International Preliminary Report on Patentability mailed on March 24, 2010, 10 pages.	<input type="checkbox"/>
/GG/	3	U.S. Patent Application No. 11/200,511, Final Office Action mailed on June 17, 2010, 9 pages.	<input type="checkbox"/>
/GG/	4	U.S. Patent Application No. 11/200,511, Non-Final Office Action mailed on February 27, 2009, 10 pages.	<input type="checkbox"/>
/GG/	5	U.S. Patent Application No. 11/200,511, Non-Final Office Action mailed on January 26, 2010, 11 pages.	<input type="checkbox"/>
/GG/	6	U.S. Patent Application No. 11/200,511, Non-Final Office Action mailed on July 24, 2009, 12 pages.	<input type="checkbox"/>
/GG/	7	U.S. Patent Application No. 11/200,511, Notice of Allowance mailed on September 23, 2010, 7 pages.	<input type="checkbox"/>
/GG/	8	U.S. Patent Application No. 11/848,216, Non-Final Office Action mailed on September 16, 2010, 12 pages.	<input type="checkbox"/>
/GG/	9	U.S. Patent Application No. 12/901,376, Non-Final Office Action mailed on April 18, 2012, 9 pages.	<input type="checkbox"/>
/GG/	10	U.S. Patent Application No. 12/901,376, Notice of Allowance mailed on July 25, 2012, 9 pages.	<input type="checkbox"/>

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	13607419
Filing Date	2012-09-07
First Named Inventor	Champlin, David
Art Unit	2653
Examiner Name	Gauthier, Gerald
Attorney Docket Number	83068177

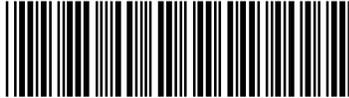
If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	/Gerald Gauthier/	Date Considered	12/24/2013
--------------------	-------------------	-----------------	------------

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

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

Index of Claims 	Application/Control No. 13607419	Applicant(s)/Patent Under Reexamination CHAMPLIN ET AL.
	Examiner GERALD GAUTHIER	Art Unit 2653

✓	Rejected
=	Allowed

-	Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

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

CLAIM		DATE							
Final	Original	10/07/2013	12/24/2013						
1	1	=	=						
2	2	=	=						
3	3	=	=						
4	4	=	=						
5	5	=	=						
6	6	=	=						
7	7	=	=						
8	8	=	=						
9	9	=	=						
10	10	=	=						
11	11	=	=						
12	12	=	=						
13	13	=	=						
14	14	=	=						
15	15	=	=						

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	(receiv\$3 with (incoming adj call) with initiat\$3 with (voice adj exchange) with second with device) same (provid\$3 with notification with display\$3) same (receiv\$3 with input with select\$3 with user) same (enabl\$3 with (pre-formulated compos\$3) with message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/12/24 06:46
L4	1	(receiv\$3 with (incoming adj call) with initiat\$3 with (voice adj exchange) with second with device) same (provid\$3 with notification with display\$3) same (receiv\$3 with input with select\$3 with user) same (enabl\$3 with message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/12/24 06:48
L5	1	(receiv\$3 with (incoming adj call) with initiat\$3 with (voice adj exchange) with second with device) same (provid\$3 with notification with display\$3) same (input with select\$3 with user) same (enabl\$3 with message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/12/24 06:49
L6	1	(receiv\$3 with (incoming adj call) with initiat\$3 with (voice adj exchange) with second with device) same (notification with display\$3) same (input with select\$3 with user) same (enabl\$3 with message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/12/24 06:49
L7	1	((incoming adj call) with initiat\$3 with (voice adj exchange) with second with device) same (notification with display\$3) same (input with select\$3 with user) same (enabl\$3 with message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/12/24 06:50
L8	2	((incoming adj call) with initiat\$3 with second with device) same (notification with display\$3) same (input with select\$3 with user) same (enabl\$3 with message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/12/24 06:50
L9	2	((incoming adj call) with initiat\$3 with second with device) same (notification with display\$3) same (input with select\$3 with user) same message	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/12/24 06:53
L10	1	((incoming adj call) with initiat\$3 with	US-PGPUB;	OR	ON	2013/12/24

		second with device) same (notification with display\$3) same ((user adj input) with select\$3) same message	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			06:54
L11	1	((incoming adj call) with initiat\$3 with second with device) same (notification with display\$3) same (user adj input) same message	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/12/24 06:54
L12	1	((incoming adj call) with initiat\$3 with device) same (notification with display\$3) same (user adj input) same message	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/12/24 06:55
L13	9	((incoming adj call) with device) same (notification with display\$3) same (user adj input) same message	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/12/24 06:55
L14	661	((incoming adj call) with device) and (notification with display\$3) and (user adj input) and message	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/12/24 06:57
L15	1	(receiv\$3 with (incoming adj call) with initiat\$3 with (voice adj exchange) with second with device) and (provid\$3 with notification with display\$3) and (receiv\$3 with input with select\$3 with user) and (enabl\$3 with (pre-formulated compos\$3 form\$3) with message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/12/24 06:59
L16	1	(receiv\$3 with (incoming adj call) with initiat\$3 with (voice adj exchange) with second with device) and (provid\$3 with notification with display\$3) and (receiv\$3 with input with select\$3 with user) and (enabl\$3 with message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/12/24 06:59
L17	1	(receiv\$3 with (incoming adj call) with initiat\$3 with device) and (provid\$3 with notification with display\$3) and (receiv\$3 with (user adj input) with select\$3) and (enabl\$3 with message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/12/24 07:01
L18	1	(receiv\$3 with (incoming adj call) with initiat\$3 with device) and (provid\$3 with notification with display\$3) and (receiv\$3 with (user adj input) with select\$3) and (select\$3 with message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2013/12/24 07:02

			IBM_TDB			
L19	1	(receiv\$3 with (incoming adj call) with initiat\$3 with device) and (provid\$3 with notification with display\$3) and (receiv\$3 with (user adj input)) and (select\$3 with message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/12/24 07:02
L20	6	(receiv\$3 with (incoming adj call) with device) and (provid\$3 with notification with display\$3) and (receiv\$3 with (user adj input)) and (select\$3 with message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/12/24 07:03
L21	33	(receiv\$3 with (incoming adj call) with device) and (provid\$3 with notification) and (receiv\$3 with (user adj input)) and (select\$3 with message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/12/24 07:09

12/ 24/ 2013 7:19:58 AM
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BIB DATA SHEET

CONFIRMATION NO. 8864

SERIAL NUMBER 13/607,419	FILING or 371(c) DATE 09/07/2012 RULE	CLASS 379	GROUP ART UNIT 2653	ATTORNEY DOCKET NO. 83068177	
APPLICANTS INVENTORS David CHAMPLIN, Menlo Park, CA; Sriikiran PRASAD, Cupertino, CA; Lang CHEN, Oakland, CA; Rajan RANGA, Palo Alto, CA; Robert HAITANI, Menlo Park, CA; ** CONTINUING DATA ***** This application is a CON of 12/901,376 10/08/2010 PAT 8311189 which is a CON of 11/200,511 08/08/2005 PAT 7844037 ** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 09/18/2012					
Foreign Priority claimed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 35 USC 119(a-d) conditions met <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Verified and Acknowledged <u>/GERALD GAUTHIER/</u> Examiner's Signature	<input type="checkbox"/> Met after Allowance Initials	STATE OR COUNTRY CA	SHEETS DRAWINGS 4	TOTAL CLAIMS 15	INDEPENDENT CLAIMS 3
ADDRESS HEWLETT-PACKARD COMPANY Intellectual Property Administration 3404 E. Harmony Road Mail Stop 35 FORT COLLINS, CO 80528 UNITED STATES					
TITLE METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS					
FILING FEE RECEIVED 1250	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit		

Issue Classification 	Application/Control No. 13607419	Applicant(s)/Patent Under Reexamination CHAMPLIN ET AL.
	Examiner GERALD GAUTHIER	Art Unit 2653

<input checked="" type="checkbox"/> Claims renumbered in the same order as presented by applicant <input type="checkbox"/> CPA <input checked="" type="checkbox"/> T.D. <input type="checkbox"/> R.1.47															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1														
2	2														
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14	14														
15	15														

NONE		Total Claims Allowed:	
		15	
(Assistant Examiner)	(Date)	O.G. Print Claim(s)	O.G. Print Figure
/GERALD GAUTHIER/ Primary Examiner. Art Unit 2653	12/24/2013	1	4
(Primary Examiner)	(Date)		

Search Notes 	Application/Control No. 13607419	Applicant(s)/Patent Under Reexamination CHAMPLIN ET AL.
	Examiner GERALD GAUTHIER	Art Unit 2653

CPC- SEARCHED		
Symbol	Date	Examiner
H04L12/5835, 5895	12/24/2013	GG
H04L51/066	12/24/2013	GG
H04M1/72552	12/24/2013	GG

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
370	310, 352	10/7/2013	GG
379	72, 88.14, 88.17, 88.28, 142.01, 201.01	10/7/2013	GG
455	410, 422.1, 435.1, 466, 557, 567	10/7/2013	GG
704	270.1	10/7/2013	GG
379	60, 88.01, 127.01, 142.07, 221.05, 265.11	12/24/2013	GG
600	509	12/24/2013	GG
709	219	12/24/2013	GG

SEARCH NOTES		
Search Notes	Date	Examiner
EAST (US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	10/7/2013	GG
Inventor's Name Search (edan)	10/7/2013	GG
EAST (US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	12/24/2013	GG

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

	/GERALD GAUTHIER/ Primary Examiner. Art Unit 2653
--	--

INTERFERENCE SEARCH

US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
370	310, 352	10/7/2013	GG
379	72, 88.14, 88.17, 88.28, 142.01, 201.01	10/7/2013	GG
455	410, 422.1, 435.1, 466, 557, 567	10/7/2013	GG
704	270.1	10/7/2013	GG
	Interference Search History (see attached)	10/7/2013	GG
379	60, 88.01, 127.01, 142.07, 221.05, 265.11	12/24/2013	GG
600	509	12/24/2013	GG
709	219	12/24/2013	GG
	Interference Search History (see attached)	12/24/2013	GG

	/GERALD GAUTHIER/ Primary Examiner.Art Unit 2653
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EAST Search History

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L3	1	(receiv\$3 with (incoming adj call) with initiat\$3 with (voice adj exchange) with second with device) same (provid\$3 with notification with display\$3) same (receiv\$3 with input with select\$3 with user) same (enabl\$3 with (pre-formulated compos\$3) with message).clm.	US-PGPUB; USPAT; UPAD	OR	ON	2013/12/24 06:47

12/ 24/ 2013 7:20:42 AM

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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:

 Practitioners associated with the Customer Number:

12811

OR

 Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name Registration	Number	Name Registration	Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:

 The address associated with Customer Number:

12811

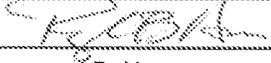
OR

<input type="checkbox"/> Firm or Individual Name			
Address			
City	State	Zip	
Country			
Telephone	Email		

Assignee Name and Address:

QUALCOMM Incorporated
5775 Morehouse Drive
San Diego, CA 92121**A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of the practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.****SIGNATURE of Assignee of Record**

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	1/5/07/2012
Name	Raymond B. Horn	Telephone	858-651-3679
Title	Vice President, Patent Counsel		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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.

STATEMENT UNDER 37 CFR 3.73(c)Applicant/Patent Owner: David Champlin et al.Application No./Patent No.: 13/607,419 Filed/Issue Date: September 7, 2012Titled: METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLSQUALCOMM Incorporated, a Corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. The assignee of the entire right, title, and interest.
2. An assignee of less than the entire right, title, and interest (check applicable box):
- The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.
- There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

- A. An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.
- B. A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: Champlin, Prasad, Chen, Ranga, Haitani To: Palm, Inc.The document was recorded in the United States Patent and Trademark Office at
Reel 031725, Frame 0510, or for which a copy thereof is attached.2. From: Champlin, Prasad, Chen, Ranga, Haitani To: Palm, Inc.The document was recorded in the United States Patent and Trademark Office at
Reel 031815, Frame 0402, or for which a copy thereof is attached.

[Page 1 of 2]

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: Palm, Inc. To: Hewlett-Packard Development Company, L.P.

The document was recorded in the United States Patent and Trademark Office at
Reel 025204, Frame 0809, or for which a copy thereof is attached.

4. From: Hewlett-Packard Development Company, L.P. To: Palm, Inc.

The document was recorded in the United States Patent and Trademark Office at
Reel 030341, Frame 0459, or for which a copy thereof is attached.

5. From: Palm, Inc. To: Hewlett-Packard Development Company, L.P.

The document was recorded in the United States Patent and Trademark Office at
Reel 031837, Frame 0239, or for which a copy thereof is attached.

6. From: Hewlett-Packard Development Company, L.P. To: Palm, Inc.

The document was recorded in the United States Patent and Trademark Office at
Reel 031837, Frame 0544, or for which a copy thereof is attached.

Additional documents in the chain of title are listed on a supplemental sheet(s).

As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/William L Paradise III/

Signature

William L Paradise III

Printed or Typed Name

February 26, 2014

Date

38,990

Title or Registration Number

STATEMENT UNDER 37 CFR 3.73(c)

7. From: Palm, Inc.

To: Hewlett-Packard Development Company, L.P.

The document was recorded in the United States Patent and Trademark Office at Reel 031837, Frame 0659, or for which a copy thereof is attached.

8. From: Hewlett-Packard Company, Hewlett-Packard Development Company, L.P.,
Palm, Inc.

To: QUALCOMM Incorporated

The document was recorded in the United States Patent and Trademark Office at Reel 032177, Frame 0210, or for which a copy thereof is attached.

Privacy Act Statement

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

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

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

Electronic Acknowledgement Receipt

EFS ID:	18313645
Application Number:	13607419
International Application Number:	
Confirmation Number:	8864
Title of Invention:	METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS
First Named Inventor/Applicant Name:	David CHAMPLIN
Customer Number:	22879
Filer:	William Leonard Paradice/Katayoun Ghazian
Filer Authorized By:	William Leonard Paradice
Attorney Docket Number:	83068177
Receipt Date:	26-FEB-2014
Filing Date:	07-SEP-2012
Time Stamp:	18:10:31
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	2012-09-19_QC_AIA_80_MPK. pdf	468057 <small>1ce8affc6bc71267558c6f67aace52cd5605a32b</small>	no	1

Warnings:

The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing

Information:

2	Assignee showing of ownership per 37 CFR 3.73.	QCP142786C1C1_373c_AF.pdf	235814 a5e1622dbc4c909f320e3dfdd64d2b96757d1a09	no	4
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Warnings:

Information:

Total Files Size (in bytes):	703871
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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


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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/607,419	09/07/2012	David CHAMPLIN	83068177

CONFIRMATION NO. 8864

22879
 HEWLETT-PACKARD COMPANY
 Intellectual Property Administration
 3404 E. Harmony Road
 Mail Stop 35
 FORT COLLINS, CO 80528



OC000000066865655

Cc: MAHAMEDI PARADICE KREISMAN LLP (QCA)
 1901 S. BASCOM AVE.
 SUITE 600
 CAMPBELL, CA 95008

 Date Mailed: 02/27/14
DENIAL OF REQUEST FOR POWER OF ATTORNEY

The request for Power of Attorney filed 02/26/14 is acknowledged. However, the request cannot be granted at this time for the reason stated below.

- The Power of Attorney you provided did not comply with the new Power of Attorney rules that became effective on June 25, 2004. See 37 CFR 1.32.
- The revocation is not signed by the applicant, the assignee of the entire interest, or one particular principal attorney having the authority to revoke.
- The Power of Attorney is from an assignee and the Certificate required by 37 CFR 3.73(c) has not been received.
- The person signing for the assignee has omitted their empowerment to sign on behalf of the assignee.
- The inventor(s) is without authority to appoint attorneys since the assignee has intervened as provided by 37 CFR 3.71.
- The signature(s) of _____, a co-inventor in this application, has been omitted. The Power of Attorney will be entered upon receipt of confirmation signed by said co-inventor(s).
- The person(s) appointed in the Power of Attorney is not registered to practice before the U.S. Patent and Trademark Office.
- Only one Customer Number can be designated for the Power of Attorney in an application. The Customer Number that was captured is the first Customer Number provided on the Power of Attorney document.



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- A request under 37 CFR 1.48 to add an inventor was granted in this application, however, no power of attorney consistent with the power of attorney granted by the originally named inventive entity has been received. Thus, the addition of the inventor has resulted in the loss of power of attorney in the application. See 37 CFR 1.32(e).
- The power of attorney has not been accepted because the party who is giving power of attorney has not been identified. Power of attorney may only be signed by the applicant for patent (37 CFR 1.42) or the patent owner. A patent owner who was not the applicant must appoint any power of attorney in compliance with 37 CFR 3.71 and 3.73. See 37 CFR 1.32(b)(4).
- The power of attorney from the inventors has not been accepted because it is a copy from a prior national application for which benefit is claimed and the continuing application names an inventor who was not named as an inventor in the prior application.
- The power of attorney from the inventors has not been accepted because the power of attorney must be signed by the applicant for patent. See 37 CFR 1.32(b)(4).
- Any request to correct or update the name of the applicant must include an application data sheet (ADS) in compliance with 37 CFR 1.76 specifying the correct or updated name of the applicant in the applicant information section. Any request to change the applicant after an original applicant has been specified under 37 CFR 1.46(b) must include a new ADS in compliance with 37 CFR 1.76 specifying the applicant in the applicant information section and comply with 37 CFR 3.71 and 3.73. See 37 CFR 1.46(c).

Any inquiries regarding this notice should be directed to the Application Assistance Unit at 571-272-4200.



 Application Assistance Unit
 571-272-4200



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/607,419	09/07/2012	David CHAMPLIN	83068177

CONFIRMATION NO. 8864

MISCELLANEOUS NOTICE



22879
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
3404 E. Harmony Road
Mail Stop 35
FORT COLLINS, CO 80528

Date Mailed: 02/28/2014

A communication which cannot be delivered in electronic form has been mailed to the applicant.



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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/607,419	09/07/2012	David CHAMPLIN	

12811
Mahamedi Paradice Kreisman LLP (QCA)
1901 S. Bascom Ave.
Suite 600
Campbell, CA 95008

CONFIRMATION NO. 8864
POA ACCEPTANCE LETTER



Date Mailed: 02/28/2014

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 02/26/2014.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/mbekele nedy/

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



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/607,419	09/07/2012	David CHAMPLIN	83068177

CONFIRMATION NO. 8864

POWER OF ATTORNEY NOTICE



22879
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
3404 E. Harmony Road
Mail Stop 35
FORT COLLINS, CO 80528

Date Mailed: 02/28/2014

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 02/26/2014.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

/mbekele nedy/

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

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 or Fax (571)-273-2885**

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

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

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

22879 7590 01/13/2014
HEWLETT-PACKARD COMPANY
 Intellectual Property Administration
 3404 E. Harmony Road
 Mail Stop 35
 FORT COLLINS, CO 80528

Certificate of Mailing or Transmission

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

Filed via EFS-Web	(Depositor's name)
	(Signature)
	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/607,419	09/07/2012	David CHAMPLIN	83068177	8864

TITLE OF INVENTION: METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	04/14/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
GAUTHIER, GERALD	2653	379-088170

<p>1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).</p> <p><input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.</p> <p><input checked="" type="checkbox"/> "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.</p>	<p>2. For printing on the patent front page, list</p> <p>(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,</p> <p>(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.</p>	<p>1 <u>Mahamedi Paradice Kreisman LLP</u></p> <p>2 _____</p> <p>3 _____</p>
--	--	--

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

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

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

QUALCOMM Incorporated

San Diego, California

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

4a. The following fee(s) are submitted:

- Issue Fee
- Publication Fee (No small entity discount permitted)
- Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- A check is enclosed.
- Payment by credit card. Form PTO-2038 is attached.
- The Director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number 50-1914 (enclose an extra copy of this form).

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

- Applicant certifying micro entity status. See 37 CFR 1.29
- Applicant asserting small entity status. See 37 CFR 1.27
- Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

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

Authorized Signature William L Paradice III
 Typed or printed name William L Paradice III

Date March 31, 2014
 Registration No. 38,990

Amendments to the Claims:

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

In the Claims:

1. (Original) A method for operating a first computing device, the method being performed by one or more processors and comprising:
 - receiving an incoming call to initiate a voice-exchange session from a second computing device;
 - providing a notification of the incoming call on a display of the first computing device, the notification including (i) an identifier associated with the second computing device, and (ii) a first feature that is selectable to answer the incoming call and a second feature that is selectable to send a message response without answering the incoming call;
 - receiving a user input to select the second feature to send a message to the second computing device; and
 - in response to receiving the user input, enabling the user to select a pre-formulated message content for the message or compose a message content for the message.

2. (Currently Amended) The method of Claim 1, further comprising transmitting the message to the second computing device, the ~~messaging~~ message including the pre-formulated message content or the composed message content.

3. (Original) The method of Claim 2, wherein transmitting the message to the second computing device includes using a phone number of the second computing device as an address for the message.

4. (Original) The method of Claim 1, wherein the message is a Short Message Service (SMS) text message.

5. (Currently Amended) The method of Claim 1, further comprising, in response to receiving the incoming call, determining a message identifier associated with the second computing device using data provided with the incoming call.

6. (Original) The method of Claim 1, wherein the identifier associated with the second computing device includes a name associated with the second computing device or a phone number associated with the second computing device.

7. (Original) A mobile computing device comprising:
a transceiver to transmit and receive communications over a cellular network;
a display;
an input mechanism;
one or more processors coupled to the transceiver and the display, the one or more processors to:

receive an incoming call to initiate a voice-exchange session from another computing device;

provide a notification of the incoming call on the display, the notification including (i) an identifier associated with the other computing device, and (ii) a first feature that is selectable to answer the incoming call and a second feature that is selectable to send a message response without answering the incoming call;

receiving a user input to select the second feature, via the input mechanism, to send a message to the other computing device; and

in response to receiving the user input, enabling the user to select a pre-formulated message content for the message or compose a message content for the message.

8. (Currently Amended) The mobile computing device of Claim 7, wherein the one or more processors further transmit the message to the other computing device using the cellular network, the ~~messaging~~ message including the pre-formulated message content or the composed message content.

9. (Original) The mobile computing device of Claim 8, wherein the one or more processors transmit the message to the second computing device by using a phone number of the other computing device as an address for the message.
10. (Original) The mobile computing device of Claim 7, wherein the message is a Short Message Service (SMS) text message.
11. (Original) The mobile computing device of Claim 7, wherein the one or more processors further, in response to receiving the incoming call, determine a message identifier associated with the other computing device using data provided with the incoming call.
12. (Original) The mobile computing device of Claim 7, wherein the identifier associated with the other computing device includes a name associated with the other computing device or a phone number associated with the other computing device.
13. (Original) The mobile computing device of Claim 7, wherein the display is a touch-sensitive display, and the input mechanism is at least a part of the touch-sensitive display.
14. (Original) A non-transitory computer readable medium storing instructions that, when executed by one or more processors, causes the one or more processors of a first computing device to perform steps comprising:
 - receiving an incoming call to initiate a voice-exchange session from a second computing device;
 - providing a notification of the incoming call on a touch-sensitive display of the first computing device, the notification including (i) an identifier associated with the second computing device, and (ii) a first feature that is selectable to answer the incoming call and a second feature that is selectable to send a message response without answering the incoming call;

receiving a user input to select the second feature, via the touch-sensitive display, to send a message to the second computing device; and

in response to receiving the user input, enabling the user to select a pre-formulated message content for the message or compose a message content for the message.

15. (Currently Amended) The non-transitory computer readable medium of Claim 14, wherein the instructions further cause the one or more processors to transmit the message to the second computing device using a phone number of the second computing device as an address for the message, the ~~messaging~~ message including the pre-formulated message content or the composed message content.

REMARKS

Applicant thanks the Examiner for the Notice of Allowance. Applicant has amended Claims 2, 5, 8 and 15 to correct minor errors. Applicant respectfully requests entry of the claim amendments.

CONCLUSION

Entry of the above amendment and early grant of a Letters Patent are respectfully requested. If there are any questions or comments that the Examiner wishes to direct to Applicant's attorney, the Examiner is invited to call Applicant's attorney at (408) 236-6646.

If an extension of time is required in connection herewith, Applicant hereby petitions for such extension.

Applicant hereby authorizes deposit account 50-1914 to be charged for any fee due in connection with this submission, including any extension of time fee.

Respectfully submitted,
MAHAMEDI PARADICE KREISMAN LLP

Date March 31, 2014

/William L Paradise III/
William L Paradise III, Reg. No. 38,990
Mahamedi Paradise Kreisman LLP
1901 S. Bascom Avenue, Ste. 600
Campbell, CA 95008
Tel: (408) 236-6646 Fax: (408) 236-6641

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“FEE ADDRESS” INDICATION FORM**Address to:**
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Alexandria, VA 22313-1450**Fax to:**
571-273-6500**- OR -**

INSTRUCTIONS: The issue fee must have been paid for application(s) listed on this form. In addition, only an address represented by a Customer Number can be established as the fee address for maintenance fee purposes (hereafter, fee address). A fee address should be established when correspondence related to maintenance fees should be mailed to a different address than the correspondence address for the application.

When to check the first box below: If you have a Customer Number to represent the fee address. **When to check the second box below:** If you have no Customer Number representing the desired fee address, in which case a completed Request for Customer Number (PTO/SB/125) must be attached to this form. For more information on Customer Numbers, see the Manual of Patent Examining Procedure (MPEP) § 403.

For the following listed application(s), please recognize as the “Fee Address” under the provisions of 37 CFR 1.363 the address associated with:

 Customer Number: **23696****OR** The attached Request for Customer Number (PTO/SB/125) form.

PATENT NUMBER (if known)	APPLICATION NUMBER
	13/607,419

Completed by (check one):

Applicant/Inventor William L Paradise III/
Signature

Attorney or Agent of record 38990 William L Paradise III
(Reg. No.) Typed or printed name

Assignee of record of the entire interest. See 37 CFR 3.71. 408-236-6646
Statement under 37 CFR 3.73(b) is enclosed. Requester's telephone number
(Form PTO/SB/96)

Assignee recorded at Reel _____ Frame _____ March 31, 2014
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

 * Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.363. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 5 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND COMPLETE D FORMS TO THIS ADDRESS.

SEND TO: Mail Stop M Correspondence, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Patent Application Fee Transmittal

Application Number:	13607419
Filing Date:	07-Sep-2012
Title of Invention:	METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS
First Named Inventor/Applicant Name:	David CHAMPLIN
Filer:	William Leonard Paradice/Drew Herndon
Attorney Docket Number:	QCP142786C1C1

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl Issue Fee	1501	1	960	960

Extension-of-Time:

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				960

Electronic Acknowledgement Receipt

EFS ID:	18633330
Application Number:	13607419
International Application Number:	
Confirmation Number:	8864
Title of Invention:	METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS
First Named Inventor/Applicant Name:	David CHAMPLIN
Customer Number:	12811
Filer:	William Leonard Paradice/Drew Herndon
Filer Authorized By:	William Leonard Paradice
Attorney Docket Number:	QCP142786C1C1
Receipt Date:	31-MAR-2014
Filing Date:	07-SEP-2012
Time Stamp:	18:31:03
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$960
RAM confirmation Number	5819
Deposit Account	501914
Authorized User	PARADICE, WILLIAM L.

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

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	142786C1C1_Issue_Fee_Trans_Form_85B_AF.pdf	189235 589f7be9642a5e937d14870df7135977d0aa32c1	no	1

Warnings:

Information:

2	Amendment after Notice of Allowance (Rule 312)	142786C1C1_312_Amendment_AF.pdf	33575 14700efe753f63aa86ce5f73b78ae9c5a173b77a	no	6
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Warnings:

Information:

3	Change of Address	142786C1C1_MFee_Address_Change_Form_SB47_AF.pdf	107955 0cb04693d10fc92e1f50cdb2f46926feb00c8d4	no	1
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Warnings:

Information:

4	Fee Worksheet (SB06)	fee-info.pdf	30771 2682d6ff48c8916e68449248a7257f2f4a1881b8	no	2
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Warnings:

Information:

Total Files Size (in bytes): 361536

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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Alexandria, Virginia 22313-1450
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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
Row 1: 13/607,419, 09/07/2012, David CHAMPLIN, QCP142786C1C1, 8864
Row 2: 12811, 7590, 04/24/2014, (Empty), (Empty)
Row 3: Mahamedi Paradice Kreisman LLP (QCA), (Empty), (Empty), (Empty), (Empty)
Row 4: 1901 S. Bascom Ave., (Empty), (Empty), (Empty), (Empty)
Row 5: Suite 600, (Empty), (Empty), (Empty), (Empty)
Row 6: Campbell, CA 95008, (Empty), (Empty), (Empty), (Empty)
Row 7: (Empty), (Empty), (Empty), EXAMINER, (Empty)
Row 8: (Empty), (Empty), (Empty), GAUTHIER, GERALD, (Empty)
Row 9: (Empty), (Empty), (Empty), ART UNIT, PAPER NUMBER
Row 10: (Empty), (Empty), (Empty), 2653, (Empty)
Row 11: (Empty), (Empty), (Empty), NOTIFICATION DATE, DELIVERY MODE
Row 12: (Empty), (Empty), (Empty), 04/24/2014, ELECTRONIC

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

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

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

- wparadice@mpkpatentlaw.com
dherndon@mpkpatentlaw.com
uspto@mpkpatentlaw.com

Response to Rule 312 Communication	Application No.	Applicant(s)
	13/607,419	CHAMPLIN ET AL.
	Examiner	Art Unit
	GERALD GAUTHIER	2653

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

1. The amendment filed on 31 March 2014 under 37 CFR 1.312 has been considered, and has been:
- a) entered.
 - b) entered as directed to matters of form not affecting the scope of the invention.
 - c) disapproved because the amendment was filed after the payment of the issue fee.
Any amendment filed after the date the issue fee is paid must be accompanied by a petition under 37 CFR 1.313(c)(1) and the required fee to withdraw the application from issue.
 - d) disapproved. See explanation below.
 - e) entered in part. See explanation below.

	/GERALD GAUTHIER/ Primary Examiner, Art Unit 2653
--	--

IN THE UNITED STATES PATENT OFFICE

Applicant(s): David CHAMPLIN et al.

Assignee: Qualcomm Incorporated

Title: "METHOD AND DEVICE FOR ENABLING MESSAGE RESPONSES TO INCOMING PHONE CALLS"

Ser. No.: 13/607,419 Filing Date: 09/07/2012

Examiner: Gerald Gauthier Art Unit: 2653

Docket No.: QCP142786C1C1 Conf. No.: 8864

Mail Stop Issue Fee
COMMISSIONER FOR PATENTS
P.O Box 1450
Alexandria, VA 22313-1450

OK TO ENTER: /GG/

AMENDMENT UNDER 37 C.F.R. § 1.312

Dear Sirs:

This paper responds to the Notice of Allowance mailed from the U.S. Patent Office on January 13, 2014.

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

Remarks begin on page 6 of this paper.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Complete if Known		
			Application Number	13/607,419	
			Filing Date	September 07, 2012	
			First Named Inventor	David Champlin	
			Art Unit	Unknown	
			Examiner Name	Not Yet Assigned	
Sheet	2	Of	3	Attorney Docket Number	83068177

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (# known)			
		US-5,943,401	08-24-1999	Risner et al.	
		US-5,946,386 A	08-31-1999	Rogers et al.	
		US-5,963,626 A	10-05-1999	Nabkel	
		US-5,991,290	11-23-1999	Malik	
		US-6,018,671 A	01-25-2000	Bremer	
		US-6,047,057 A	04-04-2000	Wieshut et al.	
		US-6,055,305	04-25-2000	Norman et al.	
		US-6,081,845	06-27-2000	Kanemaki et al.	
		US-6,219,413 B1	04-17-2001	Burg	
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		US-6,404,860 B1	06-11-2002	Casellini	
		US-6,430,271 B1	08-06-2002	DeJesus et al.	
		US-6,463,131, B1	10-08-2002	French-St. George et al.	
		US-6,484,036	11-19- 2006 2002	Sorkin et al.	
		US-6,504,912 B1	01-07-2003	Glossbrenner	
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		US-6,839,877 B2	01-04-2005	Iwata	
		US-7,009,990 B1	03-07-2006	Adams et al.	
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		US-7,023,979 B1	04-04-2006	Wu et al.	
		US-7,027,583 B2	04-11-2006	Uranaka et al.	
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		US-7,136,466 B1	11-14-2006	Gao	
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		US-7,218,710 B1	05-15-2007	Ali et al.	
		US-7,272,220	09-18-2007	Zhang et al.	
		US-7,286,649 B1	10-23-2007	Nelson et al.	
		US-7,305,068 B2	12-04-2007	Tucker et al.	
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		US-7,570,747 B1	08-04-2009	Nakatsu	
		US-7,571,458 B1	08-04-2009	Eyal	
		US-7,634,069 B2	12-15-2009	Randall et al.	

Examiner Signature	/Gerald Gauthier/	Date Considered	10/07/2013
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*EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kind Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard St.16 if possible. *Applicant is to place a check mark here if English language translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH /GG/

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Complete if Known			
			Application Number	13/607,419		
			Filing Date	September 07, 2012		
			First Named Inventor	David Champlin		
			Art Unit	Unknown		
			Examiner Name	Not Yet Assigned		
Sheet	1	Of	3		Attorney Docket Number	83068177

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (# Known)			
Change(s) applied to document, /S.R.R./ 11/15/2013		US 2001/00038126	06-14-2001	Iwata	
		US-2002/0067714 A1	06-06-2002	Crain et al.	
		US 2002/0187794 A1	12-12-2002	Fostick et al.	
		US-2003/0218975 A1	11-27-2003	Niizato et al.	
		US 2004/0203794 A1	10-14-2004	Brown et al.	
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		US-2005/0216949 A1	09-29-2005	Candelora et al.	
		US-2005/0227740 A1	10-13-2005	Orbach	
		US-2006/0015644 A1	01-19-2006	Cernohous et al.	
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Examiner Signature	/Gerald Gauthier/	Date Considered	10/07/2013
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*EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kind Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard St.16 if possible. ⁶ Applicant is to place a check mark here if English language translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH /GG/



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ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

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

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

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

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

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

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