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(54) **Providing customized messages to callers of unavailable called subscribers**

Bereitstellung von kundenspezifischen Nachrichten an Anrufer von nicht erreichbaren angerufenen Teilnehmern

Mise à disposition de messages personnalisés à des appelants d'abonnés appelés indisponibles

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(73) Proprietor: **Provenance Asset Group LLC**
Essex, CT 06426 (US)

(72) Inventors:
- **Qian, Jing**
  Eden Prairie, Minnesota 55347 (US)
- **Aziz, Mohammed**
  Plano, TX 75024 (US)
- **Fuming, Wu**
  Frisco, TX 75035 (US)

(74) Representative: **Abel & Imray**
Westpoint Building
James Street West
Bath BA1 2DA (GB)

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Description

BACKGROUND OF THE INVENTION

Technical Field of the Invention

[0001] The present invention relates in general to a presence-based interactive communications system, and in particular, to handling of missed contact attempts based on preference and presence information.

Description of Related Art

[0002] Presence-based interactive communication services are callee-centric, where callees (presentities) publish, in real time, their presence information (such as, the availability, activity, local time, location, current status of the active devices/applications and the corresponding preferences, etc.) to callers (presence watchers) who have subscribed to the presence information. The presence information is designed to enable the callers to more efficiently and effectively contact the callees.

[0003] Currently, when a caller requests a communication session (e.g., voice, text or multimedia) with a callee, but due to the unavailability of the callee, the communication session is unable to be established, a message is generated and transmitted to the caller based only on the callee's (presentity's) presence information, but not on the callee's or caller's media preference. For example, the caller may prefer to receive the response message using either a real-time text, voice and/or multimedia media type (e.g., instant messenger or a customized voice greeting) or a non-real-time text, voice and/or multimedia media type (e.g., e-mail or sending message directly to the caller's voice mailbox). However, existing presence systems do not accommodate for the media preference of both the caller and the callee.

[0004] In addition, existing preference and presence systems provide only limited callee presence information to the caller in a response message. For example, when a caller attempts to communicate with a callee by text, voice or multimedia, and the callee is unavailable for the communication session, the caller may want to obtain the following information: (1) the callee's current activity is; (2) when the callee will be available; (3) emergency contact number for the callee; and (4) alternative contact names/numbers. Based on existing presence technology, the caller may receive a presence-based voice greeting that includes the callee's current activity, but not any of the additional information listed above.

[0005] Furthermore, the callee is not able to control the content of missed call response messages according to different authorities or priorities granted to the caller by the callee, which may reduce the callee's communication and privacy satisfaction. For example, depending upon the importance of the caller to the callee or the category of the caller, the callee may want to provide more or less presence information to the caller. However, current presence systems do not allow a callee to provide different presence information to different callers.

[0006] As a result, what is needed is a communications system and method for generating and providing customized messages to callers based on presence information and preference information of both the callee and the caller.

[0007] US Patent Application 2003/0161452 A1 relates to a telephone correspondent reception system for use by subscribers when they are unavailable. According to the invention said system comprises a data server containing an electronic diary specific to the subscriber, an interface for providing the subscriber with access to the data server for consulting and updating data, a voice server including a reception service capable, in conjunction with the electronic diary, of composing messages to callers concerning the availability of the subscriber, and means for providing a caller with access to the voice server.

SUMMARY OF THE INVENTION

[0008] The main idea of the present invention is to provide a communications system and a method for providing customized messages based on presence and preference information according to independent claim 1 and 5.

[0009] The communications system includes a presence server for collecting presence information and preference information on a plurality of subscribers. The presence information includes information on the availability of a subscriber, while the preference information includes policies for different priority levels of callers. The communications system further includes a communications manager for receiving a request for a communication session with one of the subscribers from a caller. In response to unavailability of the called subscriber for the communication session, the communications manager transmits a customized response to the caller that is generated based on the presence information and the preference information of the called subscriber.

[0010] In one embodiment, the customized message includes at least a portion of the presence information of the called subscriber based on a priority level granted to the caller in the preference information of the called subscriber. In another embodiment, the customized message is a default message based on the priority level granted to the caller.

[0011] In a further embodiment, the communications manager further extracts presence information and preference information of the caller from the presence server when the caller is one of the subscribers. For example, the presence information can include a media status of the caller and the preference information can include a media preference of the caller to enable the communications manager to transmit the customized message to the caller based on the media status and the media preference of the caller.

[0012] Advantageously, embodiments of the present invention increase communication efficiency by providing additional information on when and/or how to reach the callee, and in some cases whom to contact alternatively. In addition, embodiments of the present invention provide improved caller satisfaction during communication, and improved callee control on his/her privacy information by customizing the privileges granted to different callers.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] A more complete understanding of the present invention may be obtained by reference to the following detailed description when taken in conjunction with the accompanying drawings wherein:

FIGURE 1 illustrates an exemplary presence system in accordance with embodiments of the present invention;

FIGURE 2 illustrates an exemplary communications system incorporating a presence system to generate and transmit customized call response messages based on the presence information and preference information of the called subscriber, in accordance with embodiments of the present invention; and

FIGURE 3 is a flowchart illustrating an exemplary process for generating and transmitting a customized call response message, in accordance with embodiments of the present invention.

DETAILED DESCRIPTION OF THE DRAWINGS

[0014] Referring to FIGURE 1, there is illustrated an exemplary presence system 100 capable of implementing various embodiments of the present invention. The presence system 100 includes a presentity 110 and one or more devices 120 associated with the presentity 110. The presentity 110 represents the callee and provides presence information 180 on the callee's presence status to the presence system 100. Each device 120 is a physical communications device capable of sending and/or receiving communications over a communications network 130. Examples of such devices 120 include, but are not limited to, a desktop phone 120a, a laptop computer 120b, a personal computer 120c, a cell phone 120d and a personal digital assistant (PDA) 120e. In FIGURE 1, the communications network 130 represents any type of network over which media (circuit-switched or packet-switched voice or data) may be sent. For example, the communications network 130 can include the Public Switched Telephone Network (PSTN), Public Land Mobile Network (PLMN), one or more private local area networks (LANs), the Internet and/or any other type or combination of networks.

[0015] The presence system 100 further includes one or more presence user agents 140 (PUAs), a presence agent (PA) 150, a presence server 160 and one or more watchers 170 of the presentity 110. The PUAs 140 are capable of manipulating and providing preference information 190 and presence information 180 for the presentity 110. In FIGURE 1, a separate PUA 140 is shown for each device 120. However, it should be understood that in other embodiments, the number of PUAs 140 can vary based on the number and type of devices 120, the applications supported by the devices 120 and the system configuration. Each PUA 140 independently generates a component of the overall presence information 180 for a presentity 110. Typically, PUA's 140 generate presence information 180 when a change in presence status occurs. Examples of changes in presence status include, but are not limited to, turning on and off a device 120, modifying the registration from a device 120 and changing the instant messaging status on a device 120. Preference information 190 is entered into the presence system 100 by the presentity 110 and/or may be at least partially configured by the operator of the presence system 100.

[0016] The presence information 180 and preference information 190 from each of the PUAs 140 is collected by one or more presence agents (PAs) 150. In FIGURE 1, only one PA 150 is shown for simplicity. However, it should be understood that in other embodiments, there can be multiple PAs 150 for a presentity 110, each of which is responsible for a subset of the total subscriptions (requests for presence information from watchers 170) currently active for the presentity 110. The PA 150 maintains the current complete presence information 180 for the presentity 110 and provides the presence information to one or more watchers 170 (callers) of the presentity 110.

[0017] The presence server 160 is a physical entity that can operate as either the PA 150 or as a proxy server for routing requests from watchers 170 to the PA 150. Thus, the PA 150 in combination with the presence server 160, is operable to receive preference and presence information 190 and 180, respectively, of the presentity 110 from the PUAs 140, receive preference and presence information from the watcher 170, receive requests from the watcher 170 for presence and preference information 180 and 190, respectively, of the presentity 110 and provide the presence and preference information 180 and 190, respectively, of the presentity 110 to the watcher 170.

[0018] When acting as a PA 150, the presence server 160 can also be co-located with a PUA 140.

[0019] In FIGURE 1, the presence server 160 is shown operating as a PA 150 by collecting and storing presence information 180 and preference information 190 for a plurality of subscribers (e.g., presentities 110 and watchers 170). Examples of presence information 180 include, but are not limited to, the subscriber's current activity (e.g., meeting, voice call, multimedia communication session, etc.), information on when the subscriber will be available, emergency contact numbers for the subscriber and alternative contact names/numbers. Examples of prefer-

ence information 190 include, but are not limited to, policies for different priority levels of callers and the subscriber's media preferences.

[0020] The presence system 100 uses a presence protocol to provide presence services to presentities 110 and watchers 170. An example of a presence protocol that can be used in the presence system 100 is the Session Initiation Protocol (SIP), as described in J. Rosenberg, et al., "SIP: Session Initiation Protocol"RFC: 3261, June 2002 and in A. Roach, et al., "Session Initiation Protocol (SIP) - Specific Event Notification," RFC: 3265, June 2002. SIP is an application-layer control protocol used to create, modify and terminate communication (voice, text and/or multimedia) sessions. SIP can be used with other protocols, such as the Real-time Transport Protocol (RTP), the Real-Time Streaming Protocol (RTSP), the Session Description Protocol (SDP), the International Telecommunication Union - Telecommunications ("ITU-T") H.263 standard (video CODEC), the G.711 and G.729 standards (audio CODECs), and other or additional standards or protocols. As will be appreciated, other or additional protocols and configurations may be used.

[0021] SIP networks are capable of routing requests from any user on the network to the server that maintains the registration state for a user. Thus, SIP networks enable a caller (watcher) to transmit a SUBSCRIBE request for presence and preference information relating to a particular callee (presentity 110) to be routed to the presence server 160 that maintains the presence and preference information for the presentity 110. In operation, the presence server 160 and PA 150 may be co-located with the SIP proxy/registrar for efficiency purposes.

[0022] Referring now to FIGURE 2, there is illustrated an exemplary communications system 200 incorporating a presence system to generate and transmit customized call response messages based on the presence information and preference information of the called subscriber, in accordance with embodiments of the present invention. In FIGURE 2, a caller 210 sends a request 205 for a communication session (e.g., real-time or non-real-time voice, text or multimedia) with a callee (called subscriber, not specifically shown) to a media gateway (MG) 230 through a communications network 200 (e.g., PSTN, PLMN, LAN, Internet, etc.). The MG 230 includes any device, such as a circuit switch, IP gateway or other device that converts data from the format required by one type of network to the format required by another type of network. It should be understood that if the caller 210 and the called subscriber are both connected to the same network, the MG 230 may not be necessary.

[0023] The MG 230 forwards the request 205 to a Communications Manager (CM) 240 for the called subscriber. The CM 240 manages communication sessions for the called subscriber and other subscribers registered with the presence server 160. The CM 240 is typically located on the called subscriber's premises with the presence server 160. However, in other embodiments, the CM 240 may distributed or remote from the presence server 160. The CM 240 may be co-located with the MG 230 or the presence server 160 or may be implemented on a separate device.

[0024] The CM 240 determines if the called subscriber is available for the requested communication session, and if not, sends a request 225 to the presence server 160 for the called subscriber's presence information 180 and preference information 190. The presence server 160 integrates presence information 180 for the called subscriber from internal presence information provided by PUA's (as shown in FIGURE 1), a calendar database 250 associated with the called subscriber and other sources 260 of presence information, and sends the integrated presence information 180 back to the CM 240. In an additional embodiment, if the caller 210 is a subscriber to the presence server, the CM 240 also retrieves the presence information 180 and preference information 190 for the caller 210 from the presence server 160. The CM 240 processes the returned presence information 180 and preference information 190 from the presence server 160, generates a customized message 270 based on the called subscriber's presence information 180 and preference information 190 and transmits the customized message 270 to the MG 230 for forwarding back to the caller 210.

[0025] The preference information 190 of the called subscriber determines the type and amount of the called subscriber's presence information 180 that is disclosed to the caller 210 in the customized message 270. In one embodiment, the preference information 180 includes policies for different priority levels granted to callers. Thus, the CM 240 compares the identity of the caller 210 to the preference information 180 to determine if the called subscriber has set a specific priority level for the caller 210.

[0026] For example, an employee called subscriber may set a priority level for his/her boss to a high priority level to provide as much presence information 180 as possible in the customized message 270. Examples of presence information 180 for the employee called subscriber include, but are not limited to, current activity of employee (e.g., meeting, vacation, traveling, etc.), current location of employee (e.g., meeting room number or outside location), a time when the employee will next be available, and an emergency contact number or emergency contact method for the employee.

[0027] As another example, the employee called subscriber may set a priority level for an important customer to a different priority level than that of the employee's boss to provide different presence information 180 to the customer. For example, if the customer calls or sends an e-mail to the employee called subscriber to inquiry about product information, and the employee called subscriber is not available, the priority level of the customer may indicate to the CM 240 that the customized message 270 should be an e-mail that includes a time when the employee will be available, an emergency contact number

and an alternative contact name and number. In addition, the priority level granted to the customer by the employee called subscriber may also indicate to the CM 240 that the CM 240 should automatically forward the e-mail or call to the employee's manager.

[0028] As a further example, the employee called subscriber may set a priority level for an unknown caller to a low priority level to provide minimal employee presence information 180 to the unknown caller. For example, the low priority level may indicate to the CM 240 to provide either no presence information to the unknown caller (e.g., no response for email), a default voice greeting or other default message (e.g., "I am on vacation and will be back on a certain date.") in the customized message 270.

[0029] As described above, if the caller 210 is a subscriber of the presence server 160, the CM 240 may also retrieve the presence information 180 and preference information 190 for the caller 210. For example, the presence information 180 can include the media status of the caller 210, and the preference information 190 can include the media preferences of the caller 210. The media status indicates the availability of the caller 210 per media type. The media preference indicates the media type that the caller 210 prefers for receiving customized call response messages 270.

[0030] Based on the caller's media status and media preferences, the CM 240 determines the media channel(s) for delivering the customized message 270 to the caller 210. For example, the CM 240 may deliver the customized message 270 to the caller 210 using the preferred available real-time media for the caller 210. However, if the caller 210 is not a subscriber of the presence server 160, or the presence server 160 does not return any presence information 180 or preference information 190 for the caller 210, the CM 240 can use the caller's current communication channel to transmit the customized message 270.

[0031] Using the employee called subscriber example described above, if the employee's boss is in a meeting and wants to know a testing result from the unavailable employee, the presence and preference information of the boss may indicate to the CM 240 to send the customized message 270 to the boss's cell phone mailbox to avoid interfering with the meeting.

[0032] It should be noted that the CM 240 may be constructed or configured using hardware, software, firmware, or combination thereof for managing communication sessions (e.g., real-time and non-real-time voice, text and multimedia communication sessions). As an example, the CM 240 could include one or more processors that execute instructions and one or more memories that store instructions and data used by the processors. The processor is generally understood to be a device that drives a general-purpose computer. It is noted, however, that other processor devices such as microcontrollers, Field Programmable Gate Arrays (FPGAs), or Application Specific Integrated Circuits (ASICs), or a combination thereof, can be used as well and achieve the benefits and advantages described herein. In one embodiment, the CM 240 can include one or more processes, such as software applications providing an activity, a function, or a systematic sequence of tasks that produces a specified result, for managing communications sessions.

[0033] FIGURE 3 is a flowchart illustrating an exemplary process 300 for generating and transmitting a customized call response message, in accordance with embodiments of the present invention. Initially, at block 310, a request for a communication session (e.g., text, voice, multimedia or any combination thereof) from a caller to a called subscriber is received at the Communication Manager (CM) of the called subscriber's network. The CM checks the status of the called subscriber at block 315, and if the called subscriber is available, the CM establishes a connection with the called subscriber for the communication session at block 320.

[0034] However, if the called subscriber is unavailable, at block 325, the CM retrieves the presence information for the called subscriber from the presence server. In addition, at block 330, the CM retrieves the priority level (preference information) granted to the caller by the called subscriber. At block 335, if the caller is not a subscriber of the called subscriber's presence server, no presence or preference information for the caller is retrieved by the CM from the presence server. Therefore, at block 340, the CM generates the customized message based only on the called subscriber's presence and preference information and transmits the customized message to the caller using the caller's current communication media at block 345. The customized message includes the presence information of the called subscriber that is associated with the priority level granted to the caller.

[0035] However, if the caller is a subscriber of the called subscriber's presence server, at block 350, the CM retrieves from the presence server the caller's presence and preference information. For example, the caller's presence information can include the media status of the caller, and the caller's preference information can include the media preference(s) of the caller. At block 355, the CM generates the customized message based on both the caller's and the called subscriber's presence and preference information, and transmits the customized message to the caller based on the caller's media status and media preference at block 360.

[0036] Below further aspects are described :

- The described communications system, wherein said customized message includes an emergency contact number for said select subscriber based on said priority level granted to said caller;
- The described communications system, wherein customized message is a default message based on said priority level granted to said caller;
- The described communications system, wherein

said communications manager is further operable to perform additional handling of said communication session based on said priority level granted to said caller;

- The described communications system, wherein said presence server is further capable of integrating said presence information from one or more sources of presence data;
- The described communications system, wherein said communications manager is further operable to transmit said customized message to said caller using a current communication media of said caller;
- The described method, further comprising the step of:
  performing additional handling of said communication session based on said priority level granted to said caller;
- The described method, further comprising the step of:
  retrieving presence information and preference information of said caller, said presence information including a media status of said caller and said preference information including a media preference of said caller;
- The described method, wherein said transmitting further comprises the step of: transmitting said customized message to said caller based on said media status and said media preference;
- The described method, further comprising the step of:
  collecting said presence information from one or more sources of presence data;
- The described method, wherein said step of transmitting further comprises the step of: transmitting said customized message to said caller using a current communication media of said caller.

[0037] As will be recognized by those skilled in the art, the innovative concepts described in the present application can be modified and varied over a wide rage of applications. Accordingly, the subject matter should not be limited to any of the specific exemplary teachings discussed, but is instead defined by the following claims.

Claims

1. A communications system (200) for providing customized messages based on presence and preference information, comprising:

- a presence server (160) capable of collecting presence information (180) and preference information (190) on a plurality of subscribers, wherein said presence information includes availability of a subscriber and said preference information includes policies for different priority levels of callers; and
- a communications manager (240) connected to receive (310) a request (205) for a communication session with a select one of said plurality of subscribers from a caller (210), wherein said communications manager (240) is operable to extract said presence information and said preference information of said select subscriber from said presence server,
- wherein said communications manager (240) is further operative to extract said presence information and said preference information of said caller (210) from said presence server (160), when (335) said caller (210) is one of said plurality of subscribers,
- and in response to unavailability of said select subscriber for said communication session, transmit (360, 345) a customized message (270) to said caller (210), wherein when (335) said caller (210) is one of said plurality of subscribers, said presence information of said caller (210) includes a media status of said caller (210) and said preference information of said caller (210) includes a media preference of said caller (210), and wherein said communications manager (240) is further operable to determine (335) a media channel or media channels for delivering (360, 345) the customized message (270) to said caller (210) based on said media status and said media preference of said caller (210),
- wherein the communications manager (240) is operative to generate said customized message (270) based on said media status and said media preference of said select subscriber and said caller (210) and wherein when (335) said caller is not one of said plurality of subscribers, said communications manager (240) is further operable to generate (340) and transmit (345) the customized message using the caller's current communication media.

2. The communications system of Claim 1, wherein said customized message (270) includes at least a portion of said presence information of said select subscriber based on a priority level granted to said caller (210) in said preference information of said select subscriber.

3. The communications system of Claim 2, wherein said customized message (270) includes an alternate contact number based on said priority level granted to said caller (210).

4. The communications system of Claim 1, wherein the media preference indicates the media channel that the caller prefers for receiving the customized messages.

5. A method for providing customized messages based

on presence and preference information, comprising the steps of:

- a communications manager (240) receiving (310) a request (205) for a communication session with a select subscriber of a plurality of subscribers from a caller (210);
- said communications manager (240) retrieving (325, 330) presence information and preference information of said select subscriber, wherein said presence information of said select subscriber includes availability of said subscriber and said preference information includes policies for different priority levels of callers;
- said communications manager (240) retrieving (350) presence information and preference information of said caller (210) when (335) said caller (210) is one of said plurality of subscribers; and
- transmitting (360, 345) a customized message (270) to said caller (210) in response to unavailability of said select subscriber for said communication session, wherein when said caller (210) is one of said plurality of subscribers, said presence information of said caller (210) includes a media status of said caller (210) and said preference information includes a media preference of said caller (210), and wherein said communications manager (240) determines a media channel or media channels for delivering the customized message to said caller based on said media status and said media preference of said caller and wherein said customized message (270) is generated (355) by the communications manager (240) based on said media status and said media preference of said select subscriber and said caller (210) and wherein when (335) said caller is not one of said plurality of subscribers, said communications manager (240) generates (340) and transmits (345) the customized message using the caller's current communication media.

6. The method of Claim 5, wherein said transmitting further comprises the step of:
generating (355) said customized message (270) including at least a portion of said presence information of said subscriber based on a priority level granted to said caller (210) in said preference information of said subscriber.

7. The method of Claim 6, wherein said generating further comprises the step of:
generating (355) said customized message (270) including an alternate contact number based on said priority level granted to said caller (210).

8. The method of Claim 6, wherein said generating further comprises the step of:
generating (355) said customized message (270) including an emergency contact number for said subscriber based on said priority level granted to said caller (210).

9. The method of Claim 6, wherein said generating further comprises the step of:
generating (355) said customized message (270) as a default message based on said priority level granted to said caller (210) .

Patentansprüche

1. Kommunikationssystem (200) zur Bereitstellung kundenspezifischer Nachrichten auf der Basis von Anwesenheits- und Präferenzinformationen umfassend:

- einen Anwesenheitsserver (160), der in der Lage ist, Anwesenheitsinformationen (180) und Präferenzinformationen (190) über eine Vielzahl von Teilnehmern zu sammeln, wobei die Anwesenheitsinformationen die Verfügbarkeit eines Teilnehmers und die Präferenzinformationen Richtlinien für unterschiedliche Prioritätsstufen der Anrufer umfassen; und
- einen Kommunikationsmanager (240), der von einem Anrufer (210) eine Anfrage (205) für eine Kommunikationssitzung mit einem ausgewählten der Vielzahl von Teilnehmern empfängt (310), wobei der Kommunikationsmanager (240) in der Lage ist, die Anwesenheitsinformationen und die Präferenzinformationen des ausgewählten Teilnehmers von dem Anwesenheitsserver abzurufen,
- wobei der Kommunikationsmanager (240) zudem in der Lage ist, die Anwesenheitsinformationen und die Präferenzinformationen des Anrufers (210) von dem Anwesenheitsserver (160) abzurufen, wenn (335) der Anrufer (210) einer der Vielzahl von Teilnehmern ist,
- und als Antwort auf die Nichtverfügbarkeit des ausgewählten Teilnehmers für die Kommunikationssitzung eine kundenspezifische Nachricht (270) an den Anrufer (210) übermittelt (360, 345), wobei - wenn (335) der Anrufer (210) einer der Vielzahl von Teilnehmern ist - die Anwesenheitsinformationen des Anrufers (210) einen Medienstatus des Anrufers (210) und die Präferenzinformationen des Anrufers (210) eine Medienpräferenz des Anrufers (210) umfassen, wobei der Kommunikationsmanager (240) zudem in der Lage ist, entsprechend dem Medienstatus und der Medienpräferenz des Anrufers (210) einen Medienkanal oder Medienkanäle zur Übertragung (360, 345) der kundenspe-

zifischen Nachricht (270) an den Anrufer (210) zu bestimmen (335),
- wobei der Kommunikationsmanager (240) in der Lage ist, die kundenspezifische Nachricht (270) entsprechend dem Medienstatus und der Medienpräferenz des ausgewählten Teilnehmers und des Anrufers (210) zu erzeugen, wobei - wenn (335) der Anrufer (210) nicht einer der Vielzahl von Teilnehmern ist - der Kommunikationsmanager (240) zudem in der Lage ist, die kundenspezifische Nachricht mittels des aktuellen Kommunikationsmediums des Anrufers zu erzeugen (340) und zu übertragen (345).

2. Kommunikationssystem nach Anspruch 1, wobei die kundenspezifische Nachricht (270) entsprechend einer Prioritätsstufe, die dem Anrufer (210) in den Präferenzinformationen des ausgewählten Teilnehmers gewährt worden ist, mindestens einen Teil der Anwesenheitsinformationen des ausgewählten Teilnehmers enthält.

3. Kommunikationssystem nach Anspruch 2, wobei die kundenspezifische Nachricht (270) entsprechend der dem Anrufer (210) gewährten Prioritätsstufe eine alternative Kontaktnummer enthält.

4. Kommunikationssystem nach Anspruch 1, wobei die Medienpräferenz den Medienkanal anzeigt, den der Anrufer für den Empfang der kundenspezifischen Nachricht bevorzugt.

5. Verfahren zur Bereitstellung kundenspezifischer Nachrichten auf der Basis von Anwesenheits- und Präferenzinformationen, das folgende Schritte umfasst:

- ein Kommunikationsmanager (240) empfängt (310) von einem Anrufer (210) eine Anfrage (205) für eine Kommunikationssitzung mit einem ausgewählten Teilnehmer einer Vielzahl von Teilnehmern;
- der Kommunikationsmanager (240) ruft (325, 330) Anwesenheitsinformationen und Präferenzinformationen des ausgewählten Teilnehmers ab, wobei die Anwesenheitsinformationen des ausgewählten Teilnehmers die Verfügbarkeit des Teilnehmers und die Präferenzinformationen Richtlinien für unterschiedliche Prioritätsstufen von Anrufern umfassen;
- der Kommunikationsmanager (240) ruft (350) Anwesenheitsinformationen und Präferenzinformationen des Anrufers (210) ab, wenn (335) der Anrufer (210) einer der Vielzahl von Teilnehmern ist; und
- überträgt (360, 345) als Antwort auf die Nichtverfügbarkeit des ausgewählten Teilnehmers für die Kommunikationssitzung eine kundenspezifische Nachricht (270) an den Anrufer (210), wobei - wenn der Anrufer (210) einer der Vielzahl von Teilnehmern ist - die Anwesenheitsinformationen des Anrufers (210) einen Medienstatus des Anrufers (210) und die Präferenzinformationen des Anrufers (210) eine Medienpräferenz des Anrufers (210) umfassen, wobei der Kommunikationsmanager (240) entsprechend dem Medienstatus und der Medienpräferenz des Anrufers einen Medienkanal oder Medienkanäle zur Übertragung der kundenspezifischen Nachricht an den Anrufer bestimmt, wobei der Kommunikationsmanager (240) die kundenspezifische Nachricht (270) entsprechend dem Medienstatus und der Medienpräferenz des ausgewählten Teilnehmers und des Anrufers (210) erzeugt (355) und wobei - wenn (335) der Anrufer nicht einer der Vielzahl von Teilnehmern ist - der Kommunikationsmanager (240) die kundenspezifische Nachricht mittels des aktuellen Kommunikationsmediums des Anrufers erzeugt (340) und überträgt (345).

6. Verfahren nach Anspruch 5, wobei das Übertragen zudem folgenden Schritt umfasst:
Erzeugen (355) der kundenspezifischen Nachricht (270), die entsprechend einer Prioritätsstufe, die dem Anrufer (210) in den Präferenzinformationen des Teilnehmers gewährt worden ist, mindestens einen Teil der Anwesenheitsinformationen des Teilnehmers enthält.

7. Verfahren nach Anspruch 6, wobei das Erzeugen zudem folgenden Schritt umfasst:
Erzeugen (355) der kundenspezifischen Nachricht (270) mit einer alternativen Kontaktnummer entsprechend der dem Anrufer (210) gewährten Prioritätsstufe.

8. Verfahren nach Anspruch 6, wobei das Erzeugen zudem folgenden Schritt umfasst:
Erzeugen (355) der kundenspezifischen Nachricht (270) mit einer Notfallkontaktnummer des Teilnehmers entsprechend der dem Anrufer (210) gewährten Prioritätsstufe.

9. Verfahren nach Anspruch 6, wobei das Erzeugen zudem folgenden Schritt umfasst:
Erzeugen (355) der kundenspezifischen Nachricht (270) als Standardnachricht entsprechend der dem Anrufer (210) gewährten Prioritätsstufe.

Revendications

1. Système de communications (200) pour fournir des messages personnalisés basés sur des informations de présence et de préférence, comprenant:

- un serveur de présence (160) capable de collecter des informations de présence (180) et des informations de préférence (190) sur une pluralité d'abonnés, dans lequel lesdites informations de présence incluent la disponibilité d'un abonné et dans lequel lesdites informations de préférence incluent des politiques pour des différents niveaux de priorité d'appelants; et
- un gestionnaire de communications (240) raccordé pour recevoir (310) une demande (205) d'une session de communications avec un abonné sélectionné de ladite pluralité d'abonnés par un appelant (210), dans lequel ledit gestionnaire de communications (240) peut fonctionner pour extraire lesdites informations de présence et lesdites informations de préférence dudit abonné sélectionné dudit serveur de présence,
- dans lequel ledit gestionnaire de communications (240) est apte à extraire lesdites informations de présence et lesdites informations de préférence dudit appelant (210) dudit serveur de présence (160), lorsque (335) dudit appelant (210) est un abonné de ladite pluralité d'abonnés,
- et, en réponse à l'indisponibilité dudit abonné sélectionné pour ladite session de communications, transmettre (360, 345) un message personnalisé (270) audit appelant (210), dans lequel lorsque (335) dudit appelant (210) est un abonné de ladite pluralité d'abonnés, lesdites informations de présence dudit appelant (210) incluent un état du média dudit appelant (210) et lesdites informations de préférence dudit appelant (210) incluent une préférence du média dudit appelant (210), et dans lequel ledit gestionnaire de communications (240) peut en outre fonctionner pour déterminer (335) un canal de média ou des canaux de médias pour délivrer (360, 345) le message personnalisé (270) audit appelant (210) sur la base dudit état du média et de ladite préférence du média dudit appelant (210),
- dans lequel le gestionnaire de communications (240) est apte à générer ledit message personnalisé (270) basé sur ledit état du média et ladite préférence du média dudit abonné sélectionné et dudit appelant (210) et dans lequel lorsque (335) dudit appelant n'est pas l'un de ladite pluralité d'abonnés, ledit gestionnaire de communications (240) peut en outre fonctionner pour générer (340) et transmettre (345) le message personnalisé en utilisant le média de communication actuel de l'appelant.

2. Système de communications de la revendication 1, dans lequel ledit message personnalisé (270) inclut au moins une partie desdites informations de présence dudit abonné sélectionné basée sur un niveau de priorité accordé audit appelant (210) dans lesdites informations de préférence dudit abonné sélectionné.

3. Système de communications de la revendication 2, dans lequel ledit message personnalisé (270) inclut un numéro de contact alterné basé sur ledit niveau de priorité accordé audit appelant (210).

4. Système de communications de la revendication 1, dans lequel la préférence du média indique le canal de média que l'appelant préfère pour recevoir les messages personnalisés.

5. Procédé pour fournir des messages personnalisés basé sur des informations de présence et de préférence, comprenant les étapes suivantes:

- réception (310) par un gestionnaire de communications (240) d'une demande (205) d'une session de communications avec un abonné sélectionné d'une pluralité d'abonnés par un appelant (210);
- récupération (325, 330) par ledit gestionnaire de communications (240) des informations de présence et des informations de préférence dudit abonné sélectionné, dans laquelle lesdites informations de présence dudit abonné sélectionné inclut la disponibilité dudit abonné, et lesdites informations de présence incluent des politiques pour différents niveaux de priorité d'appelants;
- récupération (350) par ledit gestionnaire de communications (240) des informations de présence et des informations de préférence dudit appelant (210) lorsque (335) dudit appelant (210) est l'un de ladite pluralité d'abonnés; et
- transmission (360, 345) d'un message personnalisé (270) audit appelant (210) en réponse à l'indisponibilité dudit abonné sélectionné pour ladite session de communications, dans laquelle ledit appelant (210) est un abonné de ladite pluralité d'abonnés, lesdites informations de présence dudit appelant (210) incluent un état du média dudit appelant (210) et lesdites informations de préférence incluent une préférence du média dudit appelant (210), et dans laquelle ledit gestionnaire de communications (240) détermine un canal de média ou des canaux de médias pour délivrer le message personnalisé audit appelant sur la base dudit état du média et de ladite préférence du média dudit appelant et dans laquelle ledit message personnalisé (270) est généré (355) par le gestionnaire de communications (240) sur la base dudit état du média et de ladite préférence du média dudit abonné sélectionné et dudit appelant (210) et

dans laquelle lorsque (335) ledit appelant n'est pas l'un de ladite pluralité d'abonnés, ledit gestionnaire de communications (240) génère (340) et transmet (345) le message personnalisé en utilisant le média de communication actuel de l'appelant.

6. Procédé de la revendication 5, dans lequel ladite transmission comprend, en outre, les étapes suivantes:
génération (355) dudit message personnalisé (270) incluant au moins une partie desdites informations de présence dudit abonné basée sur un niveau de priorité accordé audit appelant (210) dans lesdites informations de préférence dudit abonné.

7. Procédé de la revendication 6, dans lequel ladite génération comprend, en outre, l'étape suivante:
génération (355) dudit message personnalisé (270) incluant un numéro de contact alterné basé sur ledit niveau de priorité accordé audit appelant (210).

8. Procédé de la revendication 6, dans lequel ladite génération comprend, en outre, l'étape suivante:
génération (355) dudit message personnalisé (270) incluant un numéro de contact d'urgence pour ledit abonné basé sur ledit niveau de priorité accordé audit appelant (210) .

9. Procédé de la revendication 6, dans lequel ladite génération comprend, en outre, l'étape suivante:
génération (355) dudit message personnalisé (270) comme un message de défaut basé sur ledit niveau de priorité accordé audit appelant (210).

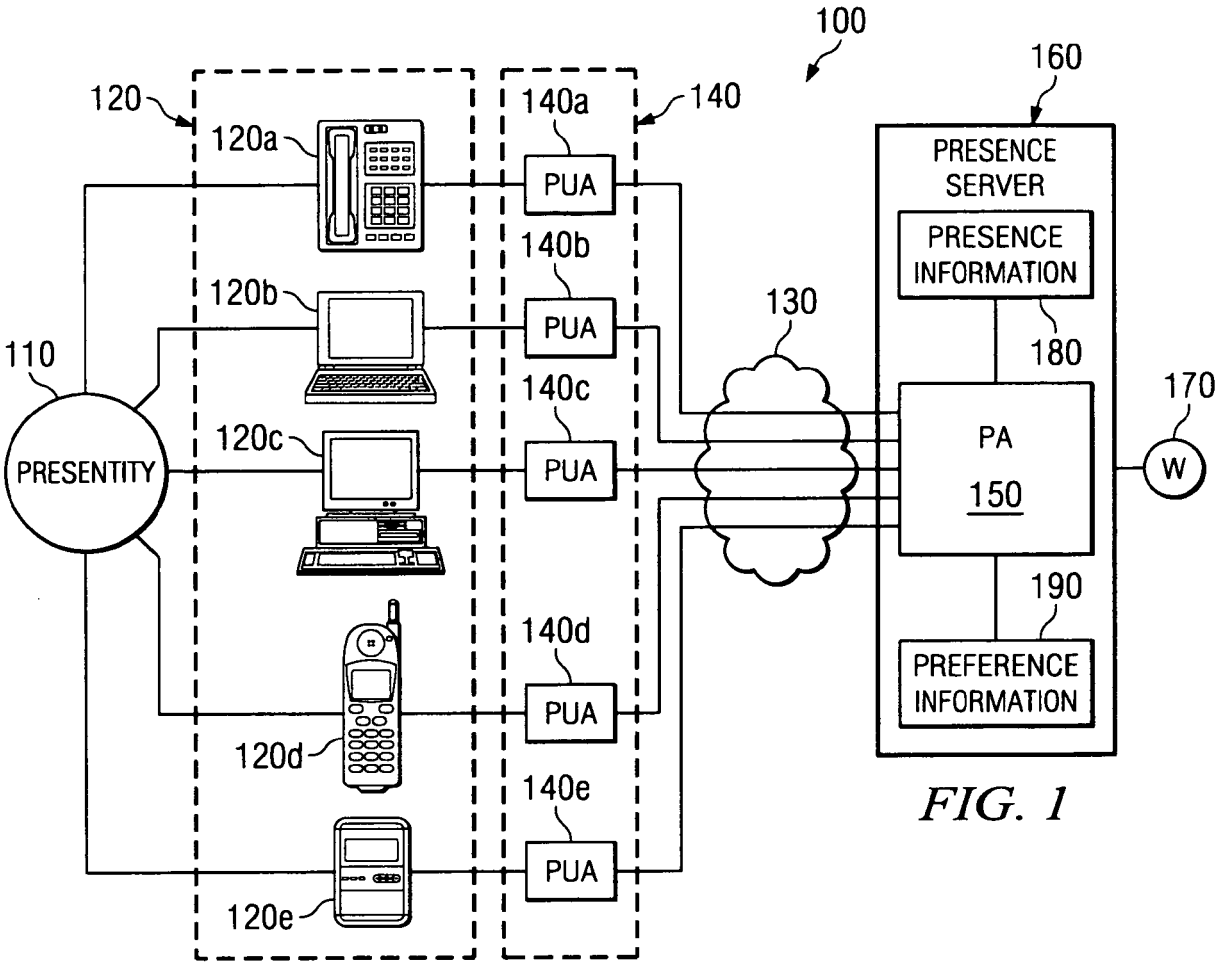
100
160
120
120a
140a
140
PUA
PRESENCE SERVER
PRESENCE INFORMATION
140b
120b
130
180
110
140c
170
120c
PRESENTITY
PA
150
W
190
140d
PREFERENCE INFORMATION
120d
140e
120e

FIG. 1

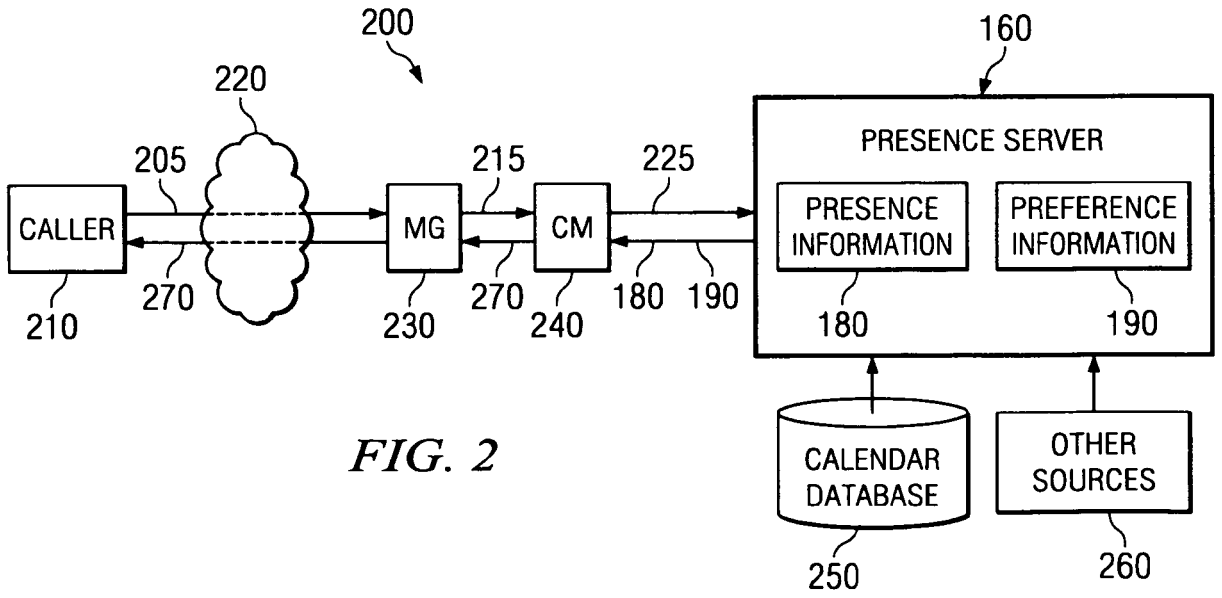
200
160
220
PRESENCE SERVER
205
215
225
CALLER
MG
CM
PRESENCE INFORMATION
PREFERENCE INFORMATION
270
270
180
190
210
230
240
180
190
CALENDAR DATABASE
OTHER SOURCES
250
260

FIG. 2

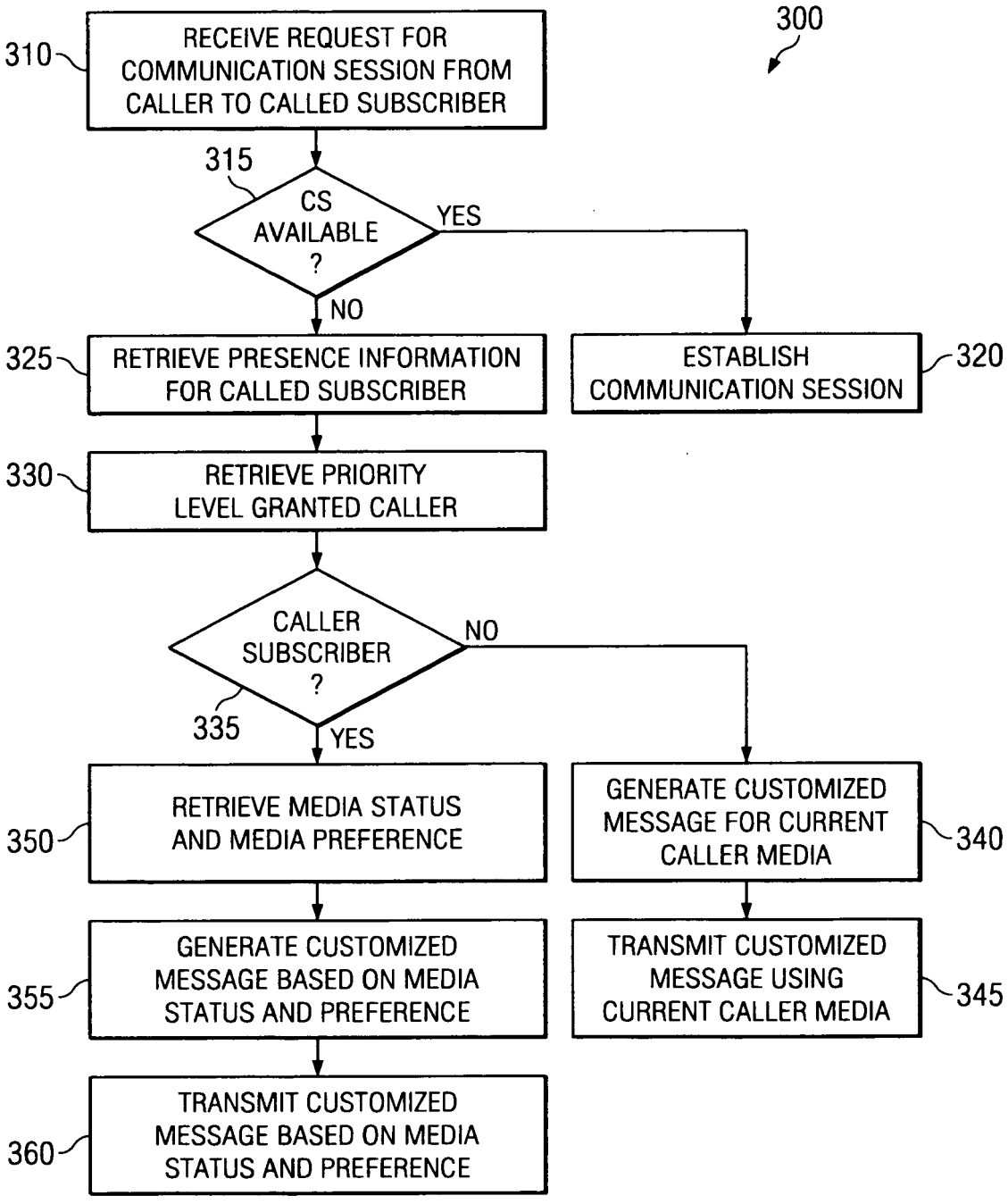
300
310
RECEIVE REQUEST FOR COMMUNICATION SESSION FROM CALLER TO CALLED SUBSCRIBER
315
CS AVAILABLE ?
YES
NO
325
RETRIEVE PRESENCE INFORMATION FOR CALLED SUBSCRIBER
ESTABLISH COMMUNICATION SESSION
320
330
RETRIEVE PRIORITY LEVEL GRANTED CALLER
CALLER SUBSCRIBER ?
NO
335
YES
350
RETRIEVE MEDIA STATUS AND MEDIA PREFERENCE
GENERATE CUSTOMIZED MESSAGE FOR CURRENT CALLER MEDIA
340
355
GENERATE CUSTOMIZED MESSAGE BASED ON MEDIA STATUS AND PREFERENCE
TRANSMIT CUSTOMIZED MESSAGE USING CURRENT CALLER MEDIA
345
360
TRANSMIT CUSTOMIZED MESSAGE BASED ON MEDIA STATUS AND PREFERENCE

FIG. 3

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- US 20030161452 A1 **[0007]**

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- **J. ROSENBERG et al.** SIP: Session Initiation Protocol. *RFC,* June 2002, 3261 **[0020]**
- **A. ROACH et al.** Session Initiation Protocol (SIP) - Specific Event Notification. *RFC,* June 2002, 3265 **[0020]**