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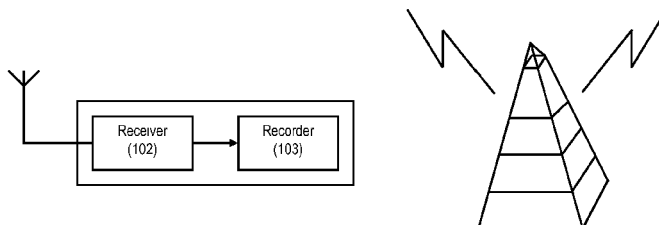
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FIG. 1



(57) Abstract: An approach is provided for communicating audio content over a network. A recipient communication terminal identifies and accepts an incoming call, the call including at least one identification parameter relating to at least one category pertaining to content of the call. The recipient communication terminal further causes, at least in part, storing of the content in one or more content stores specific to the category.

METHOD AND APPARATUS FOR COMMUNICATING AUDIO CONTENT OVER A NETWORK

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of Indian Patent Application No. 1230/CHE/2009, filed on 27 May 2009, the disclosure of which is incorporated herein in its entirety.

FIELD

[0002] The present disclosure relates to communicating audio content over a network, and more specifically to audio content that is transmitted from a sending terminal and automatically received by one or more recipient communication terminals.

BACKGROUND

[0003] The following description of the background art may include insights, discoveries, understandings or disclosures, or associations together with disclosures not known to the relevant art but provided by the disclosure. Some such contributions of the disclosure may be specifically pointed out below, whereas other such contributions will be apparent from their context.

[0004] Communication systems offer a variety of ways in which various forms of data can be transmitted from one point to another. Some known communication forms include SMS, MMS, emails, voicemail, VoiceSMS and voice calls. Within these, voice calls are examples of real time interactive communication whereas SMS, MMS, emails, voicemail and voiceSMS form part of non-real time communication. Depending on the type of communication required, any one of these techniques can be used. For example, SMS (Short Message Service) allows the exchange of text messages. Images, audio and video and other such media can be communicated using MMS (Multimedia Messaging Service). Voicemail and VoiceSMS enable sending and receiving messages with voice or audio content. Each of these makes use of appropriate transmission channels which the communication terminal is

equipped to access. For example, FTP and VOIP make use of the internet medium to transfer data.

[0005] Using audio as a medium of communication has several advantages. Unlike text, audio is script agnostic. Also, feelings and emotions can be communicated. Presently, voicemail and VoiceSMS are services which implement messaging using audio content. These include communication between individuals as well as application and service provider specific audio content. This content can be accessed at any time by connecting to a central storage location where it is stored.

[0006] Voicemail and VoiceSMS are services in which the message is not directly delivered to the recipient communication terminal. Instead, the communication terminal is notified that a message has arrived while the message itself is stored on a communication station. The recipient communication terminal is then required to connect to the communication station each time the message is to be accessed. This corresponds to a "pull" operation that requires user intervention to retrieve the message content.

[0007] Alternatively, audio content can also be delivered using MMS in which case the content is stored directly on the recipient communication terminal if the terminal is configured for MMS operation. However, MMS uses the IP channel to deliver audio content. Therefore transmitting communication terminals as well as recipient communication terminals need to be MMS and internet enabled. If the recipient user terminal is not MMS enabled, a URL link defining the location of the content on the central location is sent as an SMS to the recipient communication terminal. The recipient communication terminal can then access the audio content via GPRS in a "pull" operation. If the recipient user terminal is neither MMS nor GPRS enabled, the link cannot be accessed at all through the communication terminal.

[0008] Voice/audio content may also be delivered using a voice/audio call. This content is accessed in real time i.e. at the time it is being sent. It requires user intervention in receiving the call. However, such user intervention may not be desirable at all times. A voice/audio call carries the benefit of being enabled on all types of communication terminals as it is a common denominator.

[0009] Most of the above-mentioned services have a data plan linked to them. For example, charges are applicable to each byte of data downloaded using GPRS. While accessing sent voice content using voicemail and VoiceSMS services, call charges are applied for the time the call has lasted. If the user is on national or international roaming, related fee is levied.

[0010] In the case of delivering voice content through MMS, the transmitting and receiving communication terminals need to have software and hardware which allows internet/GPRS access. In case of voicemail and VoiceSMS, access to the audio content is possible only by connecting to the central location. At any point in time, if the means to connect to this location are not available, the content cannot be accessed.

[0011] The above-mentioned services are at present only provided by various telecommunication operators.

SUMMARY

[0012] The present disclosure describes a recipient communication terminal, comprising a receiver configured to automatically identify and accept an incoming audio call over a telephony channel, said call including identification parameters relating to a category pertaining to content of said audio call and a recorder operatively coupled to the receiver and configured to automatically store said audio content in one or more content stores specific to said category;

[0013] The present disclosure also describes a communication station, comprising a receiver configured to receive an audio call request including identification parameters relating to a category pertaining to content of said audio call for one or more recipients, a recorder operatively coupled to the receiver, said recorder configured to store audio content of the audio call request, a processor operatively coupled to the receiver or the recorder, said processor configured to automatically determine location of each recipient, a call initiator operatively coupled to the processor, said call initiator configured to initiate an audio call, and a transmitter operatively coupled to the call initiator, said transmitter configured to retrieve and transmit said stored audio content and identification parameters after the audio call has been initiated.

[0014] The present disclosure further describes an originating communication terminal, comprising an identity unit configured to store the contact parameters of at least one communication station capable of providing an audio communication service, a linking unit operatively coupled to the identity unit and configured to automatically link with said communication station using said contact parameters for initiating an audio call, a selection unit operatively coupled to the linking unit and configured to specify the category pertaining to content of said audio call, and a transmitter operatively coupled to the linking unit and configured to transmit said audio call including identification parameters relating to said category to said communication station for one or more recipients.

[0015] The present disclosure describes a method comprising the steps of automatically identifying and accepting an incoming audio call over a telephony channel, said call including identification parameters relating to a category pertaining to content of said audio call, identifying one or more content stores specific to said category, and automatically storing said content in each of said content stores.

[0016] The present disclosure also describes a method, comprising automatically performing the steps of receiving an audio call request including identification parameters relating to a category pertaining to content of said audio call for one or more recipients, storing audio content of the audio call request, determining the location of each recipient, initiating an audio call to each recipient, and retrieving and transmitting the stored audio content and identification parameters after the audio call has been initiated.

[0017] The present disclosure further describes a method comprising the steps of storing contact parameters of at least one communication station capable of providing an audio communication service, automatically linking with said communication station using said contact parameters, specifying the category pertaining to content of said audio call, and transmitting an audio call including identification parameters relating to said category to said communication station for one or more recipients.

[0018] The present disclosure describes a system comprising one or more originating communication terminals capable of transmitting audio content and identification parameters relating to a category pertaining to said audio content for one or more recipients, one or more communication stations operatively coupled to originating communication terminals and

configured to receive, store and transmit said audio content to each recipient by initiating an audio call, and one or more recipient communication terminals operatively coupled to communication stations and configured to automatically accept and store said audio content in the intended one or more content stores

[0019] The present disclosure describes a computer program product comprising a computer usable medium having computer readable program code embodied in said medium configured to operate a computer, comprising a computer readable program code for automatically identifying and accepting an incoming audio call over a telephony channel, said call including identification parameters relating to a category pertaining to content of said audio call, a computer readable program code for identifying one or more content stores specific to said category, and a computer readable program code for automatically storing said content in each of said content stores

[0020] The present disclosure also describes a computer program product comprising a computer usable medium having computer readable program code embodied in said medium configured to operate a computer, comprising computer readable program code for receiving an audio call request including identification parameters relating to a category pertaining to content of said audio call for one or more recipients, computer readable program code for storing audio content of the audio call request, computer readable program code for automatically determining the location of each recipient, computer readable program code for initiating an audio call, and computer readable program code for retrieving and transmitting stored audio content and identification parameters after the audio call has been initiated.

[0021] The present disclosure further describes a computer program product comprising a computer usable medium having computer readable program code embodied in said medium configured to operate a computer, comprising a computer readable program code for storing the contact parameters of at least one communication station capable of providing an audio communication service, a computer readable program code for automatically linking with said communication station using said contact parameters, a computer readable program code for allowing specification of the category pertaining to content of said audio call, and a computer readable program code for transmitting an audio call including identification parameters relating to said format to said communication station for one or more recipients

[0022] The present disclosure describes a method of providing a service for delivering audio content automatically to one or more recipients comprising the steps of selecting said one or more recipients, selecting audio content to be delivered to said recipients, selecting the category of the audio content, linking to a defined communication station capable of delivering audio content, transmitting said audio content to said communication station, storing said audio content and identification parameters relating to said category at said communication station, determining a linking route to each recipient and forwarding said audio content to a receiving communication station within said route, calling each said recipient with an indication of delivering audio content, identifying the call as an audio call at each recipient and connecting to it automatically, identifying one or more content stores specific to said category, and storing the received audio content in each of said content stores automatically.

BRIEF DESCRIPTION OF THE DRAWINGS

[0023] The embodiments of the invention are illustrated by way of example, and not by way of limitation, in the figures of the accompanying drawings:

[0024] **Figure 1** shows the simplified diagram of a recipient communication terminal in accordance with an embodiment of the present disclosure;

[0025] **Figure 2** shows the simplified diagram of a communication station in accordance with an embodiment of the present disclosure;

[0026] **Figure 3** shows the simplified diagram of an originating communication terminal in accordance with an embodiment of the present disclosure;

[0027] **Figure 4** describes a method describing the basic functioning of a recipient communication terminal in accordance with an embodiment of the present disclosure;

[0028] **Figure 5** describes a method describing the basic functioning of a communication station in accordance with an embodiment of the present disclosure;

[0029] **Figure 6** describes a method describing the basic functioning of communication terminal in accordance with an embodiment of the present disclosure; and

[0030] **Figure 7** shows a system for communication in accordance with an embodiment of the present disclosure.

DESCRIPTION OF SOME EMBODIMENTS

[0031] Exemplary embodiments now will be described with reference to the accompanying drawings. The disclosure may, however, be embodied in many different forms and should not be construed as limited to the embodiments set forth herein; rather, these embodiments are provided so that this disclosure will be thorough and complete, and will fully convey its scope to those skilled in the art. The terminology used in the detailed description of the particular exemplary embodiments illustrated in the accompanying drawings is not intended to be limiting. In the drawings, like numbers refer to like elements.

[0032] The specification may refer to "an", "one" or "some" embodiment(s) in several locations. This does not necessarily imply that each such reference is to the same embodiment(s), or that the feature only applies to a single embodiment. Single features of different embodiments may also be combined to provide other embodiments.

[0033] As used herein, the singular forms "a", "an" and "the" are intended to include the plural forms as well, unless expressly stated otherwise. It will be further understood that the terms "includes", "comprises", "including" and/or "comprising" when used in this specification, specify the presence of stated features, integers, steps, operations, elements, and/or components, but do not preclude the presence or addition of one or more other features, integers, steps, operations, elements, components, and/or groups thereof. It will be understood that when an element is referred to as being "connected" or "coupled" to another element, it can be directly connected or coupled to the other element or intervening elements may be present. Furthermore, "connected" or "coupled" as used herein may include wirelessly connected or coupled. As used herein, the term "and/or" includes any and all combinations and arrangements of one or more of the associated listed items.

[0034] Unless otherwise defined, all terms (including technical and scientific terms) used herein have the same meaning as commonly understood by one of ordinary skill in the art to which this disclosure pertains. It will be further understood that terms, such as those defined in commonly used dictionaries, should be interpreted as having a meaning that is consistent

with their meaning in the context of the relevant art and will not be interpreted in an idealized or overly formal sense unless expressly so defined herein.

[0035] "Communication terminal" includes units having only a signal receiver without transmit capabilities; units having only a signal transmitter without having receiving capabilities and units having both receive and transmit hardware capable of two-way communication over a communication link. Such communication terminals may include cellular or other communications terminals with or without a display; Personal Communications System (PCS) terminals that may combine voice and data processing, facsimile and/or data communication capabilities; Personal Digital Assistants (PDA), smart phones and other such user terminals that can include Internet/Intranet access, web browser and/or a global positioning system (GPS) receiver; and/or conventional desktop, laptop and/or palmtop computers which include communication capabilities.

[0036] "Communication terminals" may be portable, transportable, installed in a vehicle (aeronautical, maritime or land-based), or situated and/or configured to operate locally and/or in a distributed fashion at any other location(s) on earth and/or in space and include terminals that support fixed and/or wireless communication.

[0037] "Communication station" includes servers and any similar and/or corresponding component.

[0038] "Communication network" includes any communication system or any combination of different communication systems. The communication system may be a fixed communication system or a wireless communication system or a communication system utilizing both fixed networks and wireless networks. The protocols used, the specifications of communication systems, servers and user terminals, especially in wireless communication, develop rapidly. Such development may require extra changes to an embodiment. Therefore, all words and expressions should be interpreted broadly and they are intended to illustrate, not to restrict the embodiment.

[0039] The figures depict a simplified structure only showing some elements and functional entities, all being logical units whose implementation may differ from what is shown. The connections shown are logical connections; the actual physical connections may be different. It is apparent to a person skilled in the art that the structure may also comprise

other functions and structures. It should be appreciated that the functions, structures, elements and the protocols used in communication are irrelevant to the present disclosure. Therefore, they need not be discussed in more detail here.

[0040] Also, all logical units described and depicted in the figures include the software and/or hardware components required for the unit to function. Further, each unit may comprise within itself one or more components which are implicitly understood. These components may be operatively coupled to each other and be configured to communicate with each other to perform the function of the said unit.

[0041] Figure 1 illustrates a recipient communication terminal in accordance with an embodiment of the present disclosure. The recipient communication terminal (101) is connected to a communication network and comprises a receiver (102) including an antenna and an earphone. When the receiver (102) receives an incoming call it determines the type of the incoming call. If the incoming call is successfully identified as an audio call the receiver (102) accepts it and connects to the call without alerting the user and without requiring the user's intervention. During the call, the receiver (102) also receives predefined content specifying the category of the audio content being delivered. The output of the receiver (102) is connected to a recorder (103) which then records and stores the received audio content in one or more content stores appropriate for storing and accessing content pertaining to the specified category.

[0042] The incoming call may be identified on the basis of caller ID information by comparing it with predefined parameters. As an example, the predefined parameters are associated with a communication station (104) providing an audio content service. As another example, the predefined parameters are associated with an audio content service provided by a communication station (104). In a preferred embodiment, at any given time the predefined parameters correspond to the communication station (104) in proximity to the recipient communication terminal. As the location of the recipient communication terminal changes, the predefined parameters are accordingly updated.

[0043] The incoming call may also be identified on the basis of predefined header parameters received as part of the call.

[0044] In a preferred embodiment, the identification parameters relating to the audio content category are received in the form of Dual Tone Multi Frequency (DTMF) tones. The DTMF tones are decoded to identify the category. However, if the recipient communication terminal (101) does not support the specified category, an alert may be produced, or the audio content may be discarded or stored as an audio file. Examples of categories include a voice message in which case the audio content is stored in a voice message store; a media / music file in which case the audio content is stored in a music store; and an advertisement in which case, the audio content is stored in the advertisement store.

[0045] As an example, the category of the audio content is identified from the identification parameters using an API.

[0046] The receiver (102) may also receive identification parameters which are used to identify the originating communication terminal. For example, the identity parameters may comprise caller ID information or IP address of the originating communication terminal. These identity parameters may be received in the form of DTMF tones. These DTMF tones are then decoded to retrieve the identification of the originating communication terminal. Examples include a mobile device, a music recommending service, an advertising service and a telecommunication operator service. As another example, contact information storage unit in the recipient communication terminal may be searched to relate these parameters to a contact.

[0047] The received audio content is stored by recorder (103). Optionally, an alert is produced when the entire content has been recorded or when only part of the content has been recorded and no storage space is available to record further data.

[0048] Once the audio content is stored, a user interface (not shown) may be provided to access and/or process the audio content. This processing may include, for example, playback and/or deletion of said audio content and/or replying to a voice message comprising the audio content.

[0049] Figure 2 shows a simplified diagram of a communication station in accordance with some embodiments of the present disclosure. The communication station (201) is connected to a communication network and comprises a receiver (202) including an antenna. In one call, the receiver (202) accepts a request to send audio content to one or more

recipients along with predefined content specifying the category of the said content. A recorder (203), which is operatively coupled to the output of the receiver (202), records and stores the audio content and its category obtained from the receiver (202) in a storage unit. A processor (204) which receives identification parameters of each recipient communication terminal from the receiver (202) determines the location of each such recipient. If the communication station is not directly linked to a recipient, the processor (204) determines a route to the recipient and identifies a communication station closely linked to the recipient. A call initiator (205), which is coupled to the processor (204), initiates a connection with the identified communication station. Thereafter an audio content transmitter (206) retrieves and transmits the stored audio content and identification parameters specifying the category of the content to the destination communication station. Once the audio content and the identification parameters are transmitted the audio content transmitter (206) disconnects the call.

[0050] The communication station (201) may be an audio content server and all the communication stations may be connected to each other through the internet.

[0051] The communication station (201) may be capable of making GSM and/or CDMA voice calls simultaneously.

[0052] The communications network (201) may be a mobile service provider operator network or a service provider independent network.

[0053] The request to send audio content also includes identification parameters for each recipient communication terminal for example, its phone number. These parameters are received in the form of DTMF tones in a preferred embodiment.

[0054] The identification parameters specifying the category of the audio content are received in the form of DTMF tones in a preferred embodiment.

[0055] The request may further include identification parameters for identifying the originating communication terminal, which may be, for example, the phone number or IP address of the originating communication terminal. These parameters are received in the form of DTMF tones in one embodiment.

[0056] The request may also include the schedule comprising the date and time on which the audio content needs to be delivered. This schedule may, for example, be received via an Interactive Voice Response (IVR) system in the form of DTMF tones. In another embodiment, the IVR is configured to receive the schedule information using a speech recognition system which accepts voice inputs in response to the speech prompts of the IVR system. If schedule is received as part of the request, the communication station (201) sends the audio content to the recipients immediately; else, it sends it at the specified date and time.

[0057] In one embodiment the request includes the size of the audio content to be delivered.

[0058] The recorder (203) stores the identification parameters received as part of the request in one embodiment. Alternatively, these parameters are received by the processor (204) from the receiver directly (202) and are not stored.

[0059] The call initiator (205) initiates a call to the recipient communication terminal as an audio content request.

[0060] In an embodiment, for the case in which the communication station (201) is not directly linked to the recipient communication terminal, the call initiator (205) initiates a call to a determined communication station through the internet channel or as an audio content request.

[0061] In an embodiment, the call initiator (205) further implements error handling. As an example, error handling methods include implementing retry methods when the next communication terminal or communication station is not available or until the audio content is successfully delivered.

[0062] When the call has been accepted by a communication station, the audio content transmitter (206) also transmits identification parameters for identifying the recipient communication terminal.

[0063] The transmitter (204) may further transmit identification parameters for identifying the originating communication terminal, for example, the phone number or the IP address of the originating communication terminal.

[0064] When the call is initiated over the internet channel, the transmitter (204) encapsulates the audio content as a data packet.

[0065] In a preferred embodiment, the communication station (201) is capable of tracking the successful delivery of the audio content to at least one recipient communication terminal. The communication station (201) may further be capable of notifying the source communication terminal the status of delivery of the audio content.

[0066] In some embodiments of the invention, the communication station (201) is a base station transceiver(s) or a radio transceiver(s) that defines a cell in a cellular network and communicates with the communicating terminal(s) in the cell using a radio-link protocol. Multiple communication stations may be connected through, for example, a mobile switching center and other devices, to define a communication network.

[0067] Figure 3 illustrates an originating communication terminal in accordance with an embodiment of the present disclosure. The originating communication terminal (301) is connected to a communication network and comprises an identity unit (302) such as a memory unit located within or external to the terminal. The identity unit (302) stores the contact parameters of at least one linked communication station (306) capable of providing an audio content communication service. The identity unit (302) is linked to a linking unit (303) which retrieves the contact parameters from the identity unit (302) and automatically links to the communication station (306). The linking unit (303) is coupled to a selection unit (304) which enables selection and/or specification of the category of the content being transmitted. The output of the selection unit (304) is directed to a transmitter (305) comprising an antenna and a microphone which transmits an audio content request to the communication station (306) for at least one recipient communication terminal. The audio content request comprises the audio content to be delivered along with its category

[0068] The transmitter (305) may further transmit the schedule comprising the date and time on which the audio content needs to be delivered. This schedule may, for example, be specified via an IVR system which accepts the schedule parameters in the form of DTMF tones or by means of a speech recognition system.

[0069] At any given time, the contact parameters may correspond to the communication station (306) in proximity to the originating communication terminal (301). As the location of

the originating communication terminal (301) changes, contact parameters stored in the identity unit (302) are accordingly updated.

[0070] The communication station (305) may be part of an independent network configured to provide audio content communication facilities

[0071] In an embodiment, the linking unit (303) initiates a call to the communication station by dialing a predefined access code. Examples of predefined access code include a mobile number, ISDN, communication node number or other contact parameters

[0072] The transmitter (305) may retrieve the contact parameters of the at least one recipient from an address book.

[0073] Examples of the above described originating communication terminal include a personal computer, a game console, a laptop (notebook), a personal digital assistant, a mobile station (mobile phone), and a line telephone.

[0074] Embodiments of the method for transmitting and/or receiving audio content according to various embodiments of the present disclosure are described in Figure 4, Figure 5 and Figure 6. The methods are illustrated as a collection of blocks in a logical flow graph, which represents a sequence of operations that can be implemented in hardware, software, or a combination thereof. The order in which the process is described is not intended to be construed as a limitation, and any number of the described blocks can be combined in any order to implement the process, or an alternate process.

[0075] As seen in Figure 4, the activity is triggered at the recipient communication terminal when an incoming call is accepted over a telephony channel (401). The incoming call is analyzed to identify if it is an audio call for delivering audio content (402). If so, the call is connected automatically without alerting the user and without requiring user intervention. Audio content of the audio call along with predefined content specifying the category to which it pertains, is stored and then routed to one or more applicable content stores (403). When the entire content has been received, the incoming call is disconnected.

[0076] The incoming call may be identified as an audio call for delivering audio content by comparing its caller ID with predefined parameters. For example, these predefined parameters are associated with a communication station providing audio content delivery

services, or with an audio content delivery service. The identification may alternatively be performed by comparing the header information of the incoming call with predefined parameters. For example, these predefined parameters may be associated with a known API which designates identifiers to services including audio content delivery.

[0077] The category of the audio content is received in the form of identification parameters which, for example, may correspond to a known API which relates audio content categories to identification parameters. These parameters may be received, for example, in the form of DTMF tones. These tones may then be decoded to interpret the parameters. Consequently, the one or more content stores to which content belonging to that category may be stored are identified. If no such content store is present, an alert may be produced, or the audio content may be discarded, or by default be stored as an audio file. Alternatively, these parameters are received and the relevant one or more content stores are identified before recording the audio content. If no such content stores exist, the incoming call is disconnected. Examples of categories include a voice message in which case the audio content is stored in a voice message store; a media / music file in which case the audio content is stored in a music store; and an advertisement in which case, the audio content is stored in the advertisement store.

[0078] As yet another example, identification parameters such as caller ID information or IP address which identifies an originating communication terminal, may also be received over the incoming call. These may be received in the form of DTMF tones. These tones may then be decoded to interpret the parameters. The originating communication terminal corresponds to the first terminal which initiated the procedure of sending the audio content. Examples include a mobile device, a music recommending service, an advertising service and a telecommunication operator service. A contact information storage unit in the communication terminal may be searched to relate these parameters to a contact.

[0079] Additionally, an alert may be produced informing the user of the arrival of new audio content. An alert may also be produced when there is insufficient space to store the content being received. The incoming call is then disconnected.

[0080] The stored audio content may further be accessed through an interface, which may correspond to the relevant application. The access provided by the interface may comprise playback or deletion of the content.

[0081] As seen in Figure 5, the activity is triggered at the communication station when an incoming call which corresponds to a request to send audio content to one or more recipients (501) is received. The audio content of the audio call request is stored (502). Identification parameters specifying the category of the audio content are also received. The received content further comprises identification information relating to the recipients using which the location of each recipient is determined (503). An audio call is initiated with each recipient (504) and when the call is connected, the stored audio content and identification parameters specifying its category are transmitted to the recipient (505).

[0082] The identification information relating to the recipients may be received in the form of DTMF tones. These tones then may be decoded to interpret the contact parameters of the recipients. Based on these parameters the location of the recipient is determined. Consequently, if the communication station is not directly connected to the recipient, a route to reach the recipient is determined which may comprise of one or more intermediate communication stations. A connected communication station forming part of the route having proximity to the recipient may be identified.

[0083] As an example, the audio content to be delivered is then directed through the determined route by internet or by a series of said audio calls.

[0084] The identification parameters specifying the category of the audio content may be received in the form of DTMF tones.

[0085] The received identification parameters may either be stored or be accessed as they are received.

[0086] At the communication station directly connected to the recipient, an audio call is initiated with the recipient. In an embodiment of the present disclosure, error handling methods may also be implemented. An example of error handling methods includes implementing retry methods when the next communication terminal or communication station is not available or until the audio content is successfully delivered.

[0087] When the call has been accepted by a communication station, identification parameters which identify the recipient communication terminal are also transmitted to the communication station.

[0088] Identification parameters specifying the category of the audio content are further transmitted.

[0089] Identification parameters identifying the originating communication terminal, such as the phone number or the IP address of the originating communication terminal may also be transmitted

[0090] A schedule comprising the date and time on which the audio content needs to be delivered may also be transmitted. This schedule may, for example, be received via an Interactive Voice Response (IVR) system in the form of DTMF tones. In another embodiment, the IVR is configured to receive the schedule information using a speech recognition system which accepts voice inputs in response to the speech prompts of the IVR system. If schedule is received as part of the request, the audio content is sent to the recipients immediately; else, it is sent at the specified date and time.

[0091] When the call is initiated over the internet channel, the audio content may be encapsulated as a data packet.

[0092] The successful delivery of the audio content to the recipient may also be tracked. The source communication terminal may also be communicated the status of the delivery of the audio content.

[0093] As seen in Figure 6, the activity is triggered at the communication terminal when one or more recipients are selected. The contact parameters of at least one communication station capable of providing an audio communication service are accessed (601) and said communication station is automatically contacted (602). The category to which the audio content being transmitted belongs to is selected or specified. (603). Audio content of an audio call and its category is then transmitted to said communication station for the one or more recipients (604).

[0094] At any given time, the contact parameters may correspond to the communication station in proximity to the originating communication terminal. As the location of the

originating communication terminal changes, contact parameters stored in the identity unit are accordingly updated.

[0095] The communication station may be contacted by dialing a predefined access code. Examples of predefined access code include a mobile number, ISDN, communication node number or other contact parameters

[0096] The contact parameters of the at least one recipient are also transmitted. These contact parameters may be accessed from contact information storage unit.

[0097] The schedule comprising the date and time on which the audio content needs to be delivered may also be transmitted. This schedule may, for example, be specified via an IVR system which accepts the schedule parameters in the form of DTMF tones or by means of a speech recognition system.

[0098] A system for transmitting and/or receiving audio content, according to various embodiments of the present disclosure will now be described with reference to the system architecture illustration in Figure 7.

[0099] At least one originating communication terminal (701) which is capable of sending audio content and the category it belongs to for at least one recipient is connected to at least a communication station (702) which can receive, store and then transmit the audio content and its category to the intended recipients. This communication station (702) is directly or through other communication stations, connected to at least one recipient communication terminal (703) which is capable of automatically accepting and storing the audio content.

[0100] Although a single communication station is shown, it will be understood that many communication stations may be connected through, for example, a mobile switching center and other devices to define a network providing audio communication services. These communication stations may be located at various geographical locations.

[0101] The communications network may be a mobile service provider operator network or a service provider independent network.

[0102] The system may further comprise an API which, for example relates categories to their identification parameters.

[0103] As will be appreciated by one of skill in the art, the present invention may be embodied as a method, system, or computer program product. Accordingly, the present invention may take the form of an entirely hardware embodiment, a software embodiment or an embodiment combining software and hardware aspects all generally referred to herein as a "circuit" or "module." Furthermore, the present invention may take the form of a computer program product on a computer-usable storage medium having computer-usable program code embodied in the medium.

[0104] Any suitable computer readable medium may be utilized including hard disks, CD- ROMs, optical storage devices, a transmission media such as those supporting the Internet or an intranet, or magnetic storage devices.

[0105] Computer program code for carrying out operations of the present invention may be written in an object oriented programming language such as Java®, Smalltalk or C++. However, the computer program code for carrying out operations of the present invention may also be written in conventional procedural programming languages, such as the "C" programming language and/or a lower level assembler language. The program code may execute entirely on the user's computer (i.e., controller of the user's mobile terminal), partly on the user's computer, as a stand- alone software package, partly on the user's computer and partly on a remote computer or entirely on the remote computer. In the latter scenario, the remote computer may be connected to the user's computer through a local area network (LAN) or a wide area network (WAN), or the connection may be made to an external computer (for example, through the Internet using an Internet Service Provider).

[0106] Furthermore, the present invention was described in part above with reference to flowchart illustrations and/or block diagrams of methods, apparatus (systems) and computer program products according to embodiments of the invention.

[0107] It will be understood that each block of the flowchart illustrations and/or block diagrams, and combinations of blocks in the flowchart illustrations and/or block diagrams, can be implemented by computer program instructions. These computer program instructions may be provided to a processor of a general purpose computer, special purpose computer, or other programmable data processing apparatus to produce a machine, such that the instructions, which execute via the processor of the computer or other programmable data

processing apparatus, create means for implementing the functions/acts specified in the flowchart and/or block diagram block or blocks.

[0108] These computer program instructions may also be stored in a computer- readable memory that can direct a computer or other programmable data processing apparatus to function in a particular manner, such that the instructions stored in the computer-readable memory produce an article of manufacture including instruction means which implement the function/act specified in the flowchart and/or block diagram block or blocks.

[0109] The computer program instructions may also be loaded onto a computer or other programmable data processing apparatus to cause a series of operational steps to be performed on the computer or other programmable apparatus to produce a computer implemented process such that the instructions which execute on the computer or other programmable apparatus provide steps for implementing the functions/acts specified in the flowchart and/or block diagram block or blocks.

[0110] A computer program product comprising a computer usable medium having computer readable program code embodied in said medium configured to operate a computer, comprising a computer readable program code for automatically identifying and accepting an incoming audio call over a telephony channel, said call including identification parameters relating to a category pertaining to content of said audio call, a computer readable program code for identifying one or more content stores specific to said category, and a computer readable program code for automatically storing said content in each of said content stores

[0111] The computer program product may further comprise computer readable program code for automatically identifying an incoming call as an audio call based on caller ID of the incoming call.

[0112] The computer program product may further comprise computer readable program code for automatically identifying an incoming call as an audio call based on header parameters of the incoming call.

[0113] The computer program product may further comprise computer readable program code for producing an alert on storing said audio content in a content store

[0114] The computer program product may, further comprising computer readable program code for receiving said identification parameters in the form of Dual Tone Multi Frequency (DTMF) tones.

[0115] A computer program product comprising a computer usable medium having computer readable program code embodied in said medium configured to operate a computer, comprising computer readable program code for receiving an audio call request including identification parameters relating to a category pertaining to content of said audio call for one or more recipients, computer readable program code for storing audio content of the audio call request, computer readable program code for automatically determining the location of each recipient, computer readable program code for initiating an audio call, and computer readable program code for retrieving and transmitting stored audio content and identification parameters after the audio call has been initiated.

[0116] The computer program product may further comprise computer readable program code for receiving the identity of one or more recipients.

[0117] The computer program product may further comprise computer readable program code for receiving said identity in the form of Dual Tone Multi Frequency (DTMF) tones.

[0118] The computer program product may further comprise computer readable program code for receiving said identification parameters in the form of Dual Tone Multi Frequency (DTMF) tones

[0119] The computer program product may further comprise computer readable program code for identifying a receiving communication station in proximity to a recipient.

[0120] The computer program product may further comprise computer readable program code for transmitting the stored audio content to said receiving communication station through the internet.

[0121] The computer program product may further comprise computer readable program code for transmitting the stored audio content to said receiving communication station through a relay of said audio calls.

[0122] A computer program product comprising a computer usable medium having computer readable program code embodied in said medium configured to operate a computer,

comprising a computer readable program code for storing the contact parameters of at least one communication station capable of providing an audio communication service, a computer readable program code for automatically linking with said communication station using said contact parameters, a computer readable program code for allowing specification of the category pertaining to content of said audio call, and a computer readable program code for transmitting an audio call including identification parameters relating to said format to said communication station for one or more recipients.

[0123] The computer program product may further comprise computer readable program code for storing said contact parameters for a communication station corresponding to present location of said originating communication terminal

[0124] The computer program product may further comprise computer readable program code for accessing said communication station by automatically dialing a predefined access code.

[0125] The computer program product may further comprise computer readable program code for obtaining contact details of a recipient from an address book

[0126] The flowchart and schematic diagrams of Figures 1 to 7 illustrate the architecture, functionality, and operations of some embodiments of methods, systems, and computer program products for media tuning. In this regard, each block may represent a module, segment, or portion of code, which comprises one or more executable instructions for implementing the specified logical function(s). It should also be noted that in other implementations, the function(s) noted in the blocks may occur out of the order noted in the figures. For example, two blocks shown in succession may, in fact, be executed substantially concurrently or the blocks may sometimes be executed in the reverse order, depending on the functionality involved.

[0127] In the drawings and specification, there have been disclosed exemplary embodiments of the invention. Although specific terms are employed, they are used in a generic and descriptive sense only and not for purposes of limitation, the scope of the invention being defined by the following claims.

CLAIMS

WHAT IS CLAIMED IS:

1. A method comprising:
identifying and accepting an incoming call, the call including at least one identification parameter relating to at least one category pertaining to content of the call; and
causing, at least in part, storing of the content in one or more content stores specific to the category.
2. A method according to claim 1, further comprising identifying the incoming call as an audio call based on a caller id of the incoming call.
3. A method according to any of claims 1 to 2, wherein the incoming call is made by a communication station in proximity to a recipient communication terminal.
4. A method according to any of claims 1 to 3, further comprising producing an alert on automatically storing the content in a content store.
5. A method according to any of claims 1 to 4, wherein the at least one identification parameter is received in a form of Dual Tone Multi Frequency (DTMF) tones.
6. An apparatus comprising:
at least one processor; and
at least one memory including computer program code,
the at least one memory and the computer program code configured to, with the at least one processor, cause the apparatus to perform at least the following:
identify and accept an incoming call, the call including at least one identification parameter relating to at least one category pertaining to content of the call; and

cause, at least in part, storing of the content in one or more content stores specific to the category.

7. An apparatus according to claim 6, wherein the apparatus is caused, at least in part, to further perform:

identify the incoming call as an audio call based on a caller id of the incoming call.

8. An apparatus according to any of claims 6 to 7, wherein the incoming call is made by a communication station in proximity to a recipient communication terminal.

9. An apparatus according to any of claims 6 to 8, wherein the apparatus is caused, at least in part, to further perform:

produce an alert on automatically storing the content in a content store.

10. An apparatus according to any of claims 6 to 9, wherein the at least one identification parameter is received in a form of Dual Tone Multi Frequency (DTMF) tones.

11. A computer-readable storage medium carrying one or more sequences of one or more instructions which, when executed by one or more processors, cause an apparatus to at least perform the following steps:

identifying and accepting an incoming call, the call including at least one identification parameter relating to at least one category pertaining to content of the call; and causing, at least in part, storing of the content in one or more content stores specific to the category.

12. A computer-readable storage medium according to claim 11, wherein the apparatus is caused, at least in part, to further perform:

identifying the incoming call as an audio call based on a caller id of the incoming call.

13. A computer-readable storage medium according to any of claims 11 to 12, wherein the incoming call is made by a communication station in proximity to a recipient communication terminal.

14. A computer-readable storage medium according to any of claims 11 to 13, wherein the apparatus is caused, at least in part, to further perform:

producing an alert on automatically storing the content in a content store.

15. A computer-readable storage medium according to any of claims 11 to 14, wherein the at least one identification parameter is received in a form of Dual Tone Multi Frequency (DTMF) tones.

16. An apparatus comprising:

means for identifying and accepting an incoming call, the call including at least one identification parameter relating to at least one category pertaining to content of the call; and

means for causing, at least in part, storing of the content in one or more content stores specific to the category.

17. An apparatus according to claim 16, wherein the means for identifying and accepting is further configured to identify the incoming call as an audio call based on a caller id of the incoming call.

18. An apparatus according to any of claims 16 to 17, wherein the incoming call is made by a proximately located communication station.

19. An apparatus according to any of claims 16 to 18, wherein the means for causing, at least in part, storing is further configured to produce an alert on automatically storing the content in a content store

20. An apparatus according to any of claims 16 to 19, wherein the at least one identification parameter is received in a form of Dual Tone Multi Frequency (DTMF) tones.

21. A method comprising:

receiving an audio call request including identification parameters relating to a category pertaining to content of the audio call for one or more recipients;

causing, at least in part, storing of audio content of the audio call request;

determining the location of each recipient;

initiating an audio call to each recipient; and

retrieving and transmitting the stored audio content and identification parameters after the audio call has been initiated.

22. A method according to claim 21, further comprising identifying the audio call request by decoding associated Dual Tone Multi Frequency (DTMF) tones.

23. A method according to any of claims 21 to 22, further comprising receiving the identification parameters in the form of Dual Tone Multi Frequency (DTMF) tones.

24. A method according to any of claims 21 to 23, further comprising identifying a receiving communication station in proximity to a recipient.

25. A method according to any of claims 21 to 24, further comprising causing, at least in part, transmission of the audio content to the receiving communication station through the internet.

26. A method according to any of claims 21 to 25, further comprising causing, at least in part, transmission of the audio content to the receiving communication station through a relay of the audio calls.

27. A method according to any of claims 21 to 26, further comprising causing, at least in part, providing of at least audio communication services in an independent network.

28. An apparatus comprising:

at least one processor; and

at least one memory including computer program code,

the at least one memory and the computer program code configured to, with the at least one processor, cause the apparatus to perform at least the following:

receive an audio call request including identification parameters relating to a category pertaining to content of the audio call for one or more recipients;

cause, at least in part, storing of audio content of the audio call request;

determine the location of each recipient;

initiate an audio call to each recipient; and

retrieve and transmit the stored audio content and identification parameters after the audio call has been initiated.

29. An apparatus according to claim 28, wherein the apparatus is further caused, at least in part, to identify the audio call request by decoding associated Dual Tone Multi Frequency (DTMF) tones.

30. An apparatus according to any of claims 28 to 29, wherein the apparatus is further caused, at least in part, to receive the identification parameters in the form of Dual Tone Multi Frequency (DTMF) tones.

31. An apparatus according to any of claims 28 to 30 wherein the apparatus is further caused, at least in part, to identify a receiving communication station in proximity to a recipient.

32. An apparatus according to any of claims 28 to 31, wherein the apparatus is further caused, at least in part, to transmit the audio content to the receiving communication station through the internet.

33. An apparatus according to any of claims 28 to 32, wherein the apparatus is further caused, at least in part, to transmit the audio content to the receiving communication station through a relay of the audio calls.

34. An apparatus according to any of claims 28 to 33, wherein the apparatus is part of an independent network configured to provide at least audio communication services.

35. A computer-readable storage medium carrying one or more sequences of one or more instructions which, when executed by one or more processors, cause an apparatus to at least perform the following steps:

receiving an audio call request including identification parameters relating to a category pertaining to content of the audio call for one or more recipients;
causing, at least in part, storing of audio content of the audio call request;
determining the location of each recipient;
initiating an audio call to each recipient; and
retrieving and transmitting the stored audio content and identification parameters after the audio call has been initiated.

36. A computer-readable storage medium according to claim 35, wherein the apparatus is caused, at least in part, to further perform:

identifying the audio call request by decoding associated Dual Tone Multi Frequency (DTMF) tones.

37. A computer-readable storage medium according to any of claims 35 to 36, wherein the apparatus is caused, at least in part, to further perform:

receiving the identification parameters in the form of Dual Tone Multi Frequency (DTMF) tones.

38. A computer-readable storage medium according to any of claims 35 to 37, wherein the apparatus is caused, at least in part, to further perform:

identifying a receiving communication station in proximity to a recipient.

39. A computer-readable storage medium according to any of claims 35 to 38, wherein the apparatus is caused, at least in part, to further perform:

causing, at least in part, transmission of the audio content to the receiving communication station through the internet.

40. A computer-readable storage medium according to any of claims 35 to 39, wherein the apparatus is caused, at least in part, to further perform:

causing, at least in part, transmission of the audio content to the receiving communication station through a relay of the audio calls.

41. A computer-readable storage medium according to any of claims 35 to 40, wherein the apparatus is caused, at least in part, to further perform:

providing of at least audio communication services in an independent network.

42. An apparatus comprising:

means for receiving an audio call request including identification parameters relating to a category pertaining to content of the audio call for one or more recipients;

means for causing, at least in part, storing of audio content of the audio call request;

means for determining the location of each recipient;

means for initiating an audio call to each recipient; and

means for retrieving and transmitting the stored audio content and identification parameters after the audio call has been initiated.

43. An apparatus according to claim 42, further comprising means for identifying the audio call request by decoding associated Dual Tone Multi Frequency (DTMF) tones.

44. An apparatus according to any of claims 42 to 43, further comprising means for receiving the identification parameters in the form of Dual Tone Multi Frequency (DTMF) tones.

45. An apparatus according to any of claims 42 to 44, further comprising means for identifying a receiving communication station in proximity to a recipient.

46. An apparatus according to any of claims 42 to 45, further comprising means for causing, at least in part, transmission of the audio content to the receiving communication station through the internet.

47. An apparatus according to any of claims 42 to 46, further comprising means for causing, at least in part, transmission of the audio content to the receiving communication station through a relay of the audio calls.

48. An apparatus according to any of claims 42 to 47, further comprising means for providing of at least audio communication services in an independent network.

49. A method comprising:

causing, at least in part, storing of contact parameters of at least one communication station capable of providing an audio communication service;

causing, at least in part, linking with the communication station using the contact parameters for initiating an audio call;

specifying the category pertaining to content of the audio call; and

causing, at least in part, transmission of the audio call including identification parameters relating to the category to the communication station for one or more recipients.

50. A method according to claim 49, further comprising storing the contact parameters for a communication station corresponding to present location of the originating communication terminal.

51. A method according to any of claims 49 to 50, further comprising providing audio communication services.

52. A method according to any of claims 49 to 51, further comprising accessing the communication station by automatically dialing a predefined access code.

53. An apparatus, comprising:

at least one processor; and

at least one memory including computer program code,

the at least one memory and the computer program code configured to, with the at least one processor, cause the apparatus to perform at least the following:

cause, at least in part, storing of contact parameters of at least one communication station capable of providing an audio communication service;

cause, at least in part, linking with the communication station using the contact parameters for initiating an audio call;

specify the category pertaining to content of the audio call; and

cause, at least in part, transmission of the audio call including identification parameters relating to the category to the communication station for one or more recipients.

54. An apparatus according to claim 53, wherein the apparatus is further caused, at least in part, to store the contact parameters for a communication station corresponding to present location of the originating communication terminal.

55. An apparatus according to any of claims 53 to 54, wherein the apparatus is further caused, at least in part, to provide audio communication services.

56. An apparatus according to any of claims 53 to 55, wherein the apparatus is further caused, at least in part, to access the communication station by automatically dialing a predefined access code.

57. A computer-readable storage medium carrying one or more sequences of one or more instructions which, when executed by one or more processors, cause an apparatus to at least perform the following steps:

causing, at least in part, storing of contact parameters of at least one communication station capable of providing an audio communication service;
causing, at least in part, linking with the communication station using the contact parameters;
specifying the category pertaining to content of the audio call; and
causing, at least in part, transmission of an audio call including identification parameters relating to the category to the communication station for one or more recipients.

58. A computer-readable storage medium according to claim 57, wherein the apparatus is caused, at least in part, to further perform:

storing the contact parameters for a communication station corresponding to present location of the originating communication terminal.

59. A computer-readable storage medium according to any of claims 57 to 58, wherein the apparatus is caused, at least in part, to further perform:
providing audio communication services.

60. A computer-readable storage medium according to any of claims 57 to 59, wherein the apparatus is caused, at least in part, to further perform:
accessing the communication station by automatically dialing a predefined access code.

61. An apparatus comprising:

means for causing, at least in part, storing of contact parameters of at least one communication station capable of providing an audio communication service;
means for causing, at least in part, linking with the communication station using the contact parameters for initiating an audio call;
means for specifying the category pertaining to content of the audio call; and
means for causing, at least in part, transmission of the audio call including identification parameters relating to the category to the communication station for one or more recipients.

62. An apparatus according to claim 61, further comprising means for storing the contact parameters for a communication station corresponding to present location of the originating communication terminal.

63. An apparatus according to any of claims 61 to 62, further comprising means for providing audio communication services.

64. An apparatus according to any of claims 61 to 63, further comprising means for accessing the communication station by automatically dialing a predefined access code.

65. A system comprising:

one or more originating communication terminals capable of transmitting audio content and identification parameters relating to a category pertaining to the audio content for one or more recipients;

one or more communication stations operatively coupled to originating communication terminals and configured to receive, store and transmit the audio content to each recipient by initiating an audio call; and

one or more recipient communication terminals operatively coupled to communication stations and configured to accept and store the audio content in the intended one or more content stores.

66. A method comprising facilitating access to at least one interface configured to allow access to at least one service, the at least one service configured to perform at least the following:

selecting the one or more recipients;

selecting audio content to be delivered to the recipients;

selecting the category of the audio content;

linking to a defined communication station capable of delivering audio content;

transmitting the audio content to the communication station;

storing the audio content and identification parameters relating to the category at the communication station;

determining a linking route to each recipient and forwarding the audio content to a receiving communication station within the route;
calling each the recipient with an indication of delivering audio content;
identifying the call as an audio call at each recipient and connecting to it;
identifying one or more content stores specific to the category; and
storing the received audio content in each of the content stores.

67. A computer program product including one or more sequences of one or more instructions which, when executed by one or more processors, cause an apparatus to at least perform the steps of a method of any one of claims 1-5.

68. A computer program product including one or more sequences of one or more instructions which, when executed by one or more processors, cause an apparatus to at least perform the steps of a method of any one of claims 21-27.

69. A computer program product including one or more sequences of one or more instructions which, when executed by one or more processors, cause an apparatus to at least perform the steps of a method of any one of claims 49-52.

FIG. 1

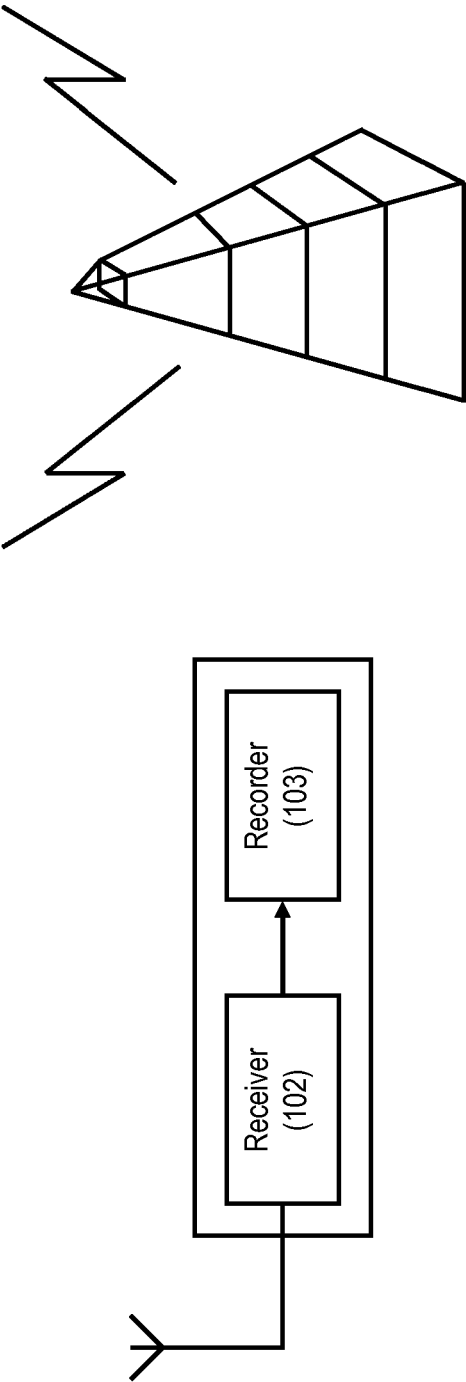


FIG. 2

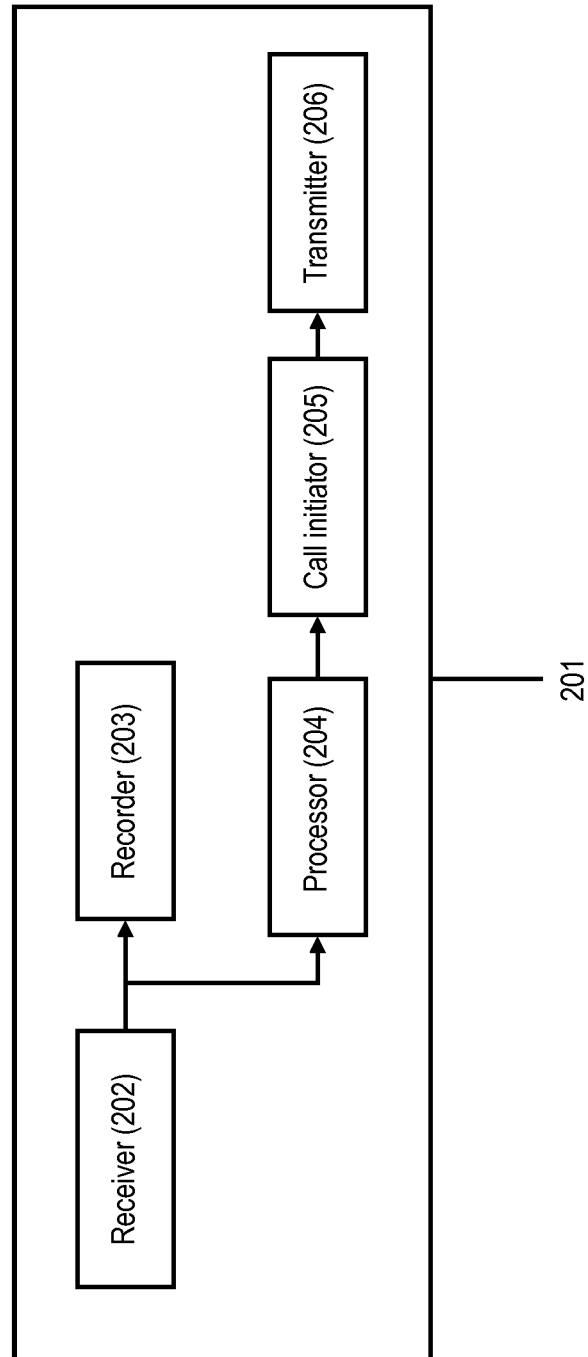


FIG. 3

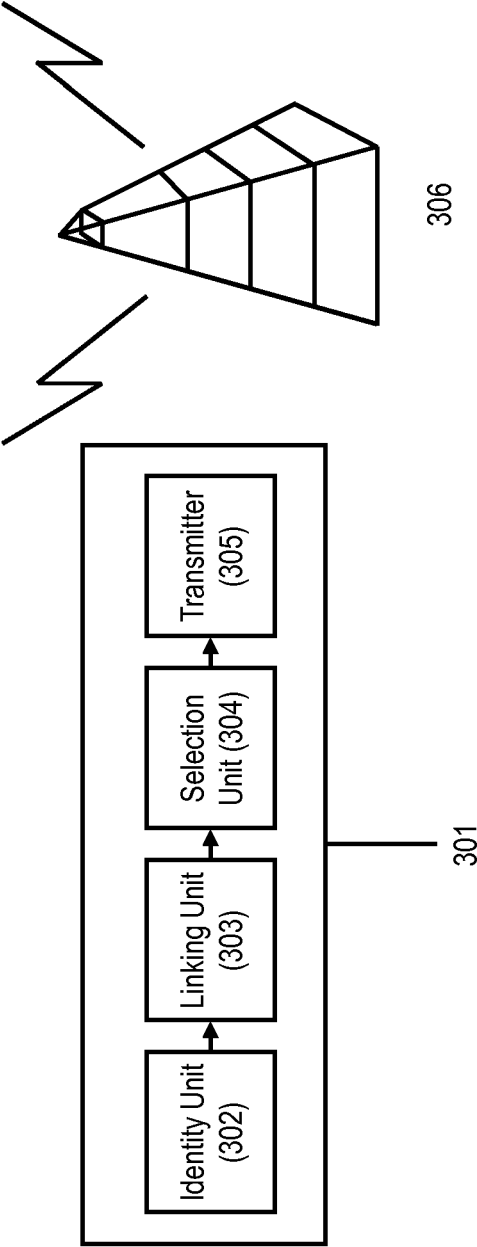


FIG. 4

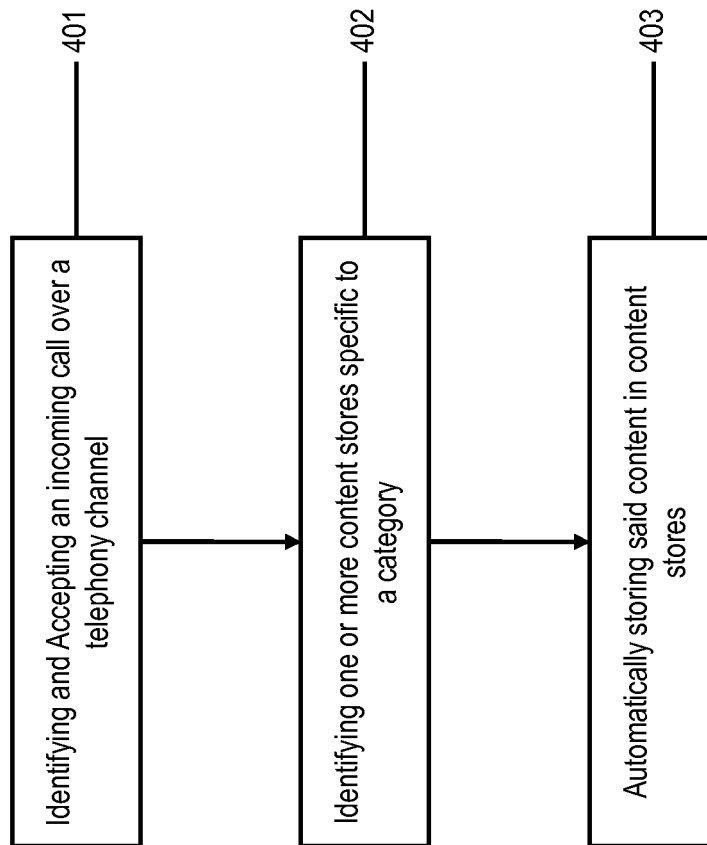


FIG. 5

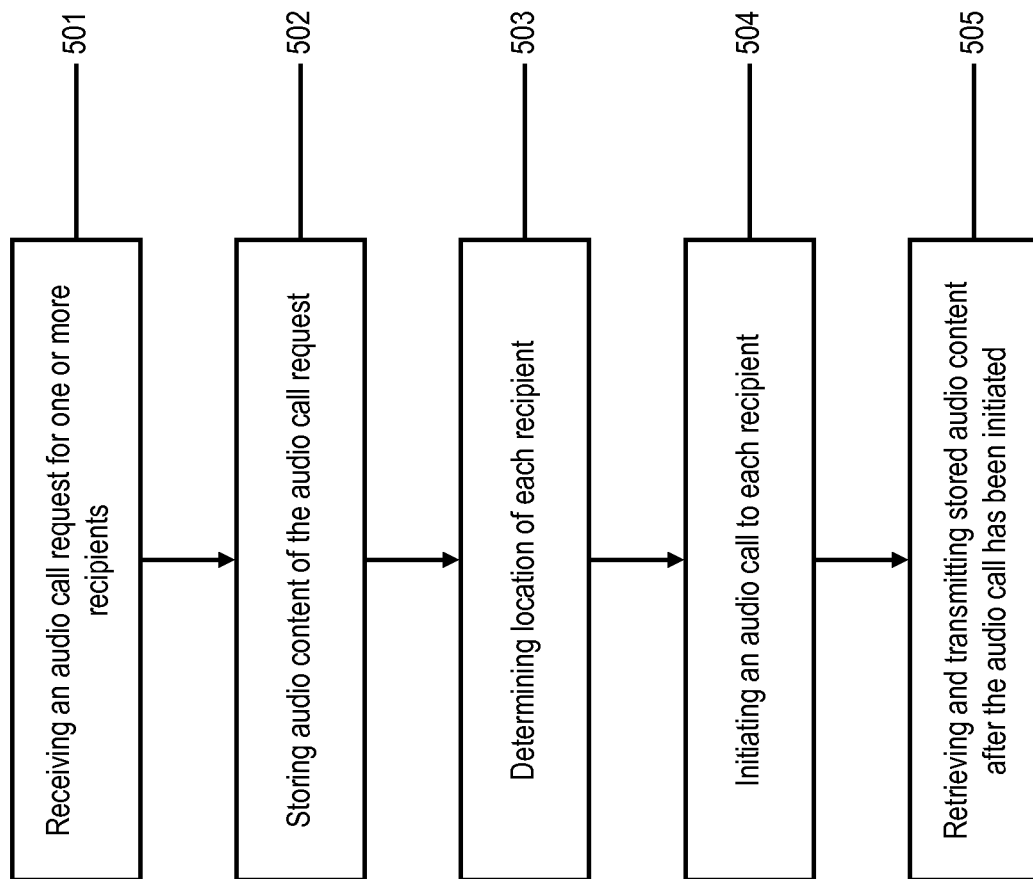


FIG. 6

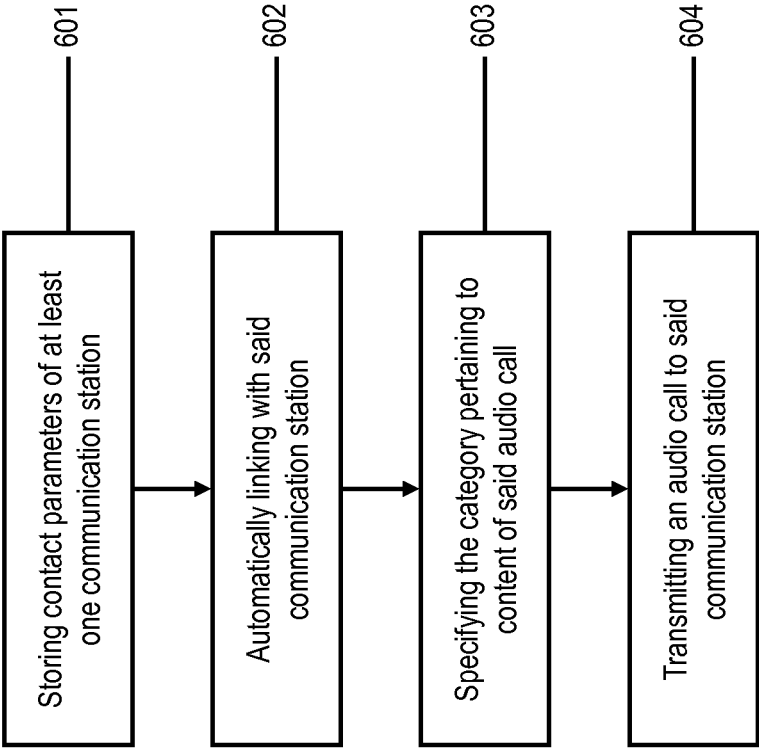
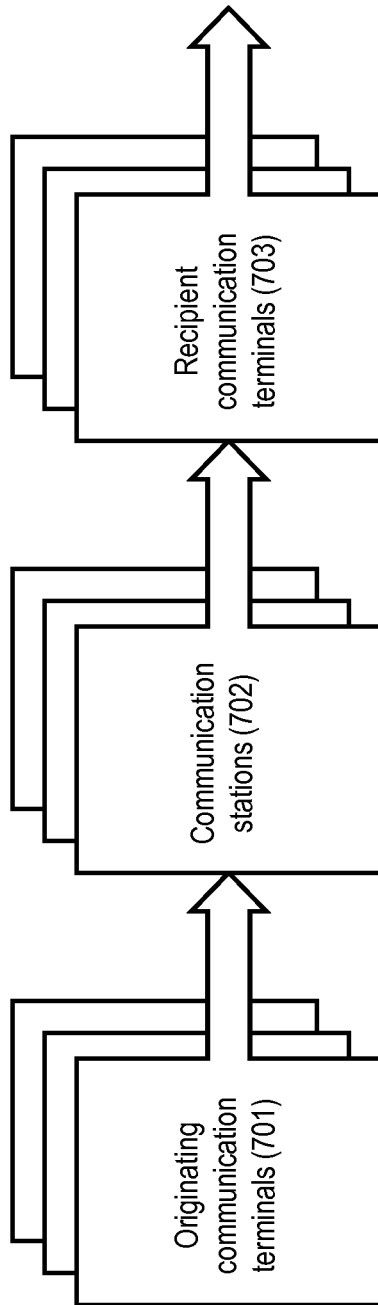


FIG. 7



A CLASSIFICATION OF SUBJECT MATTER

See extra sheet

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: H04M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
FI, SE, NO, DK

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

EPO-Internal, WPI

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 2008072268 A (SANYO ELECTRIC CO et al.) 27 March 2008 (27.03.2008) English machine translation by Thomson Scientific, paragraphs [0006], [0019]	1-20, 49-64, 65-67, 69
X	WO 2008091 566 A 1 (SHIN EDWARD M) 31 July 2008 (31 .07.2008) pages 3-5	21-48, 68
A	US 5903628 A (BRENNAN PAUL MICHAEL) 11 May 1999 (11.05.1999) whole document	1-69

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

* Special categories of cited documents	"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
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
"E" earlier application or patent but published on or after the international filing date	"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
"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)	"&" document member of the same patent family
"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	

Date of the actual completion of the international search 06 September 2010 (06.09.2010)	Date of mailing of the international search report 14 September 2010 (14.09.2010)
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Name and mailing address of the ISA/FI National Board of Patents and Registration of Finland P O Box 1160, FI-00101 HELSINKI, Finland Facsimile No. +358 9 6939 5328	Authorized officer Tapio Ikaheimo Telephone No. +358 9 6939 500
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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No
PCT/IB2010/052379

Patent document cited in search report	Publication date	Patent family members(s)	Publication date
JP 2008072268 A	27/03/2008	None	
.....			
W O 2008091 566 A 1	31/07/2008	US 2010027766 A 1	04/02/2010
		CA 2676094 A 1	31/07/2008
		US 2008178251 A 1	24/07/2008
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US 5903628 A	11/05/1999	CA 221 9728 A 1	12/05/1998
.....			

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB201 0/052379

CLASSIFICATION OF SUBJECT MATTER

Int.Cl.

H04M 1/64 (2006.01)

H04M 1/65 (2006.01)

H04M 1/57 (2006.01)

(Continuation of Box III)

Invention III: Claims 49-64, 66, 69 directed to methods, apparatuses, computer-readable storage medium and a computer program product for causing, at least in part, storing of contact parameters of at least one communication station capable of providing an audio communication service; causing, at least in part, linking with the communication station using the contact parameters for initiating an audio call; specifying the category pertaining to content of the audio call; and causing, at least in part, transmission of the audio call including identification parameters relating to the category to the communication station for one or more recipients.

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons

- 1 ☐ Claims Nos
because they relate to subject matter not required to be searched by this Authority, namely
- 2 ☐ Claims Nos
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically
- 3 ☐ Claims Nos
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6 4(a)

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows

Invention I: Claims 1-20, 65, 67 directed to a method, apparatuses, computer-readable storage medium, a system and a computer program product for identifying and accepting an incoming call, the call including at least one identification parameter relating to at least one category pertaining to content of the call; and causing, at least in part, storing of the content in one or more content stores specific to the category.

Invention II: Claims 21-48, 68 directed to a method, apparatuses, computer-readable storage medium, a system and a computer program product for receiving an audio call request including identification parameters relating to a category pertaining to content of the audio call for one or more recipients; causing, at least in part, storing of audio content of the audio call request, determining the location of each recipient, initiating an audio call to each recipient, and retrieving and transmitting the stored audio content and identification parameters after the audio call has been initiated. (Continues on an extra sheet)

- 1 ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims
- 2 ☒ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees
- 3 ☒ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos
- 4 ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims, it is covered by claims Nos

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation
- ☐ No protest accompanied the payment of additional search fees