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(54) **SELECTIVE VOICE COMMUNICATION AMONG MULTIPLE SERVICES**

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See application file for complete search history.

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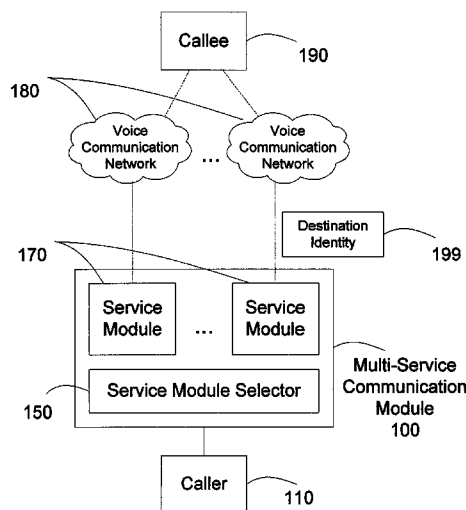
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(57) **ABSTRACT**

When a voice call is made between two users (Caller and Callee), both of which may have access to multiple voice communication services, the connection is made automatically by the communication equipment through a selectable communication service, based upon characteristics of connection. Those characteristics may include the services available to the users, the day of the week, the time of day, the availability of the Callee on a service, the geographic locations of the Caller and Callee, and Caller pre-established service preferences. Preferably, Caller preferences and associations of callees with unique destination identifiers are stored in a database created for the Caller and available to his communication equipment. An ultimate callee identifier selected for a particular call includes an indication of communication service, and connection an appropriate interface for that service is then provided automatically for the Caller.

12 Claims, 4 Drawing Sheets



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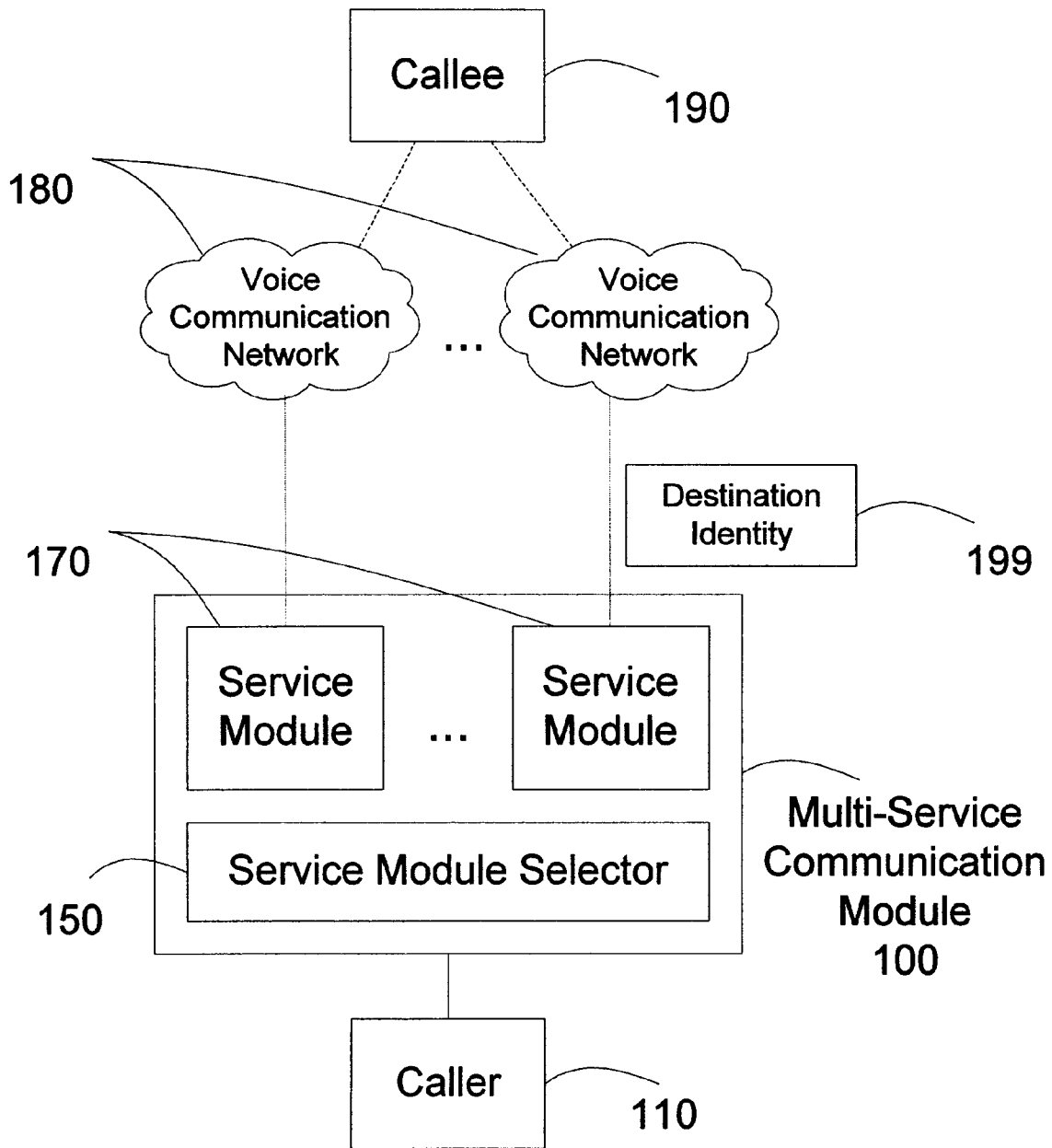


Figure 1

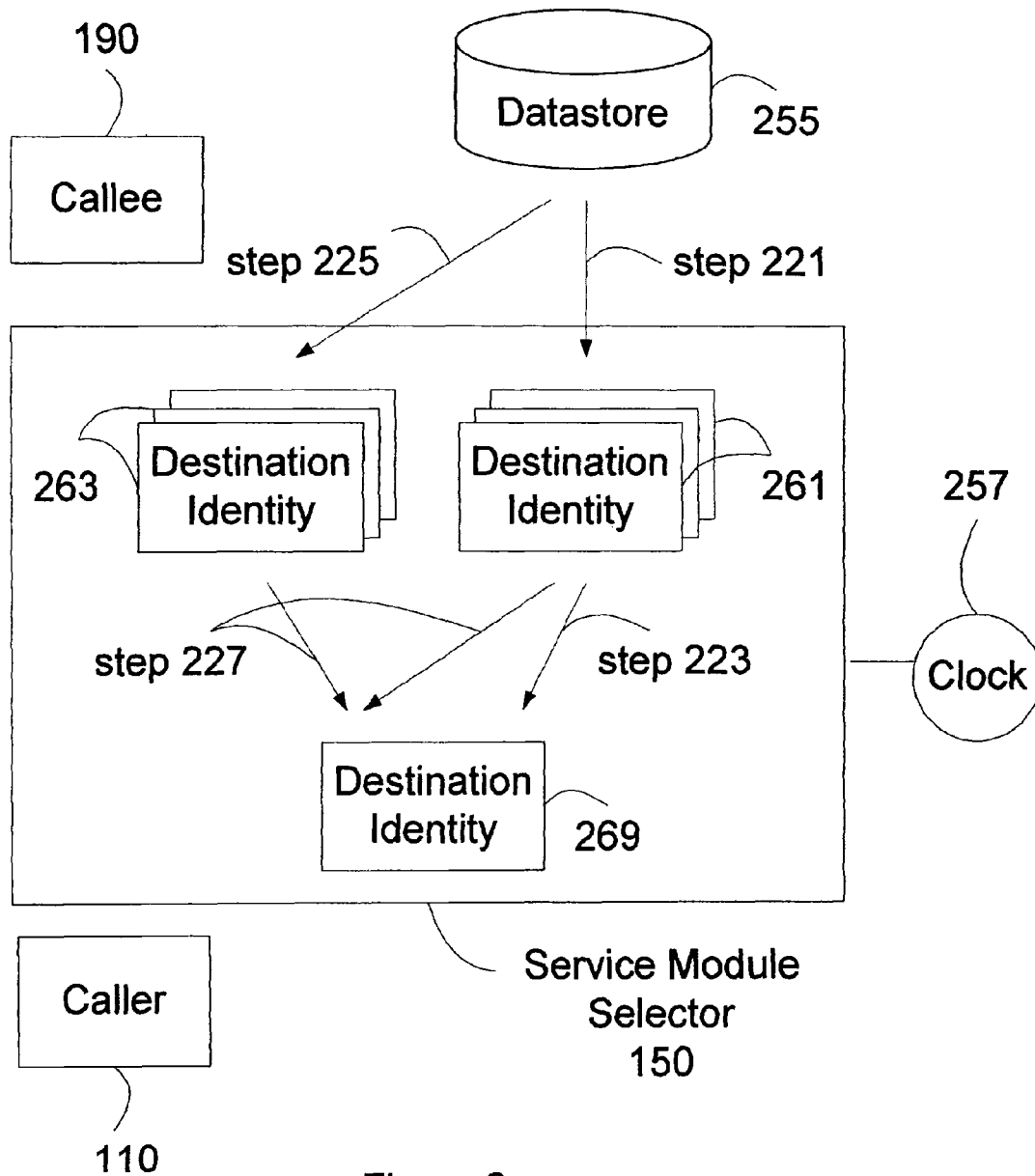


Figure 2

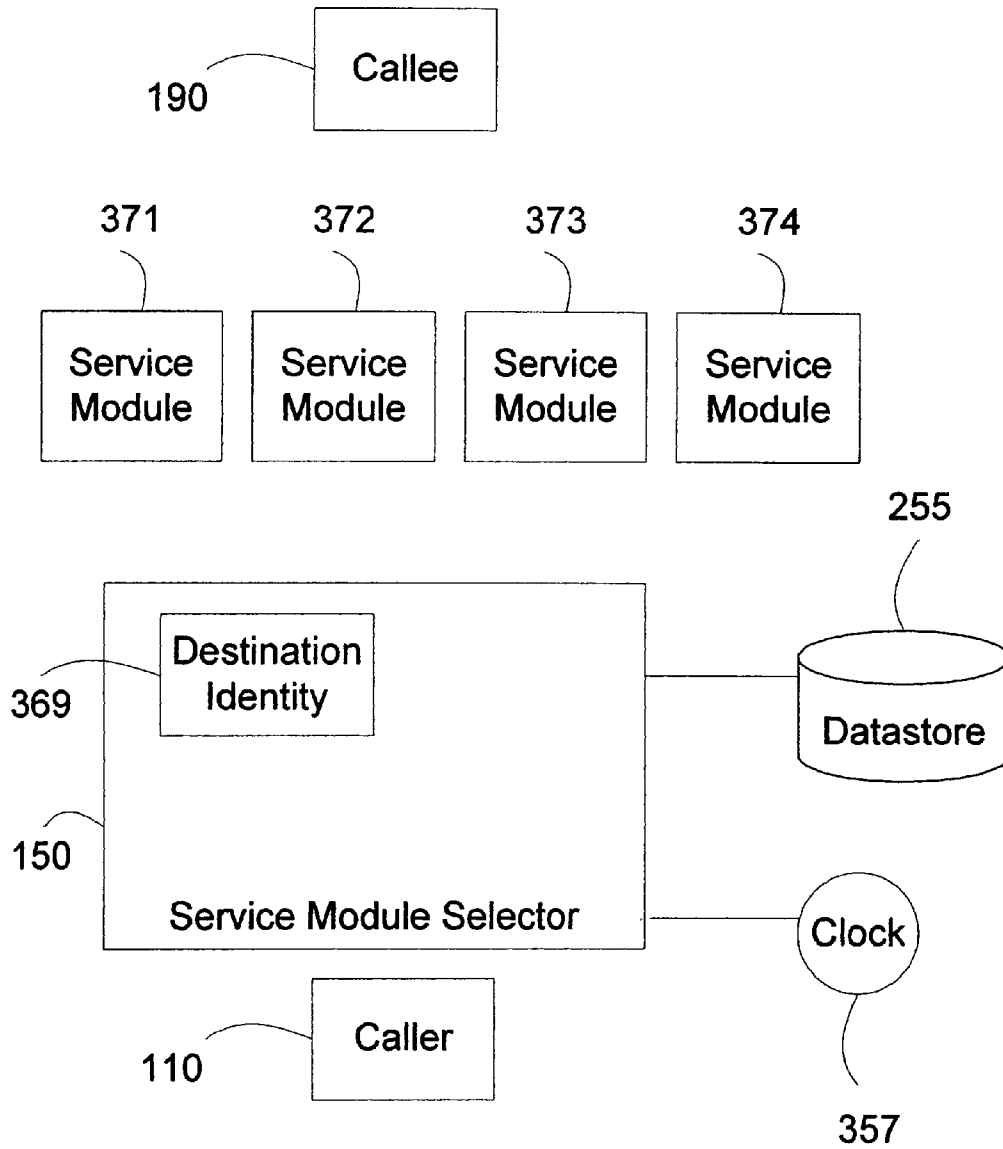


Figure 3

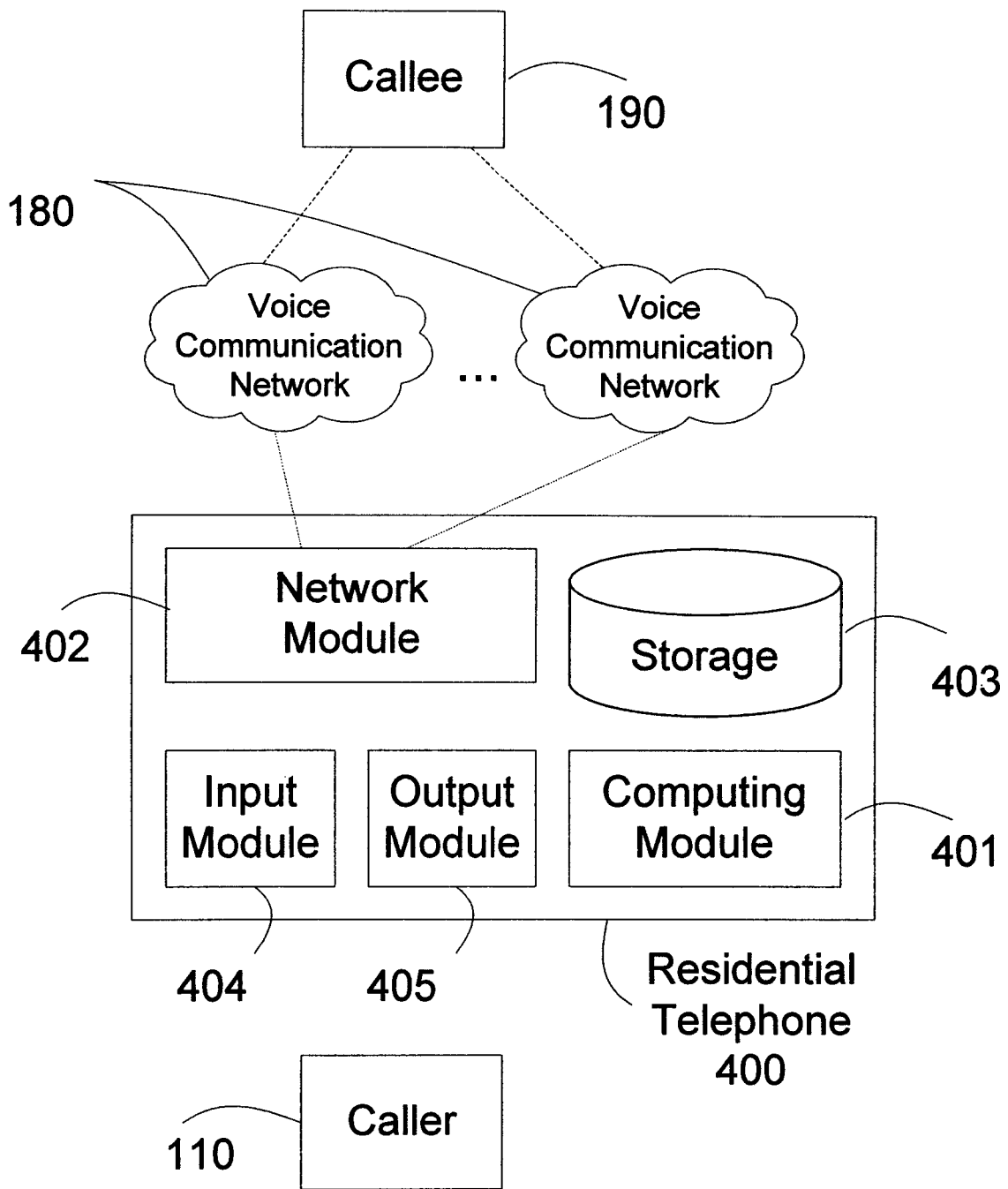


Figure 4

SELECTIVE VOICE COMMUNICATION AMONG MULTIPLE SERVICES

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of U.S. patent application Ser. No. 11/403,730 filed Apr. 13, 2006, the entirety of which is incorporated herein by reference.

BACKGROUND OF THE INVENTION

The present invention relates generally to telecommunications and, more specifically, it concerns a system permitting service selective voice communication among users who have different communication services available.

Residential telephone service allows a caller to make a call to a callee by dialing a telephone number that is associated with the callee. For example, if a telephone number "510-222-5555" belongs to John; a caller can call John by dialing "510-222-5555" using a telephone.

However, today virtually every user has multiple voice communication services available, including: cellular telephone services; Voice over IP (VoIP) telephone services (e.g., Vonage service or Skype service); and Instant Messenger (IM) based voice services (e.g., Yahoo Messenger voice service, GoogleTalk service, or Internet Gaming). Thus, there may be multiple ways to call John on his telephone.

In addition to the conventional telephone service described above, other possibilities may exist. If John subscribes to an IM based voice service with a user name "turtleneck2046", a caller who also subscribes to the same service can call John using his user name "turtleneck2046" through a personal computer. A caller who subscribes to an IM based voice service that supports outgoing calls to the Public Switched Telephone Network (PSTN) can call John's telephone using the IM based voice service through a personal computer, a smartphone, or a PDA.

There are many ways to reach a business. For example, Honest Pizza owns multiple telephone numbers, including a toll-free telephone number, and subscribes to multiple IM based voice services. A caller can call Honest Pizza by using any of the telephone numbers or user names associated with Honest Pizza.

From another perspective, a telephone that connects to multiple voice services provides unprecedented convenience to a caller. A caller can use the telephone to make a call to a callee using any of the multiple voice services. So, the telephone can connect to: a cellular telephone service or a residential telephone service; a VoIP telephone service and a residential telephone service; multiple VoIP telephone services and multiple IM based voice services.

However, this unprecedented convenience also presents overwhelming complexity for a caller to master. When Eva uses the telephone to call John, she oftentimes does not care about which voice service is used to make the call. In another scenario, Eva's telephone connects to five voice services; and John can receive a call from only two of the voice services. For example, Eva's telephone connects to a residential telephone service, a VoIP telephone service, and three IM based voice services. John owns a cell phone and does not subscribe to the three IM based voice services. When Eva uses the telephone to call John, she will have to select the residential service or the VoIP telephone service to make the call. Choosing the wrong voice service will result in call failure.

There is therefore a need to provide a solution, such that a caller need not choose a service when calling a callee.

SUMMARY OF THE INVENTION

In accordance with the present invention, when a voice call is made between two users (Caller and Callee), both of which may have access to multiple voice communication services, the connection is made automatically by the communications equipment through a selectable communication service, based upon characteristics of connection. Those characteristics may include the services available to the users, the day of the week, the time of day, the availability of the Callee on a service, the geographic locations of the Caller and Callee, and Caller pre-established service preferences. Preferably, Caller preferences and associations of callees with unique destination identifiers are stored in a database created for the Caller and available to his communication equipment. An ultimate callee identifier selected for a particular call includes an indication of communication service, and connection an appropriate interface for that service is then provided automatically for the Caller.

BRIEF DESCRIPTION OF DRAWINGS

The forgoing brief description, and further objects, features and advantages of the present invention will be understood more completely from the following detailed description of presently preferred embodiments, with reference being had to the accompanying drawing, in which:

FIG. 1 is a functional block diagram illustrating how selected voice communication is achieved among multiple services in accordance with a preferred embodiment of the present invention;

FIG. 2 is a schematic block diagram illustrating a preferred process performed by the communication equipment to select a destination identity for a callee when a caller makes an outgoing voice call;

FIG. 3 is a schematic block diagram illustrating a process performed by the communication equipment for selecting a service module for a caller to make an outgoing voice call to a selected callee; and

FIG. 4 is a functional block diagram of a telephone that embodies service selective multi-service voice communication in accordance with the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

FIG. 1 is a functional block diagram illustrating how selected voice communication is achieved among multiple communication services in accordance with a preferred embodiment of the present invention. A Caller **110** wishes to communicate with a Callee **190** by voice. It will be assumed that both of them have access to multiple voice communication services. Caller **110** places his call through Multi-Service Communication Module **100** which associates a destination identify **199** with Callee **190**. Voice Communication Networks **180** preferably represent all available voice communication services, and Multi-Service Communication Module **100** is capable of accessing every one of these services. However, those skilled in the art will appreciate that there may be instances in which only a subset of all services will be provided. Multi-Service Communication Module **100** is programmed to be aware of all voice communication services available to Caller **110** and Callee **190** and is programmed or can be instructed by Caller **110** to

utilize a particular one of Voice Communication Networks **180** under a particular circumstances arising between Caller **110** and Callee **190**. After Multi-Service Communication Module **100** makes the selection, the message from Caller **110** is sent to the appropriate one of voice communication networks **180**, and therethrough, to Callee **190**.

As explained above, Multi-Service Communication Module **100** provides connectivity of caller **110** to a plurality of Voice Communication Networks **180**. Examples of such Voice Communication Network includes the Public Switched Telephone Network (PSTN); a cellular network; a corporate telephone network; an Internet Protocol (IP) network; the Internet; a corporate Virtual Private Network (VPN); a Voice over IP (VoIP) network; an IP-based application network that supports a voice call, such as a gaming network, an Instant Message (IM) based network, a corporate collaboration network, or a home network; a walkie-talkie network; a satellite network; and a push-to-talk network. However, those skilled in the art will appreciate that connectivity could be provided to any kind of network, including ones yet to be developed.

Multi-Service Communication Module **100** includes a plurality of Service Modules **170**, each including the functionality required to interface with a connected Voice Communication Network. It will be appreciated that modules **170** could each be dedicated to a particular type of network from among networks **180**, or they could be programmable, or they could be adaptive. Making a voice call includes sending voice call setup messages to the connected Voice Communication Network to establish a voice communication between Multi-Service Communication Module **100** and the connected Voice Communication Network. For example, the voice call setup messages could include a Plain Old Telephone Service (POTS) offhook signal to the PSTN. Alternatively, the voice call setup messages includes a SIP INVITE message described in IETF RFC 3261 "SIP: Session Initiation Protocol" to a VoIP network; a call initiation message to a cellular network; or an alert signal to a walkie-talkie network.

A Service Module could also include: a telephone application and a Foreign Exchange Office (FXO) interface that connects to a telephone switch in the Public Switched Telephone Network (PSTN); a mobile telephone application and a Radio Frequency (RF) interface that connects to a wireless base station in a cellular network; a VoIP application and an IP interface that connects to a Voice over IP (VoIP) server over the Internet; an Instant Messenger (IM) based voice application and an IP interface that connects to a voice server of an IM based voice service over the Internet; a corporate voice application and an IP interface that connects to an Internet Protocol Private Branch Exchange (IP-PBX) over an IP network, such as a corporate Virtual Private Network (VPN), or a corporate VoIP network; a telephone application, and a proprietary digital phone interface or an FXO interface that connects to a Private Branch Exchange (PBX) in a corporate telephone network; a push-to-talk application, and a Radio Frequency (RF) interface that connects to a wireless base station in a push-to-talk network; or a walkie-talkie application, and a Radio Frequency (RF) interface that connects to a walkie-talkie network.

A Service Module uses a Destination Identity, associated with Callee **190**, to make a voice call over the connected Voice Communication Network. One type of Destination Identity is a public telephone number such as "408-222-3333". Alternatively, a Destination Identity could be: a user name of an IM based voice service such as "dragonfly225"

of Yahoo Messenger voice service; a corporate extension number of a corporate voice service, such as an extension number "2019"; a radio frequency used in a walkie-talkie network, such as 27.145 MHz, or 49.860 MHz; or an identity for a push-to-talk service, such as a user name "randylee-oaklandhigh-class1985".

Service Modules are specific to a particular communication service and can use a Destination Identity to make a voice call. For example, a Service Module that connects to an IM based network can use a user name "dragonfly225" to make a voice call. Alternatively, a Service Module that connects to PSTN can use a telephone number "650-222-3333" to make a voice call; a Service Module that connects to a cellular network can use the telephone number "650-222-3333" to make a voice call; and a third Service Module that connects to a VoIP network can use the telephone number "650-222-3333" to make a voice call.

A Callee represents a person, a member of a group, a business, an organization, a department of an organization, or a government agency. Examples for a Callee are "David Sanders", "Honest Pizza", "Lincoln Hospital", "Planning Commission of City of Northland", or "John Miller of Rotary Club, Palo Alto Chapter." A Callee could correspond to a plurality of Destination Identities. For example, Callee **190**, "Ronnie Weitzel", could correspond to telephone number "408-222-3333", user name "dragonfly225", telephone number "650-333-2018", and radio frequency 49.860 MHz.

Multi-Service Communication Module **100** includes a Service Module Selector **150**, which selects a Service Module from among the plurality of Service Modules **170**; and it stores a Destination Identity **199** for making a voice call to Callee **190** for Caller **110**. Through Module Selector **150**, Multi-Service Communication Module **100** invokes the selected Service Module, which makes a voice call over the selected Voice Communication Network using Destination Identity **199**.

FIG. 2 is a schematic block diagram illustrating a preferred process performed by Service Module Selector **150** to select a Destination Identity when Caller **110** makes an outgoing voice call by accessing a data in Datastore **255**. The Multi-Service Communication Module may include Datastore **255**. Basically, Service Module Selector **150** has access to a database which associates Destination Identities with Callees. Those skilled in the art will appreciate that if Datastore **255** is part of the Service Module Selector **150** used by Caller **110**, it could include a database or databases for all users of that selector module. On the other hand, it will also be appreciated that Datastore **255** could be accessed by Service Module Selector **150** through a network, in which case it could contain databases associated with all users in a defined area.

Service Module Selector **150** may select a Destination Identity in multiple steps, for example, in step **221** Service Module Selector **150** obtains from Datastore **255** a plurality of Destination Identities **261** that match to Callee **190**. Then in a step **223**, Service Module Selector **150** selects a Destination Identity **269** from among the plurality of Destination Identities **261**.

A Destination Identity could be associated with a destination type. For example, a destination type could indicate that the associated Destination Identity is for home use, or for business use. So, if the current time of day is between 8 am and 6 pm on a business day, Service Module Selector **150** selects, from the plurality of Destination Identities **261**, that Destination Identity **269** that is associated with a destination type indicating business usage. Service Module Selector **150** could connect to a Clock **257**, indicating the current time of

day. Similarly, if the current time of day is between 6 pm and 8 am, Service Module Selector **150** could select from the plurality of Destination Identities **261** that Destination Identity **269** associated with a destination type indicating home usage. Those skilled in the art will appreciate that the times are merely exemplary and that a caller could provide his own criteria.

A Destination Identity could also be associated with a destination preference ranking. For example, a destination preference ranking could include an integer, such as “7”, “8”, “39” or “5093”. As a further example, the plurality of Destination Identities **261** could include a telephone number “408-222-3333” with a destination preference ranking of “12”, a Yahoo Messenger user name “dragonfly225” with a destination preference ranking of “8”, and a telephone number “650-321-6517” with a destination preference ranking of “7”. Service Module Selector **150** selects from the plurality of Destination Identities **261** the Destination Identity **269** (“408-222-3333”) with the highest destination preference ranking of “12”. Of course, such rankings could be programmed by the caller, or there could be a default set.

A Destination Identity could also be associated with a destination’s availability, that is, the availability of the associated Destination Identity. For example, a destination availability has a value of “available”, indicating that the associated Destination Identity is available.

When a Destination Identity is a user name for an IM based voice service, such as user name “johnsmith2006” for Yahoo Messenger voice service, the destination availability associated with the Destination Identity could include the presence status for user name “johnsmith2006” on the service. For example, the presence status for user name “johnsmith2006” could be “present” and the destination availability has a value of “available”, indicating that the Destination Identity is available. As an example, Multi-Service Communication Module **100** could obtain presence status from a presence server of the IM based voice service, and obtains the destination availability of the Destination Identity.

When a Destination Identity is a mobile telephone number for a cellular telephone service, such as mobile telephone number “408-987-0123”, the destination availability of the Destination Identity includes the mobility registration status for mobile telephone number “408-987-0123”. For example, the mobility registration status for that number might be “registered” and the destination availability could have a value of “available”, indicating that the Destination Identity is available. Preferably, the Multi-Service Communication Module obtains the registration status from a Home Location Register (HLR) that serves the mobile telephone number.

When a Destination Identity is the user name of a push-to-talk service such as user name “randylee-oaklandhigh-class1985”. The destination availability of the Destination Identity includes the service status of the device associated with user name “randylee-oaklandhigh-class1985”. For example, the service status for the device could be “logged in” and the destination availability could have a value of “available”, indicating that the Destination Identity is available. The Multi-Service Communication Module preferably obtains the service status from a status server of the push-to-talk service; and it obtains the destination availability of the Destination Identity.

Multi-Service Communication Module **100** could obtain the destination availability periodically, for example, every 10 minutes, every 15 minutes, or every 20 minutes. Alternately, the Multi-Service Communication Module could

obtain the destination availability when the destination availability that associates with a Destination Identity changes. For example, Multi-Service Communication Module could obtain the destination availability before Service Module Selector **150** selects the Destination Identity.

Multi-Service Communication Module **100** could obtain the destination availability of a Destination Identity over a connected Voice Communication Network. However, it could also obtain the destination availability over a different network, such as the Internet or a corporate Virtual Private Network (VPN).

Service Module Selector **150** selects from the plurality of Destination Identities **261** that Destination Identity **269** that associates with a destination availability having a value of “available”. This could be done in multiple steps (e.g. **221**, **225**, and **227**). For example, in step **221**, Service Module Selector **150** obtains from Datastore **255** a plurality of Destination Identities **261** that match to Callee **190**. A Destination Identity could be selected based on a service module identity. Datastore **255** could include information that matches a service module identity to a plurality of Destination Identities; each matching Destination Identity can be used by the Service Module identified by the service module identity to make a voice call.

In step **225**, Service Module Selector **50** selects from Datastore **255** a plurality of Destination Identities **263** that match the service module identity. Datastore **255** includes a configuration record, which includes a preferred service module identity. Service Module Selector **150** uses the preferred service module identity from the configuration record to select the plurality of Destination Identities **263**. Datastore **255** includes caller profiles, each associated with a Caller. A caller profile includes a caller preferred service module identity. Service Module Selector **150** uses the caller preferred service module identity from the user profile associated with Caller **110** to select the plurality of Destination Identities **263**.

In step **227**, Service Module Selector **150** selects Destination Identity **269** such that Destination Identity **269** is included in the plurality of Destination Identities **261** and is included in the plurality of Destination Identities **263**.

FIG. 3 is a schematic block diagram illustrating a process performed by Service Module Selector **150** for selecting a Service Module for Caller **110** to make an outgoing voice call to a selected caller. Multi-Service Communication Module **100** includes Service Modules **371**, **372**, **373** and **374**. Service Module **371** connects to a residential telephone service; Service Module **372** connects to a cellular telephone service; Service Module **373** connects to a Voice over IP service, such as Vonage service; and Service Module **374** connects to an IM based voice service, such as Yahoo Messenger voice service.

Datastore **255** includes information for Service Modules **371**, **372**, **373** and **374**. A Service Module has an associated service preference ranking, which includes an integer, such as “2”, “3”, “15” or “21”, and Service Module Selector **150** selects the Service Module with the highest service preference ranking. Service Module Selector **150** obtains from Datastore **255** the service preference ranking of Service Modules **371**, **372**, **373** and **374**. For example, Service Module **371** may be associated with a service preference ranking of “15”; Service Module **372** with a service preference ranking of “11”; Service Module **373** with a service preference ranking of “20”; and Service Module **374** associates with a service preference ranking of “18”. Service Module Selector **150** selects Service Module **373**, the one with the highest service preference ranking of “20”.

A Service Module could be associated with a service time period, in which case Service Module Selector **150** selects a Service Module with a service time period such that the current time of day indicated by Clock **357** is within the service time period. Service Module Selector **150** obtains from Datastore **255** service time periods for Service Modules **371**, **372**, **373** and **374**. For example, suppose Service Module **371** is associated with service time period of “7:00 am to 9:30 am”; Service Module **372** with a service time period of “9:30 am to 6:30 pm”; Service Module **373** with a service time period of “6:00 pm to 9:30 pm”; and Service Module **374** with a service time period of “9:30 pm to 2:00 am”. If the current time of day indicated by Clock **357** is 9:47 pm; Service Module Selector **150** selects Service Module **374** with a service time period of “9:30 pm to 2:00 am”.

Service Module Selector **150** could also select a Service Module based on a Destination Identity **369** corresponding to Callee **190**. Datastore **355** includes information that matches a Destination Identity to a plurality of Service Modules; each of the matching Service Modules can use the Destination Identity to make a voice call. Service Module Selector **150** uses Destination Identity **369** to obtain from Datastore **255** a plurality of matching Service Modules, and it selects a Service Module from the plurality of matching Service Module.

As an example, a Service Module might be associated with a plurality of geographic locations, such as “local”, “local long distance”, “continental”, “long distance”, “international”, “Asia”, “Europe”, “Hong Kong”, or “Norway”. A Service Module **371** is associated with geographic locations of “local” and “local long distance”; Service Module **372** is associated with a geographic location of “continental”; Service Module **373** is associated with locations of “Hong Kong” and “Korea”; Service Module **374** is associated with the geographic location of “Europe”. As a further example, Destination Identity **369** is a local telephone number, such as “326-0127”; Service Module Selector **150** selects Service Module **371** that is associated with a geographic location of “local”. Destination Identity **369** is an international telephone number with country code “852”. Country code “852” is for the city of Hong Kong; Service Module Selector **150** could select Service Module **373** to associate with a geographic location of “Hong Kong”.

Datastore could include a hard disk or a flash memory, which contains the above-mentioned database.

FIG. **4** is a functional block diagram of a Telephone **400** that embodies selective multi-service voice communication in accordance with the present invention.

Telephone **400** includes a Computing Module **401** that contains programming logic that embodies a Multi-Service Communication Module. Typically, Computing Module **401** includes a processor and associated memory.

Telephone **400** also includes a Network Module **402**, which embodies the network interface for a plurality of Service Modules included in the Multi-Service Communication Module. Preferably, Network Module **402** includes an IP interface and an Ethernet interface.

Telephone **400** also includes a Storage **403** that embodies the Datastore **255** of the Multi-Service Communication Module **100**. Preferably, Storage **403** includes a hard disk, a flash memory containing a database.

Preferably, the plurality of Voice Communication Networks **180** include the Internet, a Voice over IP network, and an IM based network.

Telephone **400** includes an Input Module **404**, which includes the functionality of obtaining user input for a voice

call. The user input includes Callee **190**. Preferably, Input Module **404** includes a browser that allows a user to browse a directory and to select Callee **190**. Input Module **404** obtains the user input from Caller **110** to begin the process of selecting a Destination Identity as illustrated in FIG. **2**; and the process of selecting a Service Module as illustrated in FIG. **3**. In a preferred embodiment, the user input includes audio input from the user and Input Module **404** includes a microphone.

Telephone **400** includes an Output Module **405**, which includes the functionality of transmitting user output for a voice call; preferably, the user output includes audio output to the user. Preferably, Output Module **405** includes a speaker.

Computing Module **401** selects a Service Module and a Destination Identity, and the selected Service Module uses the selected Destination Identity to make a voice call to Callee **190** via Network Module **402**.

Preferably, the inclusion of the plurality of Service Modules in the Telephone **400** is achieved during the manufacturing process of Telephone **400**, such as by including the hardware or firmware functionalities; or by including the software applications that constitute the plurality of Service Modules. The inclusion could be achieved during a point-of-sale process, such as by activating the applications that constitute the plurality of Service Modules. Alternatively, the inclusion is achieved by a service subscription process that activates the voice communication services associated with the plurality of Service Modules.

If Telephone **400** is a wireless telephone connected to a wireless network, the connected plurality of Voice Communication Networks include a cellular network, WiFi network, push-to-talk network, satellite network or walkie-talkie network. A user uses the wireless telephone to select a Callee. The wireless telephone selects a Destination Identity and a Service Module to make a voice call to the Callee over a connected Voice Communication Network.

If Telephone **400** is a corporate telephone, the connected plurality of Voice Communication Network includes a corporate telephone network, a corporate IP network, or a corporate VPN network. A user uses the corporate telephone to select a Callee. The corporate telephone selects a Destination Identity and a Service Module to make a voice call to the Callee over a connected Voice Communication Network. Preferably, the inclusion of the plurality of Service Modules in the corporate telephone is achieved during the manufacturing process of the corporate telephone, such as by including the hardware or firmware functionalities or by including the software applications that constitute the plurality of Service Modules. Or the inclusion is achieved during an installation process, such as by activating the applications that constitute the plurality of Service Module. The inclusion could also be achieved by a service subscription process that activates the voice communication services associated with the plurality of Service Modules.

Telephone **400** could include a telephone switching system, such as a corporate telephone system, such as a PBX or an IP-PBX. The telephone switching system includes Multi-Service Communication Module. The connected plurality of Voice Communication Network includes corporate telephone network, PSTN, Internet, Voice over IP network, or IM based network. The telephone switching system connects to a terminal. The telephone switching system receives input from the terminal and transmits output to the terminal. A user uses a terminal to select a Callee by, in one embodiment, dialing an extension number of the Callee. The telephone switching system selects a Destination Identity

and a Service Module to make a voice call to the Callee over a connected Voice Communication Network.

Although preferred embodiments of the invention have been disclosed for illustrative purposes, those skilled in the art will appreciate that many additions, modifications, and substitutions are possible without departing from the scope and spirit of the invention as defined by the accompanying claims.

What is claimed is:

1. In a voice communication system including a plurality of different voice communication services available to a caller and callee, apparatus for automatically establishing a connection between the caller and the callee over a caller selectable voice communication service through respective communication equipment, comprising:

a storage device containing a database maintained for the caller and accessible by the caller's communication equipment, the database associating a callee with a plurality of different voice communication networks accessible by the callee via a single telecommunication device and storing a caller profile comprising caller preferences associated with a caller;

a set of destination identities in the database for each callee, each destination identity being associated with a different voice communication network;

a destination identity selector operable to automatically select a destination identity for an intended callee based upon a set of pre-established selection criteria for each destination identity and a caller preference, the selection criteria selected from at least one of: a day of the week, a time of day, a service priority assigned by either the caller or the callee to each of the voice communication networks, and a geographic location of the caller and/or the intended callee.

2. The apparatus of claim **1** further comprising a plurality of caller interfaces corresponding to different voice communication networks.

3. The apparatus of claim **2** wherein the caller interfaces include an interface for at least one of: a Public Switched Telephone Network (PSTN), a cellular telephone network, a corporate telephone network, a Voice over IP (VoIP) telephone service, an Instant Messenger (IM) based voice service, an Internet Protocol (IP) network, the Internet, a corporate Virtual Private Network (VPN), an IP-based application network that supports a voice call, a home network, a walkie-talkie network, a satellite network; and a push-to-talk network.

4. The apparatus of claim **1** constructed so that the destination identity selector is operable to select the destination identity in relationship to the service priorities of associated voice communication networks.

5. The apparatus of claim **1** constructed so that service priority is assigned by the caller.

6. The apparatus of claim **3**, further comprising an interface selector for selecting one of the interfaces to provide the connection based upon the selected destination identity.

7. The apparatus of claim **6**, further comprising a connection device connecting a selected interface to the voice communication network corresponding to the selected destination identity.

8. The apparatus of claim **1** wherein the plurality of voice communication networks comprises two or more of a Public

Switched Telephone Network (PSTN), a cellular telephone network, a corporate telephone network, a Voice over IP (VoIP) telephone service, an Instant Messenger (IM) based voice service, an Internet Protocol (IP) network, the Internet, a corporate Virtual Private Network (VPN), an IP-based application network that supports a voice call, a home network, a walkie-talkie network, a satellite network; and a push-to-talk network.

9. The apparatus of claim **1** wherein the single telecommunication device is a telephone.

10. A telephone operable to automatically establish a connection between a caller and a callee over a caller selectable voice communication service wherein a plurality of different voice communication services are available to a caller and callee, the telephone comprising a computing module comprising a processor, a datastore associated with the processor, and a plurality of service modules, wherein each of the service modules is operable to interface with a different voice communication network, wherein the datastore is operable to store a set of destination identities for each callee, each destination identity being associated with a different voice communication network associating a callee with a plurality of different voice communication networks accessible by the callee via a single telecommunication device and wherein the datastore is operable to store a caller profile comprising caller preferences associated with a caller, the telephone further comprising a network module comprising a network interface for the plurality of service modules, an input module and an output module, wherein the computing module is operable to select one of the service modules and a stored destination identity such that the selected service module uses the selected destination identity to initiate a voice call to a callee via the network module, and wherein the computing module is operable to automatically select a destination identity for an intended callee based upon a set of pre-established selection criteria for each destination identity and a caller preference, the selection criteria selected from at least one of: a day of the week, a time of day, a service priority assigned by either the caller or the callee to each of the voice communication networks, and a geographic location of the caller and/or the intended callee.

11. The telephone of claim **10** wherein the network module comprises an interface for at least one of: a Public Switched Telephone Network (PSTN), a cellular telephone network, a corporate telephone network, a Voice over IP (VoIP) telephone service, an Instant Messenger (IM) based voice service, an Internet Protocol (IP) network, the Internet, a corporate Virtual Private Network (VPN), an IP-based application network that supports a voice call, a home network, a walkie-talkie network, a satellite network and a push-to-talk network.

12. The apparatus of claim **10** wherein the plurality of voice communication networks comprises two or more of a Public Switched Telephone Network (PSTN), a cellular telephone network, a corporate telephone network, a Voice over IP (VoIP) telephone service, an Instant Messenger (IM) based voice service, an Internet Protocol (IP) network, the Internet, a corporate Virtual Private Network (VPN), an IP-based application network that supports a voice call, a home network, a walkie-talkie network, a satellite network; and a push-to-talk network.