

System and Method for Providing a Service using Server Electronic Addresses

5 FIELD OF INVENTION

The present invention relates broadly to a system and method for providing a service, as well as a computer readable data storage medium having stored thereon computer code means for instructing a computer to execute a method for providing a
10 service.

BACKGROUND

15 To make a voice call, a caller dials a number of the callee (manually or via a phone-book on the phone). A similarly straightforward user-experience holds for sending an sms, sending an email, communicating via IM (instant messaging) or making a VoIP call using services such as Skype. In these instances, the callee is contacted at his electronic address via the caller's electronic address. The communication between the
20 caller and the callee, be it a voice call, sms, email, IM or VoIP call takes place once the contact is established. This contact may need to be established in real-time for a voice call or a VoIP call or in non-real-time for other communications such as sms, email, and IM (specially, if the IM communication is text based). In certain situations (such as voice calling, emailing etc), the caller-ID of the caller (electronic address such as phone
25 number, email/IM/VoIP) is important as the callee's behaviour (accept/reject the incoming call, designate the email spam etc) may depend on it.

There is an ongoing trend for service providers to provide more value added services to remain attractive to the present day consumer. One of the challenges in
30 providign such value added services relates to the high costs associated with roaming charges in foreign networks, which can mean that some of these services may not be cost effective to implement when the user / subscriber is roaming in foreign networks.

Therefore, there exists a need to provide a system and method for communication services to address one or more of the problems mentioned above.

SUMMARY

The invention is defined in the independent claims. Some optional features of the invention are defined in the dependent claims. In accordance with a first disclosed technique there is provided a method of providing a service, comprising the steps of performing a communication to one of a plurality of server electronic addresses from a first electronic address; identifying, at the server electronic address, the first electronic address from which the communication is made; and providing a service based on a service definition depending on a combination of the server, electronic address and the first electronic address; wherein the plurality of server electronic addresses are divided into one or more groups such that server electronic addresses from one group, when combined with the first electronic address, generate an identical service definition; and the service definition comprises one or more second electronic addresses for execution of the service.

Different server electronic addresses from one group may be associated with respective local servers, and the local servers are coupled to a central server.

The electronic addresses associated with the respective local servers may be assigned on different respective networks.

The different networks may reside in different respective countries.

The local servers may be coupled to the central server via the Internet.

The service definition may be set up by a person associated with the first electronic address.

The service definition may comprise one or more of a group comprising: making a VoIP call to the one or more second electronic addresses, making a voice call to the one or more second electronic addresses, leaving a message at the one or more second electronic addresses, sending an email to the one or more second electronic addresses, sending a fax to the one or more second electronic addresses, sending an IM to the one

or more second electronic addresses, sending an MMS to the one or more second electronic addresses, making a calling card call to the one or more second electronic addresses, making an access sequence call to the one or more second electronic addresses, sending audio data to the one or more second electronic addresses, sending
5 video data to the one or more second electronic addresses, and sending multi-media data to the one or more second electronic processes.

The service definition may comprise one or more of a group comprising: receiving a voice call from the one or more second electronic addresses, recording a
10 message from the one or more second electronic addresses, receiving an email from the one or more second electronic addresses, receiving an SMS from the one or more second electronic addresses, receiving a fax from the one or more second electronic addresses, receiving an IM from the one or more second electronic addresses, receiving an MMS from the one or more second electronic addresses, receiving a calling card call
15 from the one or more second electronic addresses, receiving an access sequence call from the one or more second electronic addresses, receiving audio data from the one or more second electronic addresses, receiving video data from the one or more second electronic addresses, and receiving multi-media data from the one or more second electronic addresses.

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Performing the communication to the server electronic address from the first electronic address may comprise one or more of a group comprising: making a voice call to the server electronic address, sending an email to the server electronic address, sending an SMS to the server electronic address, sending a fax to the server electronic
25 address, sending an IM to the server electronic address, sending an MMS to the server electronic address, making a calling card call to the server electronic address, making an access sequence call to the server electronic address, sending audio data to the server electronic addresses, sending video data to the server electronic addresses, and sending multi-media data to the server electronic addresses.

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The service definition may comprise conversion of communication from one communication format into another communication format.

The service definition may comprise recording a communication to and/or from the one or more second electronic addresses.

Providing the service based on a service definition depending on a combination of the server electronic address and the first electronic address may comprise identifying a lead number associated with the same group as the server electronic address, and identifying the service definition based on the lead number and the first electronic address.

In accordance with a second disclosed technique, there is provided a system providing a service, the system comprising an electronic device having associated with it a first electronic address; and a server system having plurality of server electronic addresses associated therewith for receiving a communication from the first electronic address; wherein the server system identifies the first electronic address from which the communication is made; and provides a service based on a service definition depending on a combination of the server electronic address and the first electronic address; wherein the plurality of server electronic addresses are divided into one or more groups such that server electronic addresses from one group, when combined with the first electronic address, generate an identical service definition; and the service definition comprises one or more second electronic addresses for execution of the service.

The server system, may comprise a plurality of local servers and a central server, and the different server electronic addresses from one group are associated with respective one of the local servers, and the local servers are coupled to the central server.

The electronic addresses associated with the respective local servers may be assigned on different respective networks.

The different networks may reside in different respective countries.

The local servers may be coupled to the central server via the Internet.

The service definition may be set up by a person associated with the first electronic address.

5 The service definition may comprise one or more of a group comprising: making a VoIP call to the one or more second electronic addresses, making a voice call to the one or more second electronic addresses, leaving a message at the one or more second electronic addresses, sending an email to the one or more second electronic addresses, sending a fax to the one or more second electronic addresses, sending an IM to the one or more second electronic addresses, sending an MMS to the one or more second electronic addresses, making a calling card call to the one or more second electronic addresses, making an access sequence call to the one or more second electronic addresses, sending audio data to the one or more second electronic addresses, sending video data to the one or more second electronic addresses, and sending multi-media data to the one or more second electronic processes.

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The service definition may comprise one or more of a group comprising: receiving a voice call from the one or more second electronic addresses, recording a message from the one or more second electronic addresses, receiving an email from the one or more second electronic addresses, receiving an SMS from the one or more second electronic addresses, receiving a fax from the one or more second electronic addresses, receiving an IM from the one or more second electronic addresses, receiving an MMS from the one or more second electronic addresses, receiving a calling card call from the one or more second electronic addresses, receiving an access sequence call from the one or more second electronic addresses, receiving audio data from the one or more second electronic addresses, receiving video data from the one or more second electronic addresses, and receiving multi-media data from the one or more second electronic addresses.

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30 Receiving the communication from the first electronic address may comprise one or more of a group comprising: making a voice call to the server electronic address, sending an email to the server electronic address, sending an SMS to the server electronic address, sending a fax to the server electronic address, sending an IM to the server electronic address, sending an MMS to the server electronic address, making a calling card call to the server electronic address, making an access sequence call to the

server electronic address, sending audio data to the server electronic addresses, sending video data to the server electronic addresses, and sending multi-media data to the server electronic addresses.

The service definition may comprise conversion of communication from one communication format into another communication format.

The service definition may comprise recording a communication to and/or from the one or more second electronic addresses.

The server system may provide the service based on a service definition depending on a combination of the server electronic address and the first electronic address by identifying a lead number associated with the same group as the server electronic address, and identifying the service definition based on the lead number and the first electronic address. In accordance with a third disclosed technique, there is provided a data medium having stored thereon computer code means for instructing a computer to execute a method of providing a service, comprising the steps of performing a communication to one of a plurality of server electronic addresses from a first electronic address; identifying, at the server electronic address, the first electronic address from which the communication is made; and providing a service based on a service definition depending on a combination of the server electronic address and the first electronic address; wherein the plurality of server electronic addresses are divided into one or more groups such that server electronic addresses from one group, when combined with the first electronic address, generate an identical service definition; and the service definition comprises one or more second electronic addresses for execution of the service.

BRIEF DESCRIPTION OF THE DRAWINGS

Embodiments of the invention will be better understood and readily apparent to one of ordinary skill in the art from the following written description, by way of example only, and in conjunction with the drawings, in which:

Figure 1 illustrates an example embodiment of a system for communication services.

Figure 2 illustrates an example embodiment of the present invention providing the service of Conference Calling.

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Figure 3 illustrates an example embodiment of the present invention providing the service of Mobile to PC (Personal Computer) calling.

Figure 4 illustrates an example embodiment of the present invention providing the service of identity masking.

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Figure 5 shows a flowchart illustrating the method of providing a service.

Figure 6 shows the method and system of the example embodiment implemented on a computer system.

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Figure 7 shows the method and system of the example embodiment implemented on a wireless device.

20 DETAILED DESCRIPTION

When a user subscribes to particular service, he is usually provided with an access number (electronic address) to contact via his mobile phone to access the service. However, should the user be overseas, his mobile phone will be logged on to a foreign network and will therefore incur additional International Direct Dialling fees if the user dials the service access number of his home network from the foreign network to access the service. Embodiments of the present invention allow a service to be accessed via a plurality of numbers, each of which may be a local number on a foreign network. In other words, when the user is roaming on a foreign network, the user can access the same service by dialling the number local to the foreign network without incurring additional IDD fees. It will be appreciated that the 'foreign network' here can refer to any network outside a users primary service provider network, including networks in foreign countries, and networks in the same country from different service providers.

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Some portions of the description which follows are explicitly or implicitly presented in terms of algorithms and functional or symbolic representations of operations on data within a computer memory. These algorithmic descriptions and functional or symbolic representations are the means used by those skilled in the data processing arts to convey most effectively the substance of their work to others skilled in the art. An algorithm is here, and generally, conceived to be a self-consistent sequence of steps leading to a desired result. The steps are those requiring physical manipulations of physical quantities, such as electrical, magnetic or optical signals capable of being stored, transferred, combined, compared, and otherwise manipulated.

Unless specifically stated otherwise, and as apparent from the following, it will be appreciated that throughout the present specification, discussions utilizing terms such as "contacting", "determining", "dialing", "generating", "retrieving", "outputting", "playing", or the like, refer to the action and processes of a computer system, or similar electronic device, that manipulates and transforms data represented as physical quantities within the computer system into other data similarly represented as physical quantities within the computer system or other information storage, transmission or display devices.

The present specification also discloses apparatus for performing the operations of the methods. Such apparatus may be specially constructed for the required purposes, or may comprise a general purpose computer or other device selectively activated or reconfigured by a computer program stored in the computer. The algorithms and displays presented herein are not inherently related to any particular computer or other apparatus. Various general purpose machines may be used with programs in accordance with the teachings herein. Alternatively, the construction of more specialized apparatus to perform the required method steps may be appropriate. The structure of a conventional general purpose computer will appear from the description below.

In addition, the present specification also implicitly discloses a computer program, in that it would be apparent to the person skilled in the art that the individual steps of the method described herein may be put into effect by computer code. The computer program is not intended to be limited to any particular programming language and implementation thereof. It will be appreciated that a variety of programming

languages and coding thereof may be used to implement the teachings of the disclosure contained herein. Moreover, the computer program is not intended to be limited to any particular control flow. There are many other variants of the computer program, which can use different control flows without departing from the spirit or scope of the invention.

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Furthermore, one or more of the steps of the computer program may be performed in parallel rather than sequentially. Such a computer program may be stored on any computer readable medium. The computer readable medium may include storage devices such as magnetic or optical disks, memory chips, or other storage devices suitable for interfacing with a general purpose computer. The computer readable medium may also include a hard-wired medium such as exemplified in the Internet system, or wireless medium such as exemplified in the GSM mobile telephone system. The computer program when loaded and executed on such a general-purpose computer effectively results in an apparatus that implements the steps of the preferred method.

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The method and system of the example embodiment can be implemented on a computer system 600, schematically shown in Figure 6. It may be implemented as software, such as a computer program being executed within the computer system 600, and instructing the computer system 600 to conduct the method of the example embodiment.

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The computer system 600 comprises a computer module 602, input modules such as a keyboard 604 and mouse 606 and a plurality of output devices such as a display 608, and printer 610.

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The computer module 602 is connected to a computer network 612 via a suitable transceiver device 614, to enable access to e.g. the Internet or other network systems such as Local Area Network (LAN) or Wide Area Network (WAN).

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The computer module 602 in the example includes a processor 618, a Random Access Memory (RAM) 620 and a Read Only Memory (ROM) 622. The computer module 602 also includes a number of Input/Output (I/O) interfaces, for example I/O interface 624 to the display 608, and I/O interface 626 to the keyboard 604.

The components of the computer module 602 typically communicate via an interconnected bus 628 and in a manner known to the person skilled in the relevant art.

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The application program is typically supplied to the user of the computer system 600 encoded on a data storage medium such as a CD-ROM or flash memory carrier and read utilising a corresponding data storage medium drive of a data storage device 630. The application program is read and controlled in its execution by the processor 618. Intermediate storage of program data maybe accomplished using RAM 620.

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The method of the current arrangement can be implemented on a wireless device 700, schematically shown in Figure 7. It may be implemented as software, such as a computer program being executed within the wireless device 700, and instructing the wireless device 700 to conduct the method.

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The wireless device 700 comprises a processor module 702, an input module such as a keypad 704 and an output module such as a display 706.

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The processor module 702 is connected to a wireless network 708 via a suitable transceiver device 710, to enable wireless communication and/or access to e.g. the Internet or other network systems such as Local Area Network (LAN), Wireless Personal Area Network (WPAN) or Wide Area Network (WAN).

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The processor module 702 in the example includes a processor 712, a Random Access Memory (RAM) 714 and a Read Only Memory (ROM) 716. The processor module 702 also includes a number of Input/Output (I/O) interfaces, for example I/O interface 718 to the display 706, and I/O interface 720 to the keypad 704.

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The components of the processor module 702 typically communicate via an interconnected bus 722 and in a manner known to the person skilled in the relevant art.

The application program is typically supplied to the user of the wireless device 700 encoded on a data storage medium such as a flash memory module or memory card/stick and read utilising a corresponding memory reader-writer of a data storage device 724. The application program is read and controlled in its execution by the processor 712. Intermediate storage of program data may be accomplished using RAM 714.

The description of the present invention will begin with general definitions and description of some terms and concepts used throughout the specification and the claims.

Electronic address: This is an address that is assigned to electronic devices in the context of a telecommunication infra-structure. They include - (i) phone number (mobile or fixed-line including pagers etc), (ii) email address and instant messaging address (IM), and (iii) web-address for the web-sites on the internet. Electronic addresses are assigned to devices in order to facilitate communication.

Service: This is defined in context to what the consumer wishes the system to perform. Instances of service include, "send an SMS", "establish a voice call", "send an email" and the like.

Service Provider: This is the entity that facilitates provision of the service to the user. It will send/receive communications from the user, determine the complete service definition for the said communication, and process it accordingly. Service provider can provide all types of communication for a particular service depending on the nature of the complete service definition. Hence in general it can send/receive all types of communication to/from all types of electronic addresses.

Service definition. This contains a set of instructions for providing the service. Example of a complete service definition can be "receive the communication (SMS) sent from the mobile number 90214091 (electronic address of the user) to the mobile number 96613446 (electronic address of the service provider) and send it as email to trikaala@hotmail.com."

The System or Service Provider S may provide services with Service definition to a user or subscriber with electronic address M via N groups of electronic addresses, $G_1, G_2, \dots, G_N$. Each group of electronic addresses comprises K electronic addresses, and are illustrated as follows:

Group One G_1 : $\{P_1, P_{1S1}, P_{1S2}, \dots, P_{1SK}\}$

Group Two G_2 : $\{P_2, P_{2S1}, \dots\}$,

.....

Group n G_n : $\{P_n, P_{nS1}, \dots, P_{nSk}, \dots, P_{nSK}\}$,

.....

Group N G_N : $\{P_N, P_{NS1}, \dots, P_{NSK}\}$,

where $1 \leq k < K, 1 \leq n < N$.

Depending on how the System S is contacted by the subscriber, the electronic addresses $P_1, \dots, P_N, \dots, P_{1SK}, P_{NSK}$ can be phone numbers, email addresses, IM (instant messaging) addresses, or electronic identifications (IDs) or addresses for VoIP service such as Skype. The electronic addresses $P_1, \dots, P_N, \dots, P_{1SK}, P_{NSK}$ of the System S are compatible with the caller's electronic address M that he uses to contact the system S at any of its electronic addresses $P_1, \dots, P_N, \dots, P_{1SK}, P_{NSK}$. If the subscriber uses his email address to contact the System S at its electronic addresses, then the system electronic addresses are also email addresses. If the subscriber uses his phone (mobile or fixed line) with phone number M to contact the system S at its electronic- addresses $P_1, \dots, P_N, \dots, P_{1SK}, P_{NSK}$ via a voice call, then the system electronic addresses $P_1, \dots, P_N, \dots, P_{1SK}, P_{NSK}$ are phone numbers capable of receiving a voice call. If the subscriber uses his mobile phone with phone number M to contact the system S at its electronic addresses $P_1, \dots, P_N, \dots, P_{1SK}, P_{NSK}$ via an sms, then the system electronic addresses $P_1, \dots, P_N, \dots, P_{1SK}, P_{NSK}$ are phone numbers capable of receiving sms. If the subscriber uses his IM or VoIP address, to contact the System S at its electronic addresses $P_1, \dots, P_N, \dots, P_{1SK}, P_{NSK}$ then the system electronic addresses $P_1, \dots, P_N, \dots, P_{1SK}, P_{NSK}$ are also IM or VoIP addresses, respectively.

The subscriber with electronic address M is registered at one or more of the system electronic addresses P1, ... PN, ... P1SK, PNSK to access a service with a service definition SD. If the subscriber with electronic address M contacts (calls, sends an sms, sends an emails, IM etc), one of the system electronic addresses, say PnSk (PnSk is anyone of P1, ... PN, ... P1SK, PNSK), then using M & PnSk as indices for a two-dimensional data-base look-up, the System S may determine the service definition as follows:

- (i) Destination electronic address(es) Q_{PnSk} (can be more than one)
- (ii) Optionally, system electronic address(es) R_{PnSk} (can be more than one), and
- (iii) Service description that the subscriber with electronic address M is registered for when he contacts the System at the electronic address PnSk.

The System S then contacts the destination electronic address Q_{PnSk} , optionally from a specific system electronic address R_{PnSk} , for providing the service as per the service description to the communication from M to PnSk and from R_{PnSk} to Q_{PnSk} .

Multiple callers can be registered to the system in a way that when different callers contact the same system electronic addresses P1, ... PN, ... P1SK, PNSK, the service definition and thus the destination electronic address(es) Q_{PnSk} , system electronic address(es) R_{PnSk} , and the service definitions are different. The service definitions are all based on the electronic address (also termed caller-ID for telephony services) of the subscriber who contacts the System S.

When a subscriber is registered for a service definition when he contacts P1, he is simultaneously registered to the same service definition for all of the group numbers in Group G1. Alternately, the subscriber can be registered for a service definition at any one of the system electronic address in the Group G1 e.g. P1S1 and he is automatically registered for the same service definition for all the system electronic addresses in that group G1. The same applies for P2, and so on. The system electronic addresses can, for instance, be phone numbers in different countries. As the subscriber roams, he may then choose to contact different system phone numbers in a group depending on his location. It will be appreciated that there are different ways of implementing identifying the same Service definition for a group of electronic addresses using e.g. different look-

up tables at the central server and/or the local servers. The choice of implementation can e.g. take into account the locality of the respective servers.

The subscriber with electronic address M can now contact any system electronic address in the group Gn to access the same service definition.

When the subscriber with electronic address M contacts the system electronic address PnSk, the system S may first determine the group the contacted system electronic address belongs to. The system S may then determine the Lead System Electronic Address Pn for that group. Further, the system S determines the service definition from the two-dimensional mapping using the electronic address M of the subscriber and the Lead System Electronic Address Pn of the group the system electronic address contacted by the subscriber belongs to. In this embodiment, it is the Lead System Electronic Address Pn and the electronic address of the subscriber M that are used to determine the service definition and then provide the service accordingly. In other embodiments, the contacted system electronic address PnSk and electronic address of the subscriber M are used directly to determine the service definition, i.e. different look-up table(s) may be implemented in different embodiments.

Figure .1 illustrates an example embodiment of a server system 104 for communication services. In this example embodiment, a user (caller) 102 of mobile number (or electronic address) M is registered with the service provider of the server system 104 for a particular service definition. The server system 104 assigns the user 102 with a group of telephone numbers (or electronic addresses) P1, P1S1, P1S2, P1S3.... P1Sk etc. By dialling any one of the numbers in the group, e.g. P1Sk, the user may access the particular service he has registered for.

In this embodiment, the server system 104 comprises a network of local servers 106, 108, 110 in respective countries capable of connecting to a central server 112. Suppose the user 102 of mobile number M roaming in the country associated with the local server 106 now dials e.g. P1S1 to access a service via the server system 104. The local server 106 receives a call (or SMS) from the caller 102 at a particular electronic address, P1S1, and uses the parameters M and P1S1 to look up its database 116 to

determine the Lead System Electronic Address P1 of the same group. The local server 106 then connects to the central server 112 using the Lead System Electronic Address P1 and also provides the central server 112 with the user's electronic address M. Based on the parameters, namely the Lead System Electronic Address P1 and the user
5 electronic address M, the central server 112 is able to obtain the service definition of the subscribed service from a look-up database 122 stored in the central server 112. With the service definition, the central server 112 is able to provide the service.

It will be appreciated by a person skilled in the art that the method of obtaining
10 the service definition may be implemented in other manners. The service definition need not be obtained via the two-stage look up process described above i.e. first obtaining the Lead System Electronic Address before obtaining the service definition. In alternative embodiments, the local server database 116 may be able to directly identify the service definition based on the user's electronic address M and the service electronic address
15 P1S1 (instead of P1). In such an embodiment, the local database 116 size may be larger as all necessary information for the complete service definition will have to be duplicated across all local databases 116, 118, 120.

The example embodiment may be applicable to a user who would like a
20 communication service available to his mobile phone 102, even when he is overseas. For example, the user may wish to subscribe to a service which allows his SMS text-messages to be converted into an email for receipt by his intended recipient 105. At the same time, he may also inform the service provider of the countries where he would like to be provided with the service. The service provider will then provide the user with a list
25 of numbers (i.e. Electronic Address) to send the text message to, to access the service. Each number may be a local number in a particular country for access the service. For example, suppose the user's mobile phone 102 is roaming on a Singapore network 126, and was assigned number P1S1 to access the service in Singapore. The user sends via
30 normal SMS the text message to P1S1. The local server in Singapore 106 will receive the text-message via SMS and forward the text message and the user's mobile number M to the central server 112, which may be located in e.g. Malaysia via e.g. the internet 140 using the Lead System Electronic Address P1. Based on the user's mobile number M and the Lead System Electronic Address P1 as look-up parameters, the central server 112 will retrieve the service definition the user has subscribed to and generate the

instructional steps to perform the service. In this case, the central server 112 will send the received SMS text message as an Email to a pre-determined recipient 105 with electronic address (Email) Q.

5 Similarly, the same service may be accessed via the electronic address (number) P1S2 in e.g. Australia when the mobile phone 102 with electronic address M is logged onto the Australian network 108. The local (Australian) server 108 will receive the text message via SMS and forward the text message and the user's mobile number M to the central (Malaysian) server 112 via the internet 140 using the Lead System Electronic
10 Address P1. Based on the user's mobile number M and the Lead System Electronic Address P1 as look-up parameters, the central server can retrieve the service definition the user has subscribed to and generate the instructional steps to convert the text message into an email message which is subsequently sent to a pre-determined recipient.

15 It will also be appreciated by a person skilled in the art, that the functions of the central server 112 may be integrated into any one of the local servers e.g. 126, 128, 130, although the embodiment described in Figure 1 may be preferred for uniformity among the local servers.

20 The example embodiments can provide an advantage of cost-savings when a user is roaming overseas. When a user is registered to a value-added service in Singapore, he is now also subscribed automatically for that service in a host of different countries. The caller may put all the group numbers in his phone-book and call different
25 system numbers from that group depending on his own location when calling. A user with e.g. a Singapore-based mobile phone will therefore not have to pay additional international call charges when roaming in e.g. Australia, to access the same service. This will enable more cost effective value-added service for the roaming user.

30 In an alternate embodiment, the system may allocate group system electronic addresses in a flexible way to subscribers who are registered for a particular service. For example, Singapore-based users A and B are subscribed to the e.g. SMS to email service. They are allocated the same Lead System Electronic Address P1 to access the service in Singapore. User A who travels to UK and US will be provided with UK and US

numbers as group system Electronic Addresses P1S1 and P1 S2 in order to access the service in UK and India respectively. In contrast, user B who travels to Thailand and China is provided group system Electronic Addresses P1S1* and P1S2* in order to access the service in Thailand and China. The group system Electronic Addresses P1S1 , P1S2, P1S1* and P1S2* are different even though they may share identical Lead System Electronic Address P1.

In the example embodiment illustrated above, an SMS to Email service is described. It will be appreciated by a person skilled in the art that a variety of other services may be provided with the system described. Some of these services are described in the following example services.

Figure 2 illustrates an example providing the service of Conference Calling. In this example embodiment, the system / service provider 204 receives a call from the caller 202. Using the parameters M and P1S1, the pre-registered phone numbers Q1, Q2, ..., of the conference callees 206a-206d are obtained. The system then calls Q1, Q2, ..., simultaneously, and connect all these calls for a conference call between M, Q1 , Q2, ...". Whatever the caller 202 or callees 206a-d speak into their respective phones now becomes the communication between the caller 202 and callees 206a-d via the system 204.

Figure 3 illustrates an example providing the service of Mobile to PC (Personal Computer) calling. In this example embodiment, the system / service provider 304 receives the call from the caller 302. Using the parameters M and P1S1, the Skype-ID Q of the callee on the VoIP system 310 is obtained. The system then calls the callee 306 at Q and connects the call from M to the Skype-ID Q via the system 304. Here, the voice communication is received at the electronic address P of the system 304 over a phone network 308 from M. The communication is converted by the system 304 to a form suitable for VoIP communication e.g. data packets from the system 304 to Q. The reverse is done for the voice communication from Q to the System 304 that is eventually delivered to M by the System 304.

Figure 4 illustrates an example providing the service of identity masking. In this example embodiment, the system / service provider 404 receives a call (or text message via SMS) from the caller 402. Using the parameters M and P1S1, the phone numbers Q and R are determined. The System 404 then dials for (or sends via SMS) the callee 406 at Q using the System phone number R and connects the call between M and Q via the system (receiving address P and the dialling address R), without revealing the caller's number M.

In addition to the examples provided above, other services which may be provided by the embodiments described are: Email to SMS, SMS/Voice call to email, fax to email, SMS to IM (instant Messaging), SMS to Group SMS, SMS backup, SMS/Call to Email/IM, Voice Messaging, missed call alert notification, sending voice/fax messages when only phone number of intended recipient is known, calling cards, information access, call recording, emergency calling, advertising services, information/reminder notification; music/information delivery, email account and IM access, information retrieval from the internet, call-back, etc..

The service definition in example embodiments can comprises one or more of a group comprising: making a voice call to the one or more second electronic addresses, leaving a message at the one or more second electronic addresses, sending an email to the one or more second electronic addresses, sending a fax to the one or more second electronic addresses, sending an IM to the one or more second electronic addresses, sending an MMS to the one or more second electronic addresses, making a calling card call to the one or more second electronic addresses, making an access sequence call to the one or more second electronic addresses, sending audio data to the one or more second electronic addresses, sending video data to the one or more second electronic addresses, and sending multi-media data to the one or more second electronic processes.

The service definition in example embodiment can comprise one or more of a group comprising: receiving a voice call from the one or more second electronic addresses, recording a message from the one or more second electronic addresses, receiving an email from the one or more second electronic addresses, receiving an SMS from the one or more second electronic addresses, receiving a fax from the one or more

second electronic addresses, receiving an IM from the one or more second electronic addresses, receiving an MMS from the one or more second electronic addresses, receiving a calling card call from the one or more second electronic addresses, receiving an access sequence call from the one or more second electronic addresses, receiving
5 audio data from the one or more second electronic addresses, receiving video data from the one or more second electronic addresses, and receiving multi-media data from the one or more second electronic addresses.

The service definition can also comprise conversion of one communication
10 format into another communication format and/or recording a communication to and/or from the one or more second electronic addresses.

In example embodiments, performing the communication to the server electronic address of one of the servers from the first electronic address can comprise one or more
15 of a group comprising: making a voice call to the server electronic address, sending an email to the server electronic address, sending an SMS to the server electronic address, sending a fax to the server electronic address, sending an IM to the server electronic address, sending an MMS to the server electronic address, making a calling card call to the server electronic address, making an access sequence call to the server electronic
20 address, sending audio data to the server electronic addresses, sending video data to the server electronic addresses, and sending multi-media data to the server electronic addresses.

Figure 5 shows a flow chart 500 illustrating a method of providing a service
25 according to an example embodiment. At step 502, a communication to one of a plurality of server electronic addresses from a first electronic address is performed. At step 504, at the server electronic address, the first electronic address from which the communication is made is identified. At step 506, a service is provided based on a service definition depending on a combination of the server electronic address and the
30 first electronic address, wherein the plurality of server electronic addresses are divided into one or more groups such that server electronic addresses from one group, when combined with the first electronic address, generate an identical service definition; and the service definition comprises one or more second electronic addresses for execution of the service.

It will be appreciated by a person skilled in the art that numerous variations and/or modifications may be made to the present invention as shown in the specific embodiments without departing from the spirit or scope of the invention as broadly
5 described. The present embodiments are, therefore, to be considered in all respects to be illustrative and not restrictive.

CLAIMS

1. A first server apparatus for identifying a service to be provided, the first server apparatus being a first server of a plurality of servers, the plurality of servers being divided into one or more groups, each of the one or more groups having a group identifier, and each of the servers in a group having a server identifier comprising the group identifier, and wherein the service is defined by a service definition, the server being configured:

- to receive a communication from a first communication device having a first electronic address;

- to identify the first electronic address; and

- one of:

- to identify the service using a combination of the group identifier and the first electronic address; and

- to transmit, to a central server, the group identifier and the first electronic address for the central server to identify the service using a combination of the group identifier and the first electronic address; and;

- wherein

- the service definition comprises one or more second electronic addresses for execution of the service.

2. The server apparatus of claim 1 configured to identify the service using a combination of the first electronic address and the server identifier.

3. The server apparatus of claim 1 or claim 2 configured to allow a user of the first communication device to register with the server apparatus prior to the server apparatus receiving the communication.

4. The server apparatus of claim 3 configured to register a user of a second communication device responsive to the user of the second communication device registering with another server in a group with the first server.

5. A central server apparatus for identifying a service to be provided, the central server configured to receive transmissions from a plurality of servers, the plurality of

servers being divided into one or more groups, each of the one or more groups having a group identifier, and each of the servers in a group having a server identifier comprising the group identifier, and wherein the service is defined by a service definition, the server apparatus configured:

to receive, from a first server of the plurality of servers, a transmission comprising the group identifier and a first electronic address, the first electronic address having been identified by the first server upon receipt of a communication from a first communication device having the first electronic address; and

to identify the service using a combination of the group identifier and the first electronic address; wherein

the service definition comprises one or more second electronic addresses for execution of the service.

6. A method for identifying a service to be provided, the method implemented using a first server of a plurality of servers, the plurality of servers being divided into one or more groups, each of the one or more groups having a group identifier, and each of the servers in a group having a server identifier comprising the group identifier, and wherein the service is defined by a service definition, the method comprising:

receiving, at the first server, a communication from a first communication device having a first electronic address;

identifying, at the first server, the first electronic address; and

one of:

identifying, at the first server, the service using a combination of the group identifier and the first electronic address; and

transmitting, from the first server to a central server, the group identifier and the first electronic address for the central server to identify the service using a combination of the group identifier and the first electronic address; and; wherein

the service definition comprises one or more second electronic addresses for execution of the service.

7. A method for identifying a service to be provided, the method implemented using a central server configured to receive transmissions from a plurality of servers, the plurality of servers being divided into one or more groups, each of the one or

more groups having a group identifier, and each of the servers in a group having a server identifier comprising the group identifier, and wherein the service is defined by a service definition, the method comprising:

receiving, from a first server of the plurality of servers, a transmission comprising the group identifier and a first electronic address, the first electronic address having been identified by the first server upon receipt of a communication from a first communication device having the first electronic address; and

identifying the service using a combination of the group identifier and the first electronic address; wherein

the service definition comprises one or more second electronic addresses for execution of the service.

8. The method of claim 6 or claim 7, further comprising allowing the user of the first communication device to define the service definition.

9. A computer program product having stored thereon computer code means for instructing a computer to execute the method of any one of claims 6 to 8.