

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

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In accordance with a first aspect of the present invention, 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.

20 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.

25 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.

30 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

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

5 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.

10 In accordance with a second aspect of the present invention, 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
15 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
20 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
25 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.
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The different networks may reside in different respective countries.

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

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.

- 5 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.

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- 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 thirs aspect of the present invention, 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.
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BRIEF DESCRIPTION OF THE DRAWINGS

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 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:

In embodiments of the present invention, the System or Service Provider S provides services with Service definition to a user or subscriber with electronic address M via N groups of electronic addresses, G1, G2, ..., GN. Each group of electronic addresses comprises K electronic addresses, and are illustrated as follows:

Group One G1: {P1, P1S1, P1S2, ... P1SK},

Group Two G2: {P2, P2S1, ...,},

....

10 Group n Gn: {Pn, PnS1, ..., PnSk, ..., PnSK},

...

Group N GN: {PN, PNS1, ..., PNSK},

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

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Depending on how the System S is contacted by the subscriber, the electronic addresses P1, ... PN, ... P1SK, PNSK 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 P1, ... PN, ... P1SK, PNSK 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 P1, ... PN, ... P1SK, PNSK. 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 P1, ... PN, ... P1SK, PNSK via a voice call, then the system electronic addresses P1, ... PN, ... P1SK, PNSK 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 P1, ... PN, ... P1SK, PNSK via an sms, then the system electronic addresses P1, ... PN, ... P1SK, PNSK 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 P1, ... PN, ... P1SK, PNSK then the system electronic addresses P1, ... PN, ... P1SK, PNSK are also IM or VoIP addresses, respectively.

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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.

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

10 In one embodiment of the present invention, when the subscriber with electronic address M contacts the system electronic address PnSk, the system S first determines 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.

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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.

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30 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

numbers as group system Electronic Addresses P1S1 and P1S2 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 embodiment of the present invention 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 embodiment of the present invention 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 embodiment of the present invention 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

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

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.

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:

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.

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

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