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(54) **METHOD AND SYSTEM FOR COMBINING TEXT AND VOICE MESSAGES IN A COMMUNICATIONS DIALOGUE**

VERFAHREN UND SYSTEM ZUM KOMBINIEREN VON TEXT- UND SPRACHNACHRICHTEN IN EINEM KOMMUNIKATIONSDIALOG

PROCÉDÉ ET SYSTÈME PERMETTANT DE COMBINER DES MESSAGES TEXTUELS ET DES MESSAGES VOCAUX DANS UN ÉCHANGE DE COMMUNICATIONS

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Description

[0001] The present invention relates to a method, according to the preamble of Claim 1, for combining text and voice messages in a communications dialogue.

[0002] The invention also relates to a server computer according to Claim 8.

[0003] Methods and systems of this kind are used, for example, for implementing text-message based booking services.

[0004] According to the prior art, initiating a dialogue has required a text-based initiation, which can be difficult from the user's point of view, and the situation can form a threshold question for starting to use the service. On the other hand, message dialogues are implemented purely on a text-message basis. A message dialogue may break, if it has been wished to make contact in the dialogue with the aid of a voice message, such as a voice call. The dialogue has had no support for voice messages; instead the voice message has remained an event external to the dialogue.

[0005] The patent application publication US 2003/0101071 A1 discloses multi-stage interactive message-based sessions with potential users, comprising sender address conversion.

[0006] In addition, according to the prior art, bulk deliveries of e-mail messages have been implemented from a number inside operators' networks using Content Gateway technology. The delivery address of the Content Gateway bulk-delivery technology on the network side is not a familiar telephone number, which has the form +358 400 123 456, but is a short service number, which is not a real telephone number, but instead, for example 16400. Because it is not a real network number, it also cannot roam from one network to another, but goes directly to the content gateway of the operator in question. In the present document, the term roaming refers to either the updating of number information when a terminal device moves from one country to another, or the functionality of a service number when the service is used from a different country to that in which the service provider is located. Operators have constructed varied and complex solutions, by means of which services can be made to function also in other operators' networks and number spaces. In practice, this leads to complicated mutual agreements on the joint use of specific numbers, for example, by routing messages coming to a specific number of another operator back to the operator owning the number.

[0007] For years, attempts have been made to harmonize numbers on a European level, but the competing operators have never reached agreement on general service numbers. An additional drawback of the present technology is that, in the solution, the connection equipment inside the network of one operator should be connected with the corresponding connection equipment of all the other operators of networks (point to point). This creates a large number of agreements and connections from one place to another. Therefore in practice such solutions only function between a few operators.

[0008] The message bulk-delivery systems according to the prior art are thus implemented on a telephone-operator-specific basis, in such a way that the 'sender' field of the messages has shown the operator's own number, which as described above is not a roaming number. The services have therefore not functioned outside the operator's own country. Such a system is not suitable for query dialogues of a demanding type, as the use of the 'reply function' has always returned the messages to the same number and then only if the subscriber has been in their home network.

[0009] Attempts have also been made to solve the problem using tailor-made modem banks, but these solutions have been slow, expensive, and even unreliable.

[0010] The invention is intended to eliminate the defects of the prior art disclosed above and for this purpose create an entirely new type of method for combining text and voice messages in a communications dialogue.

[0011] One preferred embodiment concerns applying the aforementioned method to the bulk delivery of messages, and providing the invention for international use.

[0012] The invention is based on starting the message dialogue with a voice message. In practice, this takes place in such a way that a voice-message call attempt (voice-call or VOIP connection) is received, or a connection is formed with a potential user of the service on the basis of a voice-message call attempt, in response to the voice-message connection formed, or to the call attempt, to the potential user of the service is sent a text-form message, which initiates a long, logically continuous, temporally discontinuous session N, in such a way that the sender address (e.g., the A number) is altered to correspond to the session number N and the session stage J, and there is at least one selection query in the message.

[0013] According to a preferred embodiment a message bulk-delivery method is used, in which case the desired reply address of each bulk-delivered message, typically the sender information, is converted to correspond to a predefmed dialogue, in which the stage of the dialogue defines unequivocally the sender information, in which case the sending and reception of messages are implemented in different parts of the telecommunications network.

[0014] More specifically, the method according to the invention is characterized by what is stated in Claim 1.

[0015] The server computer according to the invention is, for its part, characterized by what is stated in Claim 8.

[0016] Considerable advantages are gained with the aid of the invention.

[0017] The voice-message possibility according to the invention facilitates the initiation of the service and creates flexibility in the dialogue. Flexibility can be implemented in a very user-friendly manner, in which case voice messages can be used to start very complex dialogues, thus avoiding unnecessary contacts that waste

the user's time and also saving capacity in the communications network.

[0018] The preferred embodiments of the invention are operator-independent and will function in the networks of all operators. The most typical applications of the invention will function in the telephone of any GSM customer in any network whatever. The invention offers a cost advantage on the transmission side thanks to the bulk delivery while reception nevertheless operates entirely country-independently, i.e. in an entirely roaming manner from the network of each operator.

[0019] In the following, the invention is examined with the aid of examples and with reference to the accompanying drawings.

Figure 1 shows schematically a solution according to the prior art.

Figure 2 shows a block diagram of a solution according to a preferred embodiment of the invention.

Figure 3 shows schematically information fields in a message according to the invention.

Figure 4 shows a flow diagram of a solution according to the invention.

[0020] According to Figure 1, in the prior art telephone operators A and B have text-message bulk-delivery means 3 in their own networks, by means of which each operator can effectively deliver large numbers of text messages. In the solution shown, each operator has a service number 20 relating to the joint message service arranged by agreement and using connection technology, which is not available to other operators outside the agreement. According to the prior art, the service number 20 is a non-roaming short number.

[0021] In the system according to Figure 2, there are typically two parties, which in exceptional cases can be the same company.

[0022] The service providing service company or association 1, which provides subscribers 8, for example, with booking services for buying tickets, changing tyres, etc. The service company or association 1 operates in a radio network, the home network 13 of some operator.

[0023] In the present application, the term service company or association 1 refers to an association or company, which operates in either its own or an extraneous telecommunications network, and produces either directly or indirectly services for customers. Such a company or association is typically a sub-contractor of an actual telephone operator, nor does a user of the service necessarily even know of the existence of the service company or association 1. In a preferred embodiment of the invention, the service company or association 1 produces either directly or indirectly many kinds of booking and reservation services for telephone subscribers. The invention can also be used within a single association.

[0024] The system also includes a telephone operator 2, in the network 14 of which there are means and equipment for the bulk delivery of digital messages containing sender information (such as SMS messages). Such a practical network element is, for example, SMS bulk-delivery logic 3, which can be implemented, for example, using Content Gateway technology.

[0025] With reference to Figure 2 and 3, in the first stage the service company or association 1 uses combination logic 9 and number conversion 4 to form a large number of messages 40, each of which contains recipient information 30, the actual message 31, and information 32 of either the sender or in practice the address, to which a reply to the message 40 is desired. In an SMS (Short Message System) application, the recipient information 30 is a mobile-station number and the sender information 32 is the sender information in the sender field 32 of the SMS message altered using a number converter 4.

[0026] Each of the aforementioned messages can be sent in response to a telephone call or call attempt of a user (subscriber).

[0027] Within the scope of the invention, the message 40 can be any message whatever that can be sent through a digital information network, which comprises recipient information, the actual message, and information on the desired reply address, for example, in the form of sender information. Such message 40 can be not only SMS messages, but also, for instance, e-mail messages, or, for example, multimedia messages (MMS).

[0028] A large number of the aforementioned messages can be formed dynamically on the basis of complex dialogues. Corresponding, for example, in emergency applications, the message totality can be static and ready for an emergency situation.

[0029] In the conversion of the desired reply address, for example of the sender's number, it is possible to take into account the address (or number) from which the connection to the service company or association 1 has been formed. In this way, it is possible to route the messages of subscribers 8 in the USA to their own national server, and correspondingly the messages of Finnish users of the same service to their own national server. From these national servers, the reply messages can be transferred over suitable telecommunications links to the service company or association 1 for further measures.

[0030] The messages formed by the service company or association 1 are sent to the bulk-delivery logic 3, which is located in the operator's 2 network 14, from where the bulk delivery 5 of the messages is implemented. From here the messages 40 disperse always according to the recipient information 30 and arrive at the subscriber's 8 terminal 7 through the subscriber's 8 radio network 6 at the time. The subscriber 8 can reply to the message using the 'reply' function, in which case the reply message is sent to the address that is defined by the value of the sender or reply-address field 32. The message 40 leaves to the service company or association 1 through radio networks 12, 11, and 13. Naturally, if the

subscriber 8 is within the area of the home network 13 of the service company or association 1, the message will not travel through the networks 11 and 12. From the home network 13, the message is transferred to the reception 10 of messages for the service company or association, where it is combined with a suitable dialogue with the aid of combination logic 9 and number conversion. In practice, networks 13 and 14 may be the same thing.

[0031] More concretely, for example, in an SMS application, when a message is sent to the subscriber 8, the sender's number (A number) is converted before bulk delivery in block 4, for example, to +358500001 in the first stage of a predefined session (dialogue). The number space of the sender's number (A number) is defined by the service provider's 1 own number space, which in the invention is entirely independent of the number space of the sending operator 2. In the following stage of the same session, the A number is, for example, +358500002, guided by the logic 9 of the service company or association 1, and so on. The sending A number is tightly defined from a logically progressing dialogue formed by the service provider 1, in which the reply to each message sent is awaited at a specific telephone number (digital reply address), which is contained in the message sent as the A number.

[0032] Thus, the subscriber replies to the SMS message using the reply function, so that in the first stage of the dialogue the reply goes to the number +35800001 and correspondingly in the second stage of the dialogue to the number +35800002.

Example of dialogue:

[0033] Message Sender's number

1. Do you need to book a time for tyre changing, reply Y/N +35850001

2. Is 07.12.2005 suitable, reply Y/N +35850002

[0034] With the reply 'Y' of the subscriber 8 the system of the service provider 1 sends a message 2. The dialogue terminates, if the reply to the first message is 'N'. In stage 2, the reply 'Y' leads to the time being booked, whereas the reply 'N' leads to a new booking proposal.

[0035] The aforementioned message can be sent as a response to a telephone call or call attempt by the user (subscriber) to the service number of the tyre-changing company.

[0036] The messages described above are sent as a bulk delivery to hundreds/thousands of recipients at one time and the A number (= field 32) of the first stage of the dialogue would then always be +35850001 and correspondingly in the second stage of the dialogue always +35850002, so that the reply to each message sent will always be targeted to the right number. In connection with the reply, the A number of the sender 8 is, in turn, defined by the person for whom the booking is made.

[0037] According to Figure 4, in block 43 a voice-message call attempt (voice call or VOIP connection) is received from a user (typically a subscriber), or a connection is formed to a potential user of the service on the basis of a voice-message call attempt. As a response to the formed voice-message connection or call attempt, a text-form message is sent to the potential user in accordance with block 41, which starts a long, logically continuous, temporally discontinuous session N, in such a way that the sender address (e.g. the A number) is converted to correspond to the session number N and the session stage J, and there is at least one selection query in the message.

[0038] The session N can continue, for example, as follows, in order to implement a long, logically continuous, temporally discontinuous session N: in stage 42, a text-form message is received, at the sender address defined in the previous stage, from the user of the message service, and the session proceeds according to the contents of the message.

[0039] After this, the next text-form message of session N is sent to the user of the message service, in such a way that the sender address (e.g. the A number) is converted to correspond to the session number N and the new session stage J.

[0040] According to the invention, a preferred embodiment is an SMS message, but according to the invention the message can be some other digital short message, in which it is possible to reply to the message, without separately defining the recipient. Thus the sender or reply-address field (field 32 in Figure 3) can contain, instead of telephone-number information, the desired reply address in some other form, for example, as an e-mail address, or as numeric or alphanumeric sender or reply-address information.

[0041] Thanks to the number conversion, the message is typically received in an open radio network external to the network of the operator 2, which sent the message, and is routed on the basis of the A number to the system of the service company or association 1. Thus, in the invention, in an SMS application, before bulk delivery the information of the 'sender' field of the text message is changed, in such a way that a different value is written in it to what the sender's number is in reality. This value is obtained from the logic 9, 10 of the service company or association 1, according to a predefined rule, in such a way that the queries and replies arriving in the logic can be combined.

[0042] In addition, in the system of the service company or association 1 there is logic 9 connecting the sending end and the receiving end, which can combine a sent message and its return message arriving from an extraneous operator 2, in such a way that the subscriber can reply (from outside the network) from any subscription whatever, but, however, the sending can take place from inside the network using a large capacity and economically. I.e. it is possible to select the cheapest sending

operator, but receive from anywhere in the information network.

[0043] According to the invention, at the receiving end of the messages it is possible to disperse reception, in such a way that, for example, in Sweden reception takes place in a local network element and in Finland correspondingly in a Finnish network element, from which national network elements the received messages are transferred using suitable connections, for example, an IP link, to the system of the service company or association, for further processing. Thus the international roaming of the service is faster and cheaper, as well as more reliable. In addition, the use of the service is more pleasant for the consumer, because sending takes place to the number of a local operator, and not to the network of a foreign operator, which is considered to be expensive. In some subscriptions, a foreign message may even be blocked, i.e. they may not function without the service according to the invention.

[0044] One application of the invention is described in the following:

> There are thousands of experts, who are needed in various catastrophe or emergency situations, or in other unexpected situations, where there is an acute need to have a large number of experts acting simultaneously. Often the situation is such that personnel is required in several locations simultaneously, in which case the emergency control centre will send messages concerning several locations. The personnel required then receives the message, using the system according to the invention, in their telephones and each recipient replies to the message that seems most appropriate. Thus the emergency control centre can decide on the basis of the replies who to send to which operation and in which area.

[0045] For example, after an earthquake an emergency control centre sends messages to thousands of emergency-aid specialists, using bulk-delivery logic, stating that help and expertise are required in Area 1, Area 2, and Area 3. When an emergency-aid specialist receives these three messages through his own operator, he can reply to the message that is the best alternative for him. The reply from the expert leaves through a radio network to the number defined by the message as an individual message through the service company or association 1 to the emergency control centre. Once the replies have been received, the server of the service provider 1 can combine the information on which expert is going to which of the areas 1 - 3. Thus the emergency control centre can act immediately and get the necessary personnel and equipment rapidly to their destinations.

[0046] The aforementioned message can be sent as a telephone call or call attempt by the user (subscriber) to the emergency control centre.

[0047] One application according to the invention is also the creation of a link to a person who travels globally in the service of an international major corporation. Large corporations typically have their own message communications centres, responding to the messages sent by which is difficult using existing technology, because if, for example, an American receives a group message from his company when he is in India, the 'reply' function cannot be used to reply to the message, because using existing technology there is a non-international number in the sender field. According to the invention, problems relating to both international roaming and also the further processing of the reply to the message are solved.

[0048] According to the invention, the aforementioned session can be initiated as a response to a telephone call or call attempt by the user (subscriber) to the company's service number. If, according to what is stated above, a person who is a subscriber wishes to reply only to telephone numbers with the code of their own country, the service provider can send from its own country group messages as a mass sending, in which the number of the sender is converted to an internal number of the recipient's country and the recipients can reply in their own area, without international numbers. In that case, the service provider will require servers in the country in question. Reply messages from the country-specific server are transmitted, for instance, over an IP connection to a server in the service provider's country, in which there is combination logic.

[0049] In the invention, a number external to the network is thus converted into the sender's identifier (= the desired reply address), so that it must return through the radio interface of the network. Thus in the reply situation messages are not routed directly to a service number inside the network, but instead through a radio interface outside the network, so that it roams automatically. For this operation, in one preferred embodiment of the invention there is thus not the short number 16400, but instead the fully roaming international number +358 5016400.

[0050] According to the invention, for example, a thousand messages are sent at one time using a bulk-sending application 3, in such a way that each individual message is given converted sender information for the reply message, so that the return messages arrive at different times (as people gradually reply) through several radio modems, so that the momentary capacity required for each radio modem will be small. However, the operation of services outside the service provider's home country, i.e. roaming operation, is achieved with the aid of the invention.

[0051] In this application, the term sender information refers to both a telephone number (A number) and to any information whatever, transported with a message, concerning the desired return address.

[0052] The method and server computer according to the invention are implemented, with the aid of at least one computer, in a telecommunications network.

[0053] The preferred application environment of the solution according to the invention is disclosed in publication WO 2004/019223, Booking System, messages

sent by the system applied to which can be implemented using the mass-sending method according to the present invention.

[0054] With the aid of the invention, if legislation so requires, the user's consent can be sought for the provision of a service including a long, logically continuous, temporally discontinuous session as a response to a first voice-message call or its attempt.

Claims

1. A method for sending messages in a telecommunications network (6, 11, 12, 13, 14), wherein the method comprises performing the following steps by a server computer (1) in the telecommunications network:

   - detecting (43) a voice-message call attempt or a connection formed to a terminal device (7) of a potential user of a service, on the basis of a voice-message call attempt, for each of several users,
   - as a response to the voice-message call attempt or connection formed to the terminal device (7), sending a text-form message from the telecommunications network to the terminal device (7), which text-form message comprises at least one selection query and initiates a logically continuous, temporally discontinuous session having multiple stages,
   - altering the sender address of the text-form message, before sending the text-form message, based on the session and current session stage for each of r the several users.

2. A method according to claim 1, wherein:

   - digital messages (40) which contain information on the desired reply address (32) are bulk delivered (3), and
   - messages, which are sent on the basis of the reply-address information (32) are received (10),
   - the reply-address information of each bulk-delivered message (40) is converted (3) to correspond to a predefined dialogue, in which the stage of the dialogue defines unequivocally the reply-address information (32), so that the transmission and reception of the messages are implemented in different parts of the telecommunications system (1, 2, 6, 11, 12).

3. A method according to claim 1 or 2, wherein the desired reply-address information is the sender field (32) of the message (40).

4. A method according to any one of the preceding claims, wherein the message (40) is an SMS message.

5. A method according to any one of the preceding claims, wherein the message (40) is an MMS message.

6. A method according to any one of the preceding claims, wherein the message (40) is an e-mail message.

7. A method according to any one of the preceding claims, wherein the reply-address information (32) of the message (40) is converted into a national address functioning in the recipient's (8) own country.

8. A server computer (1) for sending messages in a telecommunications network (6, 11, 12, 13, 14), which server computer comprises:

   - means for detecting (43) a voice-message call attempt or a connection formed to a terminal device (7) of a potential user of a service, on the basis of a voice-message call attempt, for each of several users,
   - transmission means, configured to send, as a response to the voice-message call attempt or connection formed or to the , to the terminal device (7) of the potential user (41) of the service, a text-form message, which comprises at least one selection query and initiates a logically continuous, temporally discontinuous session having multiple stages,
   - means for altering the sender address of the text-form message before sending the text-form message, based on the session and the current session stage for each of the several users.

9. A server computer according to claim 8, further comprising:

   - means for the bulk-delivery of digital messages (40), which contain information on the desired reply address (32), and
   - means for receiving messages (40), which are sent on the basis of the reply-address information (32),
   - means for converting the reply-address information (32) of each bulk-delivered message (40) to correspond to a predefined dialogue, in which the stage of the dialogue defines unequivocally the reply-address information (32), in such a way that the transmission and reception of the messages (40) are implemented in different parts of the telecommunications system (1, 2, 6, 11, 12).

10. A server computer according to claim 8 or 9, wherein

the desired reply-address information is the sender field (32) of the message (40).

11. A server computer according to claim 8 or 9, wherein the message (40) is an SMS message.

12. A server computer according to claim 8 or 9, wherein the message (40) is an MMS message.

13. A server computer according to claim 8 or 9, wherein the message (40) is an e-mail message.

14. A server computer according to claim 8 or 9, further comprising means for converting the reply-address information (32) of the message (40) into a national address functioning in the recipient's (8) own country.

Patentansprüche

1. Verfahren zum Senden von Mitteilungen in einem Telekommunikationsnetzwerk (6, 11, 12, 13, 14), wobei das Verfahren das Durchführen der folgenden Schritte auf einem Server-Computer (1) des Telekommunikationsnetzwerks umfasst:

- Erkennen (43) eines Anrufversuchs oder einer zu einem Endgerät (7) errichteten Verbindung eines potenziellen Nutzers eines Dienstes auf der Grundlage eines Anrufversuchs bei jedem von mehreren Nutzern,
- Senden einer Textmitteilung von dem Telekommunikationsnetzwerk an das Endgerät (7) als Antwort auf den Anrufversuch oder die zu dem Endgerät (7) errichtete Verbindung, wobei die Textmitteilung mindestens eine Auswahlanfrage umfasst und eine logisch kontinuierliche, temporär diskontinuierliche Sitzung mit mehreren Phasen einleitet,
- Ändern der Absenderadresse der Textmitteilung vor dem Senden der Textmitteilung auf der Grundlage der Sitzung und der aktuellen Sitzungsphase bei jedem der mehreren Nutzer.

2. Verfahren nach Anspruch 1, wobei

- digitale Mitteilungen (40), die Informationen über die gewünschte Antwortadresse (32) enthalten, gesammelt geliefert werden (3) und
- Mitteilungen, die auf der Grundlage der Antwortadresseninformation (32) gesendet wurden, empfangen werden (10),
- die Antwortadresseninformation jeder gesammelt gelieferten Mitteilung (40) umgewandelt wird (3), um einem vorbestimmten Dialog zu entsprechen, in dem die Phase des Dialogs die Antwortadresseninformation (32) eindeutig definiert, sodass die Übertragung und der Empfang der Mitteilungen in unterschiedlichen Teilen des Telekommunikationsnetzwerks (1, 2, 6, 11, 12) umgesetzt wird.

3. Verfahren nach Anspruch 1 oder 2, wobei die gewünschte Antwortadresseninformation das Absenderfeld (32) der Mitteilung (40) ist.

4. Verfahren nach einem der vorhergehenden Ansprüche, wobei die Mitteilung (40) eine SMS-Mitteilung ist.

5. Verfahren nach einem der vorhergehenden Ansprüche, wobei die Mitteilung (40) eine MMS-Mitteilung ist.

6. Verfahren nach einem der vorhergehenden Ansprüche, wobei die Mitteilung (40) eine E-Mail-Mitteilung ist.

7. Verfahren nach einem der vorhergehenden Ansprüche, wobei die Antwortadresseninformation (32) der Mitteilung (40) in eine nationale Adresse umgewandelt wird, die im Land des Empfängers (8) funktioniert.

8. Server-Computer (1) zum Senden von Mitteilungen in einem Telekommunikationsnetzwerk (6, 11, 12, 13, 14), wobei der Server-Computer umfasst:

- Mittel zum Erkennen (43) eines Anrufversuchs oder einer zu einem Endgerät (7) errichteten Verbindung eines potenziellen Nutzers eines Dienstes auf der Grundlage eines Anrufversuchs bei jedem von mehreren Nutzern,
- Übertragungsmittel, die als Antwort auf den Anrufversuch oder die zu dem Endgerät (7) des potenziellen Nutzers (41) des Dienstes errichtete Verbindung zum Senden einer Textmitteilung konfiguriert sind, die mindestens eine Auswahlanfrage umfasst und eine logisch kontinuierliche, temporär diskontinuierliche Sitzung mit mehreren Phasen einleitet,
- Mittel zum Ändern der Absenderadresse der Textmitteilung vor dem Senden der Textmitteilung auf der Grundlage der Sitzung und der aktuellen Sitzungsphase bei jedem der mehreren Nutzer.

9. Server-Computer nach Anspruch 8, weiter umfassend:

- Mittel zum gesammelten Liefern von digitalen Mitteilungen (40), die Informationen über die gewünschte Antwortadresse (32) enthalten, und
- Mittel zum Empfangen von Mitteilungen (40), die auf der Grundlage der Antwortadressenin-

formation (32) gesendet wurden,
- Mittel zum Umwandeln der Antwortadresseninformation (32) jeder gesammelt gelieferten Mitteilung (40), um einem vorbestimmten Dialog zu entsprechen, in dem die Phase des Dialogs die Antwortadresseninformation (32) eindeutig definiert, sodass die Übertragung und der Empfang der Mitteilungen (40) in unterschiedlichen Teilen des Telekommunikationsnetzwerks (1, 2, 6, 11, 12) umgesetzt wird.

10. Server-Computer nach Anspruch 8 oder 9, wobei die gewünschte Antwortadresseninformation das Absenderfeld (32) der Mitteilung (40) ist.

11. Server-Computer nach Anspruch 8 oder 9, wobei die Mitteilung (40) eine SMS-Mitteilung ist.

12. Server-Computer nach Anspruch 8 oder 9, wobei die Mitteilung (40) eine MMS-Mitteilung ist.

13. Server-Computer nach Anspruch 8 oder 9, wobei die Mitteilung (40) eine E-Mail-Mitteilung ist.

14. Server-Computer nach Anspruch 8 oder 9, weiterhin umfassend Mittel zum Umwandeln der Antwortadresseninformation (32) der Mitteilung (40) in eine nationale Adresse, die im Land des Empfängers (8) funktioniert.

Revendications

1. Méthode pour envoyer des messages dans un réseau de télécommunications (6, 11, 12, 13, 14), dans laquelle la méthode comprend l'exécution des étapes suivantes par un ordinateur serveur (1) dans le réseau de télécommunications :

- la détection (43) d'une tentative d'appel de message vocal ou d'une connexion formée vers un dispositif terminal (7) d'un utilisateur potentiel d'un service, sur la base d'une tentative d'appel de message vocal,

pour chacun de plusieurs utilisateurs,

- en tant que réponse à la tentative d'appel de message vocal ou la connexion formée vers le dispositif terminal (7), l'envoi d'un message au format texte du réseau de télécommunications au dispositif terminal (7), lequel message au format texte comprend au moins une interrogation de sélection et initie une session logiquement continue, temporellement discontinue ayant de multiples phases,
- la modification de l'adresse d'expéditeur du message au format texte, avant l'envoi du message au format texte, sur la base de la session et de la phase de session actuelle pour chacun des plusieurs utilisateurs.

2. Méthode selon la revendication 1, dans laquelle :

- des messages numériques (40) qui contiennent des informations sur l'adresse de réponse souhaitée (32) sont remis en masse (3), et
- des messages qui sont envoyés sur la base des informations d'adresse de réponse (32) sont reçus (10),
- les informations d'adresse de réponse de chaque message remis en masse (40) sont converties (3) pour correspondre à un dialogue prédéfini, dans lequel la phase du dialogue définit sans équivoque les informations d'adresse de réponse (32), de sorte que la transmission et la réception des messages soient mises en oeuvre dans différentes parties du système de télécommunications (1, 2, 6, 11, 12).

3. Méthode selon la revendication 1 ou 2, dans laquelle les informations d'adresse de réponse souhaitées sont le champ expéditeur (32) du message (40).

4. Méthode selon l'une quelconque des revendications précédentes, dans laquelle le message (40) est un message SMS.

5. Méthode selon l'une quelconque des revendications précédentes, dans laquelle le message (40) est un message MMS.

6. Méthode selon l'une quelconque des revendications précédentes, dans laquelle le message (40) est un message de courriel.

7. Méthode selon l'une quelconque des revendications précédentes, dans laquelle les informations d'adresse de réponse (32) du message (40) sont converties en une adresse nationale fonctionnant dans le propre pays du destinataire (8).

8. Ordinateur serveur (1) pour envoyer des messages dans un réseau de télécommunications (6, 11, 12, 13, 14), lequel ordinateur serveur comprend :

- des moyens de détection (43) d'une tentative d'appel de message vocal ou une connexion formée vers un dispositif terminal (7) d'un utilisateur potentiel d'un service, sur la base d'une tentative d'appel de message vocal,

pour chacun de plusieurs utilisateurs,

- des moyens de transmission, configurés pour envoyer, en tant que réponse à la tentative d'ap-

pel de message vocal ou la connexion formée vers le dispositif terminal (7) de l'utilisateur potentiel (41) du service, un message au format texte qui comprend au moins une interrogation de sélection et initie une session logiquement continue, temporellement discontinue ayant de multiples phases,
- des moyens de modification de l'adresse d'expéditeur du message au format texte avant l'envoi du message au format texte, sur la base de la session et de la phase de session actuelle pour chacun des plusieurs utilisateurs.

9. Ordinateur serveur selon la revendication 8, comprenant en outre :

- des moyens de remise en masse de messages numériques (40), qui contiennent des informations sur l'adresse de réponse souhaitée (32), et
- des moyens de réception de messages (40), qui sont envoyés sur la base des informations d'adresse de réponse (32),
- des moyens de conversion des informations d'adresse de réponse (32) de chaque message remis en masse (40) pour correspondre à un dialogue prédéfini, dans lequel la phase du dialogue définit sans équivoque les informations d'adresse de réponse (32), de telle sorte que la transmission et la réception des messages (40) soient mises en oeuvre dans différentes parties du système de télécommunications (1, 2, 6, 11, 12).

10. Ordinateur serveur selon la revendication 8 ou 9, dans lequel les informations d'adresse de réponse souhaitées sont le champ expéditeur (32) du message (40).

11. Ordinateur serveur selon la revendication 8 ou 9, dans lequel le message (40) est un message SMS.

12. Ordinateur serveur selon la revendication 8 ou 9, dans lequel le message (40) est un message MMS.

13. Ordinateur serveur selon la revendication 8 ou 9, dans lequel le message (40) est un message de courriel.

14. Ordinateur serveur selon la revendication 8 ou 9, comprenant en outre des moyens de conversion des informations d'adresse de réponse (32) du message (40) en une adresse nationale fonctionnant dans le propre pays du destinataire (8).

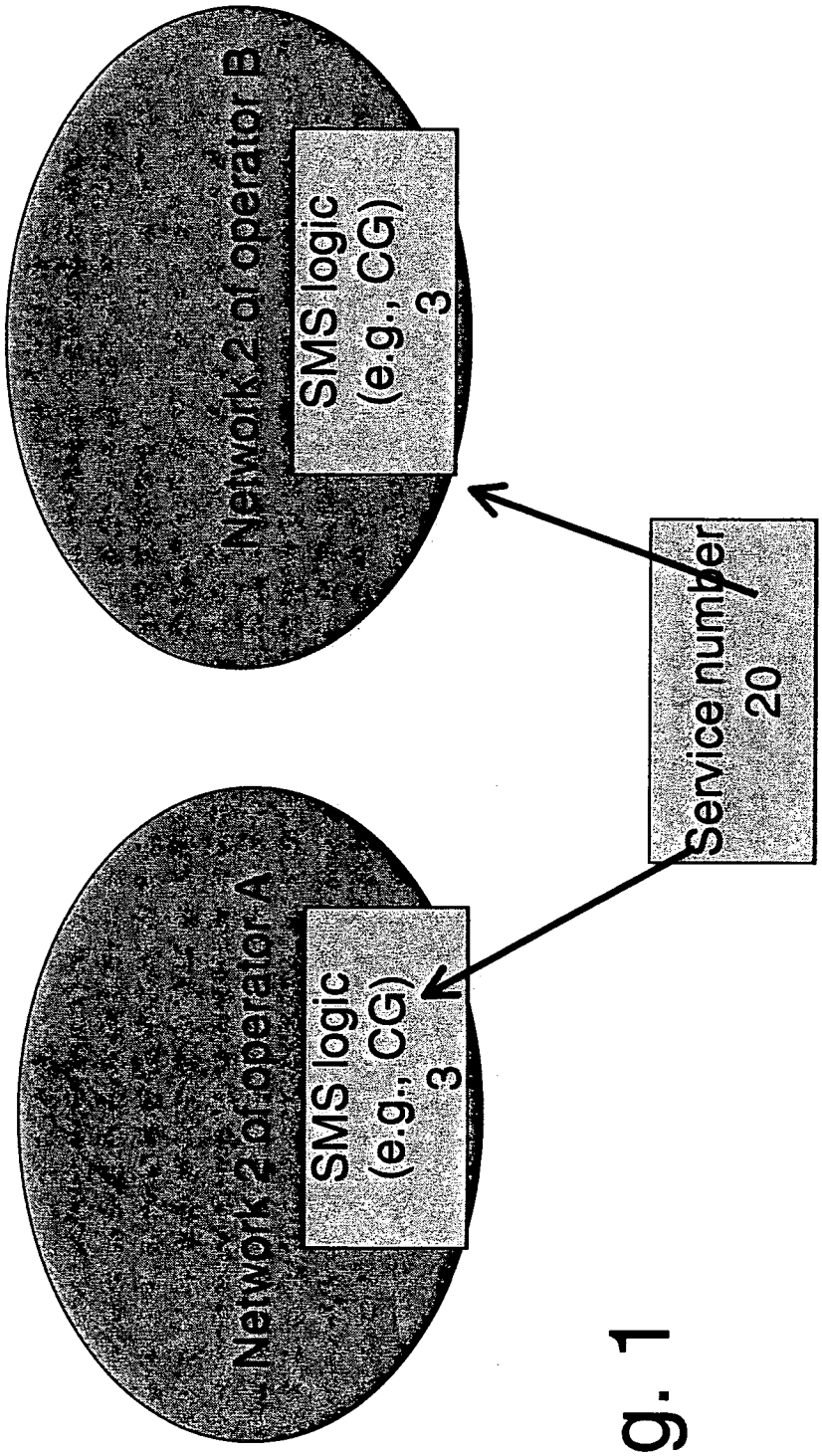
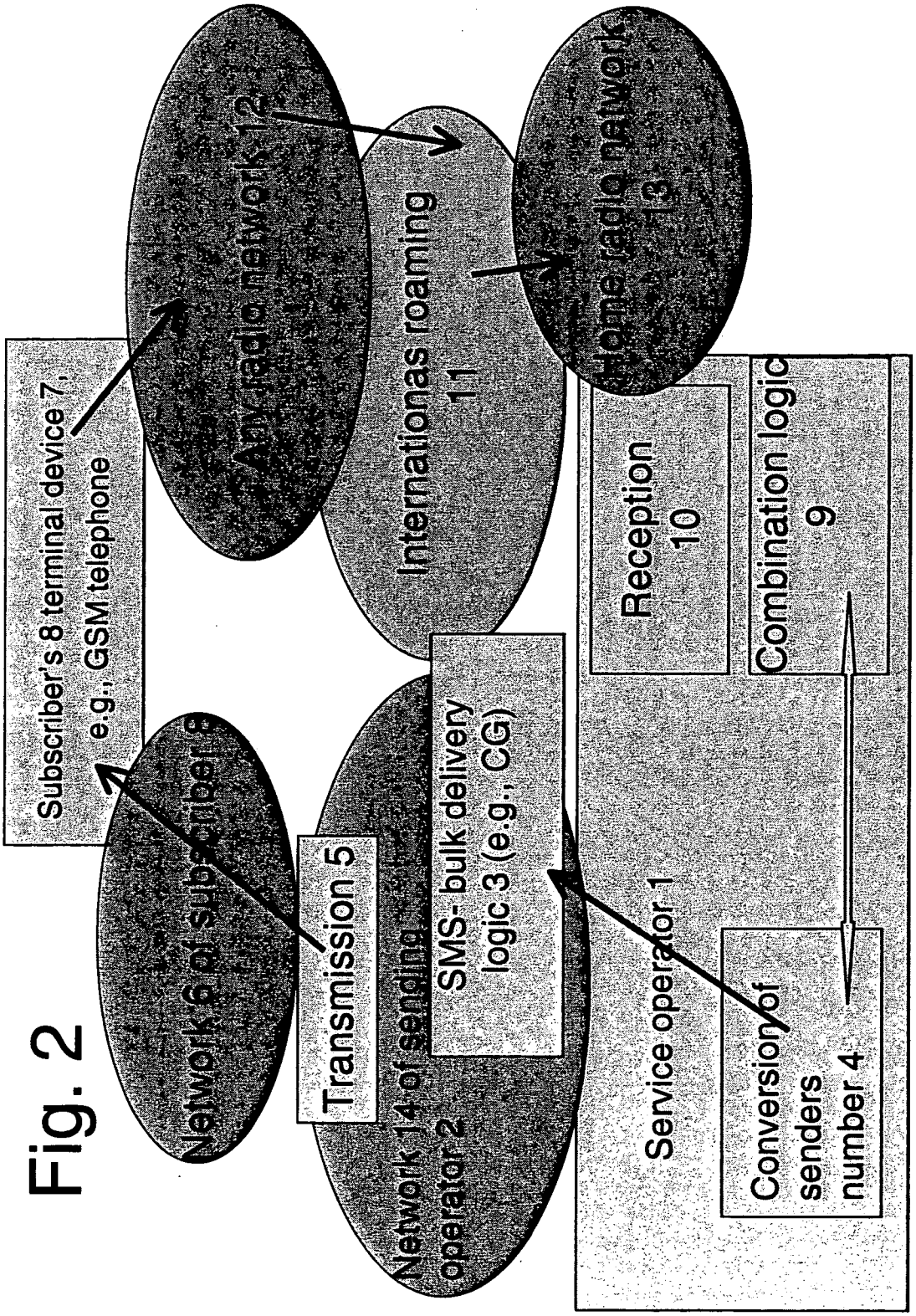

Network 2 of operator B
SMS logic
(e.g., CG)
3
Service number
20
Network 2 of operator A
SMS logic
(e.g., CG)
3

Fig. 1

Fig. 2


Subscriber's 8 terminal device 7, e.g., GSM telephone
Any radio network 12
Internationas roaming 11
Home radio network 13
Reception 10
Combination logic 9
Network 6 of subscriber's operator 2
Transmission 5
Network 14 of sending operator 2
SMS- bulk delivery logic 3 (e.g., CG)
Service operator 1
Conversion of senders number 4

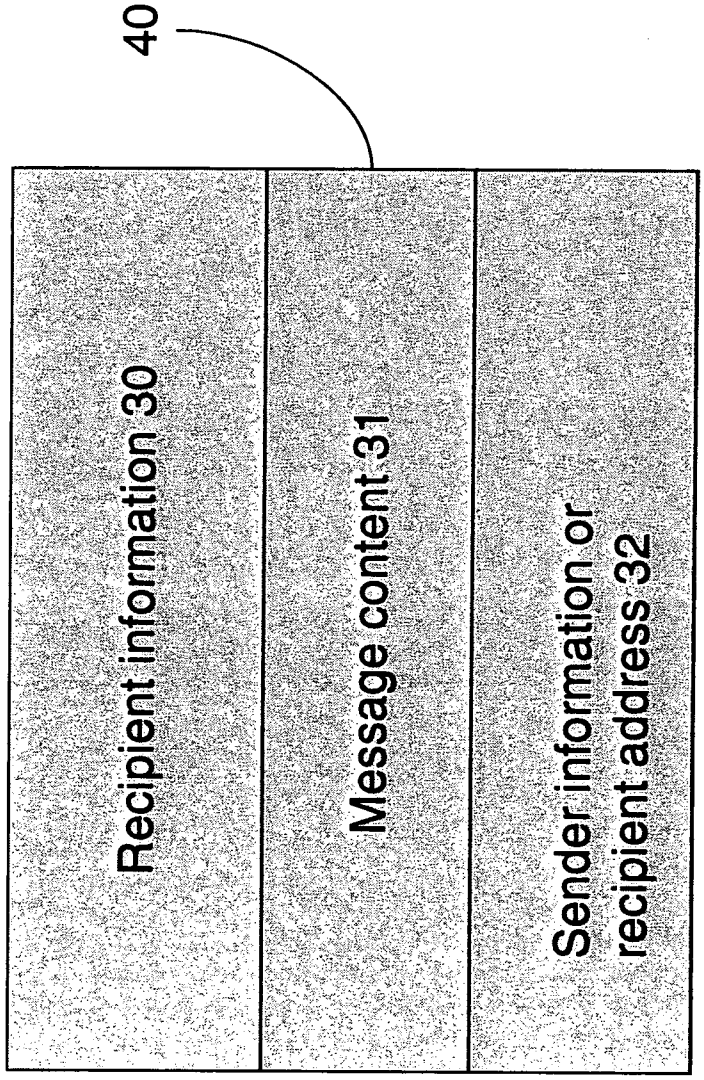

40
Recipient information 30
Message content 31
Sender information or recipient address 32

Fig. 3

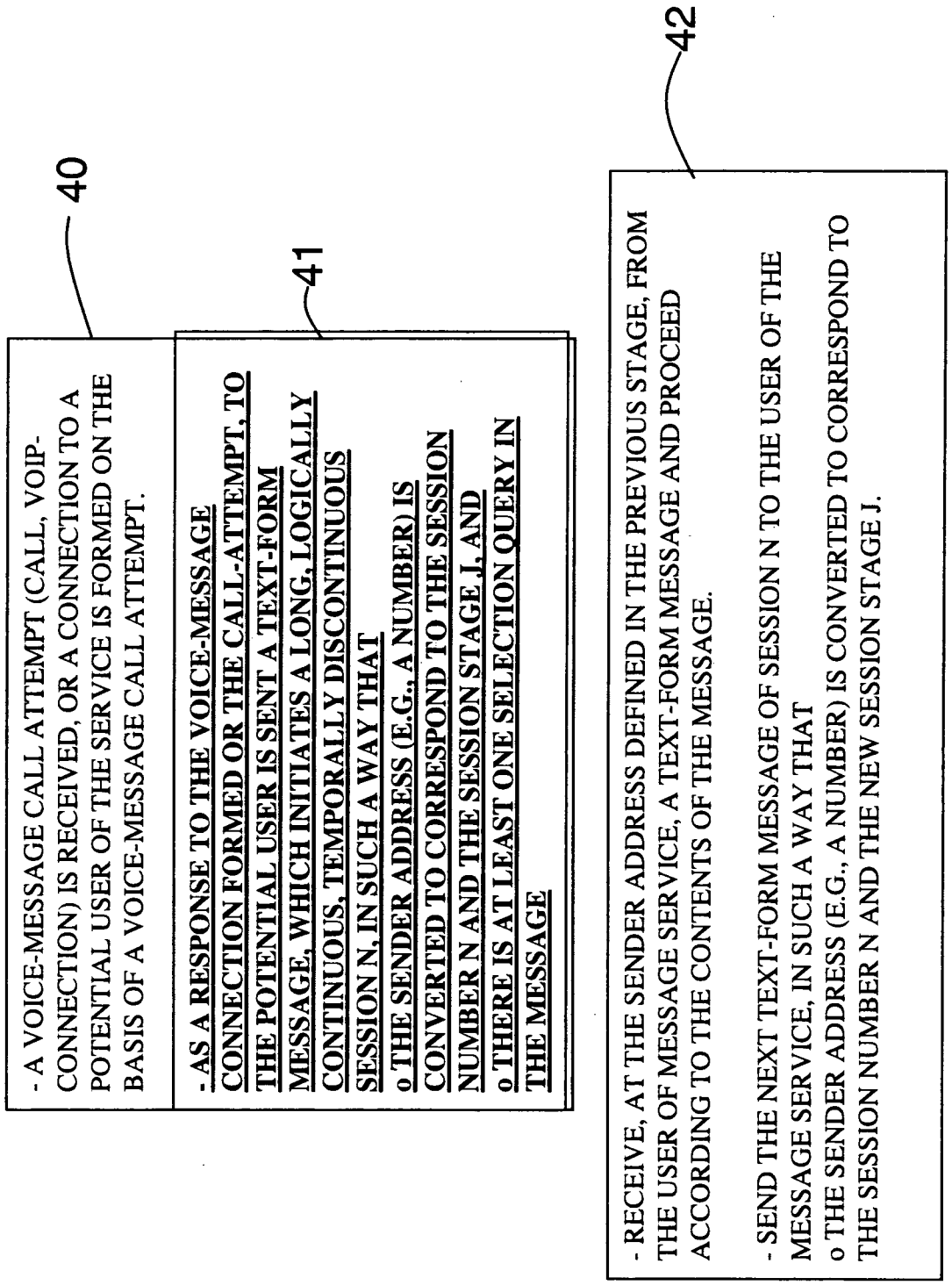

40
- A VOICE-MESSAGE CALL ATTEMPT (CALL, VOIP-CONNECTION) IS RECEIVED, OR A CONNECTION TO A POTENTIAL USER OF THE SERVICE IS FORMED ON THE BASIS OF A VOICE-MESSAGE CALL ATTEMPT.
41
- AS A RESPONSE TO THE VOICE-MESSAGE CONNECTION FORMED OR THE CALL-ATTEMPT, TO THE POTENTIAL USER IS SENT A TEXT-FORM MESSAGE, WHICH INTIATES A LONG, LOGICALLY CONTINUOUS, TEMPORALLY DISCONTINUOUS SESSION N, IN SUCH A WAY THAT
o THE SENDER ADDRESS (E.G., A NUMBER) IS CONVERTED TO CORRESPOND TO THE SESSION NUMBER N AND THE SESSION STAGE J, AND
o THERE IS AT LEAST ONE SELECTION QUERY IN THE MESSAGE
42
- RECEIVE, AT THE SENDER ADDRESS DEFINED IN THE PREVIOUS STAGE, FROM THE USER OF MESSAGE SERVICE, A TEXT-FORM MESSAGE AND PROCEED ACCORDING TO THE CONTENTS OF THE MESSAGE.
- SEND THE NEXT TEXT-FORM MESSAGE OF SESSION N TO THE USER OF THE MESSAGE SERVICE, IN SUCH A WAY THAT
o THE SENDER ADDRESS (E.G., A NUMBER) IS CONVERTED TO CORRESPOND TO THE SESSION NUMBER N AND THE NEW SESSION STAGE J.

Fig. 4

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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- WO 2004019223 A **[0053]**

SBGK
Szabadalmi
Ügyvivői Iroda

716175/MK (EP 2 014 113)

Szabadalmi igénypontok

1. Eljárás üzenetek elküldésére telekommunikációs hálózatban (6, 11, 12, 13, 14), ahol az eljárás a következő lépések végrehajtását tartalmazza egy szerver számítógépen (1) a telekommunikációs hálózatban:
- egy hang-üzenet hívás kísérlet vagy egy szolgáltatás potenciális felhasználójának terminál eszközéhez (7) létrehozott csatlakozás észlelése (43) egy hang-üzenet hívás kísérlet alapján, több felhasználó mindegyikénél,
- a hang-üzenet hívás kísérlet vagy a terminál eszközhöz (7) létrehozott csatlakozás után válaszként a telekommunikációs hálózattól a terminál eszközhöz (7) szöveges üzenet küldése, ahol a szöveges üzenet tartalmaz legalább egy kiválasztási kérdést, és kezdeményez egy logikailag folytonos, időben nem folytonos munkamenetet több szakasszal,
- a szöveges üzenet feladója címének megváltoztatása, a szöveges üzenet elküldése előtt, a munkamenet és az aktuális munkamenet szakasz alapján a több felhasználó mindegyikénél.

2. Az 1. igénypont szerinti eljárás, amelynél:
- a kívánt válaszcímre (32) vonatkozó információt tartalmazó digitális üzeneteket (40) tömegesen továbbítjuk (3), és
- fogadjuk (10) a válaszcím információ (32) alapján elküldött üzeneteket,
- a tömegesen továbbított üzenetek (40) válaszcím információját konvertáljuk (3), hogy megfeleljen egy előre meghatározott párbeszédnek, ahol a párbeszéd állapota egyértelműen meghatározza a válaszcím információt (32), úgyhogy az üzenetek átvitele és fogadása a telekommunikációs rendszer (1, 2, 6, 11, 12) különböző részeiben valósul meg.

3. Az 1. vagy 2. igénypont szerinti eljárás, amelynél a kívánt válaszcím információ az üzenet (40) feladó mezője (32).

4. Az előző igénypontok bármelyike szerinti eljárás, amelynél az üzenet (40) egy SMS üzenet.

5. Az előző igénypontok bármelyike szerinti eljárás, amelynél az üzenet (40) egy MMS üzenet.

6. Az előző igénypontok bármelyike szerinti eljárás, amelynél az üzenet (40) egy e-mail üzenet.

7. Az előző igénypontok bármelyike szerinti eljárás, amelynél az üzenet (40) válaszcím információját (32) olyan nemzeti címre konvertáljuk, amely a címzett (8) saját országában működik.

8. Szerver számítógép (1) üzenetek elküldésére telekommunikációs hálózatban (6, 11, 12, 13, 14), ahol a szerver számítógép tartalmaz:
- eszközt egy hang-üzenet hívás kísérlet vagy egy szolgáltatás potenciális felhasználójának terminál eszközéhez (7) létrehozott csatlakozás észlelésére (43) egy hang-üzenet hívás kísérlet alapján, több felhasználó mindegyikénél,
- átviteli eszközt, amely úgy van kialakítva, hogy hang-üzenet hívás kísérlet vagy a szolgáltatás potenciális felhasználójának (41) terminál eszközéhez (7) létrehozott csatlakozás után válaszként szöveges üzenetet küld, amely tartalmaz legalább egy kiválasztási kérdést, és kezdeményez egy logikailag folytonos, időben nem folytonos munkamenetet több szakasszal,
- eszközt a szöveges üzenet elküldője címének megváltoztatására, a szöveges üzenet elküldése előtt, a munkamenet és az aktuális munkamenet szakasz alapján a több felhasználó mindegyikénél.

9. A 8. igénypont szerinti szerver számítógép, amely tartalmaz még:
- eszközt a kívánt válaszcímre (32) vonatkozó információt tartalmazó digitális üzenetek (40) tömeges továbbítására, és
- eszközt a válaszcím információ (32) alapján elküldött üzenetek (40) fogadására,
- eszközt a tömegesen továbbított üzenetek (40) válaszcím információjának konvertálására, hogy megfeleljen egy előre meghatározott párbeszédnek, ahol a párbeszéd állapota egyértelműen meghatározza a válaszcím információt (32), úgyhogy az üzenetek (40) átvitele és fogadása a telekommunikációs rendszer (1, 2, 6, 11, 12) különböző részeiben valósul meg.

10. A 8. vagy 9. igénypont szerinti szerver számítógép, amelynél a kívánt válaszcím információ az üzenet (40) feladó mezője (32).

11. A 8. vagy 9. igénypont szerinti szerver számítógép, amelynél az üzenet (40) egy SMS üzenet.

12. A 8. vagy 9. igénypont szerinti szerver számítógép, amelynél az üzenet (40) egy MMS üzenet.

13. A 8. vagy 9. igénypont szerinti szerver számítógép, amelynél az üzenet (40) egy e-mail üzenet.

14. A 8. vagy 9. igénypont szerinti szerver számítógép, amely tartalmaz még eszközt az üzenet (40) válaszcím információjának (32) olyan nemzeti címre történő konvertálására, amely a címzett (8) saját országában működik.