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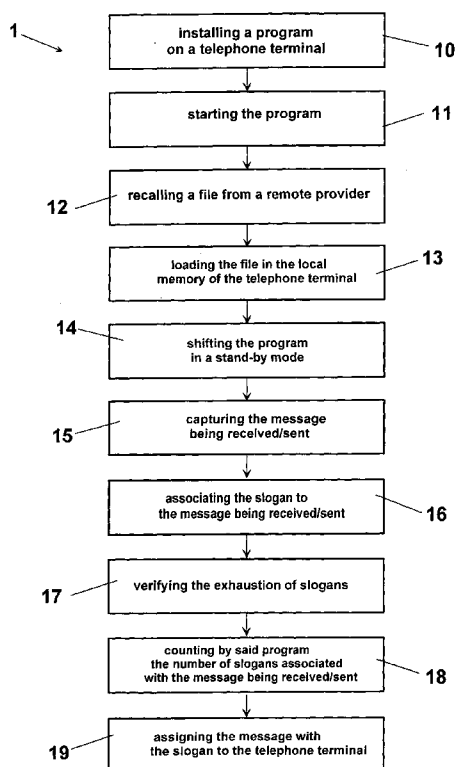


Fig. 1

(57) Abstract: A method for associating a slogan to a message exchanged between telephone terminals that provides installing a message managing program on a telephone terminal and starting said program. By using a forward service message the program attracts from a remote provider a data file that contains a determined number of slogans (numslug). After having loaded the data file in a local memory of the telephone terminal, the program is shifted to a stand-by mode waiting for a message being received/sent by the telephone terminal. When the program notices a message being received/sent by the telephone terminal it loads at the same time a slogan from the data file and associates it to a message being received/sent, assigning then the message and the slogan to the telephone terminal. The program checks furthermore, if the slogans in the data file are finished, and, in the affirmative, downloads a further data file containing a number of slogans from the remote provider. If the user is the addressee of the messages, the user displays the message and the slogan on a screen associated to the telephone terminal. Instead, if the user is the sender of the messages, after assigning the message and the slogan to the telephone terminal, it is sent to the addressee, that can display the message and the slogan on the screen associated to the receiving telephone terminal.

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TITLEMETHOD FOR ASSOCIATING A SLOGAN TO A MESSAGE EXCHANGED
BETWEEN TWO TELEPHONE TERMINALS

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Field of the invention

The present invention relates to the field of radio communication, and in particular it relates to a method for associating a slogan to a message exchanged between
10 two telephone terminals, and more precisely between a sending telephone terminal and a receiving telephone terminal.

Description of the prior art

The advent of radio communication systems has
15 transformed the telecommunication industry. In particular, mobile phones, which connect users practically everywhere, have sensibly changed both work and private life personal relationships.

A mobile phone allows an user to communicate by the
20 voice, or by messages, with another person, for example while travelling by car, or by bus, while walking, or while checking-in at the airport.

In particular, the possibility of sending messages
25 from a mobile phone to another represents a way for communicating even with a person that is not momentarily available. This opportunity is presently offered also by the cable telephone network, which permits sending and receiving messages by means of enabled telephones.

The transmission of such messages is carried out by
30 radio communication networks, which use standards adopted nationally and internationally, such as GSM (Global System for Mobile communication), CDMA (Code Division Multiple Access), TDMA (Time Division Multiple Access), PCS (Personal Communication Service), GPRS (General Packed

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Radio Service), W-CDMA (Wideband Code Division Multiple Access), EDGE (Enhanced Data rates for Global Evolution), UMTS (Universal Mobile Telecommunication System), HSDPA (High-Speed Downlink Packet Access) and WiMAX (Worldwide Interoperability for Microwave Access).

The message services are SMS (Short Message Service), EMS (Enhanced Message Service), the Smart Messaging, (Flash Message), MMS (Multimedia Messaging Service) and mobile e-mail.

In particular, the SMS is a universal standard that allows the users of mobile phones or cable telephones, which support it, to send and receive messages with a text content that can comprise a predetermined maximum number of alphanumerical characters.

In the alphabetical coding system of the European standard GSM the maximum number of characters is 160, in the Cyrillic it is 140 and with UCS2 (Turkish, Greek, Arab, Chinese, Thai, etc.) it is 70 characters. Presently, the SMS is the most common messaging system.

The evolution of SMS has led to EMS, for incorporating in a SMS text message some graphics, images, animations and sounds.

In this context, also Smart Message is used, a standard developed by Nokia and universally recognized, which allows to add graphical, audio and video content to normal SMS text messages.

Both the Smart Message and the EMS standards are obtained by linking several SMS to one another.

The Flash Message, also called class 0 SMS, is a special text message, upgraded starting from SMS messages. Its content is displayed directly on the display of the mobile phone.

The MMS Multimedia Messaging Service is a universal standard that allows the users of mobile phones that

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support it to send and receive messages with a content such as text, images, graphics, sounds, audio clips and video clips. The MMS are an extension of the SMS concept.

Mobile e-mail is an equivalent of e-mail used and
5 exchanged between computers, but adapted to be usable on mobile phone terminals.

Concerning SMS messages, they have a cost that is independent from the length of the text, provided a maximum length is not exceeded. Such maximum length is not
10 frequently reached, and a user is charged a same cost both for a single letter and for a long text within such maximum length.

The same occurs for other types of messages, among those cited, such as, EMS, Smart Message and MMS, whose
15 cost is either fixed, or calculated on the basis of fixed units, or on the basis of fixed data packages, in such a way a residual space not exploited by the user is always present.

Such a large choice of telecommunication systems which
20 are capable to satisfy the needs of the users has rapidly spread the use of mobile phones, with huge sale results.

Moreover, the possibility to use such a service through a traditional telephone network has generated new market perspectives. For example, it is possible through
25 advertisements, a very large mass of users, that are potential customers for companies.

A system for modifying a message exchanged between two mobile phones is disclosed in EP 1520437. The system provides a receiving step by a "converting device" of a
30 message sent by an individual from a first telephone terminal and comprising a plurality of alphanumeric characters. The "converting device" decodes the message allowing to determine the original text of the message and then to change it. In particular, the "converting device"

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associates to the original text having a known length an additional text, for example an advertisement, having a predetermined length. The final text, obtained from the combination of the original text and of the added text, is coded again, with the same attributes of the message, and is delivered to the addressee telephone terminal, in the form of a text composed by the added message and by the original text.

However, a necessary condition in order to apply the system described in EP 1520437 is that the number of characters of the final message, i.e. the original message plus the added message, is less than the maximum allowable number of characters for a message, otherwise the original message would be truncated once achieved the maximum number of characters. This causes relevant discomfort for a user of the service that risks not to read the original message complete, or to send a truncated message.

Summary of the invention

It is a feature of the present invention to provide a method for associating a slogan to a message exchanged between telephone terminals, wherein this association can be carried out in sending telephone terminals and/or receiving telephone terminals and in switching telephone apparatus.

It is another feature of the present invention to provide a method for associating a slogan to a message exchanged between telephone terminals that impedes tampering the process and replacing the message by unauthorised subjects.

It is also a feature of the present invention to provide a method for associating a slogan to a message exchanged between telephone terminals, which is adapted to assist processing the messages by a switching control station with respect to the prior art.

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It is, furthermore, a feature of the present invention to provide a method for associating a slogan to a message exchanged between telephone terminals whose applicability is independent from the number of characters that makes up
5 the message.

These and other features are accomplished with one exemplary method, according to the present invention, for associating a slogan to a message exchanged between telephone terminals, whose main feature is to provide the
10 following steps:

- installing a message managing program on a telephone terminal and starting said program;
- downloading by said program, through said telephone terminal, a data file from a remote
15 provider, said data file containing a determined number of slogans (*numslog*), said downloading step being carried out through a forward service message, from said telephone terminal towards said remote provider, and a return service message with said data
20 file, from said remote provider to said telephone terminal;
- loading said data file in the memory of the telephone terminal;
- shifting the program to a standby mode waiting
25 for a message being received/sent by the telephone terminal;
- capturing by said program a message being received/sent by the telephone terminal;
- extracting a slogan from said data file and
30 associating said slogan to the message being received/sent;
- assigning, by said program, the message and the slogan to it associated to the telephone terminal;
- checking if said slogans are finished in said

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data file, and, in the affirmative, downloading from said remote provider a further data file containing another number of slogans.

In a possible implementation of the method, if said telephone terminal is the addressee of said messages, after said assigning step it can display said message and said slogan on a screen associated to said telephone terminal.

In another possible implementation of the method, if said telephone terminal is the sender of said messages, after said assigning step it can send said slogan with said message to the addressee.

Advantageously, a message checking step is provided to discriminate standard messages, i.e. messages being received/sent, from service messages. In particular, each service message contains an ID code, adapted to enable its discrimination from standard messages, and a list of slogans, each configured with specific attributes.

In particular, if the message being received is a standard message, a verification step is started, whereas if it is a service message no verifications occur and its receipt is hidden to the user.

Advantageously, said verification step provides a counting step, carried out by said program, of the number of slogans associated in turn to the received/sent messages (*numslogri*) by the telephone terminal, said counting being updated at each association of a slogan to a message being received/sent, said counting being compared with said number of slogans (*numslog*) of said data file, and when said counting (*numslogri=numslog*) is equal to said number of slogans of said data file said slogans are considered to be finished.

Alternatively, said verification step provides that for each slogan extracted in turn from said data file said

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number of slogans (*numslog*) of said data file is decremented by 1, up to when *numslog*=0, when said slogans are considered to be finished.

In particular, said downloading step comprises the following steps:

- sending a request message to a remote provider for communicating that the slogans are finished;
- shifting the program to a stand-by mode waiting for a return service message to be received;
- 10 - assigning to the telephone terminal the return service message with said data file, containing a list of slogans.

In a particular embodiment of the method, a service message can be sent to the remote provider also when the available slogans are not finished yet but a predetermined threshold number of associated slogans has been achieved. This can be for example provided when the achievement of this threshold number by *numslogri* entitles to a benefit, for example a credit, a discount, etc.

Advantageously, if at the verification step the slogans are not finished yet (*numslogri* \neq *numslog*) the following steps are provided:

- extracting a slogan from said memory of said telephone terminal;
- 25 - introducing said slogan in the message being received/sent;
- incrementing by 1 the number of slogans associated with the received/sent messages (*numslogri*=*numslogri*+1);
- 30 - assigning to said telephone terminal said message with said slogan to it associated.

In particular, said data file comprises slogans that are equal to each other according to one or more species. In this case, in the data file the slogans that are equal

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to each other repeated, or the data file contains one single slogan for each species, and a parameter indicates how many times said slogan has to be associated with said messages being received/sent on the telephone terminal. In
5 both cases, a same slogan is associated for a determined number of times with said messages being received/sent on the telephone terminal.

In the latter case, once recalled the data file a generic slogan (i) is associated with a first natural
10 number that indicates how many times ($n_{max,i}$) it has to be associated with messages being received/sent on the telephone terminal and to a second natural number indicating how many times ($n_{ass,i}$) the slogan has been actually associated with said messages being
15 received/sent. Every time that the slogan (i) is associated with the message being received/sent, the value of the second natural number n_{ass} is incremented by 1 and the program is shifted to a stand-by mode awaiting another message. When $n_{ass,i} = n_{max,i}$ the (i) corresponding slogan
20 is not any more associated. Finally, when $n_{ass,i} = n_{max,i}$ for all the slogans, corresponding to the above described condition $numslogri = numslog$, the program delivers to the remote provider a request for another service message containing another data file, in particular, containing
25 another list of slogans.

Alternatively, said data file contains a repetition rule that sets the order with which said slogans have to be associated with said messages being received/sent.

It is also possible that the data file sent a first
30 time contains a number of slogans, each having also an ID code. This data file can be stored in the telephone terminal. Then, a new data file received by the telephone terminal from the remote provider may contain only the ID codes and a number of times that each ID code has to be

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repeated, or a repetition rule. This way, the second data file is a very light file and does not need to contain again the slogans, that may also contain images and be relatively heavy.

5 Advantageously, said data file comprises a list of unallowable senders/addressees, and, before said step of analysis of the message being received/sent, the program carries out a discrimination step, said discrimination step comprising the extraction and following comparison of
10 the sender/addressee of the message being received/sent with said list of unallowable senders/addressees, so that for said unallowable senders/addressees said assigning step is carried out without addition of the slogan.

Preferably, said data file comprises a first limit
15 number expressing the maximum number of messages that can be received/sent from/to a same telephone number (k_{max}) and a second limit number expressing a predefined time period ($temp$) within which the maximum number of messages that can be received/sent (k_{max}) should not be reached.

20 In this case, except from the unallowable senders/addressees, a step is provided of association with the telephone number of a sender/addressee (k) of a first natural number (num, k) that indicates how many times to a message being received/sent from/to said telephone number
25 (k) one slogan has been associated. Every time that a message with a slogan to it associated is sent/received to/from the telephone number (k), the value of the first natural number (num, k) is incremented by 1 and the program is shifted to a stand-by mode awaiting another message.

30 Then, a step is provided of creating a temporary list of unallowable senders/addressees, to which for a whole predefined time period $temp$ the k senders/addressees are added, whose (num, k) has reached or passed k_{max} , and said discrimination step involves also said temporary list of

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unallowable senders/addressees. This way, if, for a certain telephone number (k) in a predefined time period $temp$, there is $num, k = kmax$, then the program stops to associate slogans to messages being received/sent from/to the telephone number (k) for a whole predefined time period $temp$.

Advantageously, said data file comprises a third limit number expressing the maximum number of slogans to be associated with messages being received/sent ($numtotmax$) in the predefined time period $temp$ and a fourth number ($numtot$) defined as sum of all the num, k in the predefined time period $temp$ ($numtot = \sum num, k$), said assigning step omitting to associate the slogan to the message during all the time period $temp$ at fulfilling the condition $numtot = numtotmax$.

Advantageously, said telephone terminal has an inner clock that sets the time and said program records each event that happens in said telephone terminal, associating, furthermore, data on the actual date and time. The inner clock is taken into account in a determined moment to check whether the predefined time period ($temp$) has expired or not.

In a possible embodiment, if said telephone terminal on which said program is installed is a sending telephone terminal the following steps are provided:

- creating a new message by said program;
- associating said slogan to said new message;
- assigning said new message and said slogan to it associated to said telephone terminal;
- placing, by said program, said new message and said slogan to it associated in an inbox folder of said sending telephone terminal;
- receiving by said sending telephone terminal said new message and said slogan to it associated.

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In particular, the step of associating the slogan to the message being received/sent provides a step of introducing the slogan into the message being received/sent in the form of a string of characters.

5 If the telephone terminal on which the program is installed is a sending telephone terminal said introducing step comprises:

- calculating the number of characters l_{in} that makes up the message being sent;
- 10 - selecting by said program a slogan among those present in said memory of said telephone terminal, said selected slogan having maximum length $l_{admax} = l_{max} - l_{in}$ where l_{max} is the allowed maximum length for the message.

15 In particular, if in the memory of the telephone terminal there are not slogans a length less than, or the same as, l_{admax} , the program does not change the message.

Advantageously, the program communicates to the user the exhaustion of slogans in the memory of the telephone terminal and/or informs the user on the number of
20 received/sent messages with a slogan.

In particular, a step is provided of selecting by said program a slogan having length l_{ad} among those present in the memory of said telephone terminal.

25 In a possible exemplary embodiment, the program is recorded on a server present at a shifting control station, said program capturing a message being sent from a sending telephone terminal to a receiving telephone terminal and carrying out the following steps:

- 30 - extracting the data relative to the user of said sending telephone terminal and to the user of said receiving telephone terminal;
- checking the validity of said users and associating said slogan to said message, except from

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when both users do not belong to said list of unallowable users.

Advantageously, the step of associating the slogan to the message being received/sent provides the following
5 steps:

- introducing, in a field of the message being received/sent, in particular called *content_location*, said slogan, in particular called *Slogan_content* having a predetermined size, in particular,
10 *Slogan_size*;

- adding said *Slogan_content* to the body of the message being received/sent, in particular, *Message_Body*.

In particular, the message being received/sent can
15 comprise:

- at least one image;
- at least one text;
- at least one sound;
- at least one video.

20 Brief description of the drawings

Further characteristic and the advantages of the method for associating a slogan to a message exchanged between telephone terminals, according to the invention, will be made clearer with the following description of an
25 exemplary embodiment thereof, exemplifying but not limitative, with reference to the attached drawings, in which like reference characters designate the same or similar parts, throughout the figures of which:

-Figure 1 shows a block diagram that shows the main
30 phases of the method, according to the present invention;

-Figures from 2 to 4 show diagrammatically some hardware and software elements that allow to carry out the method shown in figure 1;

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-Figure 5A shows in a block diagram a possible succession of steps alternative to that shown in the flow-sheet of figure 1 in case of a receiving telephone terminal;

5 -Figure 5B shows in a block diagram a possible succession of steps alternative to that shown in the flow-sheet of figure 1 in case of a sending telephone terminal;

10 -Figure 6 shows in a block diagram a procedure that is started after exhaustion of the slogans and/or achievement of a threshold for accessing to a benefit on the telephone terminal.

Description of a preferred exemplary embodiment

15 The method, according to the present invention, for associating a slogan, which can be an advertisement string, a trademark, or other, to a message exchanged between telephone terminals, provides the steps shown in the block diagram of figure 1 and diagrammatically shown in figures from 2 to 4.

20 In particular, the method begins with the step of installing a program 75 on a sending telephone terminal 71 or a receiving telephone terminal 72, block 10 of figure 1. Then the program is started, block 11, which downloads a data file, containing a determined number of slogans
25 from a remote provider 95, block 12, and loads it on the telephone terminal 71, or 72, block 13.

The program shifts to a standby mode and waits for a message being received/sent by the telephone terminal, block 14.

30 Once captured a standard message 90, either a message sent by a generic telephone terminal 73, on which the program may have been also installed, or a message going to be sent by a sending telephone terminal 71, block 15, the program 75 proceeds with the association of a slogan

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to the message, block 16. For each association of the slogan to the received message, or to the message going to be sent, the program runs, furthermore, a step of checking whether the slogans in the data file loaded on the telephone terminal are finished, block 17.

The verification provides furthermore, the step of counting by said program the number of slogans associated with the messages being received/sent, block 18.

In the case of the receiving telephone terminal the program starts said step of detecting the number of slogans (*numslogri*) associated with the received/sent messages, for example also at turning on of the telephone terminal same, block 102.

Then, the message and the slogan to it associated are assigned to the receiving telephone terminal 72, for displaying it, or the message and the slogan are assigned to the sending telephone terminal 71, for sending to a receiving telephone terminal, for example to a generic telephone terminal 73 as shown in the figure, block 19.

As diagrammatically shown in the flow-sheet of figure 5A and 5B, the program, once captured the message being sent by the sending telephone terminal 71, or received by the receiving telephone terminal 72, starts an analysis step aimed at ascertaining whether it is a standard message or a service message, block 108. More in detail, a service message is a message sent by the remote provider to the telephone terminal on which the program is installed, containing the file with the slogans list.

As diagrammatically shown in figure 4, a service message 50 comprises a recognition string 60, or *header*, which allows to distinguish it from a standard message, and a content comprising a list of *n* slogans 51-55, separated by a character 65, each of which associated with relative configuration parameters.

More in detail, each slogan can be associated with a natural number ($n_{max} \in N$), given between brackets in the example of figure 4, which indicates the maximum number of times that the slogan can be associated with a standard received message, or a standard message going to be sent. When the service message 50 is received the program loaded in the telephone terminal derives the data in it contained and stores them in the memory of the telephone terminal same, as indicated in the table below.

10

Slogan (i)	N. to be associated (nmax)	associated N. (nass)
Slogan 1	10	0
Slogan 2	20	0
Slogan 3	10	0
Slogan 4	10	0
Slogan n	1	0

The table, contains inside the data relative to the slogans species to be associated, with the relative configuration attributes, among which the maximum number of associations (n_{max}) for a generic slogan (i) and the number of times that this has been associated (n_{ass}) with the telephone terminal. In particular, the table is updated every time that a slogan is associated with a received message, or a message being sent. In the example above reported, the service message containing the data relative to the slogan species has been just received. Therefore, in the column concerning the number of times that a determined slogan has been associated (n_{ass}) there is a null value for all the slogans, since none of them has still been associated with a received message, or a message being sent.

At sending, or receiving, a message, the program reads

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the data from the table, updates any modified configuration attributes, associates the slogan to the message and then assigns the message comprising the slogan to the telephone terminal like for a normal processing phase of a message, i.e. a received message in case of a receiving telephone terminal or a message being sent in case of a sending telephone terminal.

When the program present on the telephone terminal, verifies that $n_{ass,i} = n_{max,i}$ (block 132) for all the slogans, i.e. when there are not any more slogans to associate ($num_{slogri} = num_{slog}$) (block 114 YES branch), a procedure is activated to the remote provider requesting for a service message, and the message is left unchanged by said program (block 119). When the new service message arrives, the above described procedure of acquisition of the service message is activated again.

On the other hand, if at the verification step the slogans are not finished yet ($num_{slogri} \neq num_{slog}$) in the telephone terminal, i.e. if the condition $n_{ass,i} \neq n_{max,i}$ is fulfilled at least for one part of the slogan that are present in the memory of the telephone terminal (block 132), the sender/addressee (k) of the message being received/sent is compared with the temporary list of the unallowable senders/addressees (block 134), i.e. senders/addressees concerning messages in which a slogan has been inserted more times than the maximum limit (k_{max}) allowed within a predetermined time period. If the sender/addressee (k) belongs to this list, the message is notified to the user without adding any slogans. If the sender/addressee (k) do not to belong to this list, instead, the slogan and the message (block 116) are combined and assigned to the telephone terminal for normal processing. Then the number of slogans associated with received/sent messages is incremented by 1

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(*numslogri=numslogri+1*), the number of slogans associated with messages is incremented by 1 (*nass,i=nass,i+1*) and the number of associations made for that determined sender (*k*) is incremented by 1 (*num,k=num,k+1*), block 117. Then
5 (block 135) the value of (*num,k*) is checked whether it equals the maximum number of associations allowed for a *k* user (*num,k=kmax*) and if true, the *k* user is added to the temporary list of the unallowable addressees, for a predefined time period *temp*, block 136.

10 Before the above analysis of the type of received messages, a test can be done whether a message sender/addressee belongs to a list of valid users, block 106 of figure 5A and 5B. This is done by extracting from the message 90 the data of the user, i.e. either the sender in
15 case the program is installed on the receiving telephone terminal, or the addressee in case the program is installed on the sending telephone terminal, block 105, and comparing them with the data of the above described list of valid users. If this identification procedure is
20 negative, i.e. if the sender/addressee does not belong to the list of valid users, the standard message is delivered without changing it.

If the telephone terminal on which the program is installed is a sending telephone terminal 71, the
25 additional steps are provided, blocks 113 and 130 of figure 5B, adapted to ascertain whether the final message, i.e. the original message 90 plus the slogan to it associated, does not exceed a measured allowed maximum length for the message (*l_max*). Once calculated the number
30 of characters *l_in* of the message being sent, the program looks for slogans of maximum length *l_admax=l_max-l_in* among those stored in the memory of the telephone. In the negative, i.e. if in the memory of the telephone terminal there are not slogans of length less than *l_admax*, the

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program does not associate a slogan to a message being received, which is then assigned unchanged. The program sends, instead, to the remote provider a new request for a service message containing a list of slogans, block 119.

5 In the affirmative, instead, the program selects one of the slogans having length less than l_admax among those present in the sending telephone terminal, block 115, and associates it to the message being sent, block 116, incrementing by 1 the number of slogans associated with
10 the received/sent messages ($numslogri = numslogri + 1$), incrementing by 1 the number of slogans associated with messages ($nass, i = nass, i + 1$) and also incrementing by 1 the number of associations for that determined sender (k) ($num, k = num, k + 1$), block 117. If the program notes the
15 absence of further slogans, or alternatively, if the program finds that the threshold for access to the benefit (block 118) has been exceeded, it delivers a request message to the remote provider, according to a procedure shown in figure 6.

20 The program, before sending a request message to the remote provider, ascertains whether other request messages had been requested before (block 120) and in the negative prepares the request message checking whether the slogan are actually finished (block 122) and/or whether the
25 threshold that allows the user to obtain a benefit (block 124) has been achieved. Once the request message is ready for being sent to the remote provider the program sets $numslogri$ at zero (block 126), encrypts the request message (block 127) and delivers them in a transparent way
30 to the remote provider (block 128).

In an exemplary implementation of the method, it is possible to set a maximum limit to the number of slogans that can be used within the time range $temp$ to avoid an abuse by the users. In particular, the data file comprises

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a third limit number expressing the maximum number of slogans to be associated with messages being received/sent ($numtotmax$) in the predefined time period $temp$ and a fourth number ($numtot$) defined as sum of all the num,k in the predefined time period $temp$ ($numtot = \sum num,k$). The achievement of $numtotmax$ by $numtot$ (block 137) affects then the assigning step, preventing the slogan from being associated to the message during $temp$ at fulfilling the condition $numtot = numtotmax$. In other words, when in a predefined time period $temp$ there is $numtot = numtotmax$ the program stops to associate slogans to any messages being received/sent for all the predefined time period $temp$, irrespective of the telephone number (k). At the end of the period $temp$ all the counting parameters num,k and $numtot$ are set at zero.

In particular, said data file comprises slogans that are equal to each other according to one or more species, for example, "Read XXX", "Eat YYY", "Drink ZZZ". In this case, either in the data file the slogans that are equal to each other are repeated, or the data file contains one single slogan for each species, and a parameter indicates how many times said slogan has to be associated with said messages being received/sent on the telephone terminal. In both cases, a same slogan is associated for a determined number of times with said messages being received/sent on the telephone terminal.

Moreover, said data file may contain a repetition rule that sets the order with which said slogans have to be associated with said messages being received/sent, for example three times the first slogan, two times the second slogan, one time the third, and again.

It is also possible that the data file sent a first time contains a number of slogans, each having also an ID code. This data file can be stored in the telephone

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terminal. Fore ezample "ID1 Read XXX", "ID2 Eat YYY", "ID3
Drink ZZZ". Then, a new data file received by the
telephone terminal from the remote provider may contain
only the ID1, ID2, and ID3 codes and a number of times
5 that each ID code has to be repeated, or a repetition
rule. This way, the second data file is a much lighter
file and does not need to contain again the slogans, that
may also contain images and be relatively heavy.

The foregoing description of a specific embodiment
10 will so fully reveal the invention according to the
conceptual point of view, so that others, by applying
current knowledge, will be able to modify and/or adapt for
various applications such an embodiment without further
research and without parting from the invention, and it is
15 therefore to be understood that such adaptations and
modifications will have to be considered as equivalent to
the specific embodiment. The means and the materials to
realise the different functions described herein could
have a different nature without, for this reason,
20 departing from the field of the invention. It is to be
understood that the phraseology or terminology employed
herein is for the purpose of description and not of
limitation.

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CLAIMS

1. Method for associating a slogan to a message exchanged between telephone terminals **characterised in that** it comprises the steps of:
- 5 - installing a message managing program on a telephone terminal and starting said program;
- downloading by said program, through said telephone terminal, a data file from a remote provider, said data file containing a determined
- 10 number of slogans (*numslog*), said downloading step being carried out through a forward service message, from said telephone terminal towards said remote provider, and a return service message with said data file, from said remote provider to said telephone
- 15 terminal;
- loading said data file in the memory of the telephone terminal;
- shifting the program to a standby mode waiting for a message being received/sent by the telephone
- 20 terminal;
- capturing by said program a message being received/sent by the telephone terminal;
- extracting a slogan from said data file and associating said slogan to the message being
- 25 received/sent;
- assigning, by said program, the message and the slogan to it associated to the telephone terminal;
- checking if said slogans are finished in said data file, and, in the affirmative, downloading from
- 30 said remote provider a further data file containing another number of slogans.
2. Method according to claim 1, wherein if said telephone terminal is the addressee of said messages, after said assigning step it can display said message and said

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slogan on a screen associated to said telephone terminal.

3. Method according to claim 1, wherein if said telephone terminal is the sender of said messages, after said assigning step it sends said slogan with said message to the addressee.
4. Method according to claim 1, wherein a message checking step is provided to discriminate standard messages, i.e. messages being received/sent, from service messages, each service message containing an ID code, adapted to enable its discrimination from standard messages.
5. Method according to claim 1, wherein if the message being received is a standard message, a verification step is started, whereas if it is a service message its receipt is hidden to the user.
6. Method according to claim 1, wherein said verification step provides a counting step, carried out by said program, of the number of slogans associated in turn to the received/sent messages (*numslogri*) by the telephone terminal, said counting being updated at each association of a slogan to a message being received/sent, said counting being compared with said number of slogans (*numslog*) of said data file, and when said counting (*numslogri=numslog*) is equal to said number of slogans of said data file said slogans are considered to be finished.
7. Method according to claim 1, wherein said verification step provides that for each slogan extracted in turn from said data file said number of slogans (*numslog*) of said data file is decremented by 1, until *numslog=0* said slogans are considered to be finished.
8. Method according to claim 1, wherein said step for

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returning a further data file comprises the following steps:

- sending a request message to a remote provider for communicating that the slogans are finished;
- 5 - shifting the program to a stand-by mode waiting for a return service message to be received;
- assigning to the telephone terminal the return service message with said data file, containing a list of slogans.

10 **9.** Method according to claim 1, wherein a step is provided of sending a request message to achieve a predetermined associated slogans threshold number.

10. Method according to claim 1, wherein if at the verification step the slogans are not finished yet
15 ($numslogri \neq numslog$) the following steps are provided:

- extracting a slogan from said memory of said telephone terminal;
- introducing said slogan in the message being
20 received/sent;
- incrementing by 1 the number of slogans associated with the received/sent messages ($numslogri = numslogri + 1$);
- assigning to said telephone terminal said message
25 with said slogan to it associated.

11. Method according to claim 1, wherein said data file comprises slogans that are equal to each other according to one or more species and the slogans that are equal to each other are repeated.

30 **12.** Method according to claim 1, wherein said data file comprises slogans that are equal to each other according to one or more species and the data file contains one single slogan for each species with a

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parameter responsive to how many times each species has to be associated with said messages being received/sent on the telephone terminal, wherein, once recalled the data file, the generic slogan (*i*) is associated with a first natural number, which indicates how many times ($n_{max,i}$) it has to be associated with said messages being received/sent on the telephone terminal, and to a second natural number, indicating how many times ($n_{ass,i}$) the slogan has been actually associated with said messages being received/sent, wherein very time that the slogan (*i*) is associated with the message being received/sent, the value of the second natural number *nass* is incremented by 1 and the program is shifted to a stand-by mode awaiting another message.

13. Method according to claim 12, wherein when $n_{ass,i}=n_{max,i}$ the slogan (*i*) corresponding is not any more associated, whereas when $n_{ass,i}<n_{max,i}$ for all the slogans, corresponding to the condition $numslogri = numslog$, the program delivers to the remote provider a request for another service message containing another data file, in particular, containing another list of slogans.

14. Method according to claim 1, wherein said data file contains a repetition rule that sets the order with which said slogans have to be associated with said messages being received/sent.

15. Method according to claim 1, wherein said data file sent a first time contains a number of slogans, each having also an ID code, said data file being stored in the telephone terminal, whereas a new data file received by the telephone terminal from the remote provider may contain only the ID codes and a number of

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times that each ID code has to be repeated, or a repetition rule.

- 5 **16.** Method according to claim 1, wherein said data file comprises a list of unallowable senders/addressees, and before said step of analysis of the message being received/sent the program carries out a discrimination step, said discrimination step comprising the extraction and following comparison of the sender/addressee of the message being received/sent with said
- 10 list of unallowable senders/addressees, for said unallowable senders/addressees said assigning step being carried out without addition of the slogan.
- 15 **17.** Method according to claim 1, wherein said data file comprises a first limit number expressing the maximum number of messages that can be received/sent from/to a same telephone number (k_{max}) and a second limit number expressing a predefined time period ($temp$) within which the maximum number of messages that can be received/sent (k_{max}) is must not achieve, a step being
- 20 provided of association with the telephone number of a sender/addressee (k) of a first natural number (num, k) that indicates how many times to a message being received/sent from/to said telephone number (k) a slogan has been associated, whereby every time that a
- 25 message with a slogan to it associated is sent/received to/from the telephone number (k), the value of the first natural number (num, k) is incremented by 1 and the program is shifted to a stand-by mode awaiting another message.
- 30 **18.** Method according to claim 17, wherein a step is provided of creating a temporary list of unallowable senders/addressees, to which for a predefined time period $temp$ the k senders/addressees are added whose

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(*num, k*) has reached or passed *kmax*, and the discrimination step of claim 17 includes also said temporary list of unallowable senders/addressees.

- 5 **19.** Method according to claim 17, wherein if, for a certain telephone number (*k*) in a predefined time period *temp*, there is $num, k = kmax$, then the program stops to associate slogans to messages being received/sent from/to the telephone number (*k*) for a whole predefined time period *temp*.
- 10 **20.** Method according to claim 18, wherein said data file comprises a third limit number expressing the maximum number of slogans to be associated with messages being received/sent (*numtotmax*) in the predefined time period *temp* and a fourth number (*numtot*) defined as
15 sum of all the *num, k* in the predefined time period *temp* ($numtot = \sum num, k$), said assigning step omitting to associate the slogan to the message during all the time period *temp* at fulfilling the condition $numtot = numtotmax$.
- 20 **21.** Method according to claim 1, wherein if said telephone terminal on which said program is installed is a sending telephone terminal the following steps are provided:
- creating a new message by said program;
25 - associating said slogan to said new message;
- assigning said new message and said slogan to it associated to said telephone terminal;
- placing, by said program, said new message and said slogan to it associated in an inbox folder of said
30 sending telephone terminal;
- receiving by said sending telephone terminal said new message and said slogan to it associated.
- 22.** Method according to claim 1, wherein at associating

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the slogan to the received message/sent a step is provided of introducing the slogan into the message being received/sent in the form of a string of characters.

- 5 **23.** Method according to claim 22, wherein if the telephone terminal on which the program is installed is a sending telephone terminal said introducing step comprises:
- 10 - calculating the number of characters l_{in} that makes up the message being sent;
 - selecting by said program a slogan among those present in said memory of said telephone terminal, said selected slogan having maximum length $l_{admax}=l_{max} - l_{in}$ where l_{max} is the allowed
 - 15 maximum length for the message.
- 24.** Method according to claim 1, wherein the program is recorded on a server present at a shifting control station, said program capturing a message being sent from a sending telephone terminal to a receiving
- 20 telephone terminal and carrying out the following steps:
- extracting the data relative to the user of said sending telephone terminal and to the user of said receiving telephone terminal;
 - 25 - checking the validity of said users and associating said slogan to said message, except from when both users do not belong to said list of unallowable users.
- 25.** Method according to claim 1, wherein the step of
- 30 associating the slogan to the message being received/sent provides the following steps:
- introducing, in a field of the message being received/sent, in particular called *content_location*,

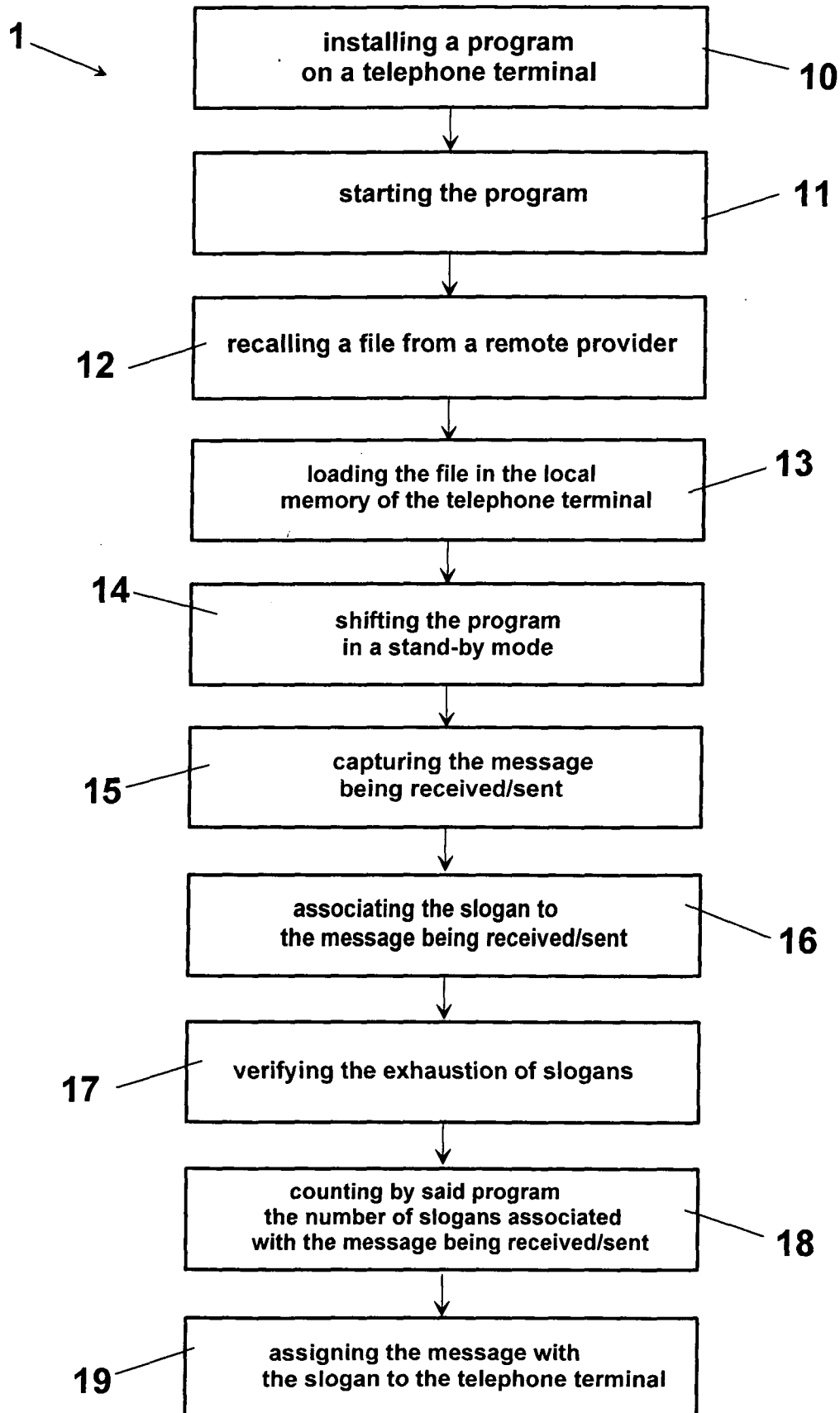
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said slogan, in particular called *Slogan_content*
having a predetermined size, in particular,
Slogan_size;

5 - adding said *Slogan_content* to the body of the
message being received/sent, in particular,
Message_Body.

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Fig. 1



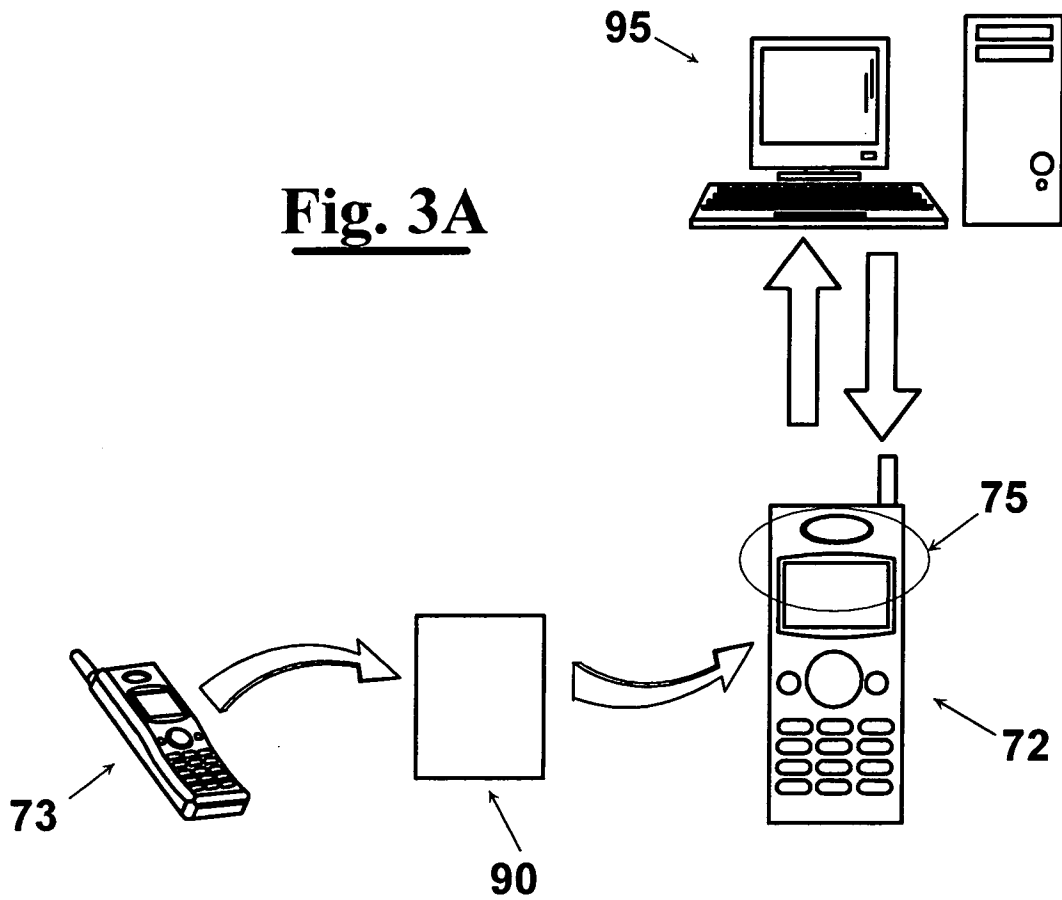
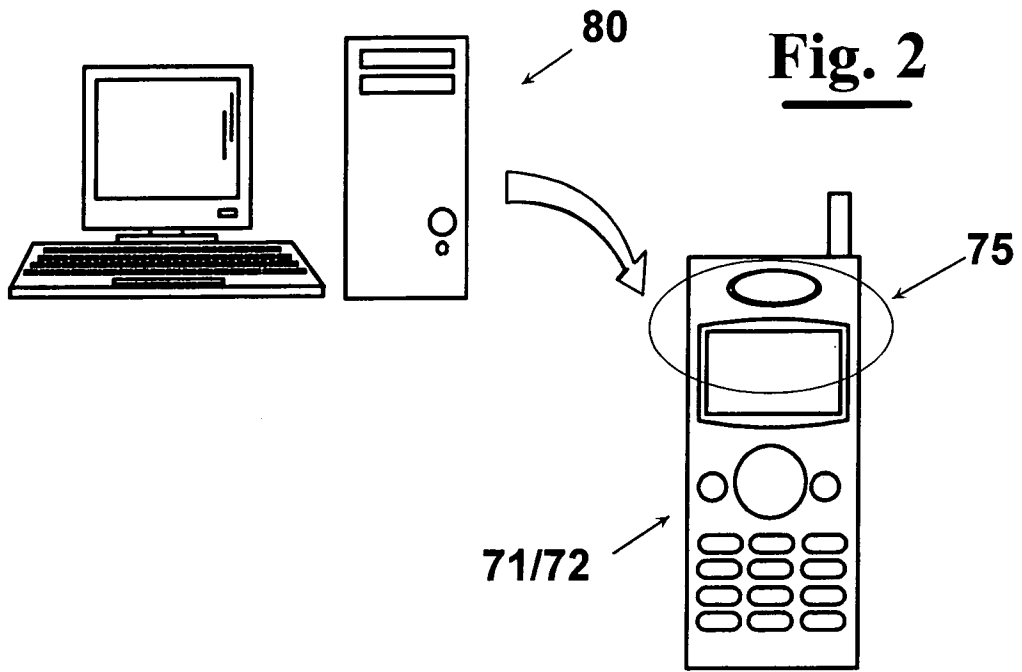


Fig. 3B

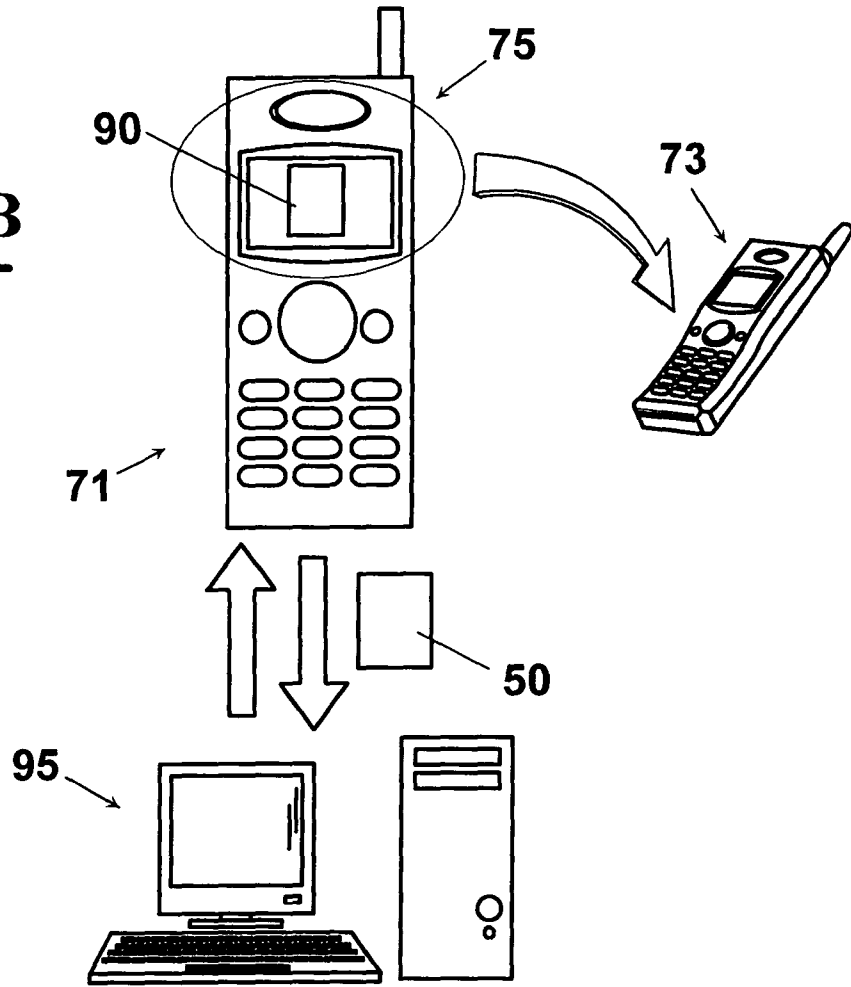


Fig. 4

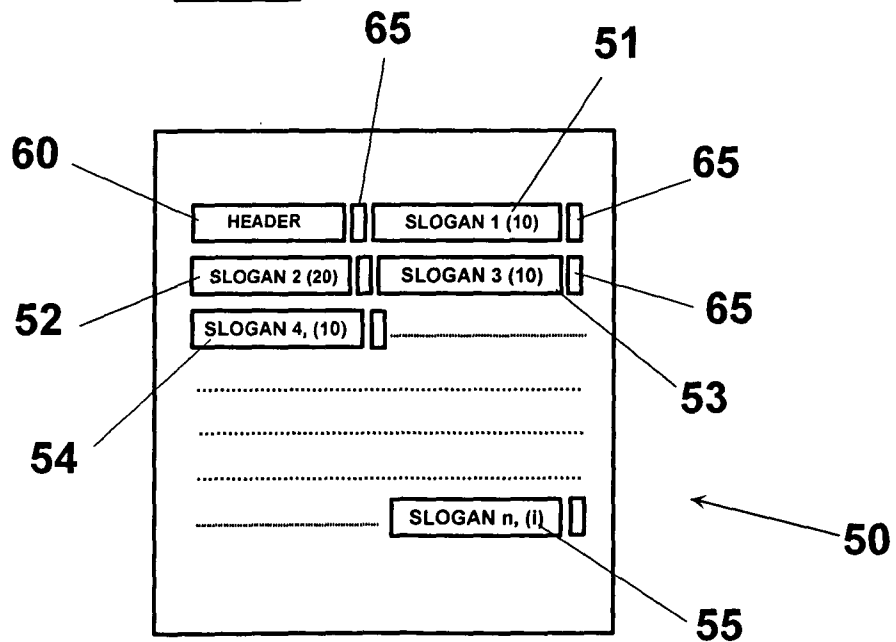


Fig. 5A

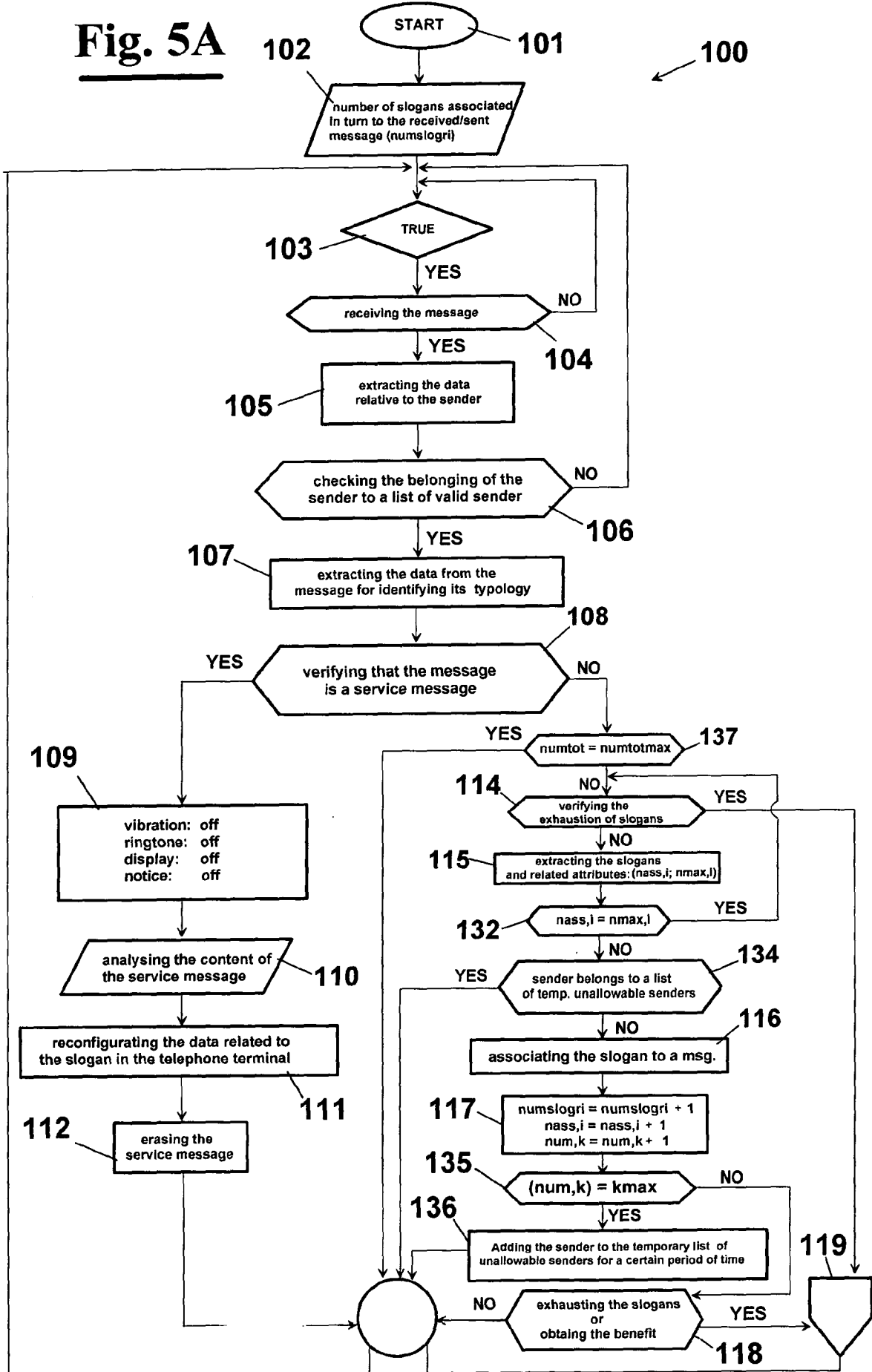


Fig. 5B

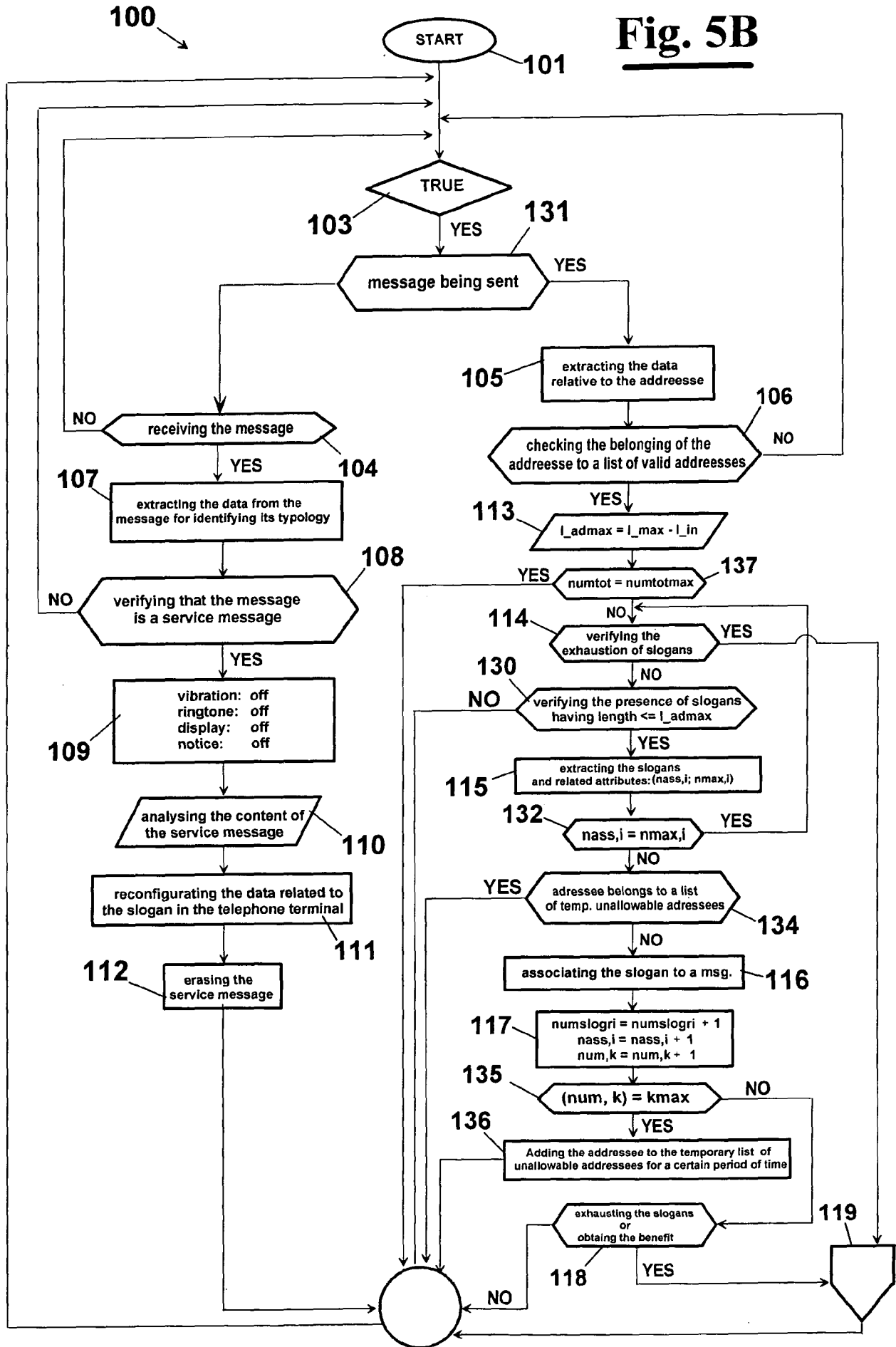
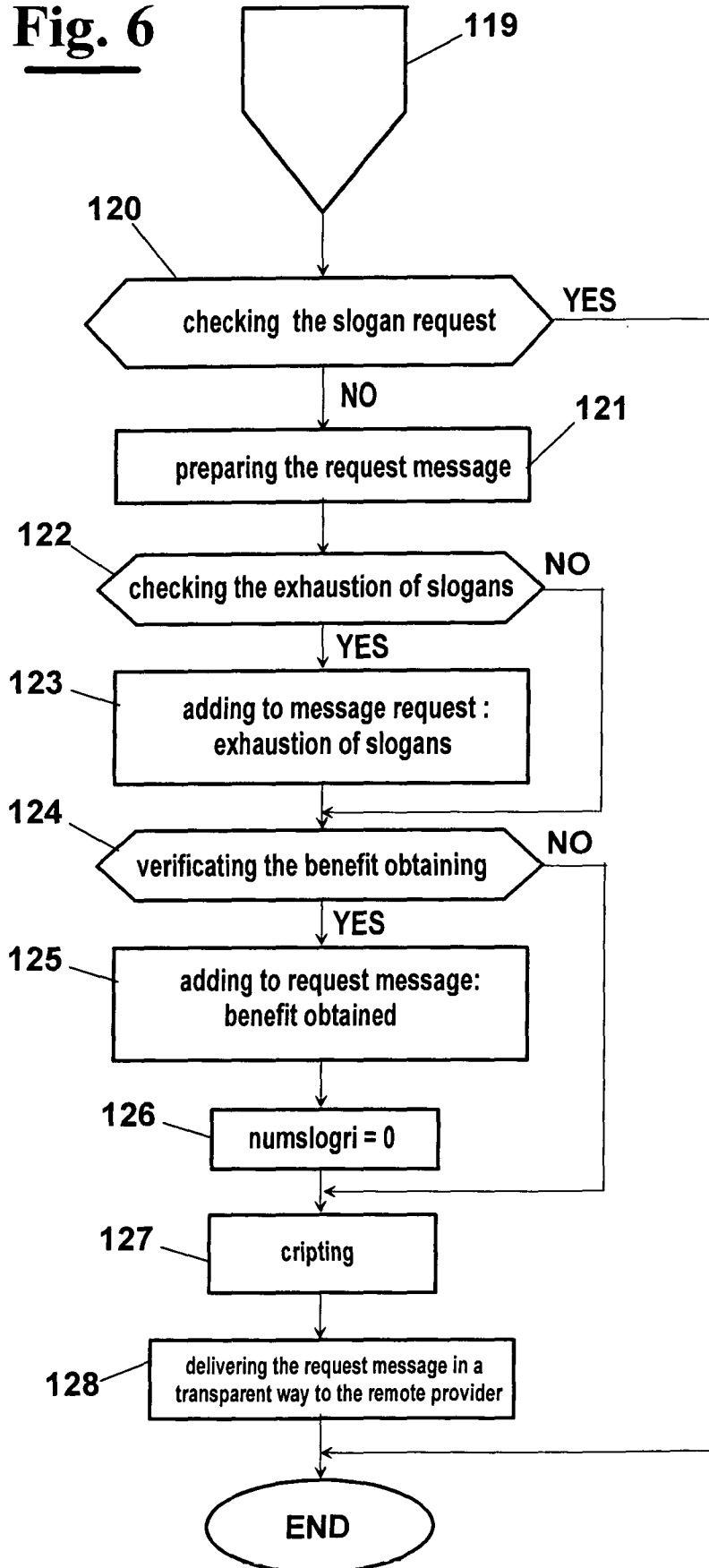


Fig. 6



INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2007/010724

A. CLASSIFICATION OF SUBJECT MATTER
 INV. H04M3/487

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

H04M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 03/015430 A (PURPLE ACE PTE LTD [SG]; GARG HARI KRISHNA [US]; PILLAI BROJO PAUL JOS) 20 February 2003 (2003-02-20) abstract page 2, line 1 - page 5, line 10 page 8, line 8 - page 9, line 14 page 11, line 22 - line 23 page 14, line 20 - page 16, line 21; figures 1-7	1-25
X	WO 02/054803 A (NOKIA CORP [FI]; KANERVA MIKKO [FI]; AHAVA TUULI [FI]; EINOLA HEIKKI []) 11 July 2002 (2002-07-11) abstract page 1, line 26 - page 5, line 2 page 6, line 2 - page 7, line 34; figures 1-6	1-25

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Further documents are listed in the continuation of Box C.

See patent family annex.

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Date of the actual completion of the international search

17 September 2008

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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A	EP 1 542 482 A (LUCENT TECHNOLOGIES INC [US]) 15 June 2005 (2005-06-15) abstract paragraph [0021] - paragraph [0025]; figures 1-4	1-25

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2007/010724

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