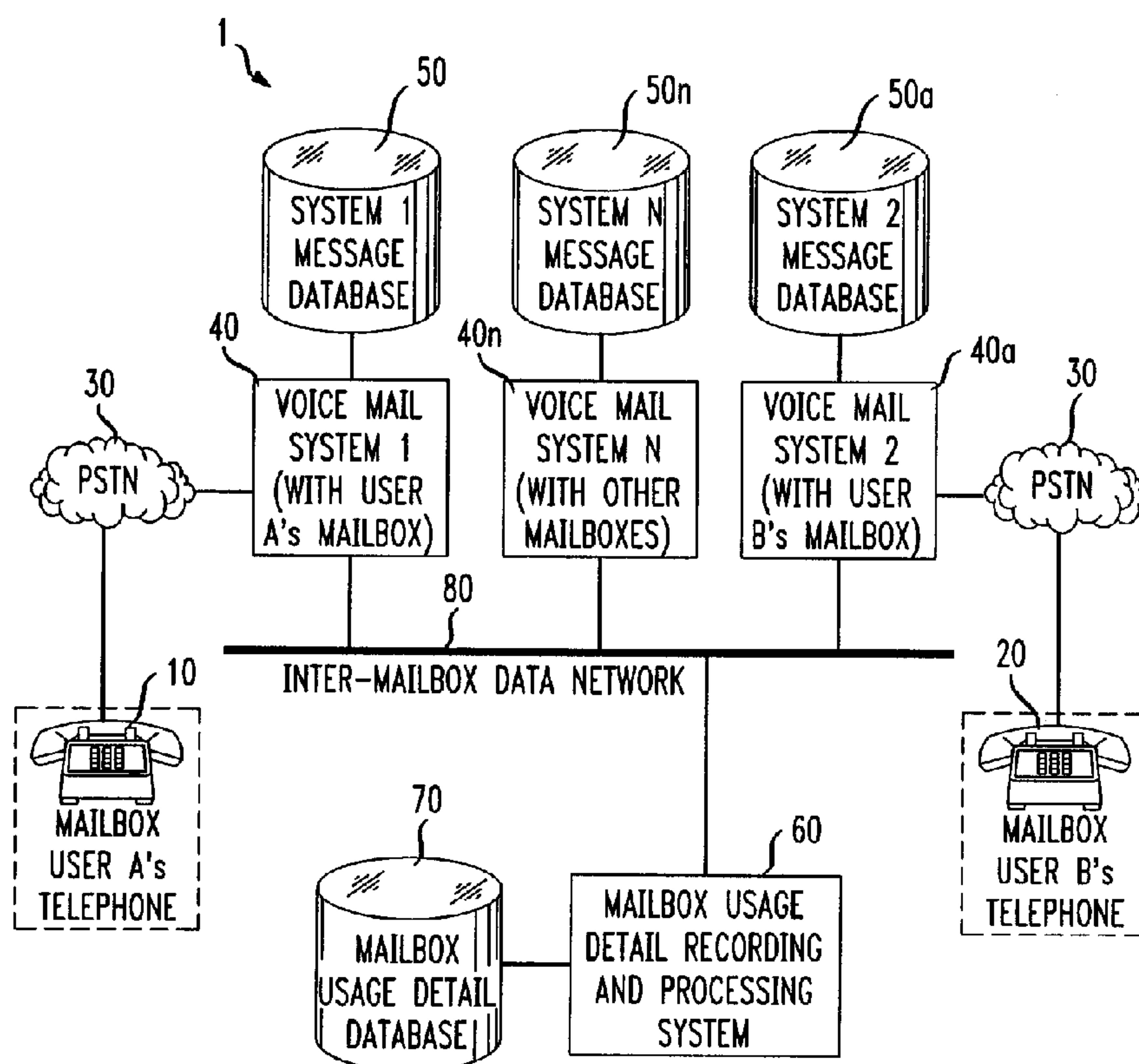




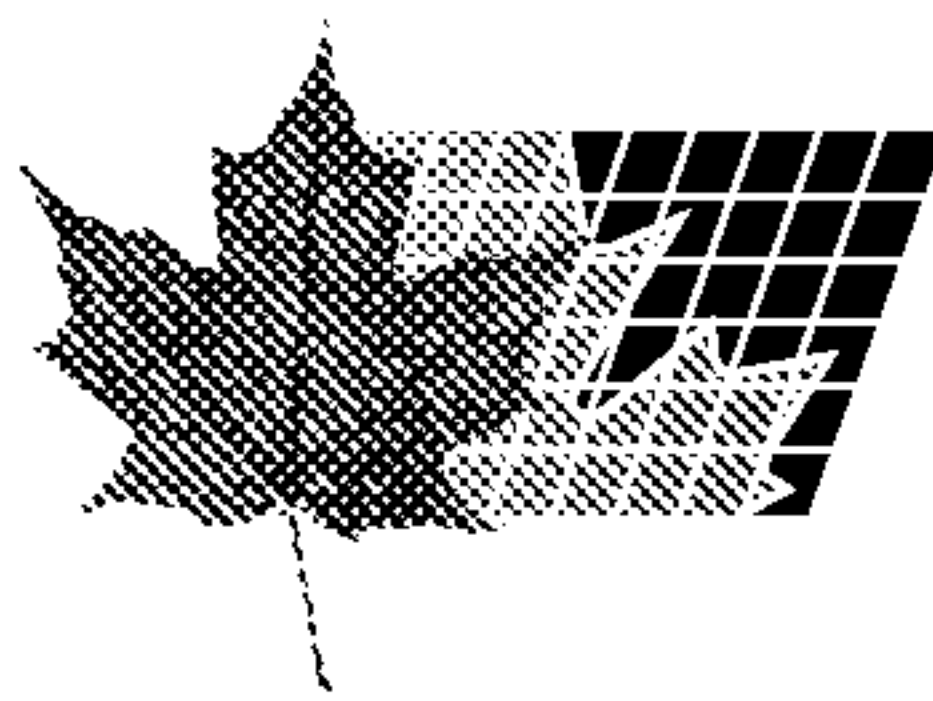
(11) (21) (C) **2,209,281**
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(54) **REPONSE A UN MESSAGE SANS FRAIS**
(54) **TOLL FREE MESSAGE RESPONSE**



(57) On présente un système de messages et de facturation et sa méthode qui servent à transmettre un message de réponse sur un réseau de communications d'un service de messages de l'abonné demandé à un service de messages de l'abonné appelant. Avant la transmission du message à un abonné appelé, le système

(57) A message and billing system and method is provided for transmitting a reply message over a communications network from a called party's message service system to a calling party's message service system. Prior to transmitting a message to a called party, a calling party's message service system prompts the



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du service de messages de l'abonné appelant demande à l'abonné appelant de préciser s'il autorise une réponse préchargée. En fonction de sa réponse, le service de messages de l'abonné appelant génère un fichier de message associé à ce message, qui comprend un champ de réponse préchargée indiquant si l'abonné appelant a autorisé une réponse préchargée. Le fichier de message est transmis sur le réseau de communications au système de messages de l'abonné appelé et ce dernier système recherche une autorisation par l'abonné appelant d'une réponse préchargée dans le champ de réponse préchargée du fichier de message. Au moment de la transmission par l'abonné appelé d'un message de réponse au message original de l'abonné appelant, le système de service de messages de l'abonné appelé génère un enregistrement détail du message de réponse ayant un champ de réponse préchargée qui signale si l'abonné appelant a autorisé une réponse préchargée. Quand le champ de réponse préchargé dans cet enregistrement détail indique une autorisation par l'abonné appelant, ce dernier abonné est facturé pour la transmission du message de réponse. Dans le cas contraire, si le champ de réponse préchargée ne contient pas une autorisation, l'abonné appelé est facturé pour la transmission du message de réponse.

calling party to specify whether a prepaid reply is authorized. Based upon the calling party's response to the prompt, the calling party's message service system generates a message file associated with the message, which includes a prepaid reply field indicating whether a prepaid reply was authorized by the calling party. The message file is transmitted over a communications network to the called party's message service system and the called party's message service system identifies whether a prepaid reply had been authorized by the calling party based upon the prepaid reply field of the message file. Upon the called party's transmission of a reply message to the calling party's original message, the called party's message service system generates a reply message detail record having a prepaid reply field indicating whether the calling party had authorized a prepaid reply. When the prepaid reply field of the reply message detail record indicates that the calling party authorized a prepaid reply, the calling party is charged a fee for the transmission of the reply message. Alternatively, when the prepaid reply field of the reply message detail record indicates that the calling party had not authorized a prepaid reply, the called party is charged a fee for the transmission of the reply message.

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TOLL FREE MESSAGE RESPONSE

ABSTRACT

A message and billing system and method is provided for transmitting a reply message over a communications network from a called party's message service system to a calling party's message service system. Prior to transmitting a message to a called party, a calling party's message service system prompts the calling party to specify whether a prepaid reply is authorized. Based upon the calling party's response to the prompt, the calling party's message service system generates a message file associated with the message, which includes a prepaid reply field indicating whether a prepaid reply was authorized by the calling party. The message file is transmitted over a communications network to the called party's message service system and the called party's message service system identifies whether a prepaid reply had been authorized by the calling party based upon the prepaid reply field of the message file. Upon the called party's transmission of a reply message to the calling party's original message, the called party's message service system generates a reply message detail record having a prepaid reply field indicating whether the calling party had authorized a prepaid reply. When the prepaid reply field of the reply message detail record indicates that the calling party authorized a prepaid reply, the calling party is charged a fee for the transmission of the reply message. Alternatively,

22 when the prepaid reply field of the reply message detail record indicates that the calling
23 party had not authorized a prepaid reply, the called party is charged a fee for the
24 transmission of the reply message.

TITLE OF THE INVENTION**TOLL FREE MESSAGE RESPONSE****BACKGROUND OF THE INVENTION****1. Field Of The Invention**

The present invention relates to communication systems and, more particularly, to a message system and method for providing a recipient of an original message with the opportunity to transmit a prepaid reply to the originator of the original message.

2. Description Of The Related Art

Modern communications systems, such as a telecommunication system, frequently include voice mail, which permits a calling party to leave a message for subsequent retrieval by a called party (e.g., the party to whom the message is addressed). The voice mail feature is often used when the called party does not answer an incoming call initiated by the calling party and the call is automatically redirected to the called party's voice mailbox. At this time, the calling party may leave a voice mail message for the called party, which message may be subsequently retrieved by the called party (i.e., the intended recipient) by issuance of a command or series of commands to the communications system that has stored the message for such later retrieval.

The voice mail feature is also used where both the calling and called parties have mailboxes. In this manner, the calling party may create a message in the calling party's mailbox, address the message to the called party's mailbox, and transmit the message from the calling party's mailbox to the called party's mailbox for subsequent retrieval by the called party.

The voice mail process generally involves the storage of a recorded voice

1 message on storage equipment associated with the communication system's switching
2 network. The called party retrieves the message at a subsequent time when the called party
3 issues a command or series of commands through the called party's telephone station set to
4 the storage equipment of the communications network.

5 In conventional voice message systems, a called party retrieving a voice mail
6 message is generally provided with the ability to prepare a response or reply to the
7 retrieved message and to transmit that response to the calling party who left the original
8 message. In one type of conventional voice message system, the calling party is generally
9 responsible for the cost associated with the placing of the call to the called party's mailbox
10 and the called party is responsible for the cost of transmitting the reply to the calling
11 party's mailbox. This particular type of conventional voice messaging system is know as a
12 "sender paid" system where each party is responsible for the cost of transmitting a voice
13 mail message (whether an original voice mail message or a reply) to the other party.

14 A shortcoming of conventional "sender paid" systems is that no provision is
15 made for the calling party to leave a message in a called party's mailbox and permit the
16 called party to transmit a prepaid reply to the message to the calling party at the calling
17 party's expense. For example, commercial establishments may wish to transmit a message
18 to a number of prospective customers' mailboxes and solicit replies from such customers.
19 In conventional "sender paid" systems, however, the prospective customers may be
20 reluctant to transmit a reply message at the customers' expense. As a result, such
21 commercial establishments may suffer due to receiving a minimal or insufficient number of
22 replies to the original message.

SUMMARY OF THE INVENTION

The above problems and shortcomings are solved and a technical advance is made by the method and system of the present invention, which provides a calling party transmitting an original message to a called party with the option of prepaying for a reply to the original message by the called party. In accordance with the present invention, prior to transmitting the original message to the called party, the calling party's message service system prompts the calling party to specify whether a prepaid reply is authorized. Based upon the calling party's response to the prompt, the calling party's message service system generates a message file associated with the original message which includes a prepaid reply field indicating whether a prepaid reply was authorized by the calling party.

The message file is transmitted over a communications network to the called party's message service system and the called party's message service system identifies whether a prepaid reply had been authorized by the calling party based upon the prepaid reply field of the message file. Upon transmission of a reply message by the called party to the calling party's original message, the called party's message service system generates a reply message detail record having a prepaid reply field indicating whether the calling party had authorized a prepaid reply. When the prepaid reply field of the reply message detail record indicates that the calling party authorized a prepaid reply, the calling party is charged a fee for the transmission of the reply message. Alternatively, when the prepaid reply field of the reply message detail record indicates that the calling party had not authorized a prepaid reply, the called party is charged a fee for the transmission of the reply message.

BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing features and other aspects of the invention are explained in the following description taken in connection with the accompanying drawings wherein:

FIG. 1 is a block diagram illustrating a voice message network and billing system in accordance with the present invention;

FIG. 2 is an illustrative message file for distributing messages among voice mail systems and mailboxes in accordance with the present invention;

FIG. 3 is an illustrative message detail record to capture essential information for message billing and account in accordance with the present invention; and

FIGS. 4-6 are flowcharts illustrating the operation of the voice message network and billing system in accordance with the present invention.

DETAILED DESCRIPTION

A voice message network and billing system 1 is illustrated in FIG. 1 having at least one Voice Message System (VMS) 40. While the preferred embodiment of the present invention is described below as a voice message network having at least one VMS, the present invention is not intended to be limited to voice messaging or VMS's and is also applicable to the other messaging systems capable of transmitting or communicating data over a communications network.

Referring now to FIG. 1, the voice message network 1 is illustrated as having a number of VMS's 40, 40a, ... 40n connected as part of the network 1. Each VMS 40, 40a, ... 40n preferably comprises a message database 50, 50a, ... 50n for storing system subscriber information and voice files, as well as the operating programs for the particular VMS served by the message database.

1 Each VMS **40**, **40a**, ... **40n** is preferably a computer system that essentially
2 functions as a central answering machine for telephone subscribers. It is understood that
3 the present invention can be utilized in a variety of VMS's or similar equipment. One well
4 known VMS, which may be modified to perform the operations of the present invention, is
5 an audio exchange system (AUDIX) manufactured by AT&T Corp, the assignee of the
6 present invention. Such a VMS arrangement is described in U.S. Patent No. 4,790,003,
7 issued to G.D. Kepley et al. on December 6, 1988.

8 Referring to FIG. 1, each VMS **40**, **40a**, ... **40n** is connected via an inter-
9 mailbox data network **80** to the other respective VMS's in the voice mailbox network **1**. In
10 this manner, each VMS **40**, **40a**, ... **40n** is able to communicate (e.g., transmit and receive
11 information) with the other VMS's in the voice mailbox network **1**.

12 Each VMS **40**, **40a**, ... **40n** is also connected via respective trunk lines to
13 the communications network **30**, which is illustrated in FIG. 1 as preferably being the
14 public switched telephone network (PSTN). In this manner, a caller may access a
15 particular VMS **40**, **40a**, ... **40n** via communications network **30** through use of a
16 telephone station set **10**, **20**. It is understood that communications network **30** could also
17 be a private branch exchange (PBX), Centrex, or similar communication or
18 telecommunication system that controls access to the respective VMS **40**, **40a**, ... **40n** by
19 telephone station sets **10**, **20**. It is also understood that station sets **10**, **20** are not intended
20 to be limited to telephones, but could be, for instance, conventional facsimile machines,
21 computers, or any other device that is capable of transmitting and receiving data over a
22 telephone line.

23 Each subscriber who has subscribed to the answering services offered by a

1 service provider is assigned a "mailbox" on a storage media of a particular VMS ("called
2 party's VMS") into which messages may be entered by a caller ("calling party") and
3 subsequently retrieved by the called party. In addition to retrieving messages, a subscriber
4 may access the subscriber's mailbox and create and transmit messages to another
5 subscriber's mailbox over the inter-mailbox data network **80**.

6 A Mailbox Usage Detail Recording and Processing System (MUDRPS) **60** is
7 also connected to the inter-mailbox data network **80** via one or more trunk lines. The
8 MUDRPS **60** is utilized by the service provider for billing purposes and receives message
9 detail records generated and transmitted over the inter-mailbox data network **80** by each
10 VMS **40**, **40a**, ... **40n** upon transmission of a message or other data from a subscriber's
11 mailbox. The message detail records received by the MUDRPS **60** are stored in a Mailbox
12 Usage Detail Database **70** connected to the MUDRPS **60**. The MUDRPS **60** is essentially
13 a computer system that periodically processes the message detail records stored in the
14 database **70** for billing purposes that will be described in greater detail below.

15 The operation of the present invention is best understood with reference to
16 FIGS. 4-6. A calling party who desires to leave a voice mail message with another party
17 (called party) may use telephone station set **10**, for example, to dial the appropriate
18 telephone number to access the calling party's mailbox stored, for instance, in VMS **40**
19 (Step **S10**). In this example, VMS **40** will be referred to as the "calling party's VMS"
20 because that is the location where the calling party's mailbox resides.

21 The calling party logs into the calling party's mailbox in a conventional
22 manner and creates a message to send to the called party (Step **S20**). Creation of the
23 message is accomplished in a conventional manner using telephone station set **10** to: (1)
24 select the "message creation" option from the mailbox activity menu, (2) enter the

1 information that is normally required (e.g., the mailbox identification number of the called
2 party to whom the message is intended to be sent, as well as (optionally) priority, delivery
3 time, etc.), and (3) record the voice message intended to be sent to the called party.

4 When creating a message, the calling party's VMS 40 will prompt the
5 calling party as to whether a prepaid reply is to be included with the message being created
6 (Step S30). The calling party will then respond to the prompt by authorizing or denying
7 the inclusion of a prepaid reply. Preferably, the calling party will provide such a response
8 to the prompt from the calling party's VMS 40 using the touch-tone keypad of telephone
9 station set 10. However, it is understood that voice recognition and other conventional
10 methods may be utilized to respond to the prepaid reply prompt from the calling party's
11 VMS 40.

12 The calling party's VMS 40 thereafter creates a message file for distributing
13 the message among the VMS's 40a ... 40n and their respective mailboxes in the voice
14 mailbox network 1 (Step S40). The message file created by the calling party's VMS 40
15 includes the necessary message address, attribute information (including a flag indicating
16 that a prepaid reply has or has not been authorized), and audio content of the message.

17 An illustrative message file is shown in FIG. 2. In this example, the
18 message file contains 8 discrete fields. The first field of the message file contains the
19 recipient's (called party's) mailbox identification number ("Recipient Address field"). The
20 second field contains the sender's (calling party's) mailbox identification number. The
21 third and fourth fields contain the date and time that the message is sent, respectively. The
22 fifth field of the message file contains a flag which is set by the calling party's VMS 40 to
23 indicate whether the message being sent is urgent. The sixth field of the message file
24 contains a flag which is set by the calling party's VMS 40 to indicate whether the calling

1 party has authorized a prepaid reply by the recipient (called party) of the message. The
2 seventh field of the message file contains a flag which is set by the calling party's VMS 40
3 to indicate whether the message being transmitted is a reply to an earlier message retrieved
4 by the calling party. Finally, the eighth field of the message file contains the digitized
5 audio message body of the message created by the calling party.

6 It is understood that the message file illustrated in FIG. 2 is for illustrative
7 purposes only. The fields described above are simply those fields believed to be
8 particularly useful for purposes of transmitting voice mail messages. As such, the order
9 and number of fields in the message file are not intended to be limited to that illustrated in
10 FIG. 2 and described above.

11 After the message file has been created by the calling party's VMS 40, the
12 calling party's VMS 40 identifies the called party's VMS 40a where the recipient of the
13 message (called party's) mailbox resides (Step S50). To identify the called party's VMS
14 40a, the calling party's VMS 40 checks the Recipient Address field of the message file
15 (which contains the called party's mailbox identification number) against a routing table
16 stored in a database of the calling party's VMS 40 and determines, for instance, that the
17 message is to be transmitted to the called party's VMS 40a. Similar routing tables are
18 stored in VMS 40a ... 40n of voice mailbox network 1 as well.

19 Upon identifying the called party's VMS 40a, the calling party's VMS 40
20 attaches the necessary routing information (corresponding to the called party's VMS 40a)
21 to the message file and transmits the message file over the inter-mailbox data network 80 to
22 the called party's VMS 40a (Step S60).

23 In addition, the calling party's VMS 40 also creates a message detail record
24 and transmits the message detail record to the MUDRPS 60 over the inter-mailbox data

1 network **80**, which message detail record is then stored in the mailbox usage detail database
2 **70** connected to the MUDRPS **60** (Step **S65**). Thereafter, the MUDRPS **60** processes the
3 message detail record (Step **S75**) and the calling party may be billed by the service provider
4 for the cost of sending the message to the called party (Step **S85**).

5 An illustrative message detail record is shown in FIG. 3. Like the message
6 file described above, the message detail record in this example also contains 8 discrete
7 fields. The first through seventh fields are identical to the first through seventh fields
8 described above with respect to the message file generated by the calling party's VMS **40**
9 (including a field indicating whether the calling party has authorized a prepaid reply).
10 However, instead of containing a digitized audio message body field, the eighth field of the
11 message detail record indicates the length of the message (preferably in seconds) being
12 transmitted in order to facilitate accurate billing by the service provider.

13 Like the message file illustrated in FIG. 2, it is understood that the message
14 detail record illustrated in FIG. 3 is for illustrative purposes only. The fields described
15 above are simply those fields believed to be particularly useful for purposes of accounting
16 and billing by the service provider for the transmission of voice mail messages within the
17 voice mailbox network **1**. As such, the order and number of fields in the message detail
18 record are not intended to be limited to that illustrated in FIG. 3 and described above.

19 Upon receipt of the message file transmitted by the calling party's VMS **40**,
20 the called party's VMS **40a** stores the message file in the called party's new message
21 directory in the message database **50a** connected to VMS **40a** (Step **S70**). At this time, the
22 called party's VMS **40a** notifies the called party that a new message is waiting in the called
23 party's mailbox (Step **S80**). Such notification of a new message can be accomplished in a
24 convention manner, such as illuminating a new message indicator light on the called party's

1 telephone station set **20**.

2 Having been notified of a new message, the called party accesses the called
3 party's mailbox by dialing the appropriate access number associated with the called party's
4 VMS **40a** (the VMS where the called party's mailbox resides) using telephone station set
5 **20**. After logging into the called party's mailbox in a conventional manner, the called
6 party is able to retrieve and hear the message received from the calling party (Step **S90**).
7 Such retrieval is accomplished in a conventional manner by selecting the "message
8 retrieval" option from the mailbox activity menu. The called party's VMS **40a** will play
9 the typical audible message "header" information to the called party (e.g., who the message
10 is from and when the message was received), as well as a special announcement advising
11 the called party whether the calling party has authorized a prepaid reply (Step **S100**). The
12 called party's VMS **40a** identifies whether the calling party has authorized a prepaid reply
13 message based upon the flag appearing in the "prepaid reply" field of the message file
14 received from the calling party's VMS **40**.

15 After listening to the message and completion of the playback, the called
16 party's VMS **40a** provides the called party with the menu option to reply to the message
17 and reminds the called party whether the reply was prepaid by the calling party.
18 Preferably, such menu options and reminders are provided to the called party in a
19 conventional manner using audible messages that are played by the called party's VMS
20 **40a**.

21 Should the called party wish to create and transmit a reply to the calling
22 party's message, the called party will select the "reply" option from the mailbox menu
23 using the touch-tone keypad of telephone station set **20**. However, it is understood that
24 voice recognition and other conventional methods could be utilized to select mailbox menu

1 options within the called party's VMS 40a.

2 After selecting the "reply" option, the called party is instructed by the called
3 party's VMS 40a to record the reply message in the normal manner. The called party
4 thereafter records the reply and approves the reply for sending to the calling party using
5 telephone station set 20 (Step S110).

6 The called party's VMS 40a thereafter creates a reply message file for
7 transmitting the reply message to the calling party's VMS 40 and associated mailbox (Step
8 S120). The reply message file created by the called party's VMS 40a includes the recipient
9 (calling party's) address taken from the message file of the original message that is being
10 replied to, the called party's (e.g., party generating the reply message) identification, the
11 audio content of the reply message, and a separate flag indicating whether the reply was
12 prepaid by the calling party. The content of the reply message file created by the called
13 party's VMS 40a is similar to that of the message file described above and illustrated in
14 FIG. 2.

15 After the reply message file has been created by the called party's VMS 40a,
16 the called party's VMS 40a identifies the calling party's VMS 40 where the recipient of the
17 message (calling party's) mailbox resides (Step S130). To identify the calling party's VMS
18 40, the called party's VMS 40a checks the Recipient Address field of the reply message file
19 (which contains the calling party's mailbox identification number) against a routing table
20 stored in a database of the called party's VMS 40a and determines that the reply message is
21 to be transmitted to the calling party's VMS 40.

22 Upon identifying the calling party's VMS 40, the called party's VMS 40a
23 attaches the necessary routing information (corresponding to the calling party's VMS 40) to
24 the reply message file and transmits the reply message file over the inter-mailbox data

1 network **80** to the calling party's VMS **40** (Step **S140**).

2 Upon receipt of the reply message file transmitted by the called party's VMS
3 **40a**, the calling party's VMS **40** stores the reply message file in the calling party's message
4 directory in the message database **50** connected to VMS **40** (Step **S150**). At this time, the
5 calling party's VMS **40** notifies the calling party that the reply message is waiting in the
6 calling party's mailbox (Step **S160**). Such notification of the reply message can be
7 accomplished in a convention manner, such as by illuminating a new message indicator
8 light on the calling party's telephone station set **10**.

9 Having been notified of the reply message, the calling party again accesses
10 the calling party's mailbox by dialing the appropriate access number associated with the
11 calling party's VMS **40** (the VMS where the calling party's mailbox resides) using
12 telephone station set **10**. After logging into the calling party's mailbox in a conventional
13 manner, the calling party is able to retrieve and hear the reply message from the called
14 party (Step **S170**). Such retrieval is accomplished in a conventional manner by selecting
15 the "message retrieval" option from the mailbox activity menu. The calling party's VMS
16 **40** identifies whether the reply message was prepaid by the calling party based upon the
17 flag appearing in the "prepaid reply" field of the reply message file. The calling party's
18 VMS **40** will play the typical audible message "header" information (e.g., who the message
19 is from and when the message was received) to the calling party and will also indicate
20 whether the reply message from the called party was prepaid by the calling party. The
21 calling party thereafter listens to the reply message from the called party in a conventional
22 manner.

23 In addition to creating a reply message file, the called party's VMS **40a** also
24 creates a reply message detail record and transmits the reply message detail record to the

1 MUDRPS **60** over the inter-mailbox data network **80**, which record is then stored in the
2 mailbox usage detail database **70** connected to the MUDRPS **60** (Step **S145**). The content
3 of the reply message detail record created by the called party's VMS **40a** is similar to that
4 of the message detail record described above and illustrated in FIG. 3. This reply message
5 detail record includes a flag indicating whether the reply message was prepaid by the
6 calling party.

7 After receiving and storing the reply message detail record, the MUDRPS
8 **60** thereafter processes the reply message detail record for accounting and billing purposes
9 on behalf of the service provider (Step **S155**). The MUDRPS **60** identifies whether the
10 reply message associated with the reply message detail record was prepaid by the calling
11 party (the recipient of the reply message) based upon the flag appearing in the "reply
12 prepaid" field of the reply message detail record (Step **S165**).

13 If the flag appearing in the "reply prepaid" field of the reply message detail
14 record indicates that the calling party had not authorized a prepaid reply, then the called
15 party may be billed by the service provider for the cost of transmitting the reply message to
16 the calling party (Step **S185**). However, if the flag appearing in the "reply prepaid" field
17 of the reply message detail record indicates that the calling party authorized a prepaid
18 reply, then the calling party may be billed by the service provider for the cost of the reply
19 message transmitted by the called party (Step **S175**).

20 Where the calling party has authorized one or more prepaid replies, the
21 calling party may be billed by the service provider for the cost of each reply actually sent
22 to the calling party or, alternatively, the calling party may be billed a particular fee by the
23 service provider for each prepaid reply authorized by the calling party (irrespective of
24 whether an actual prepaid reply was subsequently sent to the calling party in response to

1 the calling party's message).

2 Furthermore, to discourage fraudulent messages authorizing prepaid replies,
3 the MUDRPS 60 can match the reply message detail record generated by the called party's
4 VMS 40a to the message detail record originally generated by the calling party's VMS 40.

5 Before treating a reply message transmitted within the voice mailbox network 1 as having
6 been prepaid, both the message detail record and reply message detail record associated
7 with the reply message would necessarily include a flag in the "reply prepaid" field
8 indicating that the calling party had authorized a prepaid reply. In the event that the flag in
9 the "reply prepaid" field in the message detail record indicated that the calling party had
10 not authorized a prepaid reply, then the authorization would be deemed potentially
11 fraudulent and identified to the service provider for further investigation.

12 In accordance with the present invention, the calling party, who authorizes a
13 prepaid reply to a message sent by the calling party, may also set a limit on the length of
14 the prepaid reply message. This could be accomplished by creating an additional field in
15 the message detail record generated by the called party's VMS 40. The service provider
16 could set a default time limit on the length of the reply message and/or the calling party
17 may instruct the calling party's VMS 40 of the desired time limit in response to a prompt
18 from the called party's VMS following the authorization of a prepaid reply in Step S30
19 illustrated in FIG. 4.

20 Although an illustrative and advantageous embodiment has been described
21 herein in detail, it should be noted and will be appreciated by those skilled in the art that
22 numerous variations may be made within the scope of this invention without departing from
23 the principle of this invention and without sacrificing its chief advantages. For instance, it
24 is understood that the present invention is not limited to voice mail messaging, but also

1 encompasses other modes of communication over a communication network or telephone
2 line, such as facsimile transmissions, E-Mail transmissions, etc. In addition, although the
3 above-described prepaid reply field contained in the various message files and detail
4 records is preferably transmitted or communicated over the inter-mailbox data network 80,
5 it is further understood that the prepaid reply field could similarly be generated and
6 transmitted or communicated as a separate signal over a signalling network. As such, the
7 terms and expressions have been used herein as terms of description and not terms of
8 limitation. There is no intention to use the terms or expressions to exclude any equivalents
9 of features shown and described or portions thereof and this invention should be defined in
10 accordance with the claims which follow.

CLAIMS:

1. A method of transmitting a reply voice message over a voice mailbox network from a message recipient's voice message system to a message sender's voice message system, the reply message being sent in response to an original message communicated over the network from the message sender's voice message system to the message recipient's voice message system, the method comprising the steps of:

receiving a message file associated with the original message, the received message file including a prepaid reply field indicating whether a prepaid reply had been authorized by the message sender;

reading the prepaid reply field of the received message file to determine whether a prepaid reply was authorized by the message sender;

generating a reply message detail record associated with the reply message, the reply message detail record including a prepaid reply field indicating whether a prepaid reply had been authorized by the message sender;

communicating the reply message detail record from the message recipient's voice message system to a processing unit in response to communication of the reply message from the message recipient's voice message system to the message sender's voice message system;

reading the prepaid reply field of the reply message detail record;

allocating a fee to the message sender for the communication of the reply message when the prepaid reply field of the reply message detail record indicates that the message sender authorized a prepaid reply; and

allocating a fee to the message recipient for the communication of the

reply message when the prepaid reply field of the reply message detail record indicates that the message sender had not authorized a prepaid reply.

2. The method according to claim 1, further comprising the steps of:

prompting the message sender to specify whether a prepaid reply is authorized;

receiving a response from the message sender indicating whether a prepaid reply is authorized;

generating the message file associated with the original message at the message sender's voice message system;

indicating in the prepaid reply field of the message file whether the message sender authorized a prepaid reply; and

communicating the message file from the message sender's voice message system to the message recipient's voice message system.

3. The method according to claim 1, wherein the message sender's voice message system and the message recipient's voice message system are one and the same.

4. A method of transmitting a reply message over a communications network from a called party's message service system to a calling party's message service system, the method comprising the steps of:

receiving a message file associated with an original message transmitted

from the calling party's message service system to the called party's message service system, the received message file including a prepaid reply field indicating whether a prepaid reply had been authorized by the calling party;

reading the prepaid reply field of the received message file to determine whether a prepaid reply was authorized by the calling party;

generating a reply message detail record associated with the reply message, the reply message detail record including a prepaid reply field indicating whether a prepaid reply had been authorized by the calling party;

transmitting the reply message detail record from the called party's message service system to a processing unit in response to transmission of the reply message from the called party's message service system to the calling party's message service system; and

processing billing of the reply transmission based on information contained in the reply message detail record.

5. The method according to claim 4, wherein the step of processing billing includes the steps of:

reading the prepaid reply field of the reply message detail record; and

allocating a fee to the calling party for the transmission of the reply message when the prepaid reply field of the reply message detail record indicates that the calling party authorized a prepaid reply.

6. The method according to claim 5, wherein the reply message detail record is stored in a database associated with the processing system.

7. The method according to claim 5, further comprising the step of allocating a fee to the called party for the transmission of the reply message when the prepaid reply field of the reply message detail record indicates that the calling party had not authorized a prepaid reply.
8. The method according to claim 5, wherein the reply message is a voice message.
9. The method according to claim 5, wherein the reply message is a facsimile transmission.
10. The method according to claim 5, wherein the reply message is an E-Mail.
11. The method according to claim 4, further comprising the step of determining whether the calling party authorized the prepayment of a reply message in response to the original message transmitted by the calling party to the called party.
12. The method according to claim 11, further comprising the steps of:
 - prompting the calling party to specify whether a prepaid reply is authorized;
 - receiving a response from the calling party indicating whether a prepaid reply is authorized;
 - generating the message file associated with the original message at the calling party's message service system;

indicating in the prepaid reply field of the message file whether the calling party authorized a prepaid reply; and

transmitting the message file from the calling party's message service system to the called party's message service system.

13. The method according to claim 4, further comprising the steps of:

generating a reply message file associated with the reply message, the reply message file having a prepaid reply field indicating whether a prepaid reply had been authorized by the calling party;

transmitting the reply message file from the called party's message service system to the calling party's message service system; and

reading the prepaid reply field of the reply message file to determine if the reply message was prepaid by the calling party.

14. The method according to claim 4, wherein the calling party's message service system and the called party's message service system are one and the same.

15. A method of transmitting a reply message over a communications network from a called party's voice message service system to a calling party's voice message service system, the method comprising the steps of:

determining whether the calling party authorized the prepayment of a reply message in response to an original message transmitted by the calling party to the called party;

generating a reply message file associated with the reply message, the reply message file having a prepaid reply field indicating whether a prepaid reply had been authorized by the calling party; and

transmitting the reply message file from the called party's voice message service system to the calling party's voice message service system.

16. The method according to claim 15, wherein the step of determining whether the calling party authorized a prepaid reply comprises the steps of:

receiving a message file associated with the original message transmitted from the calling party's voice message service system, the received message file having a prepaid reply field indicating whether a prepaid reply had been authorized by the calling party; and

reading the prepaid reply field of the received message file to determine whether a prepaid reply was authorized by the calling party.

17. The method according to claim 16, further comprising the steps of:

prompting the calling party to specify whether a prepaid reply is authorized;

receiving a response from the calling party indicating whether a prepaid reply is authorized;

generating the message file associated with the original message at the calling party's voice message service system;

indicating in the prepaid reply field of the message file whether the calling party authorized a prepaid reply; and

transmitting the message file from the calling party's voice message service system to the called party's voice message service system.

18. The method according to claim 16, further comprising the steps of:

generating a reply message detail record associated with the reply message, the reply message detail record having a prepaid reply field indicating whether a prepaid reply was authorized by the calling party;

transmitting the reply message detail record from the called party's voice message service system to a processing system;

reading the prepaid reply field of the reply message detail record; and

allocating a fee to the calling party for the transmission of the reply message when the prepaid reply field of the reply message detail record indicates that the calling party authorized a prepaid reply.

19. The method according to claim 18, wherein the reply message detail record is stored in a database associated with the processing system.

20. The method according to claim 18, further comprising the step of allocating a fee to the called party for the transmission of the reply message when the prepaid reply field of the reply message detail record indicates that the calling party had not authorized a prepaid reply.

21. The method according to claim 17, wherein the calling party's message service system and the called party's message service system are one and the same.
22. The method according to claim 20, wherein the reply message is a voice message.
23. The method according to claim 20, wherein the reply message is a facsimile transmission.
24. The method according to claim 20, wherein the reply message may be an E-Mail.
25. A message and billing system for transmitting a reply message over a communications network from a called party's message service system to a calling party's message service system, comprising:
- a data network communicatively connecting the calling party's message service system to the called party's message service system; and
 - a processing system for processing usage detail records generated by the message service systems, the processing system communicatively connected to the message service systems via the data network;
- wherein the called party's message service system is adapted to receive a message file generated by the calling party's message service system associated with an original message and transmitted over the data network from the calling party's message service system, the received message file including a prepaid reply field indicating whether a prepaid reply had

been authorized by the calling party; the called party message service system being further adapted to read the prepaid reply field of the received message file to determine whether a prepaid reply was authorized by the calling party and to generate a reply message detail record associated with the reply message to the original message, the reply message detail record including a prepaid reply field indicating whether a prepaid reply had been authorized by the calling party; and the called party's message service system further adapted to transmit the reply message detail record to the processing unit in response to transmission of the reply message from the called party's message service system to the calling party's message service system.

26. The message and billing system according to claim 25, wherein the processing unit is adapted to read the prepaid reply field of the reply message detail record; and charges the calling party a fee for the transmission of the reply message when the prepaid reply field of the reply message detail record indicates that the calling party authorized a prepaid reply.

27. The method according to claim 26, wherein the calling party's message service system and the called party's message service system are one and the same.

28. A method of transmitting a reply message over an electronic communications network from a message recipient to a message sender, the reply message being sent electronically in response to an original message communicated over the network from the message sender to the message recipient, the method comprising the steps of:

furnishing to the message recipient an indication that the message sender will pay for the reply message; and

transmitting the reply message to the message sender over the electronic communications network.

29. The method according to claim 28, further comprising the step of receiving authorization from the message sender that the message sender will pay for the reply message.

30. The method according to claim 28, further comprising the step of allocating the cost of communicating the reply message to the message sender.

31. The method according to claim 28, wherein the indication furnished to the message recipient is in the form of a message file associated with the original message that includes a prepaid reply field indicating whether a prepaid reply had been authorized by the message sender.

32. The method according to claim 28, wherein the reply message is a voice message.

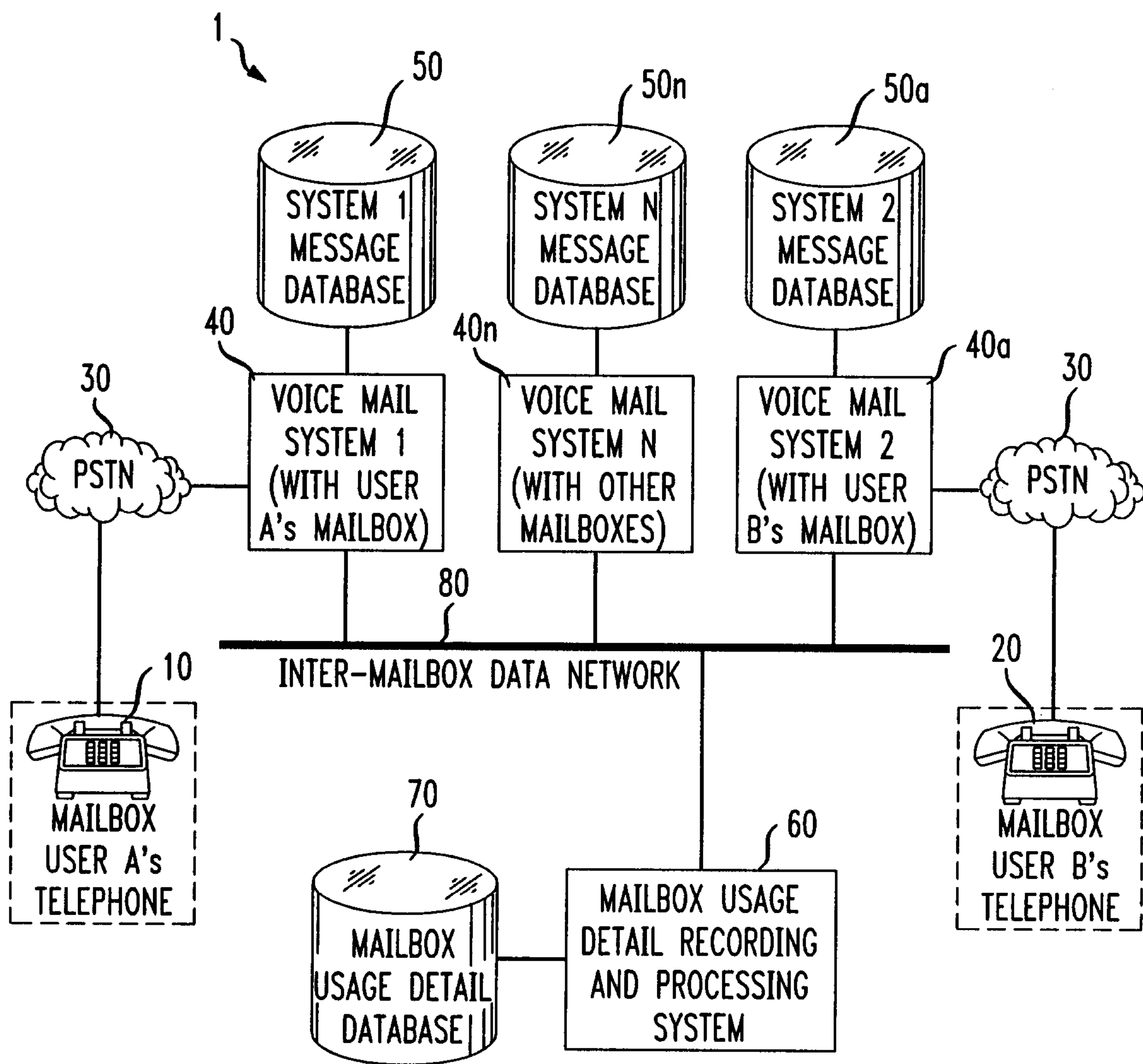
33. The method according to claim 28, wherein the reply message is a facsimile transmission.

34. The method according to claim 28, wherein the reply message is an E-Mail.

35. The method according to claim 28, wherein the reply message is a telephone call.

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FIG. 1



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FIG. 2

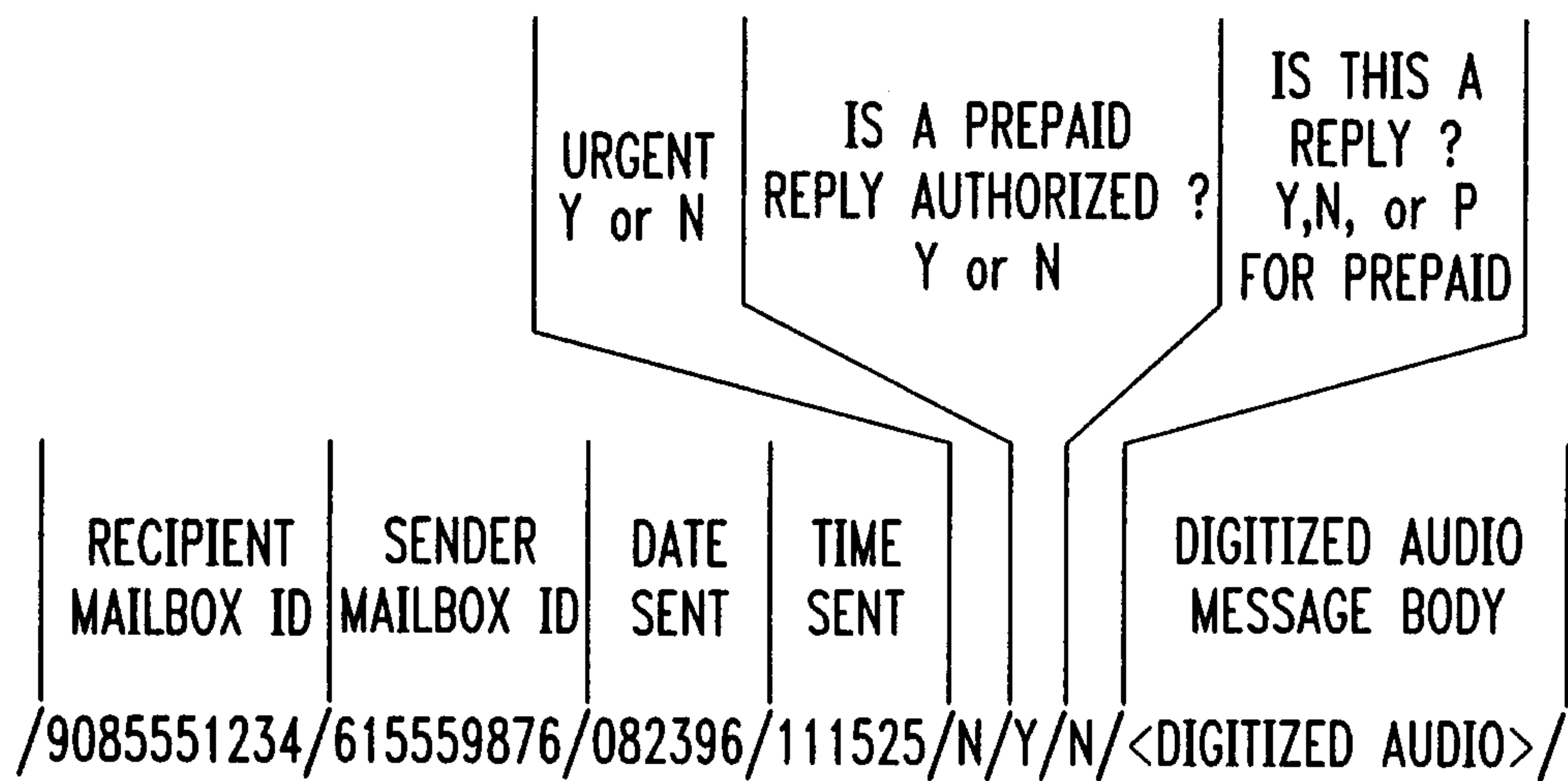
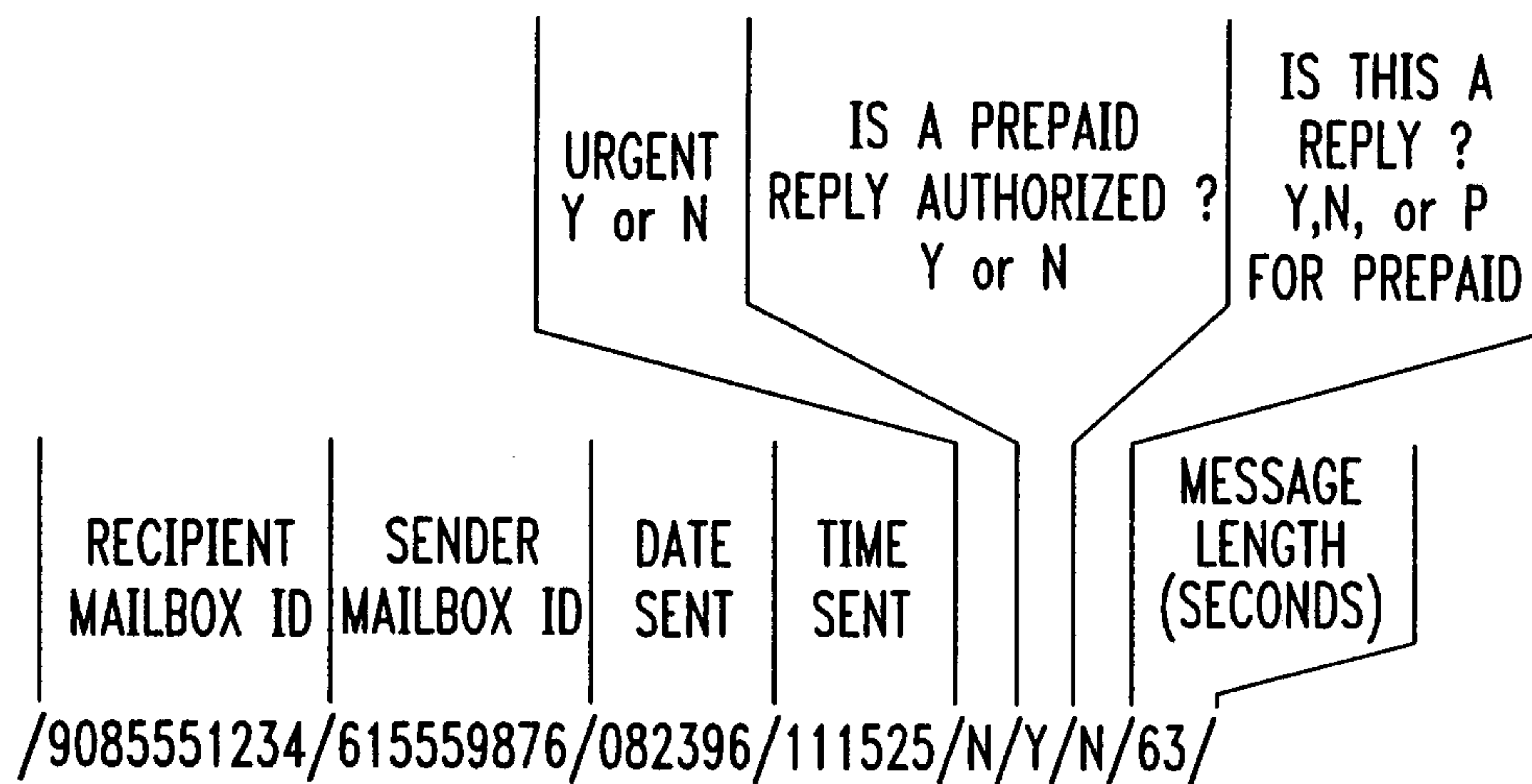
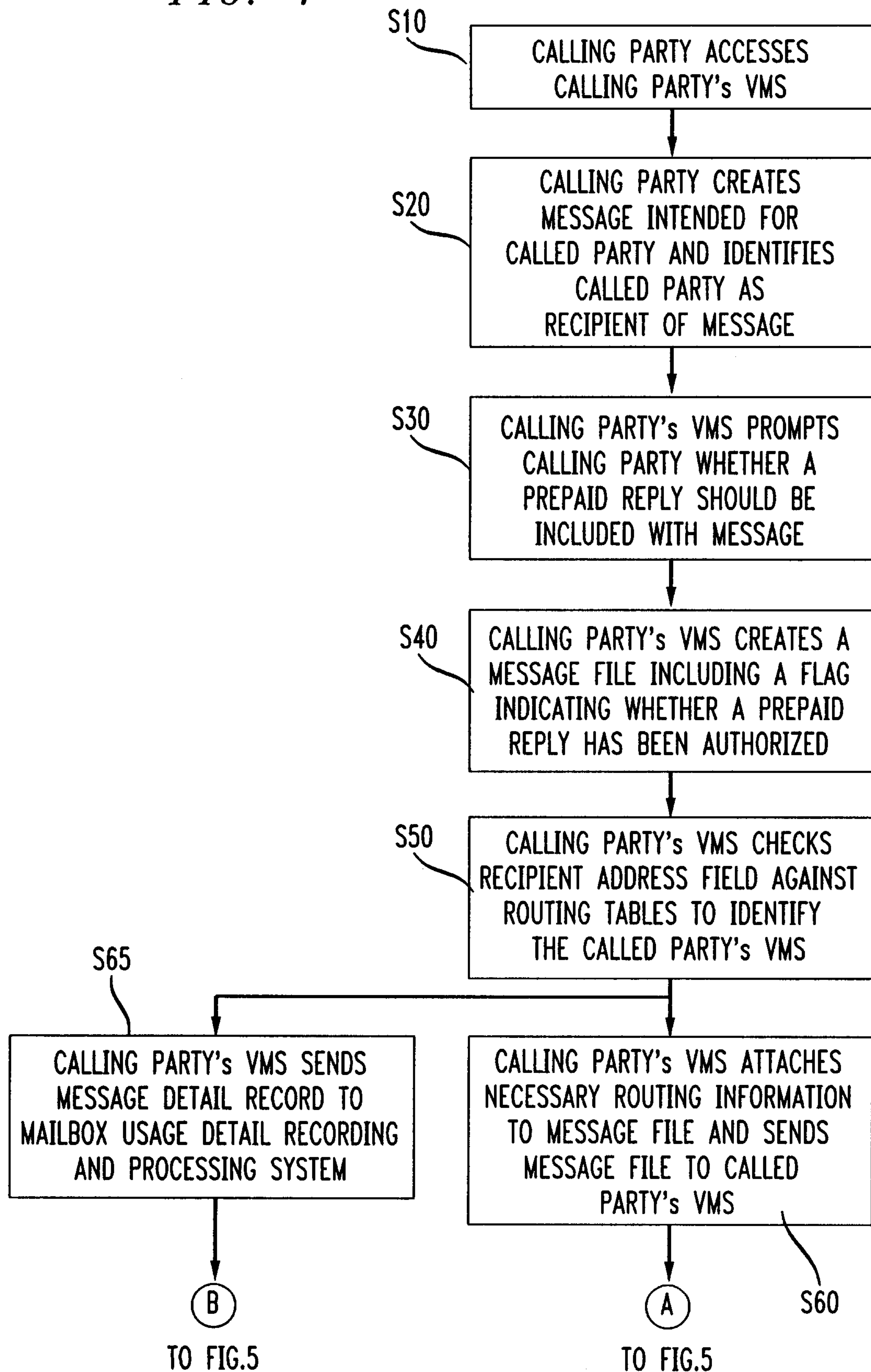


FIG. 3



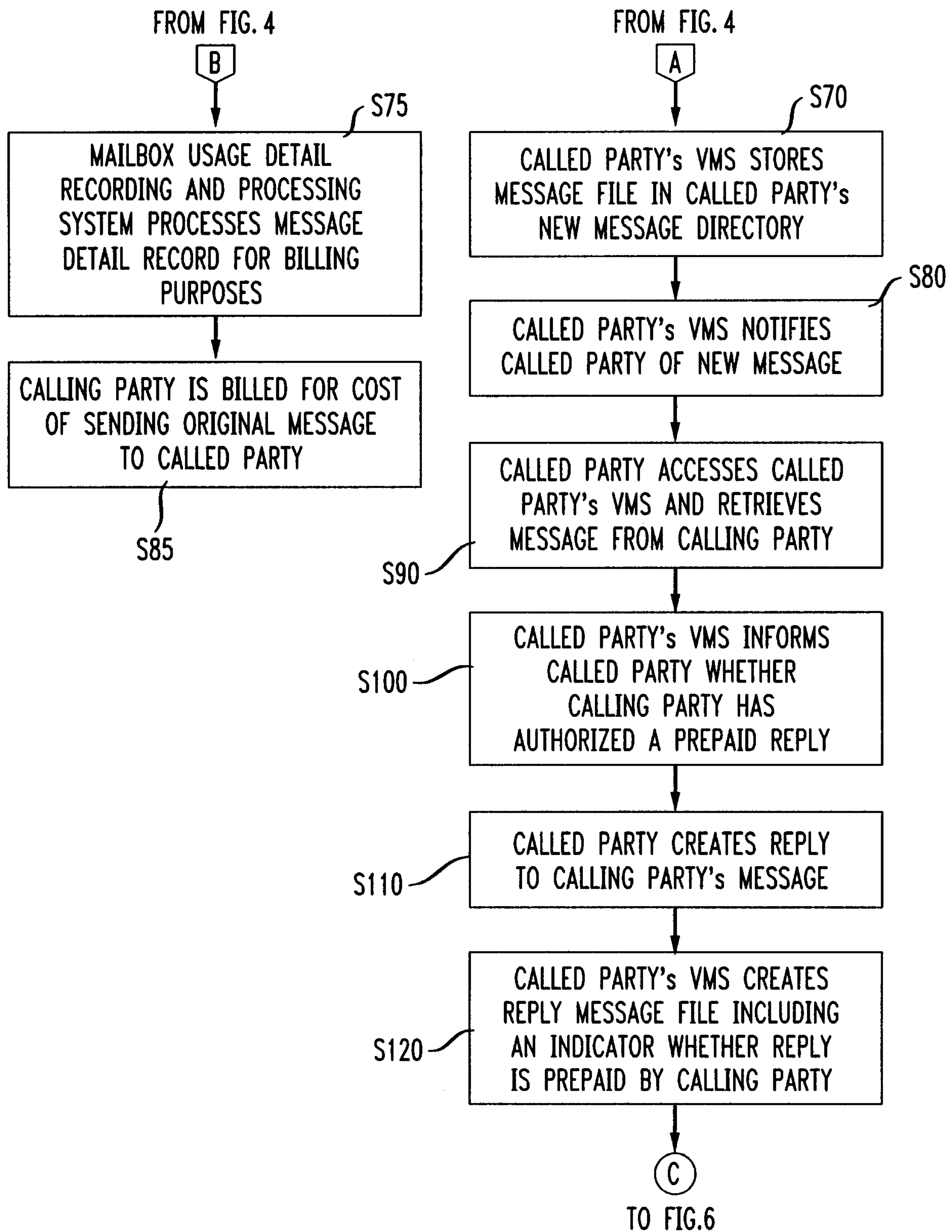
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FIG. 4



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FIG. 5



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FIG. 6

