



(22) **Date de dépôt/Filing Date:** 2007/02/14

(41) **Mise à la disp. pub./Open to Public Insp.:** 2007/08/16

(45) **Date de délivrance/Issue Date:** 2016/01/26

(30) **Priorité/Priority:** 2006/02/16 (EP06110016.0)

(51) **Cl.Int./Int.Cl.** *H04W 4/12* (2009.01),
G10L 15/26 (2006.01), *H04L 12/16* (2006.01),
G06F 15/02 (2006.01)

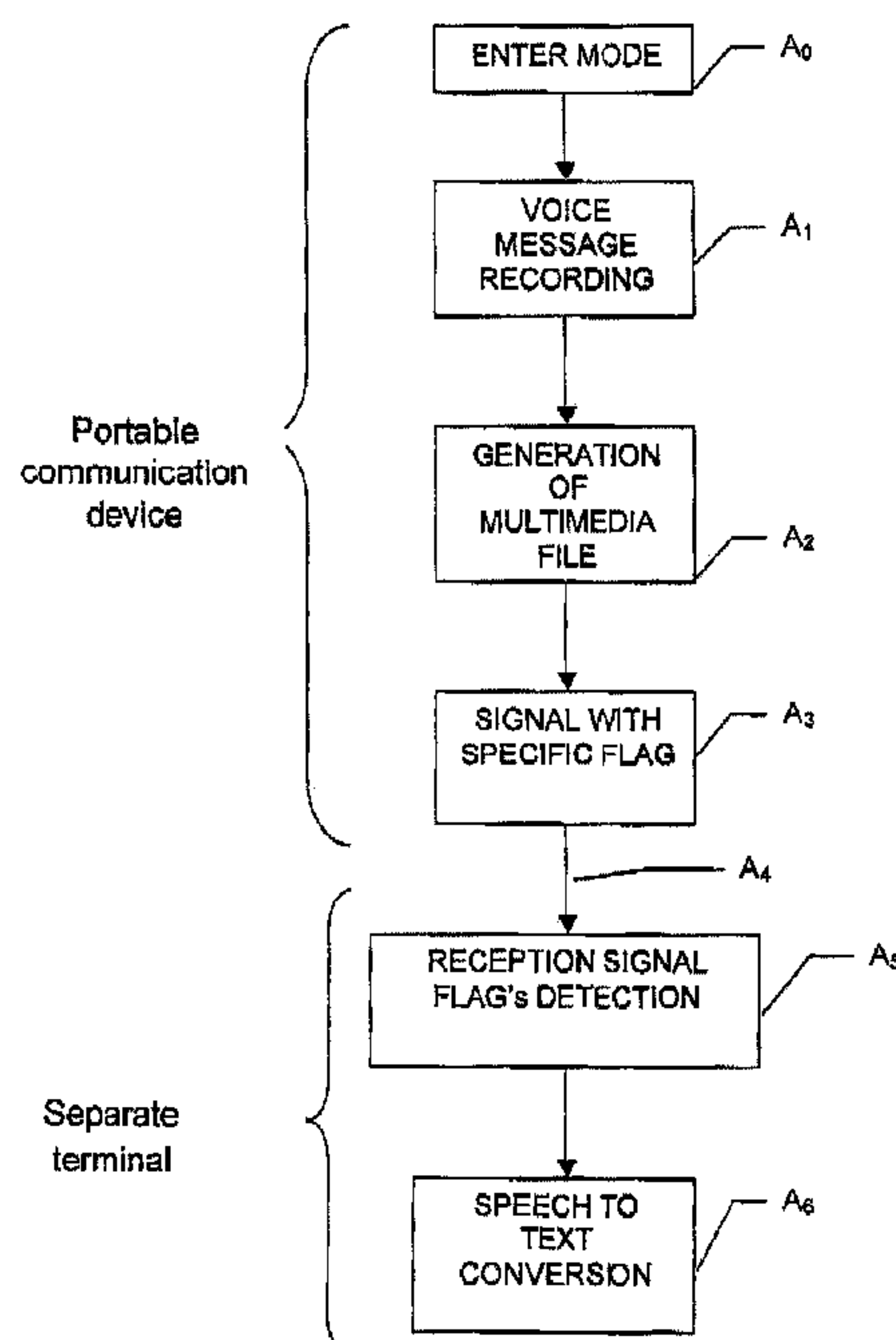
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(54) **Titre :** METHODE DE TRANSMISSION D'UN MESSAGE D'UN DISPOSITIF PORTATIF DE COMMUNICATION VERS UN
TERMINAL DISTINCT, ET DISPOSITIF PORTATIF ET TERMINAL CONNEXES

(54) **Title:** METHOD FOR TRANSMITTING A MESSAGE FROM A PORTABLE COMMUNICATION DEVICE TO A SEPARATE
TERMINAL, AND ASSOCIATED PORTABLE DEVICE AND TERMINAL



(57) **Abrégé/Abstract:**

The invention relates to a method for transmitting a message from a portable communication device (1) to a separate terminal (2) comprising a step (A1) of recording at the portable communication device (1) a voice message, and a step (A2) of generating, at



(57) Abrégé(suite)/Abstract(continued):

the portable communication device, a multimedia file comprising at least said voice message. According to the invention, said portable communication device (1) transmits (A4) to said separate terminal (2) a signal including said multimedia file and a specific flag for indication that voice message is to be displayed as a text message; upon reception (A6) at said separate terminal (2) of said signal, voice message is extracted and specific flag is detected; upon detection of said specific flag, speech-to-text conversion (A6) is performed at said separate terminal (2) in order to transform said voice message into a text message to be displayed.

ABSTRACT

The invention relates to a method for transmitting a message from a portable communication device (1) to a separate terminal (2) comprising a step (A₁) of recording at the portable communication device (1) a voice message, and a step (A₂) of generating, at the portable communication device, a multimedia file comprising at least said voice message. According to the invention, said portable communication device (1) transmits (A₄) to said separate terminal (2) a signal including said multimedia file and a specific flag for indication that voice message is to be displayed as a text message; upon reception (A₅) at said separate terminal (2) of said signal, voice message is extracted and specific flag is detected; upon detection of said specific flag, speech-to-text conversion (A₆) is performed at said separate terminal (2) in order to transform said voice message into a text message to be displayed.

**METHOD FOR TRANSMITTING A MESSAGE FROM A PORTABLE
COMMUNICATION DEVICE TO A SEPARATE TERMINAL, AND ASSOCIATED
PORTABLE DEVICE AND TERMINAL**

The present invention relates to a method enabling the transmission
5 of a message from a portable communication device, such as a mobile
phone or a personal digital assistant, to a separate device, in order to
generate a text message to be displayed either locally at said separate
device, or at a distant end user terminal.

Today, mobile applications aiming at sending text messages (for
10 instance via Short Message Services, Multimedia Message services or E-
mails) are limited due to the fact that text input is difficult to perform at
the portable device. This limitation could dramatically restrict the use of
some new applications such as mobile weblog or blog, in which a great
quantity of text may have to be input by the user of the mobile phone.

15 A known solution to counter message input issue is to use voice
messages instead of text messages. Some mobile phones already implement
this solution consisting in recording at the mobile phone a text message
which is sent to an end user terminal via MMS (Multimedia Message
Service). However, this solution requires that end user terminal (for
20 instance another mobile phone) also supports this service. In addition, the
end user might prefer to receive a text message to be displayed instead of
listening to an audio message.

For blog applications, it is also already known to call a defined
number corresponding to a server, and to leave a voice message which can
25 be listened by other users through this server. Here again, there is no
possibility to display a text message.

The aim of the invention is to remedy the above drawbacks by
proposing a solution enabling an easy input of message at the portable
communication device's side, while offering the possibility to display a text
30 message at the destination terminal's side.

To this aim, an object of the present invention is to provide a method for transmitting a message from a portable communication device to a separate terminal, comprising a step of recording a voice message at the portable communication device, and a step of generating, at the portable communication device, a multimedia file comprising at least said voice message, characterized in that it further comprises the following steps:

- transmission from said portable communication device to said separate terminal of a signal including said multimedia file and a specific flag for indication that voice message is to be displayed as a text message;
- 10 - reception at said separate terminal of said signal, extraction of said voice message and detection of said specific flag;
- upon detection of said specific flag, speech-to-text conversion at said separate terminal in order to transform said voice message into a text message to be displayed.

15 In one possible embodiment, the text message is for local use, i.e. to be displayed at separate terminal.

Alternatively, the method according to the invention may comprise a further step for transmitting said text message from said separate terminal to an end user terminal such as a mobile phone or a personal computer.

20 Transmission of signal from portable communication device to separate device can be made by any kind of transmission links, such as wired or wireless links.

Similarly, transmission of text message from separate device to end user terminal can be made through wired and/or wireless communication
25 links.

In one possible embodiment, specific flag indicating that voice message is to be displayed as text message is included within multimedia file comprising the recorded voice message.

Alternatively, said specific flag is sent in the signal as an attachment
30 to said multimedia file.

A second object of the invention is a portable communication device for implementing the method, characterized in that it comprises:

- means for recording a voice message, and for generating a multimedia file comprising at least said voice message;
- 5 - software means for generating a signal including said multimedia file and a specific flag for indication that voice message is to be displayed as a text message;
- transmission means for transmitting said signal to a separate terminal.

10 A third object of the invention is a terminal for use as separate terminal in the method, characterized in that it comprises:

- means for receiving signal transmitted by said portable communication device, for extracting said voice message from the received signal and detecting said specific flag;
- 15 - upon detection of said specific flag, software means for converting said voice message into a text message to be displayed.

This terminal can be either a server, or a personal computer.

Features and advantages of the invention will become apparent from the following description of the invention given by way of non-limiting
20 examples only and with reference to the accompanying drawings, in which:

- Figure 1 shows succession of different steps involved in a preferred embodiment according to the present invention;
- Figure 2 shows schematically an overall system including a portable communication device, a separate terminal and a end user terminal for
25 possible implementation of the method according to the invention.

In relation with figure 1, a preferred embodiment of the method for transmitting a message from a portable communication device 1 (figure 2) to a separate terminal 2 (figure 2) is shown. Left part of figure 1 indicates the steps which are performed respectively at the portable device and at
30 the separate terminal.

A first optional step A_0 consists in entering into a specific mode dedicated to the transmission of the message according to the method of the invention, in order that said portable communication device 1 can identify that a recorded voice message is to be converted as text message.

5 Said first step A_0 can be initiated by a user of said portable communication device 1, for instance via a specific menu.

Alternatively said first step A_0 is initiated automatically by said portable communication device according to the current use of said portable communication device 1. For instance, the portable device will
10 automatically perform the method according to the invention when the device is in SMS/MMS or blog input mode.

Then, during a step A_1 , a voice message is recorded by the user at the portable communication device 1. A subsequent step A_2 consists in generating, at the portable communication device, a multimedia file
15 comprising at least said recorded voice message.

According to the invention, portable communication device 1 generates then (step A_3) a signal which includes not only said multimedia file but also a specific flag for indication that voice message is to be displayed as a text message. This signal is then transmitted (step A_4) from
20 said portable communication device 1 to said separate terminal 2, via any kind of existing transmitting links (wired or wireless links).

In the preferred embodiment, said first step A_0 may also include a determination of the language which will be used for the voice message. Alternatively, determination of the language can be performed
25 automatically during step A_1 through analysis of recorded voice message. In case such determination of language is performed, the transmitted signal advantageously comprises information relating to determined language.

Specific flag can be directly included into said multimedia file. Alternatively, specific flag can also be sent as an attachment to said
30 multimedia file.

Particular well-known processing can be performed at the time of generating multimedia file, such as noise reduction processing.

At the separate terminal's side, the transmitted signal is first received so that voice message can be extracted and specific flag can be detected
5 (step A₅).

Upon detection of said specific flag, said terminal 2 will then perform a speech-to-text conversion (Step A₆) in order to transform said voice message into a text message to be displayed. Mechanisms of such conversion are well-known and will not be further detailed.

10 If the text message is for local use, no further step is required. Alternatively, message text might be displayed on another end-user terminal (including originating portable communication device 1). In this case, the method further comprises a step A₇ (see figure 2) for transmitting said text message from said separate terminal 2 to an end user terminal 3.

15 Figure 2 shows schematically an overall system including a portable communication device 1, a separate terminal 2 and a end user terminal 3 for possible implementation of the method according to the invention.

Portable communication device 1 is for instance a mobile phone, or a Personal Digital Assistant. For implementation of steps A₀ to A₄, device 1
20 comprises means for recording a voice message, and for generating, from said recorded voice message a multimedia file comprising at least said voice message. These means are classically the microphone already existing in a mobile phone. Generation of multimedia file is made by software processing under the control of the device's microprocessor.

25 For implementation of steps A₂ to A₅, device 1 comprises software means for generating a signal including said multimedia file and a specific flag for indication that voice message is to be displayed as a text message. This is also performed classically under the control of microprocessor.

At last, for implementation of step A₄, classical transmission means of
30 the device will be used for transmitting said signal to a separate terminal. These can be the radio transmitter associated to the mobile phone

antenna, or a wired connection to a PC, or a connection to PC through a wireless connection of the blue tooth type, or an internet link through a server.

In case the language is determined, this can also be made through
5 classical software means.

Separate terminal 2 may be a distant server or a PC. It must at least comprise the following features:

- means for receiving signal transmitted by said portable communication device 1, for extracting said voice message and detecting
10 said specific flag.
- upon detection of said specific flag, software means for converting said voice message into a text message to be displayed.

Terminal 2 may also further comprises means for transmitting said text message to an end user terminal 3. End user terminal 3 may be
15 another portable communication device, or the originating portable device 1. It may also consist in any other PC or server.

Thanks to the invention, a user is not limited anymore with the difficulty to enter a text massage but can still transmit a message which can be displayed on a text format.

What is claimed is:

1. A method implemented in a portable communication device for generating a multimedia file including a voice message, the method comprising:
 - recording the voice message at the portable communication device;
 - generating at the portable communication device (1) the multimedia file comprising at least the voice message and (2) an indicator indicating that the voice message is to be displayed as a text message; and
 - transmitting a signal from the portable communication device including the multimedia file and the indicator.
2. The method according to claim 1 wherein the multimedia file and the indicator are transmitted from the portable communication device in a same message.
3. The method of claim 2 wherein the message is an SMS or MMS message.
4. The method according to claim 1 wherein the portable communication device does not transmit a text message corresponding to the voice message.
5. The method according to claim 1 wherein the indicator is included in the multimedia file.
6. The method according to claim 1 wherein the indicator is attached to the multimedia file.
7. The method according to claim 1 wherein the transmitting of the signal includes transmitting the signal wirelessly.

8. The method according to claim 1 wherein the transmitting of the signal includes transmitting the signal through a wired communication.

9. The method according to claim 1 wherein the generating of the multimedia file includes processing the multimedia file to reduce noise therein.

10. The method according to claim 1 further comprising:
identifying that the recorded voice message is to be converted to the text message.

11. The method according to claim 10 wherein the identifying includes receiving input information via a user interface indicating that the recorded voice message is to be displayed as the text message.

12. The method according to claim 10 wherein the identifying occurs responsive to the portable communication device entering a predetermined mode.

13. The method according to claim 10 wherein the identifying includes determining a language used for the recorded voice message and wherein the signal further includes information relating to the determined language.

14. The method of claim 12 wherein the predetermined mode is any of short message system, SMS, mode, multimedia message, MMS, mode, and blog mode.

15. A portable communication device comprising:
a recording unit configured to receive and record a voice message;
a generating unit configured to generate a multimedia file comprising at least the voice message and an indicator indicating that the voice message is to be displayed as a text message; and

a transmitter configured to transmit a signal from the portable communication device, the signal including the multimedia file and the indicator.

16. The device according to claim 15 wherein the transmitter transmits the multimedia file and the indicator from the portable communication device in a same message.

17. The device of claim 16 wherein the message is an SMS or MMS message.

18. The device according to claim 15 wherein the portable communication device does not transmit a text message corresponding to the voice message.

19. The device according to claim 15 wherein the generator includes the indicator in the multimedia file.

20. The device according to claim 15 wherein the generator attaches the indicator to the multimedia file.

21. The device according to claim 15 wherein the transmitter transmits the signal wirelessly.

22. The device according to claim 15 wherein the transmitter transmits the signal through a wired communication.

23. The device according to claim 15 wherein the generator further processes the multimedia file to reduce noise therein.

24. The device according to claim 15 wherein the generator further identifies that the recorded voice message is to be converted to the text message.

25. The device according to claim 24 further comprising:

a user interface through which a user may enter input information identifying that the recorded voice message is to be displayed as the text message.

26. The device according to claim 24 wherein the recording unit is further configured to identify that the recorded voice message is to be displayed as the text message responsive to the portable communication device entering a predetermined mode.

27. The device of claim 26 wherein the predetermined mode is any of short message system, SMS, mode, multimedia message, MMS, mode, and blog mode.

28. The device according to claim 24 wherein the recording unit is further configured to determine a language used for the recorded voice message and wherein the signal further includes information relating to the determined language.

29. A communication terminal comprising:

a receiver configured to receive a signal, the signal including a multimedia file comprising at least a recorded voice message and an indicator indicating that the recorded voice message is to be displayed as a text message;

a control unit configured to extract the recorded voice message and the indicator and, responsive to extracting the indicator, convert the recorded voice message into a text message; and

a display configured to display the text message.

30. The communication terminal according to claim 29 wherein the control unit extracts the indicator from a same received message including the recorded voice message.

31. The communication terminal according to claim 30 wherein the message is an SMS or MMS message.

32. The communication terminal according to claim 29 wherein the control unit extracts the indicator from within the multimedia file.

33. The communication terminal according to claim 29 wherein the receiver receives the signal wirelessly.

34. The communication terminal according to claim 29 wherein the receiver receives the signal through a wired communication.

35. The communication terminal according to claim 29 wherein the signal further includes information relating to a language of the recorded voice message.

36. A first communication terminal comprising:

a receiver configured to receive a signal from a second communication terminal, the signal including a multimedia file comprising at least a recorded voice message and an indicator indicating that the recorded voice message is to be displayed as a text message;

a control unit configured to extract the recorded voice message and the indicator and, responsive to extracting the indicator, convert the recorded voice message into a text message; and

a transmitter configured to transmit the text message to a third communication terminal.

37. The communication terminal according to claim 36 wherein the control unit extracts the indicator from a same message including the multimedia file.

38. The communication terminal according to claim 37 wherein the message is an SMS or MMS message.

39. The communication terminal according to claim 36 wherein the control unit extracts the indicator from within the multimedia file.

40. The communication terminal according to claim 36 wherein the receiver receives the signal wirelessly.

41. The communication terminal according to claim 36 wherein the receiver receives the signal through a wired communication.

42. The communication terminal according to claim 36 wherein the signal further includes information relating to a language of the recorded voice message.

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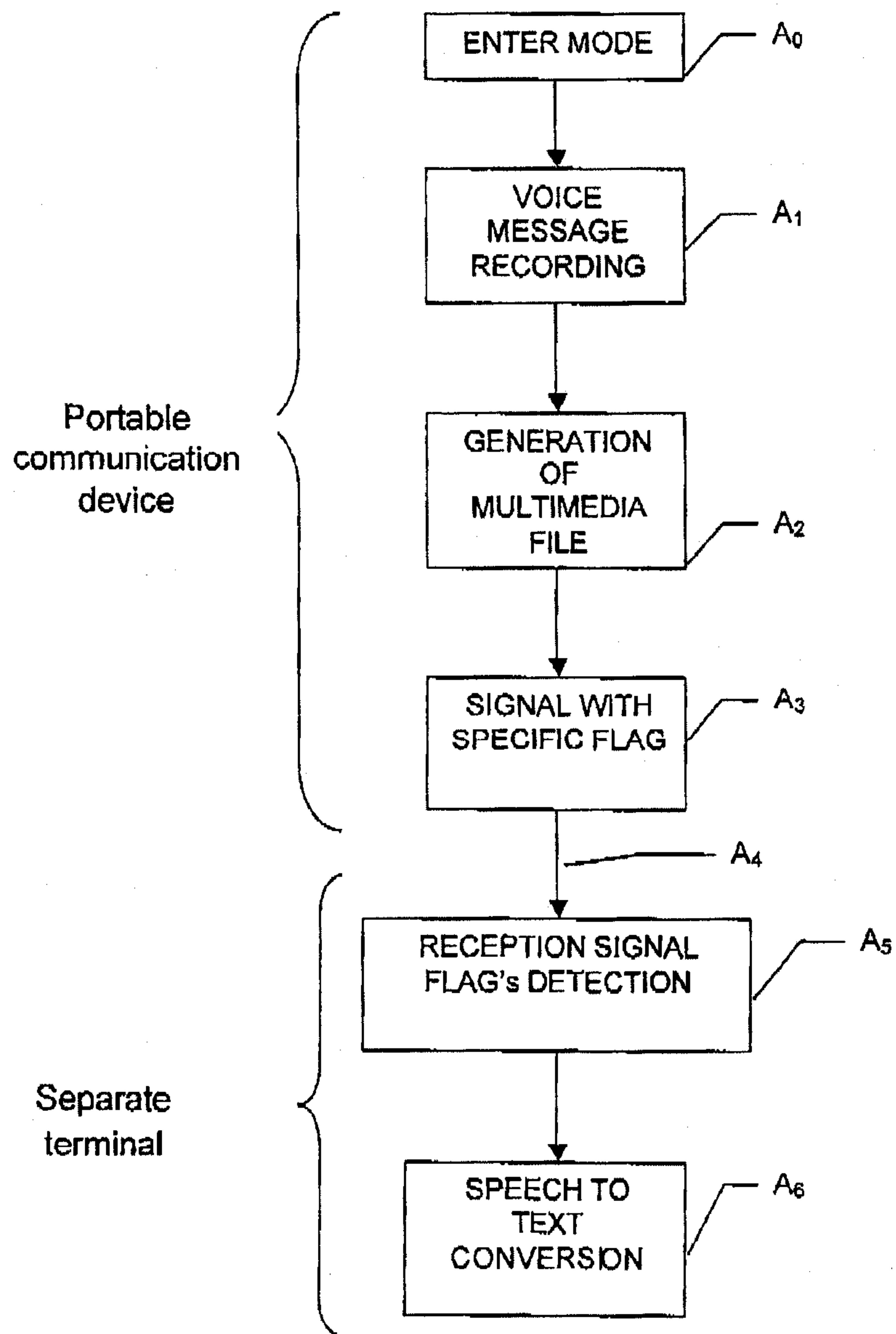


FIG. 1

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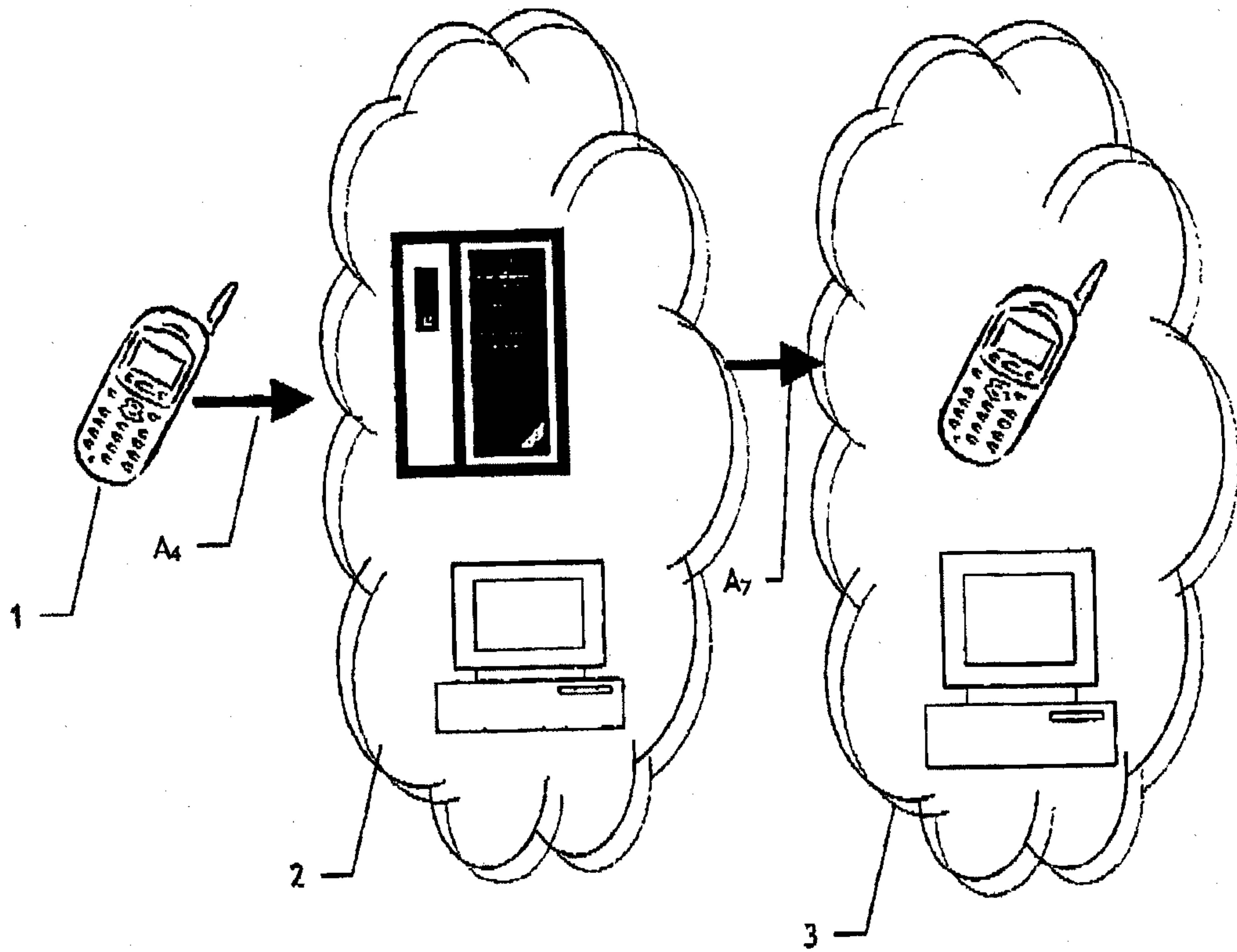


FIG. 2

