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(54) **Title**: METHOD FOR PROCESSING AN AUDIO MESSAGE

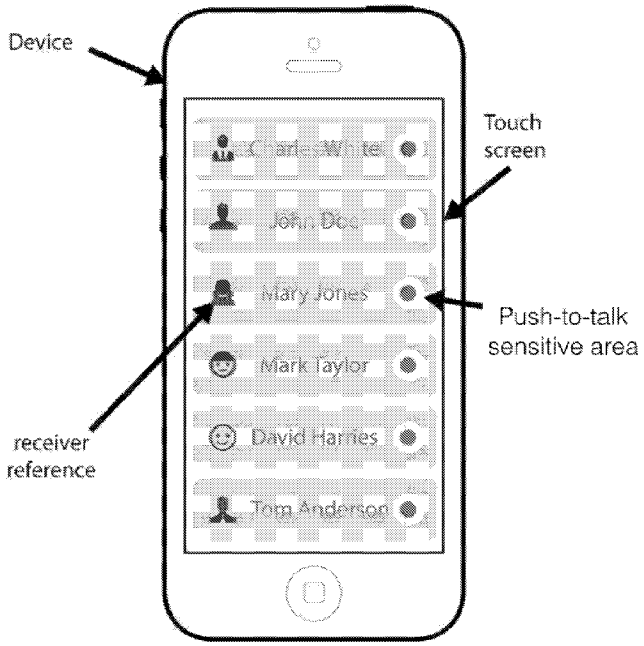


Fig. 1c

(57) **Abstract**: Method for processing an audio message by a pocket-sized electronic device, in particular a mobile phone, or a tablet having at least one touch-sensitive part of the screen, comprising the steps of: - Provision of a list of contacts, each contact being associated with a dedicated portion of the screen; Selection of a receiver of the audio message from the contact list displayed on the device screen; Activation of a function for recording an audio message to be sent; Interruption of said recording function; Transmission of the recorded voice message to the selected receiver; characterized by the circumstance that those aforementioned steps of selecting and activating are performed through a single pressure of at least one area of said portion of dedicated screen.

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# METHOD FOR PROCESSING AN AUDIO MESSAGE

DESCRIPTION

## Technical field of the invention

The present invention refers to a method for processing an audio message by a pocket-sized electronic device, in particular a mobile phone, or a tablet having at least one touch-sensitive part of the screen.

## Background

In the field of mobile telephony, the use of mobile phones not only as devices for making calls, but as devices for transmitting multimedia messages such as pictures, videos or voice messages, is becoming more common.

Methods for transmitting audio messages through the execution of multiple operations already exist. Of particular note is the following method: the operation of selecting a receiver of the message, then the operation of recording the message, and finally the operation of actual sending of the message to the chosen receiver.

One of the most felt needs in the world of telecommunications is the reduction of the number of operations needed for the activation of a certain function.

By simplifying and speeding up the operations needed for the activation of a certain function, it is possible to provide users with a leaner usability of the means of telecommunication.

In fact, the high number of operations needed to conclude the transmission of an audio message sometimes discourages even the most expert users from using a communication system that comprises the sending of audio messages.

The above-mentioned need is particularly felt by older users who have greater difficulty in managing the various functionalities of a mobile phone because of their minor familiarity with electronic devices in general.

Furthermore, the fact that the methods for transmitting audio messages need multiple operations makes them almost impossible to be used in all emergency situations in which there is very little time available to transmit the desired information.

## Summary of the invention

The technical problem posed is therefore solved by the present invention by providing a method for processing ("processing" meaning the recording and sending of an audio message to a certain receiver), that overcomes the above-mentioned issues with reference to the prior art.

This problem is solved by a method in accordance with claim 1 and also, in accordance with the same

inventive concept, by a program for computer in accordance with claim 11.

The preferred characteristics of the present invention are the object of its claims.

The present invention provides some relevant advantages. In particular, the feature of merging several functions of the device into a single operation that the user performs considerably minimizes the time needed to transmit an audio message.

Advantageously, by reducing the number of operations, the possibility of user mistakes while passing between the various functions on the mobile phone is considerably reduced.

This reduction in the possibility of mistakes also implies a greater ease of use of the device for the less expert users, such as old people or children.

A further advantage is that the reduction of time needed to complete the recording and sending operations implies that the function of transmitting an audio message from a mobile phone in case of emergency is also possible.

In addition, the reduction of the above-mentioned time is extremely advantageous for the users who use mobile phones for business reasons and/or who need to send a telephonic message while driving a motor vehicle.

Other advantages, features and use cases of the present invention will become evident in the following detailed description of certain forms of embodiment, presented for exemplary but not restrictive purposes.

**Brief description of the figures**

References will be made to the attached drawings, in which:

- Figures 1a-1c show a schematic view of some configurations of the user interface of a mobile phone that has at least one touch-sensitive screen zone;
- Figure 2 shows a block diagram of the operational phases of a method of the prior art;
- Figure 3 shows a block diagram of the operational phases of a first preferred embodiment of the method in accordance with the invention;
- Figure 4 shows a block diagram of the operational phase of a second preferred embodiment of the method in accordance with the invention.

**Detailed description of preferred embodiments**

With reference to the above-mentioned Figures, a method for transmitting an audio message in accordance with a preferred embodiment of the invention is suitable for implementation through a pocket-sized electronic device, in particular through a mobile phone or a tablet having at least one touch-sensitive screen zone, for example a so-called "touch-screen" device as shown in Figures 1a, 1b and 1c.

Specifically, a "touch-screen" device is a device capable of recognizing which part of the screen has been touched and it allows the user to interact with a graphic interface. The interface often intuitively represents the various functions that will be activated in the various areas of the screen.

An alternative embodiment of the method in accordance with the present invention provides for the processing of an audio message through a personal computer, in which the sensitive area of the user interface can be equally activated through the touch, in case the personal computer is provided with a touch-sensitive screen, or through a pointer, for example a mouse or a keyboard.

A further embodiment also provides for the processing of a multimedia message or a message containing an audio component and/or a video component.

The method in accordance with the preferred embodiment comprises a step in which it is provisioned to provide a contact list in which every contact is associated to a dedicated screen portion. Through, for example, an initial selection of a "phone book" function, a list of contacts, previously saved on the device, is displayed on the screen of the device itself.

Every contact displayed on the screen can be associated to a line or a cell containing the information related to the specific contact, for example the name and/or personal images, and the telephone number.

The preferred embodiment of the method in accordance with the present invention provides for the execution of a step of selecting the receiver and activating the recording function through a single operation by the user.

Advantageously, the association between the recording function and the selection of a receiver of the message itself through a single pressing on the sensitive screen, reduces the time needed to complete the operation of transmitting the message.

In the first preferred embodiment, as schematized in the flow chart of Figure 3, a recording of the audio message occurs during the pressing action corresponding to at least one part of the screen portion dedicated to the specific contact. For example, the user applies pressure to the sensitive screen on an area corresponding to a selected receiver and, maintaining the pressing action on the screen, proceeds to record a voice message. Alternatively to or additionally to recording a voice message, the activation of a video camera and the recording of one or more pictures in a multimedia message, for example, are provided for. The recording of the message will be interrupted and the message will be sent in correspondence with a step of releasing the pressure. Alternatively, the sending of the message after a preset time from the interruption of the recording, for example a few seconds before or after the release

of the pressure by the user, is provided for. Therefore the user applies prolonged pressure to the sensitive screen for the entire period in which the recording of the message occurs.

It has to be specified that all the described functions with reference to the discussed embodiments, such as activating a recording and selecting a receiver of the recorded message and ending the recording and transmitting the message itself, can be shifted in terms of time - for example anticipated or postponed for a few seconds - with respect to the operations, for example of pressure and release, that cause them.

Preferably, during the step of recording the audio message, a checking step in which the characteristic parameters of the message itself are checked is provided for.

Specifically, a voice detecting step is provided for, for example a checking step of whether the user is in a silent condition or a step of recognizing a voice command of the user.

In fact, an automatic interruption of the recording step in correspondence with the detecting of an invalid voice and/or the sending of the message itself in correspondence with a voice command to send the message can be provided for. The recording carried out in accordance with the above-described first embodiment can therefore be interrupted in correspondence with the detecting of an invalid voice.

Advantageously, through this possibility of interrupting and automatically sending, recordings in the audio message that contain non-useful information, such as for example prolonged voice pauses, will be avoided.

In a second embodiment of the method in accordance with the present invention, as schematized in the flow chart of Figure 4, an activation of the recording in correspondence with an action of pressure on at least one dedicated part of the screen is provided for. Therefore, in this case the recording is carried out without the need of maintaining pressure on the screen, and an automatic interruption of the recording step and a sending of the recorded message, for example in correspondence with the detecting an invalid voice or after the detecting of a user's voice command to send the message, are provided for. Alternatively, the interruption of the recording of the message and the sending of it, after a preset time, for example a few seconds after the detecting of an invalid voice or after the detecting of a user's voice command to send the message, are provided for.

Such a configuration proves to be particularly advantageous, for example, in all cases of emergency in which it is not possible to perform operations in sequence and/or it is necessary to send a message very quickly.

Preferably, the step of sending a message occurs contemporaneously with the step of activating the recording. This kind of transmission advantageously allows the receiver to receive the audio message of the sender in real time.

Specifically, the possibility of sending part of the message to a customized server or directly to the receiver's device, for example while its recording is in progress, is provided for. This sending can occur for example in real time, nearly instantaneously, or through the sending of portions of the message in correspondence with regular intervals of time.

The real time sending of the data allows for the avoidance of the transmission of messages that are too long and heavy, from the point of view of the transmission. Hence, this possibility makes the transmission of the message much faster.

In a further alternative embodiment of the method in accordance with the present invention, the activation of a recording through a selection of a previously stored message and a pressure in correspondence with the visualized message on the screen is provided for. Advantageously, the user can continue the recording from the point in which it had been interrupted in the previously stored message and proceed to transmit it in accordance with one of the above-described manners.

The present invention also comprises an implementation of the described method through a computer program.

Advantageously, the computer program can be implemented through the development of a software program that any programmable electronic device can run.

The present invention has been thus far described with reference to the preferred embodiments. It is implied that there can be other embodiments that refer to the same inventive nucleus, as defined in the range of protection of the claims reported below.

## CLAIMS

**1.** A method for processing an audio message by a pocket electronic device, in particular a mobile phone, having at least one touch-sensitive screen zone, comprising the steps of:

- providing a list of contacts, each contact being associated to a dedicated screen portion;
- selecting a receiver of the audio message to be transmitted from the contact list displayed on the screen of the device;
- activating a function of recording an audio message to be sent;
- interrupting said recording function;
- transmitting the recorded voice message to the selected receiver;

characterized in that said steps of selecting and activating are carried out through a single pressing at at least one zone of said dedicated screen portion.

**2.** The method according to the preceding claim, wherein a recording of the audio message occurs during said pressing of at least one zone of said dedicated screen portion.

**3.** The method according to the preceding claim, wherein said interrupting of said recording comprises a step of releasing said pressing.

**4.** The method according to one of the preceding claims, wherein a step of recording the audio message comprises a step of checking parameters characterizing the message itself.

**5.** The method according to any one of the preceding claims, wherein said transmitted message further comprises a multimedia message.

**6.** The method according to claim 4 or 5, wherein said step of checking comprises a voice detecting step.

**7.** The method according to the preceding claim, wherein an automatic interrupting of the recording step is provided at the detecting of an invalid voice.

**8.** The method according to any one of the preceding claims, wherein said step

of transmitting the message is concomitant with said step of activating the recording, said transmitting allowing the receiver to receive in real time the sender's audio message.

**9.** The method according to any one of the claims 1 to 7, wherein said step of transmitting the message is postponed with respect to said step of activating a recording.

**10.** The method according to the preceding claim, wherein a further step of activating a recording is activable by a selecting of a previously stored message, said selecting comprising a pressing at said stored message displayed on said screen.

**11.** A computer program suitable for the carrying out of steps of the method according to one of the claims 1 to 10.

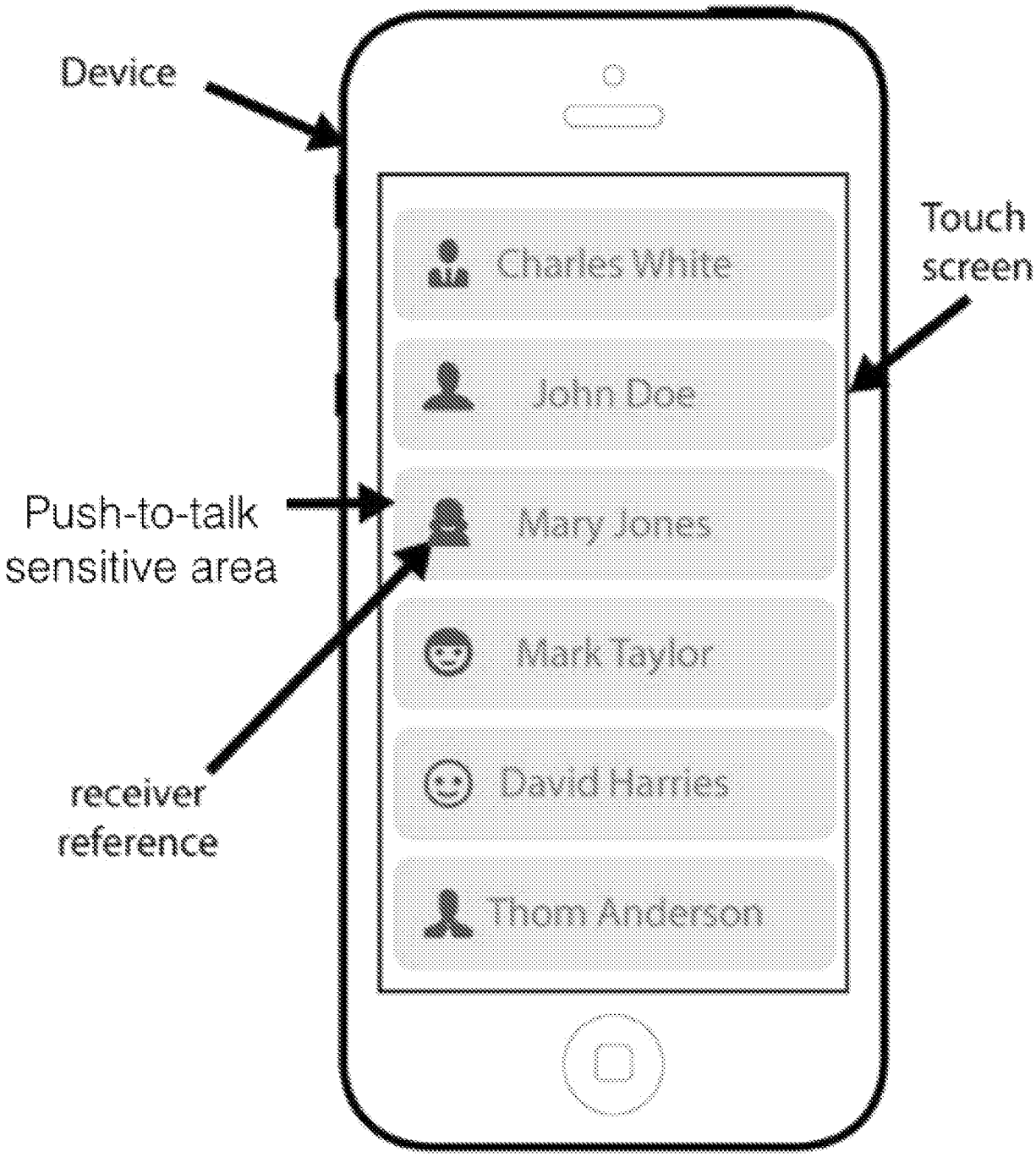
Device
Touch screen
Charles White
John Doe
Push-to-talk sensitive area
Mary Jones
Mark Taylor
receiver reference
David Harries
Thom Anderson

Fig. 1a

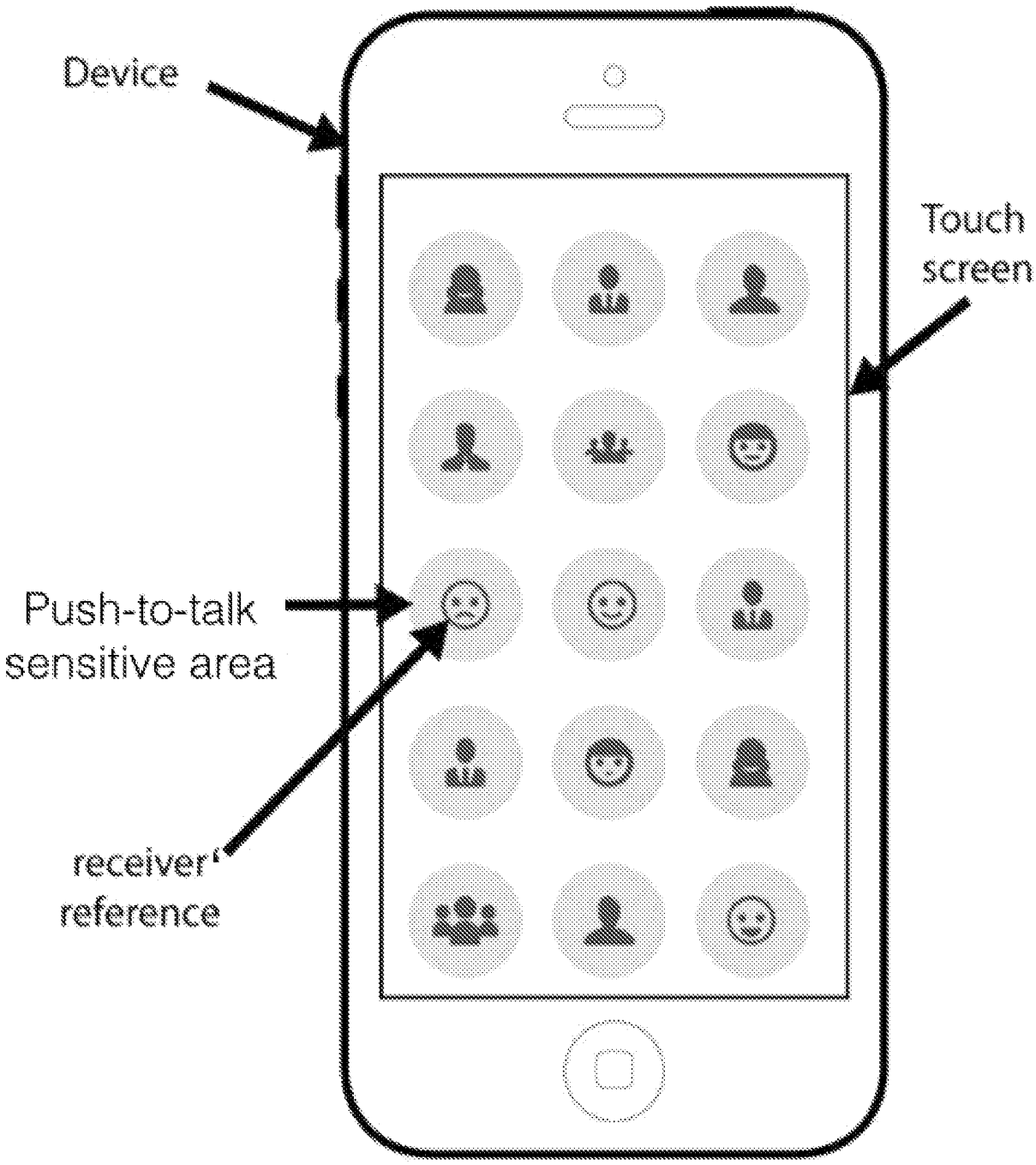
Device
Touch screen
Push-to-talk sensitive area
receiver reference

Fig. 1b

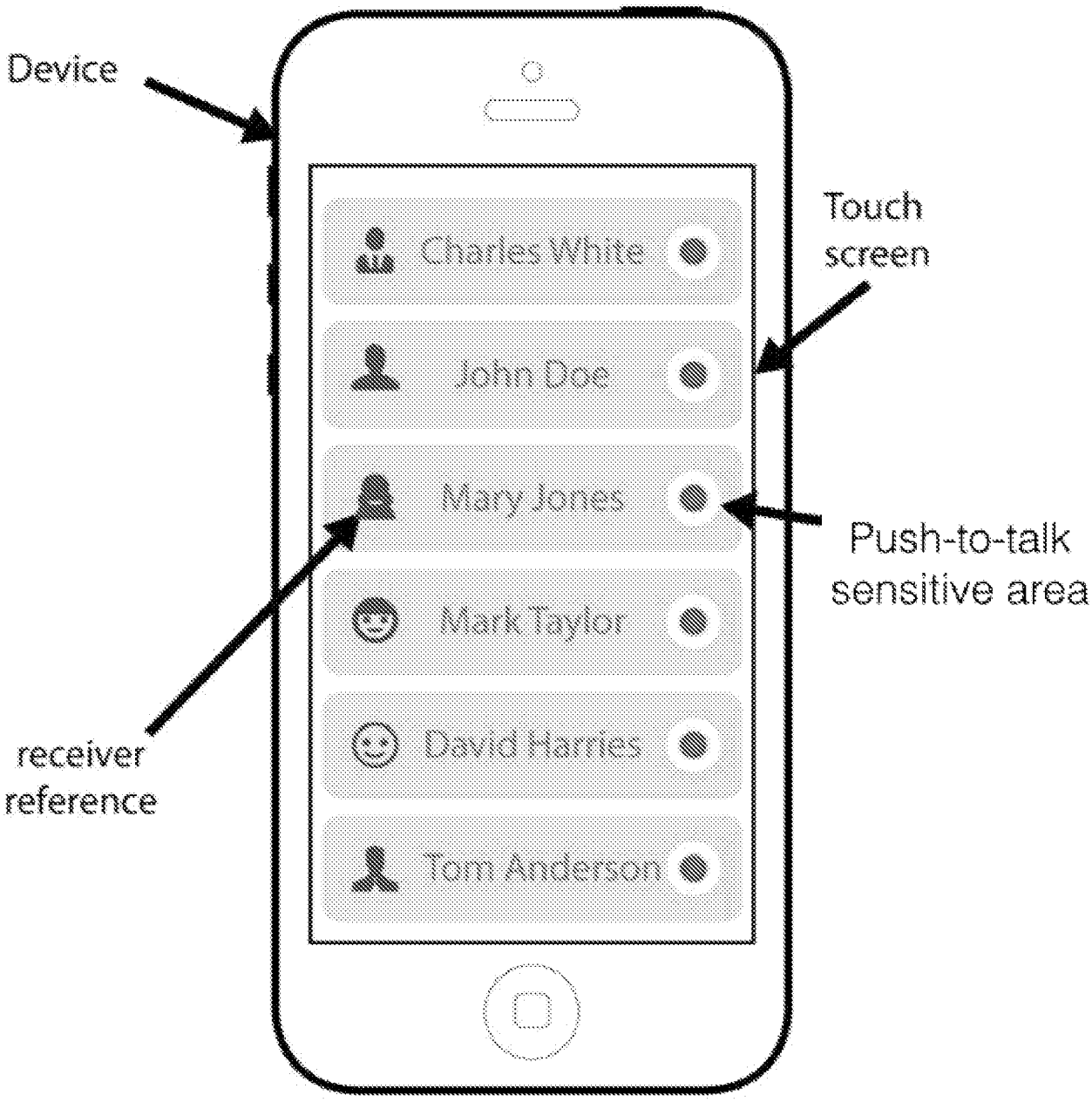
Device
Touch screen
Charles White
John Doe
Mary Jones
Mark Taylor
David Harries
Tom Anderson
Push-to-talk sensitive area
receiver reference

**Fig. 1c**

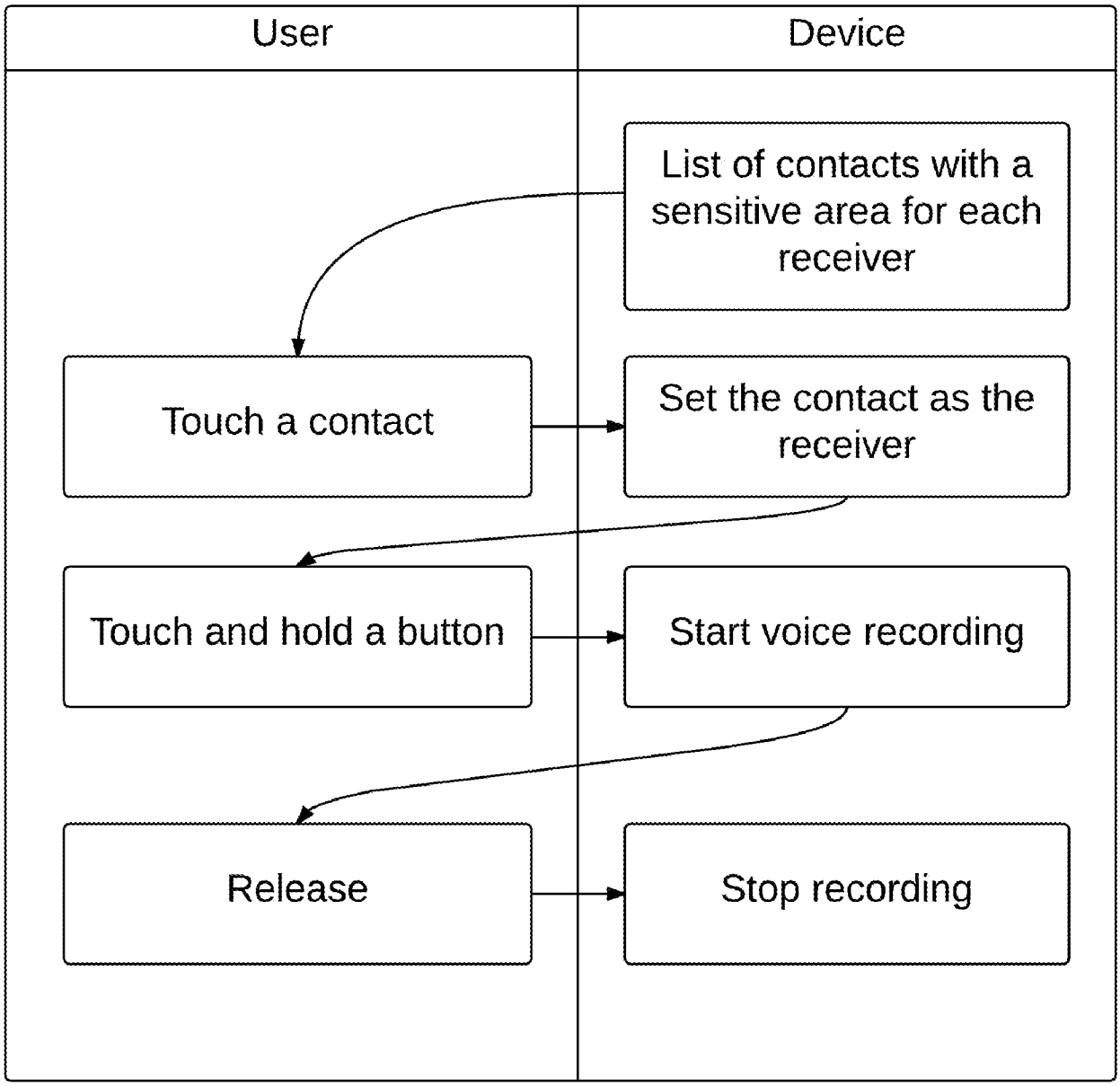
User
Device
List of contacts with a sensitive area for each receiver
Touch a contact
Set the contact as the receiver
Touch and hold a button
Start voice recording
Release
Stop recording

Fig.2

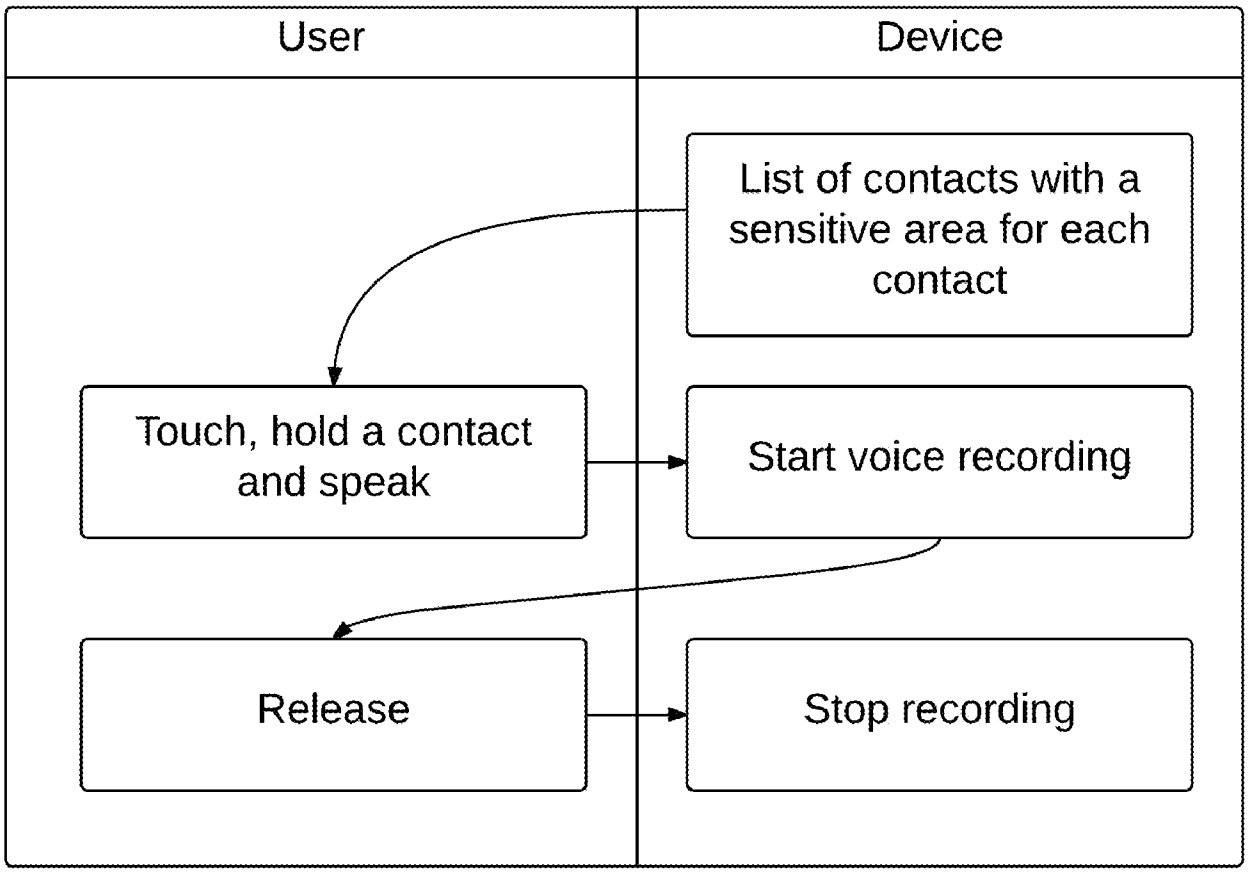
User
Device
List of contacts with a sensitive area for each contact
Touch, hold a contact and speak
Start voice recording
Release
Stop recording

Fig.3

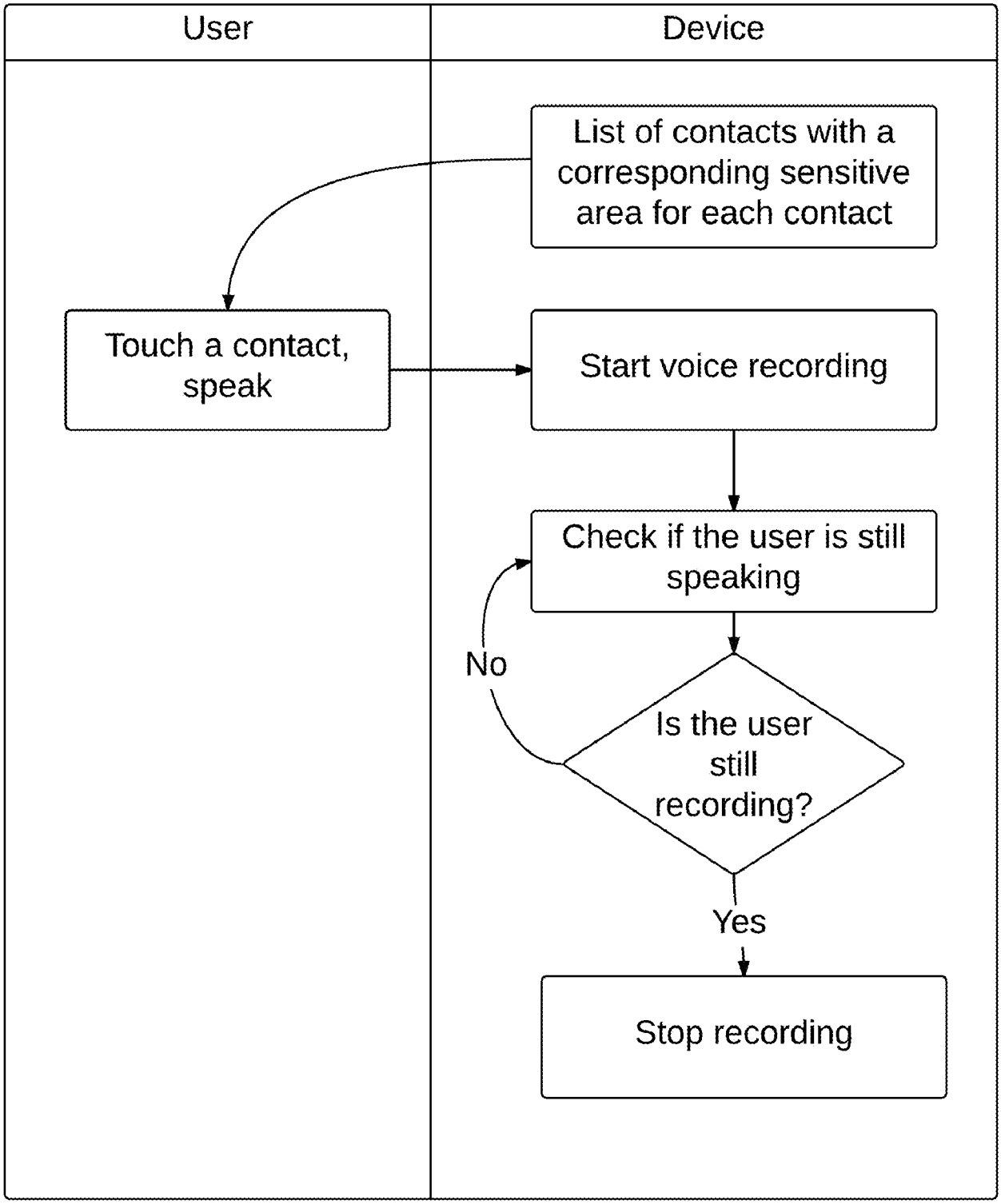
User
Device
List of contacts with a corresponding sensitive area for each contact
Touch a contact, speak
Start voice recording
Check if the user is still speaking
No
Is the user still recording?
Yes
Stop recording

Fig.4

# INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2014/062633

A. CLASSIFICATION OF SUBJECT MATTER
INV. G06F3/0488 H04L12/58 H04M1/725
ADD.

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)
G06F H04L 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 practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

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| Date of the actual completion of the international search | Date of mailing of the international search report |
|---|---|
| 5 November 2014 | 21/11/2014 |

| Name and mailing address of the ISA/ | Authorized officer |
|---|---|
| European Patent Office, P.B. 5818 Patentlaan 2<br>NL - 2280 HV Rijswijk<br>Tel. (+31-70) 340-2040,<br>Fax: (+31-70) 340-3016 | Limacher, Rolf |

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