



- (51) **International Patent Classification:**
H04W 88/02 (2009.01)
- (21) **International Application Number:**
PCT/CN2014/082469
- (22) **International Filing Date:**
18 July 2014 (18.07.2014)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
201310306859.0 19 July 2013 (19.07.2013) CN
- (71) **Applicant: TENCENT TECHNOLOGY (SHENZHEN) COMPANY LIMITED** [CN/CN]; Room 403, East Block 2, SEG Park, Zhenxing Road, Futian District, Shenzhen, Guangdong 518000 (CN).
- (72) **Inventors: LIU, Tiancheng;** Room 403, East Block 2, SEG Park, Zhenxing Road, Futian District, Shenzhen, Guangdong 518044 (CN). **ZOU, Hualin;** Room 403, East Block 2, SEG Park, Zhenxing Road, Futian District, Shenzhen, Guangdong 518044 (CN).
- (74) **Agent: DEQI INTELLECTUAL PROPERTY LAW CORPORATION;** 7/F, Xueyuan International Tower, No. 1 Zhichun Road, Haidian District, Beijing 100083 (CN).

(81) **Designated States** (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) **Designated States** (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) **Title:** METHOD, DEVICE AND MOBILE TERMINAL FOR CHECKING MESSAGE

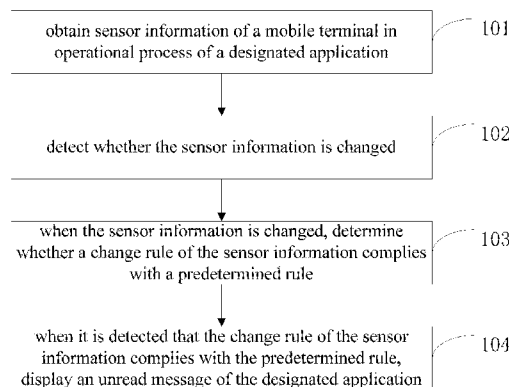


FIG. 1

(57) **Abstract:** Examples of the present disclosure provide a method, device and mobile terminal for checking a message, which relates to mobile terminal technologies. The method includes: obtaining sensor information of a mobile terminal in operational process of a designated application; detecting whether the sensor information is changed; when the sensor information is changed, determining whether a change rule of the sensor information complies with a predetermined rule; when it is detected that the change rule of the sensor information complies with the predetermined rule, displaying an unread message of the designated application. According to the present disclosure, through detecting the change of the sensor information of the mobile terminal, the unread messages at the message aggregation entrance are automatically displayed, the manual display by the user is not needed, and the operation of the user is simplified.



METHOD, DEVICE AND MOBILE TERMINAL FOR CHECKING MESSAGE

PRIORITY STATEMENT

[0001] This application claims the benefit of Chinese Patent Application No. 201310306859.0, filed on July 19, 2013, the disclosure of which is incorporated herein in its entirety by reference.

FIELD

[0002] The present disclosure relates to mobile terminal technologies, more particularly to a method, device and mobile terminal for checking a message.

BACKGROUND

[0003] With the rapid development of mobile terminal technologies and popularity of smart mobile terminals, many information collection devices may be configured in the smart mobile terminals, e.g., a gravity sensor, a gyroscope, which are able to provide users more rich functions.

[0004] Furthermore, among a plurality of application softwares provided by a smart mobile terminal, an instant messaging software are used more and more frequently, and accordingly, performance requirements on the instant messaging software by users become more and more high. However, in current instant messaging software, all the messages are aggregated at the same message aggregation entrance by the smart mobile terminal. When a user needs to check a message, the user would manually quit the current usage scenario, switch to the message aggregation entrance, and then open the message to be checked.

SUMMARY

[0005] In order to solve the problems of the prior art, examples of the present disclosure provide a method, device and mobile terminal for checking a message.

[0006] In a first aspect, a method for checking a message provided by examples of the present invention includes:

obtaining sensor information of a mobile terminal in operational process of a designated application;

detecting whether the sensor information is changed;

when the sensor information is changed, determining whether a change rule of the sensor information complies with a predetermined rule;

when it is detected that the change rule of the sensor information complies with the predetermined rule, displaying an unread message of the designated application.

[0007] In a second aspect, a device for checking a message provided by examples of the present invention includes:

an information obtaining module, configured to obtain sensor information of a mobile terminal in operational process of a designated application;

a change detection module, configured to detect whether the sensor information is changed;

a rule determining module, configured to, when the sensor information is changed, determine whether a change rule of the sensor information complies with a predetermined rule;

a message displaying module, configured to, when it is detected that the change rule of the sensor information complies with the predetermined rule, display an unread message of the designated application.

[0008] In a third aspect, a mobile terminal provided by examples of the present invention includes a memory, and one or more programs stored in the memory and configured for execution by the one or more processors, the one or more programs including instructions to:

obtain sensor information of a mobile terminal in operational process of a designated application;

detect whether the sensor information is changed;

when the sensor information is changed, determine whether a change rule of the sensor information complies with a predetermined rule;

when it is detected that the change rule of the sensor information complies with the predetermined rule, display an unread message of the designated application.

[0009] The benefits achieved by the examples of the present disclosure are:

According to the method, device and mobile terminal for checking a message provided by present disclosure, through detecting the change of the sensor information of the mobile terminal, the unread message at the message aggregation entrance is automatically displayed, the manual display by the user is not needed, and the operation of the user is simplified.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] For a better understanding of the present disclosure, accompanying drawings to be used in description of the examples will be simply introduced hereinafter. Obviously, the accompanying drawings to be described hereinafter are only some examples of the present invention. Those skilled in the art may obtain other drawings according to these accompanying drawings without creative labor.

[0011] FIG. 1 is a flow diagram illustrating a method for checking a message according to an example of the present disclosure.

[0012] FIG. 2 is a flow diagram illustrating a method for checking a message according to an example of the present disclosure.

[0013] FIG. 3 is a schematic diagram illustrating a display of an unread message list according to an example of the present disclosure.

[0014] FIG. 4 is a schematic diagram illustrating a structure of a device for checking a message according to an example of the present disclosure.

[0015] FIG. 5 is a schematic diagram illustrating a mobile terminal according to an example of the present disclosure.

[0016] FIG. 6 is a schematic diagram illustrating another structure of a device for checking a message according to an example of the present disclosure.

DETAILED DESCRIPTION

[0017] The present disclosure is hereinafter described in detail with reference to the accompanying drawings. Obviously, the examples to be described hereinafter are only some examples of the present invention. According to these examples, those skilled in the art may obtain other examples without creative labor, which all belong to the scope protected by the present disclosure.

[0018] FIG. 1 is a flow diagram illustrating a method for checking a message according to an example of the present disclosure. The implementation entity of the example is a mobile terminal. As shown in FIG. 1, the method may include the following operations.

[0019] In Block 101, obtain sensor information of a mobile terminal in operational process of a designated application.

[0020] In Block 102, detect whether the sensor information is changed.

[0021] In Block 103, when the sensor information is changed, determine whether a change rule of the sensor information complies with a predetermined rule.

[0022] In Block 104, when it is detected that the change rule of the sensor information complies with the predetermined rule, display an unread message of the designated application.

[0023] In an example, in operational process of the designated application, sensor information of the mobile terminal is obtained. When the change rule of the sensor information complies with the predetermined rule, the unread message of the designated application is displayed. Through detecting the change of the sensor information of the mobile terminal, the unread message at the message aggregation entrance is automatically displayed, the manual display by the user is not needed, and the operation of the user is simplified.

[0024] Optionally, when the sensor information is changed, determining whether a change rule of the sensor information complies with a predetermined rule, includes:

when the sensor information is an accelerated speed, determining whether the change interval of the accelerated speed is larger than a predetermined threshold. When the change interval of the accelerated speed is larger than the predetermined threshold, the change rule of the sensor information complies with the predetermined rule; or

when the sensor information is an angular speed, determining whether the change curve of the angular speed matches with a predetermined curve. When the change curve matches with the predetermined curve, the change rule of the sensor information complies with the predetermined rule.

[0025] Optionally, before obtaining sensor information of a mobile terminal in operational process of a designated application, the method further includes:

when an open instruction of the designated application is received, detecting a quick identification state of the designated application, where the quick identification state is on state or off state.

[0026] Correspondingly, obtaining sensor information of a mobile terminal in operational process of a designated application, includes:

when it is detected that the quick identification state of the designated application is on state, obtaining sensor information of a mobile terminal in operational process of a designated application.

[0027] Optionally, when the change rule of the sensor information complies with the predetermined rule, displaying an unread message of the designated application, includes:

when it is detected that the change rule of the sensor information complies with the predetermined rule, determining whether an unread message is available in the designated application;

when it is determined that an unread message is available in the designated application, displaying the unread message of the designated application.

[0028] Optionally, when it is determined that an unread message is available in the designated application, displaying the unread message of the designated application, includes:

when it is determined that an unread message is available in the designated application, displaying a latest unread message of the designated application.

[0029] Optionally, when it is determined that an unread message is available in the designated application, displaying the unread message of the designated application, includes:

when it is determined that an unread message is available in the designated application, displaying an unread message list of the designated application, where the unread message list includes at least one unread message and a message identification corresponding to the at least one unread message;

when an open instruction of any one message identification in the unread message list is detected, displaying an unread message corresponding to the open instruction.

[0030] Optionally, when the change rule of the sensor information complies with the predetermined rule, displaying an unread message of the designated application, further includes:

when a return instruction is received, switching an interface displayed currently to an interface displayed before displaying the unread message of the designated application.

[0031] Optionally, obtaining sensor information of a mobile terminal in operational process of a designated application, includes:

in operational process of a designated application, by calling an Application Programming Interface (API) corresponding to at least one sensor configured in the mobile terminal, obtaining sensor information of at least one sensor configured in the mobile terminal.

[0032] Optionally, the at least one sensor may be a gravity sensor or a gyroscope. Correspondingly, sensor information of the at least one sensor includes accelerated speed information and/or angular speed information of the mobile terminal.

[0033] Optionally, the designated application may include one or multiple designated applications. Correspondingly, displaying the unread message of the designated application

may include displaying the unread message of one designated application, or displaying the unread message of multiple designated applications simultaneously.

[0034] Any combination of all the above optional solutions may be used to form an optional example of the present disclosure, which is not described in detail herein.

[0035] FIG. 2 is a flow diagram illustrating a method for checking a message according to an example of the present disclosure. The implementation entity of the example is a mobile terminal. As shown in FIG. 2, the method may include the following operations.

[0036] In Block 201, when a starting instruction of the designated application is received, detect a quick identification state, where the quick identification state is on state or off state.

[0037] In an example, the designated application may be an instant communication software, or a gravity game software, which is not defined in the examples of the present disclosure.

[0038] Here, the quick identification state of the designated application is on state or off state. When it is detected that the quick identification state of the designated application is on state, it indicates that the user enables a function of message quick checking, then the following steps are performed. When it is detected that the quick identification state of the designated application is off state, it indicates that the user closes the function of message quick checking, and then it ends. The quick identification state of the designated application may be set by technicians when developing to be a default on state, or set by the users during usage, which is not defined in the examples of the present disclosure.

[0039] In Block 202, when it is detected by the mobile terminal that the quick identification state of the designated application is on state, in operational process of a designated application, by calling an API corresponding to at least one sensor configured in the mobile terminal, obtain sensor information of at least one sensor configured in the mobile terminal.

[0040] The example is applied in the usage scenario of the mobile terminal configured with at least one sensor. By applying the at least one sensor, sensor information of the at least one sensor may be obtained.

[0041] It should be noted that, the process of obtaining sensor information of at least one sensor in the mobile terminal may be performed in real time. Preferably, when it is detected

that the quick identification state of the designated application is on state, in operational process of a designated application, by calling an API corresponding to at least one sensor configured in the mobile terminal, obtain sensor information of at least one sensor configured in the mobile terminal in real time.

[0042] Optionally, the at least one sensor may be a gravity sensor or a gyroscope. Correspondingly, sensor information of the at least one sensor includes accelerated speed information and/or angular speed information of the mobile terminal.

[0043] Correspondingly, in Block 202, it specifically includes:

when it is detected that the quick identification state of the designated application is on state, in operational process of a designated application, by calling an API corresponding to a gravity sensor in the mobile terminal, obtaining accelerated speed information of the mobile terminal; or

when it is detected that the quick identification state of the designated application is on state, in operational process of a designated application, by calling an API corresponding to a gyroscope in the mobile terminal, obtaining angular speed information of the mobile terminal; or

when it is detected that the quick identification state of the designated application is on state, in operational process of a designated application, by calling an API corresponding to a gravity sensor in the mobile terminal and an API corresponding to a gyroscope in the mobile terminal, obtaining accelerated speed information and angular speed information of the mobile terminal, respectively.

[0044] In Block 203, detect whether the sensor information is changed;

the detection may be implemented by comparing the sensor information obtained currently with the sensor information obtained last time. In addition, the detection may also be implemented by supervising the sensor information.

[0045] In Block 204, when the sensor information is changed, determine whether a change rule of the sensor information complies with a predetermined rule.

[0046] Optionally, when the sensor information is an accelerated speed, determine whether the change interval of the accelerated speed is larger than a predetermined threshold. When the change interval of the accelerated speed is larger than the predetermined threshold, the change rule of the sensor information complies with the predetermined rule.

[0047] In an example, the predetermined operation corresponding to the predetermined rule is a shake operation. When the accelerated speed is changed, and the change interval is larger than the predetermined threshold, it is determined that the user triggers a shake operation. At this time, the change rule of the sensor information complies with the predetermined rule

[0048] Further optionally, when the sensor information is an angular speed, determine whether the change curve of the angular speed matches with a predetermined curve. When the change curve of the angular speed matches with the predetermined curve, the change rule of the sensor information complies with the predetermined rule.

[0049] In an example, the predetermined operation corresponding to the predetermined rule is a user-defined operation. The user may define a certain pose change of the mobile terminal to trigger displaying. The pose change has a corresponding predetermined curve of the angular speed. When the current change curve of the angular speed matches with the predetermined curve of the angular speed, it is determined that the user-defined operation is detected. At this time, the change rule of the sensor information complies with the predetermined rule.

[0050] Here, with respect to different types of sensors in the mobile terminal, the predetermined rule may be different. In an example, the predetermined rule may include a predetermined accelerated speed rule, a predetermined angular speed rule, etc.

[0051] Specifically, when the accelerated speed information is changed, determine whether the change rule of the accelerated speed information complies with a predetermined accelerated speed rule. When the angular speed information is changed, determine whether the change rule of the angular speed information complies with a predetermined angular speed rule. When the change rule of the accelerated speed information complies with the predetermined accelerated speed rule, or the change rule of the angular speed information

complies with the predetermined angular speed rule, it can be determined that the change rule of the sensor information complies with the predetermined rule.

[0052] Here, criteria of the predetermined accelerated speed rule may be a change direction of accelerated speed information, or a change interval of accelerated speed information, thus when determining whether the change rule of the accelerated speed information complies with a predetermined accelerated speed rule, it may determine whether the change direction of accelerated speed information complies with the change direction included in the predetermined accelerated speed rule, or determine whether the change interval of accelerated speed information complies with the change interval included in the predetermined accelerated speed rule. Criteria of the predetermined angular speed rule may be a tilt angle of angular speed information, or number of rotations of angular speed information, thus when determining whether the change rule of the angular speed information complies with a predetermined angular speed rule, it may determine whether the tilt angle of angular speed information complies with the tilt angle included in the predetermined angular speed, or determine whether the number of rotations of angular speed information complies with the number of rotations included in the predetermined angular speed. The specific criteria are not defined in the examples of the present disclosure.

[0053] For example, assume the predetermined accelerated speed rule as the accelerated speed of the mobile terminal changed from 0 meter per square second to over 12 meters per square second. When it is detected that the accelerated speed is changed, and the accelerated speed is changed from 0 meter per square second to 15 meters per square second, it is determined that the change rule of the accelerated speed information complies with the predetermined accelerated speed rule, i.e., the change rule of the sensor information complies with the predetermined rule.

[0054] For another example, assume the predetermined change curve of the angular speed is the change curve of the angular speed generated when the mobile terminal turns right for one time and then turns left until the original position. When it is detected that the angular speed information is changed, and the change curve of the angular speed matches with the predetermined change curve of the angular speed, it is determined that it is detected that the mobile terminal turns right for one time and then turns left until the original position, thus the

change rule of the angular speed information matches with the predetermined angular speed rule, i.e., the change rule of the sensor information complies with the predetermined rule.

[0055] Before Block 204, the method further includes: obtaining the predetermined rule.

[0056] Here, the predetermined rule may be set by the technicians when developing; or when installing the designated application, enabling the function of setting the predetermined rule, obtaining the predetermined operation input by the user, and obtaining the change rule corresponding to the predetermined operation as the predetermined rule; or during usage by the user, triggering the instruction of setting the predetermined rule, performing the addition or cancelling operations, etc. to the predetermined rule, which is not defined in the examples of the present disclosure.

[0057] It should be noted that, according to the predetermined rule, a type of a sensor can be determined, and the sensor information of a mobile terminal corresponding to the type can be obtained in operational process of a designated application. In particular, after the predetermined rule is obtained, according to the predetermined operation included in the predetermined rule, it may determine the sensor corresponding to the predetermined operation is a gravity sensor, a gyroscope or others. Thus, in Block 202, it may obtain the sensor information only according to the sensor corresponding to the predetermined operation. This avoids obtaining the sensor information respectively corresponding to each sensor of the mobile terminal, thus the process is simplified, and the delay is reduced.

[0058] For example, when it is obtained that the predetermined operation included in the predetermined rule is a shake operation, it may be determined that the sensor corresponding to the shake operation is a gravity sensor, thus in Block 202, in operational process of a designated application, by calling an API corresponding to a gravity sensor in the mobile terminal, obtain accelerated speed information of the mobile terminal, without obtaining the angular speed information of the mobile terminal by calling an API corresponding to a gyroscope in the mobile terminal.

[0059] In Block 205, when it is detected that the change rule of the sensor information complies with the predetermined rule, determine whether there is an unread message available in the designated application.

[0060] In an example, all the messages of the designated application are stored in the message aggregator of the designated application. By receiving a checking instruction for the message aggregator, it may display the message corresponding to the checking instruction. Correspondingly, the Block 205 specifically includes: when it is detected that the change rule of the sensor information complies with the predetermined rule, determining whether there is an unread message available in the message aggregator of the designated application.

[0061] Further, when determining whether there is an unread message available in the message aggregator of the designated application, it may determine according to a reading identification of the message in the message aggregator of the designated application. The reading identification may include a read identification or an unread identification; or it may determine according to a time when receiving the message in the message aggregator of the designated application and a time when the mobile terminal accesses the message aggregator, which is not defined in the examples of the present disclosure. Preferably, traverse the reading identification of each message in the message aggregator of the designated application. When it is detected that the reading identification of any one message is the unread identification, it is determined that an unread message is available in the message aggregator.

[0062] In Block 206, when it is determined that there is an unread message available in the designated application, display an unread message of the designated application, and then perform Block 203.

[0063] In an example, when it is detected that the change rule of the sensor information complies with the predetermined rule, and there is an unread message available in the designated application, automatically display the unread message in the message aggregator, without manually switch the display interface by the user, thus the operation of the user is simplified.

[0064] In Block 206, it may use any one of the following manners:

[0065] (1) when it is determined that an unread message is available in the designated application, display a latest unread message of the designated application.

[0066] In specific, when it is determined that an unread message is available in the message aggregator of the designated application, obtain a latest unread message of the designated application, and display the latest unread message; or, when it is determined that an unread message is available in the message aggregator of the designated application, obtain part of contents of a latest unread message of the designated application, and display the part of contents of the latest unread message.

[0067] (2) when it is determined that an unread message is available in the designated application, display an unread message list of the designated application, where the unread message list includes at least one unread message and a message identification corresponding to the at least one unread message.

[0068] Here, the message identification corresponding to the unread message may be the contact information corresponding to the unread message, or the keywords included in the unread message, or part of contents of the unread message, which is not defined in the examples of the present disclosure.

[0069] In specific, when displaying an unread message list of the designated application, it may display all the unread messages of the designated application, or display part of the unread messages of the designated application. In specific, it may include any one of the following manners:

(a) display an unread message received in a predetermined time interval before the present moment, among the unread messages of the designated application;

(b) display an unread message sent by a predetermined contact, among the unread messages of the designated application;

(c) display an unread message including a predetermined keyword, among the unread messages of the designated application;

[0070] Here, the predetermined time interval, the predetermined contact, or the predetermined keyword as described in the above three manners may be set by the user, and be added, or cancelled, etc. during usage. And in the examples of the present disclosure, it is not limited to the above three manners, it also may selectively display according to the

popularity or type of the unread message, which is not defined in the examples of the present disclosure.

[0071] Optionally, when it is determined that there is an unread message available in the designated application, and the number of the unread messages reaches a predetermined threshold, display an unread message list of the designated application. The predetermined threshold may be set by technicians when developing, or set by the users during usage, which is not defined in the examples of the present disclosure. Here, the user may set the predetermined threshold, and check the predetermined threshold number of unread messages all together during usage according to his/her requirements of checking information. Compared with displaying only one unread message at one time, displaying the predetermined threshold number of unread messages can avoid the impact on the user's current usage scenario caused by frequently displaying unread messages.

[0072] The above-described manners (1) and (2) are both optional. It may be a default setting to display one of latest unread messages, or display a plurality of unread messages of the designated application, which is not defined in the examples of the present disclosure. Here, when displaying an unread message of the designated application, it may display all the contents of the unread message so as to make the user to check the complete unread message, or display the message identification corresponding to the unread message, i.e., display the contact information corresponding to the unread message or part of contents so as to show the user a message reminder.

[0073] Correspondingly, after performing the above-described (2), the method further includes: when an open instruction of any one message identification in the unread message list is detected, displaying the unread message corresponding to the open instruction.

[0074] In specific, the mobile terminal provides the user an unread message reminder according to the unread message list. When the user needs to check any one of the unread messages in the unread message list, click the message identification of the unread message which needs to be checked, and trigger an open instruction of the message identification of the unread message which needs to be checked. When the open instruction is detected by the mobile terminal, display the unread message which needs to be checked.

[0075] Optionally, when the mobile terminal displays the unread message list, obtain a predetermined character number of contents of each unread message in the unread message list. When the open instruction is detected, obtain all the contents of the unread message corresponding to the open instruction, and display all the contents of the unread message corresponding to the open instruction.

[0076] In Block 207, when a return instruction is received, the interface displayed currently is switched to the interface displayed before displaying the unread message of the designated application.

[0077] The difference from the prior art is that, when checking an unread message in operation process of the designated application, and the user needs to return to the interface displayed before displaying the unread message, the user only needs to trigger the return instruction. In the examples, it avoids the user to manually return to the main interface of designated application in advance, and then manually switch to the interface displayed before displaying an unread message. Hence, it is simple and convenient to operate.

[0078] FIG. 3 is a schematic diagram illustrating a display of an unread message list according to an example of the present disclosure. As shown in FIG. 3, assume the predetermined rule is a shake operation. When it is detected that the user triggers a shake operation, display an unread message list shown in FIG. 3. Before displaying the unread message list, an original interface may be any kind of interface displayed in the mobile terminal, for example, the original interface may be a common interface (e.g. a main interface, or a locked interface), or an interface of the designated application, which is different from the interface displaying the unread messages of the designated application, or an interface of another application different from the designated application. When displaying the unread message list, the original interface is switched to the interface displaying the unread messages of the designated application.

[0079] The unread message list includes message identifications of three unread messages, i.e., an icon of contact “nickname 1”, the nickname and part of contents of a first unread message and its received time, an icon of contact “nickname 2”, the nickname and part of contents of a second unread message and its received time, and an icon of contact “nickname 3”, the nickname and part of contents of a third unread message and its received time. When

the user needs to check the first unread message, click the message identification of the first unread message, and display complete information of the first unread message in the mobile terminal. For the instant communication software, when the user clicks the message identification of the first unread message, enter the conversation interface of the user and contact “nickname 1”, so that the user may make a conversation with contact “nickname 1”.

[0080] When the user needs to return to the interface displayed before displaying the unread message of the designated application, by clicking the ‘return’ button at the left bottom, trigger the return instruction, and the interface displayed currently is switched to the displayed interface before displaying the unread message of the designated application.

[0081] According to the method provided by the present disclosure, in the operational process of a designated application, sensor information of the mobile terminal is obtained. When the change rule of the sensor information complies with the predetermined rule, the unread messages of the designated application are displayed. Through detecting the change of the sensor information of the mobile terminal, the unread messages at the message aggregation entrance are automatically displayed, without any manual display by the user, and when a return instruction is received, the interface displayed currently is switched to the interface displayed before displaying the unread messages of the designated application, so that it avoids the user to manually return to the main interface of designated application in advance, and then manually switch to the interface displayed before displaying unread messages, hence it is simple and convenient to operate.

[0082] FIG. 4 is a schematic diagram illustrating a structure of a device for checking a message according to an example of the present disclosure. As shown in FIG. 4, the device includes: an information obtaining module 401, a change detection module 402, a rule determining module 403, a message displaying module 404.

[0083] Here, the information obtaining module 401 is configured to obtain sensor information of a mobile terminal in operational process of a designated application; the change detection module 402 is connected with the information obtaining module 401, and configured to detect whether the sensor information is changed; the rule determining module 403 is connected with the change detection module 402, and configured to determine whether a change rule of the sensor information complies with a predetermined rule when the sensor

information is changed; the message displaying module 404 is connected with the rule determining module 403, and configured to display an unread message of the designated application when it is detected that the change rule of the sensor information complies with the predetermined rule.

[0084] Optionally, the rule determining module 403 includes:

a first rule determining unit, configured to determine whether the change interval of the accelerated speed is larger than a predetermined threshold. When the change interval of the accelerated speed is larger than the predetermined threshold, the change rule of the sensor information complies with the predetermined rule; or

a second rule determining unit, configured to determine whether the change curve of the angular speed matches with a predetermined curve. When the change curve matches with the predetermined curve, the change rule of the sensor information complies with the predetermined rule.

[0085] Optionally, the device further includes:

an identification state detection module 410, configured to, when a starting instruction of the designated application is received, detect a quick identification state of the designated application, where the quick identification state is on state or off state.

[0086] Correspondingly, the information obtaining module 401 is configured to, when it is detected that the quick identification state of the designated application is on state, obtain sensor information of a mobile terminal in operational process of a designated application.

[0087] Optionally, the message displaying module 404 includes:

a message determining unit, configured to, when it is detected that the change rule of the sensor information complies with the predetermined rule, determine whether an unread message is available in the designated application; and

a message displaying unit, configured to, when it is determined that an unread message is available in the designated application, display an unread message of the designated application.

[0088] Optionally, the message displaying unit is configured to, when it is determined that an unread message is available in the designated application, display a latest unread message of the designated application.

[0089] Optionally, the message displaying unit is configured to, when it is determined that an unread message is available in the designated application, display an unread message list of the designated application, where the unread message list includes at least one unread message and a message identification corresponding to the at least one unread message; and when an open instruction of any one message identification in the unread message list is detected, display an unread message corresponding to the open instruction.

[0090] Optionally, the device further includes:

a return module 412, configured to, when a return instruction is received, switch the interface displayed currently to the interface displayed before displaying the unread message of the designated application.

[0091] Optionally, the information obtaining module 401 is configured to, in operational process of a designated application, by calling an API corresponding to at least one sensor configured in the mobile terminal, obtain sensor information of at least one sensor configured in the mobile terminal.

[0092] Optionally, the at least one sensor may be a gravity sensor or a gyroscope. Correspondingly, sensor information of the at least one sensor includes accelerated speed information and/or angular speed information of the mobile terminal.

[0093] Optionally, the designated application may include one or multiple designated applications. Correspondingly, the message displaying module 404 is configured to, when it is detected that the change rule of the sensor information complies with the predetermined rule, display the unread message of one designated application, or display the unread message of multiple designated applications simultaneously.

[0094] According to the device provided by the present disclosure, in the operational process of a designated application, sensor information of the mobile terminal is obtained. When the change rule of the sensor information complies with the predetermined rule, the unread

messages of the designated application are displayed. Through detecting the change of the sensor information of the mobile terminal, the unread messages at the message aggregation entrance are automatically displayed without any manual display by the user, and when a return instruction is received, the interface displayed currently is switched to the interface displayed before displaying the unread messages of the designated application, so that it avoids the user to manually return to the main interface of designated application in advance, and then manually switch to the interface displayed before displaying unread messages, hence it is simple and convenient to operate.

[0095] It should be noted that when checking a message by the device provided by the above-described examples, the division of the above-described functional modules are only used as examples for description. In practical application, the division of the above functions can be achieved by different functional modules based on needs, i.e., the internal structure of the mobile terminal is divided into different functional modules to achieve part of all of the above-described functions. Furthermore, the device for checking a message provided by the above examples and the method for checking a message belong to the same idea, hence the implementation of the device may be referred to the method examples, which is not defined in detail herein.

[0096] FIG. 5 is a schematic diagram illustrating a mobile terminal according to an example of the present disclosure. The mobile terminal may be used to implement the method for checking a message provided by the above-described examples.

[0097] A mobile terminal 500 may include: a radio frequency (RF) circuit 110, at least one computer-readable storage medium 120, an input unit 130, a display unit 140, a sensor 150, an audio circuit 160, a Wireless Fidelity (WiFi) unit 170, at least one processor 180 and a power supply 190 and the like. Those skilled in the art may appreciate that, the structure of the mobile terminal shown in FIG. 5 is not intended to limit the mobile terminal, and may include more or less units than the units shown in FIG. 5, or combinations of some units, or different layout of the units.

[0098] Here, the RF circuit 110 is capable of sending and receiving signals during an information sending/receiving process or a communication process. In particular, the RF circuit 110 may send downlink information received from a base station to the at least one

processor 180 for further processing, and may send uplink data to the base station. The RF circuit as a communication unit may generally include, but not limited to, an antenna, at least one amplifier, a tuner, at least one oscillator, a subscriber identity module (SIM) card, a transceiver, a coupler, a low noise amplifier (LNA), a duplexer, and the like. Furthermore, the RF circuit 110 may also perform wireless communications via a network with other devices. The communications may be implemented by any communication standard or protocol including, but not limited to, Global System of Mobile (GSM) communication, General Packet Radio Service (GPRS), Code Division Multiple Access (CDMA), Wideband Code Division Multiple Access (WCDMA), Long Term Evolution (LTE), email, Short Messaging Service (SMS), and so on.

[0099] The storage device 120 may store software programs and modules. The processor 180 runs the software programs and modules stored in the storage device 120 to implement various functions and data processing. The storage device 120 may include an area storing programs and an area storing data. The area storing programs may store an operating system, at least one application program providing a function (e.g., audio playing function, video playing function and so on). The area storing data may store data generated during operation of the mobile terminal 500 (e.g., audio data, a phone book, etc.) and so on. The storage device 120 may include a high-speed random access memory, and may also include a non-transitory memory, e.g., at least one disk storage, flash memory or other non-transitory solid state storage device. Correspondingly, the storage device 120 may also include a storage controller to provide the processor 180 and the input unit 130 with access to the storage device 120.

[00100] The input unit 130 may receive the input digits or characters, and generate a keyboard input signal, a mouse input signal, a control lever input signal, an optical input signal, or a track ball input signal which is related with user settings and function controlling. In particular, the input unit 130 may include a touch sensitive surface 131 and another input device 132. The touch sensitive surface 131, also referred to as a touch screen or a touchpad, is capable of collecting touch operations performed by a user on the surface or near the surface (e.g., an operation performed on or near the touch sensitive surface 231 using any proper object or attachment such as a finger or a touch pen, etc.), and driving a connecting apparatus corresponding to the operation according to a pre-defined procedure. Optionally, the touch sensitive surface 131 may include a touch detecting apparatus and a touch

controller. The touch detecting apparatus detects the orientation touched by the user, detects a signal generated by the touch, and sends the signal to the touch controller. The touch controller receives touch information from the touch detecting apparatus, converts the touch information into coordinates of the touch point, sends the coordinates to the processor 180, and receives a command sent by the processor 180 and executes the command. In addition, the touch sensitive surface 131 may be implemented via various types of touch techniques such as resistive touch screen, capacitive touch screen, infrared touch screen and surface acoustic wave touch screen and so on. In particular, the input unit 130 may include another input device 132 besides the touch sensitive surface 131. In particular, the input device 132 may include, but not limited to, at least one of a physical keyboard, a function key (e.g., a volume control key, a power on/off key, etc.), a track ball, a mouse, a control lever and the like.

[00101] The display unit 140 is capable of displaying information input by the user, information provided for the user and various graphical user interfaces of the mobile terminal 500. The graphical user interfaces may include graphics, texts, icons, videos, and any combination thereof. The display unit 140 may include a display panel 141. Optionally, the display panel 141 may be configured by Liquid Crystal Display (LCD), Organic Light-Emitting Diode (OLED) and the like. Further, the touch sensitive surface 131 may overlay the display panel 141. When detecting a touch operation on or near the touch sensitive surface 131, the touch sensitive surface 131 sends the touch operation to the processor 180 to determine the type of the touch event, and then the processor 180 provides a corresponding visual output on the display panel 141 according to the type of the touch event. Although in FIG. 4, the touch sensitive surface 131 and the display panel 141 may be two independent components respectively for input and output, they may also be integrated to provide input and output in some examples.

[00102] The mobile terminal 500 may also include at least one sensor 150, e.g., an optical sensor, a motion sensor, or other types of sensors. In particular, the optical sensor may include an ambient light sensor and a proximity sensor. The ambient light sensor may adjust the brightness of the display panel 141 according to the strength of ambient light. The proximity sensor may close the display panel 141 and/or the backlight when the mobile terminal 500 is held close to an ear. A gravity sensor is a type of motion sensor, and it may

detect the amount of acceleration in multiple directions (typically in three axis), the amount and the direction of gravity when kept in stationary, and can be used in applications which need to identify phone postures (such as auto screen rotation, related games, magnetometer attitude calibration), functions related with vibration identify (such as a pedometer, percussion) and the like. The mobile terminal 500 may be configured with other sensors, e.g., a gyroscope, a barometer, a hygrometer, a thermometer, infrared sensors and the like, which are not described in detail herein.

[00103] The audio circuit 160, the speaker 161 and the microphone 162 may provide an audio interface between the user and the mobile terminal 500. The audio circuit 160 may convert received audio data into electrical signals, and then send to the speaker 161. The speaker 161 converts the electrical signals into sound and outputs the sound. The microphone 162 may convert collected sound signals into electrical signals which are received by the audio circuit 160. The audio circuit 160 converts the electrical signals into audio data, and sends the electrical signals to the processor 180 for processing. The processed audio data may be sent to another terminal device via the RF circuit 110, or output to the storage device 120 for further processing. The audio circuit 160 may also include an ear jack providing communications between a peripheral earphone and the mobile terminal 500.

[00104] In order to perform the wireless communication, a WiFi module 170 may be configured in the mobile terminal. WiFi belongs to a short-distance wireless communications technique. The mobile terminal 500 may apply a WiFi module 170 to provide wireless broadband Internet access to enable a user to send and receive emails, browse webpages and access stream media and so on. Although the WiFi module 170 is shown in FIG. 4, it should be appreciated that it is not intended to be a mandatory module of the mobile terminal 500, and may be omitted based on needs without changing the scope of the present disclosure.

[00105] The processor 180 is a control center of the mobile terminal 500, which interconnects all of the components in the phone using various interfaces and circuits, and monitors the phone completely by running or executing software programs and/or modules stored in the storage device 120, calling the data stored in the storage device 120, and performing various functions of the mobile terminal 500 and processing data. Optionally, the processor 180 may include one or more processing cores. Preferably, the processor 180 may integrate an application processor and a modem processor. The application processor mainly

handles the operating system, user interfaces and application programs, etc., and the modem processor mainly handles wireless communications. It should be appreciated that, the modem processor may not be integrated into the processor 180.

[00106] The mobile terminal 500 may also include a power supply 290 (e.g., a battery) providing power for various components. Preferably, the power supply may be logically connected with the processor 180 via a power supply management system to implement functions such as charging, discharging, power consumption management and the like. The power supply 190 may also include any components, such as one or more Direct Current (DC) or Alternating Current (AC) power supply, a recharging system, a power failure detection circuit, a power converter or inverter, a power state indicator and the like.

[00107] Although not shown, the mobile terminal 500 may also include a camera, a Bluetooth module, etc., which are not described in detail herein. In an example, the display unit of the mobile terminal is a touch screen, and the mobile terminal also includes a processor and one or more programs stored in the memory and configured for execution by the one or more processors, the one or more programs at least including instructions to:

obtain sensor information of a mobile terminal in operational process of a designated application;

detect whether the sensor information is changed;

when the sensor information is changed, determine whether a change rule of the sensor information complies with a predetermined rule;

when it is detected that the change rule of the sensor information complies with the predetermined rule, display an unread message of the designated application.

[00108] FIG. 6 is a schematic diagram illustrating another structure of a device for checking a message in accordance with an example of the present disclosure.

[00109] As shown in FIG. 6, the device 600 may include a memory 620, and a processor 610 in communication with memory 620. Memory 620 may store the following instructions executable by processor 610, which are an information obtaining instruction 621, a change

detection instruction 622, a rule determining instruction 623, and a message displaying instruction 624.

[00110] The information obtaining instruction 621 may indicate to obtain sensor information of a mobile terminal in operational process of a designated application.

[00111] The change detection instruction 622 may indicate to detect whether the sensor information is changed.

[00112] The rule determining instruction 623 may indicate to determine whether a change rule of the sensor information complies with a predetermined rule when the sensor information is changed.

[00113] The message displaying instruction 624 may indicate to display an unread message of the designated application when it is detected that the change rule of the sensor information complies with the predetermined rule.

[00114] The rule determining instruction 623 may further indicate to determine whether the change interval of the accelerated speed is larger than a predetermined threshold. When the change interval of the accelerated speed is larger than the predetermined threshold, the change rule of the sensor information complies with the predetermined rule; or, may indicate to determine whether the change curve of the angular speed matches with a predetermined curve. When the change curve matches with the predetermined curve, the change rule of the sensor information complies with the predetermined rule.

[00115] Optionally, memory 620 may further store an identification state detection instruction 625, which may indicate to, when a starting instruction of the designated application is received, detect a quick identification state of the designated application, where the quick identification state is on state or off state.

[00116] Correspondingly, the information obtaining instruction 621 may indicate to, when it is detected that the quick identification state of the designated application is on state, obtain sensor information of a mobile terminal in operational process of a designated application.

[00117] Optionally, memory 620 may further store a return instruction 626, which may indicate to, when a return instruction is received, switch currently displayed interface to the interface displayed before displaying the unread message of the designated application.

[00118] The message displaying instruction 624 may further indicate to, when it is detected that the change rule of the sensor information complies with the predetermined rule, determine whether an unread message is available in the designated application; and indicate to, when it is determined that an unread message is available in the designated application, display an unread message of the designated application.

[00119] The message displaying instruction 624 may further indicate to, when it is determined that an unread message is available in the designated application, display a latest unread message of the designated application.

[00120] The message displaying instruction 624 may further indicate to, when it is determined that an unread message is available in the designated application, display an unread message list of the designated application, where the unread message list includes at least one unread message and a message identification corresponding to the at least one unread message; and when an open instruction of any one message identification in the unread message list is detected, display an unread message corresponding to the open instruction.

[00121] The information obtaining instruction 621 may further indicate to, in operational process of a designated application, by calling an API corresponding to at least one sensor configured in the mobile terminal, obtain sensor information of at least one sensor configured in the mobile terminal.

[00122] Those skilled in the art may understand that part of all of the steps to implement the above-described examples may be accomplished by hardwares, and also may be accomplished by hardwares instructed by the programs. The programs may be stored within a computer-readable storage medium. The computer-readable storage medium may be a read-only memory (ROM), magnetic disk, or light disk, etc.

[00123] The foregoing is preferred examples of the present disclosure, which is not used for limiting the protection scope of the present disclosure. Any modifications, equivalent

substitutions and improvements made within the spirit and principle of the present disclosure, should be covered by the protection scope of the present disclosure.

CLAIMS

WHAT IS CLAIMED IS:

1. A method for checking a message, comprising:
 - obtaining sensor information of a mobile terminal in operational process of a designated application;
 - detecting whether the sensor information is changed;
 - when the sensor information is changed, determining whether a change rule of the sensor information complies with a predetermined rule; and
 - when it is detected that the change rule of the sensor information complies with the predetermined rule, displaying an unread message of the designated application.
2. The method according to claim 1, wherein when the sensor information is changed, determining whether the change rule of the sensor information complies with the predetermined rule comprises:
 - when the sensor information is an accelerated speed, determining whether a change interval of the accelerated speed is larger than a predetermined threshold, and determining that the change rule of the sensor information complies with the predetermined rule when the change interval of the accelerated speed is larger than the predetermined threshold; or
 - when the sensor information is an angular speed, determining whether a change curve of the angular speed matches with a predetermined curve, and determining that the change rule of the sensor information complies with the predetermined rule when the change curve matches with the predetermined curve.
3. The method according to claim 1, further comprising:
 - when a starting instruction of the designated application is received, detecting a quick identification state of the designated application, wherein the quick identification state is on state or off state; and
 - wherein obtaining sensor information of a mobile terminal in operational process of a designated application comprises:
 - when it is detected that the quick identification state of the designated application is on state, obtaining the sensor information of the mobile terminal in the operational process of the designated application.
4. The method according to claim 1, wherein obtaining sensor information of a mobile

terminal in operational process of a designated application comprises:

determining a type of a sensor according to the predetermined rule, and obtaining the sensor information of a mobile terminal corresponding to the type in operational process of a designated application.

5. The method according to claim 1, wherein displaying an unread message of the designated application comprises:

determining whether an unread message is available in the designated application;

when it is determined that an unread message is available in the designated application, displaying the unread message of the designated application.

6. The method according to claim 5, wherein displaying the unread message of the designated application comprises:

when it is determined that an unread message is available in the designated application, displaying a latest unread message of the designated application.

7. The method according to claim 5, wherein displaying the unread message of the designated application comprises:

displaying an unread message list of the designated application, wherein the unread message list includes at least one unread message and a message identification corresponding to the at least one unread message;

when an open instruction of any one message identification in the unread message list is detected, displaying an unread message corresponding to the open instruction.

8. The method according to claim 5, wherein displaying the unread message of the designated application comprises:

switching an original interface to an interface displaying the unread messages of the designated application, wherein the original interface comprises a common interface, or an interface of the designated application, which is different from the interface displaying the unread messages of the designated application, or an interface of another application different from the designated application.

9. The method according to any one of claims 1-8, wherein displaying an unread message of the designated application further comprises:

when a return instruction is received, switching an interface displayed currently to an interface displayed before displaying the unread message of the designated application.

10. The method according to any one of claims 1-8, wherein obtaining sensor

information of a mobile terminal in operational process of a designated application comprises:

in the operational process of the designated application, by calling an Application Programming Interface (API) corresponding to at least one sensor configured in the mobile terminal, obtaining sensor information of at least one sensor configured in the mobile terminal.

11. The method according to claim 10, wherein the at least one sensor comprises a gravity sensor or a gyroscope; and

the sensor information of the at least one sensor comprises accelerated speed information and/or angular speed information of the mobile terminal.

12. The method according to any one of claims 1-11, wherein the designated application comprises one or multiple designated applications;

displaying the unread message of the designated application comprises: displaying the unread message of one designated application, or displaying the unread message of multiple designated applications simultaneously.

13. A device for checking a message, comprising:

an information obtaining module, configured to obtain sensor information of a mobile terminal in operational process of a designated application;

a change detection module, configured to detect whether the sensor information is changed;

a rule determining module, configured to, when the sensor information is changed, determine whether a change rule of the sensor information complies with a predetermined rule;

a message displaying module, configured to, when it is detected that the change rule of the sensor information complies with the predetermined rule, display an unread message of the designated application.

14. The device according to claim 13, wherein the rule determining module comprises:

a first rule determining unit, configured to, when the sensor information is an accelerated speed, determine whether a change interval of the accelerated speed is larger than a predetermined threshold; when the change interval of the accelerated speed is larger than the predetermined threshold, determine that the change rule of the sensor information complies with the predetermined rule; or

a second rule determining unit, configured to, when the sensor information is an

angular speed, determine whether a change curve of the angular speed matches with a predetermined curve; when the change curve matches with the predetermined curve, determine that the change rule of the sensor information complies with the predetermined rule.

15. The device according to claim 13, wherein the device further comprises:

an identification state detection module, configured to, when a starting instruction of the designated application is received, detect a quick identification state of the designated application, wherein the quick identification state is on state or off state;

the information obtaining module, configured to, when it is detected that the quick identification state of the designated application is on state, obtain sensor information of a mobile terminal in operational process of a designated application.

16. The device according to claim 13, wherein the information obtaining module is configured to, determine a type of a sensor according to the predetermined rule, and obtain the sensor information of a mobile terminal corresponding to the type in operational process of a designated application.

17. The device according to claim 13, wherein the message displaying module comprises:

a message determining unit, configured to, when it is detected that the change rule of the sensor information complies with the predetermined rule, determine whether an unread message is available in the designated application;

a message displaying unit, configured to, when it is determined that an unread message is available in the designated application, display the unread message of the designated application.

18. The device according to claim 17, wherein the message displaying unit is configured to, when it is determined that an unread message is available in the designated application, display a latest unread message of the designated application.

19. The device according to claim 17, wherein the message displaying unit is configured to, display an unread message list of the designated application, wherein the unread message list includes at least one unread message and a message identification corresponding to the at least one unread message;

when an open instruction of any one message identification in the unread message list is detected, display an unread message corresponding to the open instruction.

20. The device according to claim 17, wherein the message displaying unit is configured to, switch an original interface to an interface displaying the unread messages of the designated application, wherein the original interface comprises a common interface, or an interface of the designated application, which is different from the interface displaying the unread messages of the designated application, or an interface of another application different from the designated application.

21. The device according to any one of claims 13-20, wherein the device further comprises:

a return module, configured to, when a return instruction is received, switch an interface displayed currently to an interface displayed before displaying the unread message of the designated application.

22. The device according to any one of claims 13-20, wherein the information obtaining module is configured to, in operational process of a designated application, by calling an Application Programming Interface (API) corresponding to at least one sensor configured in the mobile terminal, obtain sensor information of at least one sensor configured in the mobile terminal.

23. The device according to claim 22, wherein the at least one sensor comprises a gravity sensor or a gyroscope; and the sensor information of the at least one sensor comprises accelerated speed information and/or angular speed information of the mobile terminal.

24. The device according to any one of claims 13-23, wherein the designated application comprises one or multiple designated applications;

the message displaying module is configured to, when it is detected that the change rule of the sensor information complies with the predetermined rule, display the unread message of one designated application, or display the unread message of multiple designated applications simultaneously.

25. A mobile terminal, comprises a memory, and one or more programs stored in the memory and configured for execution by the one or more processors, the one or more programs including instructions to:

obtain sensor information of a mobile terminal in operational process of a designated application;

detect whether the sensor information is changed;

when the sensor information is changed, determine whether a change rule of the

sensor information complies with a predetermined rule;

when it is detected that the change rule of the sensor information complies with the predetermined rule, display an unread message of the designated application.

1/5

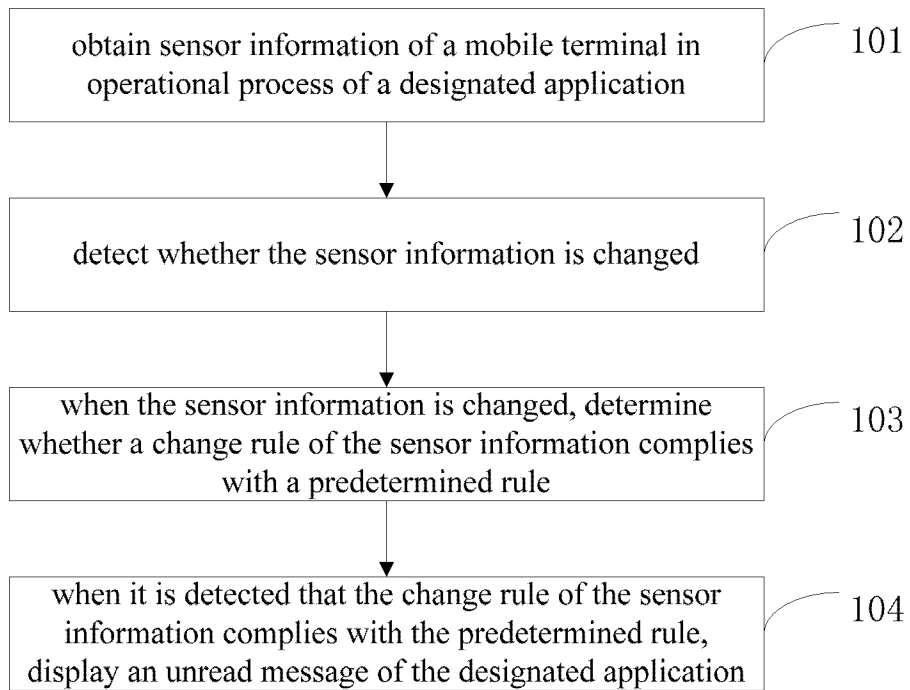


FIG. 1

2/5

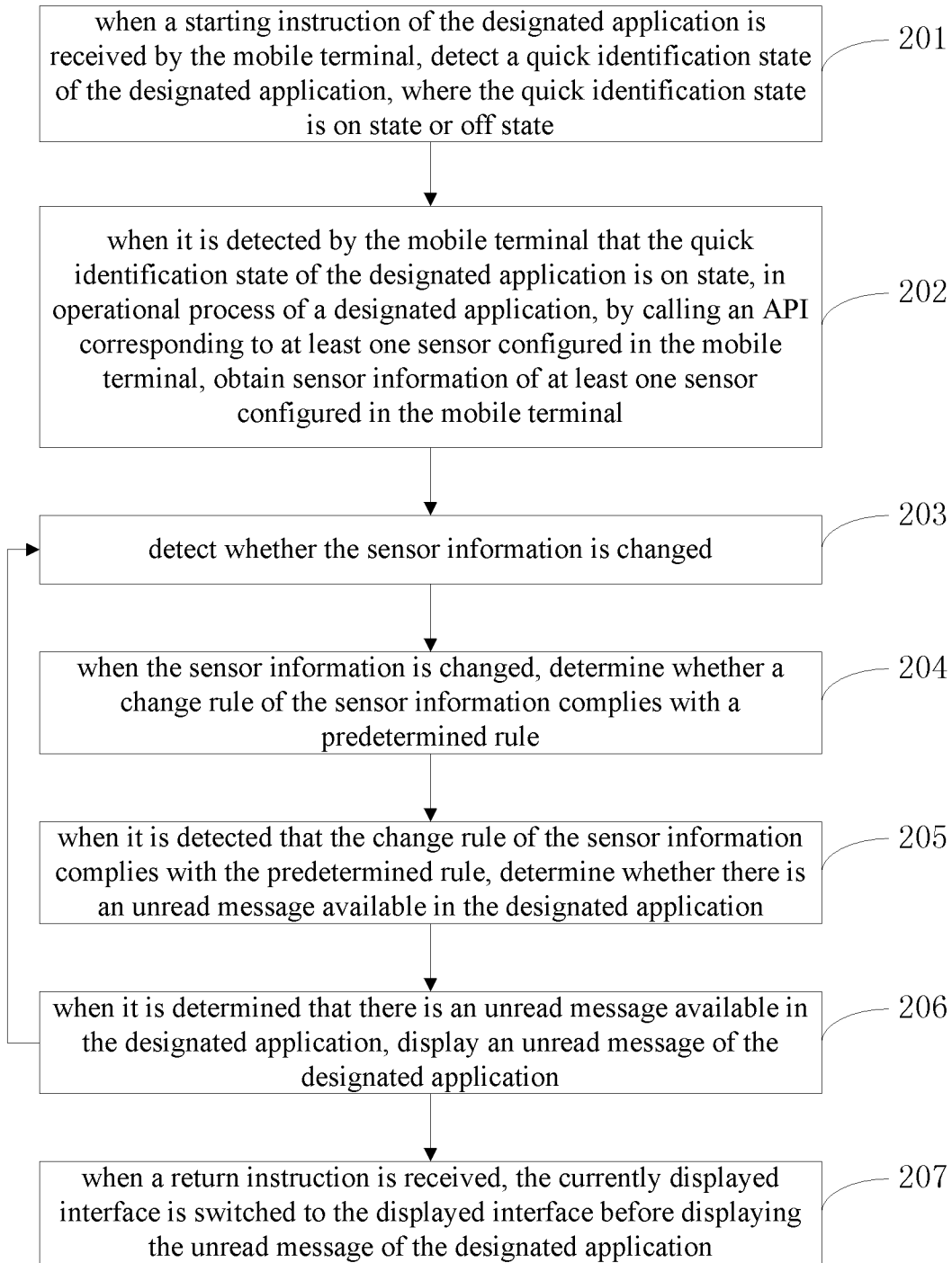


FIG. 2

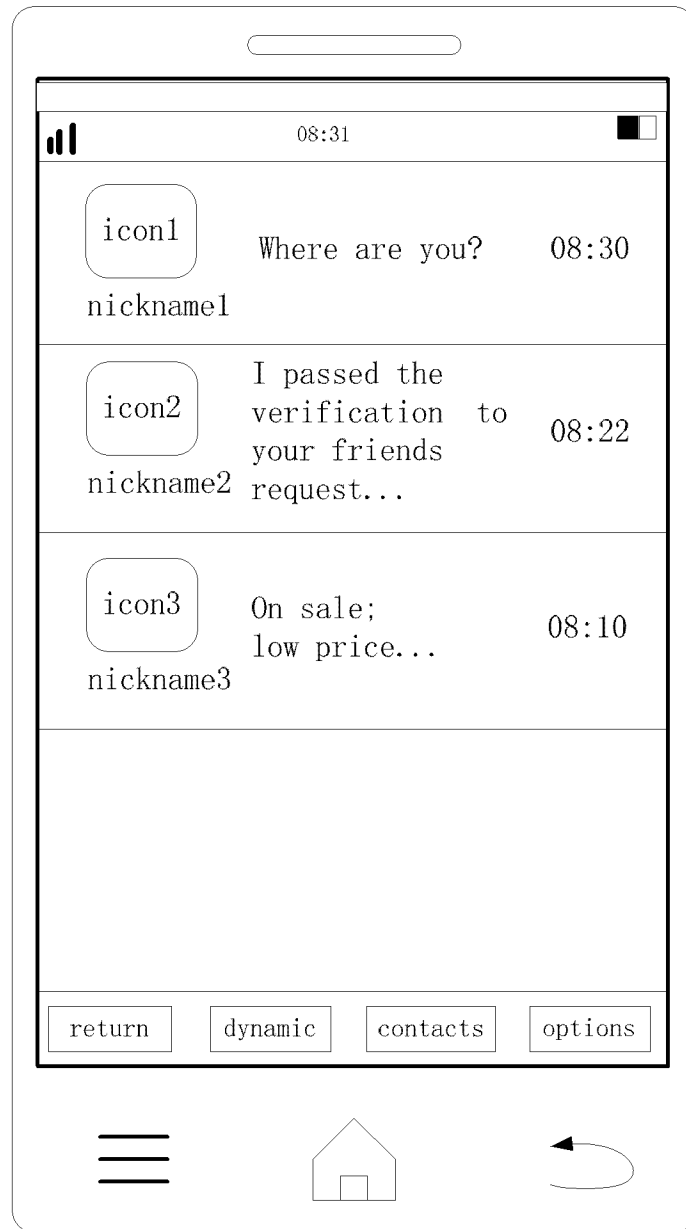


FIG. 3

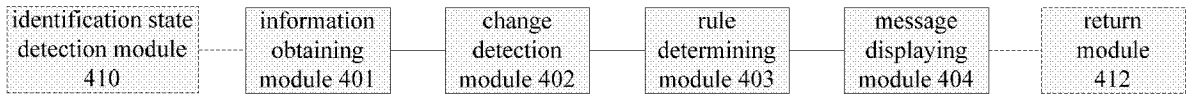


FIG. 4

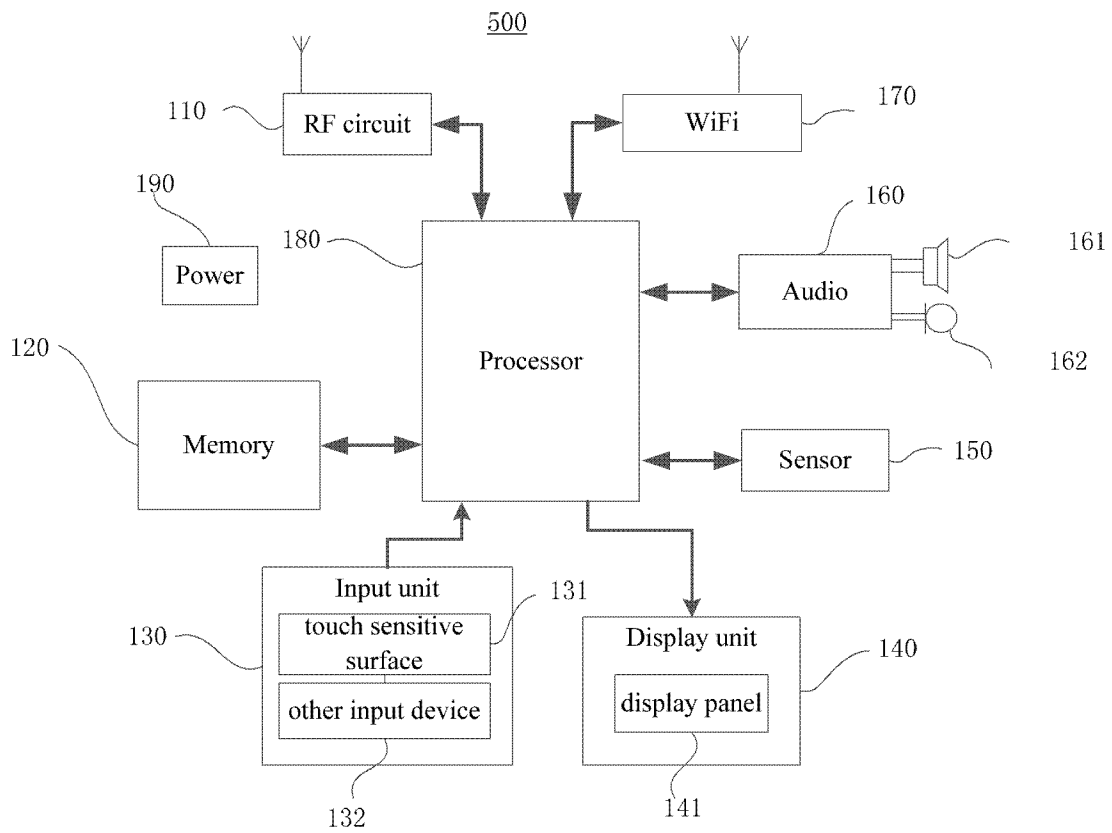


FIG. 5

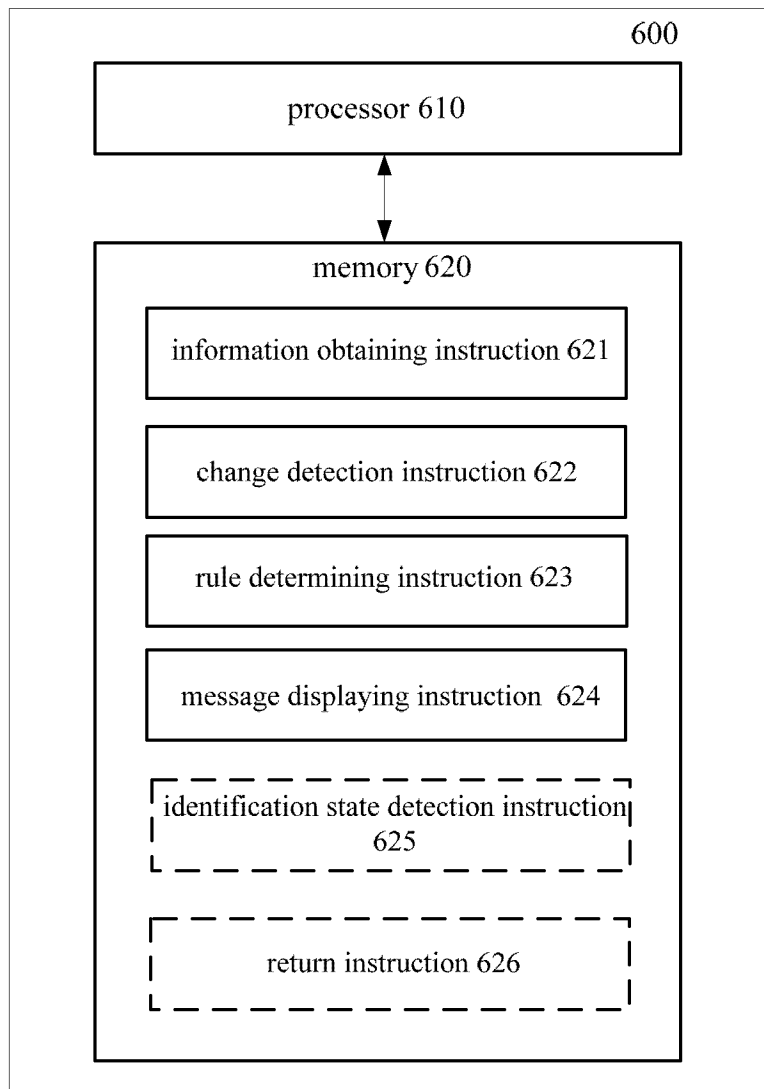


FIG. 6

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2014/082469

A. CLASSIFICATION OF SUBJECT MATTER

H04W 88/02 (2009.01) i

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)

H04Q,H04W,H04B,H04M,G06F

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)

WPI;EPODOC;CNPAT;CNKI: short message, sms, message, sensor, acceleration, accelerated speed, angular speed, shake, terminal, unread, unprocessed, untreated

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN 103067586 A (GUANGDONG OPPO MOBILE COMMUNICATION CO., LTD.) 24 April 2013 (2013-04-24) description, paragraphs [0039]-[0072]	1-25
X	CN 103118168 A (ZHUHAI MEIZU TECHNOLOGY CO., LTD.) 22 May 2013 (2013-05-22) description, paragraphs [0030]-[0067]	1-25
X	CN 102170497 A (YULONG COMPUTER TELECOMMUNICATION TECHNOLOGIES SHENZHEN CO., LTD.) 31 August 2011 (2011-08-31) description, paragraphs [0040]-[0072]	1-25
PX	CN 103685694 A (LENOVO BEIJING CO., LTD.) 26 March 2014 (2014-03-26) description, paragraphs [0047]-[0097]	1-25
A	CN 102012774 A (ZTE CORPORATION) 13 April 2011 (2011-04-13) the whole document	1-25

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

“A” document defining the general state of the art which is not considered to be of particular relevance	“T” later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
“E” earlier application or patent but published on or after the international filing date	“X” document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
“L” document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	“Y” document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
“O” document referring to an oral disclosure, use, exhibition or other means	“&” document member of the same patent family
“P” document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

22 September 2014

Date of mailing of the international search report

24 October 2014

Name and mailing address of the ISA/CN

STATE INTELLECTUAL PROPERTY OFFICE OF THE
P.R.CHINA(ISA/CN)
6,Xitucheng Rd., Jimen Bridge, Haidian District, Beijing
100088 China

Authorized officer

ZHANG,Fan

Facsimile No. (86-10)62019451

Telephone No. (86-10)62413355

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/CN2014/082469

Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)	Publication date (day/month/year)
CN	103067586	A	24 April 2013	Non e	
CN	103118168	A	22 May 2013	Non e	
CN	102170497	A	31 August 2011	Non e	
CN	103685694	A	26 March 2014	Non e	
CN	102012774	A	13 April 2011	Non e	