

METHOD AND APPARATUS FOR DISPLAYING REMINDER MESSAGE

Technical Field

This application relates to the field of communication technologies, and, more
5 particularly, to a method and an apparatus for displaying a reminder message.

Background

In the related technology, reminder messages may be sent to a target user to remind
the user to process related tasks or events in time. However, the reminder messages are
10 easily abused, and as a result, the user often receives reminder messages for various events
and scenarios, limiting the reminding effect of the reminder messages.

Summary

In view of the above, this application provides a method and an apparatus for
15 displaying a reminder message, such that reminder messages are mode-differentiated and
partially displayed in a pin-to-top manner, thus preventing an important message from being
obscured due to too many reminder messages, helping improve the reminding effect, and
improving the communication efficiency.

To achieve the above objective, this application provides the following technical
20 solutions.

According to a first aspect of this application, a method for displaying a reminder
message is provided, including:

acquiring a received reminder message;

identifying a pin-to-top reminder message or a common reminder message from the
25 reminder message according to a display mode configured for the reminder message; and

displaying the pin-to-top reminder message in a first display area in a reminder message display page, and displaying the common reminder message in a second display area in the reminder message display page, wherein the first display area and the second display area are respectively located at different positions in the reminder message display page.

According to a second aspect of this application, a method for displaying a reminder message is provided, including:

displaying a reminder message creation page which includes a mode switching identifier;

configuring a reminder message generated in the reminder message creation page to be in a corresponding display mode according to a trigger operation for the mode switching identifier; and

sending the reminder message to a target object, wherein when the display mode is a pin-to-top mode, wherein the reminder message is displayed in a first display area in a reminder message display page of the target object, while a reminder message in a common mode is displayed in a second display area in the reminder message display page, the second display area being different from the first display area.

According to a third aspect of this application, a method for displaying a reminder message is provided, including:

creating a reminder message;

configuring a creator of the reminder message as a target object when an instruction for sending the reminder message is detected and no target object is configured for the reminder message; and

receiving and displaying the reminder message.

According to a fourth aspect of this application, a method for displaying a reminder

message is provided, including:

displaying a received reminder message, wherein a pin-to-top reminder message is displayed in a first display area in a reminder message display page, a common reminder message is displayed in a second display area in the reminder message display page, and the first display area and the second display area are respectively located at different positions in the reminder message display page; and

switching the common reminder message to a pin-to-top reminder message when the common reminder message is of a task type and a time interval to a deadline corresponding to the common reminder message is not greater than a preset time length.

According to a fifth aspect of this application, an apparatus for displaying a reminder message is provided, including:

an acquiring unit configured to acquire a received reminder message;

an identifying unit configured to identify a pin-to-top reminder message or a common reminder message from the reminder message according to a display mode configured for the reminder message; and

a displaying unit configured to display the pin-to-top reminder message in a first display area in a reminder message display page and display the common reminder message in a second display area in the reminder message display page, wherein the first display area and the second display area are respectively located at different positions in the reminder message display page.

According to a sixth aspect of this application, an apparatus for displaying a reminder message is provided, including:

a page displaying unit configured to display a reminder message creation page which includes a mode switching identifier;

a mode configuring unit configured to configure a reminder message generated in

the reminder message creation page to be in a corresponding display mode according to a trigger operation for the mode switching identifier; and

a message sending unit configured to send the reminder message to a target object, wherein when the display mode is a pin-to-top mode, the reminder message is displayed in a first display area in a reminder message display page of the target object, while a reminder message in a common mode is displayed in a second display area in the reminder message display page, the second display area being different from the first display area.

According to a seventh aspect of this application, an apparatus for displaying a reminder message is provided, including:

a creating unit configured to create a reminder message;

a configuring unit configured to configure a creator of the reminder message as a target object when an instruction for sending the reminder message is detected and no target object is configured for the reminder message; and

a displaying unit configured to receive and display the reminder message.

According to an eighth aspect of this application, an apparatus for displaying a reminder message is provided, including:

a displaying unit configured to display a received reminder message, wherein a pin-to-top reminder message is displayed in a first display area in a reminder message display page, a common reminder message is displayed in a second display area in the reminder message display page, and the first display area and the second display area are respectively located at different positions in the reminder message display page; and

a switching unit configured to switch the common reminder message to a pin-to-top reminder message when the common reminder message is of a task type and a time interval to a deadline corresponding to the common reminder message is not greater than a preset time length.

As shown from the above technical solutions, this application configures an important reminder message to be in a pin-to-top mode by configuring different display modes for reminder messages, such that the corresponding pin-to-top reminder message is displayed at the top of a reminder message list page, thus enhancing the degree of attention paid to the pin-to-top reminder message by the user, helping improve the reminding effect of the pin-to-top reminder message relative to the common reminder message, preventing an important message from being obscured due to too many reminder messages, and helping improve the communication efficiency.

Brief Description of the Drawings

FIG. 1 is a schematic diagram of a reminder message display page in the related technology.

FIG. 2 is a schematic diagram of a display effect of a reminder message display page in the related technology on an electronic device.

FIG. 3 is a flowchart of a method for displaying a reminder message based on a receiver side according to an exemplary example embodiment of this application.

FIG. 4 is a flowchart of a method for displaying a reminder message based on a sender side according to an exemplary example embodiment of this application.

FIG. 5 is a flowchart of a method for displaying a reminder message according to an exemplary example embodiment of this application.

FIG. 6 to FIG. 12 are schematic diagrams of relevant interfaces of reminder messages according to an exemplary example embodiment of this application.

FIG. 13 is a flowchart of another method for displaying a reminder message based on a sender side according to an exemplary example embodiment of this application.

FIG. 14 is a flowchart of another method for displaying a reminder message based on a receiver side according to an exemplary example embodiment of this application.

FIG. 15 is a schematic structural diagram of an electronic device based on a receiver side according to an exemplary example embodiment of this application.

5 FIG. 16 is a block diagram of an apparatus for displaying a reminder message based on a receiver side according to an exemplary example embodiment of this application.

FIG. 17 is a schematic structural diagram of an electronic device based on a sender side according to an exemplary example embodiment of this application.

10 FIG. 18 is a block diagram of an apparatus for displaying a reminder message based on a sender side according to an exemplary example embodiment of this application.

FIG. 19 is a schematic structural diagram of another electronic device based on a sender side according to an exemplary example embodiment of this application.

FIG. 20 is a block diagram of another apparatus for displaying a reminder message based on a sender side according to an exemplary example embodiment of this application.

15 FIG. 21 is a schematic structural diagram of another electronic device based on a receiver side according to an exemplary example embodiment of this application.

FIG. 22 is a block diagram of another apparatus for displaying a reminder message based on a receiver side according to an exemplary example embodiment of this application.

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Detailed Description

FIG. 1 is a schematic diagram of a reminder message display page in the related technology. As shown in FIG. 1, all reminder messages are arranged sequentially according to a receiving time sequence, and are displayed sequentially in a reminder message display page. However, as shown in FIG. 2, for example, only some of the reminder messages in the

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reminder message display page may be displayed at the same time due to the limited size of a screen of an electronic device where the reminder message display page is displayed, and a user may view more reminder messages only after manually flipping over the reminder message display page.

5 Then, when a work scenario is involved, for example, among reminder messages shown in FIG. 1, it is obvious that reminder messages related to work tasks or work progresses such as "We'll have a meeting in the Dragon Pavilion on Floor 4 at 6:30 PM. Please bring your computer and design" and "Xiaohei, please return your first draft today!" are more important than reminder messages such as "Have dinner together in xxx at 6
10 o'clock this evening" and "Wait for me for a while after work," and therefore, the user expects that these important reminder messages are displayed preferentially, thus achieving enough reminding effects.

However, as shown in FIG. 2, reminder messages in the related technology are arranged merely according to a time sequence, and important reminder messages cannot be
15 distinguished from unimportant reminder messages, so that important reminder messages are very likely to be obscured by more unimportant reminder messages, thus greatly reducing the reminding effect of the reminder messages.

Therefore, this application solves the above problems in the related technology by improving the method for displaying the reminder message. The following example
20 embodiments are provided for further description of this application.

FIG. 3 is a flowchart of a method for displaying a reminder message based on a receiver side according to an exemplary example embodiment of this application. As shown in FIG. 3, the method is applied to an electronic device of a receiver, and may include the following steps:

25 Step 302: A received reminder message is acquired.

In this example embodiment, the reminder message may be sent with any communication application. For example, the communication application may be an instant messaging application such as an Enterprise Instant Messaging (EIM) application DING Talk. Certainly, it is not limited in this application.

5 In this example embodiment, the reminder message may be sent by a user to himself/herself, that is, a sender of the reminder message may be the same as the receiver of the reminder message. Therefore, when the user creates a reminder message, if an instruction of the user for sending the reminder message is detected and no receiver is configured for the reminder message, the electronic device may use the local user as the
10 receiver of the reminder message automatically, and the user does not need to configure a target object (i.e., the receiver) of the reminder message manually, thus helping improve the operating efficiency of the user.

Certainly, the receiver may be different from the sender of the reminder message. That is, transmission of the reminder message is implemented between users. This is not
15 limited in this application.

Step 304: A pin-to-top reminder message or a common reminder message is identified from the reminder message according to a display mode configured for the reminder message.

In an example embodiment, the display mode may be configured by the sender of
20 the reminder message. For example, a mode switching identifier may be displayed on a reminder message creation page on the electronic device used by the sender, and the reminder message may be configured to be a pin-to-top mode or a common reminder mode according to the sender's trigger for the mode switching identifier, so as to obtain a pin-to-top reminder message or a common reminder message.

25 In another example embodiment, the display mode may be configured by the

receiver of the reminder message. For example, when a reminder message is received, a reception prompt window of the reminder message may be displayed, and configuration options respectively corresponding to a pin-to-top mode and a common mode are provided in the reception prompt window. Therefore, according to the receiver's trigger for the configuration option, for example, it may be determined that the reminder message is configured as a pin-to-top reminder message when the pin-to-top mode is triggered, and it may be determined that the reminder message is configured as a common reminder message when the common mode is triggered.

Step 306: The pin-to-top reminder message is displayed in a first display area in a reminder message display page, and the common reminder message is displayed in a second display area in the reminder message display page, wherein the first display area and the second display area are respectively located at different positions in the reminder message display page.

In this example embodiment, when the reminder message display page is in a list form (i.e., a reminder message list page), all reminder messages are arranged sequentially from top to bottom, the first display area may be located at the top of the list, and the second display area may be located below the first display area, such that the pin-to-top reminder message is displayed in a "pin-to-top" manner.

Certainly, the reminder message display page may also be in another form. For example, when the reminder message display page arranges reminder messages sequentially from left to right, the first display area may be on the leftmost side of the reminder message display page, and the second display area may be located on the right of the first display area. Certainly, this is not limited in this application.

In fact, the reminder message display page generally has a corresponding start position and an end position regardless of the used display form, so that the reminder

messages are arranged sequentially between the start position and the end position. Therefore, the first display area may be located at the start position, and the second display area is relatively away from the start position. As a result, when the user starts to browse the reminder message display page from the start position, the user may always view the pin-to-top reminder message first, thus implementing the "pin-to-top" display effect for the pin-to-top reminder message.

In this example embodiment, when there is a plurality of pin-to-top reminder messages, the plurality of pin-to-top reminder messages displayed at the top may be arranged according to a corresponding receiving time sequence.

In this example embodiment, details of the pin-to-top reminder message may be displayed to allow the user to quickly know the content of the pin-to-top reminder message without further clicking and entering the detail page, being conducive to improving the viewing efficiency. Thumbnails of the common reminder message may be displayed to reduce the display area of each common reminder message, so as to display more common reminder messages on a page of the same specification, such that the user may conveniently view more common reminder messages at the same time, thus helping improve the viewing efficiency.

When the reminder message is of a task type, that is, the reminder message has a deadline and the receiver needs to return a task performance to the sender before the deadline, the pin-to-top reminder message may display corresponding task information for the user to directly browse and view conveniently. Task information of the common reminder messages may be hidden such that more common reminder messages may be displayed. Certainly, if a common reminder message is triggered, task information of the common reminder message may be displayed in a corresponding detail page for the user to browse and view conveniently.

In this example embodiment, a first identifier corresponding to the pin-to-top mode may be displayed in a display range of the pin-to-top reminder message; or a second identifier corresponding to the common mode may be displayed in a display range of the common reminder message, wherein the first identifier is different from the second identifier. Then, when the user views the reminder message, the user may obtain a strong visual sense from the first identifier and the second identifier, so as to identify the type of the reminder message as the pin-to-top reminder message or the common reminder message more conveniently.

The first identifier may include a pushpin icon in a pinned state, and the second identifier may include a pushpin icon in a non-pinned state. In this case, for the user, the pin-to-top reminder message looks like a corresponding reminder message "pinned" in the first display area with the "pushpin," and the common reminder message looks like a corresponding reminder message "released" to the second display area after the "pushpin" is pulled out. As such, the "pin to top" and "not pin to top" may provide a more intuitive and lively visual effect and use experience.

Further, a corresponding pin-to-top reminder message may be switched to a common reminder message according to a received trigger operation for the first identifier; and a corresponding common reminder message may be switched to a pin-to-top reminder message according to a received trigger operation for the second identifier. Therefore, the user may manually switch the type of the reminder message to meet reminding requirements in different conditions.

Correspondingly, FIG. 4 is a flowchart of a method for displaying a reminder message based on a sender side according to an exemplary example embodiment of this application. As shown in FIG. 4, the method is applied to an electronic device of a sender, and may include the following steps:

Step 402: A reminder message creation page which includes a mode switching identifier is displayed.

Step 404: A reminder message generated in the reminder message creation page is configured to be in a corresponding display mode according to a trigger operation for the mode switching identifier.

In this example embodiment, a user as the sender may actively configure a display mode of the reminder message by means of the trigger operation for the mode switching identifier, to configure the reminder message as a pin-to-top reminder message, a common reminder message, or the like, thus achieving reminding requirements having different strengths. For example, a relatively unimportant event may be configured as a common reminder message, and a relatively important event may be configured as a pin-to-top reminder message.

Step 406: The reminder message is sent to a target object, wherein when the display mode is a pin-to-top mode, the reminder message is displayed in a first display area in a reminder message display page of the target object, while a reminder message in a common mode is displayed in a second display area in the reminder message display page, the second display area being different from the first display area.

In this example embodiment, when the reminder message creation page includes a task start identifier, the reminder message may be configured as a task type according to a trigger operation for the task start identifier. Then, a pre-hidden task configuration option for the reminder message may be displayed near the task start identifier, and task information of the reminder message may be configured according to a received configuration operation for the task configuration option. By pre-hiding and temporarily displaying the task configuration option, page display information may be reduced and the reminder message creation page may be simplified when the reminder message is of a non-

task type, avoiding interference to the creating process of the non-task type reminder message, such that the task configuration option and the task type are associated more closely. The user may configure at least one of the following task information: a deadline, a task reminding moment before the deadline, and the like.

For ease of understanding, the technical solution of this application is illustrated in detail below with reference to FIG. 5 by taking message reminding of the EIM application DING Talk in an enterprise scenario as an example. FIG. 5 is a flowchart of display of a reminder message according to an exemplary example embodiment of this application. As shown in FIG. 5, the method is applied to electronic devices used by a sender and a receiver of the reminder message. These electronic devices have DING Talk client terminals installed therein, and specifically, the DING Talk client terminals achieve transmission and display functions of reminder messages of this application during operation. The method may include the following steps:

Step 502: An electronic device 1 used by the sender displays a reminder message creation page.

In this example embodiment, DING Talk is used as an example. The DING Talk may provide a reminder message creation page as shown in FIG. 6 for the sender to create a reminder message. For example, the reminder message may be a DING message. As shown in FIG. 6, the reminder message creation page includes a plurality of parts: an input field located on the upper part of the page, in which "We'll have a meeting in the Dragon Pavilion on Floor 4 at 6:30 PM. Please bring your computer and design" is displayed in the input field; a mode switching identifier (pushpin-shaped) located at the upper right corner in the input field; an attachment icon located at the lower right corner; and a numeral "2" displayed beside the attachment icon and indicating that the user selects two attachments for the reminder message. Certainly, the user may further select one or more attachments or

does not select any attachment, wherein the attachment may include a picture, a video, a document file, and the like. Meanwhile, the page further includes options such as "Recipient," "Sending mode," "Sending time," "Set as task," and "Reply is only visible to initiator," for the user to make selection and configuration.

5 Step 504: The electronic device 1 creates a reminder message according to the detected operation of the sender.

 In this example embodiment, the mode switching identifier shown in FIG. 6 may be used by the sender to configure a display mode of the reminder message. For example, when the mode switching identifier is in the state shown in FIG. 6, it indicates that the
10 reminder message is in a common mode, that is, the reminder message is a common reminder message. When the sender triggers the mode switching identifier in a manner such as clicking, the mode switching identifier may be changed to the state shown in FIG. 7, indicating that the reminder message is in a pin-to-top mode, that is, the reminder message is a pin-to-top reminder message.

15 In this example embodiment, the sender may further configure the reminder message as a task type, so as to distinguish it from a reminder message of a normal type. For the reminder message of the task type, after receiving the corresponding reminder message, the receiver needs to return a task performance of the reminder message to the sender. The sender may further configure a corresponding task deadline for the reminder message, such
20 that the receiver needs to complete task processing before the deadline.

 A task start identifier may be displayed in the reminder message creation page, and the reminder message may be configured as a task type when a trigger operation for the task start identifier is detected. Further, a pre-hidden task configuration option for the reminder message may be displayed near the task start identifier after the reminder message is
25 configured as the task type. For example, as shown in FIG. 6, a virtual button on the right of

the "Set as task" option is used as the task start identifier. When the virtual button is slid to the right side, it is determined that the trigger operation is detected, and therefore, the state as shown in FIG. 7 may be switched to, indicating that the corresponding reminder message is configured as the task type. The originally hidden task configuration option may be displayed under the virtual button to configure task information of the reminder message. For example, the task configuration option in FIG. 7 is "deadline," for configuring the deadline of the reminder message. For example, by conducting intelligent semantic analysis on the content "6:30 PM" in the reminder message input by the user, the deadline may be automatically configured as "6:30 PM today" as shown in FIG. 7. Certainly, the user may further invoke a deadline configuration page as shown in FIG. 8 by triggering the "deadline," so as to configure the deadline of the reminder message of the task type as "Unlimited (i.e., the deadline is infinite)" or a certain "Designated time (e.g., '6:30 PM, Monday, August 8')." Meanwhile, a pre-deadline reminding time (i.e., a task reminding moment before the deadline) related to the deadline may further be set, for example, to "half an hour before," and then the DING Talk server will send a reminder message (e.g., a DING message) half an hour before the deadline to remind the receiver (i.e., the recipient) again who has not finished the task.

Step 506: The sender sends a reminder message through the electronic device 1, and the receiver receives the reminder message through an electronic device 2.

In this example embodiment, the sending side and the receiving side of the reminder message are distinguished by using the sender, the receiver, the electronic device 1, the electronic device 2, and the like in this application; however:

In an example embodiment, the sender and the receiver are different users, and the two achieve sending and receiving of the reminder message respectively by using the electronic device 1 and the electronic device 2 that are different from each other, which will

not be repeated here.

In another example embodiment, the sender and the receiver may be the same user, and then the electronic device 1 and the electronic device 2 may actually be the same electronic device. For example, as shown in FIG. 6 (or FIG. 7), assuming that it is detected
5 that the user triggers a "Send" button on the upper right corner of the reminder message creation page, then it is determined that an instruction for sending the reminder message has been received. However, the sender does not configure a "recipient" (i.e., a receiver or a target object), so the sender may be configured as the "recipient," thus sending the reminder message to the sender himself/herself. This is equivalent to creating a reminder event or a
10 task event. Certainly, to avoid maloperations of the user, when the instruction for sending the reminder message is received and no "recipient" is configured for the reminder message, a pop-up operation window in FIG. 9 may be displayed first. The pop-up operation window includes "Cancel" and "Send to yourself" options, and a prompt text such as "You haven't selected a recipient, the DING message will be sent to yourself" may further be displayed.
15 When the user selects "Cancel," the reminder message creation page shown in FIG. 6 (or FIG. 7) may be returned to, and when the user selects "Send to yourself," the sender may be configured as the "recipient," thus sending the reminder message to the sender himself/herself.

Step 508: The electronic device 2 identifies the display mode of the reminder
20 message.

Step 510: The electronic device 2 displays the reminder message in the reminder message display page.

In this example embodiment, when the sender configures the reminder message to be in the pin-to-top mode by using the mode switching identifier as shown in FIG. 6 or FIG.
25 7, the electronic device 1 may add a mode label corresponding to the pin-to-top mode into

the reminder message, such that after receiving the reminder message, the electronic device 2 may identify according to the mode label whether the reminder message is a pin-to-top reminder message. By adding a mode label corresponding to the common mode into the reminder message or not adding any mode label, the common reminder message may be distinguished from the pin-to-top mode. Certainly, in other cases, a mode label may be added only for the reminder message in the common mode, no mode label is added in the pin-to-top mode, or the like, as long as different mode types may be differentiated, which is not limited in this application.

In this example embodiment, the reminder messages are classified into pin-to-top reminder messages and common reminder messages. When all the reminder messages are displayed in the reminder message list page, the pin-to-top reminder messages are displayed in a pin-to-top manner. That is, the pin-to-top reminder messages are always displayed at the top of the reminder message list page and located above all the common reminder message.

For example, FIG. 10 is a schematic diagram of a reminder message display page according to an exemplary example embodiment. The reminder message display page shown in FIG. 10 includes two areas: a "My pinned DING messages" area at the top, which is always located at the top of the reminder message display page to display pin-to-top reminder messages at the top; and an "All DING messages" area located below the "My pinned DING messages" area. The "All DING messages" area is always located below the "My pinned DING messages" area to display common reminder messages. Further, it may be seen with reference to FIG. 11 that an important reminder message is configured as a pin-to-top reminder message, such that the user may always view the pin-to-top reminder message displayed at the top first even if a screen may only display some reminder messages due to a limited size of the electronic device. Even if some pin-to-top reminder

messages cannot be displayed on the screen of the electronic device directly, for example, FIG. 11 only displays two pin-to-top reminder messages at the top while there may be a total of three pin-to-top reminder messages actually, and the user only needs to slightly scroll the reminder message display page to view the third pin-to-top reminder message. It is unnecessary to scroll the reminder message display page by a large margin to look for the reminder message, so that the user may view and process the reminder message more quickly and conveniently, thus helping improve the user's efficiency of processing the reminder message.

As shown in FIG. 10, an identifier corresponding to a display mode of a reminder message may be displayed in a display range of the reminder message. For example, a first identifier corresponding to the pin-to-top mode may be displayed in a display range of a pin-to-top reminder message, while a second identifier corresponding to the common mode may be displayed in a display range of a common reminder message.

The first identifier should be different from the second identifier, so that different types of reminder messages may be distinguished quickly and effectively. For example, the first identifier may include a pushpin icon in a pinned state, and the second identifier may include a pushpin icon in a non-pinned state. In this case, for the user, the pin-to-top reminder message looks like a corresponding reminder message "pinned" in the first display area with the "pushpin," and the common reminder message looks like a corresponding reminder message "released" to the second display area after the "pushpin" is pulled out. As such, the "pin to top" and "not pin to top" may provide a more intuitive and lively visual effect and use experience.

As shown in FIG. 10 and FIG. 11, a plurality of pin-to-top reminder messages may coexist. Then, the plurality of pin-to-top reminder messages may be arranged according to their corresponding receiving time sequence. Certainly, the pin-to-top reminder messages

may also be arranged using other methods. For example, when the pin-to-top reminder messages are of a task type, they may be arranged according to a corresponding deadline order, which is not limited in this application.

In this example embodiment, to help the user view the pin-to-top reminder message more conveniently, details of the pin-to-top reminder message may be displayed in the reminder message display page, while thumbnails of the common reminder message may be displayed. For example, when the reminder message is of a task type, as shown in FIG. 10, in the case of a pin-to-top reminder message, task information of the pin-to-top reminder message may be displayed directly. For example, task performance (such as "task not completed"), a task deadline (such as deadline: 2016/8/8 18:30) and the like may be displayed, such that the user may directly view related information of the pin-to-top reminder message without performing other operations. In the case of a common reminder message, task information of the common reminder message may be hidden. In this case, each common reminder message occupies a smaller display area, such that more common reminder messages are displayed at the same time on the screen of the electronic device. As such, when scrolling the reminder message display page by a large margin, the user may view concerned common reminder messages more conveniently and quickly, thus improving the user's efficiency of viewing and processing the common reminder messages. Certainly, the user may trigger a common reminder message, for example, click the common reminder message; then a corresponding detail page may be displayed, and task information of the common reminder message is displayed in the detail page.

It should be noted that:

1. In addition to the manner of configuring the reminder message using the mode switching identifier as shown in FIG. 7, the display mode of the reminder message may further be configured by the receiver. For example, as shown in FIG. 12, when a reminder

message is received, a message box as shown at the top of FIG. 12 may be displayed, and content (all or part of the content) of the reminder message as well as operation options for the reminder message, such as "OK" and "Pin it," are displayed in the message box. When it is detected that the operation option "Pin it" is triggered, it may be determined that the reminder message currently received by the user this afternoon is configured to be in a pin-to-top mode, so as to be displayed in the "My pinned DING messages" area shown in FIG. 11.

Certainly, the electronic device 2 of the receiver may first detect whether the received reminder message has been configured to be in a pin-to-top mode by the sender. When the reminder message has been configured to be in a pin-to-top mode by the sender, the reminder message may be displayed in a pin-to-top manner, and the receiver does not need to configure it again. When the reminder message is in a common mode, the display mode of the reminder message is configured by the receiver through the message box shown in FIG. 12.

2. User A, User B, and User C are taken as examples. Assuming that User A is a sender, and User B and User C are receivers, after receiving a reminder message sent by User A, User B and User C may both reply to the reminder message. For example, in FIG. 11, "3 replies in total" is shown in FIG. 11 corresponding to the reminder message "We'll have a meeting in the Dragon Pavilion on Floor 4 at 6:30 PM. Please bring your computer and design," indicating that there are three reply messages for the reminder message.

For example, for the scenario as shown in FIG. 9, FIG. 13 shows a method for displaying a reminder message according to an exemplary example embodiment of this application. As shown in FIG. 13, the method is applied to an electronic device, and may include the following steps:

Step 1302: A reminder message is created.

Step 1304: A creator of the reminder message is configured as a target object when an instruction for sending the reminder message is detected and no target object is configured for the reminder message.

Step 1306: The reminder message is received and displayed.

5 In this example embodiment, by detecting configuration of a target object of the reminder message and actively configuring the creator to the target object when no object target is configured, on one hand, the creator may add a reminder message for himself/herself to implement the function of reminding a relevant event, task, and the like; and on the other hand, the creator does not need to manually configure the target object as
10 himself/herself, thus helping simplify user operations and improving the efficiency of sending the reminder message.

 Further, the reminder message may be determined as a pin-to-top reminder message or a common reminder message according to a display mode configured for the reminder message. Then the pin-to-top reminder message is displayed in a first display area in a
15 reminder message display page, and the common reminder message is displayed in a second display area in the reminder message display page. The first display area and the second display area are respectively located at different positions in the reminder message display page. Reference may be made to the example embodiment shown in FIG. 3 for the process of displaying the reminder message, which will not be repeated here.

20 In the technical solution of this application, for example, in the reminder message display page shown in FIG. 10, when an identifier corresponding to the display mode of the reminder message is displayed in the display range of the reminder message, the user may trigger the relevant identifier to switch the corresponding reminder message between a pin-to-top reminder message and a common reminder message. Further, automatic type
25 switching of a reminder message may be implemented in the following manner, which is

illustrated below with reference to FIG. 14. FIG. 14 shows a method for displaying a reminder message according to an exemplary example embodiment of this application. As shown in FIG. 14, the method is applied to an electronic device, and may include the following steps:

5 Step 1402: A received reminder message is displayed, wherein a pin-to-top reminder message is displayed in a first display area in a reminder message display page, a common reminder message is displayed in a second display area in the reminder message display page, and the first display area and the second display area are respectively located at different positions in the reminder message display page.

10 Step 1404: The common reminder message is switched to a pin-to-top reminder message when the common reminder message is of a task type and a time interval to a deadline corresponding to the common reminder message is not greater than a preset time length.

 In this example embodiment, the creator may configure a corresponding reminder
15 message as a task type by triggering a "Set as task" option as shown in FIG. 7. The task-type reminder message has the following characteristics: the reminder message has a corresponding deadline (which may be configured by the creator through a "Deadline" option as shown in FIG. 7), and the receiver of the reminder message needs to return corresponding task processing information to the creator, and the like.

20 Then, by monitoring the deadline of the task-type common reminder message and by automatically switching the common reminder message to a pin-to-top reminder message when a time interval to the deadline is not greater than a preset time length, e.g., 1 day (or another preset time length) before the deadline, the user may view the task-type reminder message more conveniently and process the task-type reminder message in time,
25 thus avoiding omission.

FIG. 15 is a schematic structural diagram of an electronic device according to an exemplary example embodiment of this application. Referring to FIG. 15, on the hardware level, the electronic device includes a processor 1502, an internal bus 1504, a network interface 1506, a memory 1508 and a non-volatile storage device 1510, and certainly may further include other hardware required by services. The processor 1502 reads a corresponding computer program from the non-volatile storage device 1510 to the memory 1502 and then runs the computer program to form an apparatus for displaying a reminder message on the logic level. Certainly, apart from the software implementation, this application does not exclude other implementations such as logic devices or a combination of software and hardware. In other words, the following processing procedure is executed by, but not limited to, various logic units, and may also be executed by hardware or logic devices.

Referring to FIG. 16, in a software implementation, the apparatus for displaying a reminder message may include an acquiring unit 1602, an identifying unit 1604, and a displaying unit 1606.

The acquiring unit 1602 is configured to acquire a received reminder message.

The identifying unit 1604 is configured to identify a pin-to-top reminder message or a common reminder message from the reminder message according to a display mode configured for the reminder message.

The displaying unit 1606 is configured to display the pin-to-top reminder message in a first display area in a reminder message display page and display the common reminder message in a second display area in the reminder message display page, wherein the first display area and the second display area are respectively located at different positions in the reminder message display page.

Optionally, the apparatus further includes:

an identifier displaying unit 1608 configured to display a first identifier corresponding to the pin-to-top mode in a display range of the pin-to-top reminder message; and display a second identifier corresponding to the common mode in a display range of the common reminder message,

wherein the first identifier is different from the second identifier.

Optionally, the first identifier includes a pushpin icon in a pinned state; and the second identifier includes a pushpin icon in a non-pinned state.

Optionally, the apparatus further includes:

a switching unit 1610 configured to switch a corresponding pin-to-top reminder message to a common reminder message according to a received trigger operation for the first identifier; and switch a corresponding common reminder message to a pin-to-top reminder message according to a received trigger operation for the second identifier.

Optionally, when the reminder message display page is in a list form, the first display area is located at the top of the list, and the second display area is located below the first display area.

Optionally, the display mode is configured by a sender or a receiver of the reminder message.

Optionally, the apparatus further includes:

a display control unit 1612 configured to display details of the pin-to-top reminder message, and display thumbnails of the common reminder message.

Optionally, the reminder message is of a task type; and

the display control unit 1612 displays details of the pin-to-top reminder message by: displaying task information of the pin-to-top reminder message; and

the display control unit 1612 displays thumbnails of the common reminder message

by: hiding task information of the common reminder message, wherein when the common reminder message is triggered, the task information of the common reminder message is displayed in a corresponding detail page.

Optionally, the display unit 1606 is specifically configured to:

- 5 when there is a plurality of pin-to-top reminder messages, arrange the plurality of pin-to-top reminder messages displayed at the top according to a corresponding receiving time sequence.

FIG. 17 is a schematic structural diagram of an electronic device according to an exemplary example embodiment of this application. Referring to FIG. 17, on the hardware
10 level, the electronic device includes a processor 1702, an internal bus 1704, a network interface 1706, a memory 1708 and a non-volatile storage device 1710, and certainly may further include other hardware required by services. The processor 1702 reads a corresponding computer program from the non-volatile storage device 1710 to the memory
15 1702 and then runs the computer program to form an apparatus for displaying a reminder message on the logic level. Certainly, in addition to software implementation manner, this application does not exclude other implementation manners, such as logic devices or a combination of software and hardware. In other words, the following processing procedure is executed by, but not limited to, various logic units, and may also be executed by hardware or logic devices.

20 Referring to FIG. 18, in a software implementation manner, the apparatus for displaying a reminder message may include a page displaying unit 1802, a mode configuring unit 1804, and a message sending unit 1806.

The page displaying unit 1802 is configured to display a reminder message creation page which comprises a mode switching identifier.

25 The mode configuring unit 1804 is configured to configure a reminder message

generated in the reminder message creation page to be in a corresponding display mode according to a trigger operation for the mode switching identifier.

The message sending unit 1806 is configured to send the reminder message to a target object, wherein when the display mode is a pin-to-top mode, the reminder message is displayed in a first display area in a reminder message display page of the target object, while a reminder message in a common mode is displayed in a second display area in the reminder message display page, the second display area being different from the first display area.

Optionally, the apparatus further includes:

a type configuring unit 1808 configured to, when the reminder message creation page includes a task start identifier, configure the reminder message as a task type according to a trigger operation for the task start identifier;

an option displaying unit 1810 configured to display a pre-hidden task configuration option for the reminder message near the task start identifier; and

a task configuring unit 1812 configured to configure task information of the reminder message according to a received configuration operation for the task configuration option.

Optionally, the task information includes at least one of the following:

a deadline, and a task reminding moment before the deadline.

FIG. 19 is a schematic structural diagram of an electronic device according to an exemplary example embodiment of this application. Referring to FIG. 19, on the hardware level, the electronic device includes a processor 1902, an internal bus 1904, a network interface 1906, a memory 1908 and a non-volatile storage device 1910, and certainly may further include other hardware required by services. The processor 1902 reads a corresponding computer program from the non-volatile storage device 1910 to the memory

1902 and then runs the computer program to form an apparatus for displaying a reminder message on the logic level. Certainly, in addition to software implementation manner, this application does not exclude other implementation manners, such as logic devices or a combination of software and hardware. In other words, the following processing procedure is executed by, but not limited to, various logic units, and may also be executed by hardware or logic devices.

Referring to FIG. 20, in a software implementation, the apparatus for displaying a reminder message may include a creating unit 2002, a configuring unit 2004, and a displaying unit 2006.

The creating unit 2002 is configured to create a reminder message.

The configuring unit 2004 is configured to configure a creator of the reminder message as a target object when an instruction for sending the reminder message is detected and no target object is configured for the reminder message.

The displaying unit 2006 is configured to receive and display the reminder message.

Optionally, the displaying unit 2006 is specifically configured to:

determine the reminder message as a pin-to-top reminder message or a common reminder message according to a display mode configured for the reminder message; and

display the pin-to-top reminder message in a first display area in a reminder message display page and display the common reminder message in a second display area in the reminder message display page, wherein the first display area and the second display area are respectively located at different positions in the reminder message display page.

FIG. 21 is a schematic structural diagram of an electronic device according to an exemplary example embodiment of this application. Referring to FIG. 21, on the hardware level, the electronic device includes a processor 2102, an internal bus 2104, a network interface 2106, a memory 2108 and a non-volatile storage device 2110, and certainly may

further include other hardware required by services. The processor 2102 reads a corresponding computer program from the non-volatile storage device 2110 to the memory 2102 and then runs the computer program to form an apparatus for displaying a reminder message on the logic level. Certainly, in addition to software implementation manner, this application does not exclude other implementation manners, such as logic devices or a combination of software and hardware. In other words, the following processing procedure is executed by, but not limited to, various logic units, and may also be executed by hardware or logic devices.

Referring to FIG. 22, in a software implementation, the apparatus for displaying a reminder message may include a displaying unit 2202 and a switching unit 2204.

The displaying unit 2202 is configured to display a received reminder message, wherein a pin-to-top reminder message is displayed in a first display area in a reminder message display page, a common reminder message is displayed in a second display area in the reminder message display page, and the first display area and the second display area are respectively located at different positions in the reminder message display page.

The switching unit 2204 is configured to switch the common reminder message to a pin-to-top reminder message when the common reminder message is of a task type and a time interval to a deadline corresponding to the common reminder message is not greater than a preset time length.

In a typical configuration, a computing device includes one or more processors (CPU), an input/output interface, a network interface, and a memory.

The memory may include a volatile memory, a random-access memory (RAM) and/or a non-volatile storage device or the like in a computer readable medium, for example, a read-only memory (ROM) or a flash RAM. The memory is an example of the computer readable medium.

The computer readable medium includes non-volatile and volatile media as well as movable and non-movable media, and may store information by means of any method or technology. The information may be a computer readable instruction, a data structure, and a module of a program or other data. A storage medium of a computer includes, for example, but is not limited to, a phase change memory (PRAM), a static random access memory (SRAM), a dynamic random access memory (DRAM), other types of RAMs, a ROM, an electrically erasable programmable read-only memory (EEPROM), a flash memory or other memory technologies, a compact disk read-only memory (CD-ROM), a digital versatile disc (DVD) or other optical storages, a cassette tape, a magnetic tape/magnetic disk storage or other magnetic storage devices, or any other non-transmission medium, and may be used to store information accessible to the computing device. According to the definition in this text, the computer readable medium does not include transitory media, such as a modulated data signal and a carrier.

It should be further noted that the term "include", "comprise" or other variations thereof are intended to cover non-exclusive inclusion, so that a process, method, commodity or device including a series of elements not only includes the elements, but also includes other elements not clearly listed, or further includes elements inherent to the process, method, commodity or device. In the absence of more limitations, an element defined by "including a/an..." does not exclude that the process, method, commodity or device including the element further has other identical elements.

Exemplary example embodiments will be described in detail here, and examples thereof are shown in the accompanying drawings. In the following description involving the accompanying drawings, the same numerals in different accompanying drawings denote the same or similar elements, unless specified otherwise. Implementations described in the following exemplary example embodiments do not redisplay that all implementations are

consistent with this application. In contrast, they are merely examples of apparatuses and methods consistent with some aspects of this application described in detail in the appended claims.

Terms used in this application are merely used for describing specific example
5 embodiments, instead of limiting this application. Singular forms "a(n)," "said," and "the" used in this application and the appended claims also include plural forms, unless clearly specified in the context that other meanings are denoted. It should be further understood that the term "and/or" used in this text refers to and includes any or all possible combinations of one or more associated items listed.

10 It should be understood that although terms such as "first," "second," and "third" may be used to describe various kinds of information in this application, these kinds of information should not limited to the terms. These terms are merely used to distinguish information of the same type from each other. For example, without departing from the scope of this application, the first information may also be referred to as second
15 information, and similarly, the second information may also be referred to as first information. Depending on the context, the word "if" used herein may be explained as "when...," "as...," or "in response to the determination."

The above description is merely preferred example embodiments of this application and is not intended to limit this application. Any modification, equivalent replacement and
20 improvement made without departing from the spirit and principle of this application shall fall within the protection scope of this application.

CLAIMS

1. A method for displaying a reminder message, the method comprising:

acquiring a received reminder message;

identifying a pin-to-top reminder message or a common reminder message from the

5 reminder message according to a display mode configured for the reminder message; and

displaying the pin-to-top reminder message in a first display area in a reminder message display page, and displaying the common reminder message in a second display area in the reminder message display page, the first display area and the second display area being respectively located at different positions in the reminder message display page.

10

2. The method of claim 1, further comprising:

displaying a first identifier corresponding to the pin-to-top mode in a display range of the pin-to-top reminder message; and

displaying a second identifier corresponding to the common mode in a display range

15 of the common reminder message, the first identifier being different from the second identifier.

3. The method of claim 2, wherein:

the first identifier comprises a pushpin icon in a pinned state; and

20 the second identifier comprises a pushpin icon in a non-pinned state.

4. The method of claim 2, further comprising:

switching the pin-to-top reminder message to the common reminder message according to a received trigger operation for the first identifier; and

25 switching the common reminder message to the pin-to-top reminder message according to a received trigger operation for the second identifier.

5. The method of claim 1, wherein when the reminder message display page is in a list form, the first display area is located at a top of the list, and the second display area is located below the first display area.

6. The method of claim 1, wherein the display mode is configured by a sender or a receiver of the reminder message.

7. The method of claim 1, further comprising:
displaying a detail of the pin-to-top reminder message; and
displaying a thumbnail of the common reminder message.

8. The method of claim 7, wherein
the reminder message is of a task type;
the displaying the detail of the pin-to-top reminder message comprises displaying
task information of the pin-to-top reminder message; and
the displaying the thumbnail of the common reminder message comprises hiding the
task information of the common reminder message, wherein when the common reminder
message is triggered, the task information of the common reminder message is displayed in
a corresponding detail page.

9. The method of claim 1, wherein the displaying the pin-to-top reminder message at the top position in a reminder message list page comprises:

when there is a plurality of pin-to-top reminder messages, arranging the plurality of
pin-to-top reminder messages displayed according to a corresponding receiving time
sequence.

10. A method for displaying a reminder message, the method comprising:
displaying a reminder message creation page that includes a mode switching
identifier;

configuring a reminder message generated in the reminder message creation page to
5 be in a corresponding display mode according to a trigger operation for the mode switching
identifier; and

sending the reminder message to a target object,

wherein when the display mode is a pin-to-top mode, the reminder message is
displayed in a first display area in a reminder message display page of the target object,
10 while a reminder message in a common mode is displayed in a second display area in the
reminder message display page, the second display area being different from the first
display area.

11. The method of claim 1 further comprising:

15 when the reminder message creation page comprises a task start identifier,
configuring the reminder message as a task type according to a trigger operation for the task
start identifier;

displaying a pre-hidden task configuration option for the reminder message near the
task start identifier; and

20 configuring task information of the reminder message according to a received
configuration operation for the task configuration option.

12. The method of claim 11, wherein the task information comprises at least one
of the following:

25 a deadline; and

a task reminding moment before the deadline.

13. A method for displaying a reminder message, the method comprising:

creating a reminder message;

5 configuring a creator of the reminder message as a target object when an instruction for sending the reminder message is detected and no target object is configured for the reminder message; and

receiving and displaying the reminder message.

10 14. The method of claim 13, wherein the receiving and displaying the reminder message comprises:

determining the reminder message as a pin-to-top reminder message or a common reminder message according to a display mode configured for the reminder message; and

15 displaying the pin-to-top reminder message in a first display area in a reminder message display page, and displaying the common reminder message in a second display area in the reminder message display page, the first display area and the second display area being respectively located at different positions in the reminder message display page.

15. A method for displaying a reminder message, the method comprising:

20 displaying a received reminder message, wherein a pin-to-top reminder message is displayed in a first display area in a reminder message display page, a common reminder message is displayed in a second display area in the reminder message display page, and the first display area and the second display area are respectively located at different positions in the reminder message display page; and

25 switching the common reminder message to the pin-to-top reminder message when

the common reminder message is of a task type and a time interval to a deadline corresponding to the common reminder message is not greater than a preset time length.

16. An apparatus for displaying a reminder message, the apparatus comprising:

an acquiring unit configured to acquire a received reminder message;

an identifying unit configured to identify a pin-to-top reminder message or a common reminder message from the reminder message according to a display mode configured for the reminder message; and

a displaying unit configured to display the pin-to-top reminder message in a first display area in a reminder message display page and display the common reminder message in a second display area in the reminder message display page, the first display area and the second display area being respectively located at different positions in the reminder message display page.

17. The apparatus of claim 16, further comprising:

an identifier displaying unit configured to display a first identifier corresponding to the pin-to-top mode in a display range of the pin-to-top reminder message and display a second identifier corresponding to the common mode in a display range of the common reminder message, the first identifier being different from the second identifier.

18. An apparatus for displaying a reminder message, the apparatus comprising:

a page displaying unit configured to display a reminder message creation page which comprises a mode switching identifier;

a mode configuring unit configured to configure a reminder message generated in the reminder message creation page to be in a corresponding display mode according to a

trigger operation for the mode switching identifier; and

a message sending unit configured to send the reminder message to a target object, wherein when the display mode is a pin-to-top mode, the reminder message is displayed in a first display area in a reminder message display page of the target object, while a reminder message in a common mode is displayed in a second display area in the reminder message display page, the second display area being different from the first display area.

19. An apparatus for displaying a reminder message, the apparatus comprising:

a creating unit configured to create a reminder message;

a configuring unit configured to configure a creator of the reminder message as a target object when an instruction for sending the reminder message is detected and no target object is configured for the reminder message; and

a displaying unit configured to receive and display the reminder message.

20. An apparatus for displaying a reminder message, the apparatus comprising:

a displaying unit configured to display a received reminder message, wherein a pin-to-top reminder message is displayed in a first display area in a reminder message display page, a common reminder message is displayed in a second display area in the reminder message display page, and the first display area and the second display area are respectively located at different positions in the reminder message display page; and

a switching unit configured to switch the common reminder message to a pin-to-top reminder message when the common reminder message is of a task type and a time interval to a deadline corresponding to the common reminder message is not greater than a preset time length.