METHOD AND APPARATUS FOR PROCESSING NOTIFICATIONS ON A MOBILE COMPUTING DEVICE

Fig. 1

Display, on a status bar in a first display area of the touch sensitive display, one or more notifications each of which is associated with a corresponding one of one or more applications installed on the mobile computing device

Detect a selection of one of the one or more notifications

Display, on a top of a notification list, an application icon associated with the selected notification for launching the application

Abstract: A method and an apparatus for processing notification on a mobile computing device with a touch sensitive display are provided. The method includes displaying, on a status bar in a first display area of the touch sensitive display, one or more notifications each of which is associated with a corresponding one of one or more applications installed on the mobile computing device. The method also includes detecting a selection of one of the one or more notifications and displaying, on a top of a notification list, an application icon associated with the selected notification for launching the application, wherein the notification list is displayed in a second display area of the touch sensitive display and includes one or more application icons each of which is associated with a corresponding one of the one or more applications.
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FIELD OF THE INVENTION

[0001] Example embodiments of the present disclosure generally relate to notifications on a mobile computing device with a touch sensitive display. More particularly, example embodiments of the present disclosure relate to methods and apparatures for processing notifications and further launching an application associated with the notification.

BACKGROUND OF THE INVENTION

[0002] The following description of background art may include insights, discoveries, understandings or disclosures, or associations together with disclosures not known to the relevant art prior to the present disclosure but provided by the present disclosure. Some such contributions of the present disclosure may be specifically pointed out below, while other such contributions of the present disclosure will be apparent from their context.

[0003] As the wireless communication technology keeps developing, more and more types of mobile computing devices supporting various wireless communication standards are emerging. With these mobile computing devices, users can read and send emails, receive or send text messages, receive or make phone calls, schedule appointments, or to perform other tasks. Regardless of whether a user is currently using the mobile computing device or not, it is crucial to notify the user of various events that occur.

[0004] To this end, many mobile computing devices are now providing a status bar on the display, in which a plurality of notifications or notification representations are presented. Each notification is individually generated by a corresponding application in response to an event occurrence. Some mobile computing devices also provide a notification list, in which a plurality of application icons together with corresponding application descriptions are shown. Once the application icon in the notification list is selected by the user via his finger or stylus, an application associated with the application icon will be launched and the corresponding event as notified by the notification in the status bar could be handled. After that, the notification associated with the application as issue will automatically disappear from the status bar.
SUMMARY OF THE INVENTION

[0005] The following presents a simplified summary of the present disclosure in order to provide a basic understanding of some aspects of the present disclosure. It should be noted that this summary is not an extensive overview of the present disclosure and that it is not intended to identify key/critical elements of the present disclosure or to delineate the scope of the present disclosure. Its sole purpose is to present some concepts of the present disclosure in a simplified form as a prelude to the more detailed description that is presented later.

[0006] According to an aspect of the present disclosure, there is provided a method for processing notifications on a mobile computing device with a touch sensitive display. The method comprises displaying, on a status bar in a first display area of the touch sensitive display, one or more notifications each of which is associated with a corresponding one of one or more applications installed on the mobile computing device. The method also comprises detecting a selection of one of the one or more notifications.

The method further comprises displaying, on a top of a notification list, an application icon associated with the selected notification for launching the application, wherein the notification list is displayed in a second display area of the touch sensitive display and includes one or more application icons each of which is associated with a corresponding one of the one or more applications

[0007] In one or more embodiments, the detecting the selection comprises detecting a touch or click on the one of the one or more notifications as the selection.

[0008] In one or more embodiments, the method further comprises displaying a bottom bar for launching an application, wherein the one or more application icons are sequentially displayed in the second display area as the bottom bar is moved from the top of the notification list towards the bottom of the notification list.

[0009] In one or more embodiments, the method further comprises launching an application whose application icon is located immediately above the bottom bar by sliding the bottom bar.

[0010] In one or more embodiments, the selection of the notification and the launching of the application are performed consecutively by a single swipe on the touch sensitive display through a finger or stylus of a user.

[0011] In one or more embodiments, the notification list includes one or more additional items, each of which is displayed adjacent to a corresponding application icon
and gives a brief description regarding the application associated with the corresponding application icon.

[0012] In one or more embodiments, the one or more applications respectively associated with the one or more application icons included in the notification list at least include one or more of a picture application, a video application, a text messaging application, a multiple media messaging application, a music application, a news application, a health application, a measurement application, a navigation application, a calendar application and a reminder application.

[0013] According to an aspect of the present disclosure, there is provided an apparatus for processing notifications on a mobile computing device with a touch sensitive display. The apparatus comprises at least one processor and at least one memory including compute program instructions, wherein the at least one memory and computer program instructions are configured to, with the at least one processor, cause the apparatus at least to display, on a status bar in a first display area of the touch sensitive display, one or more notifications each of which is associated with a corresponding one of one or more applications installed on the mobile computing device. The at least one memory and computer program instructions are configured to, with the at least one processor, also cause the apparatus at least to detect a selection of one of the one or more notifications. The at least one memory and computer program instructions are configured to, with the at least one processor, further cause the apparatus at least to display, on a top of a notification list, an application icon associated with the selected notification, wherein the notification list is displayed in a second display area of the touch sensitive display and includes one or more application icons each of which is associated with a corresponding one of the one or more applications.

[0014] According to an aspect of the present disclosure, there is provided a method for launching an application on a mobile computing device with a touch sensitive display. The method comprises making an application icon on a top of a notification list upon a detection of a selection of a notification on a status bar in the touch sensitive display, wherein the notification and the application icon are associated with a same application installed on the mobile computing device, and the notification list includes one or more application icon each of which is associated with a corresponding application and the status bar includes one or more notifications. The method further comprises displaying a bottom bar for launching an application, wherein the one or more application icons are sequentially displayed in the second display area as the bottom bar is moved.
from the top of the notification list towards the bottom of the notification list. The method also comprises launching an application whose application icon is located immediately above the bottom bar by sliding the bottom bar.

[0015] In one or more embodiments, the selection of the notification and the launching of the application are consecutively performed by a single swipe.

[0016] In one or more embodiments, the selection of the notification and the launching of the application are performed by a finger or stylus of a user.

[0017] In one or more embodiments, the status bar is displayed in a first display area of the touch sensitive display and the notification list is displayed in a second display area of the touch sensitive display, and the bottom bar is automatically displayed upon detecting that a display area between the first display area and the second display area is touched.

[0018] In one or more embodiments, the notification list includes one or more additional items, each of which is displayed adjacent to a corresponding application icon and gives a brief description regarding the application associated with the corresponding application icon.

[0019] The aspects and example embodiments of the present disclosure as described above may be utilized separately or in combination and different combining forms may be constituted to achieve some advantages of the present disclosure as mentioned in the following.

[0020] First, since the notification, which is intentionally and desirably selected by the user among a plurality of the notifications, is put on the top of the notification list, it would be easier for the user to select the desired application icon associated with the selected notification and thereby launch the desired application. Second, based on the bottom bar which could be used to launch the application when locating below the associated application icon, the user may be able to access to the application more quickly than the usual. In addition, according to the one or more embodiments of the present disclosure, the selection of the notification and the launching of the application associated with the selected notification could be done by a single swipe without multiple touches or clicks on the touch sensitive display or screen, thereby giving the user experience a big boost.
BRIEF DESCRIPTION OF THE DRAWINGS

[0021] The embodiments of the present disclosure that are presented in the sense of examples and their advantages are explained in greater detail below with reference to the accompanying drawings, in which:

[0022] Fig. 1 is a flow diagram of an example method for processing notifications on a mobile computing device with a touch sensitive display according to one or more embodiments of the present disclosure;

[0023] Fig. 2 is a flow diagram of an example method for launching an application on a mobile computing device with a touch sensitive display according to one or more embodiments of the present disclosure;

[0024] Figs. 3A-3D illustrate a series of consecutive actions that are performed on the sensitive touch screen to locate a desired application and launch it according to one or more embodiments of the present disclosure;

[0025] Figs. 4A-4C illustrate a series of consecutive actions that are performed on the sensitive touch screen for launching an application according to one or more embodiments of the present disclosure; and

[0026] Fig. 5 is a schematic diagram of an apparatus according to one or more embodiments of the present disclosure.

[0027] Like reference numbers and designations in the various drawings indicate like elements.

DETAILED DESCRIPTION OF EMBODIMENTS

[0028] The present disclosure will now be described more fully hereinafter with reference to the accompanying drawings, in which certain embodiments of the present disclosure are shown. This disclosure may, however, be embodied in many different forms and should not be construed as limited to the embodiments set forth herein; rather, these embodiments are provided by way of example so that this disclosure will be thorough and complete, and will fully convey the scope of the present disclosure to those skilled in the art. Like numbers refer to like elements throughout the specification.

[0029] Generally, all terms used in the claims are to be interpreted according to their ordinary meaning in the technical field, unless explicitly defined otherwise herein. All references to "a/an/the element, apparatus, component, means, step, etc." are to be interpreted openly as referring to at least one instance of the element, apparatus, component, means, step, etc., unless explicitly stated otherwise. The steps of any method disclosed herein do not have to be performed in the exact order disclosed, unless explicitly
stated. The discussion above and below in respect of any of the aspects of the present disclosure is also in applicable parts relevant to any other aspect of the present disclosure.

[0030] Fig. 1 is a flow diagram of an example method 100 for processing notifications on a mobile computing device with a touch sensitive display according to one or more embodiments of the present disclosure. As illustrated in Fig. 1, the method 100 begins with block S101, at which the method 100 displays, on a status bar in a first display area of the touch sensitive display, one or more notifications each of which is associated with a corresponding one of one or more applications installed on the mobile computing device. The notification herein may be referred to as a notification representation, which is often graphically represented as a shortcut key icon of a corresponding application.

[0031] As is known to those skilled in the art, the touch sensitive display herein may have a touch-sensitive surface, sensor or set of sensors that accepts input from the user based on haptic and/or tactile contact. The touch sensitive display and a potential display controller, along with any associated modules and/or sets of computing instructions in memory may detect contact, for example, any movement or breaking of the contact on the touch-sensitive surface and convert the detected contact into interaction with user interface objects, for example, one or more soft keys, application icons, web pages or images, that are displayed on the touch screen. Generally, a contact point between the touch screen display and the user corresponds to a finger or a stylus of the user.

[0032] At block S102, the method 100 detects a selection of one of the one or more notifications. The selection herein may be implemented by a user via his or her finger. Therefore, the detection herein may be a detection of a finger contact on one item on the status list. Alternatively, the selection herein may be implemented using a stylus, which is removable and generally inserted inside the housing of the mobile computing device on one side.

[0033] Upon detecting the selection of the notification, the method proceeds to block S103, at which the method 100 displays, on a top of a notification list, an application icon associated with the selected notification for launching the application. In one or more embodiments, the notification list herein may include a list of items, for example, a list of software application icons, such as a picture application icon, a video application icon, a text messaging application icon, a multiple media messaging application icon, a music application icon, a news application icon, a health application
icon, a measurement application icon, a navigation application icon, a calendar application icon and a reminder application icon, or a combination thereof. In other words, the notification list herein may include one or more application icons each of which is associated with a corresponding one of the one or more applications.

[0034] In one or more embodiments, the notification list includes one or more additional items, each of which is displayed adjacent to a corresponding application icon and gives a brief description regarding the application associated with the corresponding application icon. The brief description may be different on an application-by-application basis. For example, with respect to the text messaging application, the brief description may include a received time, its sender and possibly a beginning or initial part of the message. With respect to the news application, the brief description may include a summary, a headline or an abstract of the news.

[0035] In one or more embodiments, the remaining items after the first item in the notification list may be remain the same order as it was. Additionally or alternatively, the remaining items, i.e., the application icons, may also be re-ranked in chronological order, i.e., according to the times at which the notifications are generated.

[0036] Since the application icon associated with the selected notification at block S102 is ranked at the first place in the notification list, it would be easy for the user to see and select or touch the application icon so as to launch the desired application, thereby saving the time for launching the application and improving the user experience.

[0037] In one or more embodiments, the method 100 may further display a bottom bar for launching an application, wherein the one or more application icons are sequentially displayed in the second display area as the bottom bar is moved from the top of the notification list towards the bottom of the notification list. Then, the method 100 may also launch an application whose application icon is located immediately above the bottom bar by sliding the bottom bar.

[0038] It is to be understood that the notification list may disappear or be invisible at the beginning, for example, prior to the notification being touched or selected by the user. Then, when the notification is selected or touched, the notification list may be enabled immediately and its items may be progressively or sequentially visible to the user as the bottom bar moves from the top of the notification list to the bottom of the notification list. Different from the conventional scroll bar, the bottom bar in one or more embodiments of the present disclosure may be used to trigger the launching of the application. In particular, when the bottom bar is moved by the user to locate
immediately below a desirable application, sliding the bottom bar would trigger the
launching of the particular favorite application instead of directly touching the application
icon to trigger the launch. This could achieve better user experience since the user does
not need to release the bottom bar first and then select the application icon to do the launch
as commonly used in the existing technique.

[0039] In one or more embodiments, the selection of the notification and the
launching of the application may be performed consecutively by a single swipe on the
touch sensitive display through the finger or the stylus of the user. In other words, the
user may be able to locate the desired application and then launch it by a single swipe
from the display area of the status bar to the display area of the notification list without
any other additional touches or contacts. The single swipe herein may be a movement of
the finger or stylus from a location of the status bar to the location of the desired
application icon and then from left to right or from right to left, which may be configured
according to the user's preference, without breaking off the contact. In some
embodiment, the bottom bar could be graphically emphasized such that it would be readily
distinguishable from the application icons.

[0040] With the method 100 and its various extensions as discussed in the one
or more embodiments, the user may easily select the favorite application and launch it in a
single swipe without any further finger or stylus contact, thereby obtaining great user
experience.

[0041] Fig. 2 is a flow diagram of an example method 200 for launching an
application on a mobile computing device with a touch sensitive display according to one
or more embodiments of the present disclosure. As illustrated in Fig. 2, the method 200
begins with block S201, at which the method 200 makes an application icon on a top of a
notification list upon a detection of a selection of a notification on a status bar in the touch
sensitive display. The notification and the application icon herein are associated with a
same application installed on the mobile computing device, and the notification list
includes one or more application icon each of which is associated with a corresponding
application and the status bar includes one or more notifications.

[0042] Then, at block S202, the method 200 displays a bottom bar for
launching an application, wherein the one or more application icons are sequentially
displayed in the second display area as the bottom bar is moved from the top of the
notification list towards the bottom of the notification list.

[0043] After that, at block S203, the method 200 launches an application
whose application icon is located immediately above the bottom bar by sliding the bottom bar.

[0044] In one or more embodiments, the selection of the notification and the launching of the application are consecutively performed by a single swipe.

[0045] In one or more embodiments, the selection of the notification and the launching of the application are performed by a finger or stylus of a user.

[0046] In one or more embodiments, the status bar is displayed in a first display area of the touch sensitive display and the notification list is displayed in a second display area of the touch sensitive display, and the bottom bar is automatically displayed upon detecting that a display area between the first display area and the second display area is touched.

[0047] In one or more embodiments, the notification list includes one or more additional items, each of which is displayed adjacent to a corresponding application icon and gives a brief description regarding the application associated with the corresponding application icon.

[0048] In one or more embodiments, the one or more applications respectively associated with the one or more application icons included in the notification list at least include one or more of a picture application, a video application, a text messaging application, a multiple media messaging application, a music application, a news application, a health application, a measurement application, a navigation application, a calendar application, a reminder application and a combination thereof.

[0049] From the foregoing descriptions, it is to be understood by those skilled in the art that the technical meanings of the notification, the status bar, the notification list, and the bottom bar in the method 200 and its various extensions in the one or more embodiments are identical to those as discussed with reference to Fig. 1, the pertinent details may be equally applied herein.

[0050] To a better understanding of the solutions in the present disclosure, the following will discuss the actions performed by the user with reference to Figs. 3A-3D and 4A-4C in conjunction with the example user graphic interfaces.

[0051] Figs. 3A-3D illustrate a series of consecutive actions that are performed on the sensitive touch screen to locate a desired application and launch it according to one or more embodiments of the present disclosure.

[0052] As shown in Fig. 3A, there is depicted a status bar, which exemplarily includes notifications or notification representations A, B, C and D, each of which may
have a unique icon, such as a square, a triangle, a circle and an invented triangle, as shown. Further shown is a finger of a user who is viewing the status bar and about to touch the notification C as his or her favorite one.

[0053] The actions continue to Fig. 3B, the finger as shown is touching the notification C and is about to keep moving downward to the notification list, which may be set below the status list and initially invisible to the user.

[0054] Turning to Fig. 3C, as the finger keeps moving downward, the notification list is progressively displayed and the application icon C, which is previously supposed to be ranked at the third place according to the ranking of the status list, is now placed at the first place in the notification list due to the user selection. In this manner, the favorite application icon C is first presented to the user for further potential launch.

[0055] Then, as shown in Fig. 3D, when the bottom bar as held by the finger moves passes the application icon C and the application icon C or a row including the application C is completely presented to the user, the bottom bar is just immediately below the application icon C. At this moment, as shown by the lower part of the Fig. 3D, the user who would like to launch the application C may slide the bottom bar to the right, which may be considered as a shortcut to the application C. Upon detecting this sliding, the application C installed on the mobile computing device would be launched right away and the interface for processing the notification associated with the application C would be rendered to the user, which is not further shown for a simplifying purpose.

[0056] From the above discussion made with reference to Figs. 3A-3D, it is to be understood that the launching of the favorite application according to one or more embodiments of the present disclosure could be done at one go without any interruption. Thereby, it could improve the efficiency of launching the applications on the mobile computing device.

[0057] Figs. 4A-4C illustrate a series of consecutive actions that are performed on the sensitive touch screen for launching an application according to one or more embodiments of the present disclosure. More particularly, Figs. 4A-4C illustrate various scenarios when the first presented application is not launched.

[0058] As shown in Fig. 4A, the user may not launch the application C even though he or she has selected the notification C associated with the application C for some reasons, for example, he may lose interest in launching the application C after reading the brief description regarding the notification. In this case, the user may continue to move the bottom bar downward until the application icon A is fully presented or displayed in the
touch sensitive screen. Then, as illustrated in the lower part of Fig. 4A, the user may slide the bottom bar to the right if he or she would like to launch the application A, for example, if the brief description manifests some degrees of importance or relevance to the user.

Likewise, as shown in Figs. 4B and 4C, the user may freely select to launch the application B or D by sliding the bottom bar to the right when the application icon B or D is completely displayed and the bottom bar is exactly below the application icon B or D.

It should be understood that the user interfaces and the corresponding operations applied thereon as depicted in Figs. 3A-3D and Figs. 4A-4C are merely for an illustrative purpose. A person skilled in the art, based on the teaching of the present application, is able to make any suitable amendments or modifications to the user interfaces and therefore adding additional operations to launch the application or view specific application items, for example, the specific emails or messages.

For example, in some embodiments, there may be a number of emails (e.g., 10) under the email "notification," which could be specifically indicated by adding a digit 10 with a red color on the email notification. Upon user selection of the email notification, instead of displaying a single email application icon, for example, an icon of the Exchange, ten email icons each of which corresponds to an email would be listed in the notification list in an order, for example, times when the emails entering into the inbox. According to the user preferences or settings, a direct click of the email item or a slide of the bottom bar immediately below the email item may trigger a full display of the email content or open the inbox so that the user may read and reply the email in the email application. Once the finger of the user reaches the end of ten emails, as discussed before, the second application icon may be progressively displayed and immediately above the bottom bar as the bottom bar keeps moving downwards.

In some other embodiments, a user is able to select to display the application items in the notification list, for example, by sliding the bottom bar to the left to explode the items as a list. Further, the user may select to either launch the email application or an application item by sliding the bottom bar to the right.

Based on the above exemplary embodiments, it is to be understood that the term "application icon" throughout the present disclosure does not merely refer to or cover the icon which is directly associated with the application, e.g., a main program, but also is intended to refer to the icon associated with the application item, i.e., an application
item icon as discussed above. Likewise, the launching of an application according to the present disclosure may also include or cover the case of opening an application item.

Hence, the items as shown in the notification list according to the present disclosure may include one or more icons, for example, one or more application icons, one or more application item icons or a combination thereof and the movement of the finger or stylus on the notification list and the sliding of the bottom bar at an appropriate position may trigger launching or opening of an application or an application item.

[0064] Fig. 5 is a schematic diagram of an apparatus 500 according to one or more embodiments of the present disclosure.

[0065] As illustrated in Fig. 5, the apparatus 500 includes at least one processor 501, such as a data processor, at least one memory (MEM) 502 coupled to the processor 501, and a suitable RF transmitter TX and receiver RX 503 coupled to the processor 501. The MEM 502 stores a program (PROG) 504. The TX/RX 503 is for bidirectional wireless communications.

[0066] The PROG 504 is assumed to include instructions that, when executed by the processor 501, enable the apparatus 500 to operate in accordance with the example embodiments of the present disclosure, as discussed herein with the methods 100, 200, and the operation flows as shown in Figs. 3A-3D and 4A-4C. For example, the apparatus 500 may be embodied as a mobile computing device, or a part thereof, to carry out the corresponding steps directed thereto as discussed in the methods 100 and 200.

[0067] In general, the example embodiments of the present disclosure may be implemented by computer software executable by at least one processor 501 of the apparatus 500, or by hardware, or by a combination of software and hardware.

[0068] The MEM 502 may be of any type suitable to the local technical environment and may be implemented using any suitable data storage technology, such as semiconductor based memory devices, magnetic memory devices and systems, optical memory devices and systems, fixed memory and removable memory, as non-limiting examples. While only one MEM is shown in the apparatus 500, there may be several physically distinct memory units in the apparatus 500. The processor 501 may be of any type suitable to the local technical environment, and may include one or more of general purpose computers, special purpose computers, microprocessors, digital signal processors (DSPs) and processors based on multicore processor architecture, as non-limiting examples. The apparatus 500 may have multiple processors, such as for example an application specific integrated circuit chip that is slaved in time to a clock which
synchronizes the main processor.

[0069] In addition, the at least one processor 501 and the memory 502 may be combined as processing means 505 operative to perform the relevant steps as illustrated in the methods 100 and 200 with respect to the apparatus 500.

[0070] The techniques described herein may be implemented by various means so that an apparatus implementing one or more functions of a corresponding mobile entity described with an embodiment comprises not only prior art means, but also means for implementing the one or more functions of a corresponding apparatus described with an embodiment and it may comprise separate means for each separate function, or means may be configured to perform two or more functions.

[0071] The techniques described herein may be implemented by various means so that an apparatus implementing one or more functions of a corresponding mobile entity described with an embodiment comprises not only prior art means, but also means for implementing the one or more functions of a corresponding apparatus described with an embodiment and it may comprise separate means for each separate function, or means may be configured to perform two or more functions. For example, these techniques may be implemented in hardware (one or more apparatuses), firmware (one or more apparatuses), software (one or more modules), or combinations thereof. For a firmware or software, implementation can be through modules (e.g., procedures, functions, and so on) that perform the functions described herein. The software codes may be stored in any suitable, processor/computer-readable data storage medium(s) or memory unit(s) or article(s) of manufacture and executed by one or more processors/computers. The data storage medium or the memory unit may be implemented within the processor/computer or external to the processor/computer, in which case it can be communicatively coupled to the processor/computer via various means as is known in the art.

[0072] Many modifications and other embodiments of the disclosures set forth herein will come to mind to one skilled in the art to which these embodiments of the disclosure pertain having the benefit of the teachings presented in the foregoing descriptions and the associated drawings. Therefore, it is to be understood that the embodiments of the disclosure are not to be limited to the specific embodiments disclosed and that modifications and other embodiments are intended to be included within the scope of the appended claims. Although specific terms are employed herein, they are used in a generic and descriptive sense only and not for purposes of limitation.
CLAIMS

1. A method for processing notifications on a mobile computing device with a touch sensitive display, comprising:
   displaying, on a status bar in a first display area of the touch sensitive display, one or more notifications each of which is associated with a corresponding one of one or more applications installed on the mobile computing device;
   detecting a selection of one of the one or more notifications; and
   displaying, on a top of a notification list, an application icon associated with the selected notification for launching the application,
   wherein the notification list is displayed in a second display area of the touch sensitive display and includes one or more application icons each of which is associated with a corresponding one of the one or more applications.

2. The method according to Claim 1, further comprising:
   displaying a bottom bar for launching an application, wherein the one or more application icons are sequentially displayed in the second display area as the bottom bar is moved from the top of the notification list towards the bottom of the notification list.

3. The method according to Claim 2, further comprising:
   launching an application whose application icon is located immediately above the bottom bar by sliding the bottom bar.

4. The method according to Claim 3, wherein the selection of the notification and the launching of the application are performed consecutively by a single swipe on the touch sensitive display through a finger or stylus of a user.

5. The method according to Claim 1, wherein the notification list includes one or more additional items, each of which is displayed adjacent to a corresponding application icon and gives a brief description regarding the application associated with the corresponding application icon.

6. The method according to any of Claims 1-5, wherein the one or more applications respectively associated with the one or more application icons included in the notification list at least include one or more of a picture application, a video application, a text messaging application, a multiple media messaging application, a music application, a news application, a health application, a measurement application, a navigation application, a calendar application and a reminder application.
7. An apparatus for processing notifications on a mobile computing device with a touch sensitive display, comprising:
   at least one processor; and
   at least one memory including computer program instructions,
   wherein the at least one memory and computer program instructions are configured to,
   with the at least one processor, cause the apparatus at least to:
   display, on a status bar in a first display area of the touch sensitive display, one or more notifications each of which is associated with a corresponding one of one or more applications installed on the mobile computing device;
   detect a selection of one of the one or more notifications; and
   display, on a top of a notification list, an application icon associated with the selected notification,
   wherein the notification list is displayed in a second display area of the touch sensitive display and includes one or more application icons each of which is associated with a corresponding one of the one or more applications.

8. The apparatus according to Claim 7, wherein the detecting the selection comprises:
   detecting a touch or click on the one of the one or more notifications as the selection.

9. The apparatus according to Claim 7, wherein the at least one memory and computer program instructions are configured to, with the at least one processor, cause the apparatus at least to:
   display a bottom bar for launching an application, wherein the one or more application icons are sequentially displayed in the second display area as the bottom bar is moved from the top of the notification list towards the bottom of the notification list.

10. The apparatus according to Claim 9, wherein the at least one memory and computer program instructions are configured to, with the at least one processor, cause the apparatus at least to:
   launch an application whose application icon is located immediately above the bottom bar by sliding the bottom bar.

11. A method for launching an application on a mobile computing device with a touch sensitive display, comprising:
   making an application icon on a top of a notification list upon a detection of a selection of a notification on a status bar in the touch sensitive display, wherein the notification and the application icon are associated with a same application installed on the mobile computing device, and the notification list includes one or more application icon
each of which is associated with a corresponding application and the status bar includes one or more notifications;

displaying a bottom bar for launching an application, wherein the one or more application icons are sequentially displayed in the second display area as the bottom bar is moved from the top of the notification list towards the bottom of the notification list; and

launching an application whose application icon is located immediately above the bottom bar by sliding the bottom bar.

12. The method according to Claim 11, wherein the selection of the notification and the launching of the application are consecutively performed by a single swipe.

13. The method according to Claim 11, wherein the selection of the notification and the launching of the application are performed by a finger or stylus of a user.

14. The method according to Claim 11, wherein the status bar is displayed in a first display area of the touch sensitive display and the notification list is displayed in a second display area of the touch sensitive display, and the bottom bar is automatically displayed upon detecting that a display area between the first display area and the second display area is touched.

15. The method according to Claim 11, wherein the notification list includes one or more additional items, each of which is displayed adjacent to a corresponding application icon and gives a brief description regarding the application associated with the corresponding application icon.
Display, on a status bar in a first display area of the touch sensitive display, one or more notifications each of which is associated with a corresponding one of one or more applications installed on the mobile computing device (S101)

Detect a selection of one of the one or more notifications (S102)

Display, on a top of a notification list, an application icon associated with the selected notification for launching the application (S103)

Fig. 1

Making an application icon on a top of a notification list upon a detection of a selection of a notification on a status bar in the touch sensitive display (S201)

Displaying a bottom bar for launching an application, wherein the one or more application icons are sequentially displayed in the second display area as the bottom bar is moved from the top of the notification list towards the bottom of the notification list (S202)

Launch an application whose application icon is located immediately above the bottom bar by sliding the bottom bar (S203)

Fig. 2
Fig. 4A  Fig. 4B
Fig. 4C
**INTERNATIONAL SEARCH REPORT**

**International application No**

**PCT/US2015/068209**

### A. CLASSIFICATION OF SUBJECT MATTER

**INV.** G06F3/048

**ADD.**

According to International Patent Classification (IPC) or to both national classification and IPC

### B. FIELDS.searched

Minimum documentation searched (classification system followed by classification symbols)

G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data

### C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Further documents are listed in the continuation of Box C.

See patent family annex.

*"* Special categories of cited documents:

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Date of the actual completion of the international search 11 May 2016

Date of mailing of the international search report 19/05/2016

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

Authorized officer Barba, Michelangelo

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**Information on patent family members**

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