Withers & Rogers LLP, 4 More London Riverside, London, SE1 2AU
Tel: +44 (0)20 7940 3600 Fax: +44 (0)20 7378 9680
E-Mail: admin@withersrogers.com Web: www.withersrogers.com

withers & rogers LLP

European & Chartered Patent Attorneys
Trade Mark Attorneys

European Patent Office
PB 5818 Patentlaan 2
Rijswijk
NL-2280 HV
Netherlands

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Your Ref:

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**SIGNED AND SENT
ELECTRONICALLY**

Writer's Telephone: +44 117 925 3030

Dear Sirs

European Patent Application No. 09170574.9
Unlocking A Device By Performing Gestures On An Unlock Image
Apple Inc.

We refer to the Summons to attend oral proceedings dated 23 December 2016. In response, we enclose a Main Request and First, Second and Third Auxiliary Requests, for consideration by the Examining Division in the order in which they are presented here.

MAIN REQUEST

This Main Request comprises a replacement set of 10 claims (presented in clean and marked-up versions) to replace the claims currently on file.

Claim Amendments and Basis

Claim 1 has been amended to recite:

"A computer-implemented method for preventing unintentional unlocking of a portable electronic device (1000), the device including a touch-sensitive display (1014), characterised in that the method comprises:
        displaying a plurality of unlock images (1002, 1008) on the touch-sensitive display (1014), wherein each of the plurality of unlock images (1002, 1008) is a graphical, interactive user-interface object with which a user interacts in order to unlock the portable electronic device (1000), and wherein each of the plurality of unlock images corresponds to an active application running on the portable electronic device (1000) or to an event received by the portable electronic device (1000) while the portable electronic device (1000) is in a locked state;
        detecting a contact with the touch-sensitive display (1014) at a first predefined location corresponding to a single one of the plurality of unlock images (1002, 1008) while the portable electronic device (1000) is in a the locked state, wherein the single unlock image is a graphical, interactive user interface object with which a user interacts in order to unlock the device (208, 308);

moving the ~~single~~ unlock image (1002, 1008) on the touch-sensitive display (1014) in accordance with the movement of the contact while continuous contact with the touch-sensitive display (1014) is maintained;

unlocking the portable electronic device (1000), ~~and~~ ceasing to display the ~~single~~ unlock images (1002, 1008), and displaying on the touch-sensitive display (1014) user interface objects (1016) associated with the application or event corresponding to the unlock image (1002, 1008) if the moving of the ~~single~~ unlock image (1002, 1008) on the touch-sensitive display (1014) results in movement of the ~~single~~ unlock image (1002, 1008) from the first predefined location to a predefined unlock region on the touch-sensitive display (~~214, 314~~1014); and

maintaining the portable electronic device in the locked state if the moving of the ~~single~~ unlock image (1002, 1008) does not result in movement of the ~~single~~ unlock image (1002, 1008) from the first predefined location to the predefined unlock region on the touch-sensitive display (~~212, 314~~1014)".

Basis for the feature of

"displaying a plurality of unlock images (1002, 1008) on the touch-sensitive display (1014), wherein each of the plurality of unlock images (1002, 1008) is a graphical, interactive user-interface object with which a user interacts in order to unlock the portable electronic device (1000), and wherein each of the plurality of unlock images corresponds to an active application running on the portable electronic device (1000) or to an event received by the portable electronic device (1000) while the portable electronic device (1000) is in a locked state"

may be found, for example, in paragraphs [0062], [0099] and [00101] of the specification as originally filed.

Specifically, paragraph [0099] of the original specification discloses that "*The device may display multiple unlock images on the touch screen, each unlock image corresponding to an active application or incoming event*", whilst paragraph [00101] states that "*The device displays a plurality of unlock images, each displayed unlock image corresponding to an active application running or an event received while the device is in a locked state*". As disclosed at paragraph [0062] of the original specification, an unlock image is "*a graphical, interactive user-interface object with which the user interacts in order to unlock the device*".

Basis for the features of:

"detecting a contact with the touch-sensitive display (1014) at a first predefined location corresponding to one of the plurality of unlock images (1002, 1008) while the portable electronic device (1000) is in the locked state";

and

"moving the unlock image (1002, 1008) on the touch-sensitive display (1014) in accordance with the movement of the contact while continuous contact with the touch-sensitive display (1014) is maintained"

may be found, for example, in paragraphs [00105] and Figures 11A of the original specification.

Specifically, paragraph [00105] of the original specification recites that "*In Figure 11A, the user makes contact with the touch screen 1014 using her finger 1102 (not shown to scale), at the location corresponding to the second unlock image (1008). The user performs the unlock action gesture by moving the point of contact, dragging the second unlock image 1008*".

Basis for the feature of

"unlocking the portable electronic device (1000), ceasing to display the unlock images (1002, 1008), and displaying on the touch-sensitive display (1014) user interface objects (1016) associated with the application or event corresponding to the unlock image (1002, 1008) if the moving of the unlock image (1002, 1008) on the touch-sensitive display (1014) results in movement of the unlock image (1002, 1008) from the first predefined location to a predefined unlock region on the touch-sensitive display (1014)"

may be found, for example, in paragraphs [0099] and [00106] and Figures 11C and 11D of the original specification.

Specifically, paragraph [0099] discloses that "*The device may display multiple unlock images on the touch screen, each unlock image corresponding to an active application or incoming event/ Performing the unlock action using one of the multiple unlock images unlocks the device and displays the application and/or events corresponding to the unlock image*", whilst paragraph [00106] explains that "*Figure 11C shows the second unlock image 1008 moved to the end of the channel 1010, where the unlock action with respect to the second unlock image 1008 will be completed once the user breaks the contact (and releases the second unlock image 1008)...the unlock action is completed when the unlock image 1008 is moved to the end of the channel 1010, with or without the user breaking contact, and the second unlock image 1008 disappears. As shown in Figure 11D, upon completion of the unlock action with respect to the second unlock image 1008, the device displays on the touch screen the user-interface objects 1006 associated with the application or event corresponding to the second unlock image 1008*".

Basis for the feature of

"maintaining the portable electronic device in the locked state if the moving of the unlock image (1002, 1008) does not result in movement of the unlock image (1002, 1008) from the first predefined location to the predefined unlock region on the touch-sensitive display (1014)"

may be found, for example, in paragraphs [0077] and [00105] of the original specification.

Specifically, paragraph [00105] discloses that "*The first and second unlock images and visual cues are similar to the unlock image and visual cues described above, in relation to Figures 4A and 4B*", which teaches the skilled person that the first and second unlock images and visual cues are as described in paragraph [0077]: "*if the user breaks the contact with the touch screen before the unlock image reaches the right end of the channel 404, the unlock image action has failed*". Failure of the unlock image action of course implies that the device will be maintained in its locked state.

Thus, it will be apparent that the specification as originally filed (which is identical to the specification of the parent application) provides direct and unambiguous basis for the amendments to claim 1. Accordingly, the amendments to claim 1 comply with the requirements of Article 123(2) EPC and Article 76(1) EPC regarding added subject matter.

Amendments corresponding to those made to independent claim 1 have been made to independent claims 7 and 10, which amendments find basis in the portions of the original specification cited above in relation to the amendments to claim 1. Accordingly, the amendments to claims 7 and 10 comply with the requirements of Article 123(2) EPC and Article 76(1) EPC regarding added subject matter.

Added Subject Matter

In the Summons the Examiner objected that the feature of the previous version of claim 1 of "maintaining the portable electronic device in the locked state and maintaining display of the single unlock image if the moving of the single unlock image does not result in movement of the

unlock image from the first predefined location to the predefined unlock region on the touch-sensitive display" added subject matter that was not present in the application as originally filed.

To address this objection, the relevant part of claim 1 (and independent claims 7 and 10) has been amended to recite "maintaining the portable electronic device in the locked if the moving of the unlock image (1002, 1008) does not result in movement of the unlock image (1002, 1008) from the first predefined location to the predefined unlock region on the touch-sensitive display (1014)" as discussed above, based on the disclosure of paragraph [0077] of the original specification.

Novelty

It is submitted that the independent claims as currently amended are novel over all of the available prior art, as none of the cited documents discloses a method which displays a plurality of unlock images on a touch-sensitive display, wherein each of the plurality of unlock images is a graphical, interactive user-interface object with which a user interacts in order to unlock the portable electronic device, and wherein each of the plurality of unlock images corresponds to an active application running on the portable electronic device or to an event received by the portable electronic device while the portable electronic device is in a locked state.

Inventive Step

It is further submitted that the subject matter of the independent claims as currently amended involves an inventive step over all of the available prior art, for the following reasons.

D7 is regarded as representing the closest available prior art, as that document relates to a portable electronic device which implements a method for preventing unintentional unlocking of the device.

However, D7 fails to disclose or suggest a method which displays a plurality of unlock images on a touch-sensitive display, in which each of the plurality of unlock images corresponds to an active application running on the device or to an event received by the device when the device is in a locked state.

Specifically, D7 fails to disclose the features of claim 1 of:

> "displaying a plurality of unlock images (1002, 1008) on the touch-sensitive display (1014), wherein each of the plurality of unlock images (1002, 1008) is a graphical, interactive user-interface object with which a user interacts in order to unlock the portable electronic device (1000), and wherein each of the plurality of unlock images corresponds to an active application running on the portable electronic device (1000) or to an event received by the portable electronic device (1000) while the portable electronic device (1000) is in a locked state"

> "detecting a contact with the touch-sensitive display (1014) at a first predefined location corresponding to one of the plurality of unlock images (1002, 1008) while the portable electronic device (1000) is in the locked state";

> "moving the unlock image (1002, 1008) on the touch-sensitive display (1014) in accordance with the movement of the contact while continuous contact with the touch-sensitive display (1014) is maintained";

> "unlocking the portable electronic device (1000), ceasing to display the unlock images (1002, 1008), and displaying on the touch-sensitive display (1014) user interface objects (1016) associated with the application or event corresponding to the unlock image (1002, 1008) if the moving of the unlock image (1002, 1008) on the touch-sensitive display

(1014) results in movement of the unlock image (1002, 1008) from the first predefined location to a predefined unlock region on the touch-sensitive display (1014)"; and

"maintaining the portable electronic device in the locked state if the moving of the unlock image (1002, 1008) does not result in movement of the unlock image (1002, 1008) from the first predefined location to the predefined unlock region on the touch-sensitive display (1014)".

These characterising features give rise to a technical effect of preventing accidental unlocking of a device whilst still permitting rapid and straightforward user access to an active application that was running when the device entered the locked state or to an event received by the device in the locked state.

The objective technical problem may therefore be framed as "how to prevent accidental unlocking of a device whilst still permitting rapid and straightforward user access to an active application or event when the device is in its locked state".

In seeking to address this problem, the skilled person would not adapt the teaching of D7 using that of any of the other cited documents to arrive at the invention claimed.

The Examiner's objection of lack of inventive step in the Summons was based upon the combination of D7 with D5 ("Touchscreen Toggle Design"), so that combination will be addressed here first.

D7 contains no disclosure or suggestion whatsoever that applications could be active or that events could be received while the device is in its locked state, and thus also contains no disclosure or suggestion as to how a user might access such applications or events when the device is in its locked state. In the absence of any alternative teaching the skilled person would understand that such applications or events would be accessed by performing the swipe gesture to unlock the device and subsequently accessing the relevant application or event via the start menu displayed on the touch screen, as described on page 11 of D7. There is nothing in D7 to suggest that any alternative mechanism is necessary or even desirable.

Thus, the skilled person would not be motivated to attempt to adapt the system of D7 to permit rapid access to active applications or events when the device is in its locked state.

However, if the skilled person were motivated to attempt to adapt the system of D7, he would not combine it with D5 to arrive at the invention now claimed.

It is accepted that the objective technical problem relates to the general domain of user interface design, and so the skilled person would consult documents in that field and would find D5.

From D5 the skilled person would learn of the slider toggle, which is one of a number of toggles that can be used to allow "lists of devices or options to be presented on the screen" (see D5, page 667, column 2, third paragraph). The entire teaching of D5 is directed to resolving the confusion between the state indication ("ON" or "OFF") and the possible action label in computer-implemented toggle switches (see, for example, D5, page 667, column 1, paragraphs 1-2). The slider toggle is illustrated as a slider having the labels "ON" and "OFF" at either end, and is said to include a "yellow pointer" whose position can be changed, by a sliding/dragging movement, from one side of the toggle to another. A "simple three step animation" is said to show the movement of the pointer along the slide.

Thus, the skilled person reading D5 would be taught that one or more slidable graphical, interactive user-interface objects can be displayed on a screen to control the state ("ON" or "OFF") one or more devices or options and whose appearance can change to reflect the current state and the transition between states.

From D7 the skilled person is aware that a left to right swipe gesture can be used to change the state of a device from a locked state to an unlocked state, and so the skilled person might conceivably import the slidable graphical interactive user-interface object from the slider toggle D5 into the device of D7 in order to control the state (locked or unlocked) and to provide visual feedback as to the transition between the locked and unlock states of the device of D7.

However, there is nothing in D5 that would cause the skilled person to use elements of the slider toggle to permit access to an active application or to an event received while a device is in its locked state. As explained above, the entire teaching of D5 is directed to resolving the confusion between the state indication ("ON" or "OFF") and the possible action label in computer-implemented toggle switches. The skilled person would therefore consider that the slidable graphical interactive user-interface object (the slider) of the slider toggle of D5 to be useful in controlling and indicating the state ("ON" or "OFF") of one or more devices or options, but without the benefit of knowledge of the invention as currently claimed would not consider using the slider to permit access to an application that was active when a device was placed in its locked mode, or to an event received by the device while in its locked mode, since permitting access to an application or event is not the same as controlling the state ("ON" or "OFF") of a device or option.

In other words, the purpose of the slider toggle of D5 is to control and indicate the state of a device or option, and so if the skilled person were to use the slider toggle (or elements thereof) in the system of D7 it would be to enable the user to control the state of the device itself or options on the device, rather than as a mechanism to permit rapid access to applications running on the device or events received by the device when the device is in its locked state.

Accordingly, it is submitted that the skilled person would not combine the teaching of D5 with that of D7 to arrive at the subject matter of claim 1 as currently amended, and thus that the subject matter of claim 1 involves an inventive step.

For completeness, inventive step with respect to the combination of D7 with each of D1-D4 and the combination of D5 and D6 is discussed below.

D1 (WO/2004/001560) relates to a method of deactivating a touch screen in a portable electronic device, which method requires detecting user touches on predetermined contact areas in a given order during an unlocking action, and deactivating a touch screen lock if the user touches are detected in the correct order.

D1 contains no disclosure or suggestion of any unlock image whatsoever, let alone a plurality of unlock images, each corresponding to an active application running on the device or to an event received by the device when the device is in a locked state. Thus, even if the skilled person were to combine D1 with D7, the result would not be the method of claim 1 as currently amended.

D2 (US5821933) discloses a method in which access to a restricted function on a computer is gained by entering an "iconic password" consisting of selecting two or more visual icons ("code icons") in a sequence ("iconic password sequence"). If the entered sequence corresponds to a target sequence, access to the restricted function is granted.

Like D1, D2 contains no disclosure or suggestion of any unlock image whatsoever, let alone a plurality of unlock images, each corresponding to an active application running on the device or to an event received by the device when the device is in a locked state. Thus, even if the skilled person were to combine D2 with D7, the result would not be the method of claim 1 as currently amended.

D3 ("Access/Control Icons (Icon Keys)") describes a key icon which may be moved on top of or inserted into a lock section of another icon in order to gain access to functions provided by the receptor icon. Once again, there is no disclosure or suggestion in D3 of any unlock image, let alone a plurality of unlock images, each corresponding to an active application running on the device or to an event received by the device when the device is in a locked state. Thus, even if

the skilled person were to combine D3 with D7, the result would not be the method of claim 1 as currently amended.

D4 (US5907327) similarly fails to disclose or suggest any unlock image, let alone a plurality of unlock images, each corresponding to an active application running on the device or to an event received by the device when the device is in a locked state. Thus, even if the skilled person were to combine D4 with D7, the result would not be the method of claim 1 as currently amended.

D6 (Mobile-review.com Review GSM phone Neonode N1M) is a merely a review of the telephone to which D7 relates, and does not offer any disclosure that would lead the skilled person to adapt the teaching of D7 to include the characterising features of claim 1 as currently amended.

Accordingly, it is submitted that the subject matter of claim 1 as amended involves an inventive step over all of the available prior art. The subject matter of the corresponding independent claims 7 and 10 also involves an inventive step for the reasons outlined above.

Formal Issues

Parenthesised reference signs have been added to the independent claims where appropriate, and the independent claims have been re-cast in the two-part form with respect to the D7 document.

Concluding Remarks

It is submitted that the enclosed amendments and the comments above address all of the objections raised in the Summons and thus place this application in order for allowance. We therefore request cancellation of the oral proceedings scheduled for 12 June 2017 and grant of a European patent on the basis of the claims of this Main Request.

FIRST AUXILARY REQUEST

This First Auxiliary Request comprises a replacement set of 10 claims (provided in clean and marked-up versions) to replace the claims currently on file for this application.

Claim Amendments and Basis

Claim 1 has been amended to recite:

"A computer-implemented method for preventing unintentional unlocking of a portable electronic device (1000), the device including a touch-sensitive display (1014), characterised in that the method comprises:
        displaying a plurality of unlock images (1002, 1008) on the touch-sensitive display (1014), wherein each of the plurality of unlock images (1002, 1008) is a graphical, interactive user-interface object with which a user interacts in order to unlock the portable electronic device (1000), and wherein each of the plurality of unlock images corresponds to an active application running on the portable electronic device (1000) or to an event received by the portable electronic device (1000) while the portable electronic device (1000) is in a locked state;
        detecting a contact with the touch-sensitive display (1014) at a first predefined location corresponding to a single one of the plurality of unlock images (1002, 1008) while the portable electronic device (1000) is in a the locked state, wherein the single unlock image is a graphical, interactive user-interface object with which a user interacts in order to unlock the device (208, 308);
        moving the single unlock image (1002, 1008) on the touch-sensitive display (1014) in accordance with the movement of the contact while continuous contact with the touch-sensitive display (1014) is maintained;
        unlocking the portable electronic device (1000), and ceasing to display the single unlock images (1002, 1008), and displaying on the touch-sensitive display (1014) user interface objects

(1016) associated with the application or event corresponding to the unlock image (1002, 1008) if the moving of the ~~single~~ unlock image (1002, 1008) on the touch-sensitive display (1014) results in movement of the ~~single~~ unlock image (1002, 1008) from the first predefined location to a predefined unlock region on the touch-sensitive display (~~214, 314~~1014); and

maintaining the portable electronic device in the locked state and ~~maintaining~~ displaying ~~of~~ the ~~single~~ unlock image (1002, 1008) returning to the first predefined location if the moving of the ~~single~~ unlock image (1002, 1008) does not result in movement of the ~~single~~ unlock image (1002, 1008) from the first predefined location to the predefined unlock region on the touch-sensitive display (~~212, 314~~1014)".

Basis for the feature of

"displaying a plurality of unlock images (1002, 1008) on the touch-sensitive display (1014), wherein each of the plurality of unlock images (1002, 1008) is a graphical, interactive user-interface object with which a user interacts in order to unlock the portable electronic device (1000), and wherein each of the plurality of unlock images corresponds to an active application running on the portable electronic device (1000) or to an event received by the portable electronic device (1000) while the portable electronic device (1000) is in a locked state"

may be found, for example, in paragraphs [0062], [0099] and [00101] of the specification as originally filed.

Specifically, paragraph [0099] of the original specification discloses that "*The device may display multiple unlock images on the touch screen, each unlock image corresponding to an active application or incoming event*", whilst paragraph [00101] states that "*The device displays a plurality of unlock images, each displayed unlock image corresponding to an active application running or an event received while the device is in a locked state*". As disclosed at paragraph [0062] of the original specification, an unlock image is "*a graphical, interactive user-interface object with which the user interacts in order to unlock the device*".

Basis for the features of:

"detecting a contact with the touch-sensitive display (1014) at a first predefined location corresponding to one of the plurality of unlock images (1002, 1008) while the portable electronic device (1000) is in the locked state"; and

"moving the unlock image (1002, 1008) on the touch-sensitive display (1014) in accordance with the movement of the contact while continuous contact with the touch-sensitive display (1014) is maintained"

may be found, for example, in paragraphs [00105] and Figures 11A of the original specification.

Specifically, paragraph [00105] of the original specification recites that "*In Figure 11A, the user makes contact with the touch screen 1014 using her finger 1102 (not shown to scale), at the location corresponding to the second unlock image (1008). The user performs the unlock action gesture by moving the point of contact, dragging the second unlock image 1008*".

Basis for the feature of

"unlocking the portable electronic device (1000), ceasing to display the unlock images (1002, 1008), and displaying on the touch-sensitive display (1014) user interface objects (1016) associated with the application or event corresponding to the unlock image (1002, 1008) if the moving of the unlock image (1002, 1008) on the touch-sensitive display (1014) results in movement of the unlock image (1002, 1008) from the first predefined location to a predefined unlock region on the touch-sensitive display (1014)"

may be found, for example, in paragraphs [0099] and [00106] and Figures 11C and 11D of the original specification.

Specifically, paragraph [0099] discloses that "*The device may display multiple unlock images on the touch screen, each unlock image corresponding to an active application or incoming event/ Performing the unlock action using one of the multiple unlock images unlocks the device and displays the application and/or events corresponding to the unlock image*", whilst paragraph [00106] explains that "*Figure 11C shows the second unlock image 1008 moved to the end of the channel 1010, where the unlock action with respect to the second unlock image 1008 will be completed once the user breaks the contact (and releases the second unlock image 1008)...the unlock action is completed when the unlock image 1008 is moved to the end of the channel 1010, with or without the user breaking contact, and the second unlock image 1008 disappears. As shown in Figure 11D, upon completion of the unlock action with respect to the second unlock image 1008, the device displays on the touch screen the user-interface objects 1006 associated with the application or event corresponding to the second unlock image 1008*".

Basis for the feature of

> "maintaining the portable electronic device in the locked state and displaying the unlock image (1002, 1008) returning to the first predefined location if the moving of the unlock image (1002, 1008) does not result in movement of the unlock image (1002, 1008) from the first predefined location to the predefined unlock region on the touch-sensitive display (1014)" may be found, for example, in paragraphs [0077] and [00105] of the original specification.

Specifically, paragraph [00105] discloses that "*The first and second unlock images and visual cues are similar to the unlock image and visual cues described above, in relation to Figures 4A and 4B*", which teaches the skilled person that the first and second unlock images and visual cues are as described in paragraph [0077]: "*if the user breaks the contact with the touch screen before the unlock image reaches the right end of the channel 404, the unlock image action has failed. The device 400 may display the unlock image 402 returning to its initial position on the left end of the channel 404...*".

Thus, it will be apparent that the specification as originally filed (which is identical to the specification of the parent application) provides direct and unambiguous basis for the amendments to claim 1. Accordingly, the amendments to claim 1 comply with the requirements of Article 123(2) EPC and Article 76(1) EPC regarding added subject matter.

Amendments corresponding to those made to independent claim 1 have been made to independent claims 7 and 10, which amendments find basis in the portions of the original specification cited above in relation to the amendments to claim 1. Accordingly, the amendments to claims 7 and 10 comply with the requirements of Article 123(2) EPC and Article 76(1) EPC regarding added subject matter.

Added Subject Matter

In the Summons the Examiner objected that the feature of the previous version of claim 1 of "maintaining the portable electronic device in the locked state and maintaining display of the single unlock image if the moving of the single unlock image does not result in movement of the unlock image from the first predefined location to the predefined unlock region on the touch-sensitive display" added subject matter that was not present in the application as originally filed.

To address this objection, the relevant part of claim 1 (and independent claims 7 and 10) has been amended to recite "maintaining the portable electronic device in the locked state <u>and displaying the unlock image (1002, 1008) returning to the first predefined location</u> if the moving of the unlock image (1002, 1008) does not result in movement of the unlock image (1002, 1008)

from the first predefined location to the predefined unlock region on the touch-sensitive display (1014)" as discussed above, based on the disclosure of paragraph [0077] of the original specification.

Novelty

It is submitted that the independent claims as currently amended are novel over all of the available prior art, as none of the cited documents discloses a method which displays a plurality of unlock images on a touch-sensitive display, wherein each of the plurality of unlock images is a graphical, interactive user-interface object with which a user interacts in order to unlock the portable electronic device, and wherein each of the plurality of unlock images corresponds to an active application running on the portable electronic device or to an event received by the portable electronic device while the portable electronic device is in a locked state.

Inventive Step

It is further submitted that the subject matter of the independent claims as currently amended involves an inventive step over all of the available prior art, for the following reasons.

D7 is regarded as representing the closest available prior art, as that document relates to a portable electronic device which implements a method for preventing unintentional unlocking of the device.

However, D7 fails to disclose or suggest a method which displays a plurality of unlock images on a touch-sensitive display, in which each of the plurality of unlock images corresponds to an active application running on the device or to an event received by the device when the device is in a locked state.

Specifically, D7 fails to disclose the features of claim 1 of:

"displaying a plurality of unlock images (1002, 1008) on the touch-sensitive display (1014), wherein each of the plurality of unlock images (1002, 1008) is a graphical, interactive user-interface object with which a user interacts in order to unlock the portable electronic device (1000), and wherein each of the plurality of unlock images corresponds to an active application running on the portable electronic device (1000) or to an event received by the portable electronic device (1000) while the portable electronic device (1000) is in a locked state"

"detecting a contact with the touch-sensitive display (1014) at a first predefined location corresponding to one of the plurality of unlock images (1002, 1008) while the portable electronic device (1000) is in the locked state";

"moving the unlock image (1002, 1008) on the touch-sensitive display (1014) in accordance with the movement of the contact while continuous contact with the touch-sensitive display (1014) is maintained";

"unlocking the portable electronic device (1000), ceasing to display the unlock images (1002, 1008), and displaying on the touch-sensitive display (1014) user interface objects (1016) associated with the application or event corresponding to the unlock image (1002, 1008) if the moving of the unlock image (1002, 1008) on the touch-sensitive display (1014) results in movement of the unlock image (1002, 1008) from the first predefined location to a predefined unlock region on the touch-sensitive display (1014)"; and

"maintaining the portable electronic device in the locked state and displaying the unlock image (1002, 1008) returning to the first predefined location if the moving of the unlock image (1002, 1008) does not result in movement of the unlock image (1002, 1008) from

the first predefined location to the predefined unlock region on the touch-sensitive display (1014)".

These characterising features give rise to a technical effect of preventing accidental unlocking of a device whilst still permitting rapid and straightforward user access to an active application or event and providing feedback to the user in the event of failure of the user's request to access the active application or event.

The objective technical problem may therefore be framed as "how to prevent accidental unlocking of a device whilst still permitting rapid and straightforward user access to an active application or event and providing feedback to the user in the event of failure of the user's request to access the active application or event".

In seeking to address this problem, the skilled person would not adapt the teaching of D7 using that of any of the other cited documents to arrive at the invention claimed.

The Examiner's objection of lack of inventive step in the Summons was based upon the combination of D7 with D5 ("Touchscreen Toggle Design"), so that combination will be addressed here first.

D7 contains no disclosure or suggestion whatsoever that applications could be active or that events could be received while the device is in its locked state, and thus also contains no disclosure or suggestion as to how a user might access such applications or events when the device is in its locked state. In the absence of any alternative teaching the skilled person would understand that such applications or events would be accessed by performing the swipe gesture to unlock the device and subsequently accessing the relevant application or event via the start menu displayed on the touch screen, as described on page 11 of D7. There is nothing in D7 to suggest that any alternative mechanism is necessary or even desirable.

Thus, the skilled person would not be motivated to attempt to adapt the system of D7 to permit rapid access to active applications or events when the device is in its locked state.

However, if the skilled person were motivated to attempt to adapt the system of D7, he would not combine it with D5 to arrive at the invention now claimed.

It is accepted that the objective technical problem relates to the general domain of user interface design, and so the skilled person would consult documents in that field and would find D5.

From D5 the skilled person would learn of the slider toggle, which is one of a number of toggles that can be used to allow "*lists of devices or options to be presented on the screen*" (see D5, page 667, column 2, third paragraph). The entire teaching of D5 is directed to resolving the confusion between the state indication ("ON" or "OFF") and the possible action label in computer-implemented toggle switches (see, for example, D5, page 667, column 1, paragraphs 1-2). The slider toggle is illustrated as a slider having the labels "ON" and "OFF" at either end, and is said to include a "*yellow pointer*" whose position can be changed, by a sliding/dragging movement, from one side of the toggle to another. A "*simple three step animation*" is said to show the movement of the pointer along the slide.

Thus, the skilled person reading D5 would be taught that one or more slidable graphical, interactive user-interface objects can be displayed on a screen to control the state ("ON" or "OFF") one or more devices or options and whose appearance can change to reflect the current state and the transition between states.

From D7 the skilled person is aware that a left to right swipe gesture can be used to change the state of a device from a locked state to an unlocked state, and so the skilled person might conceivably import the slidable graphical interactive user-interface object from the slider toggle

D5 into the device of D7 in order to control the state (locked or unlocked) and to provide visual feedback as to the transition between the locked and unlock states of the device of D7.

However, there is nothing in D5 that would cause the skilled person to use elements of the slider toggle to permit access to an active application or to an event received while a device is in its locked state. As explained above, the entire teaching of D5 is directed to resolving the confusion between the state indication ("ON" or "OFF") and the possible action label in computer-implemented toggle switches. The skilled person would therefore consider that the slidable graphical interactive user-interface object (the slider) of the slider toggle of D5 to be useful in controlling and indicating the state ("ON" or "OFF") of one or more devices or options, but without the benefit of knowledge of the invention as currently claimed would not consider using the slider to permit access to an application that was active when a device was placed in its locked mode, or to an event received by the device while in its locked mode, since permitting access to an application or event is not the same as controlling the state ("ON" or "OFF") of a device or option.

In other words, the purpose of the slider toggle of D5 is to control and indicate the state of a device or option, and so if the skilled person were to use the slider toggle (or elements thereof) in the system of D7 it would be to enable the user to control the state of the device itself or options on the device, rather than as a mechanism to permit rapid access to applications running on the device or events received by the device when the device is in its locked state.

Accordingly, it is submitted that the skilled person would not combine the teaching of D5 with that of D7 to arrive at the subject matter of claim 1 as currently amended, and thus that the subject matter of claim 1 involves an inventive step.

The comments on inventive step with respect to the combination of D7 with each of D1-D4 and the combination of D5 and D6 made in the Main Request are equally applicable to this First Auxiliary Request, and will not be repeated here for the sake of brevity.

Accordingly, it is submitted that the subject matter of claim 1 as amended involves an inventive step over all of the available prior art. The subject matter of the corresponding independent claims 7 and 10 also involves an inventive step for the reasons outlined above.

Formal Issues

Parenthesised reference signs have been added to the independent claims where appropriate, and the independent claims have been re-cast in the two-part form with respect to the D7 document.

Concluding Remarks

It is submitted that the enclosed amendments and the comments above address all of the objections raised in the Summons and thus place this application in order for allowance. We therefore request cancellation of the oral proceedings scheduled for 12 June 2017 and grant of a European patent on the basis of the claims of this First Auxiliary Request.

SECOND AUXILIARY REQUEST

This Second Auxiliary Request comprises a replacement set of 13 claims (provided in clean and marked-up versions) to replace the claims currently on file for this application.

Claim Amendments and Basis

Claim 1 has been amended to recite:

" A computer-implemented method for preventing unintentional unlocking of a portable electronic device (1000), the device including a touch-sensitive display (1014), characterised in that the method comprises:

selecting a subset of a plurality of unlock images (1002, 1008) for display on the touch-sensitive display (1014);

displaying the selected subset of the plurality of unlock images (1002, 1008) on the touch-sensitive display (1014), wherein each of the plurality of unlock images (1002, 1008) is a graphical, interactive user-interface object with which a user interacts in order to unlock the portable electronic device (1000), wherein each of the plurality of unlock images corresponds to an active application running on the portable electronic device (1000) or to an event received by the portable electronic device (1000) while the portable electronic device (1000) is in a locked state, and wherein the subset of the plurality of unlock images (1002, 1008) is selected based on one or more predefined criteria;

~~detecting~~ detecting a contact with the touch-sensitive display (1014) at a first predefined location corresponding to ~~a single~~ one of the plurality of unlock ~~image~~ images (1002, 1008) while the portable electronic device (1000) is in ~~a~~ the locked state~~, wherein the single unlock image is a graphical, interactive user-interface object with which a user interacts in order to unlock the device (208, 308)~~;

moving the ~~single~~ unlock image (1002, 1008) on the touch-sensitive display (1014) in accordance with the movement of the contact while continuous contact with the touch-sensitive display (1014) is maintained;

unlocking the portable electronic device (1000), ~~and~~ ceasing to display the ~~single~~ unlock ~~image~~ images (1002, 1008), and displaying on the touch-sensitive display (1014) user interface objects (1016) associated with the application or event corresponding to the unlock image (1002, 1008) if the moving of the ~~single~~ unlock image (1002, 1008) on the touch-sensitive display (1014) results in movement of the ~~single~~ unlock image (1002, 1008) from the first predefined location to a predefined unlock region on the touch-sensitive display (~~214, 314~~1014); and

maintaining the portable electronic device in the locked state if the moving of the ~~single~~ unlock image (1002, 1008) does not result in movement of the ~~single~~ unlock image (1002, 1008) from the first predefined location to the predefined unlock region on the touch-sensitive display (~~212, 314~~1014)".

Basis for the features of

"selecting a subset of a plurality of unlock images (1002, 1008) for display on the touch-sensitive display (1014)"

and

"wherein the subset of the plurality of unlock images (1002, 1008) is selected based on one or more predefined criteria"

may be found, for example, in paragraph [0103] of the specification as originally filed, which teaches that "*the device may prioritize which unlock images to display. The device may display a subset of the corresponding unlock images on the touch screen at one time. The device may decide which subset to display based on one or more predefined criteria*".

Basis for the feature of

"displaying the selected subset of the plurality of unlock images (1002, 1008) on the touch-sensitive display (1014), wherein each of the plurality of unlock images (1002, 1008) is a graphical, interactive user-interface object with which a user interacts in order to unlock the portable electronic device (1000), wherein each of the plurality of unlock images corresponds to an active application running on the portable electronic device (1000) or to an event received by the portable electronic device (1000) while the portable electronic device (1000) is in a locked state"

may be found, for example, in paragraphs [0062], [0099], [00101] and [00103] of the specification as originally filed.

Specifically, paragraph [0099] of the original specification discloses that "*The device may display multiple unlock images on the touch screen, each unlock image corresponding to an active application or incoming event*", whilst paragraph [00101] states that "*The device displays a plurality of unlock images, each displayed unlock image corresponding to an active application running or an event received while the device is in a locked state*". As disclosed at paragraph [0062] of the original specification, an unlock image is "*a graphical, interactive user-interface object with which the user interacts in order to unlock the device*". Further, as discussed above, paragraph [00103] discloses that "*The device may display a subset of the corresponding unlock images on the touch screen at one time*".

Basis for the features of:

"detecting a contact with the touch-sensitive display (1014) at a first predefined location corresponding to one of the plurality of unlock images (1002, 1008) while the portable electronic device (1000) is in the locked state"; and

"moving the unlock image (1002, 1008) on the touch-sensitive display (1014) in accordance with the movement of the contact while continuous contact with the touch-sensitive display (1014) is maintained"

may be found, for example, in paragraphs [00105] and Figures 11A of the original specification.

Specifically, paragraph [00105] of the original specification recites that "*In Figure 11A, the user makes contact with the touch screen 1014 using her finger 1102 (not shown to scale), at the location corresponding to the second unlock image (1008). The user performs the unlock action gesture by moving the point of contact, dragging the second unlock image 1008*".

Basis for the feature of

"unlocking the portable electronic device (1000), ceasing to display the unlock images (1002, 1008), and displaying on the touch-sensitive display (1014) user interface objects (1016) associated with the application or event corresponding to the unlock image (1002, 1008) if the moving of the unlock image (1002, 1008) on the touch-sensitive display (1014) results in movement of the unlock image (1002, 1008) from the first predefined location to a predefined unlock region on the touch-sensitive display (1014)"

may be found, for example, in paragraphs [0099] and [00106] and Figures 11C and 11D of the original specification.

Specifically, paragraph [0099] discloses that "*The device may display multiple unlock images on the touch screen, each unlock image corresponding to an active application or incoming event/ Performing the unlock action using one of the multiple unlock images unlocks the device and displays the application and/or events corresponding to the unlock image*", whilst paragraph [00106] explains that "*Figure 11C shows the second unlock image 1008 moved to the end of the channel 1010, where the unlock action with respect to the second unlock image 1008 will be completed once the user breaks the contact (and releases the second unlock image 1008)...the unlock action is completed when the unlock image 1008 is moved to the end of the channel 1010, with or without the user breaking contact, and the second unlock image 1008 disappears. As shown in Figure 11D, upon completion of the unlock action with respect to the second unlock image 1008, the device displays on the touch screen the user-interface objects 1006 associated with the application or event corresponding to the second unlock image 1008*".

Basis for the feature of

"maintaining the portable electronic device in the locked state if the moving of the unlock image (1002, 1008) does not result in movement of the unlock image (1002, 1008) from the first predefined location to the predefined unlock region on the touch-sensitive display (1014)" may be found, for example, in paragraphs [0077] and [00105] of the original specification.

Specifically, paragraph [00105] discloses that "*The first and second unlock images and visual cues are similar to the unlock image and visual cues described above, in relation to Figures 4A and 4B*", which teaches the skilled person that the first and second unlock images and visual cues are as described in paragraph [0077]: "*if the user breaks the contact with the touch screen before the unlock image reaches the right end of the channel 404, the unlock image action has failed*". Failure of the unlock image action of course implies that the device will be maintained in its locked state.

Thus, it will be apparent that the specification as originally filed (which is identical to the specification of the parent application) provides direct and unambiguous basis for the amendments to claim 1. Accordingly, the amendments to claim 1 comply with the requirements of Article 123(2) EPC and Article 76(1) EPC regarding added subject matter.

Amendments corresponding to those made to independent claim 1 have been made to the previous independent claims 7 and 10 (now claim 8 and 12 respectively), which amendments find basis in the portions of the original specification cited above in relation to the amendments to claim 1. Accordingly, the amendments to the previous claims 7 and 10 comply with the requirements of Article 123(2) EPC and Article 76(1) EPC regarding added subject matter.

New claims 7 and 13 have been added, based on the disclosure at paragraph [00103] of the original specification that "*the device may display only unlock images corresponding to the most recent events and/or running applications*". These amendments therefore also comply with the requirements of Article 123(2) EPC and Article 76(1) EPC regarding added subject matter.

Added Subject Matter

In the Summons the Examiner objected that the feature of the previous version of claim 1 of "maintaining the portable electronic device in the locked state and maintaining display of the single unlock image if the moving of the single unlock image does not result in movement of the unlock image from the first predefined location to the predefined unlock region on the touch-sensitive display" added subject matter that was not present in the application as originally filed.

To address this objection, the relevant part of claim 1 (and independent claims 8 and 12) has been amended to recite "maintaining the portable electronic device in the locked if the moving of the unlock image (1002, 1008) does not result in movement of the unlock image (1002, 1008) from the first predefined location to the predefined unlock region on the touch-sensitive display (1014)" as discussed above, based on the disclosure of paragraph [0077] of the original specification.

Novelty

It is submitted that the independent claims as currently amended are novel over all of the available prior art, as none of the cited documents discloses a method which displays a subset of a plurality of unlock images on a touch-sensitive display, wherein each of the plurality of unlock images is a graphical, interactive user-interface object with which a user interacts in order to unlock the portable electronic device, and wherein each of the plurality of unlock images corresponds to an active application running on the portable electronic device or to an event received by the portable electronic device while the portable electronic device is in a locked state, and wherein the subset of the plurality of unlock images is selected based on one or more predefined criteria.

Inventive Step

It is further submitted that the subject matter of the independent claims as currently amended involves an inventive step over all of the available prior art, for the following reasons.

D7 is regarded as representing the closest available prior art, as that document relates to a portable electronic device which implements a method for preventing unintentional unlocking of the device.

However, D7 fails to disclose or suggest a method which displays a selected subset of a plurality of unlock images on a touch-sensitive display, in which each of the plurality of unlock images corresponds to an active application running on the device or to an event received by the device when the device is in a locked state and in which the subset of unlock images is selected based upon one or more predefined criteria.

Specifically, D7 fails to disclose the features of claim 1 of:

"selecting a subset of a plurality of unlock images (1002, 1008) for display on the touch-sensitive display (1014)";

"displaying the selected subset of the plurality of unlock images (1002, 1008) on the touch-sensitive display (1014), wherein each of the plurality of unlock images (1002, 1008) is a graphical, interactive user-interface object with which a user interacts in order to unlock the portable electronic device (1000), wherein each of the plurality of unlock images corresponds to an active application running on the portable electronic device (1000) or to an event received by the portable electronic device (1000) while the portable electronic device (1000) is in a locked state, and wherein the subset of the plurality of unlock images (1002, 1008) is selected based on one or more predefined criteria";

"detecting a contact with the touch-sensitive display (1014) at a first predefined location corresponding to one of the plurality of unlock images (1002, 1008) while the portable electronic device (1000) is in the locked state;";

"moving the unlock image (1002, 1008) on the touch-sensitive display (1014) in accordance with the movement of the contact while continuous contact with the touch-sensitive display (1014) is maintained";

"unlocking the portable electronic device (1000), ceasing to display the unlock images (1002, 1008), and displaying on the touch-sensitive display (1014) user interface objects (1016) associated with the application or event corresponding to the unlock image (1002, 1008) if the moving of the unlock image (1002, 1008) on the touch-sensitive display (1014) results in movement of the unlock image (1002, 1008) from the first predefined location to a predefined unlock region on the touch-sensitive display (1014)"; and

"maintaining the portable electronic device in the locked state if the moving of the unlock image (1002, 1008) does not result in movement of the unlock image (1002, 1008) from the first predefined location to the predefined unlock region on the touch-sensitive display (1014)".

These characterising features give rise to a technical effect of preventing accidental unlocking of a device whilst still permitting rapid and straightforward user access to prioritised active applications or events.

The objective technical problem may therefore be framed as "how to prevent accidental unlocking of a device whilst still permitting rapid and straightforward user access to prioritised active applications or events".

In seeking to address this problem, the skilled person would not adapt the teaching of D7 using that of any of the other cited documents to arrive at the invention claimed.

The Examiner's objection of lack of inventive step in the Summons was based upon the combination of D7 with D5 ("Touchscreen Toggle Design"), so that combination will be addressed here first.

D7 contains no disclosure or suggestion whatsoever that applications could be active or that events could be received while the device is in its locked state, and thus also contains no disclosure or suggestion as to how a user might access such applications or events when the device is in its locked state, or that active applications or events could be prioritised in any way. In the absence of any alternative teaching the skilled person would understand that such applications or events would be accessed by performing the swipe gesture to unlock the device and subsequently accessing the relevant application or event via the start menu displayed on the touch screen, as described on page 11 of D7. There is nothing in D7 to suggest that any alternative mechanism is necessary or even desirable.

Thus, the skilled person would not be motivated to attempt to adapt the system of D7 to permit rapid access to active applications or events when the device is in its locked state.

However, if the skilled person were motivated to attempt to adapt the system of D7, he would not combine it with D5 to arrive at the invention now claimed.

It is accepted that the objective technical problem relates to the general domain of user interface design, and so the skilled person would consult documents in that field and would find D5.

From D5 the skilled person would learn of the slider toggle, which is one of a number of toggles that can be used to allow "*lists of devices or options to be presented on the screen*" (see D5, page 667, column 2, third paragraph). The entire teaching of D5 is directed to resolving the confusion between the state indication ("ON" or "OFF") and the possible action label in computer-implemented toggle switches (see, for example, D5, page 667, column 1, paragraphs 1-2). The slider toggle is illustrated as a slider having the labels "ON" and "OFF" at either end, and is said to include a "*yellow pointer*" whose position can be changed, by a sliding/dragging movement, from one side of the toggle to another. A "*simple three step animation*" is said to show the movement of the pointer along the slide.

Thus, the skilled person reading D5 would be taught that one or more slidable graphical, interactive user-interface objects can be displayed on a screen to control the state ("ON" or "OFF") one or more devices or options and whose appearance can change to reflect the current state and the transition between states.

From D7 the skilled person is aware that a left to right swipe gesture can be used to change the state of a device from a locked state to an unlocked state, and so the skilled person might conceivably import the slidable graphical interactive user-interface object from the slider toggle D5 into the device of D7 in order to control the state (locked or unlocked) and to provide visual feedback as to the transition between the locked and unlock states of the device of D7.

However, there is nothing in D5 that would cause the skilled person to use elements of the slider toggle to permit access to an active application or to an event received while a device is in its locked state. As explained above, the entire teaching of D5 is directed to resolving the confusion between the state indication ("ON" or "OFF") and the possible action label in computer-implemented toggle switches. The skilled person would therefore consider that the slidable graphical interactive user-interface object (the slider) of the slider toggle of D5 to be useful in controlling and indicating the state ("ON" or "OFF") of one or more devices or options, but without the benefit of knowledge of the invention as currently claimed would not consider using the slider to permit access to an application that was active when a device was placed in its locked mode, or

to an event received by the device while in its locked mode, since permitting access to an application or event is not the same as controlling the state ("ON" or "OFF") of a device or option.

In other words, the purpose of the slider toggle of D5 is to control and indicate the state of a device or option, and so if the skilled person were to use the slider toggle (or elements thereof) in the system of D7 it would be to enable the user to control the state of the device itself or options on the device, rather than as a mechanism to permit rapid access to applications running on the device or events received by the device when the device is in its locked state.

Even if, for some reason, the skilled person would (or even could) combine the teaching of D5 with that of D7, there is nothing in either document that would motivate him to seek to select only a subset of unlock images corresponding to active applications or events for display, as neither document discloses or suggests anything approaching a selection of such a subset.

Accordingly, it is submitted that the skilled person would not combine the teaching of D5 with that of D7 to arrive at the subject matter of claim 1 as currently amended, and thus that the subject matter of claim 1 involves an inventive step.

The comments on inventive step with respect to the combination of D7 with each of D1-D4 and the combination of D5 and D6 made in the Main Request are equally applicable to this First Auxiliary Request, and will not be repeated here for the sake of brevity.

Accordingly, it is submitted that the subject matter of claim 1 as amended involves an inventive step over all of the available prior art. The subject matter of the corresponding independent claims 8 and 12 also involves an inventive step for the reasons outlined above.

Formal Issues

Parenthesised reference signs have been added to the independent claims where appropriate, and the independent claims have been re-cast in the two-part form with respect to the D7 document.

Concluding Remarks

It is submitted that the enclosed amendments and the comments above address all of the objections raised in the Summons and thus place this application in order for allowance. We therefore request cancellation of the oral proceedings scheduled for 12 June 2017 and grant of a European patent on the basis of the claims of this Second Auxiliary Request.

THIRD AUXILIARY REQUEST

This Third Auxiliary Request comprises a replacement set of 13 claims (presented in clean and marked-up versions) to replace the claims currently on file.

Claim Amendments and Basis

The amendments to the claims in this Third Auxiliary Request combine the amendments made in the First and Second Auxiliary Requests. Thus, basis for the amendments may be found in the sections of the original specification cited in the First and Second Auxiliary Requests above.

Added Subject Matter

The comments on added subject matter made in the First Auxiliary Request are applicable to this Third Auxiliary Request, and will not be repeated here for the sake of brevity.

Novelty and Inventive Step

The comments on novelty and inventive step made in the Second Auxiliary Request are applicable to this Third Auxiliary Request, and will not be repeated here for the sake of brevity.

Formal Issues

Parenthesised reference signs have been added to the independent claims where appropriate, and the independent claims have been re-cast in the two-part form with respect to the D7 document.

Concluding Remarks

It is submitted that the enclosed amendments and the comments above address all of the objections raised in the Summons and thus place this application in order for allowance. We therefore request cancellation of the oral proceedings scheduled for 12 June 2017 and grant of a European patent on the basis of the claims of this Third Auxiliary Request.

CONCLUDING REMARKS

In view of the foregoing we submit that this application is in order for allowance, and we therefore request cancellation of the oral proceedings scheduled for 12 June 2017 and grant of a European patent on the basis of one of the Requests presented here. For the avoidance of doubt, however, we maintain our request for oral proceedings in the event that the Examining Division is minded not to allow the application.

Yours faithfully

Matthew Howell
Professional Representative
WITHERS & ROGERS LLP