

CLAIMS

1. A computer-implemented method for preventing unintentional unlocking of a portable electronic device, the device including a touch-sensitive display, the method comprising:

detecting a contact with the touch-sensitive display at a first predefined location corresponding to a single unlock image while the portable device is in a 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 on the touch-sensitive display in accordance with the movement of the contact while continuous contact with the touch-sensitive display is maintained;

unlocking the portable electronic device if the moving of the single unlock image on the touch-sensitive display results in movement of the single unlock image from the first predefined location to a predefined unlock region on the touch-sensitive display (214, 314); and

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

2. The method of claim 1, wherein the moving comprises movement along any desired path.

3. The method of claim 1, wherein the moving comprises movement along a predefined channel from the first predefined location to the predefined unlock region.

4. The method of claim 1, further comprising displaying visual cues to communicate a direction of movement of the single unlock image required to unlock the device (204, 304).

5. The method of claim 4, wherein the visual cues comprise text.

6. The method of claim 4, wherein the visual cues comprise an arrow indicating a general direction of movement of the single unlock image required to unlock the device.

7. A portable electronic device (100, 400, 500, 700) comprising:

a touch-sensitive display (126);

memory (102);

one or more processors (106); and

one or more modules (144, 150, 152) stored in the memory (102) and configured for execution by the one or more processors (106), the one or more modules (144, 150, 152) including instructions:

to detect a contact with the touch-sensitive display (126) at a first predefined location corresponding to a single unlock image (402, 502, 702) while the portable electronic device (100, 400, 500, 700) is in a locked state, wherein the single unlock image (402, 502, 702) is a graphical, interactive user-interface object with which a user interacts in order to unlock the device (100, 400, 500, 700);

to move the single unlock image (402, 502, 702) on the touch-sensitive display (126) in accordance with movement of the detected contact while continuous contact with the touch-sensitive display (126) is maintained;

to unlock the portable electronic device (100, 400, 500, 700) if the single unlock image (402, 502, 702) is moved from the first predefined location on the touch-sensitive display (126) to a predefined unlock region on the touch-sensitive display (126); and

to maintain the portable electronic device (100, 400, 500, 700) in the locked state if moving the single unlock image (402, 502, 702) on the touch-sensitive display (126) does not result in movement of the single unlock image (402, 502, 702) from the first predefined location to the predefined unlock region on the touch-sensitive display (126).

8. The device of claim 7, further comprising instructions to display visual cues (406) to communicate a direction of movement of the single unlock image (402, 502, 702) required to lock the device (100, 400, 500, 700).

9. The device of claim 8, wherein the visual cues (406) comprise text.

10. A computer program product for use in conjunction with a portable electronic device (100, 400, 500, 700) comprising a touch-sensitive display (126), the computer program product comprising a computer readable storage medium and a computer program mechanism embedded therein, the computer program mechanism comprising instructions for:

detecting a contact with the touch-sensitive display (126) at a first predefined location corresponding to a single unlock image (402, 502, 702) while the portable electronic device

(100, 400, 500, 700) is in a locked state, wherein the single unlock image (402, 502, 702) is a graphical, interactive user-interface object with which a user interacts in order to unlock the device (100, 400, 500, 700);

moving the single unlock image (402, 502, 702) on the touch-sensitive display (126) in accordance with movement of the detected contact while continuous contact with the touch-sensitive display (126) is maintained;

unlocking the portable electronic device (100, 400, 500, 700) if the single unlock image (402, 502, 702) is moved from the first predefined location on the touch-sensitive display (126) to a predefined unlock region on the touch-sensitive display (126); and

maintaining the portable electronic device (100, 400, 500, 700) in the locked state if moving the single unlock image (402, 502, 702) on the touch-sensitive display (126) does not result in movement of the single unlock image (402, 502, 702) from the first predefined location to the predefined unlock region on the touch-sensitive display (126).