06 846 405.6
Apple Inc.

June 16, 2009
A115422WOEP JLa/Plm/BB

New Claims

1. A computer-implemented method of controlling a portable electronic device (400, 1000) comprising a touch-sensitive display (408, 1014), comprising:

detecting (308, 908) contact with the touch-sensitive display (408, 1014) while the device is in a user-interface lock state;

transitioning (314, 914) the device (400, 1000) to a user-interface unlock state if the detected contact corresponds to a predefined gesture; and

maintaining (312, 912) the device (400, 1000) in the user-interface lock state if the detected contact does not correspond to the predefined gesture;

characterized by

moving an unlock image (402, 1002, 1008) along a predefined displayed path on the touch-sensitive display (408, 1014) in accordance with the contact, wherein the unlock image (402, 1002, 1008) is a graphical, interactive user-interface object with which a user interacts in order to unlock the device (400, 1000).

2. The computer-implemented method of claim 1, further comprising displaying (304) the unlock image (402) and one or more visual cues on the touch-sensitive display (408) while the portable electronic device (400) is in a user-interface lock state, wherein the one or more visual cues indicate a movement of the unlock image (402) along the touch-sensitive display (408) that will unlock the device (400).

3. The computer-implemented method of claim 1, further comprising displaying (304) the unlock image (402) on the touch-sensitive display (408) while the device (400) is in a user-interface lock state; and
wherein the predefined gesture corresponds to moving the unlock image (402) along the predefined displayed path on the touch-sensitive display (408) to a predefined location on the touch-sensitive display (408).

4. The computer-implemented method of claim 1, further comprising displaying (304) the unlock image (402) on the touch-sensitive display (408) while the device (400) is in a user-interface lock state; and
wherein the predefined gesture corresponds to moving the unlock image (402) across the touch-sensitive display (408) according to the predefined displayed path on the touch-sensitive display (408).

5. The computer-implemented method of claim 1, further comprising:
displaying (904) a first unlock image (1002) and a second unlock image (1008) on the touch-sensitive display (1014) while the device (1000) is in a user-interface lock state; and
wherein transitioning the device (1000) to a user-interface unlock state comprises:
transitioning (914) the device (1000) to a first active state corresponding to the first unlock image (1002) if the detected contact corresponds to a predefined gesture with respect to the first unlock image (1002); and
transitioning (914) the device (1000) to a second active state distinct from the first active state if the detected contact corresponds to a predefined gesture with respect to the second unlock image (1008).

6. A portable electronic device (100, 400, 1000), comprising:
a touch-sensitive display (126, 408, 1014);
one or more processors (106);
memory (120); and

one or more programs (132 to 146), wherein the one or more programs (132 to 146) are stored in the memory (120) and configured to be executed by the one or more processors (106), the programs (132 to 146) including instructions for:

detecting (308, 908) contact with the touch-sensitive display (126, 408, 1014) while the device (100, 400, 1000) is in a user-interface lock state;

transitioning (314, 914) the device (100, 400, 1000) to a user-interface unlock state if the detected contact corresponds to a predefined gesture; and

maintaining (312, 912) the device (100, 400, 1000) in the user-interface lock state if the detected contact does not correspond to the predefined gesture;

characterized in that

the programs (132 to 146) further include instructions for moving an unlock image (402, 1002, 1008) along a predefined displayed path on the touch-sensitive display (126, 408, 1014) in accordance with the contact, wherein the unlock image (402, 1002, 1008) is a graphical, interactive user-interface object with which a user interacts in order to unlock the device (100, 400, 1000).

7. The portable electronic device of claim 6, wherein the device (100, 400, 1000) is a portable multifunction device.

8. The portable electronic device of claim 6, further comprising instructions for preventing (302, 310, 312) the device (100, 400) from performing a predefined set of actions in response to detecting any contact with the touch-sensitive display (126, 408) that does not correspond to the predefined gesture while the device (100, 400) is in the user-interface lock state.

9. The portable electronic device of claim 6, wherein the predefined displayed path is a channel (404).

10. The portable electronic device of claim 6, wherein the detected contact is a movement of a point of contact across the touch-sensitive display (126, 408) while maintaining continuous contact with the touch-sensitive display (126, 408).

11. The portable electronic device of claim 10, wherein the movement of the point of contact across the touch-sensitive display (126, 408) while maintaining continuous contact with the touch-sensitive display (126, 408) is a horizontal movement.

12. The portable electronic device of claim 6,
wherein the one or more programs (132 to 146) further comprise instructions for displaying (304) the unlock image (402) and one or more visual cues on the touch-sensitive display (126, 408) while the portable electronic device (100, 400) is in a user-interface lock state, wherein the one or more visual cues indicate a movement of the unlock image (402) along the touch-sensitive display (126, 408) that will to unlock the device (100, 400,).

13. The portable electronic device of claim 12, wherein the one or more visual cues include an arrow.

14. The portable electronic device of claim 12, wherein the one or more visual cues include text.

15. The portable electronic device of claim 6,
wherein the one or more programs (132 to 146) further comprise instructions for displaying (304) the unlock image (402) on the touch-sensitive

display (126, 408) while the device (100, 400) is in a user-interface lock state; and

wherein the predefined gesture corresponds to moving the unlock image (402) along the predefined displayed path on the touch-sensitive display (126, 408) to a predefined location on the touch-sensitive display (126, 408).

16. The portable electronic device of claim 6, wherein the one or more programs (132 to 146) further comprise instructions for displaying (304) the unlock image on the touch-sensitive display while the device is in a user-interface lock state; and

wherein the predefined gesture corresponds to moving the unlock image (402) across the touch-sensitive display (126, 408) according to a predefined displayed path on the touch-sensitive display (126, 408).

17. The portable electronic device of claim 6, wherein the one or more programs further comprise instructions for displaying (904) a first unlock image (1002) and a second unlock image (1008) on the touch-sensitive display (1014) while the device (1000) is in a user-interface lock state; and

wherein the instructions for transitioning the device to a user-interface unlock state comprise:

instructions for transitioning the device (1000) to a first active state corresponding to the first unlock image (1002) if the detected contact corresponds to a predefined gesture with respect to the first unlock image (1002), and

instructions for transitioning the device (1000) to a second active state distinct from the first active state if the detected contact corresponds to a predefined gesture with respect to the second unlock image (1008).

18. A computer program product with instructions configured for execution by one or more processors (106), which when executed by a portable electronic device (100, 400, 1000) with a touch-sensitive display (126, 408, 1014), cause the device (100, 400, 1000) to perform the method of any of claims 1 to 5.