[0006] In a first aspect, the disclosure provides a layout method for window control bars, the method is applied to an intelligent terminal, the intelligent terminal is connected with a large-screen display, at least one window is displayed on the large-screen display, and the method comprises:

[0007] receiving detection information from the large-screen display by the intelligent terminal, wherein the detection information comprises ~~screen operation~~ information indicating a type among a plurality of types of inputting information to the large-screen display or ~~screen placement~~ information indicating a position of the large-screen display relative to a horizontal plane;

[0008] determining a display position of a window control bar relative to the at least one window ~~layout positions~~ corresponding to the detection information ~~in~~ based on a preset ~~window layout~~ table by the intelligent terminal, wherein the preset ~~window layout~~ table stores ~~the correspondence~~ corresponding relationships between ~~various~~ a plurality of kinds of detection information and a plurality of display positions of a window control bar relative to a corresponding window ~~layout positions~~; and

[0009] calling a preset window control bar layout interface by the intelligent terminal to lay out the window control bar~~s~~ on the at least one window~~s~~ displayed on the large-screen display based on the determined display position of the window control bar ~~according to the window layout positions~~.

[0010] In a ~~fourth~~ second aspect, the disclosure provides a layout method for window control bars, the method is applied to an intelligent terminal, the intelligent terminal comprises or is connected with a display device, at least one window is displayed on the display device, and the method comprises:

[0011] receiving detection information by the intelligent terminal, wherein the detection information comprises ~~screen operation~~ information indicating a type among a plurality of types of inputting information to the display device ~~and/~~or ~~screen placement~~ information indicating a position of the display device relative to a horizontal plane;

[0012] determining, by the intelligent terminal, a window control bar layout mode

corresponding to the detection information ~~according to the detection information and the~~based on a preset correspondence between the detection information and the window control bar layout mode~~s by the intelligent terminal~~, wherein the window control bar layout mode indicates a display position of a window control bar relative to a corresponding window; and

[0013] laying out, by the intelligent terminal, the window control bar~~s~~ on the at least one window~~s~~ displayed on the display device ~~according to~~based on the determined window layout mode corresponding to the detection information ~~by the intelligent terminal~~.

[0014] In an example ~~fifth aspect~~, the disclosure provides a layout device for window control bars, the device is applied to an intelligent terminal, the intelligent terminal comprises or is connected with a display device, the display device displays at least one window, and the device comprises:

[0015] a receiving unit configured to receive detection information, wherein the detection information comprises screen operation information and/or screen placement information;

[0016] a determining unit configured to determine the window layout mode corresponding to

the detection information according to the detection information and the preset correspondence between the detection information and the window layout modes; and

[0017] a layout unit configured to lay out the window control bars on the windows displayed on the display device according to the window layout mode corresponding to the detection information.

[0018] In a ~~sixth~~ third aspect, the disclosure provides a layout equipment for window control bars, wherein the equipment comprises a memory and a processor,

[0019] the memory is configured to store program codes and transmit the program codes to the processor; and the processor is configured to execute the layout method for the window control bars according to ~~any one of~~ the ~~fourth~~ second aspect according to instructions in the program codes.

[0020] According to the layout method for the window control bars provided by the present disclosure, a large-screen display is connected with an intelligent terminal, and at least one window is displayed on the large-screen display. The intelligent terminal receives detection information from the large-screen display, wherein the detection information includes screen operation information or screen placement information; then the intelligent terminal determines the window layout positions corresponding to the detection information in a preset window layout table, wherein the correspondence between various kinds of detection information and the window layout positions is stored in the window layout table; and afterwards the intelligent terminal calls a preset window control bar layout interface to lay out window control bars on the windows displayed on the large-screen display according to the above window layout positions. Therefore, the window control bars displayed on the screen are adaptively laid out and adjusted according to various kinds of information of the large-screen display, and the user experience is improved.

Brief Description of the Drawings

[0021] In order to more clearly explain the technical solutions in the embodiments of the present disclosure, the drawings required in the description of the embodiments are briefly introduced below. Obviously, the drawings in the following description are only some embodiments of the present disclosure, and those of ordinary skill in the art can obtain other drawings based on these drawings without paying creative labor.

CLAIMS

1. A layout method for window control bars, wherein the method is applied to an intelligent terminal, the intelligent terminal is connected with a large-screen display, at least one window is displayed on the large-screen display, and the method comprises:

receiving detection information from the large-screen display by the intelligent terminal, wherein the detection information comprises ~~screen operation~~ information indicating a type among a plurality of types of inputting information to the large-screen display or ~~screen placement~~ information indicating a position of the large-screen display relative to a horizontal plane;

determining a display position of a window control bar relative to the at least one window ~~layout positions~~ corresponding to the detection information ~~in~~ based on a preset ~~window layout~~ table by the intelligent terminal, wherein the ~~window layout~~preset table stores ~~the correspondence~~corresponding relationships between ~~various~~ a plurality of kinds of detection information and a plurality of display positions of a window control bar relative to a corresponding window ~~layout positions~~; and

calling a preset window control bar layout interface by the intelligent terminal to lay out the window control bar~~s~~ on the at least one window~~s~~ displayed on the large-screen display based on the determined display position of the window control bar~~according to the window layout positions~~.

2. The layout method for the window control bars according to claim 1, wherein the detection information comprises screen operation information, and the screen operation information comprises touch screen operation information and/or mouse operation information;

wherein ~~the step of~~ receiving detection information from the large-screen display by the intelligent terminal comprises:

receiving the touch screen operation information sent by the large-screen display when a touch screen operation is detected by the large-screen display by the intelligent terminal; or

receiving the mouse operation information sent by the large-screen display when a mouse operation is detected by the large-screen display by the intelligent terminal.

3. The layout method for the window control bars according to claim ~~1 or~~ 2, wherein the preset~~window layout~~ table stores ~~the~~ a correspondence between the touch screen operation information and preset positions of displaying window control bars on ~~the~~ lower portions of

corresponding windows, and ~~the~~ a correspondence between the mouse operation information and preset positions of displaying window control bars on ~~the~~ upper portions of the windows.

4. The layout method for the window control bars according to claim 1, wherein the detection information comprises screen placement information; and the screen placement information comprises placement angle information of the large-screen display;

wherein~~the step of~~ receiving detection information from the large-screen display by the intelligent terminal comprises:

receiving the placement angle information, detected by a gravity sensor of the large-screen display, of the large-screen display by the intelligent terminal.

5. The layout method for the window control bars according to claim 4, wherein the preset~~window layout~~ table stores the correspondence between the horizontal placement of the large-screen display and preset positions of displaying window control bars on ~~the~~ lower portions of corresponding windows, and/or the correspondence between the vertical placement of the large-screen display and preset positions of displaying window control bars on ~~the~~ upper portions of ~~the~~ corresponding windows.

6. The layout method for the window control bars according to ~~any one of~~ claim~~s~~ 1~~-5~~, wherein the method further comprises ~~the step~~:

updating the stored corresponding relationships~~correspondence~~ between the ~~various~~ plurality of kinds of detection information and the plurality of display positions of a window control bar relative to a corresponding window ~~layout positions which is stored in the window layout table~~.

7. A layout method for window control bars, wherein the method is applied to an intelligent terminal, the intelligent terminal comprises or is connected with a display device, at least one window is displayed on the display device, and the method comprises:

receiving detection information by the intelligent terminal, wherein the detection information comprises ~~screen operation~~ information indicating a type among a plurality of types of inputting information to the display device ~~and/~~or ~~screen placement~~ information indicating a position of the display device relative to a horizontal plane;

determining, by the intelligent terminal, a window control bar layout mode corresponding to the detection information ~~according to the detection information and the~~ based on a preset correspondence between the detection information and the window control bar layout mode~~s by the intelligent terminal~~, wherein the window control bar layout mode indicates a display position

of a window control bar relative to a corresponding window; and

laying out, by the intelligent terminal, the window control bar~~s~~ on the at least one window~~s~~ displayed on the display device ~~according to~~based on the determined window layout mode corresponding to the detection information ~~by the intelligent terminal~~.

8. The layout method for the window control bars according to claim 7, wherein the detection information further comprises preset instruction information, and the preset instruction information comprises voice instruction information and/or motion track information and/or click operation information.

9. The layout method for the window control bars according to claim 8, wherein the motion track information comprises a motion direction, and the preset correspondence between the detection information and the window control bar layout mode~~s~~ comprises: a position change direction, corresponding to the motion direction, of the window control bars relative to window main bodies;

wherein, the motion direction comprises a contact sliding direction or a motion direction of a signal of external input equipment on the display device.

10. The layout method for the window control bars according to claim 7, wherein the preset correspondence between the detection information and the window control bar layout mode~~s~~ comprises set positions, corresponding to the detection information, of the window control bars relative to the window main bodies, and/or a scaling size, corresponding to the detection information, of the window control bars.

11. The layout method for the window control bars according to claim 10, wherein the screen operation information comprises touch screen operation information and/or external input equipment operation information.

12. The layout method for the window control bars according to claim 11, wherein the preset correspondence between the detection information and the window control bar layout mode~~s~~ comprises ~~at least one of the following correspondences~~:

(1) the touch screen operation information corresponds to the mode that the window control bars are set on the lower portions relative to the window main bodies, and/or corresponds to expansion of the window control bars;

(2) the external input equipment operation information corresponds to the mode that the window control bars are set on the upper portions relative to the window main bodies, and/or corresponds to shrinkage of the window control bars; and

(3) the detection information does not comprise the external input equipment operation information corresponds to the mode that the window control bars are set on the lower portions relative to the window main bodies, and/or corresponds to expansion of the window control bars.

13. The layout method for the window control bars according to claim 10, wherein the screen placement information comprises a placement angle of the display device.

14. The layout method for the window control bars according to claim 13, wherein the preset correspondence between the detection information and the window control bar layout mode~~s~~ comprise~~s~~ at least one of the following correspondences:

(1) when the placement angle of the display device is smaller than a first preset value, the window control bars are set on the lower portions relative to the window main bodies correspondingly, wherein the first preset value ranges from 0 degree to 90 degrees;

(2) when the placement angle of the display device is greater than a second preset value, the window control bars are set on the upper portions relative to the window main bodies correspondingly, wherein the second preset value ranges from 0 degree to 90 degrees;

(3) when the placement angle of the display device is smaller than a third preset value, the window control bars are expanded correspondingly, wherein the third preset value ranges from 0 degree to 90 degrees; and

(4) when the placement angle of the display device is greater than a fourth preset value, the window control bars are shrunk correspondingly, wherein the fourth preset value ranges from 0 degree to 90 degrees.

15. The layout method for the window control bars according to claim 11, wherein when the detection information at least comprises touch screen operation information, the window control bar layout mode corresponding to the detection information is the window control bar layout mode corresponding to the touch screen operation information; and when the detection information does not comprise touch screen operation information but comprises screen placement information, the window control bar layout mode corresponding to the detection information is the window control bar layout mode corresponding to the screen placement information.

16. The layout method for the window control bars according to any one of claims 7-15, wherein the method further comprises the step:

updating the preset correspondence between the detection information and the window control

bar layout mode~~s~~.

17. A layout equipment for window control bars, wherein the equipment comprises a memory and a processor,

the memory is configured to store program codes and transmit the program codes to the processor; and the processor is configured to execute~~—~~ operations according to instructions in the program codes, the operations are applied to an intelligent terminal, the intelligent terminal comprises or is connected with a display device, at least one window is displayed on the display device, and the operations comprise:

receiving detection information by the intelligent terminal, wherein the detection information comprises ~~screen operation~~ information indicating a type among a plurality of types of inputting information to the display device ~~and/~~or ~~screen placement~~ information indicating a position of the display device relative to a horizontal plane;

determining, by the intelligent terminal, a window control bar layout mode corresponding to the detection information ~~according to the detection information and the~~ based on a preset correspondence between the detection information and the window control bar layout mode~~s by the intelligent terminal~~, wherein the window control bar layout mode indicates a display position of a window control bar relative to a corresponding window; and

laying out, by the intelligent terminal, the window control bar~~s~~ on the at least one window~~s~~ displayed on the display device ~~according to~~based on the determined window layout mode corresponding to the detection information ~~by the intelligent terminal~~.

18. The layout equipment for window control bars according to claim 17, wherein the display device is a large-screen display device, and at least one window is displayed on the large-screen display device, and the operations further comprise:

receiving the detection information from the large-screen display by the intelligent terminal~~, wherein the detection information comprises screen operation information or screen placement information~~;

determining ~~window layout positions~~ the display position of the window control bar corresponding to the detection information ~~in~~ based on a preset ~~window layout~~ table by the intelligent terminal, wherein the preset~~window layout~~ table stores ~~the correspondence~~corresponding relationships between ~~various~~ a plurality of kinds of detection information and a plurality of display positions of a window control bar relative to a corresponding window ~~layout positions~~; and

calling a preset window control bar layout interface by the intelligent terminal to lay out the window control bar~~s~~ on the window~~s~~ displayed on the large-screen display based on the determined display position of the window control bar~~according to the window layout positions~~.

19. The layout equipment for window control bars according to claim 17, wherein the detection information further comprises preset instruction information, and the preset instruction information comprises voice instruction information and/or motion track information and/or click operation information.

20. The layout equipment for window control bars according to claim 17, wherein the preset correspondence between the detection information and the window control bar layout mode~~s~~ comprises set positions, corresponding to the detection information, of the window control bars relative to the window main bodies, and/or a scaling size, corresponding to the detection information, of the window control bars.