METHOD, APPARATUS AND ELECTRONIC DEVICE ~~FORMOVING~~ FOR MOVING TARGET ELEMENT

CROSS-REFERENCES TO RELATED APPLICATIONS

[0001] This application claims priority to Chinese Patent Application No.201310499885.X, filed on October 22, 2013, the entire contents of which are incorporated herein by reference.

FIELD OF THE DISCLOSURE

[0002] The present disclosure generally relates to computer technology and, more particularly, relates to methods, apparatus and electronic devices for moving target element.

BACKGROUND

[0003] In an electronic device,data objects of the same type are usually distinguished and operated by displaying various identical or similar target elements. For example, if data objects of the same type are application programs or files, the data objects can be distinguished and operated by displaying icons that are all round-shaped or square-shaped. If data objects of the same type are_pieces in a board game, the data objects can be distinguished and operated by displaying pieces that are all round-shaped.

[0004] When multiple target elements are displayed on the same display interface, there may be a need to move the target elements. For example, when multiple icons are displayed on a desktop, there is a need to move an icon_from a_current location_on the desktop to a target location. When multiple pieces are displayed on a board, e.g., a chessboard, there is a need to move a piece from a current location on the chessboard to a target location on the chessboard.

WHAT IS CLAIMED IS:

1. A method for moving a target element, implemented on an electronic device having a display unit, wherein the display unit displays a display interface, comprising:

receiving a selection signal;

updating a state of a target element on the display interface as a selected state according to the selection signal;

receiving a movement signal linked after the selection signal;

displaying_a notification message of a target location_following the movement signal on the display interface;

receiving a confirmation signal linked after the movement signal; ~~and~~

moving the target element to the target location based on the confirmation signal;~~.~~

~~2. The method according to claim 1,~~ wherein the displaying of the notification message of the target location following the movement signal on the display interface_includes:

determining at least one candidate target location according to a preset rule;

following the movement signal to determine a current matching target location from the at least one candidate target location; and

displaying_the_notification message_at the current matching target location, the notification message including a graphic mark, an arrow mark, a lightening mark, an animation effect, or a combination thereof.

~~3~~2. The method according to ~~any one of~~ claims ~~1 and 2~~, wherein the selection signal includes a clicking signal triggered at a location instructed by a cursor pointing to the target element, and

wherein the updating of the state of the target element on the display interface as the selected state according to the selection signal includes:

updating the cursor and the target element that the cursor points to_into a display state including a hand shape grabbing the target element, wherein the grabbed target element and the display interface have a predetermined distance and a predetermined angle maintained therebetween.

3.~~4.~~ The method according to ~~any one of~~ claims ~~1 and 2~~, wherein, after receiving the movement signal linked after the selection signal, the method further includes:

changing_a cursor moved by the movement signal into a display state including a hand shape grabbing the target element.

~~5~~4. The method according to ~~any one of~~ claims ~~1 and 2~~, wherein, after receiving the movement signal linked after the selection signal, the method further includes:

displaying_the target element having a predetermined transparency at an original location of the target element.

5~~6~~. The method according to claim ~~5~~4, wherein the displaying of the target element having the predetermined transparency at the original location of the target element includes:

calculating a distance between the original location and a location indicated by the movement signal;

determining whether the distance reaches a predetermined threshold value; and

when the distance does not reach the predetermined threshold value, displaying the target element having a dynamic transparency at the original location according to the distance, wherein the distance has a negative correlation with the dynamic transparency; or

when the distance reaches the predetermined threshold value, displaying the target element having a static transparency at the original location according to the distance, wherein the static transparency is a predefined value.

~~7~~6. The method according to ~~any one of~~ claims 1 ~~and 2~~, wherein the moving of the target element to the target location based on the confirmation signal includes:

determining whether another target element exists at the target location;

when that no another target element exists at the target location is determined, moving the target element to the target location; and

when that the another target element exists at the target location is determined:

moving the target element to the target location; and

moving the another target element to another predefined location or cancelling displaying of the another target element.

~~8~~7. The method according to claim ~~7~~6, wherein, before moving the target element to the target location, the method further includes:

displaying a first animation, wherein the first animation includes dropping the target element onto the target location.

89. The method according to claim 76, wherein, after moving the target element to the target location, the method further includes:

displaying the notification message on one or both of an original location of the target element and a moving track of the target element, wherein the notification message includes the graphic mark, the arrow mark, the lightening mark, the animation effect, or a combination thereof.

109. The method according to claim 76, wherein, before moving the target element to the target location and moving the another target element to the another predefined location or cancelling the displaying of the another target element, the method further includes:

displaying a second animation, wherein the second animation includes:

dropping the target element on the another target element;

withdrawing the another target element from between the target location and the target element;

moving the another target element to the another predefined location or cancelling the displaying of the another target element; and

dropping the target element on the target location.

1110. The method according to claim 21, wherein, after receiving the confirmation signal linked after the movement signal, the method further includes:

when the current matching target location does not exist, keeping the target element on the original location.

~~12~~11. The method according to claim 1, wherein, after moving the target element to the target location based on the confirmation signal, the method further includes:

detecting whether a pre-defined condition is triggered after the target element is moved to the target location; and

when that the pre-defined condition is triggered is detected, performing at least one of:

playing a third animation, wherein the third animation includes displaying a pre-defined character and shaking the display interface or a predetermined region on the display interface;

generating a prompt sound; and

vibrating the electronic device.

~~13~~12. An apparatus for moving a target element, comprising:

a first receiving module,_configured to_receive a selection signal;

a state-updating module, configured to_update a state of a target element on a display interface to a selected state according to the selection signal received by the first receiving module;

a second receiving module, configured to receive a movement signal linked after the selection signal received by the first receiving module;

a notification-displaying module, configured to display a notification message of a target location_on the display interface following the movement signal;

a third receiving module, configured to receive a confirmation signal linked after the movement signal; ~~and~~

an element-moving module, configured to move the target element to the target

location_based on the confirmation signal;~~.~~

~~14. The apparatus according to claim 13,~~ wherein the notification-displaying module includes:

a_location-determining unit, configured to determine at least one candidate target location according to a preset rule;

a match-determining unit, configured to_follow the movement signal to determine a current matching target location from the at least one candidate target location; and

a notification-displaying unit, configured to display the_notification message_at the current matching target location, the notification message_including a graphic mark, an arrow mark, a lightening mark, an animation effect, or a combination thereof.

~~15~~13. The apparatus according to ~~any one of~~ claim~~s 13 and 14~~ 12, wherein the selection signal includes a clicking signal triggered at a location instructed by a cursor pointing to the target element, and the state-updating module is configured to:

update the cursor and the target element pointed to by the cursor into a display state including a hand shape grabbing the target element, wherein the grabbed target element and the display interface have a predetermined distance and a predetermined angle maintained therebetween.

~~16~~14. The apparatus according to ~~any one of~~ claim~~s 13 and 14~~ 12, further including:

a shape-changing module, configured to change a cursor moved by the movement signal into a display state including a hand shape grabbing the target element.

~~17~~15. The apparatus according to ~~any one of~~ claim~~s 13 and 14~~ 12, further including:

an element-displaying module, configured to display the target element having a predetermined transparency at an original location of the target element.

~~18~~16. The apparatus according to claim ~~17~~15, wherein the element-displaying module includes:

a distance-calculating unit, configured to calculate a distance between the original location and a location indicated by the movement signal;

a threshold-value-determining unit, configured to determine whether the distance reaches a predetermined threshold value;

a first displaying unit, configured to, when the distance does not reach the predetermined threshold value, display the target element having a dynamic transparency at the original location according to the distance, wherein the distance has a negative correlation with the dynamic transparency; and

a second displaying unit, configured to, when the distance reaches the predetermined threshold value, display the target element having a static transparency at the original location according to the distance, wherein the static transparency is a predefined value.

~~19~~17. The apparatus according to ~~any one of~~ claim~~s 13 and 14~~ 12, wherein the element-moving module includes:

an element-determining unit, configured to determine whether another target element exists at the target location;~~,~~

a first moving unit, configured to, when that no another target element exists at the target location is determined, move the target element to the target location; and

a second moving unit, configured to, when that the another target element exists at the target location is determined:

move the target element to the target location; and

move the another target element to another predefined location or cancel displaying of the another target element.

~~20~~18. The apparatus according to claim ~~19~~17, wherein the element-moving module further includes:

a first-animation-displaying unit, configured to display a first animation, wherein the first animation includes the target element being dropped onto the target location.

~~21~~19. The apparatus according to claim ~~19~~17, wherein_the element-moving module further includes:

a_notification-displaying unit, configured to display the notification message on one or both of an original location of the target element and a moving track of the target element, wherein the notification message includes the graphic mark, the arrow mark, the lightening mark, the animation effect, or a combination thereof.

~~22~~20. The apparatus according to claim ~~19~~17, wherein_the element-moving module further includes:

a second-animation-displaying unit, configured to display a second animation, wherein the second animation includes:

dropping the target element on the another target element;

withdrawing the another target element from between the target location and the target element;

moving the another target element to the another predefined location or cancelling the displaying of the another target element; and

dropping the target element on the target location.

~~23~~21. The apparatus according to claim ~~14~~12, further including:

a_location-keeping unit, configured to, when the current matching target location does not exist, keep the target element at the original location.

~~24~~22. The apparatus according to claim ~~13~~12, further including:

a condition-detecting module, configured to detect whether a pre-defined condition is triggered after the target element is moved to the target location; and

an animation-playing module, configured to, when that the pre-defined condition is triggered is detected, perform at least one of:

playing a third animation, wherein the third animation includes displaying a pre-defined character and shaking the display interface or a predetermined region on the display interface;

generating a prompt sound; and

vibrating the electronic device.

~~25~~23. An electronic device, comprising the apparatus according to any one of claims ~~13~~12-~~24~~22.