

the control element. In an interactive control device in the form of a touch screen, this is normally the surface of graphical representation. In a control device having a contactless sensor, this may be a spatial region, which is defined preferably at a short distance in front of the graphical representation of the control element or bordering to the graphical representation.

[0066] If the body part, in this case finger 71, is located in the activation region, then the control action associated with the control element is activated.

[0067] FIG. 6A shows a schematic view of a display device 150, on which control elements 151 are situated in two groups 152, 153. In first group 152, associated control elements 151 are arranged as a list. In the second group, control elements 151 are arranged as a number pad. In FIG. 6A, control elements 151 of the two groups 152, 153 only take up a small area on display device 150. A large part of the surface may be used for representing additional information.

[0068] If a finger 155 approaches display device 150, control elements 151 in one of the two groups 152, 153 will be magnified. If a control intention is ascertained for one of control elements 151 of the first group 152 developed as a list, then the list is magnified, as shown in FIG. 6B. If finger 155 rather approaches second group 153 of control elements 151 developed as a number pad, then these control elements are magnified, as shown in FIG. 6C.

[0069] While in the exemplary embodiment described in connection with FIGS. 5A through 5D, the center points of the control elements may not be shifted on the display device, in the exemplary embodiment described in connection with FIGS. 6A through 6C, the positions of the control elements are markedly changed.

[0070] The following will describe, with reference to FIGS. 7A and 7B, how an ascertained control intention may be utilized in order to select a control element from a list.

[0071] FIG. 7A shows a horizontal list 160 of control elements 161-169 on a display device 170. If a control intention is ascertained, then a focus is assigned to one of control elements 165 of list 160. In this case, the focus is assigned to control element 165 labeled by the number "5". This is indicated in that control element 165 is magnified. Normally, the focus is assigned to a control element of list 160 shown at the center of control device 170. Alternatively, the focus may also be assigned to a control element displayed on an edge.

[0072] The focus may be "shifted" in that the user moves his finger 171 to an edge of display device 170. In FIG. 7A, Finger 171 is located on a right edge 172 of display device 170. In example embodiments, this allows for the focus to be shifted to the right.

[0073] Alternatively, there may be provision for the focus to remain at the center of display device 170 and for control elements 161-169 to be shifted relative to the focus. That is, the control fields move to the left, as is indicated by an arrow 173. This means that the focus is next assigned to control field 166 having the number "6", control field 166 being magnified at the center of display device 170.

[0074] In both exemplary embodiments, the focus scrolls or leafs through the list of control elements.

[0075] This process may be terminated in that finger 171 is moved across the center of display device 170. Subsequently, the control element to which the focus is assigned may be activated in order to trigger the associated control action.

[0076] The scrolling or leafing speed may vary as a function of the position of finger 171. That is, the further the finger is moved from the center, the faster the scrolling/leafing occurs.

[0077] The leafing/scrolling direction may coincide with the direction in which the finger is moved or may be opposite. In the case of a list there may be a further provision for the list to be considered endless. This means that a final list element is again followed by the first list element.

[0078] FIG. 7B shows a display device 180, on which a list of control elements 181-186 is displayed. If a finger 187 approaches display device 180, then a focus is assigned to one of control elements 181-186. Control element 183, to which the focus is assigned, is magnified for optimal operation. Finger 187 is located on a lower edge 188 of display device 180. This has the effect that control element 181-186 move upward "through the focus", as indicated by arrow 189. If finger 187 moves into a center of display device 180, the scrolling process stops. The control element in the focus may be activated in an optimal manner. If finger 187 is moved into a position between the focus and an upper edge 190 of display device 180, then control elements 181-186 move downward. Thus it is possible to scroll in both directions.

[0079] It is not necessary for the focus to remain fixed in one position on the display device. Rather, it may move along with the control element to which it is assigned. If this control element is further away from a predefined setpoint position of the focus than the subsequent control element of the list, then the focus jumps to this subsequent control element.

[0080] Example embodiments may provide for multiple control elements to be magnified. For example, a primary focus and two secondary focuses may be provided. The control elements assigned to the secondary focuses are magnified, for example, but somewhat smaller than the control element assigned to the primary focus.

[0081] Example embodiments may provide for a control element, for which the highest control probability is ascertained (for example, the control element that is located in the fixed focus or the center of the control spotlight), to be activated if the body part of the user, for example the finger, abides unchanged for a predefined dwell time without an adaptation of the represented information occurring. This applies particularly also if the finger is not located in the actual activation region of the control element. This allows for a quasi activationless control of a control element.

[0082] FIG. 8 schematically show an example embodiment of an interactive control device 100 in a motor vehicle 101. This includes a display device 102, on which information may be represented in a visual and a haptic layout. Control device 100 has receiving sensors 104 integrated into it, which are able to receive in a contactless manner high-frequency signals transmitted via a body 106, 108 of a user, which are fed into the bodies by transducers 110, 112, which are situated in proximity to bodies 106, 108. Signal transducers 110, 112 are connected to a transducer unit 113, which in turn is coupled to a vehicle bus system 126. Together with receiving sensors 104, which already represent a sensor unit in the narrower sense, transducer unit 113 may also be regarded as a sensor system or a sensor unit. Interactive control device 100 further includes a control unit 120, which includes a representation module 122. Representation module 122 processes the information to be represented on display device 102. In particular, representation module 122 adapts the information to a visual or a haptic layout. Interactive control device 100 further includes a receiver unit 124, which