

- responsive to a detection signal, estimating a distance of the object from the panel based on the signal; and comparing the estimated distance to the predetermined distance.
- 3.** The method of claim 1, wherein the reconfiguring comprises:
dynamically decreasing the size of the pixels if the object is within the predetermined distance of the panel.
- 4.** The method of claim 1, wherein the reconfiguring comprises:
dynamically changing the shape of the pixels if the object is within the predetermined distance of the panel.
- 5.** The method of claim 1, wherein the object comprises a hand or a finger.
- 6.** A method for dynamically reconfiguring sensor size and shape in a sensor panel, the sensor panel including a plurality of sensing pixels placed along the panel at a predetermined initial size and shape, the method comprising:
determining that proximity of an object to the panel is below a predetermined distance; and
dynamically reconfiguring at least one of the size or shape of the pixels according to a predetermined factor based on the determined proximity to form a plurality of subgroups of pixels.
- 7.** The method of claim 6, wherein the determining comprises:
based on signals from the pixels, estimating the proximity of the object to the panel; and
comparing the estimated proximity to the predetermined distance.
- 8.** The method of claim 6, further comprising:
recursively, until a predetermined condition is met,
resetting the predetermined distance to a predetermined distance closer to the panel;
determining that the proximity of the object to the panel is below the reset predetermined distance; and
dynamically decreasing the size of the previously formed plurality of subgroups of pixels by the predetermined factor to form a new plurality of subgroups of pixels.
- 9.** The method of claim 6, wherein the predetermined factor is a multiple of two.
- 10.** The method of claim 8, wherein the predetermined condition is that the predetermined distance to the panel is at a minimum defined distance or that the size of the pixels has reached a minimum defined size.
- 11.** A method for dynamically reconfiguring sensor size and shape in a sensor panel, the sensor panel including a plurality of sensing pixels placed along the panel at a predetermined initial size and shape, the method comprising:
responsive to a sensed event, recognizing the event as a gesture;
selecting a portion of the panel in which the event was sensed, the portion of the panel including the entire panel or any portion thereof; and
dynamically reconfiguring at least one of the size or shape of the pixels in the selected portion of the panel based on recognized characteristics of the gesture.
- 12.** The method of claim 11, wherein the recognized characteristics of the gesture include a hand position, a hand motion, a hand velocity, a finger position, a finger motion, or a finger velocity.
- 13.** The method of claim 12, wherein the reconfiguring comprises:
dynamically reconfiguring the at least one of the size or shape as the hand position or the finger position gets closer to the panel.
- 14.** The method of claim 12, wherein the reconfiguring comprises:
dynamically reconfiguring the at least one of the size or shape as the hand motion or the finger motion becomes more complex.
- 15.** The method of claim 12, wherein the reconfiguring comprises:
dynamically reconfiguring the at least one of the size or shape as the hand velocity or the finger velocity increases in the perpendicular direction or in the parallel direction relative to the panel.
- 16.** A method for dynamically reconfiguring sensor size and shape in a sensor panel, the sensor panel including a plurality of sensing pixels placed along the panel at a predetermined initial size and shape, the method comprising:
selecting an application for executing on a device comprising the panel;
selecting a portion of the panel which requires at least one of a different size or shape for gestures performed during the selected application, the portion of the panel including the entire panel or any portion thereof; and
dynamically reconfiguring at least one of the size or shape of the pixels in the selected portion of the panel to the at least one of the respective different size or shape.
- 17.** The method of claim 16, wherein the application includes a selection from a pop-up menu, the reconfiguring comprising:
dynamically decreasing the size of the pixels in the selected portion of the panel to detect gestures that select from the pop-up menu.
- 18.** The method of claim 16, wherein the application includes a mouse rollover, the reconfiguring comprising:
dynamically increasing the size of the pixels in the selected portion of the panel to detect gestures that mimic movements of a mouse input device.
- 19.** The method of claim 16, wherein the application includes a selection of an icon, the reconfiguring comprising:
dynamically decreasing the size of the pixels in the selected portion of the panel to detect gestures that select the icon.
- 20.** The method of claim 16, wherein the application includes a device wake-up, the reconfiguring comprising:
dynamically increasing the size of the pixels in the selected portion of the panel to detect gestures that trigger the wake-up.
- 21.** The method of claim 16, wherein the application includes an interactive game, the reconfiguring comprising:
dynamically increasing the size of the pixels in the selected portion of the panel to detect simple gestures; and
dynamically decreasing the size of the pixels in the selected portion of the panel to detect complex gestures.
- 22.** A capacitive sensing device, comprising:
a plurality of capacitive sensing pixels; and
a processor configured to:
set at least one of a size or shape of the pixels,
in response to signals from the pixels, determine a parameter of an object detected by the signals,
select a portion of the pixels that require at least one of a different size or shape based on the determined parameter, the portion including all the pixels or any portion thereof, and