US009411048B2

(12) **United States Patent**
Vieta

(10) **Patent No.: US 9,411,048 B2**
(45) **Date of Patent: Aug. 9, 2016**

(54) **ELECTRONIC DEVICE WITH ADAPTIVE PROXIMITY SENSOR THRESHOLD**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 135 days.

(21) Appl. No.: **13/599,664**

(22) Filed: **Aug. 30, 2012**

(65) **Prior Publication Data**

US 2014/0062896 A1 Mar. 6, 2014

(51) **Int. Cl.**

G06F 1/32	(2006.01)
G01S 17/02	(2006.01)
H04M 1/725	(2006.01)
G01S 7/48	(2006.01)
H04W 52/02	(2009.01)

(52) **U.S. Cl.**

CPC ***G01S 17/026*** (2013.01); ***G01S 7/4802*** (2013.01); ***G06F 1/3231*** (2013.01); ***G06F 1/3265*** (2013.01); ***H04M 1/72519*** (2013.01); ***H04W 52/0254*** (2013.01); ***H04W 52/0267*** (2013.01); *H04M 2250/12* (2013.01); *H04M 2250/22* (2013.01); *H04W 52/0251* (2013.01); *Y02B 60/1242* (2013.01); *Y02B 60/1289* (2013.01)

(58) **Field of Classification Search**

CPC ... G01S 17/026; G06F 1/3231; G06F 1/3265; H04M 1/72; H04W 52/0251

See application file for complete search history.

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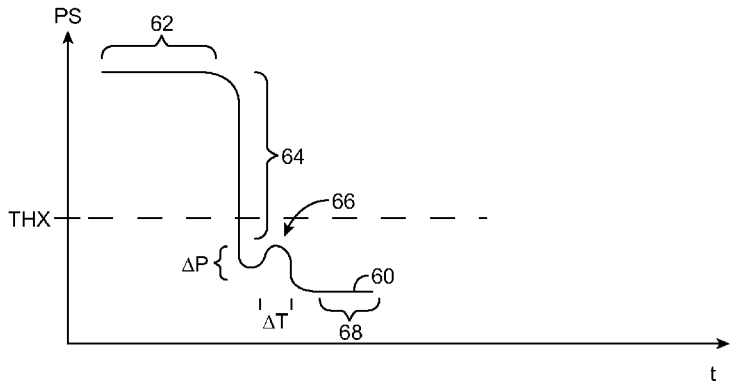
(57) **ABSTRACT**

An electronic device may be provided with electronic components such as a touch screen display. The touch screen display may be controlled based on information from a proximity sensor. The proximity sensor may have a light source that emits infrared light and a light detector that detects reflected infrared light. When the electronic device is in the vicinity of a user's head, the proximity sensor may produce data indicative of the presence of the user's head. Variations in proximity sensor output due to user hair color and smudges on the proximity sensor can be accommodated by using a dynamically adjustable proximity sensor data threshold in processing proximity sensor data. Proximity sensor data may be analyzed in real time to detect signal strength fluctuations that are indicative of the presence of low-reflectively dark hair on the user's head. Threshold adjustments may be based on the presence of dark hair.

19 Claims, 8 Drawing Sheets