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- (54) Title:** ORTHOGONAL SIGNALING TOUCH USER, HAND AND OBJECT DISCRIMINATION SYSTEMS AND METHODS

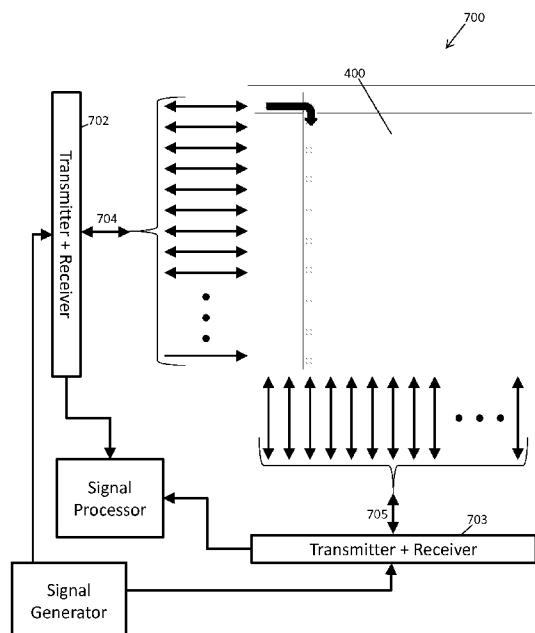


FIG. 7

(57) Abstract: A system and method for distinguishing between sources of simultaneous touch events on a touch sensitive device are disclosed. The touch sensitive device includes row conductors and column conductors, the path of each of the row conductors crossing the path of each of the column conductors. Orthogonal row signals are generated on the row conductors and orthogonal column signals are generated on the column conductors. In an embodiment, an amount of each of the plurality of orthogonal row signals present on each of the plurality of row conductors is detected, an amount of each of the plurality of orthogonal column signals present on each of the plurality of column conductors is detected, and at least one of such amounts is used to associate each of the plurality of simultaneous touch events with a discrete source. The strength of such detected "crosstalk" between row conductors can be used to distinguish two or more touch events, such as by distinguishing a two-handed gesture from a one-handed gesture, distinguishing two touch events as having been initiated by different users, distinguishing a passive object from a hand, identifying a passive object, improving palm rejection and improving accidental-touch rejection.



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