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(54) **SYSTEMS AND METHODS FOR ANTENNA OBSTRUCTION DETECTION AND MITIGATION**

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(57) **ABSTRACT**

Obstruction detecting logic may execute touch-sensing algorithms on the electronic device, which may detect when a user is gripping the electronic device from the side, when the fingers or hand of the user is on the edge of the electronic device, when the user is using one or more fingers to touch the electronic device, and may determine thumb and finger orientation. Using the touch-sensing methods, it may be determined which antennas are obstructed. To mitigate negative antenna performance due to the determined obstruction, one or more compensation actions may be taken. The touch-sensing algorithms may estimate user thumb/finger orientation and velocity, which may be used to predict future antenna occlusion (e.g., if the hand of the user is in motion).