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(54) **Title**: METHOD AND APPARATUS FOR PERFORMING DEVICE-TO-DEVICE DISCOVERY

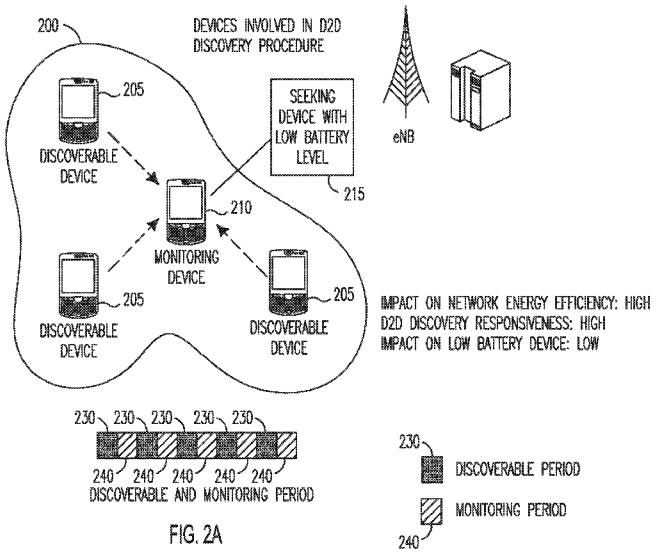


FIG. 2A

(57) **Abstract**: Methods and apparatus for performing device-to-device (D2D) discovery are described. A service discovery process may include a discoverable device (e.g., a wireless transmit/receive unit (WTRU)) sending a discovery request, over a wireless connection, for a radio resource for the purpose of performing a transmission for radio frequency (RF) proximity detection for a given service. The WTRU may receive a discovery response including a configuration for RF proximity detection from a network, which configuration may be associated to the service. The configuration for RF proximity may be received by dedicated signaling, (e.g., physical downlink shared channel (PDSCH)), in particular for a discoverable WTRU. The configuration for RF proximity may be received on a broadcast channel, (e.g., a discovery shared channel (DISCH)), in particular for a monitoring WTRU, and may include one or more service identities, each associated with an RF proximity detection configuration, or a validity information and a measurement configuration.

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