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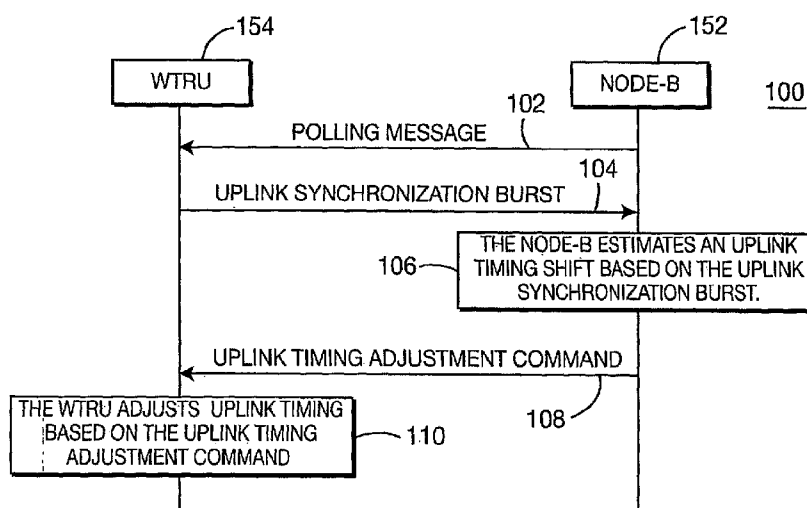
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[Continued on next page]

(54) **Title:** METHOD AND APPARATUS FOR MAINTAINING UPLINK SYNCHRONIZATION AND REDUCING BATTERY POWER CONSUMPTION



(57) **Abstract:** A Node-B sends a polling message to a wireless transmit/receive unit (WTRU). The WTRU sends an uplink synchronization burst in response to the polling message without contention. The Node-B estimates an uplink timing shift based on the synchronization burst and sends an uplink timing adjustment command to the WTRU. The WTRU then adjusts uplink timing based on the uplink timing adjustment command. Alternatively, the Node-B may send a scheduling message for uplink synchronization to the WTRU. The WTRU may send a synchronization burst based on the scheduling message. Alternatively, the WTRU may perform contention-based uplink synchronization after receiving a synchronization request from the Node-B. The WTRU may enter an idle state instead of performing a handover to a new cell when the WTRU moves to the new cell. A discontinuous reception (DRX) interval for the WTRU may be set based on activity of the WTRU.



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