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(54) Title: UPLINK SOUNDING REFERENCE SIGNALS CONFIGURATION AND TRANSMISSION

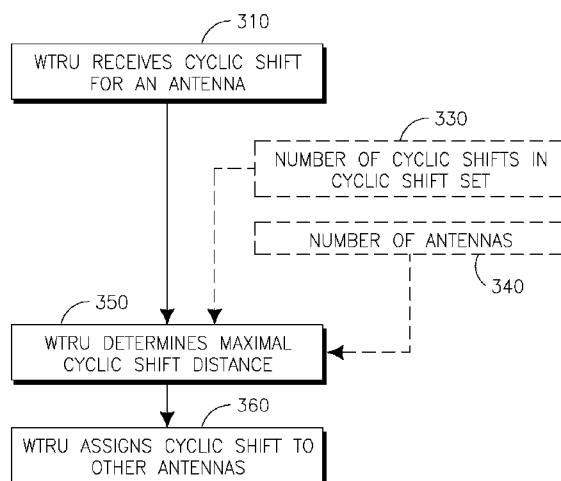


FIG. 3

(57) Abstract: Methods and apparatus for sounding reference signals (SRS) configuration and transmission. The methods include receiving configuration of wireless transmit/receive unit (WTRU) -specific SRS subframes for transmitting SRS and upon receipt of a trigger, transmitting the SRS for a number of antennas. The SRS transmissions may occur in each subframe of a duration of WTRU-specific SRS subframes that start a number of WTRU-specific SRS subframes after a triggering subframe. For multiple SRS transmissions from multiple antennas, cyclic shift multiplexing and different transmission combs may be used. The cyclic shift for an antenna may be determined from a cyclic shift reference value. The cyclic shift determined for each antenna providing a maximum distance between cyclic shifts for the antennas transmitting SRS in a same WTRU-specific subframe. SRS transmissions from multiple antennas in the WTRU-specific subframe may be done in parallel. Methods for handling collisions between SRS and physical channels are presented.



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