

CLAIMS

1. A method for use in a wireless transmit/receive unit (WTRU), the method comprising:

maintaining a Basic Service Set (BSS) parameter update counter associated with a BSS associated with a primary connectivity radio (PCR) transceiver;

receiving, via the PCR transceiver, a beacon frame or a wake-up radio (WUR) action frame that includes a WUR operation element having a first counter value indicating a current value of the BSS parameter update counter associated with the BSS of the PCR transceiver;

updating the BSS parameter update counter to the first counter value received in the WUR operation element;

deactivating the PCR transceiver and entering a WUR mode, wherein the PCR transceiver enters into a doze state;

receiving a WUR frame that includes a second counter value indicating that an update of a plurality of BSS parameters associated with the BSS of the PCR transceiver is available; and

on a condition that the second counter value is different than the BSS parameter update counter, activating the PCR transceiver to receive a beacon frame including an update of the plurality of BSS parameters.

2. The method of claim 1, wherein the action frame is a WUR mode setup frame.

3. The method of claim 1, further comprising activating a WUR transceiver to enter the WUR mode after the PCR transceiver is deactivated, wherein the WUR transceiver is a companion radio.

4. The method of claim 1, wherein the WUR frame is a broadcast WUR wake-up frame.

5. The method of claim 1, further comprising:
transmitting, via the PCR transceiver in an awake state, a response frame in response to the WUR frame.

6. A wireless transmit/receive unit (WTRU) comprising:
a primary connectivity radio (PCR) transceiver; and
a processor,
the processor and the PCR transceiver configured to:
maintain a Basic Service Set (BSS) parameter update counter associated with a BSS of the PCR transceiver;
receive a beacon frame or a wake-up radio (WUR) action frame that includes a WUR operation element having a first counter value indicating a current value of the BSS parameter update counter associated with the BSS associated with the PCR transceiver;
update the BSS parameter update counter to the first counter value received in the WUR operation element;
deactivate the PCR transceiver and enter a WUR mode, wherein the PCR transceiver enters into a doze state;
receive, while in the WUR mode, a WUR frame that includes a second counter value indicating that an update of a plurality of BSS parameters associated with the BSS of the PCR transceiver is available; and
on a condition that the second counter value is different than the BSS parameter update counter, activate the PCR transceiver to receive a beacon frame including an update of the plurality of BSS parameters.

7. The WTRU of claim 6, wherein the action frame is a WUR mode setup frame.

8. The WTRU of claim 6, wherein the processor is further configured to activate a WUR transceiver to enter the WUR mode after the PCR transceiver is deactivated, wherein the WUR transceiver is a companion radio.

9. The WTRU of claim 6, wherein the WUR frame is a broadcast WUR wake-up frame.

10. The WTRU of claim 6, wherein the PCR transceiver in an awake state is further configured to transmit a response frame in response to the WUR frame.