CLAIMS

What is Claimed:

1. A wireless transmit/receive unit (WTRU) configured to serve as a relay, the WTRU comprising:

a processor; and

a transceiver;

the processor and the transceiver configured to send or receive, over a PC5 unicast link to a remote WTRU, a first protocol data unit (PDU) including a first internet protocol (IP) address associated with a PDU session utilizing session service and continuity mode 3 (SSC3);

the processor and the transceiver configured to receive, from a network node, a message for modification of the PDU session including a cause value indicating that reactivation is requested;

the processor and the transceiver configured to send a message for modification of the PDU session utilizing SSC3;

the processor and the transceiver configured to receive new IP prefix information from the network node;

the processor and the transceiver configured to send a message including the new IP prefix information over the PC5 unicast link to the remote WTRU; and

the processor and the transceiver configured to send or receive a second PDU over the PC5 unicast link to the remote WTRU, the second PDU including a second IP address generated for the PDU session based on the new IP prefix information.

2. The relay WTRU of claim 1, wherein the message sent to the remote WTRU including the new IP prefix information is an advertisement message.

3. The relay WTRU of claim 1, the processor and the transceiver configured to send, over the link to the remote WTRU, a link indication message indicating that the new IP prefix information is available.

4. The relay WTRU of claim 3, the processor and the transceiver configured to receive, over the link to the remote WTRU, a message requesting the new IP prefix information.

5. The relay WTRU of claim 4, wherein the sending of the message including the new IP prefix information is responsive to the message requesting the IP prefix information.

6. The relay WTRU of claim 1, wherein the PDU session is associated with a first PDU session anchor and a second PDU session anchor.

7. The remote WTRU of claim 5, wherein the message requesting the new IP prefix information is a link identifier update (LIU) request message and wherein the message including the new IP prefix information is a LIU response message.

8. The relay WTRU of claim 7, wherein the processor and the transceiver are configured to receive an acknowledgment message in response to the sent message including the new IP prefix information.

9. A method performed by a wireless transmit/receive unit (WTRU) configured to serve as a relay, the method comprising:

sending or receiving, over a PC5 unicast link to a remote WTRU, a first protocol data unit (PDU) including a first internet protocol (IP) address associated with a PDU session utilizing session service and session continuity mode 3 (SSC3);

receiving, from a network node, a message for modification of the PDU session including a cause value indicating that reactivation is requested;

sending a message for modification of the PDU session utilizing SSC3;

receiving new IP prefix information from the network node;

sending a message including the new IP prefix information over the PC5 unicast link to the remote WTRU; and

sending or receiving a second PDU over the PC5 unicast link to the remote WTRU, the PDUs including a second IP address generated for the modified PDU session based on the new IP prefix information.

10. The method of claim 9, wherein the message sent to the remote WTRU including the new IP prefix information is an advertisement message.

11. The method of claim 9, further comprising sending, over the PC5 unicast link to the remote WTRU, a link indication message indicating that the new IP prefix information is available.

12. The method of claim 11, further comprising receiving, over the PC5 unicast link to the remote WTRU, a message requesting the new IP prefix information.

13. The method of claim 12, wherein the sending of the message including the new IP prefix information is responsive to the message requesting the new IP prefix information.

14. The method of claim 9, wherein the PDU session is associated with a first PDU session anchor and a second PDU session anchor.

15. The method of claim 9, wherein the message requesting the new IP prefix information is a link identifier update (LIU) request message and wherein the message including the new IP prefix information is a LIU response message.

16. The method of claim 15, further comprising receiving an acknowledgment message in response to the sent message including the new IP prefix information.