CLAIMS

What is Claimed:

1. A first wireless transmit/receive unit (WTRU) for establishing a communication link, the first WTRU comprising:

a processor, the processor configured to:

send a first message to a second WTRU, wherein the first message indicates a request to communicate with the second WTRU;

receive a second message from a second WTRU, the second message indicating a set of least significant bits (LSBs) that are associated with the second WTRU;

determine a security key identifier using a set of most significant bits (MSBs) and the set of LSBs, wherein the set of MSBs are associated with the first WTRU; and

send a third message to the second WTRU using a secure communication link, wherein the secure communication link is associated with the security key identifier.

2. The first WTRU of claim 1, wherein the first message comprises a list of supported vehicle to everything (V2X) services.

3. The first WTRU of claim 1, wherein the set of LSBs is a first set of LSBs, and wherein the processor is further configured to send the third message to the second WTRU using the secure communication link if it is determined that the first set of LSBs is different from a second set of LSBs.

4. The first WTRU of claim 1, wherein the processor is further configured to send the third message to the second WTRU using the secure communication link if it is determined that the security key identifier is different from another security key identifier.

5. The first WTRU of claim 1, wherein the set of LSBs is a first set of LSBs, wherein the processor is configured to send the third message to the second WTRU using the secure communication link if the first set of LSBs is different from a second set of LSBs, and wherein the processor is further configured to send a fourth message to the second WTRU if the first set of LSBs is similar to the second set of LSBs.

6. The first WTRU of claim 1, wherein the set of LSBs is a first set of LSBs, and wherein the processor is further configured to:

determine a conflict between the first set of LSBs that are associated with the second WTRU and a second set of LSBs that are associated with a third WTRU; and

send a fourth message to the third WTRU, wherein the fourth message indicating the conflict.

7. The first WTRU of claim 6, wherein the processor is further configured to receive a fifth message from the third WTRU, the fifth message indicating a third set of LSBs that are associated with the third WTRU.

8. The first WTRU of claim 7, wherein the security key identifier is a first security key identifier, and wherein the processor is further configured to send a sixth message to the third WTRU using a second secure communication link, wherein the second secure communication link is associated with a second security key identifier.

9. A method performed by a first wireless transmit/receive unit (WTRU) for establishing a communication link, the method comprising:

sending a first message to a second WTRU, wherein the first message indicates a request to communicate with the second WTRU;

receiving a second message from the second WTRU, the second message indicating a set of least significant bits (LSBs) that are associated with the second WTRU;

determining a security key identifier using a set of most significant bits (MSBs) and the set of LSBs, wherein the set of MSBs are associated with the first WTRU; and

sending a third message to the second WTRU using a secure communication link, wherein the secure communication link is associated with the security key identifier.

10. The method of claim 9, wherein the first message comprises a list of supported vehicle to everything (V2X) services.

11. The method of claim 9, wherein the set of LSBs is a first set of LSBs, and wherein the method further comprises sending the third message to the second WTRU using the secure communication link if it is determined that the first set of LSBs is different from a second set of LSBs.

12. The method of claim 9, wherein the method further comprises sending the third message to the second WTRU using the secure communication link if it is determined that the security key identifier is different from another security key identifier.

13. The method of claim 9, wherein the set of LSBs is a first set of LSBs, wherein the method further comprises sending a fourth message to the second WTRU if the first set of LSBs is similar to the second set of LSBs.

14. The method of claim 13, wherein the method further comprising:

determining a conflict between the first set of LSBs that are associated with the second WTRU and a second set of LSBs that are associated with a third WTRU;

sending a fifth message to the third WTRU, the fifth message indicating the conflict; and

receiving a sixth message from the third WTRU, the sixth message indicating a third set of LSBs that are associated with the third WTRU.

15. The method of claim 14, wherein the security key identifier is a first security key identifier, and wherein the method further comprises sending a seventh message to the third WTRU using a second secure communication link, wherein the second secure communication link is associated with the second security key identifier.

16. A first wireless transmit/receive unit (WTRU) for establishing a communication link, the first WTRU comprising:

a processor, the processor configured to:

send a first message to a second WTRU, wherein the first message indicates a request to communicate with the second WTRU;

receive a second message from the second WTRU, the second message indicating a first set of least significant bits (LSBs) that are associated with the second WTRU;

determine a security key identifier using a set of most significant bits (MSBs) and the first set of LSBs, wherein the set of MSBs are associated with the first WTRU; and

send a third message to the second WTRU using a secure communication link, wherein the secure communication link is associated with the security key identifier.

17. The first WTRU of claim 16, wherein the first message comprises a list of supported vehicle to everything (V2X) services.

18. The first WTRU of claim 16, wherein the processor is further configured to:

determine a conflict between the first set of LSBs that are associated with the second WTRU and a second set of LSBs that are associated with a third WTRU; and

send a fourth message to the third WTRU, the third message indicating the conflict.

19. The first WTRU of claim 18, wherein the processor is further configured to receive a fifth message from the third WTRU, the fifth message indicating a third set of LSBs that are associated with the third WTRU.

20. The first WTRU of claim 19, wherein the security key identifier is a first security key identifier, and wherein the processor is further configured to send a sixth message to the third WTRU using a second secure communication link, wherein the second secure communication link is associated with a second security key identifier.