CLAIMS

WHAT IS CLAIMED IS:

1. A method of wireless communication at a receiving device, comprising:

receiving a message for a service group, the message comprising a first indication of a geographic area associated with the message;

determining a geographic location of the receiving device; and

determining whether to send a feedback for the message based on the first indication of the geographic area associated with the message and the geographic location of the receiving device.

2. The method of claim 1, wherein the first indication of the geographic area is based at least in part on a location of a transmitting device.

3. The method of claim 1, wherein the receiving device determines to send the feedback if the geographic location of the receiving device is within an intended range based on the first indication of the geographic area associated with the message.

4. The method of claim 3, wherein the intended range is derived from sidelink control information (SCI) for the message.

5. The method of claim 1, further comprising:

determining whether the message is received correctly;

determining that the receiving device is within an intended range for the message; and

transmitting the feedback for the message when the receiving device correctly receives the message and is within the intended range.

6. The method of claim 1, wherein the receiving device transmits a negative acknowledgment (NACK) if the message is not received correctly.

7. The method of claim 1, wherein the receiving device determines to refrain from sending the feedback if the geographic location of the receiving device is outside of an

intended range based on the first indication of the geographic area associated with the message.

8. The method of claim 1, wherein the message further comprises group identifier (ID) information for the service group, and wherein the receiving device determines whether to send the feedback for the message further based on the group ID information comprised in the message.

9. The method of claim 1, wherein the first indication of the geographic area comprises a zone identifier (ID).

10. The method of claim 9, wherein the receiving device determines to send the feedback if the geographic location of the receiving device is within the geographic area indicated by the zone ID.

11. The method of claim 9, wherein the receiving device determines to send the feedback if the geographic location of the receiving device is within a range of at least one zone surrounding a zone of the zone ID.

12. The method of claim 11, further comprising:

receiving a parameter indicating the range of at least one zone.

13. The method of claim 12, wherein the parameter indicates a number of adjacent zones, wherein the receiving device determines to send the feedback if the geographic location of the receiving device is within the range based on the number of adjacent zones surrounding the zone of the zone ID.

14. The method of claim 1, wherein the first indication of the geographic area is in a form of a zone identifier (ID) comprising reduced information for the geographic area.

15. The method of claim 1, wherein the first indication of the geographic area is in a form of a zone identifier (ID) based on a modulo operation performed on geographic area information.

16. The method of claim 1, wherein the first indication of the geographic area is based on a hierarchical layer of areas and comprises a layer ID and an area ID corresponding to the layer ID.

17. The method of claim 1, wherein the geographic area indicated by the first indication comprises a preconfigured area.

18. The method of claim 17, further comprising:

receiving an update of the preconfigured area.

19. The method of claim 1, wherein the first indication of the geographic area indicates a radius surrounding a location of a transmitting device from which the message is received.

20. The method of claim 1, wherein the geographic area comprises a non-circular area.

21. The method of claim 1, wherein the message comprises a first Information Element (IE) based on a first hash of a zone identifier (ID) and a group ID or comprises a second IE based on a second hash of the zone ID and a third IE based on the zone ID, the method further comprising:

monitoring for at least one of the first IE, the second IE, or the third IE based on at least one pre-determined hash based on at least one of the group ID for the service group or zone IDs surrounding the geographic location of the receiving device.

22. The method of claim 21, wherein one or more of the first IE, the second IE, or the third IE is comprised in Sidelink Control Information (SCI) of the message.

23. The method of claim 1, wherein the message comprises Vehicle-to-Everything (V2X) communication, vehicle-to-vehicle communication, or device-to-device communication.

24. A method of wireless communication at a transmitting device, comprising:

determining a geographic location of the transmitting device; and

transmitting a message to a service group, the message comprising a first indication of a geographic area associated with the message, the geographic area based at least in part on the geographic location of the transmitting device.

25. The method of claim 24, wherein the first indication of the geographic area is based at least in part on a location of the transmitting device.

26. The method of claim 24, wherein the first indication of the geographic area indicates a range in which feedback is requested from a receiving device.

27. The method of claim 26, wherein the range is indicated in sidelink control information (SCI) for the message.

28. The method of claim 24, wherein the message further comprises group identifier (ID) information indicating a group ID of the service group.

29. The method of claim 24, wherein the first indication of the geographic area indicates a zone identifier (ID), the method further comprising:

determining the zone ID based on the geographic location of the transmitting device.

30. The method of claim 29, further comprising:

transmitting a parameter indicating a range of at least one zone surrounding a zone of the zone ID from which feedback is requested.

31. The method of claim 30, wherein the parameter indicates a number of adjacent zones from which the feedback is requested.

~~32. The method of claim 24, wherein the first indication of the geographic area is in a form of a zone identifier (ID) comprising reduced information for the geographic area.~~

~~33. The method of claim 24, wherein the first indication of the geographic area is in a form of a zone identifier (ID) based on a modulo operation performed on geographic area information.~~

~~34. The method of claim 24, wherein the first indication of the geographic area is based on a hierarchical layer of areas and comprises a layer ID and an area ID corresponding to the layer ID.~~

~~35. The method of claim 24, wherein the geographic area indicated by the first indication comprises a preconfigured area.~~

~~36. The method of claim 24, wherein the first indication of the geographic area indicates an area determined by the transmitting device.~~

~~37. The method of claim 24, wherein the first indication of the geographic area indicates a radius surrounding the geographic location of the transmitting device.~~

~~38. The method of claim 24, wherein the first indication of the geographic area indicates a non-circular area.~~

~~39. The method of claim 24, wherein the first indication of the geographic area is determined based on a Quality of Service (QoS) parameter associated with the message.~~

~~40. The method of claim 24, wherein a range of at least one zone surrounding a zone from which feedback is requested is determined based on a Quality of Service (QoS) parameter associated with the message.~~

~~41. The method of claim 24, wherein the first indication of the geographic area and an indication of group identifier (ID) information are comprised in a control portion of the message.~~

42. The method of claim 41, further comprising:

hashing the first indication of the geographic area with the group ID to generate an information element (IE) comprised in the message; or

hashing the group ID to generate a first IE comprised in the message, wherein the first indication of the geographic area is comprised in a second IE that is comprised in the message.

43. The method of claim 42, wherein the IE is comprised in Sidelink Control Information (SCI) of the message.

44. The method of claim 24, wherein the message is transmitted to the service group via Vehicle-to-Everything (V2X) communication, vehicle-to-vehicle communication, or device-to-device communication.

45. An apparatus for wireless communication at a receiving device, comprising:

a memory; and

at least one processor coupled to the memory and configured to:

receive a message for a service group, the message comprising a first indication of a geographic area associated with the message;

determine a geographic location of the receiving device; and

determine whether to send a feedback for the message based on the first indication of the geographic area associated with the message and the geographic location of the receiving device.

46. The apparatus of claim 45, wherein the first indication of the geographic area is based at least in part on a location of a transmitting device.

47. The apparatus of claim 45, wherein the at least one processor is configured to determine to send the feedback if the geographic location of the receiving device is within an intended range based on the first indication of the geographic area associated with the message.

48. The apparatus of claim 47, wherein the intended range is derived from sidelink control information (SCI) for the message.

49. The apparatus of claim 45, wherein the at least one processor is further configured to:

determine whether the message is received correctly;

determine that the receiving device is within an intended range for the message; and

transmit the feedback for the message when the receiving device correctly receives the message and is within the intended range.

50. The apparatus of claim 45, wherein the at least one processor is configured to transmit a negative acknowledgment (NACK) if the message is not received correctly.

51. The apparatus of claim 45, wherein the at least one processor is configured to determine to refrain from sending the feedback if the geographic location of the receiving device is outside of an intended range based on the first indication of the geographic area associated with the message.

52. The apparatus of claim 45, wherein the message further comprises group identifier (ID) information for the service group, and wherein the at least one processor is configured to determine whether to send the feedback for the message further based on the group ID information comprised in the message.

53. The apparatus of claim 45, wherein the first indication of the geographic area comprises a zone identifier (ID).

54. The apparatus of claim 53, wherein the at least one processor is configured to determine to send the feedback if the geographic location of the receiving device is within the geographic area indicated by the zone ID.

55. The apparatus of claim 53, wherein the at least one processor is configured to determine to send the feedback if the geographic location of the receiving device is within a range of at least one zone surrounding a zone of the zone ID.

56. The apparatus of claim 55, wherein the at least one processor is further configured to:

receive a parameter indicating the range of at least one zone.

57. The apparatus of claim 56, wherein the parameter indicates a number of adjacent zones, wherein the at least one processor is configured to determine to send the feedback if the geographic location of the receiving device is within the range based on the number of adjacent zones surrounding the zone of the zone ID.

58. The apparatus of claim 45, wherein the first indication of the geographic area is in a form of a zone identifier (ID) comprising reduced information for the geographic area.

59. The apparatus of claim 45, wherein the first indication of the geographic area is in a form of a zone identifier (ID) based on a modulo operation performed on geographic area information.

60. The apparatus of claim 45, wherein the first indication of the geographic area is based on a hierarchical layer of areas and comprises a layer ID and an area ID corresponding to the layer ID.

61. The apparatus of claim 45, wherein the geographic area indicated by the first indication comprises a preconfigured area.

62. The apparatus of claim 61, wherein the at least one processor is further configured to:

receive an update of the preconfigured area.

63. The apparatus of claim 45, wherein the first indication of the geographic area indicates a radius surrounding a location of a transmitting device from which the message is received.

64. The apparatus of claim 45, wherein the geographic area comprises a non-circular area.

65. The apparatus of claim 45, wherein the message comprises a first Information Element (IE) based on a first hash of a zone identifier (ID) and a group ID or comprises a second IE based on a second hash of the zone ID and a third IE based on the zone ID, wherein the at least one processor is further configured to:

monitor for at least one of the first IE, the second IE, or the third IE based on at least one pre-determined hash based on at least one of the group ID for the service group or zone IDs surrounding the geographic location of the receiving device.

66. The apparatus of claim 65, wherein one or more of the first IE, the second IE, or the third IE is comprised in Sidelink Control Information (SCI) of the message.

67. The apparatus of claim 45, wherein the message comprises Vehicle-to-Everything (V2X) communication, vehicle-to-vehicle communication, or device-to-device communication.

68. An apparatus for wireless communication at a transmitting device, comprising:

a memory; and

at least one processor coupled to the memory and configured to:

determine a geographic location of the transmitting device; and

transmit a message to a service group, the message comprising a first indication of a geographic area associated with the message, the geographic area based at least in part on the geographic location of the transmitting device.

69. The apparatus of claim 68, wherein the first indication of the geographic area is based at least in part on a location of the transmitting device.

70. The apparatus of claim 68, wherein the first indication of the geographic area indicates a range in which feedback is requested from a receiving device.

71. The apparatus of claim 70, wherein the range is indicated in sidelink control information (SCI) for the message.

72. The apparatus of claim 68, wherein the message further comprises group identifier (ID) information indicating a group ID of the service group.

73. The apparatus of claim 68, wherein the first indication of the geographic area indicates a zone identifier (ID), wherein the at least one processor is further configured to:

determine the zone ID based on the geographic location of the transmitting device.

74. The apparatus of claim 73, wherein the at least one processor is further configured to:

transmit a parameter indicating a range of at least one zone surrounding a zone of the zone ID from which feedback is requested.

75. The apparatus of claim 74, wherein the parameter indicates a number of adjacent zones from which the feedback is requested.

76. The apparatus of claim 68, wherein the first indication of the geographic area is in a form of a zone identifier (ID) comprising reduced information for the geographic area.

77. The apparatus of claim 68, wherein the first indication of the geographic area is in a form of a zone identifier (ID) based on a modulo operation performed on geographic area information.

78. The apparatus of claim 68, wherein the first indication of the geographic area is based on a hierarchical layer of areas and comprises a layer ID and an area ID corresponding to the layer ID.

79. The apparatus of claim 68, wherein the geographic area indicated by the first indication comprises a preconfigured area.

80. The apparatus of claim 68, wherein the first indication of the geographic area indicates an area determined by the transmitting device.

81. The apparatus of claim 68, wherein the first indication of the geographic area indicates a radius surrounding the geographic location of the transmitting device.

82. The apparatus of claim 68, wherein the first indication of the geographic area indicates a non-circular area.

83. The apparatus of claim 68, wherein the first indication of the geographic area is determined based on a Quality of Service (QoS) parameter associated with the message.

84. The apparatus of claim 68, wherein a range of at least one zone surrounding a zone from which feedback is requested is determined based on a Quality of Service (QoS) parameter associated with the message.

85. The apparatus of claim 68, wherein the first indication of the geographic area and an indication of group identifier (ID) information are comprised in a control portion of the message.

86. The apparatus of claim 85, wherein the at least one processor is further configured to:

hash the first indication of the geographic area with the group ID to generate an information element (IE) comprised in the message; or

hash the group ID to generate a first IE comprised in the message, wherein the first indication of the geographic area is comprised in a second IE that is comprised in the message.

87. The apparatus of claim 86, wherein the IE is comprised in Sidelink Control Information (SCI) of the message.

88. The apparatus of claim 68, wherein the message is transmitted to the service group via Vehicle-to-Everything (V2X) communication, vehicle-to-vehicle communication, or device-to-device communication.

89. An apparatus for wireless communication at a receiving device, comprising:

means for receiving a message for a service group, the message comprising a first indication of a geographic area associated with the message;

means for determining a geographic location of the receiving device; and

means for determining whether to send a feedback for the message based on the first indication of the geographic area associated with the message and the geographic location of the receiving device.

90. An apparatus for wireless communication at a transmitting device, comprising:

means for determining a geographic location of the transmitting device; and

means for transmitting a message to a service group, the message comprising a first indication of a geographic area associated with the message, the geographic area based at least in part on the geographic location of the transmitting device.

91. A computer-readable medium storing computer executable code for wireless communication at a receiving device, the code when executed by a processor cause the processor to:

receive a message for a service group, the message comprising a first indication of a geographic area associated with the message;

determine a geographic location of the receiving device; and

determine whether to send a feedback for the message based on the first indication of the geographic area associated with the message and the geographic location of the receiving device.

92. A computer-readable medium storing computer executable code for wireless communication at a transmitting device, the code when executed by a processor cause the processor to:

determine a geographic location of the transmitting device; and

~~transmit a message to a service group, the message comprising a first indication of a geographic area associated with the message, the geographic area based at least in part on the geographic location of the transmitting device.~~

1. An invention not claimed in any divisional application.