

CLAIMS

1. A method of communicating in a wireless network, the method comprising:
generating a data packet including a local identifier of either a transmitter of the data packet or a receiver of the data packet and a global identifier of the other of the transmitter and the receiver, the local identifier identifying either the transmitter or the receiver within a basic service set, the global identifier identifying either the transmitter or the receiver globally;
selecting which one of the local identifier or the global identifier identifies the transmitter based on a link type for transmitting the data packet, the link type being one of a downlink, an uplink, or a direct link; and
transmitting the data packet from the transmitter to the receiver.
2. The method of Claim 1, wherein the local identifier comprises an association identifier, and the global identifier comprises a media access control address.
3. The method of Claim 1, wherein the local identifier comprises 13 bits and the global identifier comprises 48 bits.
4. The method of Claim 1, wherein the data packet further includes information indicating the link type.
5. The method of Claim 1, wherein the data packet further includes information indicating a direction in which the data packet is sent.
6. The method of Claim 5, wherein the information is included in at least one of a to-distribution system field and a from-distribution system field.
7. The method of Claim 1, wherein an identifier of the receiver precedes an identifier of the transmitter in the data packet.
8. The method of Claim 1, wherein the local identifier and the global identifier in combination uniquely define a pair consisting of the receiver and the transmitter.

9. The method of Claim 1, wherein the data packet includes a field indicating if at least one of a destination address field and a source address field is present in the data packet.

10. The method of Claim 9, wherein the field that identifies whether the data packet includes at least one of a destination address field and a source address field is one or more of a type field and a subtype field of a frame control field.

11. The method of Claim 9, wherein the field that identifies whether the data packet includes at least one of a destination address field and a source address field is a single bit.

12. The method of Claim 1, wherein the data packet includes a field that identifies whether the data packet includes a compressed header or an uncompressed header.

13. The method of Claim 12, wherein the field that identifies whether the data packet includes a compressed header or an uncompressed header is a protocol version field.

14. The method Claim 12, wherein the field that identifies whether the data packet includes a compressed header or an uncompressed header is one or more of a type field and a subtype field of a frame control field.

15. The method of Claim 1, wherein the data packet does not include at least one of a duration field, high throughput control field, and a quality of service control field.

16. The method of Claim 1, wherein the data packet includes a sequence control field.

17. An apparatus for communicating in a wireless network, the apparatus comprising:

a processor configured to:

generate a data packet including a local identifier of either a transmitter of the data packet or a receiver of the data packet and a global identifier of the other of the transmitter and the receiver, the local identifier identifying either the transmitter or the receiver within a basic service set, the global identifier identifying either the transmitter or the receiver globally, and

select which one of the local identifier or the global identifier identifies the transmitter based on a link type for transmitting the data packet, the link type being one of a downlink, an uplink, or a direct link; and

a transmitter configured to transmit the data packet to the receiver.

18. The apparatus of Claim 17, wherein the local identifier comprises an association identifier, and the global identifier comprises a media access control address.

19. The apparatus of Claim 17, wherein the local identifier comprises 13 bits and the global identifier comprises 48 bits.

20. The apparatus of Claim 17, wherein the data packet further includes information indicating the link type.

21. The apparatus of Claim 17, wherein the data packet further includes information indicating a direction in which the data packet is sent.

22. The apparatus of Claim 21, wherein the information is included in at least one of a to-distribution system field and a from-distribution system field.

23. The apparatus of Claim 17, wherein an identifier of the receiver precedes an identifier of the transmitter in the data packet.

24. The apparatus of Claim 17, wherein the local identifier and the global identifier in combination uniquely define a pair consisting of the receiver and the transmitter.

25. The apparatus of Claim 17, wherein the data packet includes a field indicating if at least one of a destination address field and a source address field is present in the data packet.

26. The apparatus of Claim 25, wherein the field that identifies whether the data packet includes at least one of a destination address field and a source address field is one or more of a type field and a subtype field of a frame control field.

27. The apparatus of Claim 25, wherein the field that identifies whether the data packet includes at least one of a destination address field and a source address field is a single bit.

28. The apparatus of Claim 17, wherein the data packet includes a field that identifies whether the data packet includes a compressed header or an uncompressed header.

29. The apparatus of Claim 28, wherein the field that identifies whether the data packet includes a compressed header or an uncompressed header is a protocol version field.

30. The apparatus of Claim 28, wherein the field that identifies whether the data packet includes a compressed header or an uncompressed header is one or more of a type field and a subtype field of a frame control field.

31. The apparatus of Claim 17, wherein the data packet does not include at least one of a duration field, high throughput control field, and a quality of service control field.

32. The apparatus of Claim 17, wherein the data packet includes a sequence control field.

33. An apparatus for communicating in a wireless network, the apparatus comprising:

means for generating a data packet including a local identifier of either a transmitter of the data packet or a receiver of the data packet and a global identifier of the other of the transmitter and the receiver, the local identifier identifying either the transmitter or the receiver within a basic service set, the global identifier identifying either the transmitter or the receiver globally;

means for selecting which one of the local identifier or the global identifier identifies the transmitter based on a link type for transmitting the data packet, the link type being one of a downlink, an uplink, or a direct link; and

means for transmitting the data packet to the receiver.

34. A computer-readable medium comprising instructions that when executed by a computer cause the computer to perform a method of communicating in a wireless network, the method comprising:

generating a data packet including a local identifier of either a transmitter of the data packet or a receiver of the data packet and a global identifier of the other of the transmitter and the receiver, the local identifier identifying either the transmitter or the receiver within a basic service set, the global identifier identifying either the transmitter or the receiver globally;

selecting which one of the local identifier or the global identifier identifies the transmitter based on a link type for transmitting the data packet, the link type being one of a downlink, an uplink, or a direct link; and

transmitting the data packet to the receiver.

35. The method of Claim 1, wherein the link type is the downlink and the data packet includes the local identifier of the receiver and the global identifier of the transmitter.

36. The method of Claim 1, wherein the link type is the uplink and the data packet includes the local identifier of the transmitter and the global identifier of the receiver.

37. The method of Claim 1, wherein the link type is the direct link and the data packet includes the local identifier of the transmitter and the global identifier of the receiver.

38. The apparatus of Claim 17, wherein the link type is the downlink and the data packet includes the local identifier of the receiver and the global identifier of the transmitter.

39. The apparatus of Claim 17, wherein the link type is the uplink and the data packet includes the local identifier of the transmitter and the global identifier of the receiver.

40. The apparatus of Claim 17, wherein the link type is the direct link and the data packet includes the local identifier of the transmitter and the global identifier of the receiver.

CLAIMS

1. A method of communicating in a wireless network, the method comprising:
generating a packet including a local identifier of either a transmitter of the packet or a receiver of the packet and a media access control address of the other of the transmitter and the receiver, the local identifier identifying either the transmitter or the receiver within a basic service set containing at least one of the transmitter or the receiver, the media access control address identifying either the transmitter or the receiver globally;
selecting one of the local identifier or the media access control address to identify the transmitter based on a link type for transmitting the packet, the link type being one of a downlink, an uplink, or a direct link; and
transmitting the packet from the transmitter to the receiver.
2. The method of Claim 1, wherein the local identifier comprises an association identifier.
3. The method of Claim 1, wherein the association identifier comprises 13 bits and the media access control address comprises 48 bits.
4. The method of Claim 1, wherein the packet further includes information indicating the link type.
5. The method of Claim 4, wherein the information is included in at least one of a to-distribution system field and a from-distribution system field.
6. The method of Claim 1, wherein an identifier of the receiver precedes an identifier of the transmitter in the packet.
7. The method of Claim 1, wherein the local identifier and the media access control address in combination uniquely define a pair consisting of the receiver and the transmitter.

8. The method of Claim 1, wherein the packet includes a field indicating if at least one of a destination address field and a source address field is present in the packet.

9. The method of Claim 8, wherein the field that identifies whether the packet includes at least one of a destination address field and a source address field is one or more of a type field and a subtype field of a frame control field.

10. The method of Claim 8, wherein the field that identifies whether the packet includes at least one of a destination address field and a source address field is a single bit.

11. The method of Claim 1, wherein the packet includes a field that identifies whether the packet includes a compressed header or an uncompressed header.

12. The method of Claim 11, wherein the field that identifies whether the packet includes a compressed header or an uncompressed header is a protocol version field.

13. The method Claim 11, wherein the field that identifies whether the packet includes a compressed header or an uncompressed header is one or more of a type field and a subtype field of a frame control field.

14. The method of Claim 1, wherein the packet does not include at least one of a duration field, high throughput control field, and a quality of service control field.

15. The method of Claim 1, wherein the packet includes a sequence control field.

16. An apparatus for communicating in a wireless network, the apparatus comprising:

a processor configured to

generate a packet including a local identifier of either a transmitter of the packet or a receiver of the packet and a media access control header of the other of the transmitter and the receiver, the local identifier

identifying either the transmitter or the receiver within a basic service set containing at least one of the transmitter or the receiver, the media access control address identifying either the transmitter or the receiver globally, and

select one of the local identifier or the media access control address to identify the transmitter based on a link type for transmitting the packet, the link type being one of a downlink, an uplink, or a direct link; and
a transmitter configured to transmit the packet to the receiver.

17. The apparatus of Claim 16, wherein the local identifier comprises an association identifier.

18. The apparatus of Claim 17, wherein the association identifier comprises 13 bits and the media access control address comprises 48 bits.

19. The apparatus of Claim 16, wherein the packet further includes information indicating the link type.

20. The apparatus of Claim 19, wherein the information is included in at least one of a to-distribution system field and a from-distribution system field.

21. The apparatus of Claim 16, wherein an identifier of the receiver precedes an identifier of the transmitter in the packet.

22. The apparatus of Claim 16, wherein the local identifier and the media access control address in combination uniquely define a pair consisting of the receiver and the transmitter.

23. The apparatus of Claim 16, wherein the packet includes a field indicating if at least one of a destination address field and a source address field is present in the packet.

24. The apparatus of Claim 23, wherein the field that identifies whether the packet includes at least one of a destination address field and a source address field is one or more of a type field and a subtype field of a frame control field.

25. The apparatus of Claim 23, wherein the field that identifies whether the packet includes at least one of a destination address field and a source address field is a single bit.

26. The apparatus of Claim 16, wherein the packet includes a field that identifies whether the packet includes a compressed header or an uncompressed header.

27. The apparatus of Claim 26, wherein the field that identifies whether the packet includes a compressed header or an uncompressed header is a protocol version field.

28. The apparatus of Claim 26, wherein the field that identifies whether the packet includes a compressed header or an uncompressed header is one or more of a type field and a subtype field of a frame control field.

29. The apparatus of Claim 16, wherein the packet does not include at least one of a duration field, high throughput control field, and a quality of service control field.

30. The apparatus of Claim 16, wherein the packet includes a sequence control field.

31. An apparatus for communicating in a wireless network, the apparatus comprising:

means for generating a packet including a local identifier of either a transmitter of the packet or a receiver of the packet and a media access control address of the other of the transmitter and the receiver, the local identifier identifying either the transmitter or the receiver within a basic service set containing at least one of the transmitter or the receiver, the media access control address identifying either the transmitter or the receiver globally; means for selecting one of the local identifier or the media access control address to identify

the transmitter based on a link type for transmitting the packet, the link type being one of a downlink, an uplink, or a direct link; and

means for transmitting the packet to the receiver.

32. A non-transitory computer-readable medium comprising instructions that when executed by a computer cause the computer to perform a method of communicating in a wireless network, the method comprising:

generating a packet including a local identifier of either a transmitter of the packet or a receiver of the packet and a media access control address of the other of the transmitter and the receiver, the local identifier identifying either the transmitter or the receiver within a basic service set containing at least one of the transmitter or the receiver, the media access control address identifying either the transmitter or the receiver globally; selecting one of the local identifier or the media access control address to identify identifies the transmitter based on a link type for transmitting the packet, the link type being one of a downlink, an uplink, or a direct link; and

transmitting the packet to the receiver.

33. The method of Claim 1, wherein the link type is the downlink and the selecting further comprises selecting the local identifier to identify the receiver and the media access control address to identify the transmitter.

34. The method of Claim 1, wherein the link type is the uplink and the selecting further comprises selecting the local identifier to identify the transmitter and the media access control address to identify the receiver.

35. The method of Claim 1, wherein the link type is the direct link and the selecting further comprises selecting the local identifier of the transmitter and the media access control address to identify the receiver.

36. The apparatus of Claim 16, wherein the link type is the downlink and the processor is further configured to select the local identifier to identify the receiver and the media access control address to identify the transmitter.

37. The apparatus of Claim 16, wherein the link type is the uplink and the processor is further configured to select the local identifier to identify the transmitter and the media access control address to identify the receiver.

38. The apparatus of Claim 16, wherein the link type is the direct link and the processor is further configured to select the local identifier to identify the transmitter and media access control address to identify the receiver.

39. The apparatus of Claim 31, wherein the link type is the downlink and the selecting means selects the local identifier to identify the receiver and the media access control address to identify the transmitter.

40. The apparatus of Claim 31, wherein the link type is the uplink and the selecting means selects the local identifier to identify the transmitter and the media access control address to identify the receiver.

41. The apparatus of Claim 31, wherein the link type is the direct link and the selecting means selects the local identifier to identify the transmitter and media access control address to identify the receiver.

42. The non-transitory computer-readable medium of Claim 32, wherein the link type is the downlink and the instructions, when executed by the computer, cause the computer to select the local identifier to identify the receiver and the media access control address to identify the transmitter.

43. The non-transitory computer-readable medium of Claim 32, wherein the link type is the uplink and the instructions, when executed by the computer, cause the

computer to select the local identifier to identify the transmitter and the media access control address to identify the receiver.

44. The non-transitory computer-readable medium of Claim 32, wherein the link type is the direct link and the instructions, when executed by the computer, cause the computer to select the local identifier to identify the transmitter and media access control address to identify the receiver.