CLAIMS

What is claimed is:

1. A method to generate a wireless communications flow frame for a packet flow, the method comprising:

generating, by a medium access control logic, the wireless communications flow frame comprising:

determining a flow frame control field;

determining a compressed frame, the compressed frame comprising a frame control field, a sequence control field and a compressed frame body; and

determining a frame check sequence.

2. The method of claim 1, further comprising encapsulating, by physical layer logic, the wireless communications flow frame with a preamble to create a physical layer protocol data unit.

3. The method of claim 1, further comprising transmitting, via an antenna, the wireless communications flow frame.

4. The method of claim 1, further comprising determining a flow address field, wherein the flow address field comprises a transmitter address or a source address.

5. The method of claim 1, further comprising determining a long flow index field, wherein a short flow index field of the flow frame control field comprises a value indicative of the presence of the long flow index field.

6. The method of claim 1, wherein determining the compressed frame comprises removing constant bit sequences in accordance with flow compression rules associated with a flow index of the wireless communications flow frame.

7. The method of claim 1, wherein determining the flow frame control field comprises determining a protocol version field, a frame type field, and a frame subtype field.

8. The method of claim 1, wherein determining the frame check sequence comprises determining a hash value of the wireless communications flow frame as a whole.

9. A device to generate a wireless communication flow frame for a packet flow, the device comprising:

a memory;

a medium access control logic coupled with the memory to generate the wireless communications flow frame comprising operations to determine a flow

frame control field; to determine a compressed frame, the compressed frame comprising a frame control field, a sequence control field and a compressed frame body; and to determine a frame check sequence.

10. The device of claim 9, further comprising physical layer logic coupled with the medium access control logic to encapsulate the wireless communications flow frame with a preamble to create a physical layer protocol data unit.

11. The device of claim 10, further comprising a processor, a radio, and one or more antennas coupled with the physical layer logic to transmit the wireless communications flow frame.

12. The device of claim 9, wherein the medium access control logic comprises logic to determine the compressed frame by removing constant bit sequences in accordance with flow compression rules associated with a flow index of the wireless communications flow frame.

13. The device of claim 9, wherein the medium access control logic comprises logic to determine a flow address field, wherein the flow address field comprises a transmitter address or a source address.

14. The device of claim 9, wherein the medium access control logic comprises logic to determine a long flow index field, wherein a short flow index field of the wireless communications flow frame control field comprises a value indicative of the presence of the long flow index field.

15. The device of claim 9, wherein the medium access control logic comprises logic to determine a protocol version field, a frame type field, and a frame subtype field.

16. The device of claim 9, wherein the medium access control logic comprises logic to determine a hash value of the wireless communications flow frame as a whole to determine the frame check sequence field.

17. A method to decompress a compressed wireless communications frame from a wireless communications flow frame for a packet flow, the method comprising:

decoding, by a physical layer logic, the wireless communications flow frame;

parsing a flow frame control field to determine a flow index;

parsing a compressed frame, the compressed frame comprising a frame control field, a sequence control field and a compressed frame body; and

reconstructing an uncompressed frame based on the compressed frame and the flow index.

18. The method of claim 1, further comprising receiving, via an antenna, the wireless communications flow frame.

19. The method of claim 1, further comprising parsing a flow address field, wherein the flow address field comprises a transmitter address or a source address.

20. The method of claim 1, further comprising parsing a long flow index field, wherein a short flow index field of the flow frame control field comprises a value indicative of the presence of the long flow index field.

21. A device to decompress a compressed frame in a wireless communications flow frame for a packet flow, the device comprising:

a physical layer logic to decode the wireless communications flow frame;

a medium access control logic coupled with the memory to receive a wireless communications flow frame comprising logic to parse a wireless communications flow frame control field to determine a flow index; parse a compressed frame, the compressed frame comprising a frame control field, a sequence control field and a compressed frame body; and reconstruct an uncompressed frame based on the compressed frame and the flow index.

22. The device of claim 21, further comprising an antenna coupled with the physical logic to receive the wireless communications flow frame.

23. The device of claim 21, wherein the medium access control logic comprises logic to parse a flow address field, wherein the flow address field comprises a transmitter address or a source address.

24. The device of claim 21, wherein the medium access control logic comprises logic to parse a long flow index field, wherein a short flow index field of the wireless communications flow frame control field comprises a value indicative of the presence of the long flow index field.

25. A machine-accessible product comprising:

a medium containing instructions to decompress a compressed frame from a wireless communications flow frame for a packet flow, wherein the instructions, when executed by a station, causes the station to perform operations, the operations comprising:

decoding, by a physical layer logic, the wireless communications flow frame;

parsing a wireless communications flow frame control field;

parsing a compressed frame, the compressed frame comprising a frame control field, a sequence control field and a compressed frame body; and

reconstructing an uncompressed frame based on the compressed frame and the flow index.

26. The machine accessible product of claim 25, wherein the operations further comprise parsing a flow address field, wherein the flow address field comprises a transmitter address or a source address.

27. The machine accessible product of claim 25, wherein the operations further comprise parsing a long flow index field, wherein a short flow index field of the flow frame control field comprises a value indicative of the presence of the long flow index field.

28. A machine-accessible product comprising:

a medium containing instructions to generate a wireless communications flow frame for a packet flow, wherein the instructions, when executed by a station, causes the station to perform operations, the operations comprising:

generating, by a medium access control logic, the wireless communications flow frame comprising:

determining a flow frame control field;

determining a compressed frame, the compressed frame comprising a frame control field, a sequence control field and a compressed frame body; and

determining a frame check sequence.

29. The machine accessible product of claim 28, wherein the operations further comprise determining a flow address field, wherein the flow address field comprises a transmitter address or a source address.

30. The machine accessible product of claim 28, wherein determining the compressed frame comprises removing constant bit sequences in accordance with flow compression rules associated with a flow index of the wireless communications flow frame.

CLAIMS

What is claimed is:

1. A wireless communication device, comprising:

a memory; and

a processor coupled with the memory to implement medium access control (MAC) logic to generate a shortened wireless communications frame, wherein the shortened frame comprises a shortened MAC header, the shortened MAC header comprising a frame control field, a transmitter address and a recipient address; a frame body; and a frame check sequence; and

wherein the frame control field comprises a protocol version field, a type field a subtype field, and a From DS (Distribution System) field field;

the MAC logic to set the protocol version field to indicate a revision of a standard for the shortened wireless communications frame;

the MAC logic to set the type field to indicate that the shortened wireless communications frame is a shortened data frame, a shortened control frame, or a shortened management frame;

the MAC logic to set the subtype field to identify shortened data frames, shortened control frames, or shortened management frames;

the MAC logic to set the From DS field to a logical zero if the shortened wireless communications frame is transmitted from a non-access point (non-AP) station;

the MAC logic to set the From DS field to a logical one if the shortened wireless communications frame is transmitted from an AP.

2. The wireless communications device of claim 1, wherein the shortened frame further comprises a sequence control field.

3. The wireless communications device of claim 1, wherein the type field identifies the frame as a data frame, a management frame or a control frame.

4. The wireless communications device of claim 1, wherein the subtype field identifies the frame as a data frame, a management frame or a control frame.

5. The wireless communications device of claim 1, wherein the recipient and transmitter addresses are located in a Short ID (SID) field.

6. The wireless communications device of claim 1, wherein the protocol version is two bits in length.

7. The wireless communications device of claim 2, wherein the sequence control field is two octets in length.

8. The wireless communications device of claim 1, wherein the frame check sequence (FCS) is four octets in length.

9. The wireless communications device of claim 1, further comprising physical layer logic to create the wireless communications frame with a preamble to create a physical layer protocol data unit.

10. The wireless communications device of claim 1, further comprising an antenna to transmit the wireless communications frame.

11. The wireless communications device of claim 1, wherein the wireless communications device is one or more of the following: an access points (AP), a wireless stations (STA), a router, a switch, a server, a workstation, a netbook, a mobile device, a laptops, a smart phone, a tablet, a sensor, a meter, a control, an instrument, a monitor or an appliance.

12. The wireless communications device of claim 1, wherein the wireless communications device comprises logic to generate the shortened MAC header without a QoS Control field and to generate a standard MAC header with a QoS Control field.

13. A method, comprising:

generating, by a processor implementing medium access control (MAC) logic, a shortened wireless communications frame, wherein the frame comprises:

a shortened MAC header, the MAC header comprising a frame control field, a transmitter address and a recipient address;

a frame body and a frame check sequence; and

wherein the frame control field comprises a protocol version field, a type field, a subtype field, and a From DS (Distribution System) field;

the MAC logic to set the protocol version field to indicate a revision of a standard for the shortened wireless communications frame;

the MAC logic to set the type field to indicate that the shortened wireless communications frame is a shortened data frame, a shortened control frame, or a shortened management frame;

the MAC logic to set the subtype field to identify shortened data frames, shortened control frames, or shortened management frames;

the MAC logic to set the From DS field to a logical zero if the shortened wireless communications frame is transmitted from a non-access point (non-AP) station;

the MAC logic to set the From DS field to a logical one if the shortened wireless communications frame is transmitted from an AP.

14. The method of claim 13, wherein the shortened frame further comprises a sequence control field.

15. The method of claim 13, further comprising the type field identifying the frame as a data frame, a management frame or a control frame.

16. The method of claim 13, further comprising the subtype field identifying the frame as a data frame, a management frame or a control frame.

17. The method of claim 13, wherein the recipient and transmitter addresses are located in a Short ID (SID) field.

18. The method of claim 13, further comprising allocating two bits for the protocol version.

19. The method of claim 14, further comprising allocating two octets for the sequence control field.

20. The method of claim 13, further comprising allocating four octets for the frame check sequence (FCS).

21. The method of claim 13, further comprising encapsulating, by physical layer logic, the wireless communications frame with a preamble to create a physical layer protocol data unit.

22. A machine-accessible product comprising:

a non-transitory medium containing instructions to generate a wireless communications frame, wherein the instructions, when executed by a processor, causes the station

to perform medium access control (MAC) logic operations, the operations comprising:

generating a shortened wireless communications frame that comprising a shortened MAC header, wherein the MAC header comprises a frame control field, a transmitter address and a recipient address; a frame body; and a frame check sequence; and

wherein the frame control field comprises a protocol version field, a type field, a subtype field, and a From DS (Distribution System) field field;

the MAC logic operations to set the protocol version field to indicate a revision of a standard for the shortened wireless communications frame;

the MAC logic operations to set the type field to indicate that the shortened wireless communications frame is a shortened data frame, a shortened control frame, or a shortened management frame;

the MAC logic operations to set the subtype field to identify shortened data frames, shortened control frames, or shortened management frames;

the MAC logic operations to set the From DS field to a logical zero if the shortened wireless communications frame is transmitted from a non-access point (non-AP) station;

the MAC logic operations to set the From DS field to a logical one if the shortened wireless communications frame is transmitted from an AP.

23. The machine-accessible product of claim 22, wherein the shortened frame further comprises a sequence control field.

24. The machine-accessible product of claim 22, further comprising the type field identifying the frame as a data frame, a management frame or a control frame.

25. The machine-accessible product of claim 22, further comprising the subtype field identifying the frame as a data frame, a management frame or a control frame.