

CLAIMS

1. A method for wireless communication, comprising:
 - generating a first frame, at a first wireless communication device, that includes at least a first aggregated media access control protocol data unit (A-MPDU), wherein the first A-MPDU includes one or more media access control protocol data units (MPDUs);
 - setting a first recipient address (RA) field to a first value in a first MPDU of the one or more MPDUs in the first A-MPDU, the first value being a first MAC address associated with a second wireless communication device;
 - setting a first RA subfield of a first field in the first MPDU to a second value, the second value being the same as the first value, the second value being the first MAC address associated with the second wireless communication device; and
 - outputting the first frame for transmission to at least the second wireless communication device.
2. The method of claim 1, further comprising:
 - setting a second RA subfield of a second field in the first MPDU to a third value, different than the second value, the third value being a second MAC address associated with a third wireless communication device, and
 - outputting the first frame for transmission to at least the second and third wireless communication devices.
3. The method of claim 2, wherein the first frame is a Multi-Station (Multi-STA) BlockAck (BA) frame.
4. The method of claim 2, prior to transmitting the first frame, further comprising:
 - outputting a trigger frame that allocates one or more resource units for communications by one or more wireless communication devices unassociated with the first wireless communication device;
 - receiving, at the first wireless communication device and in response to the trigger frame, a first message from the second wireless communication device that is unassociated with the first wireless communication device, the first message received in a first resource unit allocated by the trigger frame; and

receiving, at the first wireless communication device and in response to the trigger frame, a second message from the third wireless communication device that is unassociated with the first wireless communication device, the second message received in a second resource unit allocated by the trigger frame.

5. The method of claim 1, further comprising:

setting a second RA subfield of a second field in a second MPDU in the first A-MPDU to a third value, different than the second value, that represents an identifier of a third wireless communication device.

6. The method of claim 5, wherein the first field in the first MPDU and the second field in the second MPDU are address 4 fields, and the first frame is a MAC frame.

7. The method of claim 5, further comprising:

including a first TRS control field in the first frame that assigns a first resource unit to the second wireless communication device that is unassociated with the first wireless communication device to allow the second wireless communication device to send a first response frame to the first wireless communication device in the first resource unit; and

including a second TRS control field in the first frame that assigns a second resource unit to the third wireless communication device that is unassociated with the first wireless communication device to allow the third wireless communication device to send a second response frame to the first wireless communication device in the second resource unit.

8. The method of claim 5, further comprising aggregating a first trigger frame and a second trigger frame with the first MPDU and the second MPDU in the first A-MPDU;

wherein the first trigger frame assigns a first resource unit to the second wireless communication device that is unassociated with the first wireless communication device to allow the second wireless communication device to send a first response frame to the first wireless communication device in the first resource unit; and

wherein the second trigger frame assigns a second resource unit to the third wireless communication device that is unassociated with the first wireless communication device to allow the third wireless communication device to send a second response frame to the first

wireless communication device in the second resource unit.

9. The method of claim 1, further comprising:

setting a second RA field in a second MPDU to a third value, different than the first value, wherein the third value of the second RA field in the second MPDU indicates a second MAC address of a third wireless communication device.

10. The method of claim 1, wherein the first frame is included in a resource unit of a downlink (DL) multi-user (MU) PPDU having a station identification (STA ID) field set to a value of 2045 indicating a broadcast communication with one or more unassociated wireless communication devices.

11. A wireless communication apparatus of a first wireless communication device, comprising:

a processor configured to:

generate a first frame that includes at least a first aggregated media access control protocol data unit (A-MPDU), wherein the first A-MPDU includes one or more media access control protocol data units (MPDUs),

set a first recipient address (RA) field to a first value in a first MPDU of the one or more MPDUs in the first A-MPDU, the first value being a first MAC address associated with a second wireless communication device, and

set a first RA subfield of a first field in the first MPDU to a second value, the second value being the same as the first value, the second value being the first MAC address associated with the second wireless communication device; and

a transmitter coupled with the processor, the transmitter configured to output the first frame for transmission to at least the second wireless communication device.

12. The wireless communication apparatus of claim 11, wherein:

the processor is further configured to set a second RA subfield of a second field in the first MPDU to a third value, different than the second value, the third value being a second MAC address associated with a third wireless communication device, and

the transmitter is further configured to output the first frame for transmission to at least the second and third wireless communication devices.

13. The wireless communication apparatus of claim 12, wherein the first frame is a Multi-Station (Multi-STA) BlockAck (BA) frame.
14. A method for wireless communication, comprising:
generating a first frame, at a first wireless communication device, that includes at least a first aggregated media access control protocol data unit (A-MPDU), wherein the first A-MPDU includes one or more media access control protocol data units (MPDUs);
setting a first recipient address (RA) field to a first value in a first MPDU of the one or more MPDUs in the first A-MPDU, the first value being a MAC address associated with a second wireless communication device;
setting a triggered response scheduling (TRS) control field in the first MPDU to allocate resources and provide response information to the second wireless communication device; and
outputting the first frame for transmission to at least the second wireless communication device.
15. A wireless communication apparatus of a first wireless communication device, comprising:
a processor configured to:
generate a first frame that includes at least a first aggregated media access control protocol data unit (A-MPDU), wherein the first A-MPDU includes one or more media access control protocol data units (MPDUs),
set a first recipient address (RA) field to a first value in a first MPDU of the one or more MPDUs in the first A-MPDU, the first value being a MAC address associated with a second wireless communication device, and
set a triggered response scheduling (TRS) control field in the first MPDU to allocate resources and provide response information to the second wireless communication device; and
a transmitter coupled with the processor, the transmitter configured to output the first frame for transmission to at least the second wireless communication device.