CLAIMS

1. A method for wireless communication, comprising: receiving, by a wireless device, a frame from an access point over a wireless network; decoding, by the wireless device, the frame to determine resource units unavailable for transmission during a transmission opportunity, and to identify one or more maximal transmission parameter values for use of the determined resource units, wherein decoding the frame to identify the one or more maximal transmission parameter values comprises: decoding, by the wireless device, the frame to identify, in a user info field of the frame, a predetermined association identifier; determining, by the wireless device, that the resource units are unavailable for transmission during the transmission opportunity based on the identification of the predetermined association identifier; decoding, by the wireless device, the frame to determine a duration of the transmission opportunity and a received signal strength (RSSI) limit for use of the determined resource units during the transmission opportunity, the RSSI limit determined based at least in part on decoded contents of one or more fields of the received frame; and determining whether or not an RSSI for receiving the frame is below the RSSI limit; and transmitting, by the wireless device, data to a second wireless device using at least a portion of the determined resource units in response to determining that the transmitting is in accordance with the one or more maximal transmission parameter values, wherein transmitting the data is in response to the RSSI for receiving the frame being below the RSSI limit.

2. The method of claim 1, further comprising: performing, by the wireless device, a back-off procedure during the transmission opportunity; and transmitting, by the wireless device, the data to the second wireless device in response to completion of the back-off procedure.

3. The method of claim 1, further comprising indicating, based on the determination that the resource units are unavailable for transmission during the transmission opportunity, that the resource units are available for use by one or more other devices.

4. The method of claim 1, further comprising decoding the frame to determine whether the access point permits one or more other devices to utilize the second resource units.

5. The method of claim 1, further comprising decoding a user info field of the frame to identify the RSSI limit.

6. The method of claim 1, further comprising: decoding, by the wireless device, the frame to determine a reason the resource units are unavailable for transmission during the transmission opportunity; and transmitting, from the wireless device, the data in response to the determined reason.

7. The method of claim 1, further comprising decoding the frame to determine a second set of resource units unavailable for transmission during the transmission opportunity for random access transmissions.

8. The method of claim 7, further comprising: performing, by the wireless device, a random access procedure before transmitting data using one or more of the second set of resource units, wherein performing the random access procedure comprises: determining a number of resource units in the second set of resource units; determining a numerical range based on the number; selecting a random number from the numerical range; and waiting a period of time based on the selected random number, wherein the transmission of the data using one or more of the second set of resource units is performed after waiting the period of time.

9. The method of claim 1, wherein the determined resource units consist of a single resource unit.

10. An apparatus for wireless communication, comprising: a receiver configured to receive a frame from an access point over a wireless network; a hardware processor configured to decode the frame to determine resource units unavailable for transmission during a transmission opportunity, and to identify one or more maximal transmission parameter values for use of the determined resource units; and a transmitter configured to transmit data to a wireless device using at least a portion of the determined resource units in response to determining that the transmitting is in accordance with the one or more maximal transmission parameter values; wherein decoding the frame to identify the one or more maximal transmission parameter values comprises: decoding, by the wireless device, the frame to identify, in a user info field of the frame, a predetermined association identifier; determining, by the wireless device, that the resource units are unavailable for transmission during the transmission opportunity based on the identification of the predetermined association identifier; decoding, by the wireless device, the frame to determine a duration of the transmission opportunity and a received signal strength (RSSI) limit for use of the determined resource units during the transmission opportunity, the RSSI limit determined based at least in part on decoded contents of one or more fields of the received frame; and determining whether or not an RSSI for receiving the frame is below the RSSI limit; and wherein transmitting the data to the wireless device comprises transmitting the data in response to the RSSI for receiving the frame being below the RSSI limit.

11. The apparatus of claim 10, wherein transmitting the data to the wireless device comprises: performing a back-off procedure during the transmission opportunity; and transmitting the data to the wireless device in response to completion of the back-off procedure.

12. The apparatus of claim 10, wherein decoding the frame to identify the one or more maximal transmission parameter values further comprises indicating, based on the determination that the resource units are unavailable for transmission during the transmission opportunity, that the resource units are available for use by one or more other devices.

13. The apparatus of claim 10, wherein decoding the frame to identify the one or more maximal transmission parameter values further comprises decoding the frame to determine whether the access point permits one or more other devices to utilize the second resource units.

14. The apparatus of claim 10 wherein decoding the frame to identify the one or more maximal transmission parameter values further comprises decoding a user info field of the frame to identify the RSSI limit.

15. The apparatus of claim 10 wherein decoding the frame to identify the one or more maximal transmission parameter values further comprises decoding the frame to determine a second set of resource units unavailable for transmission during the transmission opportunity for random access transmissions.

16. A method for wireless communication, comprising: receiving, by a wireless device, a frame from an access point over a wireless network; decoding, by the wireless device, the frame to determine resource units unavailable for transmission during a transmission opportunity, and to identify one or more maximal transmission parameter values for use of the determined resource units, wherein decoding the frame to identify the one or more maximal transmission parameter values comprises: decoding, by the wireless device, the frame to determine a duration of the transmission opportunity and a received signal strength (RSSI) limit for use of the determined resource units during the transmission opportunity, the RSSI limit determined based at least in part on decoded contents of one or more fields of the received frame; determining whether or not an RSSI for receiving the frame is below the RSSI limit; and indicating, based on the determination that the resource units are unavailable for transmission during the transmission opportunity, that the resource units are available for use by one or more other devices; and transmitting, by the wireless device, data to a second wireless device using at least a portion of the determined resource units in response to determining that the transmitting is in accordance with the one or more maximal transmission parameter values, wherein transmitting the data is in response to the RSSI for receiving the frame being below the RSSI limit.

17. The method of claim 16, further comprising: performing, by the wireless device, a back-off procedure during the transmission opportunity; and transmitting, by the wireless device, the data to the second wireless device in response to completion of the back-off procedure.

18. The method of claim 16, further comprising: decoding, by the wireless device, the frame to identify, in a user info field of the frame, a predetermined association identifier; and determining, by the wireless device, that the resource units are unavailable for transmission during the transmission opportunity based on the identification.

19. The method of claim 16, further comprising decoding the frame to determine whether the access point permits one or more other devices to utilize the second resource units.

20. The method of claim 16, further comprising decoding a user info field of the frame to identify the RSSI limit.

21. The method of claim 16, further comprising: decoding, by the wireless device, the frame to

determine a reason the resource units are unavailable for transmission during the transmission opportunity; and transmitting, from the wireless device, the data in response to the determined reason.

22. The method of claim 16, further comprising decoding the frame to determine a second set of resource units unavailable for transmission during the transmission opportunity for random access transmissions.

23. The method of claim 22, further comprising: performing, by the wireless device, a random access procedure before transmitting data using one or more of the second set of resource units, wherein performing the random access procedure comprises: determining a number of resource units in the second set of resource units; determining a numerical range based on the number; selecting a random number from the numerical range; and waiting a period of time based on the selected random number, wherein the transmission of the data using one or more of the second set of resource units is performed after waiting the period of time.

24. The method of claim 16, wherein the determined resource units consist of a single resource unit.

25. An apparatus for wireless communication, comprising: a receiver configured to receive a frame from an access point over a wireless network; a hardware processor configured to decode the frame to determine resource units unavailable for transmission during a transmission opportunity, and to identify one or more maximal transmission parameter values for use of the determined resource units; and a transmitter configured to transmit data to a wireless device using at least a portion of the determined resource units in response to determining that the transmitting is in accordance with the one or more maximal transmission parameter values; wherein decoding the frame to identify the one or more maximal transmission parameter values comprises: decoding, by the wireless device, the frame to determine a duration of the transmission opportunity and a received signal strength (RSSI) limit for use of the determined resource units during the transmission opportunity, the RSSI limit determined based at least in part on decoded contents of one or more fields of the received frame; determining whether or not an RSSI for receiving the frame is below the RSSI limit; and indicating, based on the determination that the resource units are unavailable for transmission during the transmission opportunity, that the resource units are available for use by one or more other devices; and wherein transmitting the data to the wireless device comprises transmitting the data in response to the RSSI for receiving the frame being below the RSSI limit.

26. The apparatus of claim 25, wherein transmitting the data to the wireless device comprises: performing a back-off procedure during the transmission opportunity; and transmitting the data to the wireless device in response to completion of the back-off procedure.

27. The apparatus of claim 25, wherein decoding the frame to identify the one or more maximal transmission parameter values comprises: decoding, by the wireless device, the frame to identify,

in a user info field of the frame, a predetermined association identifier; and determining, by the wireless device, that the resource units are unavailable for transmission during the transmission opportunity based on the identification of the predetermined association identifier.

28. The apparatus of claim 25, wherein decoding the frame to identify the one or more maximal transmission parameter values further comprises decoding the frame to determine whether the access point permits one or more other devices to utilize the second resource units.

29. The apparatus of claim 25 wherein decoding the frame to identify the one or more maximal transmission parameter values further comprises decoding a user info field of the frame to identify the RSSI limit.

30. The apparatus of claim 25, wherein decoding the frame to identify the one or more maximal transmission parameter values further comprises decoding the frame to determine a second set of resource units unavailable for transmission during the transmission opportunity for random access transmissions.