CLAIMS

1. A method for wireless communication, comprising:

identifying a transmission mode for transmitting a signal;

selecting a tone plan for transmission of the signal over a 320 MHz contiguous channel bandwidth based on the transmission mode, the tone plan being associated with a 256 point fast Fourier transform (FFT) size, a 512 point FFT size, a 1024 point FFT size, a 2048 point FFT size, or a 4096 point FFT size, the tone plan comprising a 320 MHz tone plan, a 240 MHz tone plan, a 160 MHz tone plan, or an 80 MHz tone plan, or a combination thereof; and

transmitting the signal over the 320 MHz contiguous channel bandwidth, wherein the transmitting comprises one of:

transmitting the signal over the entirety of the 320 MHz contiguous channel bandwidth based on the 320 MHz tone plan,

transmitting the signal over the 320 MHz contiguous channel bandwidth based on two duplicates of the 160 MHz tone plan, each duplicate of the 160 MHz tone plan being for a different 160 MHz sub-band of the 320 MHz contiguous channel bandwidth, or

transmitting the signal over the 320 MHz contiguous channel bandwidth based on four duplicates of the 80 MHz tone plan, each duplicate of the 80 MHz tone plan being a different 80 MHz sub-band of the 320 MHz contiguous channel bandwidth.

2. The method of claim 1, wherein a set of tones of the tone plan are spaced according to a 4x symbol duration of 12.8 μs with 78.125 kHz between subsequent tones.

3. The method of claim 2, wherein the 4x symbol duration is used with the 20 MHz tone plan, and the 20 MHz tone plane comprises 11 guard tones and 3 direct current tones.

4. The method of claim 2, wherein the 4x symbol duration is used with the 80 MHz tone plan, and the 80 MHz tone plan comprises 23 guard tones and 5 or 7 direct current tones.

5. The method of claim 1, wherein the transmission mode comprises one of:

the 320 MHz contiguous channel bandwidth;

two disjoint, contiguous 160 MHz channel bandwidths;

three disjoint channel bandwidths comprising a single contiguous 160 MHz channel bandwidth and two contiguous 80 MHz channel bandwidths;

four disjoint, contiguous 80 MHz channel bandwidths;

two disjoint, contiguous channel bandwidths comprising a first 160 MHz channel bandwidths and the other an 80 MHz channel bandwidths;

three non-contiguous 80 MHz channel bandwidths; or

a contiguous 240 MHz channel bandwidths.

6. The method of claim 5, wherein:

the 320 MHz contiguous channel bandwidth uses the three disjoint channel bandwidths comprising the single contiguous 160 MHz channel bandwidth and the two contiguous 80 MHz channel bandwidths; and

the transmission mode uses a single instance of the 160 MHz tone plan or two duplicates of the 80 MHz tone plan in one 160 MHz sub-band of the 320 MHz contiguous channel bandwidth, and two duplicates of the 80 MHz tone plan, each duplicate of the 80 MHz tone plan in one 80 MHz sub-band of the 320 MHz contiguous channel bandwidth.

7. The method of claim 5, wherein:

the 320 MHz contiguous channel bandwidth uses the four disjoint, contiguous 80 MHz channel bandwidths; and

the transmission mode uses four duplicates of the 80 MHz tone plan, each in one 80 MHz sub-band of the 320 MHz contiguous channel bandwidth.

8. The method of claim 5, wherein:

the transmission mode uses three duplicates of the 80 MHz tone plan, each duplicate of the 80 MHz tone plan in one 80 MHz sub-band of the 320 MHz contiguous channel bandwidth.

9. The method of claim 5, wherein the 80 and 160 MHz channel bandwidths use equal symbol durations.

10. The method of claim 5, wherein a first channel bandwidth that forms the 320 MHz contiguous channel bandwidth utilizes a different symbol duration from at least a second channel bandwidth that forms the 320 MHz contiguous channel bandwidth.

11. The method of claim 1, wherein the tone plan comprises at least one of a 26-, a 52-, a 106-, a 242-, a 484-, a 996-, a 2x996-, or a 4x996 tone resource unit.

12. The method of claim 1, wherein the tone plan comprises a minimum resource unit size of 52 tones.

13. The method of claim 1, wherein the tone plan comprises a minimum resource unit size of 106 tones.

14. The method of claim 1, wherein the selected tone plan comprises at least one instance of the 80 MHz tone plan or the 160 MHz tone plan, at least 23 guard tones, 5 direct current tones for non-orthogonal frequency division multiple access (OFDMA) communications or 7 direct current tones for multiple user communications;

wherein the 2048 point FFT size comprises up to 2020 data and pilot tones for non-OFDMA communications or up to 2018 data and pilot tones for multiple user communications, and the 4096 point FFT size comprises up to 4068 data and pilot tones for non-OFDMA communications or up to 4066 data and pilot tones for multiple user communications.

15. An apparatus for wireless communication, comprising:

a processor, memory in electronic communication with the processor; and

instructions stored in the memory and executable by the processor to cause the apparatus to:

identify a transmission mode for transmitting a signal;

select a tone plan for transmission of the signal over a 320 MHz contiguous channel bandwidth based on the transmission mode, the tone plan being associated with a 256 point fast Fourier transform (FFT) size, a 512 point FFT size, a 1024 point FFT size, a 2048 point FFT size, or a 4096 point FFT size, the tone plan comprising a 320 MHz tone plan, a 240 MHz tone plan, a 160 MHz tone plan, or an 80 MHz tone plan, or a combination thereof; and

transmit the signal over the 320 MHz channel bandwidth, wherein the transmitting comprises one of:

transmit the signal over the entirety of the 320 MHz channel bandwidth based on the 320 MHz tone plan,

transmit the signal over the 320 MHz channel bandwidth based on two duplicates of the 160 MHz tone plan, each duplicate of the 160 MHz tone plan being for a different 160 MHz sub-band of the 320 MHz channel bandwidth, or

transmit the signal over the 320 MHz channel bandwidth based on four duplicates of the 80 MHz tone plan, each duplicate of the 80 MHz tone plan being a different 80 MHz sub-band of the 320 MHz channel bandwidth.

16. The apparatus of claim 15, wherein a set of tones of the tone plan are spaced according to a 4x symbol duration of 12.8 μs with 78.125 kHz between subsequent tones.

17. The apparatus of claim 16, wherein the 4x symbol duration is used with the 20 MHz tone plan, and the 20 MHz tone plan comprises 11 guard tones and 3 direct current tones.

18. The apparatus of claim 16, wherein the 4x symbol duration is used with the 80 MHz tone plan, and the 80 MHz tone plan comprises 23 guard tones and 5 or 7 direct current tones.

19. The apparatus of claim 15, wherein the transmission mode comprises one of:

the 320 MHz contiguous channel bandwidth;

two disjoint, contiguous 160 MHz channel bandwidths;

three disjoint channel bandwidths comprising a single contiguous 160 MHz channel bandwidth and two contiguous 80 MHz channel bandwidths;

four disjoint, contiguous 80 MHz channel bandwidths;

two disjoint, contiguous channel bandwidths comprising a first 160 MHz channel bandwidth and the other an 80 MHz channel bandwidth;

three non-contiguous 80 MHz channel bandwidths; or

a contiguous 240 MHz channel bandwidth.

20. The apparatus of claim 19, wherein:

the 320 MHz contiguous channel bandwidth uses the three disjoint channel bandwidths comprising the single contiguous 160 MHz channel bandwidth and the two contiguous 80 MHz channel bandwidths; and

the transmission mode uses a single instance of the 160 MHz tone plan or two duplicates of the 80 MHz tone plan in one 160 MHz sub-band of the 320 MHz contiguous channel bandwidth, and two duplicates of the 80 MHz tone plan, each duplicate of the 80 MHz tone plan in one 80 MHz sub-band of the 3230 MHz contiguous channel bandwidth.

21. The apparatus of claim 19, wherein:

the 320 MHz contiguous channel bandwidth is the four disjoint, contiguous 80 MHz channel bandwidths; and

the transmission mode uses four duplicates of the 80 MHz tone plan, each in one 80 MHz sub-band of the 320 MHz contiguous channel bandwidth.

22. The apparatus of claim 19, wherein:

the transmission mode uses three duplicates of the 80 MHz tone plan, each duplicate of the 80 MHz tone plan in one 80 MHz PHY sub-band of the 320 MHz contiguous channel bandwidth.

23. The apparatus of claim 19, wherein the 80 and 160 MHz channel bandwidths use equal symbol durations.

24. The apparatus of claim 19, wherein a first channel bandwidth that forms the 320 MHz contiguous channel bandwidth utilizes a different symbol duration from at least a second channel bandwidth that forms the 320 MHz contiguous channel bandwidth.

25. The apparatus of claim 15, wherein the tone plan comprises at least one of a 26-, a 52-, a 106-, a 242-, a 484-, a 996-, a 2x996-, or a 4x996 tone resource unit.

26. The apparatus of claim 15, wherein the tone plan comprises a minimum resource unit size of 52 tones.

27. The apparatus of claim 15, wherein the tone plan comprises a minimum resource unit size of 106 tones.

28. The apparatus of claim 15, wherein the apparatus is an access point, and wherein the signal is transmitted through a transmitter and an antenna of the access point to a mobile station served by the access point.

29. The apparatus of claim 15, wherein the selected tone plan comprises at least one instance of the 80 MHz tone plan or the 160 MHz tone plan, at least 23 guard tones, 5 direct current tones for non-orthogonal frequency division multiple access (OFDMA) communications or 7 direct current tones for multiple user communications;

wherein the 2048 point FFT size comprises up to 2020 data and pilot tones for non-OFDMA communications or up to 2018 data and pilot tones for multiple user communications, and the 4096 point FFT size comprises up to 4068 data and pilot tones for non-OFDMA communications or up to 4066 data and pilot tones for multiple user communications.

30. An apparatus for wireless communication, comprising:

means for identifying a transmission mode for transmitting a signal;

means for selecting a tone plan for transmission of the signal over a 320 MHz contiguous channel bandwidth based on the transmission mode, the tone plan being associated with a 256 point fast Fourier transform (FFT) size, a 512 point FFT size, a 1024 point FFT size, a 2048

point FFT size, or a 4096 point FFT size, the tone plan comprising a 320 MHz tone plan, a 240 MHz tone plan, a 160 MHz tone plan, or an 80 MHz tone plan, or a combination thereof; and

means for transmitting the signal over the 320 MHz channel bandwidth, wherein the transmitting comprises one of:

means for transmitting the signal over the entirety of the 320 MHz channel bandwidth based on the 320 MHz tone plan,

means for transmitting the signal over the 320 MHz channel bandwidth based on two duplicates of the 160 MHz tone plan, each duplicate of the 160 MHz tone plan being for a different 160 MHz sub-band of the 320 MHz channel bandwidth, or

means for transmitting the signal over the 320 MHz channel bandwidth based on four duplicates of the 80 MHz tone plan, each duplicate of the 80 MHz tone plan being a different 80 MHz sub-band of the 320 MHz channel bandwidth.

31. A non-transitory computer-readable medium storing code for wireless communication, the code comprising instructions executable by a processor to:

identify a transmission mode for transmitting a signal;

select a tone plan for transmission of the signal over a 320 MHz contiguous channel bandwidth based on the transmission mode, the tone plan being associated with a 256 point fast Fourier transform (FFT) size, a 512 point FFT size, a 1024 point FFT size, a 2048 point FFT size, or a 4096 point FFT size, the tone plan comprising a 320 MHz tone plan, a 240 MHz tone plan, a 160 MHz tone plan, or an 80 MHz tone plan, or a combination thereof; and

transmit the signal over the 320 MHz channel bandwidth, wherein the transmitting comprises one of:

transmit the signal over the entirety of the 320 MHz channel bandwidth based on the 320 MHz tone plan,

transmit the signal over the 320 MHz channel bandwidth based on two duplicates of the 160 MHz tone plan, each duplicate of the 160 MHz tone plan being for a different 160 MHz sub-band of the 320 MHz channel bandwidth, or

transmit the signal over the 320 MHz channel bandwidth based on four duplicates of the 80 MHz tone plan, each duplicate of the 80 MHz tone plan being a different 80 MHz sub-band of the 320 MHz channel bandwidth.

32. A method for wireless communication, comprising:

identifying a transmission mode for transmitting a signal;

selecting a tone plan for transmission of the signal over a 320 MHz contiguous channel bandwidth or a 320 MHz disjoint channel bandwidth based on the transmission mode, the tone plan being associated with a 256 point fast Fourier transform (FFT) size, a 512 point FFT size, a 1024 point FFT size, a 1024 point FFT size, a 2048 point FFT size, or a 4096 point FFT size, the tone plan comprising a 320 MHz tone plan, a 240 MHz tone plan, a 160 MHz tone plan, or an 80 MHz tone plan, or a combination thereof; and

transmitting the signal over the 320 MHz contiguous channel bandwidth or the 320 MHz disjoint channel bandwidth, wherein the transmitting comprises one of:

transmitting the signal over the 320 MHz contiguous channel bandwidth based on two duplicates of the 160 MHz tone plan, each duplicate of the 160 MHz tone plane being for a different 160 MHz sub-band of the 320 MHz contiguous channel bandwidth, or

transmitting the signal over the 320 MHz disjoint channel bandwidth based on four duplicate 80 MHz tone plans, each duplicate 80 MHz tone plan in one 80 MHz sub-band, wherein the 320 MHz disjoint channel bandwidth comprises two disjoint, contiguous 160 MHz frequency bands.