CLAIMS

What is Claimed:

1. A method for use in a first station (STA1), the method comprising:

receiving a null data packet announcement (NDPA) frame, the NDPA frame including an indicator of orthogonal frequency division multiple access (OFDMA) subchannel puncturing of a subsequent null data packet (NDP), wherein the indicator of OFDMA subchannel puncturing comprises an OFDMA puncturing mode signal indicating a higher resolution of subchannel puncturing in the NDP;

receiving the NDP, the NDP occupying at least one 80MHz channel, the NDP including a U-SIG field indicating an OFDMA puncturing pattern; and

transmitting a beamforming report (BFR) to a second station (STA2), the BFR including measurement information associated with subchannels that are present in the NDP based on the OFDMA puncturing pattern.

2. The method of claim 1, wherein the NDPA frame includes indicia of inactive subchannels in a partial bandwidth (BW) subfield.

3. The method of claim 1, wherein the OFDMA puncturing pattern indicates OFDMA subcarriers that are not used in the NDP.

4. The method of claim 1, wherein the NDPA frame comprises a duplicate non-high throughput (Non-HT) physical protocol data unit (PPDU) having a partial BW subfield containing the indicia of the OFDMA subchannel puncturing with 40MHz minimum subchannel resolution, and wherein the NDP comprises an extremely high throughput (EHT) PPDU including the U-SIG field having the OFDMA puncturing pattern with 20MHz minimum subchannel resolution.

5. The method of claim 1, wherein the STA2 comprises an access point and wherein the method further comprises:

receiving a beamforming report poll (BFRP) soliciting the BFR.

6. The method of claim 1, wherein the measurement information excludes punctured subchannels identified in a disabled subchannel bitmap.

7. A station (STA1) comprising:

a transceiver; and

a processor in communication with the transceiver, the processor and transceiver configured to:

receive a null data packet announcement (NDPA) frame, the NDPA frame including an indicator of orthogonal frequency division multiple access (OFDMA) subchannel puncturing of a subsequent null data packet (NDP), wherein the indicator of OFDMA subchannel puncturing

comprises an OFDMA puncturing mode signal indicating a higher resolution of subchannel puncturing in the NDP;

receive the NDP occupying at least one 80MHz channel, the NDP including a U-SIG field indicating an OFDMA puncturing pattern; and

transmit a beamforming report (BFR) to a second station (STA2), the BFR including measurement information associated with subchannels that are present in the NDP based on with the OFDMA puncturing pattern.

8. The STA1 of claim 7, wherein the NDPA frame includes indicia of inactive subchannels in a partial bandwidth (BW) subfield.

9. The STA1 of claim 7, wherein the OFDMA puncturing pattern indicates OFDMA subcarriers that are not used in the NDP

10. The STA1 of claim 7, wherein the NDPA frame comprises a duplicate non-high throughput (Non-HT) physical protocol data unit (PPDU) having a partial BW subfield containing the indicator of the OFDMA subchannel puncturing with 40MHz minimum subchannel resolution, and wherein the NDP comprises an extremely high throughput (EHT) PPDU including the U-SIG having the OFDMA puncturing pattern with 20MHz minimum subchannel resolution.

11. The STA1 of claim 7, wherein the STA2 comprises an access point and wherein the processor and transceiver are further configured to:

receive a beamforming report poll (BFRP) soliciting the BFR.

12. The STA1 of claim 7, the measurement information associated with subchannels that are not punctured in accordance with the OFDMA puncturing pattern further excludes punctured subchannels identified in a disabled subchannel bitmap.

13. An access point (AP) comprising:

a transceiver; and

a processor in communication with the transceiver, the processor and transceiver configured to:

transmit a null data packet announcement (NDPA) frame, the NDPA frame including an indicator of an orthogonal frequency division multiple access (OFDMA) subchannel puncturing of a subsequent null data packet (NDP), wherein the indicator of OFDMA subchannel puncturing comprises an OFDMA puncturing mode signal indicating a higher resolution of subchannel puncturing in the NDP;

transmit the null data packet (NDP) occupying at least one 80MHz channel, the NDP including a U-SIG field indicating an OFDMA puncturing pattern;

transmit a beamforming report poll (BFRP), to a first station (STA1) soliciting a beamforming report (BFR); and

receive the BFR from the STA1 in response to the BFRP, the BFR including measurement information associated with subchannels that are not punctured based on the OFDMA puncturing pattern.

14. The AP of claim 13 wherein the NDPA frame includes indicia of inactive subchannels in a partial bandwidth (BW) subfield.

15. The AP of claim 13 wherein the NDPA frame comprises a duplicate non-high throughput (Non-HT) physical protocol data unit (PPDU) having a partial BW subfield containing the indicator of the OFDMA subchannel puncturing with 40MHz minimum subchannel resolution, and wherein the NDP comprises an extremely high throughput (EHT) PPDU including the U-SIG having the OFDMA puncturing pattern with 20MHz minimum subchannel resolution.

16. The AP of claim 13 wherein the indicator of OFDMA subchannel puncturing comprising an OFDMA puncturing mode signal.

17. The AP of claim 13 wherein the processor and transceiver are further configured to transmit a beacon including indicia of punctured subchannels in a disabled subchannel bitmap field.

18. The AP of claim 17 wherein the measurement information associated with subchannels that are not punctured further excludes punctured subchannels identified in the disabled subchannel bitmap field.