IEEE P802.11  
Wireless LANs

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| PDT to fix TBDs in 36.3.2.2 | | | | |
| Date: 2021-04-26 | | | | |
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This submission includes proposed text to fix TBDs in Subsection 36.3.2.2 Support of wide bandwidth OFDM operation

##### Revision history:

##### R0 – initial version

R1 – revision

Discussion:

Some of the SPs in 11/21-95r6:

**SP1 in 11/21-95r6 (SP#408,** No objection**)**

**Do you agree that:**

for an 80 MHz operating STA supporting SST that is assigned (by the AP) a non-primary 80 MHz channel in a 160 MHz or 320 MHz EHT MU PPDU using SST, the STA shall have prior knowledge of at least one "guaranteed non-punctured 20 MHz channel" from the AP within the non-primary 80 MHz.

Notes:

* + - Non-primary 80 MHz operation with non-static puncturing is an R2 feature
    - ways of informing the STA (signaling, static information, …) are TBD

**SP2 in 11/21-95r6 (SP#388,** Y/N/A/No response: 70/8/41/54**)**

**Do you agree that:**

for a 160 MHz operating STA supporting SST that is assigned (by the AP) a non-primary 160 MHz channel in a 320 MHz EHT MU PPDU using SST, the STA shall have prior knowledge of at least one "guaranteed non-punctured 20 MHz channel" from the AP within the non-primary 160 MHz.

Notes:

* + - SST in non-primary 160 MHz is an agreed R2 feature
    - ways of informing the STA (signaling, static information, …) are TBD

**SP3 in 11/21-95r6 (SP#407,** No objection**)**

**Do you agree that:**

SST support for an 80 MHz operating STA to operate in a non-primary 80 MHz with puncturing will be an R2 feature, at least for those cases where puncturing information is not communicated during association?

NOTE: R1 support of SST using static puncturing (i.e., where puncturing information is communicated during association) is TBD

SST to operate in non-primary 80 MHz within primary 160 MHz (i.e., Secondary 80 MHz) is still TBD.

There are two subcases TBD:

Subcase 1: operate in Secondary 80 MHz without puncturing – baseline developed in 11ax

Subcase 2: operate in Secondary 80 MHz with static preamble puncturing

This PDT follows subcase 1 – the baseline developed in 11ax.

Discussion end

*TGbe editor: please revise the text in Subclause 36.3.2.2 in D0.4 as below.*

**36.3.2.2 Support of wide bandwidth OFDM operation**

A 20 MHz, 80 MHz, or 160 MHz operating non-AP EHT STA is a non-AP EHT STA that supports for 20 MHz, 80 MHz, or 160 MHz channel width, respectively (see 36.1.1 (Introduction to the EHT PHY)). The supported channel width of a non-AP EHT STA is indicated in the Supported Channel Width subfield in HE PHY Capabilities Information field (see 9.4.2.248.3 (HE PHY Capblities Information field) and the Support For 320 MHz in 6 GHz subfield in EHT Capabilities element (see 9.4.2.295c.3 (EHT PHY Capabilities Information field) and the operating channel width may be updated by Operating Mode Notification frame, Operating Mode Notification element with the Rx NSS Type subfield equal to 0, or Channel Width subfieldin the OM Control subfield (see 9.2.4.6a2 (OM Control)) if the EHT OM Control subfield (See 9.2.4.6a.8 (EHT OM Control)) is not present in the same A-Control field, or the Channel Extension subfield in the EHT OM Control subfield together and with the OM Control subfield sent by the EHT STA .

A 20 MHz operating non-AP EHT STA shall be able to participate in 40 MHz, 80 MHz, 160 MHz, or 320 MHz EHT DL and UL OFDMA transmissions.

A 20 MHz operating non-AP EHT STA supports 26-tone RU, 52-tone RU, 106-tone RU, 242-tone RU 52+26-tone MRU, and 106+26-tone MRU in locations allowed in 36.3.2.5 (RU and MRU restrictions for 20 MHz operation(#3276)) when participating in EHT DL and UL OFDMA transmissions with PPDU bandwidth larger than 20 MHz. An EHT AP shall be able to allocate an RU (see 36.3.2.1 (Subcarriers and resource allocation for wideband)) or MRU (see 36.3.2.3 (Subcarriers and resource allocation for multiple RUs)) on a 20 MHz channel within the BSS bandwidth in a 40 MHz, 80 MHz, 160 MHz, or 320 MHz EHT MU or EHT TB PPDU to a 20 MHz operating non-AP EHT STA.

A 20 MHz operating non-AP EHT STA shall be able to transmit the preamble and data in the allocated RU or MRU within its operating 20 MHz channel in a 40 MHz, 80 MHz, 160 MHz, or 320 MHz EHT TB PPDU. When an EHT AP assigns an RU or MRU to a 20 MHz operating non-AP EHT STA, the EHT AP shall follow the restrictions for 20 MHz operation specified in 36.3.2.5 (RU and MRU restrictions for 20 MHz operation).

A 20 MHz operating non-AP STA shall be able to support the reception of the preamble and data in the allocated RU or MRU within its operating 20 MHz channel in a 40 MHz, 80 MHz, 160 MHz, or 320 MHz EHT MU PPDU. RU and MRU restrictions for 20 MHz operation are specified in 36.3.2.5 (RU and MRU restrictions for 20 MHz operation).

A 20 MHz operating non-AP EHT STA shall operate in the primary 20 MHz channel except when the 20MHz operating non-AP EHT STA sets dot11HESubchannelSelectiveTransmissionImplemented equal to true. In this case, the 20 MHz operating non-AP EHT STA may operate in any 20 MHz channel within the BSS bandwidth of 80 MHz or 160 MHz, or within the primary 160 MHz when the BSS bandwidth 320 MHz by following the procedure in 26.8.7 (HE subchannel selective transmission).

An EHT AP shall not allocate an RU outside of the primary 20 MHz in an 80 MHz 160 MHz or 320 MHz EHT MU or EHT TB PPDU to an 20 MHz operating non-AP EHT STA if the 20 MHz operating non-AP EHT STA has not set up SST operation on the nonprimary 20 MHz channel with the EHT AP.

An 80 MHz operating non-AP EHT STA shall be able to participate in 160 MHz and 320 MHz, EHT DL and UL OFDMA transmissions. An EHT AP shall be able to allocate an RU (see 36.3.2.1 (Subcarriers and resource allocation for wideband) or MRU (see 36.3.2.3 (Subcarriers and resource allocation for multiple RUs)) on one 80 MHz channel within the BSS bandwidth in a 160 MHz or 320 MHz EHT MU or EHT TB PPDU to an 80 MHz operating non-AP EHT STA.

An 80 MHz operating non-AP EHT STA shall operate in the primary 80 MHz channel except when the 80MHz operating non-AP EHT STA sets dot11HESubchannelSelectiveTransmissionImplemented equal to true and parks on an 80 MHz channel without ~~there exists no~~ preamble puncturing. In this case, the 80 MHz operating non-AP EHT STA may operate in any 80 MHz channel within Primary 160 MHz of the BSS bandwidth by following the procedure in 26.8.7 (HE subchannel selective transmission).

An EHT AP shall not allocate an RU outside of the primary 80 MHz in a 160 MHz or 320 MHz EHT MU or EHT TB PPDU to an 80 MHz operating non-AP EHT STA if the 80 MHz operating non-AP EHT STA has not set up SST operation on the nonprimary 80 MHz channel with the EHT AP or if there is a preamble puncturing in the non-AP EHT STA’s operating 80 MHz channel. .

An 80 MHz operating non-AP EHT STA shall support all RU and MRU sizes within its operating 80 MHz channel when participating in 160 MHz or 320 MHz EHT DL and UL OFDMA transmissions.

An 80 MHz operating non-AP EHT STA shall be able to transmit the preamble and data in the allocated RU or MRU within its operating 80 MHz channel in a 160 MHz or 320 MHz EHT TB PPDU.

An 80 MHz operating non-AP STA shall be able to support the reception of the preamble and data in the allocated RU or MRU within its operating 80 MHz channel in a 160 MHz or 320 MHz EHT MU PPDU.

A 160 MHz operating non-AP EHT STA shall be able to participate in 320 MHz EHT DL and UL OFDMA transmissions. An EHT AP shall be able to allocate an RU or MRU on the primary 160 MHz channel within the BSS bandwidth in a 320 MHz EHT MU or EHT TB PPDU to a 160 MHz operating non-AP EHT STA. An EHT AP shall not allocate an RU or MRU on the secondary 160 MHz in a 320 MHz EHT MU or EHT TB PPDU to a 160 MHz operating non-AP EHT STA .

A 160 MHz operating non-AP EHT STA shall support all RU and MRU sizes within the primary 160 MHz channel when participating in 320 MHz EHT DL and UL OFDMA transmissions.

A 160 MHz operating non-AP EHT STA shall be able to transmit the preamble and data in the allocated RU or MRU on the primary 160 MHz channel in a 320 MHz EHT TB PPDU.

A 160 MHz operating non-AP STA shall be able to support the reception of the preamble and data in the allocated RU or MRU on the primary 160 MHz channel in a 320 MHz EHT MU PPDU.