IEEE P802.11
Wireless LANs

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| CR for 320MHz BQR  |
| Date: 2021-08-06 |
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1. **Introduction**

Interpretation of a Motion to Adopt

A motion to approve this submission means that the editing instructions and any changed or added material are actioned in the TGbe Draft. The introduction and the explanation of the proposed changes are not part of the adopted material.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **Clause**  | **P.L** | **Comment** | **Proposed Change** | **Resolution** |
| 5502 | Jinsoo Choi | 9.2.4.6.3a | 71.18 | It's not clear if the BQR is associated with dot11EHTBaseLineFeaturesImplementedOnly, but EHT BQR needs to be defined since the new 320 MHz BW is in R1. | As in comment | RevisedAgree with the commenter, the text of 320MHz BQR is added based on Motion 135, #SP220.TGbe editor to make the changes shown in doc 21/1299r2 under CID 5502 |
| 5535 | JINYOUNG CHUN | 9.2.4.6.3a | 71.42 | BQR (Bandwidth query report) Control subfield should be updated because it's only support till 160MHz. | add EHT BQR control as new subclause | RevisedAgree with the commenter, the text of 320MHz BQR is added based on Motion 135, #SP220.TGbe editor to make the changes shown in doc 21/1299r2 under CID 5535 |
| 8154 | Yunbo Li | 9.2.4.6a.x | 71.50 | The indication of 320MHz through BQR already passed motion (Motion 135, #SP220). It is label in R2 just because some member asked whether it is a R2 feature without provide a reason. Since 320MHz is a R1 feature, 320MHz BQR indication should also be R1. | covert the motion text into 11be spec in R1 | RevisedAgree with the commenter, the text of 320MHz BQR is added based on Motion 135, #SP220.TGbe editor to make the changes shown in doc 21/1299r2 under CID 8154 |

The followings apply for BQR Control subfields in A-Control subfield in R2.

* When there are two BQR control subfields in A-Control subfield, the 1st BQR Control is used to indicate the primary 160 MHz, the 2nd BQR Control is used to indicate the secondary 160 MHz.
* When there is one BQR control subfield in A-Control subfield, the BQR Control is used to indicate the primary 160 MHz.

[Motion 135, #SP220, [48] and [170]]

***Editing instructions formatted like this are intended to be copied into the TGbe Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

1. **Proposed spec text**

***TGbe editor: Please change below paragraphs in subclauses 9.4.2.295c.2 (EHT MAC Capabilities Information field) as follows:***

9.4.2.295c.2 EHT MAC Capabilities Information field

The format of the EHT MAC Capabilities Information field is defined in [Figure 9-788eu (EHT MAC Capa-](#bookmark116) [bilities Information field format](#bookmark116).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | B0 | B1 | B2 | B3 | B4 | B5 | B4 B15 |
|  | NSEP Priority Access Supported | EHT OMControl Support | Triggered TXOP Sharing Support | Restricted TWT Support | SCS Traffic Description Support | Two BQRs Support | Reserved |
| Bits: | 1 | 1 | 1 | 1 | 1 | 1 | 10 |

**Figure 9-788eu—EHT MAC Capabilities Information field format**

The subfields of the EHT MAC Capabilities Information field are defined in [Table 9-322aq (Subfields of the](#bookmark117) [EHT MAC Capabilities Information field)](#bookmark117).

**Table 9-322aq—Subfields of the EHT MAC Capabilities Information field**

|  |  |  |
| --- | --- | --- |
| **Subfield** | **Definition** | **Encoding** |
| NSEP Priority Access Supported | Indicates support for NSEP priority access. | Set to 1 if dot11EHTNSEPPriorityAc- cessActivated is true (see 35.12 (NSEP priority access)).Set to 0 otherwise. |
| EHT OM Control Support | Indicates support for receiving a frame with an EHT OM Control sub- field. | If the +HTC-HE Support subfield is 1 in a STA:Set to 1 if the STA supports recep- tion of the EHT OM Control sub- field.Set to 0 otherwise.Reserved if the +HTC-HE Support subfield is 0 in a STA. |
| Triggered TXOP Sharing Support | Indicates support for transmitting or responding to a TXOP sharing trigger frame that does not solicit TB PPDU. | For an EHT AP:Set to 1 to indicate that the AP is capable of transmitting a modified MU-RTS frame that allocates time to a STA to transmit non-TB PPDUs (see 35.2.1.3 (Triggered TXOP sharing procedure)).Set to 0 otherwise.For an non-AP EHT STA:Set to 1 to indicate that the non- AP STA is capable of responding to a modified MU-RTS frame that allocates time to a STA to trans- mit non-TB PPDUs (see 35.2.1.3 (Triggered TXOP sharing proce- dure)).Set to 0 otherwise. |
| Restricted TWT Support | Indicates support for the restricted TWT operation. | Set to 1 if dot11RestrictedTWTOp- tionImplemented is true and the STA supports the restricted TWT operation (see 35.7 (Restricted TWT)).Set to 0 otherwise. |
| SCS Traffic Description Support | Indicates support for transmission and reception of SCS Descriptor elements containing a TSPEC subelement. | Set to 1 by an EHT AP that supports transmission of SCS Response frames containing SCS Descriptor element with a TSPEC subelement and dot11SCSActivated is true.Set to 1 by a non-AP EHT STA that supports transmission of SCS Request frames containing SCS Descriptor ele- ment with a TSPEC subelement and dot11SCSActivated is true.Set to 0 otherwise. |
| AAR Support | For an AP, indicates support for receiving a frame with an AAR Con- trol subfield. For a non-AP STA, indi- cates support for generating a frame with an AAR Control subfield. | If the +HTC-HE Support subfield is 1: Set to 1 if the STA supports the AAR Control subfield functionality.Set to 0 otherwise.Reserved if the +HTC-HE Support subfield is 0. |
| Two BQRs Support | For an AP, indicates support for receiving a frame with two BQR Control subfields. For a non-AP STA, indicates support for generating a frame with two BQR Control subfields. | If the +HTC-HE Support subfield is 1:Set to 1 if the STA supports the two BQR Control subfields functionality.Set to 0 otherwise.Reserved if the +HTC-HE Support subfield is 0. |

***TGbe editor: Please change below paragraphs in subclauses 9.2.4.6a.6 (BQR Control) as follows:***

**9.2.4.6a.6 BQR Control**

The Control Information subfield in a BQR Control subfield contains the bandwidth query report (BQR) used for bandwidth query report operation to assist HE MU transmission (see 26.5.2 (UL MU operation)). The format of the subfield is shown in Figure 9-22g (Control Information subfield format in a BQR Control subfield).

The Available Channel Bitmap subfield contains a bitmap indicating the subchannels available at the STA transmitting the BQR. When there is one BQR Control subfield in an A-Control subfield, the Available Channel Bitmap subfield is applied to either:

* the operating channel width when the operating channel width is no more than 160 MHz, or
* the primary 160 MHz when the operating channel width is 320 MHz.

When there are two BQR Control subfields in an A-Control subfield, the Available Channel Bitmap subfield in the first and second BQR Control subfields are applied to the primary 160 MHz and the secondary 160 MHz respectively. (#5502, 5535, 8154)

Each bit in the bitmap corresponds to a 20 MHz subchannel within the operating channel width of the BSS in which the STA is associated, with the LSB corresponding to the lowest numbered operating subchannel. The bit in position X in the bitmap is set to 1 to indicate that the subchannel X + 1 is idle; otherwise it is set to 0 to indicate that the subchannel is busy or unavailable. The availability of each 20 MHz subchannel is based on the ED-based CCA defined in 27.3.20.6.5 (Per 20 MHz CCA sensitivity) and is reported for the 20 MHz subchannels located in the operating channel of the reporting STA, when the WM is idle as defined in 10.3.2.1 (CS mechanism) and in 26.5.2.5 (UL MU CS mechanism).

***TGbe editor: Please add below subclause in subclause 35.4 (MU operation) as follows:***

**35.4.3 Two BQR Control operation**

An EHT STA with dot11TwoBQRsOptionImplemented equals to true shall set the Two BQRs Support subfield in the EHT MAC Capabilities Information field in the EHT Capabilities element it transmits to 1; otherwise the EHT STA shall set the Two BQRs Support subfield to 0.

An EHT STA with dot11TwoBQRsOptionImplemented equals to true shall set the BQR Support subfield in the HE MAC Capabilities Information field in the HE Capabilities element it transmits to 1.

The EHT STA may report the channel availability information as specified in 36.3.20.6.4 (Per 20 MHz CCA sensitivity) to its associated AP in two BQR Control subfields of frames it transmits if the AP has indicated its support in the Two BQRs Support subfield of its EHT Capabilities element; otherwise the STA shall not report the channel availability information in two BQR Control subfields.

NOTE 1—An EHT STA is an HE STA and as such inherits all the functionalities defined in 26.5.6 (Bandwidth query report operation).

***TGbe editor: Please change below paragraphs in subclauses C.3 (MIB Detail) as follows:***

C.3 MIB Detail

—dot11AAROptionImplemented

—dot11EHTEMLSROptionImplemented

—dot11EHTEMLMROptionImplemented

—dot11EHTOMIOptionImplemented

—dot11EHTTXOPSharingTFOptionImplemented

—dot11MLDAssociationSAQueryMaximumTimeout

—dot11MultiLinkActivated

—dot11RestrictedTWTOptionImplemented

—dot11SCSActivated

—dot11SoftAPMLDImplemented

—dot11SRSOptionImplemented

—dot11SupportedEMLMRRxNSS

—dot11SupportedEMLMRTxNSS

—dot11TwoBQRsOptionImplemented

***End of change***