IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Comment Resolutions for 11be D2.0 EHT STA Features CIDs | | | | |
| Date: 2022-08-31 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Rajat Pushkarna | Panasonic |  |  | rajat.pushkarna@sg.panasonic.com |
| Rojan Chitrakar |  |  |  |
|  |  |  |  |  |
|  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Abstract

This submission proposes resolutions of comments received from TGbe LB (TGbe Draft 2.0).

CIDs: 13288, 10268, 10383, 10384, 10514, 10515, 11479, 11480, 11707, 11823, 12218, 12223

(12 CIDs)

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: Based on offline discussions.

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.

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

***TGbe Editor: Editing instructions preceded by “TGbe Editor” are instructions to the TGbe editor to modify existing material in the TGbe draft. As a result of adopting the changes, the TGbe editor will execute the instructions rather than copy them to the TGbe Draft.***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| CID | Commenter | Clause | Page | Line | Comment | Proposed Change | Resolution |
| 13288 | Binita Gupta | 4.3.1.6a | 56 | 32 | The list of MAC features for EHT STA should also include optional support for QoS Characteristics element in SCS | Add 'Optional support for QoS Characteristics element in SCS' as a new bullet in the list of MAC features for EHT STA. | **Revised.**  Agree with the comment that it is better to delete the cited text and provide a list of the main PHY and MAC features using similar formatting as 11ax.    TGbe editor to make the changes shown in doc.: IEEE 802.11-22/01472r1under all headings that include CID 13288. |
| 10268 | Michael Montemurro | 4.3.16a | 55 | 14 | This is clause 4, not the PICs keep the description general and remove the mandatory/optional behavior. | Commenter is willing to collaborate on a submission with a set of changes. | **Rejected.**  The PICS are for detailed implementations and is not easy to read, whereas subclause 4.3.16a can be understood easily and describes the features related to EHT STA only. |
| 10383 | GEORGE CHERIAN | 4.3.16a | 55 |  | Add mandatory support for TID2Link mapping for non-AP MLD devices, for at least one mode where all the TIDs can be mapped to a subset of links that are set up | As in the comment | **Revised.**  The proposed text already in the specs D2.1.1.  TGbe Editor to make no changes. |
| 10384 | GEORGE CHERIAN | 4.3.16a | 55 |  | Add an explcit TID2Link mapping mode that a non-AP MLD optionally supports, wherein all the TIDs can be mapped to a subset of links that are set up, with some TIDs mapped to other links as well | As in the comment | **Revised.**  Agree with the commentor in principle to add support for TID to Link Mapping.  TGbe editor to make the changes shown in doc.: IEEE 802.11-22/01472r1under all headings that include CID 10384. |
| 10514 | Abhishek Patil | 4.3.16a | 56 | 4 | Add "In an MLD, mandatory support for MLD level packet number (PN) space" to the list | As in comment | **Revised.**  Agree with the commentor in principle to add support for MLD level PN space.  TGbe editor to make the changes shown in doc.: IEEE 802.11-22/01472r1under all headings that include CID 10514. |
| 10515 | Abhishek Patil | 4.3.16a | 56 | 7 | Add "In an EHT AP, mandatory support for beacon protection" to the list | As in comment | **Revised.**  Agree with the commentor in principle to add support for beacon protection.  TGbe editor to make the changes shown in doc.: IEEE 802.11-22/01472r1under all headings that include CID 10515. |
| 11479 | Xiaofei Wang | 4.3.16a | 55 | 63 | For the requirements in this clause under the cases "in an MLD", if a device only consists of one EHT STA, is that considered as an MLD or just an EHT STA? Should that device support the mandatory features listed under "MLD"? How can a single STA MLD and a EHT STA be differentiated? | as in comment | **Revised.**  The proposed text already exist in D2.1.1.  Clause 3 defines MLD as, “A logical entity that is capable of supporting more than one affiliated station (STA) but can also operate using one or more affiliated STAs, and has one medium access control (MAC) data service and a single MAC service access point (SAP) to the logical link control (LLC) sublayer.” For this whatever is valid for EHT STA shall be valid for a single STA affiliated with MLD.  TGbe editor to make no changes for this CID. |
| 11480 | Xiaofei Wang | 4.3.16a | 56 | 18 | The condition of "operating on a STR link pair" is confusing, assuming that the STR link pair is declared by the non-AP MLD itself, there won't be any mandate to support STR operation as long as the non-AP MLD declares the pair of links to be non-STR. This requirement should be rewritten to clearly state what the mandate is. | as in comment | **Revised.**  Agree with the commentor in principle. Added text clarifying the decleration of non-STR links by non-AP.  TGbe editor to make the changes shown in doc.: IEEE 802.11-22/01472r1under all headings that include CID 11480. |
| 11707 | Gaurav Patwardhan | 4.3.16a | 56 | 32 | Missing optional support for cross-link Management frame signaling. | Add a bullet: "In an MLD, optional support for cross-link Management frame signaling" | **Revised.**  Agree with the commentor in principle to add support for cross-link management frame signalling.  TGbe editor to make the changes shown in doc.: IEEE 802.11-22/01472r1under all headings that include CID 11707. |
| 11823 | Alfred Asterjadhi | 4.3.16a | 55 | 63 | Before going over subfeatures of MLD it is good to call out what support is there for MLD itself. | As in comment. | **Revised.**  Agree with the commenter in pornciple to add support for MLO for EHT AP/non-AP.  TGbe editor to make the changes shown in doc.: IEEE 802.11-22/01472r1under all headings that include CID 11823. |
| 12218 | Stephen McCann | 4.3.16a | 56 | 17 | An MLD should not be constrained to only have a STR link pair. It should be able to have as many STR links as it wishes. | Change to "In a non-AP MLD operating using one or more STR links, mandatory support for STR operation" | **Revised.**  Agree that MLD should not be constrained to a single STR link pair.  TGbe editor to make the changes shown in doc.: IEEE 802.11-22/01472r1under all headings that include CID 12218. |
| 12223 | Stephen McCann | 4.3.16a | 56 | 10 | An MLD should not be constrained to have a STR link pair. It should be able to have as many STR links as it wishes | Change the sentence to "In an AP MLD that is not an NSTR mobile AP MLD, mandatory support for STR operation on each link" | **Revised.**  The proposed change already exists in D2.1.1  TGbe Editor to make no changes. |

**Discussion:**

Reference for CIDs 10383 and 12223.

**CID 10383:**

**A picture containing text

Description automatically generated**

**CID 12223:**

****

**SP:** Do you agree to incorporate the changes provided in doc.: IEEE 802.11-22/01472r1 for CIDs 13288, 10268, 10383, 10384, 10514, 10515, 11479, 11480, 11707, 11823, 12218, 12223 to the next revision of 802.11be draft?

4.3.16a Extremely high throughput (EHT) STA (CIDs)

***TGbe editor: Modify the sub-clause as the following (Track Changes ON):***

The main MAC features in an EHT STA that are not present in HE STA or VHT STA or HT STA are the following:

—Mandatory support for GCMP-256

* In an EHT AP, mandatory support for MLO. (#11823)
* In an EHT non-AP, optional support for MLO. (#11823)

—In an EHT AP, mandatory support for beacon protection. (#10515)

—In an MLD, mandatory support for multi-link discovery procedure

—In an MLD, mandatory support for multi-link (re)setup procedure

—In an MLD, mandatory support for multi-link BlockAck procedure

—In an MLD, mandatory support for link management procedure with default TID-to-link mapping

—In an MLD, mandatory support for MLD level sequence number spaces

—In an MLD, mandatory support for MLD level packet number (PN) space (#10514)

—In an MLD, mandatory support for BSS parameter critical update procedure

—In an MLD, mandatory support for multi-link power management

—In an AP MLD, mandatory support for serving a single radio non-AP MLD

—In an AP MLD that is not an NSTR mobile AP MLD, mandatory support for STR operation on each pair of links, if the AP MLD operates with more than one affiliated APs

—In an AP MLD, mandatory support for PPDU end time alignment when the AP-MLD is serving an NSTR non-AP MLD.

—In an AP MLD, mandatory support for multi-link group addressed frame delivery

—(#10383)(#14054)In a non-AP MLD, mandatory support for TID-to-link mapping negotiation with value 1 as described in Table 9-401j (Subfields of the MLD Capabilities and Operations field), and optional support for TID-to-link mapping negotiation with other values .

* In a non-AP MLD, optional support for TID2Link mapping, wherein all the TIDs can be mapped to a subset of links that are set up, with some TIDs mapped to other links as well. (#10384)

—In a non-AP MLD operating on one or more STR link pairs, mandatory support for STR operation, if the non-AP MLD announce that it operates on one or more STR link pair. (#12218) (#11480)

—In an (#10383)(#14054)AP MLD, optional support for TID-to-link mapping negotiation

—In an MLD, optional support for EMLSR mode

—In an MLD, optional support for EMLMR mode

—In an MLD, optional support for start time sync PPDUs medium access

—In an MLD, optional support for NSTR mobile AP MLD operation

—In an MLD, optional support for cross-link Management frame signaling (#11707)

—Optional support for EPCS priority access operation

Optional support for QoS Characteristics element in SCS (#13288)

—Optional support for BlockAck Bitmap field lengths of 512 and 1024

—Optional support for (#11109)R-TWT

—Optional support for triggered TXOP sharing procedure

--------- End of text changes --------------