IEEE P802.11 Wireless LANs

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| Resolution for CIDs related to 35.17.3 (LB266) | | | | |
| Date: 07-31-2022 | | | | |
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Abstract

This submission proposes resolutions for following 8 CIDs received for TGbe LB266: 10267, 11245, 12699, 12700, 12701, 12702, 12703, 12704

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: Editorial changes per comment in the offline review.
* Rev 2: revised per comment in the meeting

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. This introduction is 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 802.11 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.***

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| **CID** | **Section** | **Pg/Ln** | **Comment** | **Proposed Change** | **Resolution** |
| 10267 | 35.17.3.1 | 539.31 | Defintions of EPCS AP MLD and EPCS non-AP MLD should appear before their first use in this section of the document. | Move the sentences defining EPCS AP MLD and EPCS non-AP MLD to subclause 35.17.1 just after the first paragraph. | **Accepted** |
| 11245 | 35.17.3.2 | 539.44 | What is the range for the values of parameters in the EDCA parameter set that the AP provides to EPCS authorized devices? The range actually determines if the EPCS authorized devices get priority access or not. | Spec needs to specify the range | **Rejected**  The EDCA parameters in Priority Access Multi-link element defined in 9.4.2.312.6 follow the rules specified in clause 9.4.2.28 (EDCA Parameter Set element) that describes range for EDCA parameters. |
| 12699 | 35.17.3.2 | 539.47 | There is no EPCS Priority Access Enable action frame but rather EPCS Priority Access Enable Request frame or EPCS Priority Access Enable Response frame. in addition, The AP MLD does not transmit any frame, but only one of its affiliated APs. Please revise the following sentence, as proposed:"...the values carried in the EDCA Parameters Set element in the Per-STA Profile corresponding to the AP to which the STA is associated in Priority Access Multi-Link element contained in an EPCS Priority Access Enable action frame sent by the EPCS AP MLD, if the corresponding Per-STA Profile is present and contains an EDCA Parameters Set element .." | Please revise the sentence as follows: "the values in the EDCA Parameters Set element \*included\* in the Per-STA Profile of the Priority Access Multi-Link element, corresponding to the AP \*with\* which the STA is associated \*and carried\* in an \*EPCS Priority Access Enable Request frame or EPCS Priority Access Enable Response frame\* sent by the \*AP affiliated with the\* EPCS AP MLD, if the corresponding Per-STA Profile is present and contains an EDCA Parameters Set element .." | **Revised**  Agree in principle with the comment.  **TGbe editor please implement changes labelled as #12699 in this doc.** |
| 12700 | 35.17.3.2 | 539.56 | There is no EPCS Priority Access Enable action frame but rather EPCS Priority Access Enable Request frame or EPCS Priority Access Enable Response frame. in addition, The AP MLD does not transmit any frame, but only one of its affiliated APs. Please revise the following sentence, as proposed:"...update the dot11MUEDCATable to respective values that correspond to fields in the MU EDCA Parameter Set element in the Per-STA Profile corresponding to the AP to which the STA is associated in Priority Access Multi-Link element contained in an EPCS Priority Access Enable action frame sent by the EPCS AP MLD, if the corresponding Per-STA Profile is present and contains an MU EDCA Parameter Set element .." | Please revise the sentence s follows:"...update the dot11MUEDCATable to respective values that correspond to fields in the MU EDCA Parameter Set element in the Per-STA Profile \*included in Priority Access Multi-Link element\*,corresponding to the AP to which the STA is associated, \*and carried\* in \*EPCS Priority Access Enable Request frame or EPCS Priority Access Enable Response frame\* sent by the \*AP affiliated with the\* EPCS AP MLD, if the corresponding Per-STA Profile is present and contains an MU EDCA Parameter Set element .." | **Revised**  Agree in principle with the comment.  **TGbe editor please implement changes labelled as #12700 in this doc.** |
| 12701 | 35.17.3.2 | 540.01 | There is no EPCS Priority Access Enable action frame but rather EPCS Priority Access Enable Request frame or EPCS Priority Access Enable Response frame. in addition, The AP MLD does not transmit any frame, but only one of its affiliated APs. Please revise the following sentence, as proposed:"...use the latest EDCA parameter set, corresponding to the Link ID in the Priority Access Multilink element contained in a EPCS Priority Access Enable action frame sent by the EPCS AP MLD, if the Per-STA Profile corresponding to the AP to which the STA is associated is included in the Priority Access Multi-Link element.." | Please revise the sentence as follows:"...use the latest EDCA parameter set, corresponding to the Link ID \*included\* in the Priority Access Multilink element \*and carried\* in \*EPCS Priority Access Enable Request frame or EPCS Priority Access Enable Response frame\* sent by the \*AP affiliated with the\* EPCS AP MLD, if the Per-STA Profile corresponding to the AP to which the STA is associated is included in the Priority Access Multi-Link element.." | **Revised**  Agree in principle with the comment.  **TGbe editor please implement changes labelled as #12701 in this doc.** |
| 12702 | 35.17.3.2 | 540.13 | There is no EPCS Priority Access Enable action frame but rather EPCS Priority Access Enable Request frame or EPCS Priority Access Enable Response frame. in addition, The AP MLD does not transmit any frame, but only one of its affiliated APs. Please revise the following sentence, as proposed:"...update the dot11MUEDCATable to respective values that correspond to fields in the MU EDCA Parameter Set element in the Per-STA Profile corresponding to the AP to which the STA is associated in Priority Access Multi-Link element contained in an EPCS Priority Access Enable action frame sent by the EPCS AP MLD, if the corresponding PerSTA Profile is present and contains an MU EDCA Parameter Set element.." | Please revise the sentence as follows:"...update the dot11MUEDCATable to respective values that correspond to fields in the MU EDCA Parameter Set element \*included\* in the Per-STA Profile \*of the Priority Access Multi-Link element\*, corresponding to the AP to which the STA is associated \*and is carried\* in \*EPCS Priority Access Enable Request frame or EPCS Priority Access Enable Response frame\* sent by the \*AP affiliated with the\* EPCS AP MLD, if the corresponding PerSTA Profile is present and contains an MU EDCA Parameter Set element.." | **Revised**  Agree in principle with the comment.  **TGbe editor please implement changes labelled as #12702 in this doc.** |
| 12703 | 35.17.3.2 | 540.13 | typo: replace "PerSTA" with "Per-STA" in the following sentence: "...update the dot11MUEDCATable to respective values that ..., if the corresponding \*PerSTA\* Profile is present and contains an MU EDCA Parameter Set element.." | revise the sentence as follows: "...update the dot11MUEDCATable to respective values that ..., if the corresponding \*Per-STA\* Profile is present and contains an MU EDCA Parameter Set element.." | **Rejected**  The corresponding text in 802.11be D2.0 shows “Per-STA”. Not change is needed. |
| 12704 | 35.17.3.2 | 540.19 | There is no EPCS Priority Access Enable action frame but rather EPCS Priority Access Enable Request frame or EPCS Priority Access Enable Response frame. in addition, The AP MLD does not transmit any frame, but only one of its affiliated APs. Please revise the following sentence, as proposed:"...if the MUEDCATimer[AC] of the STA reaches 0, either by counting down or due to a reset following the reception of an MU EDCA Reset frame, the STA shall update CWmin[AC], CWmax[AC], and AIFSN[AC] to the values that are contained in the EDCA Parameters Set element in the Per-STA Profile corresponding to its associated AP in the Priority Access Multi-Link element, if the corresponding per-STA profile is contained in an EPCS Priority Access Enable action frame sent by the EPCS AP MLD and the Per-STA Profile contains an EDCA Parameter Set element.." | Please revise the sentence as follows:"...if the MUEDCATimer[AC] of the STA reaches 0, either by counting down or due to a reset following the reception of an MU EDCA Reset frame, the STA \*affiliated with EPCS non-AP MLD\* shall update CWmin[AC], CWmax[AC], and AIFSN[AC] to the values that are contained in the EDCA Parameters Set element in the Per-STA Profile corresponding to its associated AP \*included\* in the Priority Access Multi-Link element, if the corresponding per-STA profile is contained in \*EPCS Priority Access Enable Request frame or EPCS Priority Access Enable Response frame\* sent by the \*AP affiliated with the\* the EPCS AP MLD and the Per-STA Profile contains an EDCA Parameter Set element.." | **Revised**  Agree in principle with the comment.  **TGbe editor please implement changes labelled as #12704 in this doc.** |
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***TGbe editor: Please note baseline is 11be D2.0.***

*TGbe editor: Please change 35.17.3 as follows (track change on):*

**35.17.3 EPCS priority access procedure**

**35.17.3.1 General**

EPCS priority access procedure allows EPCS non-AP MLDs with priority access in the enabled state to gain priority access to medium. If the negotiation to enable EPCS priority access between an EPCS AP MLD and an EPCS non-AP MLD is successful, then the STA affiliated with the non-AP MLD applies EPCS priority access to its EPCS traffic on all enabled links using the procedure described below.

An EPCS non-AP MLD shall apply EPCS priority access procedures only when its EPCS priority access state is set to enabled. An EPCS AP MLD may apply EPCS priority access to EPCS traffic using the procedure described below prior to completion of the negotiation to enable EPCS priority access.

An EPCS AP MLD is an AP MLD with dot11EHTEPCSPriorityAccessActivated set to true.

An EPCS non-AP MLD is a non-AP MLD with dot11EHTEPCSPriorityAccessActivated set to true.

* + - 1. **EDCA operation using EPCS EDCA parameters**

As part of the EPCS priority access procedure, a STA affiliated with an EPCS non-AP MLD shall manage its EDCA parameter sets as follows:

* During the process of enabling EPCS priority access, the STA affiliated with the EPCS non-AP MLD shall
* update its CWmin[AC], CWmax[AC], AIFSN[AC], and TXOP Limit [AC] state variables of each access category to
  + the values carried in the EDCA Parameters Set element included in the Per-STA Profile, with the Link ID corresponding to the AP with which the STA is associated, carried in the Priority Access Multi-Link element contained in an EPCS Priority Access Enable Request or an EPCS Priority Access Enable Response frame sent by an AP affiliated with the EPCS AP MLD, if the corresponding Per-STA Profile is present and contains an EDCA Parameters Set element or, (#12699)
  + the default EDCA parameter values found in Table 9-155 (Default EDCA Parameter Set element parameter values if dot11OCBActivated is false or the STA is a non-sensor STA) otherwise.
* update the dot11MUEDCATable to respective values that correspond to fields in the MU EDCA Parameter Set element included in the Per-STA Profile, with the Link ID corresponding to the AP with which the STA is associated, carried in the Priority Access Multi-Link element contained in an EPCS Priority Access Enable Request or an EPCS Priority Access Enable Response frame sent by an AP affiliated with the EPCS AP MLD, if the corresponding Per-STA Profile is present and contains an MU EDCA Parameter Set element.(#12700)
* While EPCS priority access is enabled, the STA affiliated with an EPCS non-AP MLD shall
* use the latest EDCA parameter set, included in the Per-STA Profile, with the Link ID corresponding to the AP which the STA is associated with, carried in the Priority Access Multi-Link element contained in an EPCS Priority Access Enable Request or an EPCS Priority Access Enable Response frame sent by an AP affiliated with the EPCS AP MLD, if the Per-STA Profile corresponding to the AP with which the STA is associated is included in the Priority Access Multi-Link element, and (#12701)
* ignore the part of the procedures defined in 10.2.3.2 (HCF contention based channel access (EDCA)) that concerns the update of the EDCA parameters and the part of the procedures defined in 26.2.7 (EDCA operation using MU EDCA parameters) that concerns the update of the MU EDCA parameters that are sent by the corresponding AP in its Beacon and Probe Response frames
* follow the rules defined in 26.2.7 (EDCA operation using MU EDCA parameters), except that
  + update the dot11MUEDCATable to respective values that correspond to fields in the MU EDCA Parameter Set element included in the Per-STA Profile, with the Link ID corresponding to the AP with which the STA is associated, carried in the Priority Access Multi-Link element, if the corresponding per-STA profile is carried in Priority Access Multi-Link element contained in an EPCS Priority Access Enable Request or EPCS Priority Access Enable Response frame sent by an AP affiliated with the EPCS AP MLD, if the corresponding Per-STA Profile is present and contains an MU EDCA Parameter Set element.(#12702)
  + if the MUEDCATimer[AC] of the STA reaches 0, either by counting down or due to a reset following the reception of an MU EDCA Reset frame, the STA affiliated with EPCS non-AP MLD shall update CWmin[AC], CWmax[AC], and AIFSN[AC] to the values that are contained in the EDCA Parameters Set element included in the Per-STA Profile, with the Link ID corresponding to the AP which the STA is associated with, carried in the Priority Access Multi-Link element, if the corresponding per-STA profile is contained in an EPCS Priority Access Enable Request or EPCS Priority Access Enable Response frame sent by the AP affiliated with the EPCS AP MLD and the Per-STA Profile contains an EDCA Parameter Set element. (#12704)
* After the EPCS priority access is torn down, the STA affiliated with an EPCS non-AP MLD
* shall update its CWmin[AC], CWmax[AC], AIFSN[AC], and TXOP Limit [AC] state variables following the procedures in 10.2.3.2 (HCF contention based channel access (EDCA)).
* shall update the dot11MUEDCATable following the procedures in 26.2.7 (EDCA operation using MU EDCA parameters)

An AP affiliated with an EPCS AP MLD manages the EDCA parameter set and the MU EDCA parameter set for EPCS non-AP MLD with the EPCS priority access in the enabled state and non-EPCS non-AP MLDs as follows:

* If the EPCS priority access state is in the enabled state by at least one associated EPCS non-AP MLD, then
* if the EDCA parameters previously sent out by an AP affiliated with an EPCS AP MLD in Management frames it transmits (see 10.2.3.2 (HCF contention based channel access (EDCA))) do not result in higher priority for STAs that are affiliated with EPCS non-AP MLDs in the enabled state, that AP shall announce EDCA parameters in Management frames that result in higher priority for those STAs with EPCS priority access in the enabled state;
* Otherwise,
* an AP affiliated with an EPCS AP MLD with its EPCS priority access state set to the torn down state for all its associated STAs announces the EDCA parameter set corresponding to the link in Management frames (e.g., Beacon or Probe Response) that it transmits following the procedure in 10.2.3.2 (HCF contention based channel access (EDCA)).