IEEE P802.11
Wireless LANs

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| LB 271 Resolution for 35.3.9 |
| Date: June 29, 2023 |
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 Abstract

This submission proposes resolutions for following CIDs received for TGbe LB271: 15146, 15537, 16279, 16681, 16807, 18038, 18158, 18311

**Revisions:**

* Rev 0: Initial version of the document.

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.

***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** | **Commenter** | **Clause** | **Page** | **Comment** | **Proposed Change** | **Resolution** |
| 18158 | Abhishek Patil | 35.3.9 | 527.21 | Non Dynamic framentation has a hyphen in its name (see baseline spec). | Add a hyphen ("-") between non and dynamic. | Accepted |
| 15537 | Chaoming Luo | 35.3.9 | 527.21 | There is no such a "nondynamic fragmentation procedure" defined in clause 10.4. | Use the correct reference or define what is a "nondynamic fragmentation procedure" | RevisedAgree in principle with the comment. The correct term is non-dynamic. Amending to the correct term.**TGbe editor: please implement changes as shown in 11-23/302r0 tagged 18158.** |
| 18038 | Joseph Levy | 35.3.9 | 527.21 | There is no nondynamic fragmentation procedure described in 10.4, however dynamic fragmentation is described. Should nondynamic be dynamic or is the intent to only allow for dynamic fragmentation? Please clarify. | replace "nondynamic" with "dynamic" | RevisedIntention is to disallow the legacy “static” version. Correct term is non-dynamic. Amending to the correct term.**TGbe editor: please implement changes as shown in 11-23/302r0 tagged 18158.** |
| 15146 | Po-Kai Huang | 35.3.9 | 527.21 | Dyanmic fragmentation is not specified properly in 11be spec. specifically, fragments should be in order. Also, capabiltiy in each link for fragmentation probably needs to be unified. Without specification, dynamic fragmentation simply will not work. | Suggest to disallow dynamic fragmentation. | RevisedAgree in principle with the comment. Disallowing dynamic fragmentation would be too restrictive. Proposed resolution is to allow dynamic fragmentation, however if the fragments of an MSDU are sent in one link then the rest needs to be sent on that same link. This way the (tx & rx) MLDs do not need to chase links for the status of each fragment. The resolution also adds appropriate restrictions of cap related fields.**TGbe editor: please implement changes as shown in 11-23/302r0 tagged 15146.** |
| 16279 | Ryuichi Hirata | 35.3.9 | 527.19 | Dynamic fragmentation procedure is missing. The dyamic fragmentation procedure is useful for end time alignment. | Define dynamic fragmentation procedure for MLD. | RevisedAgree in principle with the comment. Disallowing dynamic fragmentation would be too restrictive. Proposed resolution is to allow dynamic fragmentation, however if the fragments of an MSDU are sent in one link then the rest needs to be sent on that same link. This way the (tx & rx) MLDs do not need to chase links for the status of each fragment. The resolution also adds appropriate restrictions of cap related fields.**TGbe editor: please implement changes as shown in 11-23/302r0 tagged 15146.** |
| 18311 | Yusuke Tanaka | 35.3.9 | 527.18 | Dynamic fragmentation in multi-link operation is missing here. | Please define dynamic fragmentation and block ack procedure considering synamic fragmentation in multiple links. | RevisedAgree in principle with the comment. Disallowing dynamic fragmentation would be too restrictive. Proposed resolution is to allow dynamic fragmentation, however if the fragments of an MSDU are sent in one link then the rest needs to be sent on that same link. This way the (tx & rx) MLDs do not need to chase links for the status of each fragment. The resolution also adds appropriate restrictions of cap related fields.**TGbe editor: please implement changes as shown in 11-23/302r0 tagged 15146.** |
| 16681 | Qi Wang | 35.3.9 | 527.21 | "A STA affiliated with an MLD shall not use the nondynamic fragmentation procedure described in 10.4." However, in 802.11me subclause 10.23.2.9, it says: "Except as described above, a STA shall fragment an individually addressed MSDU or MMPDU so that the initial transmission of the first fragment does not cause the TXOP limit to be exceeded." So an exception rule or recommendation needs to be added to subclause 10.23.2.9 to ensure that MLD needs not use nondynamic fragmentation. | As in comment. | RevisedAgree in principle with the comment. STA can use dynamic fragmentation to achieve this. Also clarified that if the STA cannot fragment then it can’t transmit. **TGbe editor: please implement changes as shown in 11-23/302r0 tagged 16681.** |
| 16807 | Mark RISON | 35.3.9 | 527.21 | If nondynamic fragmentation is not supported then TXOP limits might be illegally violated (because they assume up to 16 fragments) | Delete 35.3.9 | RevisedAgree in principle with the comment. STA can use dynamic fragmentation to achieve this. Also clarified that if the STA cannot fragment then it needs to reassociate as a STA only.**TGbe editor: please implement changes as shown in 11-23/302r0 tagged 16681.** |

**35.3.9 Fragmentation in multi-link operation**

***TGbe editor: Please update this subclause as shown below:***

A STA affiliated with an MLD shall not use the non-dynamic[18158] fragmentation procedure described in 10.4 (MSDU, A-MSDU, and MMPDU fragmentation).

A STA affiliated with an MLD may use dynamic fragmentation as described in 26.3 (Fragmentation and defragmentation) subject to the following additional requirements:

* The Dynamic Fragmentation Support, Maximum Number of Fragmented MSDUs/A-MSDUs Exponent, Minimum Fragment Size and A-MSDU Fragmentation Support fields in the HE Capabilities elements transmitted by each STA affiliated with the same MLD shall be set to values that are identical across all STAs.
* If the first dynamic fragment of an MSDU, A-MSDU or MMPDU is sent on an enabled link then all the remaining fragments of that MSDU, A-MSDU, or MMPDU shall be sent on that same enabled link.[15146]

If a STA is required to fragment an MSDU or MMPDU so that the initial transmission of the first fragment does not cause the TXOP limit to be exceeded (see 10.23.2.9) then the STA shall either use dynamic fragmentation (while conforming to the rules described above) or reassociate as a STA that is not affiliated with an MLD (so that it can use non-dynamic fragmentation).[16681]