IEEE P802.11
Wireless LANs

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| 802.11bi – Technical comment resolution to 9.4.1.83 |
| Date: May 12, 2025 |
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 Abstract

This submission addresses the comments with CID:

34, 35, 203, 204, 205, 291, 308, 431, 432, 436, 448, 449, 751, 772, 998, 1002

**Comment Resolution**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Clause Number(C)** | **Page(C)** | **Line(C)** | **Comment** | **Proposed Change** | **Resolution** |
| 34 | 9.4.1.83 | 49 | 22 | "The Participating Affiliated STAs Count field represents an indication of the number of affiliated STAs participating in the signaled group on the link" Is this the atual number or an indication? I assume it is the actual. Can say it much clearer. | Rewrite cited text as follows:..."The Participating STAs Count field value is the number of affiliated STAs currently participating to this group EDP epoch, on the current link." | REVISEEditor please perform the changes tagged with [34] in document with DCN 25/925r2. |
| 35 | 9.4.1.83 | 49 | 23 | "The Participating Affiliated STAs Percentage field, with values in the range of 0 to 100, represents an indication of the percentage of the associated affiliated STAs participating to the signalled group on the link." Indication or actual percentage. Can be clearer | Rewrite cited text as follows: "The Participating Affiliated STAs Percentage field value is the percentage of the associated affiliated STAs participating to the signalled group on the link. The Participating Affiliated STAs Percentage field can have a value from 0 to 100, and values 101 to 255 are reserved." | REVISEDEditor please perform the changes tagged with [35] in document with DCN 25/925r2. |
| 203 | 9.4.1.83 | 49 | 22 | The number of Participating STAs is a privacy violation. A non-AP MLD should select the shortest epoch that it can operate. The number of STAs operating in the epoch information is not needed by the STA. | Please delete the Number of Participating Affiliated STAs field. | REVISEEditor please implement changes tagged as [34] in 25/925r2 |
| 204 | 9.4.1.83 | 49 | 28 | The Participating Affiliated STAs Count is severe privacy violation! In very many cases APs have less than 100 associated STAs , so this field provides the exact number of the STAs. | Please delete the Number of Participating Affiliated STAs field. | REVISEDEditor please implement changes tagged as [35] in 25/925r2 |
| 205 | 9.4.1.83 | 49 | 28 | The Participating Affiliated STAs Percentage field is not described or used in the 802.11bi spec. | Please delete the Participating Affiliated STAs Percentage field. | REVISEDEditor please implement changes tagged as [35] in 25/925r2 |
| 291 | 9.4.1.83 | 49 | 22 | The number of Participating STAs is a privacy violation. A non-AP MLD should select the shortest epoch that it can operate. The number of STAs operating in the epoch information is not needed by the STA, and the inclusion of such information is a privacy violation. Please delete this field and the relevant spec text. | As in comment. | REVISEDEditor please implement changes tagged as [35] in 25/925r2 |
| 431 | 9.4.1.83 | 48 |   | The " Max Epoch Duration(approx.)" column is at best duplication | Delete said column | REVISEDEditor please implement changes tagged as [431] in doc 25/XX |
| 432 | 9.4.1.83 | 48 | 46 | I don't think this is extensible. Existing devices won't understand values 2-7, so it won't be possible to use them in the future | Reduce the Epoch Interval Unit to a 1-bit field | REVISEDEditor please implement changes tagged as [431] in doc 25/XX |
| 436 | 9.4.1.83 | 48 | 50 | " the value of the TSF timer of the receiving link" -- it's not clear that a "link", whatever this is exactly, has a TSF timer | Delete "of the receiving link" | REVISEDEditor implement the changes tagged as 81 and 196 in DCN 25/925r2 |
| 448 | 9.4.1.83 |   |   | There is discussion of "current link" or even "the link" but it is not clear what this means | As it says in the comment | REVISEDEditor implement the changes tagged as 81 and 196 in DCN 25/925r2 |
| 449 | 9.4.1.83 | 49 | 22 | "The Participating Affiliated STAs Count field represents an indication of the number of affiliated STAs par-ticipating in the signaled group on the link." -- if it's just some representation and not the actual number, it's not clear what it carries | Change "represents an indication of" to "indicates". Ditto next sentence | REVISEDEditor please implement changes tagged as [34] in 25/925r2 |
| 751 | 9.4.1.83 | 49 | 9 | The minimum epoch pacing field only displays the compute constraints of the STA, expressing a minimum value, but the STA may support a short value yet desire another, longer epoch value. The STA should be allowed to express this preference | Introduce an optional field that allows the STA to express its prefered value, and possibly the max value it would accept | REJECTThis option is already included. An STA may include the Minimum Epoch Pacing to indicate its capabilities. It can also have the Epoch Interval field indicating the desired Epoch duration. |
| 772 | 9.4.1.83 | 49 | 6 | It would be more efficient to signal the number of affiliated STAs which can join the signalled group (2 bytes) instead of having the number of afficilated STAs actually in this group (2 bytes) and the percentage of occupation this group (1 byte) | As in comment, replace "Number of Participating Affiliated STAs" filed with some thing like "Remaining Number of Affiliated STAs Allowed to Participate" and have only a 2 bytes field for this | REJECTEDThe number of affiliated STAs which can join the group does not provide information on the number of STAs in the group. This last information is the one needed to evaluate the privacy of the group. |
| 998 | 9.4.1.83 | 48 | 42 | The start time for epochs is provided in TU (1024 micro seconds), but the Epoch Interval Units available are 1000 seconds and 1 second, which cannot be provided in whole multiples of a TU. | Suggest specifying epoch interval units in TU, and then providing approximate equivalents in inseconds . | REVISEDEditor please implement changes tagged as [998] in DCN 25/XX |
| 1002 | 9.4.1.83 | 49 | 6 | The non-AP MLD's choice of EDP epoch will apply across all setup links, so the non-AP MLD should have information about participating affiliated STA for all available links. | Update the field to support providing EDP epoch settings for multiple links. | REVISEDEditor please implement changes tagged with [1002] in DCN 25/XX |

**9.4.1.83 EDP Epoch Settings field**

The EDP Epoch Settings field format is shown in Figure 9-207n (EDP Epoch Settings field format).(#23)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | EDP Epoch Settings Control | EDP(#1012) Group ID | Epoch Interval | First Epoch TSF Start Time | Epoch Number Offset | Time Range | Epochs Remaining | Minimum Epoch Pacing(#106)  |
| Bits: | 16 | 0 or 8 | 16 | 0 or 64 | 0 or 8 | 0 or 16 | 0 or 16 | 0 or 16 |

|  |  |  |
| --- | --- | --- |
|  | Number Of Participating Affiliated STAs | AID Storage Size |
| Bits: | 0 or 8 or 16 or 24 | 0 or 16 |

**Figure 9-207k -- EDP Epoch Settings field format**

The EDP Epoch Settings field contains the EDP epoch parameters of an EDP epoch sequence for the non-AP MLD.

The EDP Epoch Settings(#193) Control field format is shown in Figure 9-207o (EDP Epoch Settings Control field format).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | EDP(#1012) Group ID Present | First Epoch TSF Start TimePresent | Epoch Number Offset Present [429] | Time RangePresent | Epochs RemainingPresent | Minimum Epoch Pacing Present(#106) [429] | Participating Affiliated STAs Count Present | Participating Affiliated STAs Percentage Present | AID Storage Size Present |
| Bits: | 1 | 1 |  | 1 | 1 | 1 | 1 | 1 | 1 |

(#24)

|  |  |
| --- | --- |
|  | Reserved |
| Bits: | 7 [429] |

**Figure 9-207l -- EDP Epoch Settings Control field format**

Each field in the EDP Epoch Settings Control field indicates the presence of the corresponding field in the EDP Epoch Settings field when set to 1 and its absence when set to 0.(#195)

The EDP(#1012) Group ID field contains(#425) an identifier of the EDP group. The value 0 indicates the default EDP(#1012) group. The value 255 is reserved.(#194)

The EDP Epoch Interval field format is shown in Figure 9-207p (Epoch Interval field format).(#25)

|  |  |  |  |
| --- | --- | --- | --- |
|  | Epoch Interval Unit | Epoch Interval Length | Reserved |
| Bits: | 3 | 11 | 2 |

**Figure 9-207m—Epoch Interval field format**

The Epoch Interval Unit field indicates the units for the Epoch Interval Length field, and the Epoch Interval Length field contains the length of the EDP epoch as shown in Table 9-129s (Epoch Interval Units and epoch durations).(#430, #Ed)

Epoch Interval Length field(#433) value 0 is reserved.

|  |  |  |
| --- | --- | --- |
| **Epoch Interval Unit field value** | **Epoch Interval Unit** | **Max Epoch Duration (approx.)** |
| 0 | Reserved [431] |  NA [431] |
| 1 | 100 TUs [431] [998] (approx. 100 ms) | 2 seconds, 48 milisec [431] |
| 2 [431] | 1000 TUs [431] [998] (approx. 1 s) | 34 min 7 s [431] |
| 3 [431] | 10000TUs s [431] [998] (approx. 10 s) | 5 hours, 40 min, 48 s [431] |
| 4 [431] | 100000 TUs [431] [998] (approx. 100 s) | 56 hours, 52 min, 48 s [431] |
| 5 [431] | 1000000 TUs [431] [998] (approx. 1000 s) | 23 d 16 h 36 min 40 s [431] |
| 6-7 [431] | Reserved [431] | NA [431] |

**Table 9-129g—Epoch Interval Units and epoch durations**

The First Epoch TSF Start Time field(#27) contains the first epoch TSF start time presented as the TSF timer value of the link in which this field was sent (see 10.71.2.4 (EDP Epoch Start Time Computation)).(#81, #Ed, #196)

The Epoch Number Offset(#80) field value contains the epoch number offset(#80) between the AP MLD(#1001) epoch number and the non-AP MLD(#1001) epoch number (see 10.71.2.4 (EDP Epoch Start Time Computation)).

The Time Range field contains the range of values, expressed in epoch interval units as defined in Table 9-129s (Epoch Interval Units and epoch durations), used by the AP MLD and each non-AP MLDs that is a [331] member of the EDP group to determine a random delay added to the EDP epoch planned start time [441] as defined in 10.71.2.4 (EDP Epoch Start Time Computation).(#439, #430, #1001)

The Epochs Remaining field value indicates the number of EDP epochs left in the sequence after the current epoch finishes, except the value of 255 indicates that the epoch sequence duration is unlimited.(#439, #442, #202, #32, #Ed)

The Minimum Epoch Pacing field indicates the minimum epoch duration the non-AP MLD can support.(#196) The format of the Minimum Epoch Pacing field(#106) is the same as the Epoch Interval field.

[446] The Number of Participating Affiliated STAs field format is shown in Figure 9-207n [33].

|  |  |  |
| --- | --- | --- |
|  | Participating Affiliated STAs Count | Participating Affiliated STAs Percentage |
| Octets: | 2 | 1 |

**Figure 9-207n—Number of Participating Affiliated STAs field format**

The Participating Affiliated STAs Count field represents an indication of the number of affiliated non-AP MLDs(#1001) participating in the signaled EDP(#1012) group on the MLD [1002]. This field provides the actual number of STAs in the EDP group rounded (ceil) to the nearest multiple of 10. [34]

The Participating Affiliated STAs Percentage field value is the [35]percentage of the associated affiliated non-AP MLDs(#1001) participating to the signaled EDP(#1012) group on the MLD [1002]. The Participating Affiliated STAs Percentage field can have a value from 0 to 100, and values [35] 101-255 are reserved.

When transmitted by a [206] AP MLD(#1001), the AID Storage Size field indicates the minimum number of AID values [332] a [206]non-AP MLD shall be able [332] to be allowed to join in the EDP group.

When transmitted by a [206]non-AP MLD, the AID Storage Size field indicates the number of AID values that the non-AP MLD can store.