IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 802.11bi – Comment resolution Clauses 9.4.2.348, 9.4.1.9, 9.6.42.1, 9.6.42.4, 9.6.42.5, 9.6.42.6, 9.6.42.7, 9.4.1.84, 9.4.1.83 | | | | |
| Date: March 10, 2024 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Antonio de la Oliva | Interdigital Ltd, UC3M |  |  | aoliva@it.uc3m.es |

Abstract

This submission addresses the comments with CID:

49, 22, 192, 931, 493, 950, 315, 499, 500, 501, 502, 504, 1011, 1012, 1013, 1014, 1015, 1016, 1017, 62, 218, 858, 859, 909, 922, 1018, 63, 217, 1019, 123, 219, 936, 951, 1020, 38, 207, 208, 451, 23, 24, 25, 26, 31, 32, 33, 34, 35, 106, 161, 193, 194, 195, 196, 198, 199, 202.203, 204, 205, 206, 291, 308, 309, 326, 327, 328, 331, 332, 423, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 436, 438, 439, 440, 441, 442, 443, 444, 446, 447, 448, 449, 450, 750, 751, 772, 792, 853, 855, 995, 997, 998, 999, 1001, 1002

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page** | **Line** | **Comment** | **Proposed Change** | **Resolution** |
| 49 | 9.4.2.348 | 61 | 44 | Figure 9-1074dq should be "EDP element format" | Change Figure 9-1074dq title to "EDP element format" | ACCEPT  Editor: No text modification added in the document with DCN 25/455r1 |
| 22 | 9.4.1.9 | 45 | 22 | "The request to join or create agroup epoch is successful but the epoch parameters are not exactly the requested." "those requested. | Edit cited sentence replacing "the requested " with "those requested" | ACCEPT |
| 192 | 9.4.1.9 | 45 | 37 | Status code 146 leaves It is unclear whether a non-AP MLD has joined to the existing group epoch. | Please clarify status code 146. It is unclear whether the STA has joined to existing epoch group. | REVISED  Please implement the changes tagged as [192] in document with DCN 25/455r1 |
| 931 | 9.4.1.9 | 45 | 31 | To be aligned with other status codes, change the tense to past tense: FAILURE\_MAX\_NUM\_EPOCH\_RE ACH to FAILURE\_MAX\_NUM\_EPOCH\_RE ACHED | As suggested in comment | ACCEPT |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Clause Number(C)** | **Page(C)** | **Line(C)** | **Comment** | **Proposed Change** | **Resolution** |
| 493 | 9.6.42.1 | 69 | 7 | " EDP Group Parameter frame" should not have " frame" | As it says in the comment | ACCEPT |
| 950 | 9.6.42.1 | 69 | 13 | "otaMAC" => "OTA MAC" (we have no precedent for this odd type of capitalization and it is inconsistent with other uses) | And at 73.1, 73.3, 73.8 | ACCEPT |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Clause Number(C)** | **Page(C)** | **Line(C)** | **Comment** | **Proposed Change** | **Resolution** |
| 315 | 9.6.42.4 | 71 | 19 | singular form "group" not correct | use plural form "groups" | REVISED  Superceeded by [1011] |
| 499 | 9.6.42.4 | 71 | 19 | "for one or more group" should be "... groups" | As it says in the comment | ACCEPT |
| 500 | 9.6.42.4 | 71 | 48 | "Value 0 is reserved." should be "The value 0 is reserved." | As it says in the comment | ACCEPT |
| 501 | 9.6.42.4 | 71 | 50 | "one or more EDP Setting fields" -- no such fields | Change to "one or more EDP Epoch Setting fields" | ACCEPT |
| 502 | 9.6.42.4 | 72 | 9 | " Epoch request" should be " Epoch Request" | As it says in the comment | REJECTED  There is no Epoch Request text in this clause.  Maybe wrong clause? |
| 504 | 9.6.42.4 | 72 | 46 | "Status" should be "Status Code" | As it says in the comment | REJECTED  There is no Status text in this clause.  Maybe wrong clause? |
| 1011 | 9.6.42.4 | 71 | 17 | "9.6.42.4 EDP Group Parameter frame format". The frame contains information for all available EDP groups - not just a single EDP group. | Replace "EDP Group Parameter" with "EDP Groups Parameter" | ACCEPT |
| 1012 | 9.6.42.4 | 71 | 19 | "one or more group". To avoid confusion, always clarify that this is an EDP epoch. There may be other occurences of "group" without the EDP prefix. | Throguhout document, ensure that any mentino of a group identifying an EDP group always uses the "EDP" prefix | ACCEPT  Editor please make this change globally |
| 1013 | 9.6.42.4 | 71 | 37 | There is an EDP Epoch Setting for each EDP group, This number more naturally describes the number of EDP groups. | Replace "Number of EDP Epoch Settings Included" with "Number of EDP Epoch Settings" | ACCEPT |
| 1014 | 9.6.42.4 | 71 | 47 | See comment on p71 line 37. It would be good to update this sentence to clarify that the number of EDP Epoch Settings fields is the number of EDP groups. | Update "Number of EDP Epoch Settings" to align with comment on p71 line 37. Update this sentence to clarify that the number of EDP Epoch Settings fields is the number of EDP groups. | REVISED  Editor please implement the changes as indicated with the tag [1014] in document with DCN 25/455r1 |
| 1015 | 9.6.42.4 | 71 | 47 | "EDP Setting" field does not exist. This is a typo. | Replace "EDP Setting" with "EDP Epoch Settings" | REVISED  Superceeded by [501] |
| 1016 | 9.6.42.4 | 71 | 58 | EDP Epochs are only available for MLDs, but "STA" and "AP are used here. | "STA and "AP" should be "non-AP MLD" and "AP MLD" respectively. | REJECTED  No instance of AP or STA in this section. |
| 1017 | 9.6.42.4 | 71 | 59 | This is a request frame sent by a non-AP MLD to an AP MLD. The text "or to be assigned" and "or to maintain" can suggest that the message is used by the AP MLD for assignment and maintaining. | Replace "or to be assigned" with "or to request assignment" . Replace "or to maintain" with "or to request maintaining" . | REJECTED  This comment is not for this clause |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Clause Number(C)** | **Page(C)** | **Line(C)** | **Comment** | **Proposed Change** | **Resolution** |
| 62 | 9.6.42.5 | 71 | 58 | "...CPE STA provides an AP to request a..." Should be "provides to an AP" | At cited location insert "to" after "provides". | REVISED  Superceeded by [218] |
| 218 | 9.6.42.5 | 72 | 28 | Unclear sentence. | Please change to:" A CPE non-AP MLD may send an EDP Epoch Request frame to request a new EDP epoch group creation, assignment to a particular EDP epoch group, or leave from the current EDP epoch group, as defined in 10.71.2.1 (General(#1091)) and 10.71.2.2 (EDP group operations(#1091)).." | ACCEPT |
| 858 | 9.6.42.5 | 71 | 58 | Why only a "new" EDP Epoch request can be requested for the action frame EDP Epoch Request frame ? | This action frame could be modified such as a STA can request also an update of an EDP Epoch group. | DISCUSS |
| 859 | 9.6.42.5 | 71 | 58 | Why an EDP Epoch request frame can be sent only by a STA and not by an AP ? An AP would like to update characteristics of an existing EDP Epoch group or to request a STA to move to another EDP Epoch group. | This action frame should enable also for an AP. | DISCUSS |
| 909 | 9.6.42.5 | 71 | 58 | Why can a STA send an EDP Epoch request frame, while an AP cannot? | AP should too | DISCUSS |
| 922 | 9.6.42.5 | 71 | 58 | Why an EDP Epoch request frame can be sent only by a STA and not by an AP ? An AP would like to update characteristics of an existing EDP Epoch group or to request a STA to move to another EDP Epoch group. | This action frame should enable also for an AP. | DISCUSS |
| 1018 | 9.6.42.5 | 71 | 65 | This sentence is between a table caption and the corresponding table. | Move sentence before caption or after table. | ACCEPT |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Clause Number(C)** | **Page(C)** | **Line(C)** | **Comment** | **Proposed Change** | **Resolution** |
| 63 | 9.6.42.6 | 72 | 30 | "...provides a STA in response..." Should be "provides to" | At cited location insert "to" after "provides". | REVISED Superceeded by [217] |
| 217 | 9.6.42.6 | 73 | 3 | Unclear sentence. | Please change to:" The EDP Epoch Response frame contains a response to a EDP Epoch Request frame." | ACCEPT |
| 1019 | 9.6.42.6 | 72 | 29 | EDP Epochs are only available for MLDs, but "STA" and "AP are used here. | "STA and "AP" should be "non-AP MLD" and "AP MLD" respectively. | REVISED  Superceeded by [217]. |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Clause Number(C)** | **Page(C)** | **Line(C)** | **Comment** | **Proposed Change** | **Resolution** |
| 123 | 9.6.42.7 | 73 | 1 | Inconsist use of "ota" and "OTA". | Change to: OTA MAC Collision Warning frame | ACCEPT |
| 219 | 9.6.42.7 | 73 | 42 | Unclear sentence. | Please change to:" The otaMAC Collision Warning frame warns on upcoming MAC address collision with another STA". | REVISED  Revised to The OTAMAC Collision Warning frame warns on upcoming MAC address collision with another STA in a given epoch.  See resolution tagged with [219] in document with DCN 25/455r1. |
| 936 | 9.6.42.7 | 73 | 1 | Is there a reason why "OTA" and "MAC" are merged in the context of the frame format and in not other contexts , as "otaMAC" | Replace them with "OTA MAC" here and all other occurences | ACCEPT |
| 951 | 9.6.42.7 | 73 | 3 | Bad grammar. We typically use "indicate" not "signal". It is not clear what the adjective "OTA" adds. Do we use MAC addresses in some other manner? It is not obvious what collision means (e.g., it could mean that to transmissions overlap). I don't see how a calculation can predict collision. Isn't it a comparison operation? Does it matter if the MAC addresses are used in different epochs? Presumably not. | Change to "The OTA MAC Collision Warning frame is used to indicate that a MAC address that will be used by an EDP non-AP MLD in an upcoming epoch is the same as a the MAC address that will be used by another STA in that epoch." Since we don't want to repeat information, change the sentence at 61.54 to "The OTA MAC Collison Warning element is sued in the OTA MAC Collision Warning frame (see 9.6.42.7). | REVISED  Superceeded by [219] |
| 1020 | 9.6.42.7 | 73 | 3 | "is used to signal when an OTA MAC address expected to be used by an EDP non-AP MLD in an upcoming epoch is calculated". Two issues. First, it is not used justby the AP MLD to signal when this ocurs, but is also used in a response from the non-AP MLD. Also, the description does nto clarify who does the calculation | Replace "is used when an OTA MAC address expected to be used by a non-AP MLD in an upcoming epoch is calculated (by the AP MLD)" | REVISED  Superceeded by [219].  In addition, this behavior is described in 10.71.2.5 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Clause Number(C)** | **Page(C)** | **Line(C)** | **Comment** | **Proposed Change** | **Resolution** |
| 38 | 9.4.1.84 | 49 | 54 | "The possible values of the Epoch Request field and their meaning are shown in Table 9-129h..." Needs rephrasing, not correct. | Rewrite cited text as "The Epoch Request field values are defined in Table 9-129h...) | ACCEPT |
| 207 | 9.4.1.84 | 49 | 57 | Complicated sentence. | Please clarify. | REVISED  Superceeded by [38] |
| 208 | 9.4.1.84 | 50 | 26 | Unclear why STA needs explicitly define whether AP creates a new group epoch or the STA just joins to an existing epoch. | Please allow an operaiton that may join or create (which ever is more suitable) for the STA to simplify the non-AP STA epoch usage. | REVISED  Editor please implement the changes tagged as [208] in document with DCN 25/455r1 |
| 451 | 9.4.1.84 | 49 | 53 | "The possible values of the Epoch Request field and their meaning are shown in Table 9-129h " -- I don't think "possible" is the way it's normally worded | Use baseline style | REVISED  Superceeded by [38] |
| 23 | 9.4.1.83 | 47 | 3 | "The EDP Epoch Settings field includes the information regarding the parameters of an epoch." This is not how to refer to these format figures. | Replace cited text with "The EDP Epoch Settings field format is shown in Fugure 9-207k" | ACCEPT |
| 24 | 9.4.1.83 | 47 | 42 | "The EDP Epoch Settings Control is defined as follows:" This is not how to refer to these format figures. | Replace cited text with "The EDP Epoch Settings Control field format is shown in Figure 9-207l" | ACCEPT |
| 25 | 9.4.1.83 | 48 | 9 | "The Epoch Interval field is defined as follows:" This is not how to refer to these format figures. | Replace cited text with "The EDP Epoch Interval filed format is shown in Figure 9-207m" | ACCEPT  Filed-> filed |
| 26 | 9.4.1.83 | 48 | 27 | "The Epoch Interval Length field contains the length of the EDP epoch, expressed in Epoch Interval Units, shown in Table 9-129g (Epoch Interval Units and epoch durations). Epoch Interval Length value 0 is reserved." The description fopr the Epoch Interval Unit field should be first described. then the Interval and then the Table. | Rewrite Cited text as "The Epoch Interval Unit field value defines the Epoch Interval Unit as shown in Table 9-129g. The Epoch Interval Length field contains the length of the EDP epoch, expressed in Epoch Interval Units. An Epoch Interval Length value 0 is reserved." | ACCEPT |
| 31 | 9.4.1.83 | 48 | 57 | "The Minimum Epoch Pacing field signals the minimum epoch duration..." Not sure we use "signals" I think "indicates" is better, or even better, "is". | Edit cited text as follows:"The Minimum Epoch Pacing field signals value indicates the minimum epoch duration... | REVIEWED  Editor please perform the changes tagged with [31] in document with DCN 25/455r1. |
| 32 | 9.4.1.83 | 49 | 2 | "The Epochs Remaining field indicates the number of EDP Epochs left in the sequence after the current epoch finishes, except 255, which means that the sequence duration is unlimited." Needs a little tidying. | Rewrite cited text as follows: "The Epochs Remaining field value indicates the number of EDP Epochs left in the sequence after the current epoch finishes. A value of 255 indicates that the sequence duration is unlimited. " | ACCEPT |
| 33 | 9.4.1.83 | 49 | 6 | "When present.the field signals an indication of the number of affiliated STAs currently participating to this group EDP epoch on the current link." Is the real number or an estimate (i.e., and indication)? I assume the actual number.Also this is repeated at line 22, so at this line, you should simply refer to the Figure 9-207n. | Delete cited text and then add "The Number of Participating Affiliated STAs field format is shown in Figure 9-207n." | ACCEPT |
| 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." | ACCEPT |
| 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." | ACCEPT |
| 106 | 9.4.1.83 | 48 | 58 | In consistent field name. In Figure (9-207k--EDP Epoch Settings field format), it's "Minimum Epoch Pacing Parameters", while in P48L58 it's "Minimum Epoch Pacing field" and "Minimum Epoch Pacing element", in P77L2 it's "Minimum Epoch Pacing Parameters field" and "Minimum Epoch Pacing field". | Use a consistent field name. | REVISED  All names changed to Minimum Epoch Pacing field.  Editor please implement the changes tagged as [106] in document with DCN 25/455r1. |
| 161 | 9.4.1.83 | 48 | 1 | Some figures use different fonts (e.g. Figure 9-207m) | Please use a single consistent font for all figures. | ACCEPT  Note, no change in this document |
| 193 | 9.4.1.83 | 47 | 41 | Missing part of the field name. | Please use field name EDP Epoch Settings Control. | ACCEPT |
| 194 | 9.4.1.83 | 47 | 45 | Incorrect description order. The EDP Epoch Settings field should be described before Group ID. | Change the group id description after the EDP Epoch Settings Control field. | ACCEPT |
| 195 | 9.4.1.83 | 48 | 12 | Unclear text. Please clarify. | Change the sentence:" Each field in the EDP Epoch Settings Control field..." | ACCEPT |
| 196 | 9.4.1.83 | 49 | 1 | Difficult sentence, please clarify. | The sentence should be split to multiple sentences. The use of the field should be in normative clauses. Please change to:" The First Epoch TSF Start Time filed contains the first Epoch start time presented as the TSF of the link in which this field was sent, see 10.71.2.4 (EDP Epoch Start Time Computation)." Please move all other text to the normative clauses. | REVISED  Accepted the rewriting of the phrase but not included anything in 10.71.2.4 |
| 198 | 9.4.1.83 | 49 | 5 | Unclear sentence. | Change to:"The Minimum Epoch Pacing field indicates the minimum epoch duration the non-AP MLD can support." | REVISED  Superceeded by [31] |
| 199 | 9.4.1.83 | 49 | 10 | Incorrect use of element and unclear sentence | Change to:"The Minimum Epoch Pacing field has the same format as the Epoch Interval field. | ACCEPT |
| 202 | 9.4.1.83 | 49 | 18 | Unclear sentence. | Plaase chagne to:"The Epochs Remaining field indicates the number of EDP Epochs left in the sequence after the current epoch, except value 255 indicates unlimited Epochs. | REVISED  Editor please implement the changes tagged as [202] in document with DCN 25/455r1. |
| 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. | DISCUSS |
| 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. | DISCUSS |
| 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. | DISCUSS |
| 206 | 9.4.1.83 | 49 | 44 | The field may be transmitted by CPE and BPE devices. CPE is not mentioned in other fields of the clause. | Remove 3\* "CPE" from lines 44-49. | ACCEPT |
| 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. | DISCUSS |
| 308 | 9.4.1.83 | 47 | 44 | The control field for the EDP Epoch Settings element does not follow the order of the fields in the frame. We should reorder it. | I will provide a contribution to solve this | REVISED  Editor please implement changes tagged with [308] in document with DCN 25/455r1 |
| 309 | 9.4.1.83 | 49 | 2 | Imho most of epochs will have an unlimited duration. Maybe we can avoid sending all time a 255 in the Epoch Remaining field and add a control bit stating if it is unlimited. | I will discuss if this is an acceptable solution and will provide a contribution if so. | DISCUSS |
| 326 | 9.4.1.83 | 47 | 35 | field name needs to match Figure- EDP Epoch Settings Control field | Correct field name to EDP Epoch Settings Control field | REVISED  Superceeded by [24] |
| 327 | 9.4.1.83 | 47 | 38 | Group ID description in wrong place | Move sentence after Fig. 9-207l | REVISED  Superceeded by [194] |
| 328 | 9.4.1.83 | 48 | 50 | mispelled Field - filed | Change filed to field. Recommend global check for other filed instances. | REVISED  Superceeded by [25] |
| 331 | 9.4.1.83 | 48 | 62 | Missing word? "used by the AP and each non-AP stations member of the EDP group" | Change to "used by the AP and each non-AP station that is a member of the EDP group" | ACCEPT |
| 332 | 9.4.1.83 | 49 | 28 | Clarify sentence: "When transmitted by a CPE AP, the AID Storage Size field indicates the minimum number of AID values required by a CPE non-AP MLD to be allowed to join in the EDP group." | Change to "When transmitted by a CPE AP, the AID Storage Size field indicates the minimum number of AID values a CPE non-AP MLD shall be able to store to be allowed to join in the EDP group." | REVISED  Editor please implement changes tagged as [332] in document with DCN 25/455r1. |
| 423 | 9.4.1.83 | 47 | 3 | "The EDP Epoch Settings field includes the information regarding the parameters of an epoch." is too waffly and vague ("includes") | Change to "The EDP Epoch Settings field specifies the parameters of an epoch." | REVISED  Superceeded by [23] |
| 425 | 9.4.1.83 | 47 | 38 | "The Group ID field signals an identifier" is a bit weird | Change "signals" to "contains" | ACCEPT |
| 426 | 9.4.1.83 | 47 | 34 | "The EDP Epoch Settings field contains the EDP epoch parameters of an EDP epoch sequence for the non- AP MLD." but just above (line 3) we have something else | Delete the cited text | ACCEPT |
| 427 | 9.4.1.83 | 47 | 38 | Fields should be specified in the order in the figure | Move the para at line 38 to be after the description at line 42 | REVISED  Superceeded by [194] |
| 428 | 9.4.1.83 | 47 | 42 | "The EDP Epoch Settings Control is defined as follows" missing "field" | Add "field" before "is" | REVISED  Superceeded by [24] |
| 429 | 9.4.1.83 | 48 | 6 | "Each of the bits of the EDP Epoch Settings Control field indicate the presence of the corresponding field in the EDP Epoch Settings field when set to 1 and its absence when set to 0.", yeah, but there's a confusing Epoch Interval field plonked in the middle | Move the Epoch Interval field to the start of the element | ACCEPT |
| 430 | 9.4.1.83 |  |  | "Interval Unit" should be lowercase except when actual field name | Lowercase everywhere except in Figure 9-207m--Epoch Interval field format and change "The Epoch Interval Length field contains the length of the EDP epoch, expressed in Epoch Interval Units, shown in Table 9-129g (Epoch Interval Units and epoch durations)" to "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 9-129g (Epoch Interval Units and epoch durations)" | REVISED  Editor please implement changes tagged as [430] in document with DCN 25/455r1.  Regarding changes in the Epoch Interval Length and Units, these proposed changes have been superceeded by [26] |
| 431 | 9.4.1.83 | 48 |  | The " Max Epoch Duration  (approx.)" column is at best duplication | Delete said column | DISCUSS |
| 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 | DISCUSS |
| 433 | 9.4.1.83 | 48 | 28 | "Epoch Interval Length value 0" is missing "field" before "value" | As it says in the comment | ACCEPT |
| 434 | 9.4.1.83 | 48 | 50 | "filed" should be "field" | As it says in the comment | REVISED  Superceeded bu [328] |
| 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" | DISCUSS |
| 438 | 9.4.1.83 | 48 | 57 | "The Minimum Epoch Pacing field" -- no such field | Maybe this is missing "Parameters" | REVISED superceeded by [106] |
| 439 | 9.4.1.83 | 48 |  | Aaargh, everything is jumbled up! | Describe fields in the same order as they appear in the figures! | REVISED  Superceeded by [308] |
| 440 | 9.4.1.83 | 48 | 61 | "Epoch Interval Units" bad case | As it says in the comment | REVISED  Superceeded by [26] |
| 441 | 9.4.1.83 | 48 | 63 | It's not clear what "(PlannedTSFStartTime)" is | Delete the cited text | ACCEPT |
| 442 | 9.4.1.83 | 49 | 1 | "EDP Epochs" bad case | As it says in the comment | ACCEPT |
| 443 | 9.4.1.83 |  |  | "Participating Affiliated STAs Count Present" v. "Number Of Participating Affiliated STAs" inconsistency | Pick one name for the field and make the presence indicator field match it | REVISED  Editor please implement changes tagged with [443] in document with DCN 25/455r1. |
| 444 | 9.4.1.83 | 47 | 46 | "Participating Affiliated STAs Percentage Present" -- there is no Participating Affiliated STAs Percentage field | Delete this field | REVISED  Superceeded by [443] |
| 446 | 9.4.1.83 | 49 | 6 | "The Number of Participating Affiliated STAs field is optional" -- yeah, but so are most of the others, and the figure already shows this. Also "of" should be "Of" | Change "The Number of Participating Affiliated STAs field is optional. When present, the field " to "The Number Of Participating Affiliated STAs field ". Maybe for all such fields add ", if present" | REVISED  Superceeded by [34] |
| 447 | 9.4.1.83 | 49 | 7 | "participating to this group EDP epoch" should be "participating in this group EDP epoch"; similarly at line 24 | As it says in the comment | ACCEPT |
| 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 | DISCUSS |
| 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 | REVISED  Superceeded by [34] |
| 450 | 9.4.1.83 | 49 | 28 | "When transmitted by a CPE AP, the AID Storage Size field indicates the minimum number of AID values required by a CPE non-AP MLD to be allowed to join in the EDP group. When transmitted by a CPE non-AP MLD, the AID Storage Size field indicates the number of AID values that the non-AP MLD can store." -- not clear what contained if transmitted by other devices, e.g. BPE devices | As it says in the comment | REVISED  Superceeded by [206] and [332] |
| 750 | 9.4.1.83 | 49 | 1 | Typo filed->field | filed -> field | REVISED  Superceeded by  [328] |
| 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 | DISCUSS |
| 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 | DISCUSS |
| 792 | 9.4.1.83 | 48 | 50 | The text says uses the word "filed" but should be "field" | Revise as "The First Epoch TSF Start Time field contains ... | REVISED  Superceeded |
| 853 | 9.4.1.83 | 47 | 50 | The "First Epoch TSF Start time" field is always required for an EDP Epoch. I think the "present" bit is useless. | Please clarify or remove this bit | ACCEPT |
| 855 | 9.4.1.83 | 47 | 50 | The "Group ID" field is always required for an EDP Epoch. I think the "present" bit is useless. | Please clarify or remove this bit | REJECTED, there are cases when the STA does not know the Group ID number, for example when creating it. |
| 995 | 9.4.1.83 | 47 | 9 | In 10.71.2.4, this "First Epoch TSF Start Time" is called "First Planned Epoch TSF Start Time". Inconsistent terminology. | Update "First Epoch TSF Start Time" to "First Planned Epoch TSF Start Time" here, elsewhere in this clause, and in 10.71.2.4 | REVISED  Editor please implement changes tagged as [995] in document with DCN 25/455r1  Note: no change to 10.71.2.4 |
| 997 | 9.4.1.83 | 47 | 38 | The Group ID field is shown after EDP Epoch Settings Control in Figure 9-270k, but the description is provided before EDP Epoch Settings Control in the text. The orders should be aligned. | Move the dsecription for Group ID field to after the description of the EDP Epoch Settings Control | REVISED  Superceeded by [194] |
| 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 . | DISCUSS |
| 999 | 9.4.1.83 | 48 | 50 | "filed" is a typo | replace "filed" with "field" | REVISED  Superceeded by [792] |
| 1001 | 9.4.1.83 | 48 | 54 | This clause applies only to MLDs, and does not apply to APs and non-AP STAs. See also p48, line 62 (twice), | In this clause, replace "AP" with "AP MLD" and replace "non-AP STA" with "non-AP MLD". | REVISED  Editor implement the changes tagged as [1001] in document with DCN 25/455r1. |
| 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. | DISCUSS |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Clause Number(C)** | **Page(C)** | **Line(C)** | **Comment** | **Proposed Change** | **Resolution** |
| 211 | 9.4.2.349 | 62 | 10 | In some cases, multiple collision warning messages may be send to the same receiver. A dialog token is typically added to management frames to ensure that each receiver knows which management frames are new and which are retransmissions, etc. | Please add a Dialog Token to the collision warning frame. | REVISED  Editor please implement changes tagged as [211] in document with DCN 25/455r1 |

**9.4.1.9 Status code field**

***Insert the following new rows to Table 9-80 while maintaining the numerical order and updating the reserved range (not all lines shown):***

**Table 9-80— Status codes**

|  |  |  |
| --- | --- | --- |
| **Status code** | **Name** | **Meaning** |
| … |  |  |
| 145 | SUCCESS\_SIMILAR\_EPOCH | The request to join or create a group epoch is successful but the epoch parameters are not exactly th~~e~~ose [22] requested |
| 146 | FAILURE\_ALREADY\_EXISTING\_EPOCH | The creation of the group epoch fails because the group already exists. The STA has successfully joined the requested group epoch. [192] |
| 147 | FAILURE\_MAX\_NUM\_EPOCH\_REACHED [931] | Failure to create a group epoch because the maximum number of group epochs at the AP has been reached |
| 148 | SUCCESS\_AID\_LIST\_PARTIALLY\_STORED | The AID List is too large and the CPE non-AP MLD has stored it only partially. |
| 149 | FAILURE\_AID\_LIST\_NOT\_STORED | No AID value has been stored. |
| 150 | FAILURE\_AID\_STORAGE\_TOO\_SMALL | The request to join or create a group epoch has failed, because the AID storage of the non-AP MLD is too small |
| 151 | NO\_ASSIGNED\_AID | The non-AP MLD has no AID value for the current epoch. |

**9.4.1.83 EDP Epoch Settings field**

[23] ~~The EDP Epoch Settings field includes the information regarding the parameters of an epoch.~~ The EDP Epoch Settings field format is shown in Figure 9-207k.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | [429] Epoch Interval | EDP Epoch Settings Control | Group ID | First [995] Planned Epoch TSF Start Time | Epoch Number Offset | Time Range | Epochs Remaining | Minimum Epoch Pacing [106] ~~Parameters~~ |
| Bits: | 16 | 16 | 0 or 8 | 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**

[25] ~~The Epoch Interval field is defined as follows:~~ The EDP Epoch Interval field format is shown in Figure 9-207m.

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

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

[26] ~~The Epoch Interval Length field contains the length of the EDP epoch, expressed in Epoch Interval Units, shown in Table 9-129g (Epoch Interval Units and epoch durations). Epoch Interval Length value 0 is reserved.~~ The Epoch Interval Unit field value defines the Epoch Interval Unit as shown in Table 9-129g. The Epoch Interval Length field contains the length of the EDP epoch, expressed in Epoch Interval Units. An Epoch Interval Length [433] field value 0 is reserved.

|  |  |  |
| --- | --- | --- |
| **Epoch Interval Unit field value** | **Epoch Interval Unit** | **Max Epoch Duration (approx.)** |
| 0 | 1000 s | 23 d 16 h 36 min 40 s |
| 1 | 1 s | 34 min 7 s |
| 2-7 | Reserved | N/A |

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

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

[194] ~~The Group ID field signals an identifier of the EDP group. The value 0 indicates the default group. The value 255 is reserved.~~

[24] ~~The EDP Epoch Settings Control is defined as follows:~~ The EDP Epoch Settings Control field format is shown in Figure 9-207l.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Group ID Present | First [995] Planned Epoch TSF Start Time  Present | [308] Epoch Number Offset  Present | Time Range  Present | Epochs Remaining  Present | [308] Minimum Epoch Pacing [106] ~~Parameters~~  Present | [443] Participating Affiliated STAs Count Present | Participating Affiliated STAs Percentage Present | AID Storage Size Present |
| Bits: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

|  |  |
| --- | --- |
|  | Reserved |
| Bits: | 7 |

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

Each [195] field in ~~of the bits of~~ 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.

[194] The Group ID field [45] ~~signals~~ contains an identifier of the EDP group. The value 0 indicates the default group. The value 255 is reserved.

[196] ~~The First Epoch TSF Start Time filed contains the value of the TSF timer of the receiving link at the start time of the first EDP epoch of the sequence (EDP epoch number = Epoch number Offset).~~

[196] The First [995] Planned Epoch TSF Start Time [792] ~~filed~~ field contains the first Epoch start time presented as the TSF of the link in which this field was sent, see 10.71.2.4 (EDP Epoch Start Time Computation).

The Epoch number offset field value contains the offset between the AP [1001] MLD epoch number and the non-AP [1001] MLD ~~STA~~ epoch number (see 10.71.2.4 (EDP Epoch Start Time Computation)).

The Minimum Epoch Pacing field [31] ~~signals~~ value indicates the minimum epoch duration value that the non-AP MLD can support. The [199] ~~format of the~~ Minimum Epoch Pacing field [106] ~~element~~ [199] has the same format ~~is the same~~ as the Epoch Interval field.

The Time Range field contains the range of values, expressed in ~~E~~epoch ~~I~~interval ~~U~~units [430] as defined in Table 9-129g (Epoch Interval Units and epoch durations), used by the [1001] MLD ~~AP~~ and each non-AP [1001] MLD ~~stations~~ [331] that is a member of the EDP group to determine a random delay added to the EDP epoch planned start time [442] ~~(PlannedTSFStartTime)~~ as defined in 10.71.2.4 (EDP Epoch Start Time Computation).

[32] ~~The Epochs Remaining field indicates the number of EDP Epochs left in the sequence after the current epoch finishes, except 255, which means that the sequence duration is unlimited.~~ The Epochs Remaining field value indicates the number of EDP [442] ~~E~~epochs left in the sequence after the current epoch finishes, except [202] the value of 255, which indicates unlimited epochs.

[33] ~~The Number of Participating Affiliated STAs field is optional. When present, the field signals an indication of the number of affiliated STAs currently participating to this group EDP epoch on the current link.~~ The Number of Participating Affiliated [1001] non-AP MLD ~~STAs~~ field format is shown in Figure 9-207n.

|  |  |  |
| --- | --- | --- |
|  | Participating Affiliated [1001] non-AP MLD ~~STAs~~ Count | Participating Affiliated [1001] non-AP MLD ~~STAs~~ Percentage |
| Octets: | 2 | 1 |

**Figure 9-207n— Number of Participating Affiliated** [1001] non-AP MLD **~~STAs~~ field format**

[34] ~~The Participating Affiliated STAs Count field represents an indication of the number of affiliated STAs participating in the signaled group on the link.~~

The Participating [1001] non-AP MLD ~~STAs~~ Count field value is the number of affiliated STAs currently participating [447] in ~~to~~ this group EDP epoch, on the current link.

[35] ~~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. Values 101-255 are reserved.~~

The Participating Affiliated [1001] non-AP MLD ~~STAs~~ Percentage field value is the percentage of the associated affiliated STAs participating to the signaled group on the link. The Participating Affiliated [1001] non-AP MLD ~~STAs~~ Percentage field can have a value from 0 to 100, and values 101 to 255 are reserved.

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

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

**9.4.1.84 Epoch Request field**

The Epoch Request field carries information on the action to be performed by the AP upon receiving an EDP Epoch Request frame.

The format of the Epoch Request field is shown in Figure 9-207o (Epoch Request field format).

|  |  |
| --- | --- |
|  | Epoch Request |
| Bits: | 8 |

**Figure 9-207o—Epoch Request field format**

[38] The Epoch Request field values are defined in ~~The possible values of the Epoch Request field and their meaning are shown~~ in Table 9-129h (Values for the Epoch Request field).

|  |  |
| --- | --- |
| **Value** | **Meaning** |
| 0 | Reserved |
| 1 | Create/Join [208] |
| ~~2~~ [208] | ~~Join~~ [208] |
| ~~3~~2 [208] | Leave |
| 3 ~~4~~-255 [208] | Reserved |

**Table 9-129h—Values for the Epoch Request field**

**9.6.42.1 EDP Action field**

An EDP Action field, in the octet immediately after the Category field, differentiates the EDP Action frame formats. The EDP Action field values associated with each frame format within the EDP category are defined in Table 9-658u (EDP Action field values).

**Table 9-658u— EDP Action field values**

|  |  |
| --- | --- |
| **Value** | **Meaning** |
| 0 | Capabilities And Operation Parameters Request |
| 1 | Capabilities And Operation Parameters Response |
| 2 | EDP Group Parameter [493] ~~frame~~ |
| 3 | EDP Epoch Request |
| 4 | EDP Epoch Response |
| 5 | [950] OTA ~~ota~~MAC Collision Warning |
| 6 | Privacy Beacon Solicit Request |
| 7 | AID Assignment |
| 8-255 | Reserved |

**9.6.42.4 EDP Groups [1011] Parameter frame format**

The EDP Groups [1011] Parameter frame is used to carry the EDP epoch settings for one or more [1012] EDP groups [499] using the procedures defined in 10.71.2.2 (EDP group operations) and 10.71.2.3 (EDP epoch transitions operations). The EDP Groups [1011] Parameter frame contains the information shown in Table 9-658z (EDP Groups [1011] Parameter frame Action field format).

**Table 9-658z—EDP Group**s [1011] **Parameter frame Action field format**

|  |  |
| --- | --- |
| **Order** | **Meaning** |
| 0 | Category |
| 1 | EDP Action |
| 2 | Dialog Token |
| 3 | [1013] Number of EDP Epoch Settings ~~Number of EDP Epoch Settings Included~~ |
| 4 | EDP Epoch Settings List |

The Category field is defined in 9.4.1.11 (Action field).

The EDP Action field is defined in 9.6.42.1 (EDP Action field).

The [1013] [1014] Number of EDP Epoch Settings ~~Number of EDP Epoch Settings Included~~ field specifies the number of EDP Epoch Settings fields that are in the EDP Epoch Settings List field [1014] (i.e., the number of EDP groups which parameters are conveyed). The length of this field is one octet. [500] The v~~V~~alue 0 is reserved.

The EDP Epoch Settings List field contains one or more EDP Epoch [501] Setting fields (as defined in 9.4.1.83 (EDP Epoch Settings field)) indicating the parameters of EDP groups that the AP MLD wants to convey to the non-AP MLD.

**9.6.42.5 EDP Epoch Request frame format**

[218] ~~The EDP Epoch Request frame contains the information that a CPE STA provides [63] to an AP to request a new EDP epoch group, or to be assigned to a particular EDP epoch group, or to maintain its current EDP epoch group, as defined in 10.71.2.1 (General) and 10.71.2.2 (EDP group operations).~~

[218] A CPE non-AP MLD may send an EDP Epoch Request frame to request a new EDP epoch group creation, assignment to a particular EDP epoch group, or leave from the current EDP epoch group, as defined in 10.71.2.1 (General) and 10.71.2.2 (EDP group operations).

**Table 9-658aa—EDP Epoch Request frame Action field format**

[1018] ~~The Category field is defined in 9.4.1.11 (Action field).~~

|  |  |
| --- | --- |
| **Order** | **Meaning** |
| 0 | Category |
| 1 | EDP Action |
| 2 | Dialog Token |
| 3 | Epoch request |
| 4 | EDP Epoch Settings |

[1018] The Category field is defined in 9.4.1.11 (Action field).

The EDP Action field is defined in 9.6.42.1 (EDP Action field).

The Dialog Token field is defined in 9.4.1.12 (Dialog Token field) and is set to a nonzero value to identify the request/response transaction.

The Epoch Request field is defined in 9.4.1.84 (Epoch Request field).

The EDP Epoch Settings field is defined in 9.4.1.83 (EDP Epoch Settings field).

**9.6.42.6 EDP Epoch Response frame format**

The EDP Epoch Response frame contains [217] the response to an EDP Epoch Request frame. ~~information that an AP provides [63] to a STA in response to the STA's EDP Epoch Request frame.~~

**Table 9-658ab—EDP Epoch Response frame Action field format**

|  |  |
| --- | --- |
| **Order** | **Meaning** |
| 0 | Category |
| 1 | EDP Action |
| 2 | Dialog Token |
| 3 | Status |
| 4 | EDP Epoch Settings (Optional) |

The Category field is defined in 9.4.1.11 (Action field).

The EDP Action field is defined in 9.6.42.1 (EDP Action field).

The Dialog Token field is defined in 9.4.1.12 (Dialog Token field) and is set to a nonzero value to identify the request/response transaction.

The Status field is defined in 9.4.1.9 (Status code field).

The EDP Epoch Settings field is optional and is defined in 9.4.1.83 (EDP Epoch Settings field).

**9.6.42.7 [123] OTA ~~ota~~MAC Collision Warning [211] Request frame format**

[219] ~~The~~ **~~[123] OTA~~** ~~otaMAC Collision Warning frame is used to signal when an OTA MAC address expected to be used by an EDP non-AP MLD in an upcoming epoch is calculated to collide with the MAC address of another STA.~~

[219] The [123] OTAMAC Collision Warning [211] Request frame warns on upcoming MAC address collision with another STA in a given epoch.

**Table 9-658ac—[123] OTA ~~ota~~MAC Collision Warning [211] Request frame Action field format**

|  |  |
| --- | --- |
| **Order** | **Meaning** |
| 0 | Category |
| 1 | EDP Action |
| 2 | [211] Dialog Token |
| ~~2~~ 3 | OTA MAC Collision Warning element |

The Category field is defined in 9.4.1.11 (Action field).

The EDP Action field is defined in 9.6.42.1 (EDP Action field).

The Dialog Token field is defined in 9.4.1.12 (Dialog Token field).

The OTA MAC Collision Warning element is defined in 9.4.2.349 (OTA MAC Collision Warning element).

**[211] 9.6.42.8 OTA ~~ota~~MAC Collision Warning [211] Response frame format**

The OTAMAC Collision Warning frame indicates the action the STA will take based on the information on the OTA MAC Collision Warning Request frame.

**Table 9-658ac—[123] OTA ~~ota~~MAC Collision Warning Response frame Action field format**

|  |  |
| --- | --- |
| **Order** | **Meaning** |
| 0 | Category |
| 1 | EDP Action |
| 2 | Dialog Token |
| ~~2~~ 3 | OTA MAC Collision Warning element |

The Category field is defined in 9.4.1.11 (Action field).

The EDP Action field is defined in 9.6.42.1 (EDP Action field).

The Dialog Token field is defined in 9.4.1.12 (Dialog Token field).

The OTA MAC Collision Warning element is defined in 9.4.2.349 (OTA MAC Collision Warning element).