IEEE P802.11  
Wireless LANs

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| LB 200 cluase 8.3.3 comment resolution | | | | |
| Date: 2014-03-03 | | | | |
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Abstract

This submission proposes comment resolutions of the clause 8.3.3 from TGah Draft 1.0.

* CIDs: 1417, 1681, 1682, 1683, 1684, 1685, 2041, 2115, 2122, 2130, 2286, 2287, 2385, 2473, 2824, 2842, 2980, 2981, 2982

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 TGah Draft. This introduction is not part of the adopted material.

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

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

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| --- | --- | --- | --- | --- | --- |
| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 1417 | 43.28 | 8.3.3.6 | The MIB variable has an "l" missing. | Please correct to "dot11S1GOptionImplemented". Additionally, throughout the draft search for "Impemented" and replace it with "Implemented" as quite a few occurrences were found. | Accepted-  Agree with the comment. |
| 1681 | 41.53 | 8.3.3.2 | "Beacon frames generated by APs for medium access of a group of STAs" is unclear. Either delete this qualification or specify a location where it is clearly specified. | Delete "for medium access of a group of STAs". | Revised-  Agree in principle. Remove the unnecessary informative text from the sub-clause 8.3.3.n.  TGah editor to make changes shown in 11-14-0274r1 under the heading for CID 1681, 2130. |
| 1682 | 41.61 | 8.3.3.2 | "sector training" is not the name of a frame, field, element, etc., so should not include initial caps. | Replace "Sector Training" with "sector training" throughout the draft. | Accepted-  Agree with the comment. |
| 1683 | 42.04 | 8.3.3.2 | "is optionally present": then how does the receiver know whether it is or is not present? And how then can the receiver parse the following fields in this frame? | Delete "optionally". Do likewise on lines 17, 20, 23 and 26. (The final "optionally present" on line 30 won't cause parsing problems because there are no following fields in the Beacon). | Rejected-  Please see the  9.25.6 (Element parsing).  The receiver can decode the optional fields based on the element parsing rule. |
| 1684 | 42.20 | 8.3.3.4 | Apparently "Change Sequence" is referring to the element with that name, but that fact is not specified here (unlike similar specifications for other elements). | Replace "Change Sequence" with "Change Sequence element" here and in all of the specifications of the other frame bodies in which it applies. | Accepted-  Agree with the comment. |
| 1685 | 43.49 | 8.3.3.5 | "is optionally present": then how does the receiver know whether it is or is not present? And how then can the receiver parse the following fields in this frame? | Delete "optionally". Do likewise on lines 52 and 56 and in similar cases in clauses 8.3.3.6, 8.3.3.7, 8.3.3.8, etc. | Rejected-  Please see the  9.25.6 (Element parsing).  The receiver can decode the optional fields based on the element parsing rule. |
| 2041 | 45.58 | 8.3.3.8 | "Group ID List" is not included in Reassociation Response frame | If allocation or change of group IDs to a station is allowed in reassociation, add "Group ID List" in Table 8-29 | Revised-  Agree in principle.  The Sectorized Group ID list element can also be included in Reassociation frame.  TGah editor to make changes shown in 11-14-0274r1 under the heading for CID 2041. |
| 2115 | 44.35 | 8.3.3.7 | the Relay element is not present in Reassociation Request,it should be present in Reassociation Request when dot11RelaySTACapable is true. | add the Relay element in Reassociation Request. | Accepted-  Agree with the comment. |
| 2122 | 42.20 | 8.3.3.2 | the change sequece in normal Beacon frame should be contained in an information element. | change "The Change Sequence is optionally present..." to "The Change Sequence element is optionally present". | Accepted-  Agree with the comment. |
| 2130 | 46.55 | 8.3.3.10 Probe Response frame format | The notes text of the "RPS" and "segment count IE" are not in consistance with other elements | Improve the notes description and move the function description to corresponding sections. | Revised-  Agree in principle. Remove the unnecessary informative text from the sub-clause 8.3.3.n.  TGah editor to make changes shown in 11-14-0274r1 under the heading for CID 1681, 2130. |
| 2286 | 44.01 | 8.3.3.6 | SIG Operation is missing. | Add SIG Operation element to Probe Response frame. | Revised-  Add the S1G Operation element to the Association Response frame and the Reassociation Response frame.  TGah editor to make changes shown in 11-14-0274r1 under the heading for CID 2286, 2287. |
| 2287 | 45.35 | 8.3.3.8 | SIG Operation is missing. | Add SIG Operation element to Probe Response frame. | Revised-  Add the S1G Operation element to the Association Response frame and the Reassociation Response frame.  TGah editor to make changes shown in 11-14-0274r1 under the heading for CID 2286, 2287. |
| 2385 | 43.37 | 8.3.3.6 | This appears to change the requirements on existing conformant devices | Qualify with "and when dot11S1GOptionImplemented is true" (ditto for ReassocRsp) | Revised-  Agree with the comment.  TGah editor to make changes shown in 11-14-0274r1 under the heading for CID 2385. |
| 2473 | 46.21 | 8.3.3.9 | "ProbeResponseOption" | "Probe Response Option" (twice) | Reevised -  Agree with the comment.  TGah editor to make changes shown in 11-14-0274r1 under the heading for CID 2473. |
| 2824 | 44.14 | 8.3.3.6 | There is a new "Group ID" in MAC layer for sectorization, while there has been a "Group ID" in PHY for MU-MIMO transmission. It looks really confusing. | Please choose a new name for the "Group ID" in MAC layer. | Revised-  Agree in principle.  The terminology of the Group ID should be renamed as the Sectorized Group ID.  But, TGah Draft 1.2 is already resolving this comment.  No change is needed. |
| 2842 | 42.15 | 8.3.3.2 | The note description for Relay element is not in consistance with the text in sub-clause 9.48, pg205/ln40. | Unify the pre-requisite for carrying Relay elements. | Revised-  Agree in principle.  For making a consistency with sub-clause 9.48, replace  “dot11RelayAPOperation” with “dot11RelaySupport”.  TGah editor to make changes shown in 11-14-0274r1 under the heading for CID 2842. |
| 2980 | 44.43 | 8.3.3.7 | AID request is optionally present in 11ah | insert "optionally" before "present" | Rejected-  Please see the discussion shown in 11-14-0274r1 under the heading for CID 2980, 2981 and 2982. |
| 2981 | 43.00 | 8.3.3.6 | AID should be optionally present in 11ah | change "is not" to "optionally" under "Notes" column in the Table | Rejected-  Please see the discussion shown in 11-14-0274r1 under the heading for CID 2980, 2981 and 2982. |
| 2982 | 45.11 | 8.3.3.8 | AID should be optionally present in 11ah | change "is not" to "optionally" under "Notes" column in the Table | Rejected-  Please see the discussion shown in 11-14-0274r1 under the heading for CID 2980, 2981 and 2982. |

**Discussion:**

**CID 2980, 2981, 2982**

In MLME-(RE)ASSOCIATE.confirm andMLME-(RE)ASSOCIATE.response,

“If the association request result was SUCCESS, then AssociationID specifies the association ID value assigned by the PCP/AP. This parameter is not present if dot11S1GOptionImpemented is true.”

“Parameters describing an AID assignment. This parameter is present if dot11S1GOptionImpemented is true; otherwise not present.”

AID field is not present if dot11S1GOptionImplemented is true.

On the behalf of the AID field, the AID Response element is used for providing the association identifier.

In order to support the hierarchical TIM element and the page slice element, AP should provide a wakeup interval for the corresponding AID of each STA. On this purpose, AID Response element can be used as the generalized signaling mechanism.

**Propose:**

Revised for CID 1417, 1681, 1682, 1683, 1684, 1685, 2041, 2115, 2122, 2130, 2286, 2287, 2385, 2473, 2824, 2842, per discussion and editing instructions in 11-14/0274r1.

***TGah editor: Modify the sub-clause 8.3.3 as the following:***

* Management frames
* Format of management frames
* Beacon frame format

***Change Table 8-24 in Clause 8.3.3.2 by inserting the following rows :***

|  |  |  |
| --- | --- | --- |
| * Beacon frame body (continued) | | |
| **Order** | **Information** | **Notes** |
| 67 | RPS | ~~The RPS element is present in Beacon frames generated by APs for medium access of a group of STAs.~~  The RPS ~~This~~ element is optionally present if dot11RAWOptionActivated is true. |
| 68 | Page Slice | ~~The Page Slice element is used for indication of page slices served in DTIM intervals.~~  The Page Slice ~~This~~ element is optionally present if dot11PageSlicingSupported is true. |
| 69 | Sector Operation | ~~The AP provides via this element the information related to the sector duration and sector periodicity or Sector Training when dot11S1GSectorizationActivated is true.~~  The Sector Operation element is optionally present if dot11S1GSectorizationActivated is true. |
| 70 | Subchannel Selective Transmission | The Subchannel Selective Transmission element is optionally present if dot11SubchannelSelectiveTransmissionActivated is true. |
| 71 | Authentication Control | The Authentication Control element is optionally present when dot11S1GAuthenticationControlActivated is true. |
| 72 | TSF Timer Accuracy | The TSF Timer Accuracy element is optionally present when dot11TSFTimerAccuracyImpemented is true. |
| 73 | Relay | The Relay element is present if dot11RelaySupport ~~dot11RelayAPOperation~~ is true. |
| 74 | Relay Discovery | The Relay Discovery element is optionally present if dot11RelayDiscoveryOptionImplemented is true. |
| 75 | Change Sequence | The Change Sequence element is optionally present if dot11ShortBeaconOptionImplemented is true. |
| 76 | S1G Capabilities | The S1G Capabilities element is ~~optionally~~ present if dot11S1GOptionImplemented is true; otherwise, it is not present. |
| 77 | S1G Operation(#863,866) | The S1G Operation element is ~~optionally~~ present when dot11S1GOptionImpemented is true; otherwise, it is not present. |
| 78 | Short Beacon Interval | The Short Beacon Interval element is optionally present if dot11ShortBeaconOptionImplemented is true. |

* Association Request frame format

***Change Table 8-26 in Clause 8.3.3.5 by inserting the following rows:***

|  |  |  |
| --- | --- | --- |
| * Association Request frame body (continued) | | |
| **Order** | **Information** | **Notes** |
| 24 | TWT | The TWT element is optionally present if dot11TWTOptionActivated is true. |
| 25 | AID Request | The AID Request element is optionally present if dot11S1GOptionImplemented is true. |
| 26 | S1G Capabilities | The S1G Capabilities element is ~~optionally~~ present if dot11S1GOptionImplemented is true; otherwise, it is not present. |
| 27 | Activity Specification | The Activity Specification element is optionally present if dot11S1GActivityEnabled is true. |
| 28 | Relay | The Relay element is present if dot11RelaySTACapable is true. |
| 29 | BSS Max Idle Period | The BSS Max Idle Period element is optionally present if dot11S1GOptionImplemented is true. |

* Association Response frame format

***Change the row of Order 3, 13, and 19 in Table 8-27 Association Response frame body as the following:***

|  |  |  |
| --- | --- | --- |
| **Order** | **Information** | **Notes** |
| 3 | AID | This field is not present when dot11S1GOptionImpemented is true. |
| 13 | Timeout Interval (Association Comeback time) | The Timeout Interval element (TIE) containing the Association Comeback time is present when dot11RSNAActivated is true, dot11RSNAProtectedManagementFramesActivated is true, and either the association request is rejected with a status code 30 or the association request is accepted with a status code 0 and when dot11S1GOptionImplemented is true. |
| 19 | BSS Max Idle Period | The BSS Max Idle Period element is present if  dot11WirelessManagementImplemented is true or dot11S1GOptionImplemented is true. |

***Change Table 8-27 in Clause 8.3.3.6 by inserting the following rows:***

|  |  |  |
| --- | --- | --- |
| * Association Response frame body (continued) | | |
| **Order** | **Information** | **Notes** |
| 30 | Sector Operation | ~~The AP provides via this element the information related to the sector duration and sector periodicity or Sector Training when dot11S1GSectorizationActivated is true.~~  The Sector Operation element is optionally present if dot11S1GSectorizationActivated is true. |
| 31 | TWT | The TWT element is present if dot11TWTOptionActivated is true and the TWT element is present in the Association Request frame that elicited this Association Response frame. |
| 32 | TSF Timer Accuracy | The TSF Timer Accuracy element is optionally present when dot11TSFTimerAccuracyImpemented is true. |
| 33 | S1G Capabilities | The S1G Capabilities element is ~~optionally~~ present if dot11S1GOptionImplemented is true; otherwise, it is not present. |
| 34 | S1G Operation(#863,866) | The S1G Operation element is present when dot11S1GOptionImpemented is true; otherwise, it is not present. |
| 35 ~~34~~ | AID Response | The AID Response element is present when dot11S1GOptionImpemented is true. |
| 36 ~~35~~ | Sectorized Group ID List | The Sectorized Group ID List element is optionally present ~~added~~ when dot11S1GSectorizationActivated is true ~~and indicates new membership groups for a receiving STA~~. |
| 37 ~~36~~ | Relay | The Relay element is optionally present if dot11RelaySupport is true. |

* Reassociation Request frame format

***Change Table 8-28 in Clause 8.3.3.7 by inserting the following rows:***

|  |  |  |
| --- | --- | --- |
| * Reassociation Request frame body | | |
| **Order** | **Information** | **Notes** |
| 30 | TWT | The TWT element is optionally present if dot11TWTOptionActivated is true. |
| 31 | AID Request | The AID Request element is present when dot11S1GOptionImpemented is true. |
| 32 | S1G Capabilities | The S1G Capabilities element is ~~optionally~~ present if dot11S1GOptionImplemented is true; otherwise, it is not present. |
| 33 | Activity Specification | The Activity Specification element is present if dot11S1GActivityEnabled is true. |
| 34 | Relay | The Relay element is present if dot11RelaySTACapable is true. |
| 35 ~~34~~ | BSS Max Idle Period | The BSS Max Idle Period element is optionally present if dot11S1GOptionImplemented is true. |

* Reassociation Response frame format

***Change the rows of Order 3, 15, and 21 in Table 8-29 Reassociation Response frame body as the following:***

|  |  |  |
| --- | --- | --- |
| **Order** | **Information** | **Notes** |
| 3 | AID | This field is not present when dot11S1GOptionImpemented is true. |
| 15 | Timeout Interval (Association Comeback time) | The Timeout Interval element containing the Association Comeback time is present when dot11RSNAActivated is true, dot11RSNAProtectedManagementFramesActivated is true, and either the reassociation is rejected with status code 30 or the reassociation request is accepted with a status code 0 and when dot11S1GOptionImplemented is true. |
| 21 | BSS Max Idle Period | The BSS Max Idle Period element is present if  dot11WirelessManagementImplemented is true or dot11S1GOptionImplemented is true. |

***Change Table 8-29 in Clause 8.3.3.8 by inserting the following rows:***

|  |  |  |
| --- | --- | --- |
| * Reassociation Response frame body | | |
| **Order** | **Information** | **Notes** |
| 34 | Sector Operation | ~~The AP provides via this element the information related to the sector duration and sector periodicity or sector Training when dot11S1GSectorizationActivated is true.~~  The Sector Operation element is optionally present if dot11S1GSectorizationActivated is true; otherwise, it is not present. |
| 35 | TWT | The TWT element is present if dot11TWTOptionActivated is true and the TWT element is present in the Reassociation Request frame that elicited this Reassociation Response frame. |
| 36 | TSF Timer Accuracy | The TSF Timer Accuracy element is optionally present when dot11TSFTimerAccuracyImpemented is true. |
| 37 | S1G Capabilities | The S1G Capabilities element is ~~optionally~~ present if dot11S1GOptionImplemented is true; otherwise, it is not present. |
| 38 | S1G Operation(#863,866) | The S1G Operation element is present when dot11S1GOptionImpemented is true; otherwise, it is not present. |
| 39 ~~38~~ | AID Response | The AID Response element is present when dot11S1GOptionImpemented is true. |
| 40 | Sectorized Group ID List | The Sectorized Group ID List element is optionally present when dot11S1GSectorizationActivated is true. |
| 41 ~~39~~ | Relay | The Relay element is optionally present if dot11RelaySupport is true. |

* Probe Request frame format

***Change Table 8-30 in Clause 8.3.3.9 by inserting the following rows:***

|  |  |  |
| --- | --- | --- |
| * Probe Request frame body | | |
| **Order** | **Information** | **Notes** |
| 18 | Change Sequence | The Change Sequence element is optionally present if dot11ShortBeaconOptionImplemented is true. |
| 19 | Relay Discovery | The Relay Discovery element is optionally present if dot11RelayDiscoveryOptionImplemented is true. |
| 20 | Probe Response Option  ~~ProbeResponseOption~~ | The Probe Response Option ~~ProbeResponseOption~~ element is optionally present if dot11~~S1G~~ShortProbeResponseOptionImplemented is true. |
| 21 | S1G Capabilities | The S1G Capabilities element is ~~optionally~~ present if dot11S1GOptionImplemented is true; otherwise, it is not present. |
| 22 | Activity Specification | The Activity Specification element is present if dot11S1GActivityEnabled is true. |
| 23 | Relay | The Relay element is present if dot11RelaySTACapable is true. The Root BSSID field of the Relay element is reserved in this case. |

* Probe Response frame format

***Change Table 8-31 in Clause 8.3.3.10 by inserting the following rows:***

|  |  |  |
| --- | --- | --- |
| * Probe Response frame body (continued) | | |
| **Order** | **Information** | **Notes** |
| 68 | RPS | ~~The RPS element is present only within Probe Response frames generated by APs for medium access of STAs.~~  The RPS element is optionally present if dot11RAWOptionActivated is true. |
| 69 | Page Slice | ~~The Segment Count element is used for indication of TIM and Page segments present in DTIM intervals.~~  The Page Slice element is optionally present if dot11PageSlicingSupported is true. |
| 70 | Change Sequence | The Change Sequence element is optionally present if dot11ShortBeaconOptionImplemented is true. |
| 71 | TSF Timer Accuracy | The TSF Timer Accuracy element is optionally present when dot11TSFTimerAccuracyImpemented is true. |
| 72 | Relay Discovery | The Relay Discovery element is optionally present if dot11RelayDiscoveryOptionImplemented is true. |
| 73 | Relay | The Relay element is optionally present if dot11RelaySupport is true. |
| 74 | S1G Capabilities | The S1G Capabilities element is ~~optionally~~ present if dot11S1GOptionImplemented is true; otherwise, it is not present. |
| 75 | S1G Operation(#863,866) | The S1G Operation element is ~~optionally~~ present when dot11S1GOptionImpemented is true; otherwise, it is not present. |

***TGah editor: For CID 1417, replace “dot11S1GOptionImpemented” with “dot11S1GOptionImplemented”*** ***throughout the TGah draft 1.2.***

***TGah editor: For CID 1682, replace “Sector Training” with “sector training”*** ***throughout the TGah draft 1.2, especially 8.4.2.170f and 8.47.***