IEEE P802.11  
Wireless LANs

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| SB0 resolution to misc comments | | | | |
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Abstract

This submission proposes resolutions to the following comments for TGah 1st Sponsor Ballot (TGah Draft 5.0).

* CIDs: 8098, 8134, 8135, 8136, 8282, 8298, 8210, 8186, 8187 (9 CIDs)

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 inst ructions 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.***

**Clause 8.4.2.6 and 8.6.5** (4 CIDs)

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| **CID** | | **Pg. Ln** | **Comment** | | **Proposed Change** | | **Resolution** | |
| 8098 | | 120.1 | The number of different ways of encoding a block is completely over the top. Assuming these are all mandatory modes, it adds unnecessary complexity to what are supposed to be simple devices. | | Delete the "inverse bitmap" bit and related behaviour. Delete the ADE mode and related behaviour. | | Rejected.  11ah needs to support very different use cases, e.g., sensors and data offloading. TIM has to be encoded efficiently in different scenarios where the adopted TIM Hierarchical Structure allowing 4 modes to address the issue effiecintly. Details can be found in 11-12/388r2. In addtion, “inverse bitmap” increases marginal complexity and ADE mode is not a mandatory mode. | |
| 8134 | | 188.45 | "The Block Ack Action field is set to 0, 128, or 132 (representing ADDBA request)" -- this is wrong. It is inconsistent with table 8-286 that indicates that value 128 and 132 do not represent ADDBA Request.  The issue is that this draft is trying to use the term "ADDBA Request" both for the specific purpose (action field value 0) and the generic case (any of the \* ADDBA Request frames). This won't work, and creates ambiguity. Presumably there is value in the ability to reference a generic ADDBA Request, or the changes would not be made here. | | Rename the "original" Request / Response frames by inserting "Basic" in front of them.  Document the contention "Reference to an ADDBA Request frame without qualification refer to the Basic ADDBA Request, NDP ADDBA Request and BAT ADDBA Request frames." + Ditto for Response.  Add new subclauses to describe the contents of the new frames.  Then review the 78 instances of ADDBA Request frame and insert "Basic" there the use is specific to the now Basic ADDBA Request frame. Do the same for the ADDBA Response frame. Yes, you really do need to do this work. | | Revised.  Agreed in principle.  TGah Editor to make the changes under the heading of CID8134 in 11-15/1495r0 | |
| 8135 | | 188.45 | "The meaning for each value is described in 8.6.5.1 (General)" -- but it doesn't The cited text merely names the action field values without describing them. | | Add a subclause for each new frame type, and use the standard format of describing what it is used for, and its contents. Delete cited text.  Do the same for the response frames (188.53). | | Revised.  Discussions: as the different request/response frames are similar, a combined description is proposed instead.  TGah Editor to make the changes under the heading of CID8134 in 11-15/1495r0 | |
| 8136 | 189.38 | | I don't see why three types of DELBA are needed. Once a BA has been set up, surely both peers know the type of BA agreement it is, and it is uniquely identified by a TC and direction. | | | Delete the two new DELBA variants. | | Revised.  Agreed in principle.  TGah Editor to make the changes under the heading of CID8136 in 11-15/1495r0 | |

**[CID 8134, 8135, 8136]**

**Instruction to TGah editor: Please change the Table 8-286—Block Ack Action field values in the clauses 8.6.5.1 (General of TGah D5.0 as follows:**

**Table 8-286—Block Ack Action field values**

|  |  |
| --- | --- |
| Block Ack Action field values | Meaning |
| 0 | Basic ADDBA Request |
| 1 | Basic ADDBA Response |
| 2 | DELBA |
| 3–127~~255~~ | Reserved |
| 128 | NDP ADDBA Request |
| 129 | NDP ADDBA Response |
| ~~130~~ | ~~NDP DELBA~~ |
| 130-131 | Reserved |
| 132 | BAT ADDBA Request |
| 133 | BAT ADDBA Response |
| ~~134~~ | ~~BAT DELBA~~ |
| 134~~135~~-255 | Reserved |

**Instruction to TGah editor: Please replace 8.6.5.2 (ADDBA Request frame format) of TGah D5.0 with the following:**

***8.6.5.2 ADDBA Request frame format***

***Change the 1st three paragraphs of sub-clause 8.6.5.2:***

An ADDBA Request frame is sent by an originator of block ack to another STA. There are three types of ADDBA Request frame, i.e. basic ADDBA Request frame, NDP ADDBA Request frame, and BAT ADDBA Request frame, and they share the same frame format. The Action field of an ADDBA Request frame contains the information shown in Table 8-287 (ADDBA Request frame Action field format).

The Category field is defined in 8.4.1.11 (Action field).

The Block Ack Action field is different for a different type of ADDBA Request frame. It is set to 0, 128, or 132 to represent an ADDBA Request frame, an NDP ADDBA Request frame, or a BAT ADDBA Request frame respectively. The field value and meaning for each value is described in 8.6.5.1 (General).

**Instruction to TGah editor: Please make the following changes in the clauses 8.6.5.3 (ADDBA Response frame format) of TGah D5.0:**

**8.6.5.3 ADDBA Response frame format**

***~~Change the third paragraph of sub-clause 8.6.5.3:~~***

***Change the 1st three paragraphs of sub-clause 8.6.5.2:***

~~The Block Ack Action field is set to 1, 129, or 133 (representing ADDBA response). The meaning for each value is described in 8.6.5.1 (General).~~

The ADDBA Response frame is sent in response to an ADDBA Response frame. There are three types of ADDBA Response frame, i.e. basic ADDBA Response frame, NDP ADDBA Response frame, and BAT ADDBA Response frame, and they share the same frame format. The Action field of an ADDBA Response frame contains the information shown in Table 8-288 (ADDBA Response frame Action field format).

The Category field is defined in 8.4.1.11 (Action field).

The Block Ack Action field is ~~defined~~ set to different value for a different type of ADDBA Request frame. It is set to 1, 129, or 133 to represent a basic ADDBA Response frame, an NDP ADDBA Response frame, or a BAT ADDBA Response frame respectively. The field value and meaning for each value is described in 8.6.5.1 (General).

*(Line 57 of pg 188) … …*

**Instruction to TGah editor: Please remove the clauses 8.6.5.4 (DELBA frame format) of TGah D5.0 (i.e. reuse DELBA and no change to the baseline text) and the clauses 9.24.5 (Teardown of the block ack mechanism) (i.e reuse DELBA and no change to the baseline text)**

**Clause 9.56** (1 CID)

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| **CID** | **Pg. Ln** | **Comment** | **Proposed Change** | **Resolution** |
| 8282 | 340.15 | The wording is incorrect - it looks like a STA reading this subclause is being instructed to transmit a frame. | Change the first sentence to be: "An S1G STA transmitting an S1G NDP CMAC frame shall use the following TXVECTOR parameters:" | Accepted.  TGah Editor to make the changes as in the proposed change. |

**Clause 10.3 and 10.5** (4 CIDs)

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| **CID** | **Pg. Ln** | | **Clause** | | **Comment** | | | **Proposed Change** | | **Resolution** | |
| 8298 | 357.29 | | 10.3.5.11 | | The processing and usage of the Service Type indication is not described in suffeicient details | | | Describe the procedures at the STA and the AP to describe how each uses and interprets the Service Type indication. For instance, are there any error conditions that need to be handled? Can an AP reject an Association Request based on Service Type? | | Rejected.  The commenter does not provide an actionable resolution, but some questions.  Regarding the questions, additional informaiton on Service Type field and usage is in 8.4.2.190 AID Request element an 10.48 Dynamic AID assignment operation. The response, being succesful/rejection is determined by an AP, and may be based on Service Type. This is beyond the scope of the stardard Draft. | |
| 8210 | 357.52 | | 10.3.8.1 | | I understand the two ammendmants are being developed completely parallel to each other, but the Authentication Control feature in 11ah seems to be solving the exact same use case as 11ai with a completely different mechanism. | | | Use FILS authentication as it has mechanisms defined for any frequency band, not specific to sub 1 GHz. Remove 10.3.8. That will alleviate WM contention when a large number of STAs are sending Authentication Request frames. | | Rejected.  The objectives and the issues addressed by 11ah and 11ai on Authentication control are different. TGah is addressing the problem where there are a large number of STAs (could be up to 6,000 STAs) that may be reset and need to authenticate/re-associate with the AP at the same time (e.g. in emergence cases or STAs are in power outage). This is not addressed by the fast initial link setup in TGai. 11ai addresses the congestion caused by tens to a couple of hundreds STAs trying to access the channel in a short period of time. | |
| 8186 | | 357.53 | |  | " when a large number of STAs are trying to or are expected to send Authentication Request frames to the AP at about the same time." I get it might be effective in managing that. But it is not reasonable that the clients will all suddenly want to authenticate. It might be true when the AP is switched on, but it's a transient condition that will clear itself in a few seconds. Also why this focus on Authentication. Why not also association? Don't optimize what you don't need to optimize. | | Delete 10.3.8 in its entirety. | | Rejected.  As specified in the specification requirement document, 11ah task group is required to address the issue that a large number of STAs reset and re-authenticate / associate may congest or down the network. One such example is STAs’ efficient recovery from power outage and they need to authenticate/re-associate at the same time. | |
| 8187 | | 360.25 | | 10.5.2.3 | The mixture of dashes and numbering does not follow IEEE-SA style. | | Use a recognized style - all dashes or all numbered /lettered. | | Revised.  Agreed in principle.  TGah Editor to make the following changes:   * change the dashes on lines 25, 35, and 39 (pg 360) to number “1)”, “2)”, and “3)” respectively * change “1)” on line 47 to “4)” | |