IEEE P802.11  
Wireless LANs

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| Comment Resolutions for 9.30.3 | | | | |
| Date: 2014-09-02 | | | | |
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Abstract

This submission proposes comment resolutions for subclause 9.30.3:

3036, 3487, 3488, 3489, 3490, 3491, 3787*.*

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** | **Clause Num** | **P** | **L** | **Comment** | **Propose Change** | **Resolution** |
| 3036 | 9.30.3 | 269 | 60 | " HT Control field which can be used" - ungrammatical. In the general case, confusion between "which" and "that" can change the meaning. Please review the English grammar for "that vs which". Good: "receives an RTS, which causes a CTS to be sent", "receives an RTS in which the A1 field is ..." See 275.04 for an example of the other class of error. | Review all use of "which" (generally 'that' is OK) and replace "which" with ", which" or "that" when not preceded by a preposition. | Revise  Discussion: generally agree with the comment. Comment 3486 already remove “which” from the sentence. So no further change is required here  Refer to CID 3486 |
| 3487 | 9.30.3 | 270 | 1 | For link adaptation procedure between two S1G STAs the same behavior that is described throughout this subclause is valid with the following qualifications:": this is the beginning of a set of instructions that would turn sections of the standard into a do-it-yourself instruction booklet of changes needed to create new sections, rather than text providing the sections themselves. Not only is this process rife with problems (some of which are noted in other comments), but it would make a mockery of an IEEE standard. Remove all of these do-it-yourself instructions from the proposed text and create the new sections and the (proposed) text for them. | Remove all editing instructions that are proposed to be included inside the standard's text and replace them with the actual proposed normative text. See the prpoosed text for 9.30.3 and 9.33.5 (new subclauses 11mc 9.31.3, 9.34.5 and 9.34.7) in document 11-14-0784-01. | Revise  Discussion: generally agree with the comment. However moving whole S1G link adaptation to a new subclause creates duplication and potential error.  TGah editor makes the changes indicated in 11-14/1245r1 under CID 3487 |
| 3488 | 9.30.3 | 270 | 7 | since "bidirectional" is one word, "BDT" isn't a clear acronym. 11mc already has a defined acronym "BT"; but that acronym is not used anywhere in 11mc and will be deleted, so there will be no conflict. However, the way "BDT" is used in this text is odd | Change either the definiton of the S1G Capabilities Info field or the instructions here (better: change the related text in document 11-14-0478) to make this subclause and 8.4.2.170j.2 consistent. | Revise  Discussion: The comment gives wrong reference (P270L7 has nothing to do with bidirectional feautre). However, P270L39 seems what the comment try to deal with. TACK, STACK should be refered to TWT  TGah editor makes the changes indicated in 11-14/1245r1 under CID 3488, 3787 |
| 3489 | 9.30.3 | 270 | 9 | This text talks about an "S1G NDP Announcement frame", but no such frame is defined in the 11ah amendment. | Either define the S1G NDP Announcement frame or remove this reference from the 11ah amendment (including subclause 9.33.7 and page 441 line 49). | Reject  Discussion: S1G NDP Announcement is defined in subclause 8.3.1.20 |
| 3490 | 9.30.3 | 270 | 50 | Why does the proposed change for a S1G PPDU not use a S1G-MCS? | If no S1G-MCS is supposed to be used for a S1G PPDU, at least include a note as to why. | Reject  Discussion: VHT-MCS is the field name which is used for both VHT STA and S1G STA. |
| 3491 | 9.30.3 | 270 | 58 | The added text is "in a VHT PPDU and VHT-MCS = 15, NUM\_STS = 3 and MFSI in the range 0 to 6": shouldn't this say "in an S1G PPDU" at the end of this added text? | Replace "range 0 to 6:" with "range 0 to 6 in an S1G PPDU:". | Revise  Discussion: agree with the comment  TGah editor makes the changes indicated in 11-14/1245r1 under CID 3491 |
| 3787 | 9.30.1 | 270 | 29 | CTS can also be used as a +HTC control frame. | Change the text according to the comment. | Revise  Discussion: Generally agree with the comment. For link adaptation in 11ah, there is one requirement to differentiate link adaptation through management frame and control frame.  TGah editor makes the changes indicated in 11-14/1245r1 under CID 3488, 3787 |

**8.4.2.170k.2 S1G Capabilities info field**

***TGah editor: Add 1-bit Link Adaptation per Normal Control Response Capable subfield in Figure 8-575a25 (***CID 3488, 3787***).***

***TGah editor: Change 1-bit VHT Link Adaptation Capable subfield to 2-bit VHT Link Adaptation Capable in Figure 55a25 (CID 3488, 3787).***

***TGah editor: Add the encoding of Link Adaptation per Normal Control Response Capable sibfield in Table 8-258a5 as following (CID 3488, 3787):***

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| Subfield | Definition | Encoding |
| Link Adaptation per Normal Control Response Capable | Indicate whther or not link adaptation through normal control frame is allowed | Set to 0 if not supported.  Set to 1 if supported. |

**9.31.1 Introduction**

***TGah editor: add the following paragraph at the end of subclause 9.31.1 (***CID 3487***):***

Two S1G STAs shall use the link adaptation procedure that is described in subclause 9.31.3 with the following qualifications:

—“VHT” is replaced by “S1G” when referring to characteristics of an S1G STA or when referring to the contents of an S1G PPDU. More specifically:

-“VHT Capabilities Info field in the VHT Capabilities element” is replaced by “S1G Capabilities Info field in the S1G Capabilities element”

-“VHT NDP Announcement frame” is replaced by “S1G NDP Announcement frame”

-“VHT MU PPDU” is replaced by “S1G MU PPDU”

**9.31.3 Link adaptation using the VHT variant HT Control field**

***TGah editor: Remove the following paragraph from 9.31.3*** (CID 3487)***:***

***TGah Editor: Insert new paragraphs after the 2nd paragraph of the subclause as follows***(CID 3488, 3787)***:***

The MFB requester or MFB responder that is an S1G STA shall set the S1G subfield in the VHT variant HT Control field to 1. Otherwise the value of the S1G field shall be reserved.

An S1G STA shall not transmit a +HTC Control frame to another S1G STA that does not support VHT link adaptation.

An S1G STA that sets the +HTC VHT Capable to 1 and supports sending normal control response frames for link adaptation shall set Link Adaptation per Normal Control Response Capable bit in the S1G Capabilities element to 1. Otherwise it shall set it to 0. An S1G STA shall not elicit normal control frame for link adaptation from another S1G STA when the received Link Adaptation per Normal Control Response Capable subfield in the received S1G Capabilities element from the STA has value 0.

An S1G STA that is an MFB requester shall set the TXVECTOR parameter RESPONSE\_INDICATION to NORMAL\_RESPONSE if it intends to elicit link adaptation feedback in the immediate control response frame. Otherwise, it shall not set the TXVECTOR parameter RESPONSE\_INDICATION to Normal Response, unless it is permitted to do so as described in 9.24 (Block acknowledgment (block ack)), 9.3.2.9 (Ack procedure), and 9.42a (Target wake time (TWT)).

An S1G STA that is an MFB responder may transmit a +HTC Control frame as an immediate response to an eliciting frame for which the RXVECTOR parameter RESPONSE\_INDICATION is equal to NORMAL\_RESPONSE. The +HTC Control Response frame shall be one of the following:

—+HTC Ack frame if the eliciting frame requires an Ack frame as a response (see 9.3.2.9 (Ack procedure))

—+HTC BlockAck or +HTC BAT frame if the eliciting frame requires a BlockAck or BAT frame as a response (see 9.24 (Block acknowledgment (block ack)))

—+HTC TACK or +HTC STACK frame if the eliciting frame requires a TACK or STACK frame as a response (see 9.42a.2 (TWT acknowledgement procedure))

—+HTC CTS frame in the eliciting frame requires an CTS frame as a response (see 9.3.2.7 (CTS and DMG CTS procedure))

Otherwise, the S1G STA shall not transmit a +HTC Control response frame.

***TGah Editor: Change the 8th paragraph of the subclause as follows (***CID 3491***):***

The MFB responder may send a solicited response frame with any of the following combinations of VHT-MCS, NUM\_STS, and MFSI:

—VHT-MCS = 15, NUM\_STS = 7 in the MFB subfield, MFSI = 7 in a VHT PPDU and VHT-MCS = 15, NUM\_STS = 3 and MFSI = 7 in an S1G PPDU: no information is provided for the immediately preceding request or for any other pending request. This combination is used when the responder is required to include a VHT variant HT Control field due to other protocols that use this field (e.g., the Reverse Direction Protocol) and when no MFB is available. It has no effect on the status of any pending MRQ.

—VHT-MCS = 15, NUM\_STS = 7 in the MFB subfield, MFSI in the range 0 to 6 in a VHT PPDU and VHT-MCS = 15, NUM\_STS = 3 and MFSI in the range 0 to 6 in an S1G PPDU: the responder is not now providing, and will never provide, feedback for the request that had the MSI value that matches the MFSI value.

—VHT-MCS = valid value, NUM\_STS = valid value in the MFB subfield, MFSI in the range 0 to 6: the responder is providing feedback for the request that had the MSI value that matches the MFSI value.