IEEE P802.11
Wireless LANs

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| LB 205 Comment Resolution for 8.2.5 |
| Date: 2014-11-01 |
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Abstract

This submission proposes resolutions for comments in subclause 8.2.5 of TGah Draft 3.0 with the following CIDs (TOT 10 CIDs):

* 5371 5440, 5441, 5244, 5372, 5373, 5374, 5375, 5442, 5443

Revisions:

- Rev 0: Initial version of the document

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** | **Commenter** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 5371 | Mitsuru Iwaoka | 83.16 | 8.2.5.1 | An S1G STA does not support HCCA. So, the subclause 8.2.5.4 (Setting for frames sent by a TXOP holder under HCCA) is not applied to the S1G STA. | Delete "8.2.5.4 (Setting for frames sent by a TXOP holder under HCCA)" | Revised –Agree with comment. The comma needs to be removed as well.TGah editor to make the changes shown in 11-14/1466r0 under all headings that include CID 5371. |

**Discussion:** *None.*

**8.2.5.1 General**

**TGah Editor: *Change the paragraph below as follows (#5371):***

The value in the Duration field of an NDP Ack, NDP\_2M PS-Poll-Ack, and NDP CTS frames transmitted by an S1G STA is defined in 8.2.5.7 (Setting for control response frames). Setting the value in the Duration field is additionally constrained by the same rules that apply to the value of the Duration/ID field of Ack, and CTS frames as described in 8.2.5.2 (Setting for single and multiple protection under enhanced distributed channel access (EDCA)), 8.2.5.8 (Setting for other response frames).

**Note to TGah Editor: *The heading of 8.2.5.4 (Setting for frames sent by a TXOP holder under HCCA) can also be removed from the draft.***

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| **CID** | **Commenter** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 5440 | David Hunter | 84.01 | 8.2.5.2 | The CRC resolution to CID3446 claimed that "BDT" is a term similar to "BF". But this claim ignores the fact that "beamforming" is a process or procedure while a TXOP is a time interval. This difference shows up in such phrases as "as a response to Short frames which are not part of a BDT". How can a frame be a part of a TXOP? | Replace "not part of a BDT" with "is not transmitted in a BDT". | Revised –Agree in principle with the comment. Proposed resolution is to clarify that it is not part of a BDT exchange.TGah editor to make the changes shown in 11-14/1466r0 under all headings that include CID 5440. |
| 5441 | David Hunter | 84.44 | 8.2.5.2 | How can a frame be part of a time interval? | Replace "as part of a BDT" with "in a BDT". | Revised –Agree in principle with the comment. Proposed resolution is to clarify that it is part of a BDT exchange.TGah editor to make the changes shown in 11-14/1466r0 under all headings that include CID 5441. |

**Discussion:** *None.*

**8.2.5.2 Setting for single and multiple protection under enhanced distributed channel access (EDCA)**

**TGah Editor: *Change item 1) as follows (#5440):***

1) For an RTS frame that is not part of a dual clear-to-send (CTS) exchange and is not part of a BDT exchange, the Duration/ID field is set to the estimated time, in microseconds, required to transmit the pending frame, plus one CTS frame, plus one Ack or BlockAck frame if required, plus any NDPs required, plus explicit feedback if required, plus applicable IFSs.

**TGah Editor: *Change the paragraph below as follows (#5441):***

For a PS-Poll+BDT frame and an RTS frame generated by an S1G STA as part of a BDT exchange, the Duration/ID field value is determined as follows:

—For a PS-Poll+BDT frame, the Duration/ID field is set to the estimated time required for the transmission of one Ack frame, plus the estimated time required for the transmission of its following MPDUs and their responses if required, plus applicable IFS durations.

—For an RTS frame that is sent as a response to the PS-Poll+BDT frame, the Duration/ID field is set to a value D: min (*TEND-NAV +TPENDING – TPPDU; TTXOP-REMAINING - TPPDU) <= D <= TTXOP-REMAINING-TPPDU*.

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| **CID** | **Commenter** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 5244 | Alfred Asterjadhi | 85.02 | 8.2.5.7 | Broken reference 9.49.5.3 (Relay-shared TXOP protection mechanisms). Fix it. | As in comment. | Revised –Agree with the comment. Proposed resolution is to correct the reference.TGah editor to make the changes shown in 11-14/1466r0 under all headings that include CID 5244. |
| 5372 | Mitsuru Iwaoka | 85.02 | 8.2.5.7 | Reference to the subclause (Relay-shared TXOP protection mechanisms) is wrong. It is 9.42h.5.3, not 9.49.5.3. | Correct the reference to "9.42h.5.3" | Revised –Agree with the comment. Proposed resolution is to correct the reference.TGah editor to make the changes shown in 11-14/1466r0 under all headings that include CID 5372. |
| 5373 | Mitsuru Iwaoka | 85.13 | 8.2.5.7 | The subclause 8.2.5.1 (P83L11) and 8.9.1.5.2 (P221L50) specifies that the value of the Duration field of an NDP\_2M PS-Poll-Ack frame is defined in 8.2.5.7 (Setting for control response frames). However, the subclause 8.2.5.7 does not specify the value of the Duration field of the NDP\_2M PS-Poll-Ack frame.Setting of the Duration field of the NDP\_2M PS-Poll-Ack frame is partially specified in 9.3.2.15 (Response Indication procedure). It should be specified in 8.2.5.7. The subclause 9.3.2.15 is referred from 8.2.5.2 (Setting for single and multiple protection under enhanced distributed channel access (EDCA)). but not 8.2.5.7. | Remove the last second paragraph of 9.3.2.15 (P247L60 to L63), and insert a following text at the end of 8.2.5.7 (P85L13):---For an NDP\_2M PS-Poll-Ack frame with the Idle Indication field equal to 0 and the More Data field equal to 1 transmitted in response to an NDP PS-Poll frame, the Duration field is set to the estimated duration of the BU frame that the S1G AP has buffered for the polling STA, plus SIFS, plus the duration of the response from the S1G non-AP STA, if required.For an NDP\_2M PS-Poll-Ack frame with the Idle Indication field equal to 0 and the More Data field equal to 0 transmitted in response to an NDP PS-Poll frame, the Duration field is set to 0. | Revised –Generally agree with the comment. Given that the Duration field setting rules for this frame are described in 9.3.2.15 the proposed resolution removes the occurrence of NDP\_2M PS-Poll-Ack frame from 8.2.5.1 (General), clarifies the missing case of the Duration field setting when More Data field is 0 as suggested by the commenter, and corrects the reference in 8.9.1.5.2 (NDP\_2M PS-Poll-Ack) to point to 9.3.2.15 (Response indication procedure).TGah editor to make the changes shown in 11-14/1466r0 under all headings that include CID 5373. |
| 5374 | Mitsuru Iwaoka | 85.04 | 8.2.5.7 | The setting of the Duration field of the NDP Ack frame is specified in both 9.3.2.15 (P247L54) and 8.2.5.7 (P85L5). The setting of the Duration field of the NDP Ack frame shall be specified in 8.2.5.7 as described in 8.2.5.1 (P83L11) and 8.9.1.4 (P219L55 and P220L33). The subclause 9.3.2.15 is referred from 8.2.5.2 (Setting for single and multiple protection under enhanced distributed channel access (EDCA)). but not 8.2.5.7. | Remove the last third paragraph of 9.3.2.15 (P247L54 to L57), and insert a following text as the last third paragraph of 8.2.5.7 (P85L4):---For an NDP Ack frame with the Idle Indication field equal to 0 and the More Data field equal to 1 transmitted in response to an PS-Poll frame, the Duration field is set to the estimated duration of the BU frame that the S1G AP has buffered for the polling STA, plus SIFS, plus the duration of the response from the S1G non-AP STA, if required. | Revised –Generally agree with the comment that a reference connecting this subclauses is missing. However, given that the Duration field setting of the NDP Ack frame described in 9.3.2.1.5 is an exception of the default settings that are described in 8.2.5.7 the proposed resolution is to state this exception in 8.2.5.7.TGah editor to make the changes shown in 11-14/1466r0 under all headings that include CID 5374. |

**Discussion:** *None.*

**8.2.5.1 General**

**TGah Editor: *Change the paragraph below as follows (#5373):***

The value in the Duration field of NDP Ack, and NDP CTS frames transmitted by an S1G STA is defined in 8.2.5.7 (Setting for control response frames). Setting the value in the Duration field is additionally constrained by the same rules that apply to the value of the Duration/ID field of Ack, and CTS frames as described in 8.2.5.2 (Setting for single and multiple protection under enhanced distributed channel access (EDCA)), 8.2.5.4 (Setting for frames sent by a TXOP holder under HCCA), 8.2.5.8 (Setting for other response frames).

**8.2.5.7 Setting for control response frames**

**TGah Editor: *Change the paragraph below as follows (#5244, 5372):***

For an NDP CTS frame transmitted in response to an RTS frame, the Duration field is set to the value obtained from the Duration/ID field of the RTS frame that elicited the response minus the time, in microseconds, between the end of the PPDU carrying the RTS frame and the end of the NDP CTS frame except as described in 9.42h.5.3 (Relay-shared TXOP protection mechanisms).

**TGah Editor: *Change the paragraph below as follows (#5374):***

For an NDP Ack frame with the Idle Indication field equal to 0, the Duration field is set to the value obtained from the Duration/ID field of the frame that elicited the response minus the time, in microseconds, between the end of the PPDU carrying the frame that elicited the response and the end of the NDP Ack frame except when the eliciting frame is a PS-Poll frame in which case the Duration field can be set as described in 9.3.2.15 (Response Indication procedure).

**9.3.2.15 Response Indication procedure**

**TGah Editor: *Change the paragraph below as follows (#5373):***

An S1G AP that sends an NDP\_2M PS-Poll-Ack frame with the Idle Indication field equal to 0 and the More Data field equal to 1 as a response to an eliciting NDP PS-Poll frame may set the Duration field of the NDP\_2M PS-Poll-Ack frame to the estimated duration of the BU frame that the S1G AP has buffered for the polling STA, plus SIFS, plus the duration of the response from the S1G non-AP STA, if required. An S1G AP that sends an NDP\_2M PS-Poll-Ack frame with the Idle Indication field equal to 0 and the More Data field equal to 0 as a response to an eliciting NDP PS-Poll frame shall set the Duration field of the NDP\_2M PS-Poll-Ack frame to 0.

**8.9.1.5.2 NDP\_2M PS-Poll-Ack**

**TGah Editor: *Change the two paragraphs below as follows (#5373):***

The Idle Indication field is 1 bit and is set to 0 if the value of the Duration field sets the NAV as described in 9.3.2.15 (Response Indication procedure). Otherwise, it is set to 1 if the value of the Duration field indicates an idle period.

If the Idle Indication field is 0 the Duration field is set as described in 9.3.2.15 (Response Indication procedure), where the value is expressed in units of 1 microsecond.

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| **CID** | **Commenter** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 5375 | Mitsuru Iwaoka | 85.19 | 8.2.5.8 | The subclause 8.2.5.8 specifies that the Duration/ID field of a frame transmitted by a BDT Initiator as a response to Short frames is set to the value of the TXNAV timer minus the estimated time required to transmit the frame.However, if the BDT initiator is a TXOP holder, the Duration/ID field setting shall follow the rule specified in 8.2.5.2 as BDT sequence is protected by an BDT initiating PPDU.If the BDT initiator is not a TXOP holder (i.e. an S1G AP initiated BDT with NDP PS-Poll-Ack frame as a response to an NDP PS-Poll frame transmitted by a non-AP S1G STA that is the TXOP holder), the BDT initiator does not maintain TXNAV timer (Refer to the subclause 9.22.2.7 of P802.11mc D3.0 / P1314L6). So, it is not possible to calculate a value of the Duration/ID field. | Modify the subclause 8.2.5.8 as follows:---For any frame that includes a Duration/ID field transmitted by an S1G STA that is not a TXOP holder as a response to PV1 frames, the Duration/ID field of the frame is set to 0. | Revised –Proposed resolution is to clarify that the rule applies to the BDT initiator that is the TXOP holder (which knows the value of the TXNAV timer).TGah editor to make the changes shown in 11-14/1466r0 under all headings that include CID 5375. |
| 5442 | David Hunter | 85.20 | 8.2.5.8 | How can a frame be part of a time interval? | Replace "which are not part of a BDT" with "that are not transmitted in a BDT" (note also the correction of the which/that problem). | Revised –Agree in principle with the comment. Proposed resolution clarifies that it is part of a BDT exchange.TGah editor to make the changes shown in 11-14/1466r0 under all headings that include CID 5442. |
| 5443 | David Hunter | 85.21 | 8.2.5.8 | "BDT Initiator" is not the name of a defined frame, field, etc., so "Initiator" does not need the initial cap. | Replace "Initiator" with "initiator". | Revised –Agree with the comment. TGah editor to make the changes shown in 11-14/1466r0 under all headings that include CID 5443. |

**Discussion:** *None.*

**8.2.5.8 Setting for other response frames**

**TGah Editor: *Change the paragraph below as follows (#5375, 5442, 5443):***

For any frame that includes a Duration/ID field, transmitted by an S1G STA as a response to Short frames that are not part of a BDT exchange, the Duration/ID field of the frame is set to 0. For any frame transmitted by a BDT initiator that is the TXOP holder as a response to Short frames, the Duration/ID field of the frame is set to the value of the TXNAV timer minus the estimated time required to transmit the frame.