IEEE P802.11  
Wireless LANs

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| LB 203 Comment Resolution for  10.1.4.3.4a, 8.4.2.170q, 9.49.6 | | | | |
| Date: 2014-09-03 | | | | |
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Abstract

This submission proposes resolutions for comments in clauses 10.1.4.3.4a, 8.4.2.170q, 9.49.6 of TGah Draft 2.0 with the following CIDs (TOT 6 CIDs):

* 3172, 3272, 3732, 3844, 3845, 3954

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.***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 3172 | 319.36 | 10.1.4.3.4a | This subclause contains some grammatical errors and the references need to be updated. | Fix grammatical errors (in general describe the behavior of a single STA not multiple STAs) and fix the references including the heading of the reference. | Revised  TGah editor to make the changes shown in 11-14/1197r1 under all headings that include CID 3172. |
| 3272 | 158.30 | 8.4.2.170q | the figure has too many fields, please make it heirarchical for better readablity. For example, group the UL/DL fields into one field, respectively. | As in comment | Revised  TGah editor to make the changes shown in 11-14/1197r1 under all headings that include CID 3732. |
| 3732 | 159.62 | 8.4.2.170q | I can't find "Relay Station Indication field". Where is it? | Claify it. | Revised  Replace “Relay Station Indication field” with “Relay Discovery Info field.  TGah editor to make the changes shown in 11-14/1197r1 under all headings that include CID 3732. |
| 3844 | 310.19 | 9.49.6 | Direct link is used in 802.11 with other meaning. The usage here creates confusion. | Change the name or delete the sentence. | Revised-  TGah editor to make the changes shown in 11-14/1197r1 under all headings that include CID 3844. |
| 3954 | 310.71 | 9.49.6 | The subclause 9.46.9 specifies the Relay discovery procedure which is used from SME. The contents of 9.46.9 shall be placed under clause 10 (MLME). | Insert a new subclause 10.50 (Relay operation) and move the contents of subclause 9.46.9 to a new subclause 10.50.2 Relay discovery procedure.  Also, insert a new subclause 6.3.116 (Relay Activation procedure) which specify the procedure to start or terminate a Relay function (i.e. Relay Activation Request / Response frame exchange). | Revised-  It is not necessary to add these parts in clause 10 because the MLME signaling is defined anyways. Please refer to comment resolution for CID3952 in 11-14/1117r0. |
| 3845 | 308.28 | 9.49.6 | "When using the explicit ack procedure, the relay-AP (relay-STA) shall signal a Response Indication of Long Response in the NDP Ack frame that is transmitted as an acknowledgement to the non-AP STA (AP)."  This will waste the medium time since once Long Response is received RID will be set to TXOPLimit. | Delete the sentence. | Rejected-  The duration field of NDP ACK has to be set to some value. One represents “No response”, and the other represents “Long response”.  Since the relaying frame transmission in TXOP sharing will set the RESPONSE INDICATION to NDP frame, this ensure that the 3rd party STA that hearing the preceding NDP Ack with Long Response indication may update its RID value to a smaller value, it will not waste the mediun time even though the preceding NDP Ack has Long Response indication. If the third party STAs missed the relaying frame, with the Long Response setting in the preceding NDP ACK, the transmission of the packet to the root AP is still protected by the NDP Ack.  Therefore, setting to Long response indication is a better choice. |

**Discussion:** *None.*

***TGah Editor: Change the paragraph below as follows (#3172):***

**10.1.4.3.4a Active scanning for relay discovery**

An S1G STA~~s~~ that ~~are~~ is performing an active scan to discover ~~an~~ operating APs, or relay-APs may include the Relay Discovery element (see 8.4.2.170q (Relay Discovery element)) in the Probe Request frame. This element provides information on the QoS criteria on the relay path.

The active scanning procedure for relay-AP is similar to the Active scanning procedure outlined in 10.1.4.3.3 (Active scanning).

A relay-AP receiving Probe Request frames may respond with a (Short) Probe Response if the criteria outlined in 10.1.4.3.2 (Active scanning procedure for a non-DMG STA) are met. A relay-AP ~~also~~ may not respond with a (Short) Probe Response if the QoS criteria on the relay path specified in the Relay Discovery element (see 8.4.2.170q (Relay Discovery element)) cannot be satisfied.

A relay-AP sending (Short) Probe Response frames may include the Relay Discovery element (see 8.4.2.170q (Relay Discovery element)) to carry link budget information between the relay-AP and root AP.

An S1G STA may use the information received from different relay-APs to determine a suitable relay-AP for association. The relay-AP selection is made by the S1G STA, and the specific selection procedure is up to the implementation.

**8.4.2.170q Relay Discovery element**

The Relay Discovery element is shown in Figure 8-401av (Relay Discovery element format).

***TGah Editor: Replace figure 8-401av with the figure as follows (#3272):***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Element ID | Length | Relay Discovery Info | UL/DL  Data Rate | Delay Bound Requirement/Channel Utilization | Min PHY Rate Requirement/ Relay Station count |

Octet: 1 1 1 6 0 or 1 0 or 1

Figure 8-401av- Relay Discovery element format

***TGah Editor: Add figure 8-401ava with the figure as follows (#3272):***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| UL Min  Data Rate | UL Mean  Data Rate | UL Max  Data Rate | DL Min  Data Rate | DL Mean  Data Rate | DL Max  Data Rate |

Octet: 1 1 1 1 1 1

Figure 8-401ava- UL/DL Date Rate field format

***TGah Editor: Change the text on page 159 Line 62 as follows (#3732):***

The Relay Station Indication field in Figure 8-401aw (Relay Discovery Info field format) is set to 1 if the Relay Discovery Info ~~Station Indication~~ field is included in a Relay Discovery element transmitted by a Relay. Otherwise, the Relay Station Indication field is set to 0.

**9.49.6 Relay discovery procedure**

***TGah Editor: Change the text on page 159 Line 62 as follows (#3844):***

A single hop ~~direct~~ link is an one-hop link between a non-AP STA and the root AP.

A relay link is a two-hop link between a non-AP STA performing an active scan for relays, and the root AP through the Relay.

A non-AP STA that performs active scanning may use the Probe Request frame with a Relay Discovery element when relay discovery procedure is implemented. A non-AP STA with dot11RelayDiscoveryOptionImplemented equal to true may transmit a Probe Request frame including a Relay Discovery element with link budget information for the single hop ~~direct~~ link and additional QoS requirements for the relay link. This information shall be conveyed using the Relay Discovery element as defined in subclause 8.4.2.170q (Relay Discovery element) if present. The formulas for calculating link budget and QoS requirements are implementation specific.