IEEE P802.11  
Wireless LANs

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| LB 200 cluase 8.3.5.1.2 comment resolution | | | | |
| Date: 2014-xx-xx | | | | |
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Abstract

This submission proposes comment resolutions of the clause 8.3.5.1.2 from TGah Draft 1.0.

* CIDs: 1077, 1344, 1374, 1701, 2054, 2159, 2292, 2723, 2806, 2813, 2863, 2883, 2884, 2983.

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** |
| 1077 | 54.04 | 8.3.5.1.2 | "TBD". A requirement for entry to WG ballot is "no unavoidable TBDs". This is an unavoidable TBD. | Supply Values for any TBDs in the draft. | Revised –  Agree with the commenter in principle.    TGah editor to make changes shown in 14/0247r1 under the heading for CID 1077 to 2983. |
| 1344 | 54.06 | 8.3.5 | P54L6 and P54L37. It seems the defnition of UDI is missing (UL Data Indicator?) | Add the definition of UDI | Revised – Agree with the commenter in principle.  TGah editor to make changes shown in 14/0247r1 under the heading for CID 1077 to 2983. |
| 1374 | 53.40 | 8.3.5.1.2 | UDI field is included in NDP PS-Polls (1MHz and >=2MHz) which seems not to be bery well defined and there is no protocol behavior description based on this indication. Also when it is set to 0 and 1 it is the same signaling as the already existing More Data field. In addition, there are a couple of TBDs in the NDP PS-Poll (1MHz). Also NDP PS-Polls do not have a signaling provided by PS-Polls (i.e., indicate Poll type) which is useful to indicate the AP the type of information the STA requests. | Replace "UDI" field in Table 8-44 and Table 8-45 with "More Data". Replace existing text in the Description column of the UDI field in both Tables 8-44 and Table 8-45 with the following text: "The More Data field is described in 8.2.4.1.8 (More Data field)." And add the following sentence at the end of the paragraph added after the 6th paragraph of subclause 8.2.4.1.8: " An S1G STA sets the More Data field of an NDP PS-Poll (>=2MHz) to a value greater than 1, to indicate the duration of the data buffered for transmission to the frame's recipient during the current SP or TXOP (in multiples of 8us). Define the TBDs. | Revised – Agree with the commenter in a way that UDI subfield is not clearly defined. However, as “More Data field described in 8.2.4.1.8 (More Data field) is defined as a 1 bit indicator, it may not be appropriate to apply this for 2MHz frame case where it represents the duration of the uplink transmission. Therefore, clearer definition on UDI subfield will be a better resolution.  The comment is resolved by the resolution for CID 1344. |
| 1701 | 53.43 | 8.3.5.1.2 | Many nouns need articles. | Replace "NDP MAC frame body of NDP PS-Poll frame" with "The NDP MAC frame body of the NDP PS-Poll frame", on line 46 replace "of NDP" with "of the NDP" and on lines 59 and 61 replace "PARTIAL\_AID addressed to AP" with "The partial AID addressed to the AP," and replace "PARTIAL\_AID" with "The partial AID", respectively. | Revised – Part of comments are already resolved by comment resolution shown in 14/0210r1.  And, comments on lines 59 and 61 are reasonable and proposed resolution is to modify as shown here.  TGah editor to make changes shown in 14/0247r1 under the heading for CID 1077 to 2983. |
| 2054 | 76.04 | 8.3.5.1.2 | There are 42 instances of "TBD" in the draft. This is far too many for a WG letter ballot. | Multiple instances of TBD, beginning with Line 4 on Page 76 | Revised. – The comment is resolved by the resolution for CID 1077. |
| 2159 | 54.10 | 8.3.5.1.2 | TBD value should be set to be "3" because total bitwidth in case of 1MHz mode is 25bits and no more technical proposal exists to use this left 3bits. | Change TBD value to 3. And all these 3bits should be set to be 0. | Revised. – The comment is resolved by the resolution for CID 1077. |
| 2292 | 54.37 | 8.3.5.1.2 | Does the Duration include the IFS and responding frame TX time? | Clarify it. | Revised. – The comment is resolved by the resolution for CID 1344. |
| 2723 | 53.04 | 8.3.5.1.2 | TBD is found | Need to define the TBD | Revised. – The comment is resolved by the resolution for CID 1077. |
| 2806 | 54.04 | 8.3.5.1.2 | Regarding Table 8-44, this draft is not ready for sponsor ballot with "TBD"s. When will the 2B be decided? What decision is awaited? Is this ANA or something else? | as per comment | Revised. – The comment is resolved by the resolution for CID 1077. |
| 2813 | 54.37 | 8.3.5.1.2 | What exactly does duration include - both response frame duration + inter-frame spacing? | Explanation/Clarifitaion needed | Revised. – The comment is resolved by the resolution for CID 1344. |
| 2863 | 54.33 | 8.3.5.1.2 | If a STA does not have any preferred MCS, the preferred MCS field in the NDP PS-Poll frame should be set to a reserved value. | Define a reserved value for indicating no preferred MCS. | Revised. – Agree with the commenter in principle.  The proposed resolution is to add one state in the Preferred MCS subfield that indicates a STA don’t have “Preferred MCS”.  TGah editor to make changes shown in 14/0247r1 under the heading for CID 1077 to 2983. |
| 2883 | 54.35 | 8.3.5.1.2 | "may language" is not appropriate in chapter 8. The sentence "This field may be used in determining MCS level of PPDU for BU delivery." should be delted or moved to an appropriate subclause. | As mentioned in the Comment. | Revised – Agree with the commenter in principle.  TGah editor to make changes shown in 14/0247r1 under the heading for CID 1077 to 2983. |
| 2884 | 54.04 | 8.3.5.1.2 | TBDs in Preferred MCS and Reserved field should be clarified. | As mentioned in the Comment. | Revised. – The comment is resolved by the resolution for CID 1077. |
| 2983 | 54.00 | 8.3.5.1.2 | There are "TBD"s should be filled | please complete the required fields | Revised. – The comment is resolved by the resolution for CID 1077. |

**Discussion:**

***CID 1077 – Agree with the commenter of CID 1077.As there are only upto 3 bits available for Preferred MCS subfield, and there exist 11 MCS levels for 1MHz format, the Preferred MCS subfield cannot indicate each available MCS level directly. Considering parsing complexity and memory requirement, it is beneficial to simply map 11 MCS levels into 7 steps. (One state is used for indicating the case that the STA doesn’t have preferred MCS information.) As Preferred MCS subfield utilizes 3 bits, there’s no bit left for Reserved subfield.***

***CID 1344 – Agree with the commenter of CID 1344. Definition on UDI field is explained in the text as*** “***The Uplink Data Indicator (UDI) subfield indicates if the STA has uplink data to transmit.”. Also, for ≥2MHz frame case, duration information on UDI subfield is further clarified as “Estimated time required for the transmission of uplink data frames in unit of TU excluding its reponse and applicable IFS durations.”. Moreover under current definition, the UDI value can cover UL data duration over 4 seconds with resolution of around 25 OFDM symbols, which is unnecessarily long with poor resolution. Therefore, to have clearer indication, the proposed resolution is to use 40 usec for the unit of UDI (≥2MHz) subfield. And, in case a STA has UL data to transmit, its duration shall be greater than single OFDM symbol as it shall include PLCP header. Therefore for UDI=1 will not be used in ≥2MHz frame case.So, the proposed resolution is to use UDI=1 to indicate that the duration is not determined.***

***CID 2863 – Agree with the commenter of CID 2863. It is possible that a STA that wakes up from long sleep state does not have chance to measure Short Beacon frame and thus does not have preferred MCS level information. To account for this situation, the proposed resolution is to have one state that represents “No Preference” in both 1MHz and ≥2MHz frame formats.***

* **NDP PS-Poll**

**Instructions to TGah Editor*: Change this subclause as follows (This resolution considers 14/0210r0 as a baseline document for subclause 8.3.5.1.2):***

The format of the NDP MAC frame body field of the S1G\_1M NDP PS-Poll ~~(1 MHz)~~ frame is illustrated in Figure 8-8b1 (NDP MAC frame body field of the S1G\_1M NDP PS-Poll ~~(1 MHz)~~ frame) and it contains the information listed in .

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | B0      B2 | B3 B11 | B12     B20 | B21 B23 | B24 |
|  | NDP MAC Frame Type | RA | TA | Preferred MCS | UDI |
| Bits: | 3 | 9 | 9 | 3 | 1 |

|  |  |  |
| --- | --- | --- |
| * **NDP MAC frame body of S1G\_1M NDP PS-Poll frame ~~(1 MHz)~~** | | |
| **Field** | **Size (bits)** | **Description** |
| NDP MAC  Frame Type | 3 | The NDP MAC Frame Type field is set to 1 |
| RA | 9 | The ~~PARTIAL\_AID~~ partial AID of the STA contained in the AP ~~addressed to AP~~ as described in 9.17b |
| TA | 9 | The ~~PARTIAL\_AID~~ partial AID of the STA transmitting the frame ~~addressed to a STA~~ as described in 9.17b |
| Preferred MCS | ~~TBD~~ 3 | ~~TBD~~ The Preferred MCS field indicates the preferred MCS level for an 1MHz chanel width of the STA for downlink transmission. Mapping between Preferred MCS value and corresponding MCS index is shown in Table 8-44a. |
| UDI | 1 | The Uplink Data Indicator (UDI) subfield indicates if the STA has uplink data to transmit.  Set to 0: ~~n~~No uplink data  Set to 1: ~~u~~Uplink data present |
| ~~Reserved~~ | ~~TBD~~ |  |

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| --- | --- | --- |
| **Table 8-44a – Preferred MCS subfield values for S1G\_1M NDP PS-POLL frame** | | |
| **Preferred**  **MCS value** | **MCS Index** | **Description** |
| 0 | 0 | BPSK 1/2 |
| 1 | 1 or 2 | QPSK 1/2 or QPSK 3/4 |
| 2 | 3 or 4 | 16-QAM 1/2 or 16-QAM 3/4 |
| 3 | 5 or 6 | 64-QAM 2/3 or 64-QAM 3/4 |
| 4 | 7 or 8 | 64-QAM 5/6 or 256-QAM 3/4 |
| 5 | 9 | 64-QAM 5/6 |
| 6 | 10 | BPSK 1/4 |
| 7 | No Preference |  |

The format of the NDP MAC frame body field of the S1G\_SHORT NDP PS-Poll ~~(≥ 2 MHz)~~ frame is illustrated in Figure 8-8b2 (NDP MAC frame body field of the S1G\_SHORT NDP PS-Poll ~~(≥2 MHz)~~ frame) and it contains the information listed in .

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | B0      B2 | B3 B11 | B12      B20 | B21 B24 | B25 B36 |
|  | NDP MAC Frame Type | RA | TA | Preferred MCS | UDI |
| Bits: | 3 | 9 | 9 | 4 | 12 |
| **Figure 8-8b2 - NDP MAC frame body field of the S1G\_SHORT NDP PS-Poll ~~(≥ 2 MHz)~~ frame** | | | | | |

|  |  |  |
| --- | --- | --- |
| * **NDP MAC frame body of S1G\_SHORT NDP PS-Poll frame ~~(≥2 MHz)~~** | | |
| **Field** | **Size (bits)** | **Description** |
| NDP MAC Frame Type | 3 | The NDP MAC Frame Type field is set to 1 |
| RA | 9 | The PARTIAL\_AID of the address of the STA contained in the AP ~~addressed to AP~~ as described in 9.17b |
| TA | 9 | The PARTIAL\_AID of the address of the STA transmitting the frame ~~addressed to a STA~~ as described in 9.17b |
| Preferred MCS | 4 | The Preferred MCS field indicates the preferred MCS level for a 2MHz channel width of the STA for downlink transmission.~~, and its value represents MCS index.~~ Mapping between Preferred MCS value and corresponding MCS index is shown in Table 8-44b.  ~~This field may be used in determining MCS level of PPDU for BU delivery.(#899)~~ |
| UDI | 12 | The Uplink Data Indicator (UDI) subfield indicates if the STA has uplink data to transmit.  Set to 0: No uplink data  Set to 1: Uplink data present but estimated time for the transmission not determined.  Set to ~~Non-zero~~>1: Uplink data present and the estimated time required for the transmission of uplink data frames ~~Duration of uplink data~~ in unit of ~~TU~~ 40 usec excluding its reponse and applicable IFS durations. |

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| **Table 8-44b – Preferred MCS subfield values for S1G\_SHORT NDP PS-POLL frame** | | |
| **Preferred**  **MCS value** | **MCS Index** | **Description** |
| 0 - 9 | 0 - 9 | The value represents MCS index for the STA’s preferred MCS level. |
| 10 | No Preference |  |
| 11-15 | Reserved |  |

**10.2.1 Power management in an infrastructure network**

**10.2.1.1 General**

**Instructions to TGah Editor:** *Insert the following texts after the 6th paragraph of subcaluse 10.2.1.1 as follows****:***

If an S1G AP with dot11NDPPSPollSupport field equal to true has a buffered BU for a STA associated with the AP and receives a NDP PS-Poll frame from the STA, it should send the buffered BU with the MCS level that is calculated based on the value indicated in the Preferred MCS subfield in the received NDP PS-Poll frame unless the indicated MCS level violates rate selection rule for data frames (as defined in 9.7.5) .