IEEE P802.11  
Wireless LANs

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| LB 203 Clause 3 comment resolution | | | | |
| Date: 2014-08-04 | | | | |
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Abstract

This submission proposes comment resolutions of MAC comments from TGah Draft 2.0.

* CIDs: 3882, 4201, 4137, 4136, 4007, 3428, 3878, 3879, 3880, 3881, ~~3122~~, 3124, 3913, 3874, 3884, 4202, 3885, 3991, 3992, 3993, 4004, 4102, 3883, 3687, 3686, 3429 (24 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 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** | **Commenter** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| --- | --- | --- | --- | --- | --- | --- |
| 3882 | Matthew Fischer | 3.00 | 3.2 | several items are listed followed by a qualifier - it is not clear if the qualifier applies to all items in the list or only the last one | Change "A 2 MHz S1G non-duplicate PPDU, S1G 1 MHz duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW2)" to "A 2 MHz S1G non-duplicate PPDU or an S1G 1 MHz duplicate PPDU, with (TXVECTOR parameter CH\_BANDWIDTH equal to CBW2)" - also make similar changes to the language in the 4MHz MASK PPDU, 8 MHz MASK PPDU and 16 MHz MASK PPDU definitions. | Revised-  Agree in principle.  But, as an alternative, the proposed wording is to remove the "PPDU" in the sentence as in the same style of 802.11ac.  TGah editor to make changes shown in 11-14/1012r1 under the heading for CID 3882. |
| 4201 | Vinko Erceg | 3.00 | 3.2 | several items are listed followed by a qualifier - it is not clear if the qualifier applies to all items in the list or only the last one | Change "A 2 MHz S1G non-duplicate PPDU, S1G 1 MHz duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW2)" to "A 2 MHz S1G non-duplicate PPDU or an S1G 1 MHz duplicate PPDU, with (TXVECTOR parameter CH\_BANDWIDTH equal to CBW2)" - also make similar changes to the language in the 4MHz MASK PPDU, 8 MHz MASK PPDU and 16 MHz MASK PPDU definitions. | Revised-  Agree in principle.  It is a duplicated CID with CID 3882.  TGah editor to make changes shown in 11-14/1012r1 under the heading for CID 3882. |
| 4137 | Tom Kolze | 3.00 | 3.2 | several items are listed followed by a qualifier - it is not clear if the qualifier applies to all items in the list or only the last one | IS: "A 2 MHz S1G non-duplicate PPDU, S1G 1 MHz duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW2)". SHOULD BE: "A 2 MHz S1G non-duplicate PPDU or an S1G 1 MHz duplicate PPDU, with (TXVECTOR parameter CH\_BANDWIDTH equal to CBW2)". | Revised-  Agree in principle.  It is a duplicated CID with CID 3882.  TGah editor to make changes shown in 11-14/1012r1 under the heading for CID 3882. |
| 4136 | Tom Kolze | 3.00 | 3.2 | wrong word | change "whereby" to "wherein" | Revised-  Agree in principle.  But, CID 3426 addressed this CID by changing “whereby” to “in which”.  TGah Editor:  TGah editor to make changes shown in 11-14/906r2 under the heading for CID 3426.  (No change is needed). |
| 4007 | Richard Roy | 3.00 | 3.2 | Text reads: "1 MHz physical layer protocol data unit (PPDU): A Clause 24 1 MHz sub 1 GHz (S1G) PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW1).1 MHz mask physical layer protocol data unit (PPDU): A PPDU that is transmitted using the 1 MHz transmit spectral mask defined in Clause 24 and that is a 1 MHz S1G PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW1)." These are very odd terms, and it is not clear what the difference is sincePPDUs are not transmitted using "transmit spectral masks". They are transmitted by transmitters and the resulting waveforms either meet the spectral mask limits or they don't. | Here and in the other similar definitions for 2MHz, 4MHz, 8 Mhz and 16MHz PPDUs, either eliminate one of the definitions, or change the second so that the difference between the two becomes easily discernible. | Rejected-  1 MHz PPDU is a PPDU with TXVECTOR parameter CH\_BANDWIDTH equal to CBW1.  1 MHz mask PPDU is a 1 MHz PPDU that is transmitted using the 1 MHz transmit spectral mask.  The difference between two terminologies is clear.  Also, two terminologies are not unique for 11ah.  11n and 11ac are also defining two terminologies with the same wording. |
| 3878 | Matthew Fischer | 3.00 | 3.2 | definition is incomplete | to the end of the definition of VHT single MPDU add the following text: "and for which the response, if required, is an ACK, not a BA." | Revised-  Agree in principle.  But, in the case of 11ah, a NDP ACK can be used as a response of the VHT single MPDU.  TGah editor to make changes shown in 11-14/1012r1 under the heading for CID 3878. |
| 3879 | Matthew Fischer | 3.00 | 3.2 | wrong word | change "whereby" to "wherein" | Revised-  Agree in principle.  But, CID 3426 addressed this CID by changing “whereby” to “in which”.  TGah Editor:  TGah editor to make changes shown in 11-14/906r2 under the heading for CID 3426.  (No change is needed). |
| 3880 | Matthew Fischer | 3.00 | 3.2 | wrong article | change "The Sub 1 GHz (S1G) non-access" to "A Sub 1 GHz (S1G) non-access" - change "that entered" to "that has entered" | Revised-  Agree in principle.  TGah editor to make changes shown in 11-14/1012r1 under the heading for CID 3880. |
| 3881 | Matthew Fischer | 3.00 | 3.2 | wrong grammatical number category | change "Beacon frame" to "Beacon frames" | Accepted-  Agree in principle. |
| ~~3122~~ | ~~Alfred Asterjadhi~~ | ~~3.00~~ | ~~3.2~~ | ~~The "VHT single MPDU" is now carried not only in a VHT PPDU but also in an S1G PPDU which makes the use of this terminology very confusing. Also sort the inserted definitions in alphabetical order.~~ | ~~Replace the definition "very high throughput (VHT) single medium access control (MAC) protocol data unit (VHT single MPDU)" with "single medium access control (MAC) protocol data unit (S-MPDU)". Replace "VHT single MPDU" with "S-MPDU" throughout the draft. Also arrange subclause 3.2 so that the inserted definitions in subclause 3.2 are in alphabetical order.~~ | ~~Rejected-~~  ~~The proposed change is also effected to the base draft such 802.11 REVmc.~~  ~~Before making a decision, I recommend to discuss this topic in the REVmc by submitting the comment in the REVmc LB.~~ |
| 3124 | Alfred Asterjadhi | 4.00 | 3.2 | Definition of primary 1 MHz channel is missing. | Insert the following defintion in P4L57: "primary 1 MHz channel: In a 2 MHz, 4 MHz, 8 MHz, 16 MHz sub 1 GHz basic service set (BSS), the 1 MHz channel that is used to transmit 1 MHz PPDUs." | Accepted-  Agree in principle. |
| 3913 | Mitsuru Iwaoka | 4.00 | 3.2 | A term "primary 1 MHz" is used in 7.3.5.12, 9.21.2.9a, 10.47, and 24.2, but is not defined in 3.2. | Insert a following text to 3.2;---primary 1 MHz channel: In a 2 MHz, 4 MHz, 8 MHz, 16 MHz sub 1 GHz basic service set (BSS), the 1 MHz channel that is used to transmit 1 MHz PPDUs. | Revised-  Agree in principle.  It is a duplicated CID with CID 3124.  TGah editor to make changes shown in 11-14/1012r1 under the heading for CID 3124. |
| 3874 | Mark Hamilton | 5.00 | 3.2 | I can find no expansion of the acronym "NDP", and I continue to find its use, in juxtaposition with the existing "NDP" (null data packet) very confusing. This is espeically the case when there's an S1G (a synonym for NDP?) NDP Sounding frame. | Please choose a different acronym. Or, at least spell it out and provide some understanding if how this is related to null data packet (if it is). | Revised-  Agree in principle.  But, CID 3125 addressed this CID by expanding “NDP” to “null data packet”.  TGah Editor:  TGah editor to make changes shown in 11-14/906r2 under the heading for CID 3125.  (No change is needed.) |
| 3884 | Matthew Fischer | 5.00 | 3.2 | missing a couple of words | change "with the Protocol Version field" to "with the value of the Protocol Version field" | Revised-  Agree in principle.  TGah editor to make changes shown in 11-14/1012r1 under the heading for CID 3880. |
| 4202 | Vinko Erceg | 5.00 | 3.2 | confusing wording - the definition of secondary 1 MHz chanel begins with a single item and then has the phrase "that together form" - together with what? Only one thing has been identified at this point in the definition. Similar problem in similar definitions of secondary channels. | not certain how to fix this | Rejected-  “secondary 1 MHz channel: In a 2 MHz sub 1 GHz (S1G) basic service set (BSS), the 1 MHz channel adjacent to the primary 1 MHz channel that together form the 2 MHz channel of the 2 MHz S1G BSS”  The primary 1 MHz channel and secondary 1 MHz channel together form the 2 MHz channel of the 2 MHz S1G BSS.  Same wording is used in 802.11ac. Please refer the below example defined in 802.11ac.  “secondary 20 MHz channel: In a 40 MHz very high throughput (VHT) basic service set (BSS), the 20 MHz channel adjacent to the primary 20 MHz channel that together form the 40 MHz channel of the 40 MHz VHT BSS.”  If you still think that this is a confusing wording, please change the definition of REVmc. Then, the TGah will also follow the updated definition. |
| 3885 | Matthew Fischer | 5.00 | 3.2 | better wording possible | change "contend for the medium access" to "contend for access to the medium" | Accepted-  Agree in principle. |
| 3991 | Osama Aboulmagd | 5.00 | 3.2 | Clause 3 is missing a definition for a Relay (both Relay-Ap and Relay-STA) | add a definition for a relay | Rejected-  Relay is not a new entity.  As described in 4.3.13a.2 (Relay), a relay AP is an AP with additional functionalities for the relaying of frames. And, a relay STA is a non-AP STA with additional functionalities for the relaying of frames.  The relay introduction in general description is enough. |
| 3992 | Osama Aboulmagd | 5.00 | 3.2 | clause 3 is missing a definition for SIG\_SHORT PPDU | add a definition for S1G\_SHORT PPDU | Revised-  Agree in principle.  TGah editor to make changes shown in 11-14/1012r1 under the heading for CID 3992. |
| 3993 | Osama Aboulmagd | 5.00 | 3.2 | Clause 3 is missing a definition og S1G\_LONG PPDU | add a definition got S1G\_LONG PPDU | Revised-  Agree in principle.  TGah editor to make changes shown in 11-14/1012r1 under the heading for CID 3993. |
| 4004 | Qi Wang | 5.00 | 3.2 | The definition of secondary 1 MHz chanel begins with a single item and then has the phrase "that together form" - together with what? Only one thing has been identified at this point in the definition. Similar problem in similar definitions of secondary channels. | Please clarify and modify the text accordingly. | Rejected-  “secondary 1 MHz channel: In a 2 MHz sub 1 GHz (S1G) basic service set (BSS), the 1 MHz channel adjacent to the primary 1 MHz channel that together form the 2 MHz channel of the 2 MHz S1G BSS”  The primary 1 MHz channel and secondary 1 MHz channel together form the 2 MHz channel of the 2 MHz S1G BSS.  Same wording is used in 802.11ac. Please refer the below example defined in 802.11ac.  “secondary 20 MHz channel: In a 40 MHz very high throughput (VHT) basic service set (BSS), the 20 MHz channel adjacent to the primary 20 MHz channel that together form the 40 MHz channel of the 40 MHz VHT BSS.”  If you still think that this is a confusing wording, please change the definition of REVmc. Then, the TGah will also follow the updated definition. |
| 4102 | Shusaku Shimada | 5.00 | 3.2 | Append the difinition of "sub-channel" and/or "sub channel" and/or "subchannel". | Unify the "sub-channel" and the "sub channel" and "subchannel" as a "sub channel" and difine as, "A sub channel is a part of the operating channel in which beacons are transmitted or a unit channel in which SST(selective sub channel transmission) STAs may transmit." | Revised-  I agree in principle. But, a terminology of a subchannel has being widely used in the REVmc D3.0.  TGah Editor:  Replace “sub-channel” with “subchannel” throughout the draft. |
| 3883 | Matthew Fischer | 5.00 | 3.2 | confusing wording - the definition of secondary 1 MHz chanel begins with a single item and then has the phrase "that together form" - together with what? Only one thing has been identified at this point in the definition. Similar problem in similar definitions of secondary channels. | not certain how to fix this | Rejected-  “secondary 1 MHz channel: In a 2 MHz sub 1 GHz (S1G) basic service set (BSS), the 1 MHz channel adjacent to the primary 1 MHz channel that together form the 2 MHz channel of the 2 MHz S1G BSS”  The primary 1 MHz channel and secondary 1 MHz channel together form the 2 MHz channel of the 2 MHz S1G BSS.  Same wording is used in 802.11ac. Please refer the below example defined in 802.11ac.  “secondary 20 MHz channel: In a 40 MHz very high throughput (VHT) basic service set (BSS), the 20 MHz channel adjacent to the primary 20 MHz channel that together form the 40 MHz channel of the 40 MHz VHT BSS.”  If you still think that this is a confusing wording, please change the definition of REVmc. Then, the TGah will also follow the updated definition. |
| 3687 | Liwen Chu | 6.00 | 3.3 | S1G\_SHORT format is not just 2MHz wide | change to "NDP MAC frame that is transmitted using the 2MHz S1G\_SHORT format | Rejected-  NDP MAC frame can be transmitted in greater than or equal to 2MHz channel bandwidth. |
| 3686 | Liwen Chu | 6.00 | 3.2 | TWT STA is not good name. | Change TWT STA to TWT initiator (initiating STA) and TWT peer STA to TWT responder (responding STA). Both TWT initiator and responder are TWT peer STAs. The changes should be executed in whole draft. | Rejected-  Please refer a sub-clause 9.42a (Target wake time).  Definitions of TWT STA and TWT peer STA are very clear.  Because clause 3 just follows the description of clauses 8, 9 and 10. If you want to change the name of the TWT STA, please submit the comment for 9.42a.  At this moment, I haven’t find any technical reason the name change of the TWT STA is needed. |
| 3429 | David Hunter | 6.00 | 3.3 | "bi directional": why create another new term, when a standard English term will do? See the official English dictionary for IEEE standards (Webster's Collegiate 11th Ed). | Replace "bi directional" and "bi-directional" with "bidirectional" throughout the draft: here and page.lines: 7.63, 9.42, 10.34, 10.36, 149.7, 231.10, 285.54, 285.59, 286.7, 287.21 and 501.46. | Accepted-  Agree in principle. |

**Propose:**

Revised for CID 3882, 3878, 3880, 3884, 3992, 3993, per discussion and editing instructions in 11-14/1012r1.

***TGah editor: Chage this subclause (3.2) as follows:*** *(CID 3882)*

2 MHz mask physical layer protocol data unit (PPDU): A PPDU that is transmitted using the 2 MHz transmit spectral mask defined in Clause 24 and that is one of the following:

1) A 1 MHz S1G non-duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW1)  
2) A 2 MHz S1G non-duplicate ~~PPDU,~~ or S1G 1 MHz duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW2)

**4 MHz mask physical layer protocol data unit (PPDU)**: A PPDU that is transmitted using the 4 MHz transmit spectral mask defined in Clause 24 and that is one of the following:

1) A 1 MHz S1G non-duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW1)

2) A 2 MHz S1G non-duplicate ~~PPDU,~~ or S1G 1 MHz duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW2)

3) A 4 MHz S1G non-duplicate ~~PPDU~~, S1G 1 MHz duplicate ~~PPDU~~, or S1G 2 MHz duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW4)

**8 MHz mask physical layer protocol data unit (PPDU)**: A PPDU that is transmitted using the 8 MHz transmit spectral mask defined in Clause 24 and that is one of the following:

1) A 1 MHz S1G non-duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW1)

2) A 2 MHz S1G non-duplicate ~~PPDU,~~ or S1G 1 MHz duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW2)

3) A 4 MHz S1G non-duplicate ~~PPDU~~, S1G 1 MHz duplicate ~~PPDU~~, or S1G 2 MHz duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW4)

4) An 8 MHz S1G non-duplicate ~~PPDU~~, S1G 1 MHz duplicate ~~PPDU~~, or S1G 2 MHz duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW8)

**16 MHz mask physical layer protocol data unit (PPDU)**: A PPDU that is transmitted using the 16 MHz transmit spectral mask defined in Clause 24 and that is one of the following:

1) A 1 MHz S1G non-duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW1)

2) A 2 MHz S1G non-duplicate ~~PPDU,~~ or S1G 1 MHz duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW2)

3) A 4 MHz S1G non-duplicate ~~PPDU~~, S1G 1 MHz duplicate ~~PPDU~~, or S1G 2 MHz duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW4)

4) An 8 MHz S1G non-duplicate ~~PPDU~~, S1G 1 MHz duplicate ~~PPDU~~, or S1G 2 MHz duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW8)

5) An 16 MHz S1G non-duplicate ~~PPDU~~, S1G 1 MHz duplicate ~~PPDU~~, or S1G 2 MHz duplicate PPDU (TXVECTOR parameter CH\_BANDWIDTH equal to CBW16)

***TGah editor: Chage this subclause (3.2) as follows:*** *(CID 3878)*

very high throughput (VHT) single medium access control (MAC) protocol data unit (VHT single MPDU): An MPDU that is the only MPDU in an aggregate MPDU (A-MPDU) carried in a VHT or sub 1 GHz (S1G)(#3423) physical layer (PHY) protocol data unit (PPDU) and that is carried in an A-MPDU subframe with the EOF subfield of the MPDU delimiter field equal to 1 and for which the response, if required, is an (NDP) Ack, not a (NDP) Block Ack.

***TGah editor: Chage this subclause (3.2) as follows:*** *(CID 3880)*

non-traffic indication map (non-TIM) mode: A ~~The~~ sub 1 GHz (S1G) non-access point (non-AP) station (STA) power save mode in which(#3426) an S1G non-AP STA need not listen for traffic indication map (TIM) Beacon frame.

non-traffic indication map (non-TIM) station (STA): A ~~The~~ sub(#3427) 1 GHz (S1G) non-access point (non-AP) station (STA) that has entered the non-TIM mode.

***TGah editor: Chage this subclause (3.2) as follows:*** *(CID 3884)*

**protocol version 0 (PV0) MPDU**: An MPDU with the value of the Protocol Version field of the Frame Control field of the MPDU header equal to 0.

**protocol version 1 (PV1) MPDU**: An MPDU with the value of the Protocol Version field of the Frame Control field of the MPDU header equal to 1.

***TGah editor: Insert the below two definitions to subclause (3.2) as follows:*** *(CID 3992, 3993)*

*(maintaining alphabetical order):*

**sub 1 GHz 1M (S1G\_1M)**: 1 MHz PPDU or 1 MHz Duplicated PPDU.

**sub 1 GHz short (S1G\_SHORT)**: 2 MHz, 4 MHz, 8 MHz or 16 MHz PPDU with short preamble format.

**sub 1 GHz long (S1G\_LONG)**: 2 MHz, 4 MHz, 8 MHz or 16 MHz PPDU with long preamble format.

***TGah editor: Delete the below two acronyms from subclause (3.3) as follows:*** *(CID 3992, 3993)*

**3.3 Abbreviations and acronyms**

~~S1G\_1M 1 MHz format~~

~~S1G\_SHORT greater than or equal to 2 MHz short format~~

~~S1G\_LONG greater than or equal to 2 MHz long format~~