IEEE P802.11
Wireless LANs

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| LB 207 Clause 3 Definition Comment Resolution |
| Date: 2015-02-21 |
| Author(s): |
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Abstract

This submission proposes resolutions of clause 3 (definition) comments received from TGah Draft 4.0.

* CIDs: 6020, 6021, 6022, 6079, 6111, 6167, 6168, 6172, 6176, 6229, 6233, 6005, 6006, 6007, 6008 (15 CIDs)

NOTE) CID 6157 is also related with clause 3. But, this document is missing the resolution.

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** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| --- | --- | --- | --- | --- | --- |
| 6020 | 4.45 | 3.2 | The term "small" is a vague and subjective quatificaton to specify a STA to be energy-limited. | Change the end of the sentence from " ... SIG STA that is ... " to " ... S1G STA whose limited energy supply requires the STA to transmit or receive in certain intervals of time only." | Revised- Small is a subjective terminology.Agree in principle. TGah editor to make the changes shown in 11-15/0268r1 under all headings that include CID 6020. |
| 6167 | 4.45 | 3.2 | "powered by a small energy supply", small is not the right adjective. | use the word "limited" instead of "small" | Revised- Limited energy supply is a more appropriate term.Agree in principle. TGah editor to make the changes shown in 11-15/0268r1 under all headings that include CID 6167. |
| 6168 | 4.46 | 3.2 | "has a limited ability to transmit and receive in certain interval of time". I don't know how this decription becomes a part of a definition. What causes this limited ability? How those certain times are determined? | clarify | Revised- It is need to clarify how to determine a certain interval of time. Agree in principle. TGah editor to make the changes shown in 11-15/0268r1 under all headings that include CID 6168. |
| 6021 | 4.57 | 3.2 | Definition of non-sensor STA -- "small" is a vague and subjective term that should not be used in a definition. | Replace "small" with a quantive value / number (e.g. payload is smaller than xxx byte) | Revised-Small is a subjective terminology.Agree in principle. And, regarding the proposed change from a commenter, determining the quantative value is very controversial. Suggestion is to remove “small”. TGah editor to replace “not limited to a small payload size” to “not subject to limitation of payload size” from the definition of “Non-sensor station (STA)”. |
| 6022 | 6.01 | 3.2 | The definition of sensor STA uses undefined terms: short MSDU size; sensor BSS; mixed BSS | Add definitions for short MSDU (size); sensor BSS; and mixed BSS. | Revised- I agree that short MSDU size, sensor BSS and mixed BSS is not defined. For clarifying the missing definition, TGah editor to make the changes shown in 11-15/0268r1 under all headings that include CID 6022. |
| 6172 | 5.05 | 3.2 | I do not agree with the resolution of CID 5478. CID 5478 was rejected on the basis of "The definition of the NDP CMAC is very clear. Also, the group decided that the NDP CMAC is more appropriate for representing the original meaning." While NDP and frame are both clear, I do not agree that "Carrying Medium Access Control" is in any way clear. In particular, Medium Access Control refers to either a mechanism or a layer, neither can be carried by an NDP frame. | Change the term to be meaningful and correct,such as NDP Carrying Medium Access Control Information (CMACI) frame or NDP Medium Access Control (MAC) frame. | Revised- We received two conflicted comments.First comment (CID 3027) is to change the NDP MAC frame to the different name, submitted by Adrian on TGah Draft 2.0 See the below comment "NDP MAC frames"The naming is internally contradictory and unnecessarily couples the MAC and PHY layers.Second comment (CID 5478, 6172 and 6229) is to change the NDP CMAC frame to the NDP MAC frame on TGah Draft 3.0 and 4.0.See the below comment [Comment]The term NDP Carrying Medium Access Control (CMAC) frame is not clear. A frame cannot carry MAC, but rather MAC information.Both are not wrong. So, as a compromised one,the proposed resolution is to change from “null data packet (NDP) carrying medium access control (CMAC) frame” to “null data packet (NDP) carrying medium access control (MAC) informace (CMI) frame”.TGah editor to make the changes shown in 11-15/0268r1 under all headings that include CID 6172. |
| 6229 | 5.00 | 3.2 | I do not agree with the resolution of CID 5478. CID 5478 was rejected on the basis of "The definition of the NDP CMAC is very clear. Also, the group decided that the NDP CMAC is more appropriate for representing the original meaning." While NDP and frame are both clear, I do not agree that "Carrying Medium Access Control" is in any way clear. In particular, Medium Access Control refers to either a mechanism or a layer, neither can be carried by an NDP frame.  | Change the term to be meaningful and correct,such as NDP Carrying Medium Access Control Information (CMACI) frame or NDP Medium Access Control (MAC) frame. | Revised- We received two conflicted comments.First comment (CID 3027) is to change the NDP MAC frame to the different name, submitted by Adrian on TGah Draft 2.0 See the below comment "NDP MAC frames"The naming is internally contradictory and unnecessarily couples the MAC and PHY layers.Second comment (CID 5478, 6172 and 6229) is to change the NDP CMAC frame to the NDP MAC frame on TGah Draft 3.0 and 4.0.See the below comment [Comment]The term NDP Carrying Medium Access Control (CMAC) frame is not clear. A frame cannot carry MAC, but rather MAC information.Both are not wrong. So, as a compromised one, The proposed resolution is to change the the null data packet (NDP) carrying medium access control (CMAC) information (CMI) framefrom “null data packet (NDP) carrying medium access control (CMAC) frame” to “null data packet (NDP) carrying medium access control (MAC) informace (CMI) frame”.TGah editor to make the changes shown in 11-15/0268r1 under all headings that include CID 6229. |
| 6079 |  | 3.2 | SST channel is used without definition. | Add the definition of SST channel in the subclause 3.2. | Revised- Agree in principle to add the definition of SST channel. TGah editor to make the changes shown in 11-15/0268r1 under all headings that include CID 6079. |
| 6111 | 6.30 | 3.2 | TWT STA should be TWT requester and TWT peer STA should be TWT responder. | As in comment | Revised- Agree in principle. TGah editor to make the changes shown in 11-15/0268r1 under all headings that include CID 6111. |
| 6176 | 4.61 | 3.2 | I do not agree with the resolution of CID 5476. In the resolution, it is stated that "agree in principle; editor to make changes in 14/1593r1 under heading CID 5476", there is no change under the heading "5476" in the document 11-14/1593r1. Please address the concern stated in the original CID 5476, namely "While it is informative to know what a S1G Non-AP STA will not listen for when in non-TIM mode, I believe it would be more informative to know what it does listen for." | Clarify the definition and behavior of a S1G Non-AP STA. | Revised-Document 11-14/1593r1 proposed a text change. But, because there was an error on the editing instruction, the TGah editor hasn’t executed the change. TGah editor to make the changes shown in 11-15/0268r1 under all headings that include CID 6176. |
| 6233 | 4.00 | 3.2 | I do not agree with the resolution of CID 5476. In the resolution, it is stated that "agree in principle; editor to make changes in 14/1593r1 under heading CID 5476", there is no change under the heading "5476" in the document 11-14/1593r1. Please address the concern stated in the original CID 5476, namely "While it is informative to know what a S1G Non-AP STA will not listen for when in non-TIM mode, I believe it would be more informative to know what it does listen for." | Clarify the definition and behavior of a S1G Non-AP STA. | Revised-Document 11-14/1593r1 proposed a text change. But, because there was an error on the editing instruction, the TGah editor hasn’t executed the change. TGah editor to make the changes shown in 11-15/0268r1 under all headings that include CID 6233. |
| 6005 |  |  | The resolution for CID 5027 in document https://mentor.ieee.org/802.11/dcn/14/11-14-1372-09-00ah-tgah-lb205-comments-on-d3-0.xlsx states that the termionology / used wording is in line with text found in IEEE 802.11 REVmc. Based on this argument, the proposed change was rejected.TGah has added the text (respectively changed the paragraph of the baseline) that was commented on in the previous comment. Hence the comment was valid.The fact that 11mc used unspecific, unclear, or errorneous wording is not a justification for 11ah to repeat the text and claim that changes to this new text, added by 11ah, should be made in 11mc.Hence, the comment was not properbly addressed. | Accept the proposed change per previous comment | Revised- CID 5027 comment: definition of "secondary 1 MHz channel" -- The definition is complicated to read and could be rephased to make the sentences shorter.CID 5027 proposed changes of commenter: secondary 1 MHz channel: The 1 MHz channel adjacent to the primary 1 MHz channel. In a 2 MHz sub 1 GHz (S1G) basic service set (BSS), primary and secondary 1 MHz channel together form the 2 MHz channel of the 2 MHz S1G BSS. In a 4 MHz, 8 MHz, and 16 MHz S1G BSS, primary and secondary 1 MHz channel together form the primary 2 MHz channel of the S1G BSS.Current sentence is not unspecific, unclear or erroneous wording. Instead, the proposed changes of the commenter are using a recursive definition.The explanation of a definition (secondary 1 MHz channel) is also using the definition (secondary 1 MHz channel). But, even though it is not definitely needed, the current sentence can be simplified by combining duplicated wording. TGah editor to make the changes shown in 11-15/0268r1 under all headings that include CID 6005. |
| 6006 |  |  | The resolution for CID 5028 in document https://mentor.ieee.org/802.11/dcn/14/11-14-1372-09-00ah-tgah-lb205-comments-on-d3-0.xlsx states that the termionology / used wording is in line with text found in IEEE 802.11 REVmc. Based on this argument, the proposed change was rejected.TGah has added the text (respectively changed the paragraph of the baseline) that was commented on in the previous comment. Hence the comment was valid.The fact that 11mc used unspecific, unclear, or errorneous wording is not a justification for 11ah to repeat the text and claim that changes to this new text, added by 11ah, should be made in 11mc.Hence, the comment was not properbly addressed. | Accept the proposed change per previous comment | Revised- CID 5028 comment: definition of "secondary 2 MHz channel" -- The definition is complicated to read and could be rephased to make the sentences shorter.CID 5027 proposed changes of commenter: secondary 2 MHz channel: The 2 MHz channel adjacent to the primary 2 MHz channel. In a 4 MHz sub 1 GHz (S1G) basic service set (BSS), primary and secondary 2 MHz channel together form the 4 MHz channel of the 4 MHz S1G BSS. In a 8 MHz, and 16 MHz S1G BSS, primary and secondary 2 MHz channel together form the primary 4 MHz channel of the S1G BSSCurrent sentence is not unspecific, unclear or erroneous wording. Instead, the proposed changes of the commenter are using a recursive definition.The explanation of a definition (secondary 2 MHz channel) is also using the definition (secondary 2 MHz channel). But, even though it is not definitely needed, the current sentence can be simplified by combining duplicated wording. TGah editor to make the changes shown in 11-15/0268r1 under all headings that include CID 6006. |
| 6007 |  |  | The resolution for CID 5029 in document https://mentor.ieee.org/802.11/dcn/14/11-14-1372-09-00ah-tgah-lb205-comments-on-d3-0.xlsx states that the termionology / used wording is in line with text found in IEEE 802.11 REVmc. Based on this argument, the proposed change was rejected.TGah has added the text (respectively changed the paragraph of the baseline) that was commented on in the previous comment. Hence the comment was valid.The fact that 11mc used unspecific, unclear, or errorneous wording is not a justification for 11ah to repeat the text and claim that changes to this new text, added by 11ah, should be made in 11mc.Hence, the comment was not properbly addressed. | Accept the proposed change per previous comment | Rejected- CID 5029 comment: definition of "secondary 4 MHz channel" -- The definition is complicated to read and could be rephased to make the sentences shorter.CID 5029 proposed changes of commenter: secondary 4 MHz channel: The 4 MHz channel adjacent to the primary 4 MHz channel. In a 8 MHz sub 1 GHz (S1G) basic service set (BSS), primary and secondary 4 MHz channel together form the 8 MHz channel of the 8 MHz S1G BSS. In a 16 MHz S1G BSS, primary and secondary 4 MHz channel together form the primary 8 MHz channel of the S1G BSS.And, current definition is as the following: secondary 4 MHz channel: In an 8 MHz sub 1 GHz (S1G) basic service set (BSS), the 4 MHz channel adjacent to the primary 4 MHz channel that together form the 8 MHz channel of the 8 MHz S1G BSS. In a 16 MHz S1G BSS, the 4 MHz channel adjacent to the primary 4 MHz channel that together form the primary 80 MHz channel.The commenter likes to use shorter sentence but the current definition is shorter than the proposed changes of the commenter. Current sentence is not unspecific, unclear or erroneous wording. Instead, the proposed changes of the commenter are using a recursive definition.The explanation of a definition (secondary 4 MHz channel) is also using the definition (secondary 4 MHz channel).  |
| 6008 |  |  | The resolution for CID 5030 in document https://mentor.ieee.org/802.11/dcn/14/11-14-1372-09-00ah-tgah-lb205-comments-on-d3-0.xlsx states that the termionology / used wording is in line with text found in IEEE 802.11 REVmc. Based on this argument, the proposed change was rejected.TGah has added the text (respectively changed the paragraph of the baseline) that was commented on in the previous comment. Hence the comment was valid.The fact that 11mc used unspecific, unclear, or errorneous wording is not a justification for 11ah to repeat the text and claim that changes to this new text, added by 11ah, should be made in 11mc.Hence, the comment was not properbly addressed. | Accept the proposed change per previous comment | Rejected- CID 5030 comment: definition of "secondary 8 MHz channel" -- The definition is complicated to read and could be rephased to make the sentences shorter.CID 5030 proposed changes of commenter: secondary 8 MHz channel: The 8 MHz channel adjacent to the primary 8 MHz channel. In a 16 MHz sub 1 GHz (S1G) basic service set (BSS), primary and secondary 8 MHz channel together form the 16 MHz channel of the 16 MHz S1G BSS.And, current definition is as the following: secondary 8 MHz channel: In an 16 MHz sub 1 GHz (S1G) basic service set (BSS), the 8 MHz channel adjacent to the primary 8 MHz channel that together form the 16 MHz channel of the 16 MHz S1G BSS.The commenter likes to use shorter sentence but the current definition is shorter than the proposed changes of the commenter. Current sentence is not unspecific, unclear or erroneous wording. Instead, the proposed changes of the commenter are using a recursive definition.The explanation of a definition (secondary 8 MHz channel) is also using the definition (secondary 8 MHz channel).  |

**Propose:**

Revised for CID 6020, 6167, 6168, 6022, 6172, 6229, 6079, 6176, 6233, 6111, 6005, 6006, per discussion and editing instructions in 11-15/0268r1.

**3. Definitions, acronyms, and abbreviations**

**3.2 Definitions specific to IEEE 802.11**

***TGah editor: Change the subclauses 3.2 as follows:***

Energy-limited station (EL STA): An energy-limited STA is an S1G STA whose ~~that is powered by a small~~ limited energy supply requires the STA ~~and has a limited ability~~ to transmit or receive in certain intervals of time determined by an Activity Specification element.

sensor station (STA): A sensor STA is an S1G non-AP STA that meets the sensor profile (e.g., limited paylod size,~~short MSDU size, low~~ limited traffic volume, battery operated device, etc) and is allowed to associate with an AP that ~~has setup a sensor BSS or a mixed BSS~~ transmits a Beacon or a (Short) Probe Response frame containing the S1G Capabilities element with the STA Type Support subfield value set to 0 or 1.

**non-traffic indication map (non-TIM) mode:** A sub 1 GHz (S1G) non-access point (non-AP) station (STA) power save mode in which an S1G non-AP STA need not listen for traffic indication map (TIM) Beacon frames but requires to transmit at least one PS-Poll or trigger frame to the associated AP every listen interval.

target wake time ~~peer STA (TWT peer STA)~~ (TWT) responder: A STA that has accepted a TWT agreement that was requested by another STA and that assigns TWT SP start times to the requesting STA.

target wake time ~~STA (TWT STA)~~ (TWT) requester: A STA that has had a requested TWT agreement accepted by another STA and that receives TWT SP start times from that STA.

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. In a 4 MHz, 8 MHz and 16 MHz S1G BSS, the 1 MHz channel adjacent to the primary 1 MHz channel that together form the primary 2 MHz channel of the ~~4 MHz~~ S1G BSS. ~~In an 8 MHz S1G BSS, the 1 MHz channel adjacent to the primary 1 MHz channel that together form the primary 2 MHz channel of the 8 MHz S1G BSS. In a 16 MHz S1G BSS, the 1 MHz channel adjacent to the primary 1 MHz channel that together form the primary 2 MHz channel of the 16 MHz S1G BSS.~~

secondary 2 MHz channel: In a 4 MHz sub 1 GHz (S1G) basic service set (BSS), the 2 MHz channel adjacent to the primary 2 MHz channel that together form the 4 MHz channel of the 4 MHz S1G BSS. In an 8 MHz and 16 MHz S1G BSS, the 2 MHz channel adjacent to the primary 2 MHz channel that together form the primary 4 MHz channel of the ~~8 MHz~~ S1G BSS. ~~In a 16 MHz S1G BSS, the 2 MHz channel adjacent to the primary 2 MHz channel that together form the primary 4 MHz channel of the 16 MHz S1G BSS.~~

secondary 4 MHz channel: In an 8 MHz sub 1 GHz (S1G) basic service set (BSS), the 4 MHz channel adjacent to the primary 4 MHz channel that together form the 8 MHz channel of the 8 MHz S1G BSS. In a 16 MHz S1G BSS, the 4 MHz channel adjacent to the primary 4 MHz channel that together form the primary 8~~0~~ MHz channel.

NDP\_1M: A null data packet (NDP) carrying medium access control (~~C~~MAC) information (CMI) frame that is transmitted using the S1G\_1M format.

NDP\_2M: A null data packet (NDP) carrying medium access control (~~C~~MAC) information (CMI) frame that is transmitted using the S1G\_SHORT format.

null data packet (NDP) carrying medium access control information (CMAC)frame: A physical layer (PHY) protocol data unit (PPDU) with no Data field used by the PHY to provide to the MAC the service of carrying medium access control (MAC) information in the SIGNAL field of the sub 1 GHz (S1G) PPDU.

***TGah editor: Insert the below definition to the subclauses 3.2:***

subchannel selective transmission (SST) channel: Channel that is permitted for the subchannel selective transmission indicated by either an SST element or an RPS element