### **IEEE P802.11Wireless LANs**

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| CC36 CR for Trigger frame on Common Info field format |
| Date: 2021-08-11 |
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**Abstract**

This submission proposes resolutions for following 46 comments received for TGbe CC36:

* 4807, 5200, 5539, 4104, 4502, 4809, 5792, 5793, 7789, 8055,
* 8158, 4873, 6692, 6693, 8069, 8159, 4961, 7474, 4503, 7023,
* 4321, 4096, 4320, 7790, 5439, 7795, 6145, 5366, 5199, 5366,
* 7796, 8068, 4874, 5114, 5794, 4872, 4962, 4340, 4341, 5115,
* 7794, 7350, 6487, 5116, 4327, 8160

**Revisions:**

* Rev 0: Initial version of the document.

***TGbe editor: Please note Baseline is REVmd D5.0, 11ax D8.0, and 11be D1.1***

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| --- | --- | --- | --- | --- | --- | --- |
| CID | Commenter | Clause | Page | Comment | Proposed Change | Resolution |
| 4807 | Dibakar Das | 9.3.1.22.1 | 82.40 | We need to clarify that the Trigger frame may also allocate resources for non-TB PPDU transmissions e.g., via the TXS TXOP sharing feature. | As in comment. | RevisedAgree with the commenter in principle. Added text to clarify that a Trigger frame (e.g. TXS) can allocate resources for a PPDU that is not a TB PPDU. Tgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #4807. |
| 5200 | Hanqing Lou | 9.3.1.22.1 | 82.40 | A Trigger frame is not always used to solicit a TB PPDU. For example, MU-RTS solicits a non-HT or non-HT duplicate PPDU | Add non-HT and non-HT duplicate PPDU to the sentence. | RevisedAgree with the commenter in principle. Added text to clarify that a Trigger frame (e.g. MU-RTS) can allocate resources for a PPDU that is not a TB PPDU. Tgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #5200. |
| 5539 | JINYOUNG CHUN | 9.3.1.22.1 | 82.65 | Other control frames such as RTS, PS-Poll, CF-End, BAR, NDP Announcement can set TA to bandwidth signaling TA in non-HT format. But Trigger frame doesn't have such that text. So I suggest to add the setting in Trigger frame, too. | Change the text of TA field in 11ax as follows:The TA field is the address of the STA transmitting the Trigger frame or the bandwidth signaling TA of the STA transmitting the Trigger frame if the Trigger frame is addressed to STAs that belong to a single BSS.In a Trigger frame transmitted by an EHT STA that is a STA 6G with 320 MHz bandwidth support in a non-HT or non-HT duplicate format and where the scrambling sequence and SERVICE field carry the TXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_HT, the TA field is set to a bandwidth signaling TA. Otherwise, in a Trigger frame transmitted by a VHT, or HE or EHT STA in a non-HT or non-HT duplicate format and where the scrambling sequence carries the TXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_HT, the TA field is set to a bandwidth signaling TA.The TA field is the transmitted BSSID if the Trigger frame is addressed to STAs from at least two different BSSs of the multiple BSSID set. The rules for setting of the TA field are defined in 26.5.2.2.4. | RejectedA Trigger frame carries bandwidth information (e.g. UL BW subfield in the Common Info field), so it doesn’t need bandwidth signaling TA in 11ax. 11be can inherit the similar rule. |
| 4104 | Abhishek Patil | 9.3.1.22.1.1 | 83.47 | Update the titles of Figures 9-64b and 9-64b1 respectively to "HE variant Common Info field format" and "EHT variant Common Info field format." | As in comment | RevisedRevised the titles of the two figures as suggested Tgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #4104 |
| 4502 | Bin Tian | 9.3.1.22.1.2 | 83.18 | B20-B21 TXOP Sharing mode is not defined in 11ax D8.0. Is it OK to add the new definition of these bits to the HE variant now? Or if the TXOP sharing mode shall be aded to the EHT variant | as in the comment. | RevisedAgree with the commenter in principle. Deleted ‘TXOPSharing Mode’ from Figure 9-64-b (HE variant) and added it to Figure 9-64b1 (EHT variant)Tgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #4502 |
| 4809 | Dibakar Das | 9.3.1.22.1.1 | 83.14 | The "TXOP sharing Mode" is an EHT feature and not HE. | Delete this text from Figure 9-64b and add it to Figure 9-64b1. | RevisedAgree with the commenter in principle.Tgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #4809 (same as the changes for #**4502** above) |
| 5792 | Lei Huang | 9.3.1.22.1.1 | 83.19 | HE variant Common Info field intends to be used by a HE STA, which does not support TXOP Sharing operation. | change "GI And HE-LTF Type/TXOP Sharing Mode" to "GI And HE-LTF Type" | RevisedAgree with the commenter in principleTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #5792 (same as the changes for #**4502** above) |
| 5793 | Lei Huang | 9.3.1.22.1.1 | 84.09 | EHT variant Common Info field intends to be used by an EHT STA, which can transmit HE or EHT TB PPDU and may support TXOP Sharing operation. | change "GI And HE-LTF Type" to "GI And HE/EHT-LTF Type/TXOP Sharing Mode" | RevisedAgree with the commenter in principleTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #5793 (same as the changes for #**4502** above) |
| 7789 | Yanjun Sun | 9.3.1.22.1.1 | 83.18 | Please change B20-B21 in Figure 9-64b from 'GI And HE LTF Type/TXOP Sharing Mode' to ''GI And HE-LTF Type', as the TXOP Sharing Mode is only applicable for EHT variant | As in comment | RevisedAgree with the commenter in principleTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #7789 (same as the changes for #**4502** above) |
| 8055 | Yuchen Guo | 9.3.1.22.1.1 | 83.16 | GI And HELTF Type/TXOP Sharing Mode should be in EHT variant, rather than HE variant | Put it to the EHT variant | RevisedAgree with the commenter in principleTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #8055 (same as the changes for #**4502** above) |
| 8158 | Yunbo Li | 9.3.1.22.1.1 | 83.18 | TXOP sharing mode(B20, B21) should in EHT variant or HE variant? | as in comment | RevisedEHT variant only.Tgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #8158 (same as the changes for #**4502** above) |
| 4873 | Dong Guk Lim | 9.3.1.22.1 | 84.38 | The TXOP Sharing Mode subfield is not included in the common field described in Figure 9-64b1.add or indicate this field in figure 9-64b1. | As in comment | RevisedAgree with the commenter in principleTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #4873 (same as the changes for #**4502** above) |
| 6692 | Rojan Chitrakar | 9.3.1.22.1.1 | 86.33 | GI And HE/EHT-LTF Type subfield is not present in either of the two figures for the Common Info field. Both contain GI And HE-LTF Type subfield. The meaning of the subfield appear to be exactly the same for both HE and EHT, except for the LTF format; perhaps the subfield name can be simplified as "GI and LTF Type". | Either correct the subfield name discrepancy in Figure 9-64b, 9-64b1 or rename the "GI and HE-LTF Type" subfield as "GI and LTF Type" | RevisedAgree with the commenter in principleTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #6692 (same as the changes for #**4502** above) |
| 6693 | Rojan Chitrakar | 9.3.1.22.1.1 | 86.36 | Where is the TXOP Sharing Mode subfield in Figure 9-64b, 9-64b1? | Add the TXOP Sharing Mode subfield in Figure 9-64b, 9-64b1. | RevisedAgree with the commenter in principleTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #6693 (same as the changes for #**4502** above) |
| 8069 | yujin noh | 9.3.1.22.1.1 | 86.37 | The TXOP Sharing Mode subfield is not in Figure 9-64b1(EHT variant) but Figure 9-64b (HE variant). Update two figures. Add add reference if needed such as "The TXOP Sharing Mode subfield indicates the TXOP sharing mode(see Table 9-29j5(TXOP Sharing Mode subfield encoding))" | as in comment | RevisedAgree with the commenter in principleTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #8069 (same as the changes for #**4502** above) |
| 8159 | Yunbo Li | 9.3.1.22.1.1 | 86.32 | the name of GI AND HE/EHT-LTF Type is not modified in the frame structure (Figure 9-64b1) | as in comment | RevisedAgree with the commenter in principleTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #8159 (same as the changes for #**4502** above) |
| 4961 | Eunsung Park | 9.3.1.22.1.1 | 84.08 | Change the subfield name "GI And HE-LTF Type" to "GI And HE-/EHT-LTF Type" in Figure 9-64b1 since the EHT variant Trigger frame can solicit HE TB PPDU as well as EHT TB PPDU. | See the comment. | RevisedAgree with the commenter in principleRevised the subfield name for both HE variant and EHT variant, due to shared encoding Table 9-29e (GI And HE/EHT-LTF Type subfield encoding)Tgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #4961 |
| 7474 | Tianyu Wu | 9.3.1.22.1 | 83.03 | The Subclause number are not correct. 9.3.1.22.1.1 to 9.3.1.22.1.4 shall be replaced by 9.3.1.22.2 to 9.3.1.22.4 | As in comment | RejectedAfter a careful review, these subclauses are expanding 9.3.1.22.1, so the current structure looks ok. |
| 4503 | Bin Tian | 9.3.1.22.1.1 | 84.21 | For EHT variant of common information field, may change the B22 MU-MIMO HE-LTF mode, B26 UL STBC, B53 Doppler and to reserved since they are not supported by EHT TB PPDU in 11be R1. | as in the comment. | RevisedAgree with the commenter in principleRevised Figure 9-64b1 to mark those subfields as reservedTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #4503 |
| 7023 | Sigurd Schelstraete | 9.3.1.22.1.1 | 84.06 | In Figure 9-64b1, why do we reuse names like "MU-MIMO HE-LTF mode", "UL STBC", "Doppler" for the EHT variant of the Common field when these features are not defined for 11be? These bits should be set to reserved instead. | See comment | RevisedAgree with the commenter in principleTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #7023 (same as the changes for #**4503** above) |
| 4321 | Arik Klein | 9.3.1.22.1.1 | 87.52 | Add a clarification note that since doppler subfield is reserved in Het variant of the Common Info field, no encoding is required for the Number Of EHT-LTF Symbols And Midamble Periodicity subfield | As in comment | RevisedAgree with the commenter in principleTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #4321(same as the changes for #**4503** above) |
| 4096 | Abhishek Patil | 9.3.1.22.1.1 | 84.05 | Should the field names say EHT-LTF instead of HE-LTF? B20-21 and B22 | As in comment | RejectedThis subfield becomes reserved in the EHT variant based on resolution to CID #4503 above. |
| 4320 | Arik Klein | 9.3.1.22.1.1 | 87.02 | The MU-MIMO EHT-LTF Mode subfield of the Common Info field does not appear in Figure 9-64b1 (Common Info field format, EHT variant) | 1. Please clarify where this field is located and align it with the Figure 9-64b1.2. If this field is reserved in EHT variant of the Common Info field - please clearly indicate "Reserved" in the position of this subfield in Figure 9-64b1 | RevisedAgree with the commenter in principleTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #4320 (same as the changes for #**4503** above) |
| 7790 | Yanjun Sun | 9.3.1.22.1.1 | 84.08 | Please update the name of the subfields as follows:'GI And HE-LTF Type' to 'GI And EHT LTF Type/TXOP Sharing Mode''UL STBC' to reserved'Doppler' to reserved'MU-MIMO HE-LTF mode' to reservedIn additon, please merge B56 to B63 into a single reserved subfield | As in comment | RevisedAgree with the commenter in principleTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #7790 (same as the changes for #**4503** above) |
| 5439 | Jian Yu | 9.3.1.22.1.1 | 84.09 | In the figure of EHT Variant of the common info, GI And HE-LTF Type should be changed to GI And EHT-LTF Type, MU-MIMO HE-LTF Mode should changed to Reserved, UL STBC should be changed to reserved. Number Of EHT-LTF Symbols And Midamble Periodicity should be changed to Number Of EHT-LTF Symbols. Doppler should be changed to Reserved. | as in comment | RevisedAgree with the commenter in principleRevised Figure 9-64b1 as suggestedTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #5439 |
| 7795 | Yanyi Ding | 9.3.1.22.1.1 | 84.10 | The 'GI and HE-LTF Type' should be 'GI and HE/EHT-LTF Type' | Change the field name to 'GI and HE/EHT-LTF Type'. | RevisedAgree with the commenter in principleTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #7795 (same as the changes for #**5439** above) |
| 6145 | Mengshi Hu | 9.3.1.22.1.1 Common Info field | 84.09 | The "GI And HE-LTF Type" subfield should be "GI And HE/EHT-LTF Type" subfield to be consistent with the description of it in Page 86. In that page it is called GI And HE/EHT-LTF Type" | Change "GI And HE-LTF Type" into "GI And HE/EHT-LTF Type" | RevisedAgree with the commenter in principleTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #6145 (same as the changes for #**5439** above) |
| 5366 | Jay Yang | 9.3.1.22.1.1 | 86.36 | TXOP Sharing is already used in 11ax for the EDCA sharing between different ACs of a STA.While I guess it means AP grants part of it's portion to the associated STA here,In order to avoid ambiguous&#65292; suggest rewording the term. | To avoid ambiguity with TXOP sharing between different ACs, 11be shall use a different term to describe it, like TXOP granted mode | RevisedAgree with the commenter in principleTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as # |
| 5199 | Hanqing Lou | 9.3.1.22.1.1 | 86.36 | It is unclear where the TXOP Sharing Mode subfield is. There is no TXOP Sharing Mode subfield shown in Figure 9-64b1. | Is the GI and HE/EHT LTF type subfield is used as TXOP Sharing Mode subfield in MU RTS? If so please change Figure 9-64b1 and clarify the text. | RevisedAgree with the commenter in principleTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #5199 (same as the changes for #**5439** above) |
| 5366 | Jay Yang | 9.3.1.22.1.1 | 86.36 | TXOP Sharing is already used in 11ax for the EDCA sharing between different ACs of a STA.While I guess it means AP grants part of it's portion to the associated STA here,In order to avoid ambiguous&#65292; suggest rewording the term. | To avoid ambiguity with TXOP sharing between different ACs, 11be shall use a different term to describe it, like TXOP granted mode | RevisedAgree with the commenter in principleTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #5366 and do a global search and replace “TXOP Sharing Mode” by “Triggered TXOP Sharing Mode” and replace “TXOP sharing mode” by “triggered TXOP sharing mode” in subclauses 9.3.1.22 and 35.2.1.3 |
| 7796 | Yanyi Ding | 9.3.1.22.1.1 | 84.10 | The 'Number Of EHT-LTF Symbols And Midamble Periodicity' field shall be kept consistent with the 'GI and HE/EHT-LTF Type' field. | Change the field name to 'Number Of HE/EHT-LTF Symbols And Midamble Periodicity'. | RevisedAgree with the commenter in principleAs the Doppler subfield is reserved, delete the ‘And Midamble Periodicity’ portion.Tgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #7796 (same as the changes for #**5439** above) |
| 8068 | yujin noh | 9.3.1.22.1.1 | 84.38 | GI And HE-LTF Type in Figure 9-64b1 should be GI And HE/EHT-LTF Type to be consistent. | as in comment | RevisedAgree with the commenter in principleTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #8068 (same as the changes for #**5439** above) |
| 4874 | Dong Guk Lim | 9.3.1.22.1 | 86.33 | The GI And HE/EHT-LTF Type subfield is not defined in figure 9-64b1. modify the field's name with "The GI And HE Type subfield" and add the description for interpretation of this field when EHT TB PPDU is solicited. | As in comment | RevisedAgree with the commenter in principleTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #4874 (same as the changes for #**5439** above) |
| 5114 | Geonjung Ko | 9.3.1.22.1.1 | 84.10 | Change HE-LTF to EHT-LTF in subfield names. | As in comment | RevisedAgree with the commenter in principleTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #5114 (same as the changes for #**5439** above) |
| 5794 | Lei Huang | 9.3.1.22.1.1 | 84.09 | EHT variant Common Info field intends to be used by an EHT STA, which can transmit HE or EHT TB PPDU. | change "Number Of EHT-LTF Symbols And Midamble Periodicity" to "Number Of HE/EHT-LTF Symbols And Midamble Periodicity" | RevisedAgree with the commenter in principleTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #5794 |
| 4872 | Dong Guk Lim | 9.3.1.22.1 | 84.08 | It is allowed that to solicit the TB PPDU, the EHT variant of the common field in the trigger frame can be used. so, to reduce the confusion, we can reuse the field's names defined in the HE variant of the common field for the EHT variant of the common field in the trigger frame. | modify the field's name in figure 9-64b1 as following."Number Of HE-LTF Symbols And Midamble Periodicity" | RejectedAs an EHT variant Common Info field can be used to solicit EHT or HE TB PPDU, the subfield name is renamed to “Number Of HE/EHT- LTF Symbols”. Please refer to the resolution to #5439 for more details. |
| 4962 | Eunsung Park | 9.3.1.22.1.1 | 84.08 | Change the subfield name "Number Of EHT-LTF Symbols And Midamble Periodicity" to "Number Of HE-/EHT-LTF Symbols And Midamble Periodicity" in Figure 9-64b1 since the EHT variant Trigger frame can solicit HE TB PPDU as well as EHT TB PPDU. | See the comment. | RevisedAgree with the commenter in principleAs the Doppler subfield is reserved, delete the ‘And Midamble Periodicity’ portion.Tgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #4962 |
| 4340 | Arik Klein | 9.3.1.22.1.1 | 84.32 | Why do we need 2 consecutive "Reserved" fields in the common Info field, EHT variant? Seems redundant | Unify it into a single Reserved subfield (B56..B63) |  RevisedAgree with the commenter than B56 to B63 are all reserved bits. However, for backward compatibility with HE, B56-B62 is set to 1 and B63 is set to 0 to leave them expandable in the future. As the default values are different, the subfield is renamed as the commenter suggested later in email.Tgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #4340 |
| 4341 | Arik Klein | 9.3.1.22.1.1 | 84.32 | Combine the 2 adjacent "Reserved" subfields (B56..B62 and B63) into a single "Reserved" subfield (B56..B63) in Figure 9-64b1 (Common Info field format, EHT variant) | As in comment |  RevisedSame comment as that for #**4340.** The subfield is renamedTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #4341(same as the changes for #**4340** above) |
| 5115 | Geonjung Ko | 9.3.1.22.1.1 | 84.30 | There are two successive Reserved fields. | Combine them to one Reserved field. |  RevisedSame comment as that for #**4340** above**.** The subfield is renamedTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #5115(same as the changes for #**4340** above) |
| 7794 | Yanyi Ding | 9.3.1.22.1.1 | 84.32 | There are two reserved fields (B56-B62, B63) in the common field, looks odd and unnecessary. | Merge these two reserved fields, make it a single reserved field (B56-B63). |  RevisedSame comment as that for #**4340** above**.** The subfield is renamedTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #7794(same as the changes for #**4340** above) |
| 7350 | Stephen McCann | 9.3.1.22.1.1 | 84.29 | In Figure 9-64b1, there is no reason to have 2 reserved sub-fields, starting at bits B56 and B63, as no whole octet boundary is crossed. | Merge the two reserved sub-fields "B56-B62" and "B63" into one reserved sub-field "B56-B63". |  RevisedSame comment as that for #**4340** above**.** The subfield is renamedTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #7350(same as the changes for #**4340** above) |
| 6487 | Osama Aboulmagd | 9.3.1.22.1.1 | 84.33 | B55 in Figure 9-6-4b-1. Why is the need for a specific bit to indicate the Special User info field Present when the field is indicated by a specific AID 12 value (2007)? | Change B55 to reserved | RejectedThis is based on a passed motion. This bit helps a STA parsing the Trigger frame to easily determine whether a Special User Info field is present or not. |
| 5116 | Geonjung Ko | 9.3.1.22.1.1 | 86.38 | Missing hyphen between "MU" and "RTS" | Add hyphen | RevisedFixed as suggestedTgbe editor please implement changes as shown in doc 11-21/1333r1 tagged as #5116 |

*Discussion: there are multiple ways to resolve the following two CIDs and they will be addressed based on SP results.*

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| 4327 | Arik Klein | 9.3.1.22.1.3 | 101.56 | The name of the Special User Info Field Present subfield is misleading regarding the encoding of this field: set to 0 to indicate the presence and set to 1 to indicate is absence. Please consider changing the encoding or the designation of the subfield. | Option 1 (preferred): change the encoding of this field (so it is aligned with the name) the subfield is set to 1 if the Special User Info field is presnet and is set to 0 if it is not present.If this is the preferred option - need to change the sentences in P101L51 and P101L37 accordingly.Option 2: change the name of the subfield to "Special User Info Field Absence" | TBDThe existing text is correct technically: “If the Special User Info field is included in the Trigger frame, then the Special User Info Field Present subfield of the EHT variant of the Common Info Field is set to 0, otherwise it is set to 1.”. As the corresponding B55 is set to 1 in HE, 0 needs to be used to indicate the presence of the Special User Info field. Two options ahead of us:**Option 1**: keep the existing subfield name of “Special User Info Field Present” **Option 2**: rename “Special User Info Field Present” to “Special User Info Field Absent” by having a global replacement and toggling the value of this subfield in all the spec text that refers to this subfield. SP: which option do you prefer to address CID4327?Option1/Option2/Abs |
| 8160 | Yunbo Li | 9.3.1.22.1.3 | 101.37 | usually set to 0 means not present, and set to 1 means present. Please change the name of "Special User Info Filed Present" to "Special User Info Filed Absent" | as in comment | Same resolution as that for #**4327** above, to be updated based on SP results. |

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 TGbe Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGbe Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGbe Editor: Editing instructions preceded by “TGbe Editor” are instructions to the TGbe editor to modify existing material in the TGbe draft. As a result of adopting the changes, the TGbe editor will execute the instructions rather than copy them to the TGbe Draft.***

***TGbe editor: Please update subclause 9.3.1.22 as follows:***

* + - 1. **Trigger frame format**
				1. **General**

A Trigger frame which is not an MU-RTS Trigger frame allocates resources for and solicits one or more ~~HE~~ TB PPDU transmissions. An MU-RTS Trigger frame allocates resources for one or more PPDUs that are not TB PPDU (see 35.2.1.3 (Triggered TXOP sharing procedure)) (#4807). The Trigger frame also carries other information required by the responding STA to send ~~an HE~~ an HE TB PPDU (see 26.5.2 (UL MU operation) ), an EHT TB PPDU (see 35.4.2 (EHT UL MU operation)), a non-HT PPDU or a non-HT duplicate PPDU (see 26.2.6 (MU-RTS Trigger/CTS frame exchange procedure) and 35.2.1.3 (Triggered TXOP sharing procedure)) (#5200) in response to the Trigger frame.

The RA field is set as follows:

* For a Trigger frame that is not a GCR MU-BAR, NFRP or MU-RTS Trigger frame, and that has one User Info field that is not a Special User Info field (see [9.3.1.22.1.3 (Special User Info field)](#bookmark36)) and the AID12 subfield of the User Info field contains the AID of a non-AP STA, the RA field is set to the address of that STA
* For a Trigger frame that has at least one User Info field with the AID12 subfield that allocates an RA-RU, the RA field is set to the broadcast address
* For a Trigger frame that is not a GCR MU-BAR Trigger frame and that has more than one User Info field that is not a Special User Info field (see [9.3.1.22.1.3 (Special User Info field)](#bookmark36)), the RA field is set to the broadcast address
* For a Trigger frame that is an NFRP Trigger frame or MU-RTS Trigger frame, the RA field is set to the broadcast address
* For a Trigger frame that is a GCR MU-BAR Trigger frame, the RA field is set to the MAC address of the group for which reception status is being requested

**Common Info field**

The HE variant of the Common Info field is defined in [Figure 9-64b (HE variant Common Info field format](#bookmark16) [(#4104))](#bookmark16).

B0 B3 B4 B15 B16 B17 B18 B19 B20 B21 B22 B23 B25

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Trigger Type | ULLength | More TF | CSRequired | UL BW | GI And HE-LTF Type (#4502) (#4809) (#5792)(#5793)(#7789)(#8505)(#8518)(#4873)(#4961)(#4784)(#6692)(#6693)(#8069) | MU-MIMO HE-LTFMode | Number Of HE- LTF Symbols And Midamble Periodicity |

Bits: 4 12 1 1 2 2 1 3

B26 B27 B28 B33 B34 B35 B36 B37 B52 B53 B54 B62

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| UL STBC | LDPCExtra Symbol Segment | AP TxPower | Pre-FECPadding Factor | PEDisambiguity | UL Spatial Reuse | Doppler | UL HE- SIG-A2Reserved |

Bits: 1 1 6 2 1 16 1 9

B63

Trigger Dependent Common Info

Reserved

Bits: 1 variable

**Figure 9-64b—** **HE variant Common Info field format(#4104)**

The EHT variant of the Common Info field is defined in [Figure 9-64b1 (EHT variant Common Info field format](#bookmark17)(#4104)).

B0 B3 B4 B15 B16 B17 B18 B19 B20 B21 B22 B23 B25

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Trigger Type | ULLength | More TF | CSRequired | UL BW | GI And HE/EHT-LTFType/ Triggered TXOPSharing Mode (#4502) (#4809) (#5792)(#5793)(#7789)(#8505)(#8518)(#5439)(#7795)(#8068)(#4873)(#4961)(#5114)(#6145)(#8159)(#5199)(#6692)(#6693)(#8069)(#5366) | Reserved (#4503)(#7790)(#5439)(#7023)(#4320) | Number Of HE/EHT- LTF Symbols(#5439)(#7796)(#4962)(#5794) |

Bits: 4 12 1 1 2 2 1 3

B26 B27 B28 B33 B34 B35 B36 B37 B52 B53 B54

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Reserved (#4503)(#7790)(#7023) | LDPCExtra Symbol Segment | AP TxPower | Pre-FECPadding Factor | PEDisambiguity | UL Spatial Reuse | Reserved (#4503)(#7790)(#5439)(#7023)(#4320) | HE/EHT P160 |

Bits: 1 1 6 2 1 16 1 1

B55 B56 B62 B63

|  |  |  |  |
| --- | --- | --- | --- |
| Special |  |  | Trigger |
| User Info FieldPresent (0) (#4327)(#8160) | Unused Reserved (#4340)(#4341)(#5115)(#7794)(#7350) | Reserved  | Dependent Common |
|  |  | Info |

Bits: 1 7 1 variable

**Figure 9-64b1—EHT variant Common Info field format(#4104)**

**NOTE—for backward compatibility with HE variant Common Info field, an EHT AP with dot11EHTBaseLineFeaturesImplementedOnly equal to true sets B22, B26, B53 and B63 to 0 and set B56 to B62 to 1 in the EHT variant Common Info field.** (#4503)(#7790)(#5439)(#7023)(#4320)

The Trigger Type subfield identifies the Trigger frame variant and its encoding is defined in [Table 9-29c](#bookmark18) [(Trigger Type subfield encoding)](#bookmark18).

**Table 9-29c—Trigger Type subfield encoding**

|  |  |
| --- | --- |
| **Trigger Type subfield value** | **Trigger frame variant** |
| 0 | Basic |
| 1 | Beamforming Report Poll (BFRP) |
| 2 | MU-BAR |
| 3 | MU-RTS |
| 4 | Buffer Status Report Poll (BSRP) |
| 5 | GCR MU-BAR |
| 6 | Bandwidth Query Report Poll (BQRP) |
| 7 | NDP Feedback Report Poll (NFRP) |
| 8-15 | Reserved |

The UL Length subfield of the Common Info field indicates the value of the L-SIG LENGTH field of the solicited ~~HE~~ TB PPDU. The UL Length subfield is set:

* As defined in 26.5.2.2.4 (Allowed settings of the Trigger frame fields and TRS Control subfield) if the solicited PPDU is an HE TB PPDU.
* As defined in 35.4.2.2.1 (Allowed settings of the Trigger frame fields and TRS Control subfield) if the solicited PPDU is an EHT TB PPDU.

The More TF subfield of the Common Info field indicates whether or not a subsequent Trigger frame is scheduled for transmission. The More TF subfield is set as defined in 26.8.2 (Individual TWT agreements) and 26.8.3.2 (Rules for TWT scheduling AP).

The CS Required subfield of the Common Info field is set to 1 to indicate that the STAs identified in the User Info fields are required to use ED to sense the medium and to consider the medium state and the NAV in determining whether or not to respond. The CS Required subfield is set to 0 to indicate that the STAs identified in the User Info fields are not required to consider the medium state or the NAV in determining whether or not to respond. See 26.5.2.3 (Non-AP STA behavior for UL MU operation) and 26.5.2.5 (UL MU CS mechanism) for details.

The UL BW subfield of the Common Info field indicates the bandwidth in the HE-SIG-A of the HE TB PPDU and is defined in [Table 9-29d (UL BW subfield encoding)](#bookmark19).

**Table 9-29d—UL BW subfield encoding**

|  |  |
| --- | --- |
| **UL BW****subfield value** | **Description** |
| 0 | 20 MHz |
| 1 | 40 MHz |
| 2 | 80 MHz |
| 3 | 80+80 MHz or 160 MHz |

The UL BW subfield of the Common Info field along with the UL BW Extension subfield of the Special User Info field indicates the bandwidth in the U-SIG of the EHT TB PPDU and is defined in [Table 9-29j3](#bookmark38) [(UL Bandwidth Extension subfield encoding)](#bookmark38).

The GI And HE-LTF Type subfield or GI And HE/EHT-LTF Type subfield of the Common Info field indicates the GI and HE/EHT-LTF type of the HE or EHT TB PPDU response. The GI And HE-LTF Type subfield or GI And HE/EHT-LTF Type subfield ~~encoding~~ is present in a Trigger frame that solicits a TB PPDU response and its encoding is defined in [Table 9-29e (GI And HE/EHT-](#bookmark20) [LTF Type subfield encoding)](#bookmark20). The Triggered TXOP Sharing Mode subfield in the EHT variant Common Info field indicates the triggered TXOP sharing mode as defined in Table 9-29j5 (TXOP Sharing Mode subfield encoding). The

Triggered TXOP Sharing Mode subfield is present in an MU-RTS(#5116) Trigger frame and is defined in [9.3.1.22.5 (MU-RTS](#bookmark40) [Trigger frame format)](#bookmark40).

**Table 9-29e—GI And HE/EHT-LTF Type subfield encoding**

|  |  |
| --- | --- |
| **GI And HE/EHT-LTF****Type subfield value** | **Description** |
| 0 | 1 HE/EHT-LTF + 1.6 µs GI |
| 1 | 2 HE/EHT-LTF + 1.6 µs GI |
| 2 | 4 HE/EHT-LTF + 3.2 µs GI |
| 3 | Reserved |

The MU-MIMO HE-LTF Mode subfield of the HE Common Info field indicates the HE-LTF mode for an HE TB PPDU that has an RU that spans the entire bandwidth and that is assigned to more than one non-AP STA (i.e., for UL MU-MIMO) when the GI And HE-LTF Type subfield of the HE Common Info field indicates either 2 HE-LTF + 1.6 µs GI or 4 HE-LTF + 3.2 µs GI, as defined in Table [9-29f (MU-MIMO HE-LTF](#bookmark21) [Mode subfield encoding)](#bookmark21). Otherwise, this subfield is set to indicate HE single stream pilot HE-LTF mode. The MU-MIMO EHT-LTF Mode subfield of the EHT variant Common Info field is reserved in a Trigger frame soliciting an EHT TB PPDU and is set to 0. (#4503)(#7790)(#5439)(#7023)(#4320)

**Table 9-29f—MU-MIMO HE-LTF Mode subfield encoding**

|  |  |
| --- | --- |
| **MU-MIMO HE-LTF****subfield value** | **Description** |
| 0 | HE single stream pilot HE-LTF mode |
| 1 | HE masked HE-LTF sequence mode |

If the Doppler subfield of the Common Info field is 0, then the Number Of HE-LTF Symbols And Midamble Periodicity subfield or the Number Of HE/EHT-LTF Symbols subfield (#5439)(#7796)(#4962)(#5794) of the Com- mon Info field indicates the number of HE-LTF or EHT-LTF symbols present in the HE or EHT TB PPDU and is encoded as follows:

* 0 for 1 HE-LTF or EHT-LTF symbol
* 1 for 2 HE-LTF or EHT-LTF symbols
* 2 for 4 HE-LTF or EHT-LTF symbols
* 3 for 6 HE-LTF or EHT-LTF symbols
* 4 for 8 HE-LTF or EHT-LTF symbols
* 5–7 is reserved

If the Doppler subfield of the Common Info field is 1, then the Number Of HE-LTF Symbols And Midamble Periodicity subfield indicates the number of HE-LTF symbols and the periodicity of the midamble and is encoded as follows:

* 0 for 1 HE-LTF symbol and 10 symbol midamble periodicity
* 1 for 2 HE-LTF symbols and 10 symbol midamble periodicity
* 2 for 4 HE-LTF symbols and 10 symbol midamble periodicity
* 4 for 1 HE-LTF symbol and 20 symbol midamble periodicity
* 5 for 2 HE-LTF symbols and 20 symbol midamble periodicity
* 6 for 4 HE-LTF symbols and 20 symbol midamble periodicity
* 3 and 7 are reserved

The UL STBC subfield of the Common Info field indicates the status of STBC encoding for the solicited HE TB PPDUs. It is set to 1 to indicate STBC encoding and set to 0 otherwise.

The UL STBC subfield of the Common Info field is reserved in a Trigger frame soliciting an EHT TB PPDU and is set to 0. (#4503)(#7790)(#7023)

The LDPC Extra Symbol Segment subfield of the Common Info field indicates the status of the LDPC extra symbol segment. It is set to 1 if the LDPC extra symbol segment is present in the solicited HE or EHT TB PPDUs and set to 0 otherwise.

The AP Tx Power subfield of the Common Info field indicates the AP’s combined transmit power at the transmit antenna connector of all the antennas used to transmit the triggering PPDU in units of dBm/ 20 MHz. The transmit power in dBm/20 MHz, *PTX*, is calculated as *PTX* = –20 + *FVal*, where *FVal* is the value of the AP Tx Power subfield, except for the values above 60, which are reserved.

The Pre-FEC Padding Factor and PE Disambiguity subfields are defined in [Table 9-29g (Pre-FEC Padding](#bookmark22) [Factor and PE Disambiguity subfields)](#bookmark22) and have the same encoding as their respective subfields in HE SIG-

A (see Table 27-20 (HE-SIG-A field of an HE MU PPDU)) or as in their respective subfields in EHT-SIG (see Table 36-33 (Common field for OFDMA transmission)).

**Table 9-29g—Pre-FEC Padding Factor and PE Disambiguity subfields**

|  |  |  |
| --- | --- | --- |
| **Subfield** | **Description** | **Encoding** |
| Pre-FEC Padding Factor | Indicates the pre-FEC padding factor | Set to 0 to indicate a pre-FEC padding factor of 4 Set to 1 to indicate a pre-FEC padding factor of 1 Set to 2 to indicate a pre-FEC padding factor of 2 Set to 3 to indicate a pre-FEC padding factor of 3 |
| PE Disambiguity | Indicates PE disambiguity | Set to 1 if the condition in Equation (27-118) is met; otherwise it is set to 0 |

(#1599)When the Trigger frame solicits an HE TB PPDU, the~~The~~ UL Spatial Reuse subfield of the Com- mon Info field carries the values to be included in the Spatial Reuse fields in the HE-SIG-A field of the solicited HE TB PPDUs. The format of the UL Spatial Reuse subfield is shown in [Figure 9-64c (UL Spatial](#bookmark23) [Reuse subfield format)](#bookmark23), where each Spatial Reuse *n* subfield, 1  *n*  4 , is set to the same value as its corre- sponding subfield in the HE-SIG-A field of the HE TB PPDU, which are defined in Table 27-21 (HE-SIG-A field of an HE TB PPDU).

B0 B3 B4 B7 B8 B11 B12 B15

|  |  |  |  |
| --- | --- | --- | --- |
| Spatial Reuse 1 | Spatial Reuse 2 | Spatial Reuse 3 | Spatial Reuse 4 |

Bits: 4 4 4 4

**Figure 9-64c—UL Spatial Reuse subfield format**

(#1599)When the Trigger frame solicits an EHT TB PPDU, each Spatial Reuse *n* subfield, 1  *n*  4 , of the Common Info field is determined based on either the Spatial Reuse 1 subfield or the Spatial Reuse 2 subfield of the Special User Info field (see [9.3.1.22.1.3 (Special User Info field)](#bookmark36)) as described below.

(#1599)When the Trigger frame solicits a 20 MHz EHT TB PPDU, each Spatial Reuse *n* subfield, 1  *n*  4 , of the Common Info field is set to the value of the Spatial Reuse 1 subfield of the Special User Info field.

(#1599)When the Trigger frame solicits a 40 MHz EHT TB PPDU, the Spatial Reuse 1 subfield and the Spatial Reuse 3 subfield of the Common Info field are set to the value of the Spatial Reuse 1 subfield of the Special User Info field and the Spatial Reuse 2 subfield and the Spatial Reuse 4 subfield of the Common Info field are set to the value of the Spatial Reuse 2 subfield of the Special User Info field.

(#1599)When the Trigger frame solicits an 80 MHz EHT TB PPDU or a 160 MHz EHT TB PPDU, the Spa- tial Reuse 1 subfield and the Spatial Reuse 2 subfield of the Common Info field are set to the value of the Spatial Reuse 1 subfield of the Special User Info field and the Spatial Reuse 3 subfield and the Spatial Reuse 4 subfield of the Common Info field are set to the value of the Spatial Reuse 2 subfield of the Special User Info field.

(#1599)When the Trigger frame solicits a 320 MHz EHT TB PPDU, each Spatial Reuse *n* subfield, 1  *n*  4 , of the Common Info field is set to the smaller of the values of the Spatial Reuse 1 subfield and the Spatial Reuse 2 subfield of the Special User Info field.

The Doppler subfield of the Common Info field is set to 1 to indicate that a midamble is present in the HE TB PPDU and set to 0 otherwise.

The Doppler subfield of the Common Info field is reserved in a trigger soliciting an EHT TB PPDU and is set to 0. (#4503)(#7790)(#5439)(#7023)(#4320)

The UL HE-SIG-A2 Reserved subfield of the HE Common Info field carries the value to be included in the Reserved field in the HE-SIG-A2 subfield of the solicited HE TB PPDUs. An HE AP sets the UL HE-SIG- A2 Reserved subfield of the HE Common Info field to all 1s. An EHT AP sets HE/EHT P160 subfield of the EHT Common Info field to 0 to indicate to an EHT STA that the solicited TB PPDU in the primary 160 MHz is an EHT TB PPDU and sets HE/EHT P160 subfield of the Common Info field to 1 to indicate that the solicited TB PPDU in the primary 160 MHz is an HE TB PPDU. An EHT AP sets the Unused Reserved subfield of the EHT Common Info field to all 1s.(#4340)(#4341)(#5115)(#7794)(#7350)

The Trigger Dependent Common Info subfield in the Common Info field is optionally present based on the value of the Trigger Type field (see 9.3.1.22.2 (Basic Trigger frame format) to 9.3.1.22.9 (NFRP Trigger frame format)).