IEEE P802.11
Wireless LANs

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| Resolution for CC36 CIDs related to r-TWT low-lat traffic differentiation 35.7.2.1 |
| Date: November, 2021 |
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 Abstract

This submission proposes resolutions for the following CIDs related to section “35.7.2.1 Latency sensitive traffic differentiation” for TGbe (CC36):

4155, 4431, 4785, 4935, 5519, 6510, 6543, 6780, 7084, 7431, 7432, 7469, 7633, 7634, 7857

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: removed some CIDs that were inadvertently included
* Rev 2: removed CIDs 5953 and 6511. Added a note to mention ML SCS can also be used to differentiate latency sensitive traffic. Added CIDs 6780 and 7084.
* Rev 3: added the CID tags

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.***

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| **CID** | **Commenter** | **Section** | **Page.Line** | **Comment** | **Proposed Change** | **Resolution** |
| 4155 | Alfred Asterjadhi | 35.6.2.1 | 298.27 | The mechanism that differentiates latency sensitive traffic from other types of traffic is actually missing. Need to expand a little bit more on this particular subclause. | As in comment. | **Revised**Agree in principle with the comment. Proposed resolution is to describe the mechanisms the STA can use to serve QoS to the latency sensitive traffic.**TGbe editor, please make changes as shown in doc 11-21/1902r3** |
| 4431 | Arik Klein | 35.6.2.1 | 298.27 | Please add the missing mechanism that differentiates latency sensitive traffic from other types of traffic | As in comment. | **Revised**Agree in principle with the comment. Proposed resolution is to describe the mechanisms the STA can use to serve QoS to the latency sensitive traffic.**TGbe editor, please make changes as shown in doc 11-21/1902r3** |
| 4785 | Dana Ciochina | 35.6.2.1 | 298.27 | This subclause defines a mechanism that differentiates latency sensitive traffic from other types of traffic. - No mechanism is defined | please define a mechanism to provide the differentiation between low latency and other types of traffic | **Revised**Agree in principle with the comment. Proposed resolution is to describe the mechanisms the STA can use to serve QoS to the latency sensitive traffic.**TGbe editor, please make changes as shown in doc 11-21/1902r3** |
| 4935 | Eldad Perahia | 35.6.2.1 | 298.27 | without a definition for latency sensitive traffic, can anything be latency sensitive? | as in comment | **Reject**The comment is actually a question. It’s not clear what is the proposed resolution.**TGbe editor, please make changes as shown in doc 11-21/1902r3** |
| 5519 | Jinsoo Choi | 35.6.2.1 | 298.25 | Need to define a mechanism that differentiates latency sensitive traffic from other types of traffic. TID based differentiation/mapping of the low latency traffic can be one of example for the purpose. | As in comment | **Revised**Agree in principle with the comment. Proposed resolution is to describe the mechanisms the STA can use to serve QoS to the latency sensitive traffic.**TGbe editor, please make changes as shown in doc 11-21/1902r3** |
| 6510 | Pascal VIGER | 35.6.2.1 | 298.25 | "Latency sensitive traffic differentiation" is not clear enough, as it could rely to a type of traffic (from application) or a transportation (network point of view) of such traffic. Iy is not clear where the differenciation occurs. | as in comment.Please precise the 'traffic' | **Revised**Agree in principle with the comment. Proposed resolution is to describe the mechanisms the STA can use to serve QoS to the latency sensitive traffic.**TGbe editor, please make changes as shown in doc 11-21/1902r3** |
| 6543 | Patrice Nezou | 35.6.2.1 | 297.62 | This subclause defines a mechanism that differentiates latency sensitive traffic from other types of traffic.Comment: there is neither definition of the latency sensitive traffic nor mapping with TID and/or access queues to enable efficient management of latency sensitive data frames. | As in comment | **Revised**Agree in principle with the comment. Proposed resolution is to describe the mechanisms the STA can use to serve QoS to the latency sensitive traffic.**TGbe editor, please make changes as shown in doc 11-21/1902r3** |
| 6780 | Romain GUIGNARD | 35.6.1 | 297.60 | restricted TWT is for latnecy sensitive traffic but the current document does not specify clearly what is a low latency traffic. | Please define the requirement of a low latency traffic or a mean to define it. | **Rejected**The definition of low latency traffic is not needed. However, this CR added more text in the section to clarify how to identify low-lat traffic. |
| 7084 | Sigurd Schelstraete | 35.6.1 | 298.25 | "This subclause defines a mechanism that differentiates latency sensitive traffic from other types of traffic.". Actually it doesn't, but hopefully it will ... | Complete section 35.6.2.1 | **Revised**Agree in principle with the comment. Proposed resolution is to describe the mechanisms the STA can use to serve QoS to the latency sensitive traffic.**TGbe editor, please make changes as shown in doc 11-21/1902r3** |
| 7431 | SunHee Baek | 35.6.2.1 | 298.27 | During restricted TWT, latency sensitive traffic is shared between AP and STA. There is needed to define a term to call latency sensitive traffic such as low latency data (LLD). | As in comment. | **Rejected**Not clear why the term is needed and how to use the term. |
| 7432 | SunHee Baek | 35.6.2.1 | 298.27 | AP cannot recognize the total transmitting amount of latency sensitive traffic although TSPEC can deliver the type of the traffic. For AP to assign the restricted TWT SP to Low Latency STA, we need a way to indicate the total amount from the STA to AP. By defining it (e.g., like BSR) for LLD, it would be helpuful to AP in allocating restricted TWT SP. | As in comment. | **Rejected**BSR can be reported per TID, which identifies the latency sensitive traffic flow. |
| 7469 | Thomas Handte | 35.6.2.1 | 298.27 | 35.6.2.1 seems to be a place holder subclause | Please add content | **Revised**Agree in principle with the comment. Proposed resolution is to describe the mechanisms the STA can use to serve QoS to the latency sensitive traffic.**TGbe editor, please make changes as shown in doc 11-21/1902r3** |
| 7633 | Tomoko Adachi | 35.6.2.1 | 0.00 | The mechanism that differentiates latency sensitive traffic from other types of traffic needs to be defined. | As in comment. | **Revised**Agree in principle with the comment. Proposed resolution is to describe the mechanisms the STA can use to serve QoS to the latency sensitive traffic.**TGbe editor, please make changes as shown in doc 11-21/1902r3** |
| 7634 | Tomoko Adachi | 35.6.2.1 | 0.00 | The EHT AP should be able to check whether the EHT non-AP STAs that said to support the restricted TWT operation are really following the rule during the restricted TWT service period. | As in comment. | **Rejected**It is not clear what standard based solution is proposed here. The AP can monitor the EHT non-AP STA behavior by implementation means and can disconnect the STA if the STA is not complying with the rTWT rules and/or is abusing the rTWT SPs. |
| 7857 | Yonggang Fang | 35.6.2.1 | 298.27 | This clause is not completed. | Please specify a mechanism to differentiate latency sensitive traffic from others. | **Revised**Agree in principle with the comment. Proposed resolution is to describe the mechanisms the STA can use to serve QoS to the latency sensitive traffic.**TGbe editor, please make changes as shown in doc 11-21/1902r3** |

# Discussion

When an 11be STA intends to support latency sensitive traffic, the STA may request a restricted TWT session with the AP for the latency sensitive traffic flow and specify the TID of the flow.

# Proposed text change

**35.7.2.1 Latency sensitive traffic differentiation for r-TWT**

***TGbe editor: remove the sentence and insert the following text to this subclause as follows:***The latency sensitive traffic is differentiated from other types of traffic during the r-TWT service periods using the UL and/or DL TIDs indicated as part of the r-TWT setup procedure. (#4155, #4431, #4785, #4935, #5519, #6510, #6543, #6780, #7084, #7431, #7432, #7469, #7633, #7634, #7857)

An r-TWT scheduled STA or an r-TWT scheduling AP shall identify the latency sensitive traffic for an r-TWT service period as traffic corresponding to TIDs indicated in the Restricted TWT Traffic Info subfield in the TWT element with the TWT Setup Command field set to Accept TWT, which is delivered by the r-TWT scheduling AP during the r-TWT setup for that service period. (#4155, #4431, #4785, #4935, #5519, #6510, #6543, #6780, #7084, #7431, #7432, #7469, #7633, #7634, #7857)

NOTE— A STA that supports the ML SCS procedure defined in 35.3.21 (Multi-link SCS procedure) can also use the parameters (e.g., TCLAS, TID) conveyed during SCS stream session creation for differentiating latency sensitive traffic.

Do you agree to the resolution provided in doc 11-21/1902r3 for following CIDs?

4155, 4431, 4785, 4935, 5519, 6510, 6543, 6780, 7084, 7431, 7432, 7469, 7633, 7634, 7857