IEEE P802.11  
Wireless LANs

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| CR for CID5859 and CID5971 | | | | |
| Date: 2017-09-07 | | | | |
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Abstract

The submission resolves CID5958 and CID5971. The submission 11-17-1338r0 is a presentation for these comment resolutions.

These CIDs discuss on the U-APSD and PS-Poll use with TWT. The submission contains normative text to:

1. Clarify that the individual TWT SP termination terminates also an ongoing APSD SP and pending data frame as a response to PS-Poll frame.
   * Otherwise, the TWT responding STA may need to transmit additional MPDU or QoS Null frame with EOSP field set to value 1 to terminate the APSD SP.
2. Clarify that initiation of the announced TWT SP is not needed, if the STA has already a SP ongoing, or it has transmitted a PS-Poll but not received a DL frame as a response.

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| CID | Page | Clause | Comment | Proposed Change | Resolution |
| 5958 | 141.12 | 11.2.2.6 | The use of PS-Poll frame together with the TWT power save mechanism could be clarified and justified. The PS-Poll should be used only with announced TWT. The TWT SP intiated by PS-Poll should be terminated like any TWT SP, i.e. no data should be transmitted outside of TWT SP. | Please clarify how TWT and PS-Poll frames are used. It would make sense that if a PS-Poll frame is transmitted within the TWT SP and termiantion of the TWT SP also cancels the solicited DL PPDU transmission regardless if it has not been yet transmitted. | Revise – agree in principle that TWT SP termination cancels also PS-Poll frames to wait for DL frame as response to the frame.  Disagree with the principle that PS-poll frame needs to be transmitted within TWT SP. The PS-Poll, frames to transition to active/power save mode and APSD trigger frame may be transmitted at any time.  TGax editor to make changes as shown in clause 27.7.2 11-17/1138r6 and the changes shown in 17/1337r1 marked with CID 5958. |
| 5971 | 141.58 | 11.2.2.6 | It is unclear can an HE non-AP STA operate in both U-APSD and TWT at the same time. | The TWT power save mechanism is superior to U-APSD power save. For instance, scheduling support and faster service period termination make TWT better. If TWT is supported by the AP and the non-AP STA, the STA shall operate only in TWT mode. | Reject – disagree in principle with the comment. PS-Poll, active and power save mode transition signaling and APSD trigger frame may be transmitted at any time. The TWT SP termination terminates also possibly ongoing U-APSD SP and pending PS-Poll frames.  TGax editor to make changes as shown in 11-17/1337r1 that are marked with CID 5971. |

**27.7.2 Individual TWT agreements**

***Instructions to ax Editor: make the following changes to the eighth paragraph of the clause.***

A TWT requesting STA that is U-APSD capable shall follow the rules as defined in 11.2.2.5 (Power management with APSD), except that all the additional rules defined in subclause supersede all the respective rules. (#5971)

**27.7.5 PS operation during TWT SPs**

***Instructions to ax Editor: Add the following text after the fourth paragraph of the clause. The clause is presented in the submission [11-17-1138r6]***

A termination of an TWT SP shall also terminate an ongoing U-APSD SP of the TWT requesting STA and shall cancel the pending MPDU transmission as a response to PS\_Poll frame. (#5859) (#5971)