IEEE P802.11
Wireless LANs

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| Comment resolutions for 27.7.6 |
| Date: 2018-09-01 |
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Abstract

This submission proposes resolutions for multiple comments related to TGax D3.0 with the following CIDs (1 CIDs):

* 16466

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: Some changes that are highlighted in green.

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

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

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

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| **CID** | **Commenter** | **P.L** | **Comment** | **Proposed Change** | **Resolution** |
| 16466 | Ming Gan | 330.24 | What is AdjustedMinimumTBTTWakeDuration? It only appears one time in 11ax D3.0 | As in comment | Revised –Agree in principle with the comment. Proposed resolution clarifies this aspect. Also fixed a couple of bugs in the subclause as well related to the TWT request and TWT response which are not actual “frames”.TGax editor to make the changes shown in 11-18/1466r1 under all headings that include CID 16466. |

**Discussion: *None.***

* Negotiation of wake TBTT and wake interval

**TGax Editor: *Change the paragraph below of this subclause as follows (#CID16466):***

A TWT scheduled STA that intends to operate in power save mode (see 11.2.2.2 (STA Power Management modes)) may transmit a TWT request to the TWT scheduling AP that identifies the wake TBTT of the first Beacon frame and the wake interval between subsequent Beacon frames it intends to receive. The TWT request shall contain*(#16466)*:

* The Negotiation Type subfield equal to 1 and the TWT Command field to Suggest TWT or Demand TWT
* The requested first wake TBTT in the Target Wake Time field
* The requested wake interval between consecutive TBTTs in the TWT Wake Interval Mantissa and TWT Wake Interval Exponent fields
* The requested TBTT wake duration in the Nominal Minimum TWT Wake Duration field
* All other fields in the TWT element are reserved.(#12528, #11849)

A TWT scheduling AP that receives a TWT request from a STA whose value of the Negotiation Type subfield is 1 shall respond with a TWT response that contains either Accept TWT, Alternate TWT,(#12095) or Reject TWT in the TWT Command field and, in the case of an Accept TWT, it shall also contain*(#16466)*:

* The Negotiation Type subfield equal to 1
* The allocated first wake TBTT in the Target Wake Time field
* The allocated wake interval between consecutive TBTTs in the TWT Wake Interval Mantissa and TWT Wake Interval Exponent fields
* The allocated TBTT wake duration in the Nominal Minimum TWT Wake Duration field
* All other fields in the TWT element are reserved(#12528, 11849)

After successfully completing the negotiation, the TWT scheduled STA may go to doze state until its TSF matches the next negotiated wake TBTT provided that the STA is in power save mode, and no other condition requires the STA to remain awake. The TWT scheduled STA shall be in the awake state to listen to Beacon frames transmitted at negotiated wake TBTTs and shall operate as described in 27.7.3.3 (Rules for TWT scheduled STA).

**TGax Editor: *Change the paragraph below of this subclause as follows (#CID16466):***

If the TWT scheduled STA receives a Beacon frame from the TWT scheduling AP at or after TBTT, the TWT scheduled STA may go to doze state until the next wake TBTT if no other condition requires the STA to remain awake.

The TWT scheduled STA may go to doze state after a Nominal Minimum TBTT Wake Duration time has elapsed from the TBTT start time if no other condition requires the STA to remain awake.*(#16466)*

Either STA that is a party to an established wake TBTT agreement can tear down the wake TBTT agreement by following the tear down procedure described in 10.43.8 (TWT Teardown) and by setting the Negotiation Type subfield to 1 in the TWT Teardown frame.(#13040, #12529)

Table 27-8 (Wake TBTT negotiation exchanges)(#12096) summarizes the interactions between devices that negotiate a Wake TBTT agreement.

**TGax Editor: *Change the table below of this subclause as follows (#CID16466):***

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| * Wake TBTT negotiation exchanges
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| TWT Setup Command field in an initiating frame(#11377) | TWT Setup Command field in a response frame(#11377) | Condition after the completion of the exchange |
| Request TWT | Accept TWT or Alternate TWT or Dictate TWT or Reject TWT or no response | This exchange is not allowed. |
| Demand TWT or Suggest TWT | Accept TWT | A Wake TBTT agreement has been created with the Wake TBTT parameters indicated in the initiating frame. |
| Demand TWT or Suggest TWT | Reject TWT | No Wake TBTT agreement has been created. |
| Demand TWT or Suggest TWT | Alternate TWT | No Wake TBTT agreement has been created. The TWT scheduling AP*(#16466)* is offering an alternative set of parameters vs. those indicated in the initiating frame. The TWT scheduled STA can send a new request with any set of Wake TBTT parameters and the responder might create a Wake TBTT agreement using those parameters.The TWT scheduled STA is unlikely to send a new request if the TWT Setup Command is Demand TWT and is very likely to send a new request if the TWT Setup Command is Suggest TWT.(#12530, #12246) |
| NOTE 1—The Negotiation Type field of the TWT element contained in these frames is equal to 1. NOTE 2—The initiating frame and response frame settings not listed in the tables in 10.43 (Target wake time (TWT)) or 27.7 (TWT operation) are not allowed. The initiating frame is a TWT request and the response frame is a TWT response.(#11377, #13779, #11035, #12045) |