IEEE P802.11
Wireless LANs

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| TGah D0.1 Comment Resolution on MAC |
| Date: 2013-09-18 |
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Abstract

This document provides comment resolution for TGah Draft 0.1 Comment Collection 9 with CID773 and 774.

Interpretation of a Motion to Adopt

A motion to approve this submission means that the editing instructions in the TGah Draft to include a sentense in term of the extension of TSF timer accuracy field and the corresponding table.

(This introduction is not part of the adopted material.)

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **CID** | **P** | **L** | **Cl** | **Submission** | **Comment** | **Proposed Change** | **Resolution** |
| 773 | 95 | 56 | 8.4.2.170p | 11-13/1035r1 | Clarify the meaning of TSF clock accuracy if it has to be always taken account as the absolute error band (initial tolerance + drift rate) for wake up scheduling meaning always fully early waking up, or initial error band without drift rate (stability). | Clarify as in comment. If it is absolute error band, how to use this information to schedule the wake up time in term of +/-0.01% (100ppm) shoulld be defined, e.g. substitute +/-100ppm with +/-(received value) ppm, or additive usage like as +/-(received value + self tolerance) ppm (always early waking up in either ways), and clarify if +/-0.01% can be the absolute maximum. If it is the initial error band not including stability, describe how to use, e.g. the received value is added with TSF error ratio estimation by each partial timestamp reception (Γû│partial TSF/Interval of partial TSF reception). Or otherwise, make it selectable to specify (1) absolute total error band (including drift rate), (2) Initial error only, or (3) stability (Drift rate) only. | Rejected.  |
| 774 | 96 | 20 | 8.4.2.170p | 11-13/1035r1 | TSF clock stability information is instrumental for power saving. | TSF timer accuracy element to possibly include TSF stability entry. | Revised TSF accuracy field is defined as 11-13/1035r1, to be able to inform either an absolute accuracy or a relative stability, and to ensure further extension in future. |

**Discussion:***The commenter requests in CID773 to clarify if the TSF accuracy means an absolute accuracy including the frequency offset and drift rate or a stability excluding frequency offset, and proposes in CID774 to include TSF stability. As the definition of TSF timer accuracy in the base standard has not to be changed, even if new TSF accuracy element is introduced. So CID773 is rejected, however ensuring the future extention and optional inclusion of TSF timer stability is beneficial. Hence, CID774 is revised.*

**Instruction to TGah editor: *Please modify 8.4.2.170o TSF Timer Accuracy element from Page 101 Line 24 of the D0.2 text, and insert a new Table 8-191f, titled as TSF Timer Accuracy encoding, as follows***

*The TSF Timer Accuracy element, shown in Figure 8-401dl (TSF Timer Accuracy element format),*

*specifies fields describing the accuracy of TSF timer. This information is used by a receiving STA to*

*estimate the clock accuracy of the transmitting STA and to schedule wake-up time for beacon reception by*

*taking this clock accuracy into account.*

|  |  |  |
| --- | --- | --- |
| ElementID | Length | TSF TimerAccuracy ***field*** |

 Octets: 1 1 1

**Figure 8-401dl—TSF Timer Accuracy element format**

*The Element ID field is set to the value for TSF Timer Accuracy element defined in Table 8-55 (Element*

*IDs).*

*The Length field is set to 1.*

*The TSF Timer Accuracy field is a 1 octet ~~signed integer~~ information that specifies the accuracy of the TSF timer of transmitting STA* ***if Bit 7 equal to 0, and the stability of TSF timer excluding frequency offset for the duration until next DTIM if Bit 7equal to 1 and Bit 6 equal to 0, as shown in Table 8-191f. The condition both Bit 7 and Bit 6 are equal to 1 is reserved for future extention.*** *The unit of the TSF Timer Accuracy field is PPM.* ***The range of TSF timer accuracy and stability are 1 to 100 ppm and 1 to 63 ppm, respectively.***

***Table 8-191f—TSF Timer Accuracy field encoding***

|  |  |  |  |
| --- | --- | --- | --- |
| **Bit 0-5** | **Bit 6** | **Bit 7** | **Usage** |
| 1-127 | 0 | Absolute Accuracy (effective value 1-100) in unit of ppm |
| 1-63 | 0 | 1 | Stability (1-63) in unit of ppm (for duration until next DTIM) |
| 1-63 | 1 | 1 | Reserved |