IEEE P802.11
Wireless LANs

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| Comment Resolutions on Clause 8.4.2.187 for LB207 |
| Date: 2015-03-08 |
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Abstract

This submission proposes comment resolutions for the following comments:

6120, 6161 and 6166

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

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

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

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| **CID** | **Clause Num** | **P** | **L** | **Comment** | **Propose Change** | **Resolution** |
| 6120 | 8.4.2.187 | 133 | 17 | Wrong font for "T". Harmonize the font of the first word to the rest of it. | Harmonize the font of the first word to the rest of it. | RevisedTGah editor changes the font “T” in “**T**he S1G Open-Loop Link Margin” in line 17 in page 133. |
| 6161 | 8.4.2.187 | 132 | 54 | The S1G Open-Loop Link Margin Index element says it is included in a "Beacon frame or Probe Response frame". However, neither of these frame formats (8.3.3.2 or 8.3.3.10) have been modified to show the inclusion of this element. Further, it seems this element should be in S1G Beacons, not (legacy) | Clarify the statement in 8.4.2.187, or add this element to the appropriate frame formats. | RevisedTGah editor changes “The S1G Open-Loop Link Margin Index element is included in a Beacon frame or Probe Response frame without a corresponding request.” To “The S1G Open-Loop Link Margin Index element is optionally included in an S1G Beacon frame or a Probe Response frame without a corresponding request.”TGah editor also changes the table 8-42 as show in 11-15/0397r3.  |
| 6166 | 8.4.2.170a | 133 | 17 | Regarding CIDs 3523, 3524 and 3525 of LB 203, the nomenclature change resolves the conflict with the existing Link Margin definition in IEEE 902.11-2012. However, the definition for the Open Loop Link Margin Index is still incorrect. Reviewing document 802.11-12/0645 helps set the context for the definition of the Open Loop Link Margin Index. It would help implementers to see more of this detail to avoid misinterpretations that could cause incompatible implementations between vendors.However, the main issue remains that the Open Loop Link Margin Index is still defined as dBm, which is incorrect. According to the definition this index is the sum of the AP output power, measured in dBm plus the the Received Sensitivity of the AP, also measured in dBm. The sum of two Power values in dBm is NOT another power value measured in dBm. This is mathematically incorrect. the sum of two power values measured in dBm is a unitless value measured in dB. Therefore the Open Loop Link Margin Index is actually measured in dB. This is described in IEEE 802.11-14/1508, and confirmed as shown in slide 7 of IEEE 802.11-12/0645 as submitted by the original proponents. The IEEE 802.11-14/0645 document correctly describes the Open Loop Link Margin in terms of dB.Furthermore, slide 7 also correctly describes the granularity of the Open Loop Link Margin Index in units of 0.5 dB, exactly as I originally described in CIDs 3523 and 3524 of LB 203. | 1. Change all four instances in the two paragraphs that start on lines 30 and line 38 of page 133 of Draft P802.11ah\_D4.0.pdf from dBm to dB.2. Change the description of the range of values in the paragraph that starts on line 38 of page 133 of Draft P802.11ah\_D4.0.pdf to match the description in slide 7 IEEE 802.11-12/0645, or as described in the proposed resolution to CID 3524, which is essentially identical to slide 7.3. Include more of the derivation shown in slide 6 of IEEE 802.11-12/0645 in the paragraph starting on line 17 of page 133 of Draft P802.11ah\_D4.0.pdf. This derivation is similar to the proposed resolutions in CIDs 3523 and 3525 of LB 203. | Revised.Discussion: Firstly, the commenter seems not commenting on Draft 4.0. The clause is not correct. The clause should be 8.4.2.187.1. Accepted. TGah editor changes “dBm” to “dB” starting from line 30 to lne 45 in page 133.
2. Rejected: Open-Loop Link Margin Index is clearly defined in P802.11ah\_D4.0.
3. Rejected: Detailed derivations are not necessary as far as descriptions are clear. There are many formulas in 802.11 standards that do not include detailed derivations for concision.
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***TGah editor to insert the following row to Table 8-42 (Probe Response frame body):***

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| 79 | S1G Open-Loop Link Margin Index element | The S1G Open-Loop Link Margin Index element is optionally present if dot11S1GOptionImplemented is true; otherwise not present. |