IEEE P802.11
Wireless LANs

|  |
| --- |
| Some Eastlake 11ak SB Comment Resolutions |
| Date: 2017-07-12 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Donald Eastlake | Huawei Technologies | 155 Beaver Street, Milford, MA 01757 USA | +1 508 333 2270 | d3e3e3@gmail.com |
|  |  |  |  |  |

Abstract

Some suggested resolutions for 802.11ak initial Sponsor Ballot comments most of which were assigned to Donald Eastlake.

**Table of Contents**

CID 2040 2

CID 2098 2

CID 2149 3

CID 2033, 2035 3

GLK Capabilities Changes 4

Format Determination 6

# CID 2040

**Comment:** 802.1Qbz-2016 is not cited in text. Is it cited in the base or another amendment? If so, then there is no need to cite in text.

**Proposed Change: —**

**Discussion:** 802.1Qbz-2016 does not appear to be cited in the base or another amendment. If they did cite it, they should have added it to Clause 2 and they do not. There is no reason for 11ak to add it if 11ak does not cite it.

**Resolution:** Revise. Delete the reference to 802.1Qbz-2016 from Clause 2 (Normative References).

# CID 2098

**Comment:** A BU is, in effect, an MSDU. Therefore, it can't be "SYNRA" or "non-SYNRA". Reword. Above, we have used, "that arrive via the DS" to separate non-GLK group addressed MSDUs from those that will get SYNRA handling.

**Proposed Change:** Reword all uses of "non-SYNRA" being applied to BUs in bullet (f). (7 occurances) Refer to the MSDU being received via the DS rather than whether they are SYNRA or not. (Do we need to worry about group addressed Management frames?) Same thing throughout 11.2.3.7.

**Discussion:** This is a comment on 11.2.3.6 item “f” that also covers 11.2.3.7 but what about 11.2.3.3 and 11.2.3.4 and other parts of 11.2.3.6 and the draft? There are also occurrences of the following: “non-SYNRA group addressed traffic”.

**Resolution:** Revise. Replace occurrences in 11.2.3 and subclauses thereof as follows:

 “non-SYNRA group addressed BUs” -> “group addressed BUs that will be delivered using non-SYNRA MPDUs”

 “non-SYNRA group addressed MSDUs” -> “group addressed MSDUs that will be delivered using non-SYNRA MPDUs”

# CID 2149

**Comment:** It looks like the newly defined GLK Capabilities element is used to transmit one bit of information with three octets. That is both wasting airtime (encoding 1 bit into 24 bits) and Element ID values. Wouldn't it have been sufficient to add this bit into the Extended Capabilities element instead?

**Proposed Change:** Replace GLK Capabilities element with GLK-GCR bit in the Extended Capabilities element.

**Discusion:** We were using four bits in GLK Capabilities and the presence of the IE is itself an indication so we were indicating 5 things. Now, we use only one bit which, plus the indication provided by presence, means we are only indicating 2 things. It turns out that Extended Capability bits 1 and 3 have never been assigned to anything so we can make them be the indications of GLK and GLK-GCR support respectively.

**Resolution:** Revise. Incorporate changes from the “GLK Capabilities Changes” Section of 11-17/1117r3.

# CID 2033, 2035

**Comment 2033:** Bullet 2, sentence is structured: if v or w and x or y and z. I am left confused about this particular condition.

**Proposed Change 2033:** Please rewrite this sentence so the condition is clear.

**Comment 2035:** Does the receiving STA have enough information to choose the correct encoding to decode every received frame? i.e. is 5.1.4 condition #2 deterministic and calculatable at the receiver?

**Proposed Change 2035: —**

**Discussion:** It would be clearer if the decision were made by a more a step-by-step algorithmic procedure.

**Resolution:** Revise.Replace the inserted text in clause 5.1.4 with new inserted text given in the “Format Determination” Section of 11-17/1117r3.

# GLK Capabilities Changes

Make the following ten changes to the 802.11ak draft:

1. Delete all changes to clause 6.3.3.3 (MLME-SCAN.confirm).
2. Delete GLK Capabilities from the parameter list and the accompanying table in clauses
6.3.7.2.2 (Semantics of the service primitive)
6.3.7.3.2 (Semantics of the service primitive)
6.3.7.4.2 (Semantics of the service primitive)
6.3.7.5.2 (Semantics of the service primitive)
6.3.8.2.2 (Semantics of the service primitive)
6.3.8.3.2 (Semantics of the service primitive)
6.3.8.4.2 (Semantics of the service primitive)
6.3.8.5.2 (Semantics of the service primitive)
3. Delete all changes to the following clauses:
6.3.11 (Start)
6.3.27 (Management of direct links)
9.3.3.3 (Beacon frame format)
4. Delete GLK Capabilities from the table of inserted rows in following clauses:
9.3.3.6 (Association Request frame format)
9.3.3.7 (Association Response frame format)
9.3.3.8 (Reassociation Request frame format)
9.3.3.9 (Reassociation Response frame format)
5. Delete all changes to the following clauses:
9.3.3.10 (Probe Request frame format)
9.3.3.11 (Probe Response frame format)
9.3.4.2 (DMG Beacon)
6. In clause 9.4.2.1 (General) delete the “GLK Capabilities” element.
7. In clause 9.4.2.27 (Extended Capabilities element) change the entries for bits 1 and 3 as follows:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Bit** | **Information** | **Notes** |  |
|  | 1 | GLK  | The STA sets the GLK field to 1 when dot11GLKImplemented is true and sets it to 0 otherwise. |  |
|  | 3 | GLK-GCR  | The STA sets the GLK-GCR field to 1 when dot11GLKGCRImplemented is true and sets it to 0 otherwise. |  |

1. Delete new clause 9.4.2.219 (GLK Capabilities element) and renumber new clause 9.4.2.220 (GLK-GCR Parameters element).
2. Delete all changes to the following clauses:
9.6.4 DLS (Action frame details)
9.6.8 (Public Action details)
9.6.13 (TDLS Action field formats)
9.6.16 (Self-protected Action frame details)
3. In clause 11.24.16.3.1 (Overview) change the inserted text as follows:
When a GLK STA implements the GLK-GCR procedures defined in 11.24.16.4.2 (GLK-GCR unsolicited retry) or 11.24.16.4.3 (GLK-GCR block ack), it shall set dot11GLKGCRImplemented to true; otherwise dot11GLKGCRImplemented shall be set to false. When dot11GLKGCRImplemented is true the GLK-GCR ~~Supported~~ ~~bit~~ field shall be set to 1 in the ~~GLK Capabilities Flags field in the GLK~~ Extended Capabilities element, to indicate support for GLK-GCR, otherwise the ~~bit~~ field shall be set to 0.
4. Change the first paragraph of new clause 11.49.1 (General) as follows:
When dot11GLKImplemented is true, the STA is a GLK STA and dot11QosOptionImplemented shall be true. A STA advertises its GLK capability using the GLK field of the Extended Capabilities element (see 9.4.2.~~219~~27 (~~GLK~~ Extended Capabilities element)). dot11GLKImplemented is true if and only if a STA implements the GLK facility.

# Format Determination

MSDUs are formatted in accordance with LPD as specified in IEEE Std 802-2014 (Overview and Architecture) or with EPD as specified in IEEE Std 802-2014 (Overview and Architecture), as determined by the first condition below that is true. After a true condition has been found, subsequent conditions are ignored.

1. In the 5.9 GHz bands (see E.2.3 (5.9 GHz band in the United States (5.850–5.925 GHz)) and E.2.4 (5.9 GHz band in Europe (5.855–5.925 GHz))), use EPD.
2. For OCB communications outside of the 5.9 GHz bands, use LPD.
3. Within Data frames with individually addressed RAs, if both the transmitter and receiver are EPD STAs, use EPD.
4. Within Data frames with individually addressed RAs, if either the transmitter or the receiver are non-EPD STAs, use LPD
5. If the transmitting AP will only accept association from an EPD STA, use EPD.
6. If the transmitting mesh STA will only peer with an EPD mesh STA, use EPD.
7. For all other cases, use LPD.