IEEE P802.11
Wireless LANs

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| Yet More 11ak LB218 CIDs Assigned Donald Eastlake |
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Abstract

Proposed resolutions for the six remaining LB218 comments assigned to Donald Eastlake

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# CID 1069

**Comment:** How EPD works in an MBSS needs more consideration. For example, the MPDU format probably needs to be agreed between the two ends of the communication, but not by every (mesh) node along the path. How this happens is not clear in the text. Alternatively, the text could be interpreted to say this is a hop-by-hop negotiation, which implies the potential for a lot of format translations, which doesn't make sense.

**Proposed Change:** This needs discussion and a submission.

**Resolution: Revise:** Drop GLK as part of the Mesh Profile (Clause 14.2.3). Add EPD as part of the Mesh Profile and require EPD Mesh STAs to assert the EPD required in the Supported Rates and BSS Membership Selectors element and the Extended version of that element for backwards compatibility. See text in 11-16/1507r2.

**Changes to Draft 2.5 Text:**

### 14.2.3 Mesh profile

***Insert a new item in the mesh profile list as follows:***

g) EPD support — specified by dot11EPDImplemented

A Mesh STA with dot11EPDImplemented set to true shall set dot11EPDRequired to true.

**Changes to Draft Annex C Text:**

dot11GLKRequired OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-write

STATUS current

dot11EPDRequired OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-write

STATUS current

# CID 1134

**Comment:** I don't know what this "media priority" thing is, nor which direction we are talking about (802.11 to bridge or bridge to 802.11)

**Proposed Change:** Define the term "media priority" (shouldn't it be "medium priority" anyway?) and clarify what direction "received on a GLK ISS SAP" means

**Resolution: Revise:** Change text as shown in 11-16/1507r2.

**Changes to Draft 2.5 Introduction text:**

1. Priority code points in IEEE Std 802.1Q have a different default meaning that they do in IEEE Std 802.1D. For example, in IEEE Std 802.1Q, priority 2 is, by default, higher priority than priority 1 while in IEEE Std 802.1D it is lower. Thus it is suggested in Annex V that GLK associations use a Priority code point to user priority (UP) mapping in their corresponding IEEE Std 802.1Q bridge port.

**Changes to Draft 2.5 Clause 5.1.1.2 text:**

The QoS facility supports eight priority values, referred to as *UPs*. The values a UP may take are the integer values from 0 to 7 and are identical to the IEEE Std 802.1D priority tags. An MSDU with a particular UP is said to belong to a traffic category (TC) with that UP. The UP is provided with each MSDU at the medium access control service access point (MAC SAP) either directly, in the UP parameter, or indirectly, in a TSPEC or SCS Descriptor element designated by the UP parameter. For an MSDU received on a Internal Sublayer Service SAP associated with a general link, the UP will be determined by the IEEE Std 802.1AC GLK convergence function based on the priority parameter of the M\_UNITDATA.request. (See Annex R (Interworking with external networks) for recommended mapping guidelines.)

# CID 1272

**Comment:** "any of a 3-address frame 22

format, a 4-address frame format or a basic A-MSDU format." confuses MPDUs and A-MSDUs, which are at different layers. An A-MSDU is necessarily sent using 3- or 4-address format. Similarly in surrounding parens

**Proposed Change:** Be clear on the set of options (3- and/or 4-addr) in each case (in A-MSDU or standalone)

Resolution: Revise: Change text as in 11-16/1507r3.

**Changes to Draft 2.5 Clause 10.57 text:**

## 10.57 Addressing of GLK data frame transmission

GLK transmissions of MSDUs with an individual destination address that is not in the same BSS shall use either a four-address MAC header formatted frame or a frame containing a Basic A-MSDU.

GLK transmissions of MSDUs with an individual destination address that is in the same BSS shall use either a three-address MAC header formatted frame or a four-address MAC header formatted frame.

GLK transmissions of MSDUs with a group destination address shall use either a four-address MAC header formatted frame or a frame containing a Basic A-MSDU.

# CID 1284

**Comment:** Either these rules are the same as the normal rules or they should be with the other rules

**Proposed Change:** Either just delete, or move to the addressing clause, as appropriate

**Resolution: Revise:** It was felt that the text commented on has too much semantics to be put into Clause 9; however, two references to clause 10.57 have already been added in Clause 9.3.2.1.2, one in a NOTE and one in normative text. In addition, change text in the first paragraph of 9.3.2.1.2 as follows:

 The content of the address fields is defined in Table 9-26 (Address field contents). Where the content of the fields transmitted by mesh STAs is defined in 9.3.5 (Frame addressing in an MBSS) and the contents of the fields transmitted by GLK STAs is defined in 10.57 (Addressing of GLK data frame transmission).

# CID 1328

**Comment:** "In the 5.9 GHz bands where EPD is used (see E.2.3 (5.9 GHz band in the United States 7

(5.850-5.925 GHz)) and E.2.4 (5.9 GHz band in Europe (5.855-5.925 GHz))). " STAs are presumably not required to have dot11EPDImplemented true or to set the EPD bit

**Proposed Change:** Make this clear

**Resolution: Revise:** Change draft text as specified in 11-16/1507r2.

**Changes to Draft 2.5 Clause 4.3.23.2:**

An EPD STA is a STA that supports EPD format MSDUs. EPD STAs, other than those operating in the 5.9 GHz bands, indicate their support through a bit in the Capability Information, DMG STA Capability Information, and Relay Capabilities fields. An EPD STA, when transmitting an MPDU with an individually addressed RA, uses EPD if the recipient supports EPD; otherwise such individually addressed transmissions use LPD.

In MPDUs transmitted with group address RA, the choice between of EPD or LPD format of MSDUs in the MPDU is controlled by the policy of the BSS. (see 5.1.4 (MSDU format)).

**Changes to Draft 2.5 Clause 11.53 first paragraph text:**

For an EPD STA not operating in the 5.9 GHz bands, dot11EPDImplemented is true;

for a non-EPD STA, dot11EPDImplemented is false or not present.

EPD STAs not operating in the 5.9 GHz bands shall set to one the EPD subfield in the Capability Information, and DMG Capability Information.

# CID 1343

**Comment:** So what does Media Priority 2 map to?

**Proposed Change:** Surely what you're trying to do here is to make the UP order 12034567 become the order 01234567? So the table should have rows saying 1<->0, 2<->1, 0<->2 and leave 3-7 mapped to themselves

**Resolution: Revise:** See changes to draft text in 11-16/1507r2.

**Changes to Draft 2.5 text in Clause R.3.4:**

### R.3.4 QoS mapping and GLK

General links connect through a STA to an IEEE Std 802.1D Internal Sublayer Service instance. Note that 802.11 UPs are IEEE Std 802.1D priorities that differ from 802.1Q priorities. For example, in IEEE Std 802.1D priority 2 is lower than priority 0 while in 802.1Q it is higher.

The priority provided to the MS-SAP by the 802.1AC GLK Convergence Function is the UP for the 802.11 MSDU being transmitted. As provided in IEEE Std. 802.1AC, the 802.1AC GLK Convergence Function derives this UP from the priority code point associated with the frame inside the 802.1Q bridge. A suggested mapping is given in Table R-3a (Suggested default priority code point to UP mapping). The 802.1AC GLK Convergence Function might be configured to provide other mappings.

**Table R-3a—Suggested default priority code point to UP mapping**

|  |  |
| --- | --- |
| Priority Code Point | UP |
| 7 | 7 |
| 6 | 6 |
| 5 | 5 |
| 4 | 4 |
| 3 | 3 |
| 2 | 3 |
| 0 | 0 |
| 1 | 1 |

When an MSDU received over the WM is passed up to the corresponding IEEE 802.1AC GLK Convergence Function, the UP passed up is mapped to an 802.1Q network priority code point. A suggested mapping is shown in Table R-3b (Suggested default UP to priority code point mapping).

**Table R-3b—Suggested default UP to priority code point mapping**

|  |  |
| --- | --- |
| UP  | Priority Code Point |
| 7 | 7 |
| 6 | 6 |
| 5 | 5 |
| 4 | 4 |
| 3 | 3 |
| 0 | 0 |
| 2 | 1 |
| 1 | 1 |