IEEE P802.11  
Wireless LANs

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| Letter Ballot 227 Comment Resolution for CID 1404, 1405, 1447, 1456 | | | | |
| Date: 2017-01-17 | | | | |
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This document contains a proposed comment resolution for the 802.11ak WG Letter Ballot 227 for CID: 1404, 1405,1447, 1456

**CIDs 1404, 1405:**

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| **CID** | **Clause Number(C)** | **Page(C)** | **Line(C)** | **Part of No Vote** | **Comment** | **Proposed Change** |
| 1404 | 4.3.27.2 | 7 | 8 | Y | I could be wrong, but the restriction comes from dot11OCBacbivated = TRUE, not the 5. 9 GHz band. | Reword the sentence to reflect dot11OCB activated and not the 5.9 GHz band. At 7.14, |
| 1405 | 11.53 | 76 | 26 | Y | I could be wrong, but the restriction comes from dot11OCBacbivated = TRUE, not the 5. 9 GHz band. | Reword the sentence to reflect dot11OCB activated and not the 5.9 GHz band. |
| 1456 | 11.53 | 76 | 25 | Y | I believe this behavior is for an EPD STA not a non-EPD STA. | Correct the text to: "For a EPD STA not operating in the 5.9 GHz bands, dot11EPDImplemented is true. For a non-EPD STA, dot11EPDImplemented is false or not present." |
| 1447 | 11.53 | 76 | 25 | Y | Typo. | "non-EPD" -> "EPD" |

The clause of concern (4.3.27.2) reads as follows, with the text of concern highlighted 1404, 1405, 1456, 1447:

**4.3.27.2 Ethertype protocol discrimination (EPD)**

IEEE Std 802-2014 describes the two LLC sublayer protocols: Ethertype protocol discrimination (EPD), and LLC protocol discrimination (LPD). LPD is the default for 802.11 MSDUs with the exception of the 5.9 GHz bands where EPD is used for the transmission of all MSDUs (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))). While not the default, EPD may be used in other 802.11 frequency bands only where it is known that all STAs involved support EPD.

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 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).

**11.53 EPD operation**

For a non-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 the EPD subfield in the Capability Information and DMG Capability information to one.

The Supported Rates and BSS Membership Selectors or Extended Supported Rates and BSS Membership Selectors IEs shall include the EPD selector if dot11EPDRequired is true.

See also 5.1.4 (MSDU format).

**From 802.11-2016 (subclauses 5.1.4, E.2.3, and E.2.4):**

**5.1.4 MSDU format**

Logical Link Control (LLC) sublayer entities use the MAC sublayer service to exchange PDUs with peer

LLC sublayer entities. These PDUs are termed MAC sublayer SDUs (MSDUs) when sent to the MAC

sublayer. There are two LLC sublayer protocols used (see IEEE Std 802-2014); LLC Protocol

Discrimination (LPD) (see ISO/IEC 8802-2:1998) and EtherType Protocol Discrimination (EPD) (see

IEEE Std 802.3-2012). LPD is used for transmission of all IEEE 802.11 MSDUs with the exception of the

5.9 GHz bands where EPD is used (see E.2.3 and E.2.4).

**E.2.3 5.9 GHz band in the United States (5.850–5.925 GHz)**

STAs operating with a behavior limit of ITS\_nonmobile\_operations in Table D-2 are required to be

registered with the FCC ULS. The registration includes the following:

— Classification by coverage size, which is defined by EIRP, and

— Identification of channels the STA is permitted to use.

A STA shall be classified for operation in this band by their maximum transmit power capability, as listed in

Table D-3 in D.2.2. A STA shall be compliant with the spectral emission requirements for their class listed

in D.2.3.

A STA shall have dot11OCBActivated equal to true.

EPD as defined in IEEE Std 802-2014 shall be used for transmission of all MSDUs.

**E.2.4 5.9 GHz band in Europe (5.855–5.925 GHz)**

A STA shall have dot11OCBActivated equal to true.

EPD as defined in IEEE Std 802-2014 shall be used for transmission of all MSDUs.

Discussion:

Regarding CIDs 1404 and 1405:

The requirement for EPD operation in the 5.9 bands is a requirement of the band, not due to the configuration of dot11OCBActivated equal to true. It is true that dot11OCBActivated is equal to true for any STA operating in the 5.9 bands, but this this is a result of the restriction in the 5.9 GHz band, not the source of the restriction. Therefore, the precise wording on the use of LPD and EPD as the default format for 802.11 MSDUs follows the current requirements in 802.11-2016.

Regarding CIDs 1456 and 1447:

The statement that this is “For a non-EPD STA …” is incorrect as this should apply “For an EPD STA …”.

Proposed Resolutions:

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| **CID** | **Comment** | **Proposed Change** | **Resolution** |
| 1404 | I could be wrong, but the restriction comes from dot11OCBacbivated = TRUE, not the 5. 9 GHz band. | Reword the sentence to reflect dot11OCB activated and not the 5.9 GHz band. At 7.14, | Reject – the restriction is due to the 5.9 GHz band. (See 11-17/0145r0) |
| 1405 | I could be wrong, but the restriction comes from dot11OCBacbivated = TRUE, not the 5. 9 GHz band. | Reword the sentence to reflect dot11OCB activated and not the 5.9 GHz band. | Reject – the restriction is due to the 5.9 GHz band. (See 11-17/0145r0) |
| 1456 | I believe this behavior is for an EPD STA not a non-EPD STA. | Correct the text to: "For a EPD STA not operating in the 5.9 GHz bands, dot11EPDImplemented is true. For a non-EPD STA, dot11EPDImplemented is false or not present." | Accept, duplicate of 1447 (See 11-17/0145r0) |
| 1447 | Typo. | "non-EPD" -> "EPD" | Accept  Note article must also change “a” to “an” (See 11-17/0145r0) |

**References:**