**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) | |
| Title | Comment resolution on CID 89, 90, 92, and 93 | |
| Date Submitted | 18, May, 2016 | |
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| Re: | LB119\_Consolidated\_Comments | |
| Abstract | This document proposes comment resolution on CID 89, 90, 92, and 93. | |
| Purpose | To be used by the technical editor to apply the necessary changes to the draft. | |
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CID 89, 90, and 92

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| **CID** | **Page** | **Sub-clause** | **Line #** | **Comment** | **Proposed Change** | **Resolution Status** |
| 89 | 6 | 4.3.6 | 20 | The Superframe duration should be cleary described for unassociated phase and associated phase. | Add description on the superframe duration to a) Unassociated Phase and b) Associated Phase. | Revised  See the proposed text in 15-16-0414r0 |
| 90 | 8 | 4.5a.2 | 33 | It is better to provide an example of transmitting the dual beacon. | Add an example of transmitting the dual beacon. | Revised  See the proposed text in 15-16-0414r0 |
| 92 | 25 | 6.3.1.1a | 26 | The Superframe duration should be cleary described for unassociated phase and associated phase. | Add description on the Superframe duration for unassociated phase and associated phase. | Revised  See the proposed text in 15-16-0414r0 |

**Discussion on CIDs**

Clause 4.3.6 describes 802.15.3 superframe, but there is no mention about the superframe duration. Especially the superframe duration in associated phase is different from the superframe duration in unassociated phase, but it is not clearly described in the current spec.

It is possible to transmit dual beacons by the HRCP PNC, and it would be helpful for implementers if an example is provided for informational purpose.

**CID 89: Proposed Text (based on 802.15.3e D02)**

***Change the following paragraphs in clause 4.3.6 as follows:***

a) Unassociated Phase

A HRCP PNC sends a Beacon periodically to initiate a P2P connection. Beacon includes information on the number and duration of the access slots which any target DEV can use by responding with an Association Request. The number of access slots is defined in pNAccessSlot and the duration of each slot is defined in pDAccessSlot. These values are specified in Pairnet Synchronization Parameters field format set in Beacon frames, as shown in Figure 6-50b. A target DEV selects one of access slots to send an Association Request command and sends it at the beginning of the selected access slot.

All frames shall be transmitted using an MCS from the mandatory MCS set during Unassociated Phase.

The superframe duration in unassociated phase equals the interval between transmission start times of beacons with the same PHY mode and is indicated by the Pairnet Synchronization Parameters field in the beacon frame.

b) Associated Phase

All frames are sent by SIFS access or RIFS access.

The superframe in associated phase starts from the transmission start time of the Association Response command that replaces the beacon. The superframe duration is infinite and is terminated by a Disassociation Request command or an ATP expiration.

**CID 90: Proposed Text (based on 802.15.3e D02)**

***Change the last paragraph in clause 4.5a.2 as follows:***

The same process is used for an HRCP PNCC capable DEV that supports only HRCP-OOK mode. If a HRCP PNC capable DEV supports more than one HRCP PHY mode, then it is able to select the type of Pairnet it starts. It may allow connection from each type of DEV by transmitting both the HRCP-SC mode beacon and the HRCP-OOK mode beacon. Figure 4-xx is an example of transmitting dual mode beacons. The number and duration of the access slots and the superframe duration for each PHY mode are indicated by the beacon with the corresponding PHY mode.



**Figure 4-xx—Example of transmitting dual mode beacons**

**CID 90: Proposed Text (based on 802.15.3e D02)**

***Change the following paragraph in clause 6.3.1.1a as follows:***

The Superframe Duration field contains the duration of the current superframe in unassociated phase. The resolution of this field is 1 us and therefore has a range of [0–65535] us. However, the valid range of this field lies between mMinSuperframeDuration and mMaxSuperframeDuration.

NOTE – The superframe duration may be longer than pNAccessSlot\*pDAccessSlot when dual beacons are transmitted.

CID 93

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| **CID** | **Page** | **Sub-clause** | **Line #** | **Comment** | **Proposed Change** | **Resolution Status** |
| 93 | 30 | 6.3.4a.1 | 54 | Padding shoud be added to the figure 6-58e | Add padding to the figure. | Revised  See the proposed text in 15-16-0414r0 |

**Discussion on CID 93**

Padding is defined in clause 7.8.3 (HRCP aggregation) but it is missed from the MAC subframe body format.

**CID 93: Proposed Text (based on 802.15.3e D02)**

***Change the following figure and paragraph in clause 6.3.4a.1 as follows:***

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| **Octets: variable** | 4 | **variable** |
| Payload | FCS | Padding |

**Figure 6-58e—MAC Subframe Body format for aggregation**

The Payload field is a variable length field that carries the information that is to be transferred to a DEV.

The FCS field is defined in 6.2.7.6.

The Padding is defined in 7.8.3.