**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) |
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| Abstract | Text for MAC Functional Description |
| Purpose | Approval |
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***Note to Editor: Black texts represent the existing text in P802.15.8 PAC draft, and the proposed text changes are in blue.***

**5. MAC protocol**

**5.1 MAC functional description**

The MAC sublayer handles all access to the physical radio channel and is responsible for the following tasks:

— Network synchronization

— Supporting peering and de-peering

— Supporting device security

— Employing mechanisms for channel access

— Providing a reliable link between two peer MAC entities

Throughout this subclause, the receipt of a frame is defined as the successful receipt of the frame by the PHY and the successful verification of the frame check sequence (FCS) by the MAC sublayer.

Constants and PAC information base (PIB) attributes that are specified and maintained by the MAC sublayer or PHY layer are written in the text in italics. Constants have a general prefix of “a”, e.g., *aBaseSuperframeDuration*. MAC PIB attributes have a general prefix of “mac”, e.g., *macAckWaitDuration*. PHY PIB attributes have a general prefix of “phy”, e.g., *phyCurrentChannel*.

The next higher layer accesses the services provided by the MAC through the MAC sublayer management entity (MLME) service access point (SAP), as described in 6.2, and the MAC common part sublayer (MCPS) SAP, as described in 6.3. The primitives for the MLME SAP are written in all capital letters prefixed with MLME, e.g., MLME.Scan.confirm. The primitives for the MCPS SAP are written in all capital letters prefixed with MCPS, e.g., MCPS.Data.request.

**5.1.1 Channel access**

This subclause describes the mechanisms for accessing the physical radio channel.

**5.1.1.1 Superframe**

**5.1.1.1.1 CAP**

The CAP shall start on a slot boundary immediately following the Peering Period, and has fixed length of [TBD]. Transmissions within the CAP shall use a contention based random access mechanism described in 5.6.1.

**5.1.1.1.2 CFP**

The CFP shall start on a slot boundary immediately following the CAP, and it shall complete before the end of the active portion of the superframe. Any allocated resource slot (ReS) shall be located within the CFP and occupy contiguous ReSs. The CFP shall therefore grow or shrink depending on the total length of all of the combined ReSs.

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[snip]

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**5.2 MPDU formats**

***End of the proposed text.***