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IEEE 802.15-10-0872-02-004g

**IEEE P802.15
Wireless Personal Area Networks**

Project	IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs)	
Title	Enhanced Beacon Related MAC Primitives	
Date Submitted	Nov., 2010	
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Re:		
Abstract	IEEE 802.15 Task Group TG4g Comment Resolution	
Purpose	To modify the primitives according to the modifications in the enhanced beacon and enhanced beacon request frame formats	
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Release	The contributor acknowledges and accepts that this contribution becomes the property of IEEE and may be made publicly available by P802.15.	

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Text – General Idea of this document

*****Not Part of the Draft Modification*****

General Idea:

This purpose of this document is to modify the primitives in accordance to the changes made in EB/EBR frame formats.

The basic changes in this document:

1 MCPS-DATA.request

1.1 For the transmission of EBR

2 MCPS-BEACON-NOTIFY.indication

2.1 For the convey of all information to upper layer upon receiving the EB

3 MLME-SCAN.request

3.1 For the control of scanning process including selecting channels to scan and etc.

4 MLME-START.request

4.1 For the control of transmitting the outgoing EB for potential incoming networks

This document resolves the comments with CID as below:

78,80,81,82,83,84,85,86,87,88,89,90,92,145,285,286,287,288,289,290,291,292,293,294,
,295,297,862,864,865,866,867,868,869,870,871,872,873,874,875,922,1057,1071,1081,
1140

Instructions to the editors are given in *Editorial Notes* in red font.

Editorial note: Remove sub-clauses 7.1.5a, 7.1.11, 7.1.14.1 and all corresponding sub-sub-clauses. Replace with the following text.

Editorial note: Add 7.1.1.1 as the following

7.1.1.1 MCPS-DATA.request

7.1.1.1.1 Semantics of the service primitive

Add additional parameters to primitive:

MCPS-DATA.request

```
(
  ...
  SUNattributeID
)
```

Add element in Table 41 as follows:

Table 41 – MCPS-DATA.request parameters

Name	Type	Valid Range	Description
...			
SUNattributeID	Integer	--	Determines which IEs are sent in the enhanced beacon. Otherwise set to zero.

Editorial note: Add 7.1.5.1 as the following

7.1.5.1 MCPS-BEACON-NOTIFY.indication

7.1.5.1.1 Semantics of the service primitive

Add additional parameters to primitive:

MCPS-BEACON-NOTIFY.indication

(
 ...
CoexSpecification
)

Add element in Table 54 as follows:

Table 54 – MLME-BEACON-NOTIFY.indication parameters

Name	Type	Valid Range	Description
...			
CoexSpecification	Sets of octets	See 7.2.2.4a.2	The Coex Specification contains the information on multi-PHY management

Editorial note: Add 7.1.11.1 as the following

7.1.11.1 MLME-SCAN.request

7.1.11.1.1 Semantics of the service primitive

Add additional parameters to primitive:

MLME-SCAN.request

```
(
  ...
  ScanDurationBPAN
  ScanDurationNBPAN
  MPMScanChannels
)
```

Add element in Table 67 as follows:

Table 67 – MLME-SCAN.request parameters

Name	Type	Valid Range	Description
...			
ScanDurationBPAN	Integer	0-14	The maximum time spent to scan for enhanced beacon of a beacon-enabled PAN in the channel is [<i>aBaseSuperframeDuration</i> * 2 ^{<i>n</i>}] symbols, where <i>n</i> is a parameter to specify the scan duration
ScanDurationNBPAN	Integer	0-16383	The maximum time spent to scan for enhanced beacon of a non-beacon-enabled PAN in the channel is [<i>aBaseSlotDuration</i> * <i>n</i>] symbols, where <i>n</i> is a parameter to specify the scan duration
<u>MPMScanChannels</u>	Bitmap	<i>phyMaxSUNChannelSupported</i> + 1 bits	The specific channels where enhanced beacon is transmitted and scanned in a multi-PHY PAN. This parameter facilitates selected

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			channels for EB to be sent and scanned. A bit is set (=1) for channel(s) where the EB is sent or scanned.
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Editorial note: Add 7.1.14.1 as the following

7.1.14.1 MLME-START.request

7.1.14.1.1 Semantics of the service primitive

Add additional parameters to primitive:

MLME-START.request

```
(
  ...
  SUNattributeID
  EnhancedBeaconOrder
  OffsetTimeSlot
  NBPANEnhancedBeaconOrder
)
```

Add element in Table 108 as follows:

Table 108 – MLME-START.request parameters

Name	Type	Valid Range	Description
...			
<u>SUNattributeID</u>	Integer	--	Determines which IEs are sent in the EB. Otherwise set to zero.
<u>EnhancedBeaconOrder</u>	Integer	0-15	Indicates how often the EB is to be transmitted in a beacon-enabled PAN. A value of 15 indicates that no enhanced beacon will be transmitted.
<u>OffsetTimeSlot</u>	Integer	1-15	Indicates the time difference between the EB and the preceding periodic beacon.
<u>NBPANEnhancedBeaconOrder</u>	Integer	0-16383	Indicates how often the EB is to be transmitted in a non-beacon-enabled PAN (<i>i.e.</i> <i>macBeaconOrder</i> = 15). A value of 16384 indicates that no enhanced

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			beacon will be transmitted.
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