**IEEE P802.15**

**Wireless Personal Area Networks**

|  |  |
| --- | --- |
| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) |
| Title | **<PassThru Module Operation>** |
| Date Submitted | [16 March 2017] |
| Source | [Pat Kinney][<company>][address] | Voice: [ ]Fax: [ ]E-mail: [ ] |
| Re: | TG12 Architecture: PassThru Module operation |
| Abstract | [Work in Progress – ] |
| Purpose | [Description of what the author wants P802.15 to do with the information in the document.] |
| Notice | This document has been prepared to assist the IEEE P802.15. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein. |
| Release | The contributor acknowledges and accepts that this contribution becomes the property of IEEE and may be made publicly available by P802.15. |

# PassThru Module

**PassThru Module Description**

### Purpose:

The 802.15.12 shall include the PassThru Protocol module. The PassThru module performs the following functions:

1. Allows applications/functions above the ULI to access the MCPS-SAP and the MLME-SAP.
2. Generates an IEEE 802.15.4 primitive for messages from the upper layers as well as the 6LoWPAN protocol module to be passed via the IEEE 802.15.4 data SAP (MCPS-SAP)
3. Responds to primitives (i.e. MCPS.DATA.confirm and MCPS.DATA.indication) delivered via the data SAP, such as passing the MPDU to a higher layer function.

### Overview

For datagrams coming from a higher layer, the PassThru Module determines the SAP to which the datagram is to be sent based upon the configuration of the IEEE 802.15.4 device as set by the PDE and the Management Protocol entity, creates the IEEE 802.15.4 primitive and forwards it to the identified SAP.

For frames going to the higher layer, the PassThru module determines the appropriate SAP for delivery, as determined by the ULI header (i.e. the ULI-6lo IE or the MPX IE)removes the payload from the IE, reconstitutes the appropriate datagram header, and then directs the datagram to the SAP.

Support for/from Other Protocol Modules

* RLS
* MGMT

Examples:

1. 6lo datagram to be sent out
2. 6lo frame to be sent to a higher layer
3. IPv4 datagram to be sent out
4. IPv4 datagram to be sent to a higher layer
5. Ack vs non-Ack
6. Use of Profiles

# MMI-DATA.request

# ( SrcAddrMode, SrcPanId,SrcAddr, DstAddrMode, DstPanId, DstAddr, MultiplexId, MpxData, SecurityLevel, KeyIdMode, KeySource, KeyIndex)

MCPS-DATA.request (

SrcAddrMode,

DstAddrMode,

DstPanId,

DstAddr,

Msdu,

MsduHandle,

HeaderIeList,

PayloadIeList,

HeaderIeIdList,

NestedIeSubIdList,

AckTx,

GtsTx,

IndirectTx,

SecurityLevel,

KeyIdMode,

KeySource,

KeyIndex,

UwbPrf,

Ranging,

UwbPreambleSymbolRepetitions,

DataRate,

LocationEnhancingInformationPostamble,

LocationEnhancingInformationPostambleLength,

PanIdSuppressed,

SeqNumSuppressed,

SendMultipurpose

FrakPolicy,

CriticalEventMessage

)