IEEE P802.15
Wireless Specialty Networks

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| IEEE 802.15.13 Text proposal for MAC general frame structure |
| Date: 2018-05-08 |
| Author: |
| Name | Affiliation | Address | Phone | Email |
| John Li | Huawei |  |  | john.liqiang@hisilicon.com  |
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Abstract

# This document contains a text proposal for MAC general frame structure.

1. **Overview**
2. **Normative references**
3. **Definitions, acronyms, and abbreviations**
4. **General description**
5. **MAC protocol specification**
	1. **MAC functional description**
	2. **General MAC frame format**

The MAC frame format is composed of a MHR, a MSDU, and a MFR. The fields of the MHR appear in a fixed order; however, the addressing fields may not be included in all frames. The general MAC frame shall be formatted as illustrated in Figure xx.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Octet: TBD** | **TBD** | **TBD** | **TBD** | **TBD** | **TBD** | **TBD** |
| Frame control | Sequence control | ACK information | Addressing field | Auxiliary security header | Frame payload | FCS |
| MHR | MSDU | MFR |

* + 1. **Frame control field**

The frame control field is [TBD] octets in length and contains information defining the frame type, addressing
fields, and other control flags. The frame control field shall be formatted as illustrated in Figure xx. Reserved bits are set to zero on transmission and ignored on reception.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Bits: TBD** | **TBD** | **TBD** | **TBD** | **TBD** |
| Frame version | Frame type / subtype | Security enabled | ACK request | Reserved |

* + - 1. **Frame Version subfield**

Text proposal (bit number; meaning of each bit/state)

* + - 1. **Frame type / subtype subfield**

Text proposal (bit number, meaning of each bit/state)

* + - 1. **Security enabled subfield**

The Security Enabled subfield is 1 bit in length, and it shall be set to one if the frame is protected by the MAC sublayer and shall be set to zero otherwise. The Auxiliary Security Header field of the MHR shall be present only if the Security Enabled subfield is set to one.

* + - 1. **ACK request subfield**

Text proposal (bit number, meaning of each bit/state)

* + 1. **Sequence control field**

Text proposal (bit number, meaning of each bit/state)

* + 1. **ACK information field**

|  |  |  |  |
| --- | --- | --- | --- |
| **Bits: TBD** | **TBD** | **TBD** | **TBD** |
| Device address (to be confirmed) | Sequence number | ACK | Reserved |

* + - 1. **Device address subfield**

Text proposal (bit number, meaning of each bit/state)

* + - 1. **Sequence number subfield**

Text proposal (bit number, meaning of each bit/state)

* + - 1. **ACK subfield**

Text proposal (bit number, meaning of each bit/state)

* + 1. **Addressing field**

|  |  |  |  |
| --- | --- | --- | --- |
| **Bits: TBD** | **TBD** | **TBD** | **TBD** |
| Destination OWPAN ID (optional) | Destination address | Source OWPAN ID | Source address |

* + - 1. **Destination OWPAN ID subfield**

Text proposal (bit number, meaning of each bit/state)

* + - 1. **Destination address subfield**

Text proposal (bit number, meaning of each bit/state)

* + - 1. **Source OWPAN ID subfield**

Text proposal (bit number, meaning of each bit/state)

* + - 1. **Source address subfield**

Text proposal (bit number, meaning of each bit/state)

* + 1. **Auxiliary Security Header field**

The Auxiliary Security Header field has a variable length and specifies information required for security processing, including how the frame is actually protected (security level) and which keying material from the MAC security PIB is used (see TBD). This field shall be present only if the Security Enabled subfield is set to one. For details on formatting, see TBD.

* + 1. **Frame Payload field**

Text proposal

* + 1. **FCS field**

Text proposal