**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) | |
| Title | Draft Text for Inclusion of UWB Secure Service Information Element | |
| Date Submitted | [November 2018] | |
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| Abstract | [] | |
| Purpose | [] | |
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Payload IE <ANA>: UWB Secure Service IE

In order to support secure routing feature for the next higher layer above the 802.15.4z standard, a UWB Secure Service (USS) payload IE is proposed. A suitable number (designated as <ANA> for now) needs to be assigned for the payload IE from the reserved bits. The format of the USS IE is as shown below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Bits: 0-1 | 2-3 | 4-7 | 8-11 | 12-15 | Octets: 1-16 | Octets: 0-16 |
| Technical1 | Protocol2 | Reserved | USSID Length | Addition info Length | USS ID3 | Addition information5 |
| A/B/F | ISO-DEP or  MIFARE  or  FELICA |  | 1 -16 | 0-16 | ID or  AID or System Code | 0-16 |

1NFC forum supports NFC-A, NFC-B, NFC-F. The 3 kinds used by NFC Card Emulation mode.

2Protocol: ISO-DEP Protocol: Half-duplex block transmission protocol as defined in NFC Digital Protocol Technical Specification.

3USSID= Uwb Secure Service ID which will be used in routing table.

If Protocol=FeliCa then USS ID shall be a System Code.

|  |  |  |
| --- | --- | --- |
| Bit 1 | Bit 0 | Tech |
| 0 | 0 | A |
| 0 | 1 | B |
| 1 | 0 | F |
| 1 | 1 | Reserved |

|  |  |  |
| --- | --- | --- |
| Bit 3 | Bit 2 | Protocol |
| 0 | 0 | ISO-DEP |
| 0 | 1 | MIFARE |
| 1 | 0 | FELICA |
| 1 | 1 | Reserved |

|  |  |  |
| --- | --- | --- |
| Length | ID4 |  |
| Octet 1 | 0x01 | MIFARE Classic |
| 0x02 | MIFARE Desfire |
| 0x03 | Implicit Select |
| 0x04-0xFF | Reserved |

4ID is used for the case with no AID or no system code, the definition to distinguish them for the known cases as of now.

|  |  |  |
| --- | --- | --- |
| Length | System Code | Explanation |
| Octets 2 | 0x8008 | Octopus Service |

System code is used by NFC F Technology to distinguish among each service.

|  |  |  |
| --- | --- | --- |
| Length | AID | Explanation |
| Octets 4-16 | 0x325041592E5359532E4444463031 | PPSE for EMVco payment |
| 0xD410000003000100 | T Money |
| 0x53315632494410 | Samsung ID card |

AID = Application ID is defined at ISO7816-4

Once MAC layer detects the USS IE Payload, the next higher layer will use this information to route the packets accordingly.

5Additon information is optional, any string with a maximum of 16 bytes can be used here, e.g. “$100” for payment usage or “BENZ E500” for smart car access case. Additional information can be used to offer more information when request authorization to host.