**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 |
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| Source | Yi Yang (Samsung)Jong-Hoon Jang (Samsung)Jonghyo Lee (Samsung)Aditya V. Padaki (Samsung)Boon Loong Ng (Samsung)Rias Al-kadi (NXP) |  |
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| Abstract | [] |
| Purpose | [] |
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Payload IE XX: UWB Secure Service IE

In order to support secure routing feature in the 802.15.4z standard, a UWB Secure Service (USS) payload IE is proposed. A suitable number (designated as XX 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 orMIFAREorFELICA |  | 1 -16 | 0-16 | ID orAID or System Code | 0-16 |

1NFC forum supports NFC-A, NFC-B, NFC-F 3kinds 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 NO AID or NO system code case, we define as below to distinguish them for known case right 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 within max 16 bytes can be here, e.g. “$100” for payment usage or “BENZ E500” for smart car access case. Addition information can be used to offer more information when request Authorization to HOST.