**IEEE P802.15**

**Wireless Personal Area Networks**

|  |  |
| --- | --- |
| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) |
| Title | **OCC Operating Modes – Table Revision** |
| Date Submitted | [May 2017] |
| Source | Jaesang Cha(SNUST), Kim Chan(SNUST), Soonho Jung(SNUST), Sooyoung Chang(CSUS), Seongjin Choi(SNUST) , , Vinayagam Mariappan(SNUST) |
| Re: |  |
| Abstract | Discussion on D2 comments’ resolution revision |
| Purpose | Resolution for D2 technical comments revision |
| 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. |

# #1: PHY IV, V, VI Tables

**Table 114 - PHY IV Operating Modes**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Modulation** | **RLL** | **Optical Clock Rate** | **FEC** | **Bit Rate** |
| UFSOOK | NA | multiple of frame rate | MIMO path dependent | (1/2)\*(code rate)\*Frame Rate) |
| Twinkle VPPM | NA | 4x bit rate | RS(15, 11) | 4 kbps |
| S2-PSK | Differential code | 10 Hz | Temporal error correction | 5 bps |
| S8-PSK | Grey code | 10 Hz | Temporal error correction | 30 bps |
| HS-PSK | ½ code rate for S2-PSK; none for DS8-PSK | 10 kHz | Temporal error correction;  Outer FEC with GF(16) | 22 kbps |
| Offset-VPPM | None | 25Hz | RS(15,2) / RS(15,4) / None | 18bps |

**Table 115 - PHY V operating modes**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Modulation** | **RLL** | **Optical Clock Rate** | **FEC** | **Bit Rate** |
| NS-FSK | None | 30 Hz | XOR FEC | 60/90 bps |
| C-OOK | Manchester/ 4B6B | 2.2 kHz/ 4.4 kHz | Temporal error correction  (DS rate=100/ DS rate=60) | 60/150/580/700 bps |
| CM-FSK | None | 10 Hz | Temporal error correction | 40/50/60  bps |
| Packet PWM/PPM | None | 100 kHz | Temporal error correction | 5.5/ 8 kbps |

**Table 116 - PHY VI Operating Modes**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Modulation** | **RLL** | **Optical Clock Rate** | **FEC** | **Bit Rate** |
| A-QL | None | 10 Hz | Hamming (11,15)/ None | 5.28/ 7.56 kbps  (16x16 cells) |
| HA-QL | Differential code | 10 Hz | Hamming (11,15)/ None | 220/ 300 bps  (8x8 cells) |
| VTASC | None | 30 Hz | RS(64,32)/ RS(160,128)/ None | 512 Kbps |
| SS2DC | None | 30 Hz | RS(64,32)/ RS(160,128)/ None | 368 Kbps |
| IDE-BLEND-MxN-FPSK | None | 30 Hz | RS(64,32)/ RS(160,128)/ None | 32 Kbps |
| IDE-WM | None | 30 Hz | RS(64,32)/ RS(160,128)/ None | 256 Kbps |

**Note:**

Green data is gathered from doc. *17-13r1* (by NTU and Intel)

Yellow data is pending to update (from PANASONIC)