**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) |
| Title | **OCC operating modes - table** |
| Date Submitted | [September 2017] |
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| Re: |  |
| Abstract | Discussion on D4 comments’ resolution  |
| Purpose | Resolution for D4 technical comments |
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# #1: PHY A,B,C tables

**Table 81. PHY IV, V, and VI operating modes**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***phyOccMcsID*** | **Modulation** | **RLL** | **Optical clock rate** | **FEC** | **Bit Rate** |
|  | **PHY IV operating modes** |
| 1 | UFSOOK | None | multiple of frame rate | MIMO path dependent | (1/2)\*(code rate)\*(Frame Rate) |
| 2 | Twinkle VPPM | None | 4x bit rate | RS(15, 11) | 4 kbps |
| 3 | S2-PSK | Half-rate code  | 10 Hz  | Temporal error correction | 5 bps |
| 4 | HS-PSK | Half-rate code for S2-PSK | 10 kHz | RS(15,7) | 22 kbps |
| 5 | Offset VPPM | None | 25 Hz | R(15,2)/RS(15,4)/None | 18bps |
|  | **PHY V operating modes** |
| 6 | NS-FSK | None | 30 Hz | XOR FEC | 60/90 bps |
| 7 | C-OOK | Manchester/ 4B6B | 2.2 kHz/ 4.4 kHz | Inner Hamming code,Optional outer RS(15,11) | 40/110/220/400 bps |
| 8 | CM-FSK | None | 10 Hz | Optional outer RS(15,11) | 50/60/70bps |
| 9 | MPM | None | 25 kHz | Temporal error correction | 5/ 8 kbps |
|  | **PHY VI operating modes** |
| 10 | A-QL | None | 10 Hz | Outer RS(15,11),Inner CC(1/4) | 1.32/ 5.54 kbps |
| 11 | HA-QL | Half-rate code | 10 Hz | Outer RS(15,7), Inner CC(1/4) | 140 bps |
| 12 | VTASC | None | 30 Hz | RS(64,32)/RS(160,128)/None | 512 kbps |
| 13 | SS2DC | None | 30 Hz | RS(64,32)/RS(160,128)/None | 368 kbps |
| 14 | IDE | None | 30 Hz | RS(64,32)/RS(160,128)/None | 32 kbps |

**TBD:**

* Should we have the column of *phyOccMscID*. If yes, The TG7m committee will assign the ID.