**IEEE P802.15**

**Wireless Personal Area Networks**

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**20.3.1.4 PSDU field**

The PSDU field carries the data of the PPDU.

**20.3.2 System parameters for TVBS-NB-OFDM**

**Table 142—System parameters for TVWS-OFDM PHY** (continued)

|  |  |  |
| --- | --- | --- |
| Parameter | **Mode #1** | **Mode #2** |
| STF duration (TSTF) | 1008 (252x4) us | |
| LTF duration (TLTF) | 1008 (504x2) us | |

**20.3.3.1 Reference modulator diagram**

The reference modulator diagram is shown in Figure zzz.



**Figure zzz—Reference modulator diagram for TVWS-NB-OFDM**

**20.3.3.2.2 Inner encoding**

A recursive and systematic convolutional encoder of coding rate R = 1/2, 2/3, 3/4, 7/8 encodes the RS encoded data bits, 6 tail bits, and pad bits. The convolutional encoder shall use the generator polynomials g0 = 171 and g1 = 133, of rate R = 1/2, with feedback connection of g0 as shown in Figure 129.

 **Figure 129—Recursive and systematic convolution encoder**

The value of the tail bits are dependent on the memory state shown in Figure 129 and shall be set as shown in Table xxx.

**Table xxx—Tail bit pattern for the recursive systematic encoder**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Memory state (M0–M5)** | **Tail bits (T0–T5)** | **Memory state (M0–M5)** | **Tail bits (T0–T5)** | **Memory state (M0–M5)** | **Tail bits (T0–T5)** | **Memory state (M0–M5)** | **Tail bits (T0–T5)** |
| 000000 | 000000 | 010000 | 100001 | 100000 | 111011 | 110000 | 011010 |
| 000001 | 111001 | 010001 | 011000 | 100001 | 000010 | 110001 | 100011 |
| 000010 | 001011 | 010010 | 101010 | 100010 | 110000 | 110010 | 010001 |
| 000011 | 110010 | 010011 | 010011 | 100011 | 001001 | 110011 | 101000 |
| 000100 | 010110 | 010100 | 110111 | 100100 | 101101 | 110100 | 001100 |
| 000101 | 101111 | 010101 | 001110 | 100101 | 010100 | 110101 | 110101 |
| 000110 | 011101 | 010110 | 111100 | 100110 | 100110 | 110110 | 000111 |
| 000111 | 100100 | 010111 | 000101 | 100111 | 011111 | 110111 | 111110 |
| 001000 | 101100 | 011000 | 001101 | 101000 | 010111 | 111000 | 110110 |
| 001001 | 010101 | 011001 | 110100 | 101001 | 101110 | 111001 | 001111 |
| 001010 | 100111 | 011010 | 000110 | 101010 | 011100 | 111010 | 111101 |
| 001011 | 011110 | 011011 | 111111 | 101011 | 100101 | 111011 | 000100 |
| 001100 | 111010 | 011100 | 011011 | 101100 | 000001 | 111100 | 100000 |
| 001101 | 000011 | 011101 | 100010 | 101101 | 111000 | 111101 | 011001 |
| 001110 | 110001 | 011110 | 010000 | 101110 | 001010 | 111110 | 101011 |
| 001111 | 001000 | 011111 | 101001 | 101111 | 110011 | 111111 | 010010 |

**20.3.3.2.3 Pad bit Insertion**

The number of pad bits input to the convolutional encoder, NPAD, shall be computed with to the following equation:

NRS = ceiling (LPSDU /(188\*8))

LRS= LPSDU+NRS×16\*8

NSYS = ceiling ((LRS +6)/ NDBPS))

NDATA= NSYS\* NDBPS

NPAD= NDATA - 8\*LRS+6

LPSDU is the number of PSDU bits, which is equal to the content of the Frame Length field in Figure 128, and NDBPS is shown in Table 142.

The function ceiling (.) is a function that returns the smallest integer value greater than or equal to its argument value. The pad bits are set to “zeros”.

**20.3.5.1 Operating frequency range (To be Removed)**