# Project: IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs)

Submission Title: [TBs and MDs in DF3]
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Re: [In response to TG3c Call for Proposals (IEEE P802.15-07-0586-02-003c)]
Abstract: [Comment resolutions for TBDs and MDs]

Purpose: [To be considered in TG3C baseline document.]

# TBDs and MDs in DF3

# May 2008

# TBDs and MDs in the document

- There are still 9 TBDs in the document in
  - **5.3.13 Frame aggregation (1)**
  - **8.4.1 Interframe space (1)**
  - **8.6.2 Beacon generation(2)**
  - **12.2.4.3.1 MAC subheader for standard aggregation (2)**
  - **12.3.6.5 Minimum fragment size (1)**
  - **12.3.6.6 HSI PHY PIB(1)**
  - **12.4.1.3.3 Minimum fragment size (1)**
- **There are 6 MDs**
  - **All in chapter 7 related UEP and beamforming**

# Frame Aggregation

<TBD based on new additons>

**Remove the TBD, since information in frame aggregation section is complete at the moment.**

# Interframe Space (Comment 131)

For the 2.4 GHz PHY they are listed in 11.2.7.1. For the SC mmWave PHY mode they are listed in 0.1.10. For the HSI mmWave PHY mode they are listed in <TBD>. For the AV mmWave PHY mode they are listed in 12.4.1.2

**Change above paragraph,**

For the 2.4 GHz PHY they are listed in 11.2.7.1. For the SC mmWave PHY mode they are listed in 12.2.10. For the HSI mmWave PHY mode they are listed in 12.3.5.4. For the AV mmWave PHY mode they are listed in 12.4.1.2

# Beacon Generation

The PNC may also send extended beacons which enable DEV with different transmission modes and DEVs located in different directional antenna coverage to join the same piconet. The succeeding extended beacons, if any, shall be sent one MIFS after the previous beacon. The PNC may transmit directional beacons, as described in <TBD xref 12.1.2>, for beam forming between PNC and DEV. An HSI or AV capable PNC may optionally transmit beacons with either the HSI or AV mmWave PHY mode, as described in <TBD xref 12.2>.

**<TBD Xrefs>s are potentially 8.x.x, where beamforming process in SC is explained. For other PHYs appropriate refs will be added by editors.**

# MAC subheader for standard aggregation

**The MCS Information field shall be set to the MCS, as defined in <TBD>, that is used for the subframe.**

**The Subframe Information field is <TBD>.**

**Resolution:**

**MCS Information field is defined in 12.2.4.1.3.**

**The Subframe Information field is resolved in comment 68.**

# Minimum Fragment Size in 12.3

The minimum fragment size, pMinFragmentSize, shall be <TBD> octets.

**Change to**

The minimum fragment size, pMinFragmentSize, shall be 512 octets.

# HSI PHY PIB

HSI PHY PIB table is missing.

**Table 126 for SC PHY in section 12.2 should be updated and put in 12.1, it should be valid for all PHYS.**

| Managed Object | Octets | Definition | Access |
|---|---|---|---|
| PHYPIB_Type | 1 | 0x01=mmWave PHY | Read/write |
| PHYPIB_Mode | 1 | 0x01=SC mode<br>0x02=HSI mode<br>0x03=AV mode<br>0x04= SC Mode HSI Mode<br>0x05= SC Mode AV Mode<br>0x06= SC Mode HSI mode AV mode<br>0x07=OOK Mode<br>0x08=SC Mode OOK Mode<br>0x09-0xFF=Reserved | Read/write |
| PHYPIB_RegDomainsSupported | 1 | One octet for each regulatory domain supported,as defined for PHYPIB_CurrentRegDomain | Read/write |
| PHYPIB_RegRegDomain | 1 | 0x00 = European Telecommunications Standards Institute (ETSI)<br>0x01 = Federal Communications Commission (FCC)<br>0x02 = Industry Canada (IC)<br>0x03 = Association of Radio Industries and Businesses (ARIB) | Read/write |
| PHYPIB_DataRateVector | 10 | Encodes the data rates, defined in Table 129. | Read/write |
| PHYPIB_NumChannelsSupported | Variable | Value = 0x04, see 12.1.7 | Read/write |
| PHYPIB_CurrentChannel | 1 | Indicates the channel that is currently being used, see 12.1.7 | Read/write |
| PHYPIB_CCAThreshold | | The CCA threshold in dBm, encoded in two's complement format. The value is implementation dependant but no larger than the value listed in 12.1.9 | Read/write |
| PHYPIB_FrameLengthMax | 2 | pMaxFrameBodySize, see 12.1.11 | Read/write |

# Minimum Fragment Size in 12.4

The minimum fragment size, pMinFragmentSize, shall be <TBD> octets.

**Change to**

The minimum fragment size, pMinFragmentSize, shall be 512 octets.

# Missing Definitions

| Draft ver. | Sub clause | pp | line | Missing definition | Usage | Resolution |
|---|---|---|---|---|---|---|
| DF3 | 7.4.7. | 18 | 25 | UEP field in DEV capabilities field | | Resolved in comment 4. NICT has proposed 5bit field as described in 08/225r1. |
| DF3 | 7.5.11. | 20 | 14 | Number of Beams field | Defined in announce command so that “beamformee” DEV sends its antenna specification to the “beamformer” DEV | Related Beamforming |
| DF3 | 7.5.11.2. | 20 | 35 | Transmit beam number field | Defined in beam training feedback IE so that the “beamformee” DEV indicates each of transmit beam numbers in the report to the “beamformer” DEV | Related Beamforming |
| DF3 | 7.5.11.2. | 20 | 37 | Received Beam Number field | Defined in beam training feedback IE so that the “beamformee” DEV indicates each of received beam numbers in the report to the “beamformer” DEV | Related Beamforming |
| DF3 | 7.5.11.2. | 20 | 39 | Beam Status Information field | Defined in beam training feedback IE so that the “beamformee” DEV reports beam received result to the “beamformer” DEV | Related Beamforming |
| DF3 | 7.5.11.6 | 22 | 15 | Channel Status Information field | | Resolved in comment 3. NICT has proposed 16bit field as described in 08/225r1. |