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

Submission Title: [Resolutions to MR-FSK Comments on filtered FSK]

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Re: [Resolutions to MR-FSK Comments]

Abstract: [Resolutions to MR-FSK Radio Spec Comments]

Purpose: [802.15.4g Comment Resolution for LB59.]

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Overview

- Resolution of a number Radio Specification comments

Comments 1

- CID 41
  - "The single-sided clock frequency tolerance T, in ppm, shall be set as follows" isn't clear what externally visible characteristic is being specified.   Phrase "tolerance shall be set" isn't clear what "set" means. Discussion ……..capture and demodulate.
  - clarify that this is the transmitter frequency tolerance that is being specified.
  - **AP: Replace with "The single-sided clock frequency tolerance T, in ppm, at the transmitter, shall be as follows"**

- CID 42
  - Sentence is redundant; last sentence in sub-clause says all regulatory requirements will be met.
  - Delete sentence
  - **A**

- CID 50:
  - Added text "and an OFDM receiver, which shall provide a maximum PER of 10% with a PSDU length of 250 octets with a receiver maximum input level greater than or equal to -20 dBm." seems inappropriate here …….. Sensitivity conditions are in 6.1.7. When I go through all that, it is saying the max input is -20dBm, which is already stated in the base standard.
  - Delete the added text.
  - **A**

Comments 2

- CID: 63
  - The PSDU length used for receiver sensitivity tests should be consistent for all SUN PHYs.
  - Change the PSDU length to 250 octets for all SUN PHYs
  - **AP: Remove the added text in 6.1.7 concerning the PSDU length for the receiver sensitivity test.**

- CID 72:
  - Clarify channel page for aCCATime
  - Change: "….at the lowest mandatory symbol rate for that channel page." to: "…at the lowest mandatory symbol rate for the specific 32-bit channel page definition."
  - **AP: Change to: "...at the lowest mandatory symbol rate for that channel page (see Figure 22a)"**

- CID 235:
  - Table 31: I looked in 6.1.2, and didn't see where the current channel was uniquely defined as an integer. Did I miss it?
  - Describe how each logical channel is defined by a single, unique integer value.
  - **AP: Replace "see 6.1.2" with "see NumChan in 6.1.2.5a"**

Comments 3

- CID 242:
  - The text says, "for the inner levels, and […] for the outer levels as shown in Figure 65p, but the figure only shows the constraint on the positive deviation values. And since figures are always normative, they override text, which is undesirable in this case since both positive and negative deviations need to be specified.
  - Modify Figure 65p to show constraints on negative deviations, too.
  - **A**

- CID 362:
  - this tolerance applies to the transmitter. It would be good to remind this here, the same way it is stated right after for the channel switch time "The channel switch time is a transmitter parameter…"
  - rephrase as follow: "The single-sided clock frequency tolerance T, in ppm, shall be set in the transmitter as follow:"
  - **AP: same resolution as CID 41**

- CID 422:
  - The conditions for the receiver sensitivity tests are overly complicated
  - Use PSDU length of 20 octets for all PHYs as in the baseline standard
  - **AP: same resolution as CID 63**

Comments 4

- CID 572:
  - Need to clarify units in "The transmit spectral content at M1 and M2 shall be less than −25 dB and −35 dB, respectively."
  - Clarify the units (dBc or dBm)
  - **AP: The transmit spectral content is defined as a ratio of the out-of-channel power to in-channel power, for which the units of dB are appropriate. No change required.**

- CID 573:
  - Clarify the units for So
  - So is -90 dBm
  - **A**

- CID 705:
  - The reference value with regard to the offset frequencies M1 and M2 is missing. Is this the carrier frequency?
  - Specify the reference value of the offset values M1 and M2.
  - **AP: Change to "offset frequencies M1 = 1.5×R×(1+h) and M2 = 3×R×(1+h) relative to the carrier frequency…"**

Comments 5

- CID 971:
  - The PSDU length used to define the receiver sensitivity is of 250 octets for MR-FSK and MR-OFDM, and 20 octets for MR-OQPSK.
  - Make consistent the definition of the receiver sensitivity over all the SUN PHYs, w/r/t the PSDU length. Define the MR-OQPSK receiver sensitivity for a PSDU of 250 octets.
  - **AP: Same resolution as CID 63**

- CID 1036:
  - Document says "PER < 1%" This value is not stable for repeatable measurement. The transition curve between 95% and 5% PER is abrupt and then it is almost flat and oscillating for the extremities of the curve. Better points for measurement should be 10% PER, 50% PER or 90% PER.
  - Change the PER value for one of the proposed values, 10%, 50%, or 90%
  - **AP: Same resolution as CID 63**