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

Submission Title: [Generic PHY descriptor for FSK modulation polarity]
Date Submitted: [January 2011]
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Re: [802.15.4g Comment Resolution for LB59]
Abstract: []

Purpose: [Generic PHY related Comments Resolution for LB59]

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CID 970

- There is missing a descriptor for FSK modulation: the "FSK modulation polarity".
- Add a descriptor for FSK modulation polarity.

Proposed Resolution : Accept

Proposed change: See document xxx-**0094-00-004g**.

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CID 1020

- The Generic PHY Descriptor PIB attribute format, described in Figure 103g, does not contain a field for the FSK modulation polarity.
- Borrow 1 bit from the "Modulation Order" field or from "BT" field and use this bit to signal the FSK modulation polarity. When set to 0, positive polarity. When set to 1 negative polarity.

Proposed Resolution : Accept.

Proposed change: See document xxx-**0094-00-004g**.

Table XXX: Generic FSK PHY: Bit to symbol mapping for 2-level FSK.

Symbol (binary)	Frequency deviation (ΔF)	
	Mod_Polarity = 0	Mod_Polarity = 1
0	See Table 75c.	+ΔF
1	See Table 75c.	-ΔF

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Table XXX: Generic FSK PHY: Bit to symbol mapping for 4-level FSK.

Symbol (binary)	Frequency deviation (ΔF)	
	Mod_Polarity = 0	Mod_Polarity = 1
01	See Table 75c.	$+3*\Delta F$
00	See Table 75c.	$+\Delta F$
10	See Table 75c.	$-\Delta F$
11	See Table 75c.	$-3*\Delta F$

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Instruction to editors:
In clause 6.1.2.7.2 Channel page structure for Generic PHY modes

•Insert the descriptor "*Mod_Polarity*" in Figure 22x, immediately after or before the "*Symbol Rate*" descriptor.

• On page 30, lines 2 or 3: Remove the proposition: "*The bit to symbol mapping follows SUN PHY convention.*"

• On page 30, insert the following paragraph at line 2 or 3*:"The Mod_Polarity represents the bit to symbol mapping for FSK modulation scheme. The bit to symbol mapping follows the convention defined in <insert reference to Table describing bit to symbol mapping for 2-FSK> and <insert reference to table describing bit to symbol mapping for 4-FSK>.*

• *Insert Table from Page 3 of document XXXX immediately after the text describing the Mod_Polarity descriptor of the Generic PHY. This table describe the bit to symbol mapping for 2-FSK.*

• *Insert Table from Page 4 of document XXXX immediately after the text describing the Mod_Polarity descriptor of the Generic PHY. This table describe the bit to symbol mapping for 4-FSK.*

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Instruction to editors:

In clause 7.3a.3.1 "Generic PHY Descriptor PIB attribute format"

• On page 129, Figure 103g, borrow one bit from the 2-bit *Modulation Order* field and create a 1-bit field called *Modulation Polarity*.

• In table 125h, remove the last row.

• On page 129, insert the following text after the paragraph describing the *Modulation Order* field:

> • *Modulation Polarity* is an unassigned integer describing the polarity of the FSK modulation. *Modulation Polarity* values are given in Table <Insert reference to both tables describing the bit to symbol mapping for the Generic 2-FSK and 4-FSK PHYs, as a function of *Mod_Polarity* descriptor.>

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