

Proposed Comment Resolution for CID # 188 (MR-O-QPSK PHY)

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September 20, 2011

IEEE P802.15

Wireless Personal Area Networks

Title: Proposed Comment Resolution for CID # 188 (MR-O-QPSK PHY)

Date Submitted: September 20, 2011

Source: Michael Schmidt - Atmel (email: michael.schmidt@atmel.com)

Re: Task Group 15.4g sponsor ballot comment resolution

Abstract: Proposed comment resolution for CID #188 (MR-O-QPSK PHY)

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CID 188

Comment:

The commenter states: “There is no compelling reason why coherent detection is required for no spreading case. Pg 105, Line 18-20”

The commenter proposes the following: “Remove the description requiring coherent detection in this context”

Response:

Accept in principle.

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Response:

- ▶ According to P802.15.4g/D5, BDE is not specified for (1,1)-DSSS, see Table 147. This implies that non-coherent differential detection will not be supported for this mode.
- ▶ A receiver will require phase information in order to detect the information bits.
- ▶ Theoretical background information can be found in document IEEE 15-11-0639-00-004g.
- ▶ However, explicitly mandating coherent detection is not required in this context.

Proposed Change

- ▶ At page 105, line 19 delete:
“For $N = 1$ (no spreading), coherent detection is required, employing a phase control loop based on the received chip samples.”
- ▶ At page 105, lines 42,43 delete:
“For $(N,4)$ -DSSS, coherent detection is recommended, employing a phase control loop based on the maximum likelihood decision of the optimal codeword with respect to the $(N,4)$ block code.”