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

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Abstract: Evaluation criteria are necessary for the development of the standard. This presentation gives some first thoughts on these criteria.

Purpose: Enabling the Discussion for Evaluation criteria.

Some Thoughts on Evaluation Criteria

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General Thoughts

– Possibly more than one system is proposed for the standard.
– How do we decide which one (or which parts) are best suited for the standard?

– What are the figures of merit for…
    – … achieved data rate (after subtraction of all the overhead)?
            SNR, BER, data rate, spectral efficiency
    – … complexity?
            die area
    – … power consumption?
    – … suitability of a feedback figure for beamsteering?

– And which of these shall be investigated here?

What do we have to deal with here?

From the PAR (IEEE 802.15-13-0523-07):

5.2.a. Scope of the complete standard: This project will define the PHY and MAC specifications for high data rate wireless connectivity with fixed, portable and moving devices. Data rates will be high enough to satisfy a set of consumer multimedia industry needs, and to support emerging wireless switched point-to-point applications.

5.4 Purpose: The purpose is to provide a standard for low complexity, low cost, low power consumption, and high data rate wireless connectivity among devices. Data rates will be high enough to satisfy a set of consumer multimedia industry needs, and to support emerging wireless switched point-to-point applications in data centers, wireless backhaul/fronthaul intra-device communication and kiosk downloading.

Link level simulations for data rate
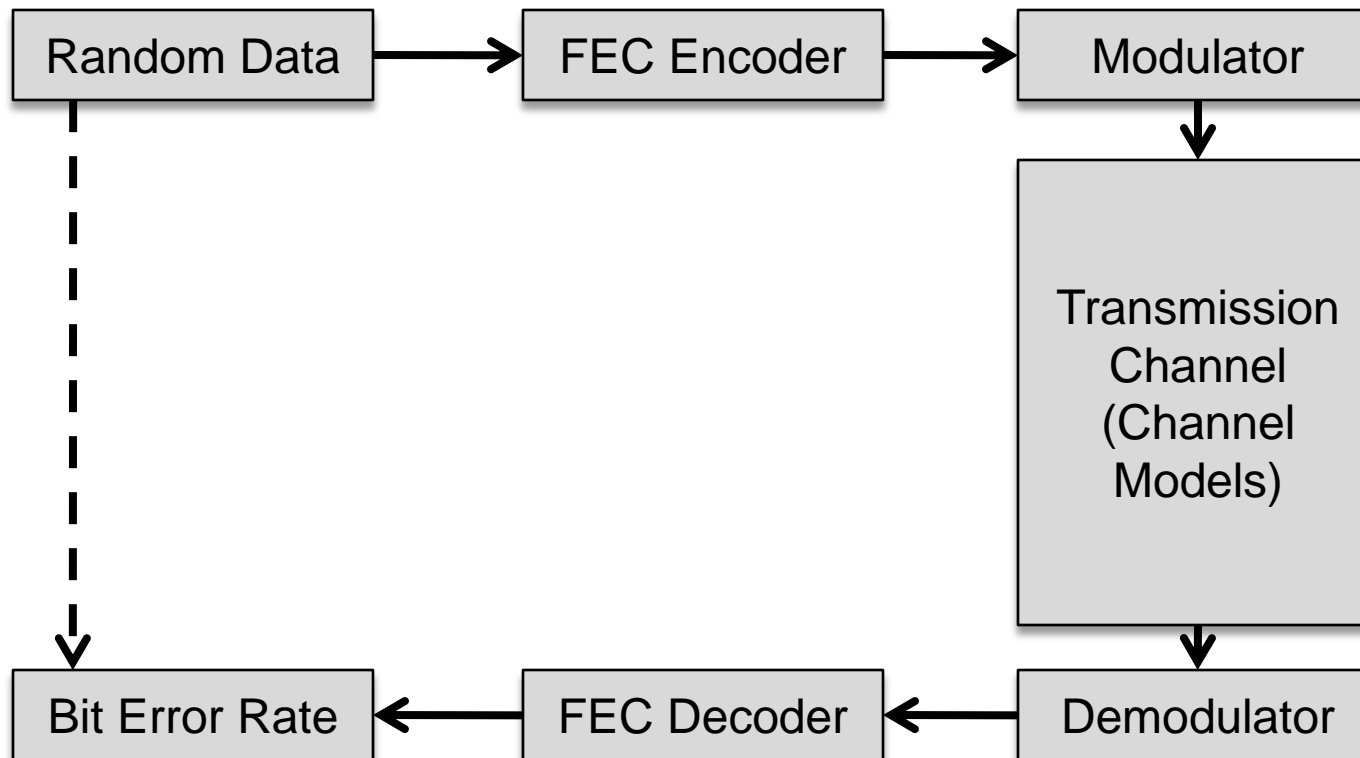
• Equivalent baseband model

Danke für Ihre Aufmerksamkeit!
(Thank you for paying attention!)

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