

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

Submission Title: [802.15.3c comment resolution on #2, 7, 17, 19, 29, and 36]

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Re: [In response to IEEE P802.15-08-0020-03-003c-df0-comments]

Abstract: [This document provides resolutions for some comments discussed in IEEE Jan'08 meeting at IEEE P802.15-08-0020-03-003c-df0-comments.]

Purpose: [This document provides resolutions for some comments discussed in IEEE Jan'08 meeting IEEE P802.15-08-0020-03-003c-df0-comments]

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- Issue Number #2 : Do we need a capability bit that indicates a DEV is MMC PNC capable?
- Resolution : Not necessary. DEV Capability includes AV PHY, HSI PHY, SC PHY, OOK PHY capabilities.

- Issue Number #7 : (1) Will Dly-ACK do what is necessary for Blk-ACK or (2) are there unique things that Blk-ACK needs to do. (3) Also, can this concept be extended to include the AV PHY directional ACK.
- Resolution :
 - (1) Dly-ACK is based on MPDU indication while Blk-ACK is based on subframe indication.
 - (2) MSB/LSB indication are included in Blk-ACK.
 - (3) Need more discussion.
 - Blk-ACK shall be kept at the baseline document.

- Issue Number #17 : Can this be done with an information element? Also, there are some updates to the frame format that need to be reviewed.
- Resolution : Yes. It would be possible to use an information element, instead of commands. We can use either capability IE or create UEP IE.

- Issue Number #36 : Rather than using commands, if the UEP capabilities are exchanged as part of the normal capabilities exchange, then the commands are not needed.
- Resolution : Yes. Same as in #17

- Issue Number #19 : Need rules to describe that the beacon PHY mode shall not change while in operation. Also, that on handover, the new PNC uses the same PHY mode for the beacon as the old PNC. If so, we may be able to leave PNC Des-Mode as the top criteria for handover.
- Resolution : Agreed. The beacon PHY mode after handover shall not be changed. For example, current device is SC and candidate device is MMC-capable device. After handover, it shall maintain SC base rate.

- Issue Number #29 : Can we unify the aggregation?
- Resolution : All CoMPA, HSI OFDM, and AV OFDM support aggregation, but there are differences

	CoMPA/HSI OFDM	AV OFDM
Number of sub-frames	Variable Maximal 16	fixed to 7
Position of MCS and sub-frame length	At Subframe header (MAC header extension) part.	At PHY header part
Sequence number and sub-frame ID information	MSDU number and sub-frame ID (or fragment information) placed at each sub-frame header	No such information
Sub-frame type information	Sub-frame information type means whether the sub-frame is MSB/LSB/Combination of MSB/LSB	No such information
ACK & Re-Transmission	ACK is done at MAC layer, each sub-frame can have its own ACK and Re-transmission policy	ACK is done at PHY layer, maximal 7 sub-frames need to be grouped and mapped to 5 ACK bits

- AV OFDM, CoMPA/HSI use quite different PHY technologies which need to be reflected in the PHY header.
- It is difficult to have a unified frame format

- New Issue : When a MMC device turns on, is it up to implementation which mode it starts with? (SC base rate or other)
- Resolution : It is up to implementation. It is OK to let implementation decide which mode to start with.

Thanks!