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

Submission Title: [Resolution for comment #7]

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Source: [Chang woo Pyo, Zhou Lan, Fumihide Kojima, Hiroyuki Nakase, Shuzo Kato]

Company [National Institute of Information and Communications Technology (NICT)]

Address[1][3-4 Hikari-no-oka, Yokosuka-shi, Kanagawa 239-0847, Japan]

Voice[1]:[+81-46-847-5074] , FAX[1]: [+81-46-847-5440]

E-Mail[]

Re: [In response to TG3c Call for Proposals (IEEE P802.15-07-0586-02-003c)]

Abstract: [Resolution for comment #7]

Purpose: [To be considered in TG3C baseline document.]

Comment #7 (1/3)

- Comment #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)No, Dly-ACK can not do what is necessary for Blk-ACK
  - (2)Yes, Blk-ACK has unique things (see the next slide)
  - (3)Need to discuss with AV-PHY

Categorization of Block ACK/NAK (2/3)

To efficiently support different applications such as stream transmission and low latency frame transmission, Block ACK/NAK usage can be categorized as following:

1. **Categorization 1 : Block ACK/NAK for stream transmission**
   – For stream transmission, block ACK/NAK will include ACK/NAK and UEP information for aggregated subframes (limited upto 8 subframes)
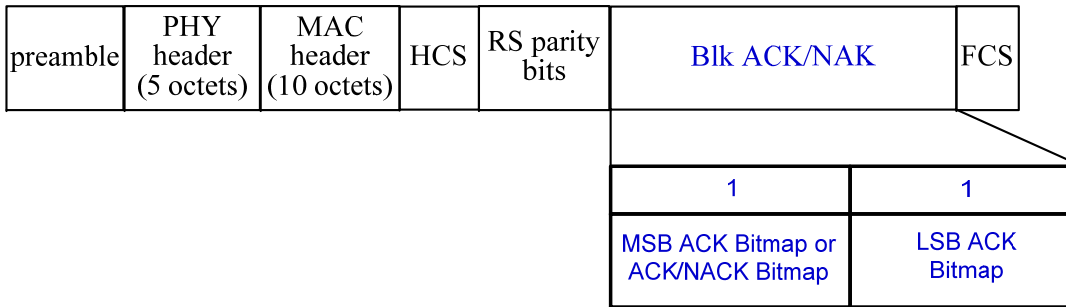
2. **Categorization 2 : Block ACK/NAK for low latency frame transmission**
   – For low latency frame transmission, bi-directional frames will contain compressed Block ACK/NAK bitmap (need to upto 256) for aggregated subframes

Blk ACK/NAK format (3/3)

1. Blk ACK/NAK format for streaming with UEP

  – Blk ACK/NAK contains

    – 1 octet of ACK/NAK bitmap or MSB ACK bitmap (for UEP)

    – 1 octet of LSB ACK bitmap

preamble	PHY header (5 octets)	MAC header (10 octets)	HCS	RS parity bits	Blk ACK/NAK	FCS

1	1
MSB ACK Bitmap or ACK/NACK Bitmap	LSB ACK Bitmap

2. Bi-directional frame format with Blk ACK/NAK for low latency frame transmission

  – Bi-directional frame includes compressed Blk ACK/NAK bitmap (upto 256)

preamble	PHY header (5 octets)	MAC header (10 octets)	HCS	Subframe number	Compressed BA bitmap	HCS	Subheader	Subframe#1	FCS	Subheader	Subframe#2	FCS	...	Subheader	Subframe#n	FCS

Subframe#1 ACK/NAK	Subframe#2 ACK/NAK	...	Subframe#256 ACK/NAK