IEEE P802.11  
Wireless LANs

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| **ACK Policy for Short frames** | | | | |
| **Date:** 2013-07-13 | | | | |
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Abstract

This document provides draft normative text for Ack Policy in short frames.

Revisions:

* Rev 0: Initial proposed document.
* Rev 1: Added support for Fragment BA procedure with the following line to table 8.301c :

“In a short frame that is a fragment:

When both the originator and the addressed recipient support the Fragment BA procedure, the addressed recipient returns an NDP BlockAck frame after a SIFS period, according to the procedure defined in 9.3.2.9a (Fragment BA procedure).”

**Instruction to Editor: *Please make the following changes in subclause 8.7.3.1:***

* **Frame Control field**

The format of the Frame Control field of the short MAC header is illustrated in Figure 8-532b (Frame Control field).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | B0  B1 | | B2 B4 | | B5 | B6 | B7 | B8 | B9 | B10 | B11 | B12 B14 | B15 |
|  | Protocol  Version | | Type | | From  DS | More  Fragments | Power  Management | More  Data | Protected  Frame | End of  Service  Period | Relayed  Frame | TID | Ack Policy |
| Bits: | 2 | | 3 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 1 |
|  | |  | |

The Type field is 3 bits in length and identifies the type of the frame, as defined in Table 8-301a (Short frame types).

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| --- | --- |
| * **Short frame types** | |
| Type | Type description |
| 0 | Data   * A1 or A2 is an SID (defined in 8.7.3.2), as determined by the From DS subfield in the FC field |
| 1 | Management   * A1 or A2 is an SID (defined in 8.7.3.2), as determined by the From DS subfield in the FC field * Management subtypes are encoded in the TID subfield in the FC field |
| 2-6 | Reserved |
| 7 | Extension (currently reserved) |

**Instruction to Editor: *Please add after the last paragraph of 8.7.3.1 the following:***

The Ack Policy field is 1 bit in length and identifies the acknowledgement policy that is followed upon the delivery of the MPDU, as defined in Table 8-301c (Ack Policy field in the FC field for Short frames).

Table 8-301c—Ack Policy field in the FC field for Short frames

|  |  |
| --- | --- |
| **Ack Policy  field** | **Meaning** |
| 0 | Normal Ack or Implicit Block Ack Request.  In a short frame that is a non-A-MPDU frame or VHT single MPDU:  The addressed recipient returns an Ack frame after a short interframe space (SIFS) period, according to the procedures defined in 9.3.2.8 (Ack procedure). In a short frame that is part of an A-MPDU that is not a VHT single MPDU:  The addressed recipient returns a BlockAck frame, either individually or as part of an A-MPDU starting a SIFS after the PPDU carrying the frame, according to the procedures defined in 9.3.2.9 (Block Ack procedure), 9.22.7.5 (Generation and transmission of BlockAck frames by an HT STA), and 9.22.8.3 (Operation of HT-delayed Block Ack).  In a short frame that is a fragment:  When both the originator and the addressed recipient support the Fragment BA procedure, the addressed recipient returns an NDP BlockAck frame after a SIFS period, according to the procedure defined in 9.3.2.9a (Fragment BA procedure).  Ack Policy 0 shall be limited to at most one MU recipient per MU PPDU. |
| 1 | No Ack or Block Ack Policy.  In a short frame that is a non-A-MPDU frame or VHT single MPDU:  The addressed recipient takes no action upon receipt of the frame. More details are provided in 9.23 (No Acknowledgment (No Ack)). The Ack Policy subfield is set to this value in all individually addressed frames in which the sender does not require acknowledgment. The Ack Policy subfield is also set to this value in all group addressed frames. This combination is not used for short Data frames with a TID for which a Block Ack agreement exists.  In a short frame that is part of an A-MPDU frame that is not a VHT single MPDU:  The addressed recipient takes no action upon the receipt of the frame except for recording the state. The recipient can expect a BlockAckReq frame in the future to which it responds using the procedure described in 9.22 (Block Acknowledgment (Block Ack)). |