IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| [3.9 Reverse Direction Protocol] | | | | |
| Date: 2016-12-12 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Ou Yang | Intel |  |  | ou.yang@intel.com |
|  |  |  |  |  |

Abstract

[This document proposes specification text for subclause 3.9 of the SFD describing reverse directional protocol in general.]

**Discussion**

This proposal has the following assumptions on terminologies.

1. An EDMG STA is a DMG STA by default.
2. An EDMG network is a DMG network by default.

**9.2.4.5.14 RDG/More PPDU subfield**

P576L59

The RDG/More PPDU subfiled of the QoS Control field for DMG or EDMG frames is interpreted differently depending on whether it is transmitted by an reverse direction (RD) initiator or an RD responder, as defined in Table 9-11 (RDG/More PPDU subfield values).

**10.28 Reverse direction protocol**

**10.28.1 General**

- No change is needed in the entire subclause

**10.28.2 Reverse direction (RD exchange sequence**

P1420L29

The transmission of a PPDU by a TXOP holder or SP source containing an RD grant (the RDG PPDU), which is indicated by the PPDU containing one or more +HTC, ~~or~~ DMG, or EDMG MPDUs in which the RDG/More PPDU subfield is equal to 1.

**10.28.3 Rules for RD initiator**

P1420L62

A QoS Data frame or a QoS Null frame with the ACK Policy field equal to any value except PSMP Ack (i.e., including Implicit Block ACK Request), or

P1421L17

Transmission of a +HTC, ~~or~~ DMG, or EDMG frame by an RD initiator with the RDG/More PPDU subfield equal to 1 (either transmitted as a non-A-MPDU frame, as a VHT single MPDU, or with in an A-MPDU) indicates that the duration indicated by the Duration/ID field is available for the RD response burst and RD initiator final PPDU (if present).

P1421L23

An RD initiator that sets the RDG/More PPDU field to 1 in a +HTC, ~~or~~ DMG, or EDMG frame during a TXOP shall set the AC Constraint subfield to 1 in that frame if the TXOP was gained through the EDCA channel access mechanism and shall otherwise set it to 0. An RD initiator that sets the RDG/More PPDU field to 1 in a DMG frame or EDMG frame transmitted during an SP can set the AC Constraint subfield to 1 to limit the Data frames transmitted by the RD responder.

P1421L30

An RD initiator shall not transmit a +HTC, ~~or~~ DMG, or EDMG frame with the RDG/More PPDU subfield set to 1 that requires a response MPDU that is not one of the following frames:

P1421L42

Contains one or more received +HTC, ~~or~~ DMG, or EDMG frames with the RDG/More PPDU subfield equal to 0

**10.28.4 Rules for RD responder**

P1422L55

The RD initiator shall not transmit a +HTC, ~~or~~ DMG, or EDMG MPDU with the RDG/More PPDU subfield set to 1 from which the AC cannot be determined.

P1423L12

The last PPDU of a response burst shall have the RDG/More PPDU subfield set to 0 in all +HTC, ~~or~~ DMG, or EDMG MPDUs contained in that PPDU.

P1423L23

After transmitting a PPDU containing one or more +HTC, ~~or~~ DMG, or EDMG MPDUs in which the RDG/More PPDU subfield is equal to 0, the RD responder shall not transmit any more PPDUs within the current response burst.

**References:**

1. 11-15-1358-16-00ay-11ay Spec Framework.doc

2. IEEE P802.11-REVmc/D8.0, Aug 2016