IEEE P802.11
Wireless LANs

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| Timely Link Quality Feedback (text changes)  |
| Date: 2020-07-31 |
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Abstract

This submission contains specific text edits, to be applied to REVmd D3.4, to implement the “Timely link quality feedback” proposal.

R0 – initial version.

**All page/line references are per REVmd D3.4.**

***Editor: Make the indicated changes in 9.4.2.139 “ADDBA Extension element”:***

* ***Modify Figure 9-580 as shown:***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | No Fragmentation | RCPI Present in BlockAck | RSNI Present in BlockAck | Reserved |
| Bits: | 1 | 1 | 1 | ~~7~~ 5 |

Figure 9-580—ADDBA Capabilities field format

* ***Add two new last paragraphs to 9.4.2.139:***

The RCPI Present in BlockAck subfield, when set to 1 in the ADDBA Request frame, indicates the request that the peer include an RCPI field in BlockAck frames sent under the block ack agreement. The RCPI Present in BlockAck subfield, when set to 1 in the ADDBA Response frame, indicates that the transmitter will include an RCPI field in BlockAck frames sent under the block ack agreement.

The RSNI Present in BlockAck subfield, when set to 1 in the ADDBA Request frame, indicates the request that the peer include an RSNI field in BlockAck frames sent under the block ack agreement. The RSNI Present in BlockAck subfield, when set to 1 in the ADDBA Response frame, indicates that the transmitter will include an RSNI field in BlockAck frames sent under the block ack agreement.

***Editor: Make the indicated changes in 9.3.1.8 “BlockAck frame format”:***

* ***Modify Figure 9-42 as shown:***

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | BA Ack Policy | Multi-TID | Compressed Bitmap | GCR Mode | RCPI Present | RSNI Present | Reserved | TID\_INFO |
| Bits: | 1 | 1 | 1 | 2 | 1 | 1 | ~~7~~ 5 | 4 |

Figure 9-42—BA Control field format

* ***Add four new last paragraphs to 9.3.1.8.1:***

For all BlockAck frame variant types, when the RCPI Present subfield is set to 1, an RCPI subfield formatted per Figure 9-xxx is appended to the contents of the BA Information field described in the following subclauses. When the RCPI Present subfield is set to 0, the RCPI field is not present.

|  |  |
| --- | --- |
|  | RCPI |
| Octets: | 1 |

Figure 9-xxx—RCPI subfield format in BlockAck frame BA Information field

The RCPI field contains an RCPI value, which is an indication of the received RF power in the selected

channel for the most recently received frame being acknowledged. The value is encoded as described in 9.4.2.37.

For all BlockAck frame variant types, when the RSNI Present subfield is set to 1, an RSNI subfield formatted per Figure 9-yyy is appended, following any RCPI field if present, to the contents of the BA Information field described in the following subclauses. When the RSNI Present subfield is set to 0, the RSNI field is not present.

|  |  |
| --- | --- |
|  | RSNI |
| Octets: | 1 |

Figure 9-yyy—RSNI subfield format in BlockAck frame BA Information field

The RSNI field contains an RSNI value, which is an indication of the received signal-to-noise level in the selected channel for the most recently received frame being acknowledged. The value is encoded as described in 9.4.2.40.

***Editor: Insert the following paragraph as a new third paragraph in 10.25.2 “Setup and modification of the block ack parameters”:***

The peers of a block agreement indicate support for sending signal quality information (RCPI and RSNI) in BlockAck frames by setting to 1 the RCPI Present in BlockAck and/or RSNI Present in BlockAck subfields in the ADDBA Capabilities field of the ADDBA Extension element. If both peers indicate support for either the RCPI or RSNI information in BlockAck frames, then the responding peer will include the indicated information in all BlockAck frames under this agreement. The originator may use this information as real-time feedback on the quality of the link over which it is transmitting.