IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Proposed Resolution for CID 1555 | | | | |
| Date: 2022-08-25 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Stephen McCann | Huawei Technologies Co., Ltd | Southampton, UK |  | stephen.mccann@ieee.org |

Abstract

This submission proposes a resolution for CID 1555 on 11me/D1.0.

|  |  |  |
| --- | --- | --- |
| Identifiers | Comment | Proposed change |
| CID 1555  10.11  2180.60 | SPP A-MSDUs do not work under S1G for PV1 MPDUs, since there's no QC in the AAD | At the referenced location change "Table 10-13 (A-MSDU STA behavior for RSN associations) defines behavior related to the transmission and  reception of individually addressed A-MSDUs of a first HT STA or S1G STA (STA1) that has successfully  negotiated an RSNA (re)association with a second HT STA or S1G STA (STA2)."  to "Table 10-13 (A-MSDU STA behavior for RSN associations) defines behavior related to the transmission and  reception of individually addressed A-MSDUs of a first non-S1G STA (STA1) that has successfully  negotiated an RSNA (re)association with a second non-S1G STA (STA2). An S1G STA shall not set the MFPC Capable subfields of the RSN Capabilities field of the RSNE to 1.” |

Email discussion:

On Wed, Aug 24, 2022 at 1:06 PM Mark Rison <[m.rison@samsung.com](mailto:m.rison@samsung.com)> wrote:

Maybe, because the current definition of SPP A-MSDU and description of

dot11SPPAMSDUCapable imply PV0 by mention of the QoS Control field, we could just say the following instead?

Change 10.11 A-MSDU operation as follows:

A non-DMG STA indicates support for payload protected A-MSDUs (PP A-MSDUs) or signaling and payload

protected A-MSDUs (SPP A-MSDUs), when dot11RSNAActivated is true, in its RSNXE. A non-DMG STA

and its peer STA both determine and maintain a record of whether an encrypted A-MSDU sent to its peer is to

be a PP A-MSDU or an SPP A-MSDU based on the SPP A-MSDU Capable subfield of the Extended RSN

Capabilities field of the RSNXE (see 9.4.2.241 (RSN Extension element (RSNXE))). If a STA and its peer

STA are DMG STAs or both have their SPP A-MSDU Capable subfields equal to 1, A-MSDUs shall be

transmitted as SPP A-MSDUs and shall not be transmitted in PV1 MPDUs. Otherwise, A-MSDUs shall be transmitted as PP A-MSDUs.(M57)

NOTE—A PV1 MPDU cannot contain an SPP A-MSDU because the signaling of whether an A-MSDU is being carried is not part of the AAD (see Figure 12-20—AAD construction for PV1 MPDUs) and so is not protected.

Reception and transmission of A-MSDUs using a non-RSN association is unaffected by the value of the SPP

A-MSDU Capable subfield.(M57)

An AP may transmit an SPP A-MSDU for a GCR group address if it has successfully negotiated RSNA

(re)associations with all associated STAs that have an active GCR agreement for this group address.

(No changes to 3.2 SPP A-MSDU definition or C.3 dot11SPPAMSDUCapable

description.)

Thanks,

Mark

**From:** Mark Rison <[m.rison@SAMSUNG.COM](mailto:m.rison@SAMSUNG.COM)>   
**Sent:** Friday, 19 August 2022 14:29  
**To:** [STDS-802-11-TGM@LISTSERV.IEEE.ORG](mailto:STDS-802-11-TGM@LISTSERV.IEEE.ORG)  
**Subject:** Re: [STDS-802-11-TGM] 11me/D1.0 CID 1555 (SPP and S1G)

--- This message came from the IEEE 802.11 Task Group M Technical Reflector ---

Regarding CID 1555, discussed on Monday, further investigation has shown

that while the SID has a bit that tells you whether what is being carried

is an A-MSDU or a plain MSDU, this bit is not part of the AAD because the

AAD expands SIDs to the full MAC address, losing the A-MSDU indication

in the process.

I therefore propose that CID 1555 be resolved like this (editorial suggestions

on how to avoid the ugly "In the context of PV<n> MPDUs," preambles welcome!):

Change 10.11 A-MSDU operation as follows:

~~A~~In the context of PV0 MPDUs, a non-DMG STA indicates support for payload protected A-MSDUs (PP A-MSDUs) or signaling and payload

protected A-MSDUs (SPP A-MSDUs), when dot11RSNAActivated is true, in its RSNXE. A non-DMG STA

and its peer STA both determine and maintain a record of whether an encrypted A-MSDU sent to its peer is to

be a PP A-MSDU or an SPP A-MSDU based on the SPP A-MSDU Capable subfield of the Extended RSN

Capabilities field of the RSNXE (see 9.4.2.241 (RSN Extension element (RSNXE))). If a STA and its peer

STA are DMG STAs or both have their SPP A-MSDU Capable subfields equal to 1, A-MSDUs shall be

transmitted as SPP A-MSDUs. Otherwise, A-MSDUs shall be transmitted as PP A-MSDUs.(M57)

In the content of PV1 MPDUs, when dot11RSNAActivated is true, A-MSDUs shall not be transmitted if a STA and its peer STA both have their SPP A-MSDU Capable subfields equal to 1.

NOTE—This is because in a PV1 MPDU the indication of whether an A-MSDU is being carried is not part of the AAD (see Figure 12-20—AAD construction for PV1 MPDUs) and so is not protected.

Reception and transmission of A-MSDUs using a non-RSN association is unaffected by the value of the SPP

A-MSDU Capable subfield.(M57)

An AP may transmit an SPP A-MSDU for a GCR group address if it has successfully negotiated RSNA

(re)associations with all associated STAs that have an active GCR agreement for this group address.

(No changes to 3.2 SPP A-MSDU definition or C.3 dot11SPPAMSDUCapable

description.)

Further changes might be made in D2.0 to allow for SPP A-MSDUs in PV1 MPDUs,

if a way to make this possible is identified.

Thanks,

Mark

REVISED

In D1.3 at 2186.20 after "If a STA and its peer STA are DMG STAs or both have their SPP A-MSDU Capable subfields equal to 1, A-MSDUs shall be transmitted as SPP A-MSDUs" add " and shall not be transmitted in PV1 MPDUs".

After the para add "NOTE—A PV1 MPDU cannot contain an SPP A-MSDU because the signaling of whether an A-MSDU is being carried is not part of the AAD (see Figure 12-20—AAD construction for PV1 MPDUs) and so is not protected."

===

Thanks,

Mark