IEEE P802.11
Wireless LANs

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| Link latency measurement and report in MLO  |
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Abstract

This submission proposes text of D0.1 for the SFD MAC topic, Link latency measurement and report in MLO

Revisions:

- Rev 0: Initial version of the document.

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Discussion:

None.

***Instruction to Editor: TBD***

The Link Latency Measurement and Report element contains information reported from an AP operating on a specific link about the statistics of MSDUs entering the MAC of the AP and the transmit delay of MSDUs transmitted on the link. The element format is defined in Figure x-xx0 (Link Latency Measurement and Report element). This element may be used by a STA to select a proper AP operating on a specific link to associate with or be used by network analysis to compare link latency performance among different links of an AP MLD.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |
|  | Element ID | Length | Element ID Extension | Link ID | Measurement Duration  | Average DL TransmitDelay  | 95th Percentile DL Transmit Delay |
| Octets: | 1 | 1 | 1 | 1 | 2 | 1 | 1 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | AC\_VO Average DL Transmit delay | AC\_VO 95th Percentile DL Transmit delay | MSDU Discarded Rate | AC\_VOMSDU Discarded Rate | OptionalSubelements |
| Octets: | 1 | 1 | 1 | 1 | Variable |

Figure x.xx0 Link Latency Measurement and Report element format

The Element ID and Length fields are defined in 9.4.2.1. (General).

The Element ID Extension field is defined in 9.4.2.1.

The Link ID is defined in the TBD section.

The Measurement Duration field is set to the duration where the statistics reported in the element was measured, in units of TUs.

The Average DL Transmit Delay field is an unsigned integer in units of TUs indicating the average transmit delay, which is rounded to the nearest integer, of all successfully transmitted DL MSDUs on the link during the measurement duration. Transmit delay is defined in 9.4.2.21.11 (Transmit Stream/Category Measurement report).

The AC\_VO Average DL Transmit Delay field is an unsigned integer in units of TUs indicating the average transmit delay, which is rounded to the nearest integer, of all successfully transmitted DL MSDUs belonging to the access category AC\_VO on the link during the measurement duration.

The 95th Percentile DL Transmit Delay field indicates the transmit delay rounded to the nearest unsigned integer in units of TU that during the measurement duration, 95 percent of the transmit delay of all successfully transmitted DL MSDUs falls below.

The AC\_VO 95th Percentile DL Transmit Delay field indicates the transmit delay rounded to the nearest unsigned integer in units of TU that during the measurement duration, 95 percent of the transmit delay of all successfully transmitted DL MSDUs belonging to the access category AC\_VO falls below.

The MSDU Discarded Rate field is defined as that during the measurement duration the percentage of dropped MSDUs over all MSDUs entering the MAC of the AP operating on the link due to either retry limit being reached or the MSDU life time being exceeded and is linearly scaled with 255 representing 100%

The AC\_VO MSDU Discarded Rate field is defined as that during the measurement duration the percentage of dropped AC\_VO MSDUs over all AC\_VO MSDUs entering the MAC of the AP operating on the link due to either retry limit being reached or the MSDU life time being exceeded and is linearly scaled with 255 representing 100%

The Optional Subelements field contains zero or more subelements. The subelement format and ordering of subelements are defined in 9.4.3 (Subelements).

Optional Subelement field is TBD.