IEEE P802.11  
Wireless LANs

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| LB272 CID 1950. | | | | |
| Date: 2023-07-05 | | | | |
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Abstract

This submission addresses CID 1950

Revision history:

R0 – initial version

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| --- | --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page** | **Comment** | **Proposed Change** | **Resolution** |
| 1950 | 9.4.1.75.4 | 96.30 | Reporting RSSI and an receiver gain/operating point is useful for sensing, however many applications can also benefit from also having an SNR reported. As with the gain/operating point, a similar PHY specific parameter may be allocated in the report and provided with the CSI measurement. | Allocate per rx-tx pair SNR values into Table 9-127j. Add parameters to SENSTBREPORT.indication and SENSNTBREPORT.indication MLME primitives. |  |

**Proposed Resolution**:

**Discussion**:

* For HT/VHT PHYs, there is an SNR field transmitted as part of MFB (MCS Feedback), or Link Adaptation protocol.
  + For the HE variant, the SNR field was dropped (e.g., 11-15-1329-02).

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* A SNR field is also present in the Beamforming reports.

A table with text and numbers

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A table of numbers and a few black text

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* A corresponding SNR RXVECTOR parameter is defined.

A close-up of a table

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* Problems:
  + SNR is not defined for an HE\_TB PPDU, but it is defined for a HE\_SU PPDU (with PSDU\_LENGTH==0).
    - This may be a problem for the Sensing by Proxy case:
      * The SBP Responder (AP) is the Sensing Receiver
      * The SR2SI NDP would be HE TB Ranging NDP (HE\_TB PPDU)
  + The SNR is an average for each received Space-Time stream, and hence does not reflect quality of each RX/TX measurement path.

**Conclusion:** Existing SNR definition is not ideal for sensing.

**SP:**

Do you support adding a new RXVECTOR SNR definition for Sensing (e.g., CSI\_ESTIMATE\_SNR), and adding new fields into the Sensing Measurement Report field?

Y/N/A