IEEE P802.11
Wireless LANs

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| Comment Resolution on Spatial Sharing |
| Date: 2017-05-07 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Lei Huang  | Panasonic |  |  | Lei.huang@sg.panasonic.com |
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Abstract

This submission proposes resolutions of comments received from TGay comment collection (TGay Draft 0.3).

* 2 CIDs: 331, 343

Revisions:

* Rev 0: Initial version of the document.
1. **Introduction**

Interpretation of a Motion to Adopt

A motion to approve this submission means that the editing instructions and any changed or added material are actioned in the TGay Draft. The introduction and the explanation of the proposed changes are not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGay Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGay Editor: Editing instructions preceded by “TGay Editor” are instructions to the TGay editor to modify existing material in the TGay draft. As a result of adopting the changes, the TGay editor will execute the instructions rather than copy them to the TGay Draft.***

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| CID | Page Number | Line Number | Comment | Proposed Change | Resolution |
| 331 | 87 | 10 | Considering dense operation scenario, spatial reuse could be a very imoprtant feature of 802.11ay. While 802.11ad specifies spatial sharing method, large portion of the operation is left beyond the scope of the standard. Also Directional Channel Quality report does not contain precise information such as measurement result per RX sectors. It would be nice if 802.11ay considers spatial reuse leveraging beamforming. | Please consider to include concurrent measurement per sector, in order to allow more aggressive spatial sharing among neighboring STAs. | Rejected-According to D0.3, if a recipient STA that receives a Directional Channel Quality request frame is already SU-MIMO beamformed trained with the target STA, then the recipient STA shall carry out the measurements concurrently employing the same receive antenna configuration as is used by the recipient STA when receiving frames from the target STA. Notice that the receive antenna configuration for SU-MIMO operation comprises two or more RX sectors, each corresponding to a specific RX antenna. In other words, the concurrent measurement per sector has been allowed in D0.3. |
| 343 | 87 | 40 | there is lack of the description about how the Extended Measurement Configuration subelement is used. | Please add the description about how the Extended Measurement Configuration subelement is used. | Revised-Agree in principle with the comment. TGay editor to make the changes shown in 11-17/0713r0 under all headings that include CID 343. |

**Discussion:** None

**Propose:**

Revised for CID #343 as per discussion and editing instructions in 11-17/0713r0.

**11.32.2 Spatial sharing and interference assessment**

***TGay editor: Change the Change the sixth and seventh paragraphs (D0.3) as follows******(CID #343):***

 If the AP or PCP transmits a Directional Channel Quality request to a STA involved in a candidate SP to assess the possibility for spatial sharing with one or more ~~another~~ existing SPs, it shall set the Target STA to the corresponding peer STA’s MAC address involved in the candidate SP and shall set the Measurement Method field to indicate ANIPI. Additionally, the AP or PCP may include a Measurement Configuration subelement in the Directional Channel Quality request where the Measurement Channel Bitmap subfield indicates one or more 2.16 GHz channels for which the measurement request applies; in this case, it may set the Channel Measurement Report Method subfield to 0 to indicate the results of measurements over all the requested 2.16 GHz channels during each measurement time block are reported per 2.16 GHz channel or may set this subfield to 1 to indicate the averaged results of concurrent measurements over all the requested 2.16 GHz channels during each measurement time block are reported, and may set the Antenna Measurement Report Method subfield to 0 to indicate the results of concurrent measurements over each requested 2.16 GHz channel using multiple RX DMG antennas during a measurement time block are reported per DMG antenna or may set this subfield to 1 to indicate the averaged results of concurrent measurements over each requested 2.16 GHz channel using multiple RX DMG antennas during a measurement time block are reported. Together with the Measurement Configuration subelement, the AP or PCP may also include an Extended Measurement Configuration subelement in the Directional Channel Quality request, where measurement timing information for the first requested channel is indicated in the Measurement Request field and measurement timing information for the remaining requested channels is indicated in the Extended Measurement Configuration subelement.

If the candidate SP has already been allocated channel time, the AP or PCP should additionally transmit a Directional Channel Quality request to the STAs involved in each of the one or more existing SPs to assess the possibility for spatial sharing with the candidate SP. In the Directional Channel Quality request, the AP or PCP shall set the Target STA to the corresponding peer STA involved in the existing SP and shall set the Measurement Method field to indicate ANIPI. Additionally, the PCP or AP may include a Measurement Configuration subelement in the Directional Channel Quality request where the Measurement Channel Bitmap subfield indicates one or more 2.16 GHz channels for which the measurement request applies; in this case, it may set the Channel Measurement Report Method subfield to 0 to indicate the results of measurements over all the requested 2.16 GHz channels during each measurement time block are reported per 2.16 GHz channel or may set this subfield to 1 to indicate the averaged results of concurrent measurements over all the requested 2.16 GHz channels during each measurement time block are reported, and may set the Antenna Measurement Report Method subfield to 0 to indicate the results of concurrent measurements over each requested 2.16 GHz channel using multiple RX DMG antennas during a measurement time block are reported per DMG antenna or may set this subfield to 1 to indicate the averaged results of concurrent measurements over each requested 2.16 GHz channel using multiple RX DMG antennas during a measurement time block are reported. Together with the Measurement Configuration subelement, the AP or PCP may also include an Extended Measurement Configuration subelement in the Directional Channel Quality request, where measurement timing information for the first requested channel is indicated in the Measurement Request field and measurement timing information for the remaining requested channels is indicated in the Extended Measurement Configuration subelement.