**3GPP TSG RAN WG1#100bis R1-200xxxx**

**e-Meeting, April 20th – 30th, 2020**

**Agenda item:** 7.2.6.1

**Source:** Moderator (Samsung)

**Title:** TP for eMIMO MU-CSI topic #2

**Document for:** Discussion and Decision

1. Analysis

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| Reasons for change | In the current version of TS 38.214 V16.1.0:   1. For R=2, the PMI subband equations result in incorrect PMI subband size under a certain condition () 2. For , FD basis indicator is still reported 3. Various typographical errors |
| Summary of changes | 1. Add “+1” and “–1” in the modulo equations to fix the error 2. Add condition for FD basis indicator reporting (and its converse for not reporting) 3. Fix typographical errors |
| Specs/Sections impacted | TS 38.214 V16.1.0, section 5.2.2.2.5 |
| Consequences if not approved | The spec is either ambiguous or erroneous (incorrect implementation, incorrect description contrary to agreements) |

1. Text proposal

TP for TS 38.214 V16.1.0

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| --- | --- | --- |
| 5.2.2.2.5 Enhanced Type II Codebook **<**Unchanged text is omitted>  - When :  - For each subband in *csi-ReportingBand* that is not the first or last subband of a BWP, two precoding matrices are indicated by the PMI: the first precoding matrix corresponds to the first PRBs of the subband and the second precoding matrix corresponds to the last PRBs of the subband.  - For each subband in *csi-ReportingBand* that is the first or last subband of a BWP  - If , one precoding matrix is indicated by the PMI corresponding to the first subband. If , two precoding matrices are indicated by the PMI corresponding to the first subband: the first precoding matrix corresponds to the first PRBs of the first subband and the second precoding matrix corresponds to the last PRBs of the first subband.  - If , one precoding matrix is indicated by the PMI corresponding to the last subband. If , two precoding matrices are indicated by the PMI corresponding to the last subband: the first precoding matrix corresponds to the first PRBs of the last subband and the second precoding matrix corresponds to the last PRBs of the last subband.  **<**Unchanged text is omitted>  vectors, , , are identified by (for ) and where  which are indicated by means of the indices (for ) and ( and ), , where  **<**Unchanged text is omitted>  For all values of , for . If , the nonzero elements of , identified by are found from , for , and from and , for , using as defined in Table 5.2.2.2.5-4 and the algorithm:  **<**Unchanged text is omitted>  When and are known, and are found as follows:  - If , and is not reported. If , , for , and is not reported. If , , where is given in Table 5.2.2.2.5-4 and where the indices are assigned such that increases as increases.  **<**Unchanged text is omitted>  The codebooks for 1-4 layers are given in Table 5.2.2.2.5-5, where , , for are obtained as in clause 5.2.2.2.3, and the quantities and are given by  **<**Unchanged text is omitted>  **Table 5.2.2.2.5-5: Codebook for 1-layer. 2-layer, 3-layer and 4-layer CSI reporting using antenna ports 3000 to 2999+*P*CSI‑RS**  **<**Unchanged text is omitted>   |  | | --- | | Where  and the mappings from to , , , , , , , , and from to , , , , , and , , , and are as described above, including the ranges of the constituent indices of and . |   **<**Unchanged text is omitted>  5.2.2.2.6 Enhanced Type II Port Selection Codebook  **<**Unchanged text is omitted>  **Table 5.2.2.2.6-2: Codebook for 1-layer. 2-layer, 3-layer and 4-layer CSI reporting using antenna ports 3000 to 2999+*P*CSI‑RS**  **<**Unchanged text is omitted>   |  | | --- | | Where ,  and the mappings from to, , , , , and from to , , , , , and , , , and are as described above, including the ranges of the constituent indices of and . |   **<**Unchanged text is omitted> |