**3GPP TSG RAN WG1 #110 R1-220xxxx**

**Toulouse, France, August 22nd – 26th, 2022**

**Agenda item:** 8.1

**Source:** Moderator (CATT)

**Title:** Moderator Summary for Rel.17 NR FeMIMO maintenance: mTRP beam management

**Document for:** Discussion and Decision

1. Introduction

The moderator summary of the maintenance-related issues raised in the submitted contributions for Rel.17 NR\_FeMIMO maintenance is given below.

An initial assessment on each of the issues is given (but can be revised based on the outcome of the discussion during the preparation week). The assessment will be used as a basis to select a number of issues (per chairman instruction) for further discussion in the upcoming weeks.

* *High priority (H):* this includes high-priority item (essential, pending issues, broken spec components) and proposed editorial changes that either enhance the clarity of the specs or correct mistakes
* *Non-essential (N)*: this includes all other purposes such as spec optimization and low priority issues
* *Editorial (E)*: this includes editorial issues that will be handled as editorial CRs

Companies are invited to provide inputs **before Monday 15:00 (local time in France).**

1. Maintenance issues

The issues are summarized in the following table:

**Table 1 Summary**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **#** | **Issue (summary of CR proposal)** | **Companies** | **FL assessment** | **Company inputs (if any)** |
| 1 | RRC parameter of SR configuration in TS38.213 is not aligned with that in TS38.331.  FL note: Editorial change. | Lenovo | E | Google: Agree with FL |
| 2 | With regard to L1-RSRP reporting in group based beam reporting,   * R1-2206352 proposes that L1-RSRP(s) and resource set indicator are not reported when repetition “on” is configured for both CMRs. * R1-2207176 proposes to clarify L1-RSRP reporting behavior when one CMR resource set has repetition set to ‘on’. In addition, repetition should not be set to ‘on’ for both CMR resource sets.   FL note: CRI/SSBRI reporting when repetition of one CMR is set to ‘on’ was discussed and agreed in last meeting. Suggest discussing L1-RSRP related issues in this meeting. | CATT, Qualcomm | H | Google: OK to discuss |
| 3 | With regard to implicit BFD-RS set determination,   * R1-2206353 points out that UE is unclear on how many BFD-RS sets needs to be determined if , and are all not configured. * R1-2207640 points out that each BFD-RS set is derived based on both CORESET groups in current specification   FL note: The first issue was discussed in RAN1#109-e but no agreement was achieved. In last meeting, some companies thought cell-specific BFR and TRP-specific BFR can be differentiated by *BeamFailureRecoveryServingCellConfig-r17*. However, this parameter was removed in current TS38.331.  The second issue was not discussed before and the clarification is needed. | CATT, Huawei, HiSilicon | H | Google: OK to discuss |
| 4 | R1-2206727 clarifies that for aperiodic CSI reporting, the high layer parameter *groupBasedBeamReporting-r17* is configured and applied per CSI-ReportConfig.  FL note: issue seems to be valid. Suggest discussing it to avoid misunderstanding. | vivo | H |  |
| 5 | With regard to MAC-CE based BFD-RS set update,   * R1-2206864 proposes that RRC configured BFD-RS(s) is activated when the number of BFD-RS(s) in a set is equal to or less than N\_BFD. Besides, the activation MAC CE always includes the all the activated BFD-RS of two sets. * R1-2207498 proposes that *simultaneousTCI-UpdateList1* or *simultaneousTCI-UpdateList2* can be applied for activation of BFD-RS.   FL note: The first issue was discussed in RAN1#109-e but no agreement was achieved. Some companies preferred to leave the MAC-CE and RRC designs to RAN2.  The second issue was not discussed before and the feature was not agreed in RAN1. | LG Electronics, ASUSTek | N | Google: Agree with FL. For the first issue, in our understanding, RAN2 is also discussing this issue in this meeting. It seems RAN1 has no need to touch this issue again. |
| 6 | PDCCH Monitoring after UE receives BFR response is clarified in R1-2207541. UE is not required to monitor PDCCH on CORESETs associated with failed BFD-RS set if no suitable candidate is indicated.  FL note: Not necessary. The corresponding behavior has already been supported by “if any” in the specification.  -corresponding to from , if any, for the first CORESETs,  -corresponding to from , if any, for the second CORESETs | Nokia | N | Google: Agree with FL. |

1. Observation

From the inputs shared by participating companies during the preparation phase, the following **observation** can be made:

* The following issue can be handled as E (a part of editorial CR): ...
* The following issues can be designated as H (requiring discussion and additional agreements/conclusions): ...
* The following issues can be designated as N (non-essential) but can be discussed again in future meetings: ...
* The following issues can be designated as N (non-essential) and have been discussed in previous meeting(s): ...

# References

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| --- | --- | --- | --- |
| 1 | R1-2206217 | Corrections on SR configured for TRP-specific BFRQ to TS38.213 | Lenovo |
| 2 | R1-2206352 | Clarification on L1-RSRP reporting for enhanced group based beam reporting | CATT |
| 3 | R1-2206353 | Correction on BFD-RS set determination for mTRP BFR | CATT |
| 4 | R1-2206727 | [Draft] CR on the application of the configuration of group-based beam reporting | vivo |
| 5 | R1-2206864 | Draft CR on beam failure recovery for M-TRP | LG Electronics |
| 6 | R1-2207176 | Draft Rel-17 CR on L1-RSRP reporting for enhanced group based beam report | Qualcomm |
| 7 | R1-2207498 | Correction on BFD-RS indication MAC CE | ASUSTek |
| 8 | R1-2207541 | Draft CR 38.213 PDCCH Monitoring After m-TRP BFR | Nokia, Nokia Shanghai Bell |
| 9 | R1-2207640 | Corrections on implicit BFD-RS derivation in 38.213 | Huawei, HiSilicon |