**3GPP TSG RAN WG1 #104-e R1-210xxxx**

**e-Meeting, January 25th – February 5th, 2021**

**Agenda item:** 8.1.1

**Source:** Moderator (Samsung)

**Title:** Moderator summary for

**Document for:** Discussion and Decision

## Introduction

In this summary, inputs from participating companies on the following DRAFT LS to RAN2:

[104-e-Post-R17-eMIMO-01] Email discussion for LS to RAN2 on TCI state update (beam indication) using non-serving source RS configured for non-serving cell(s) for DL reception and UL transmission – Eko (Samsung), Feb 22 ~ Feb 26

The following version of the companion DRAFT LS were provided:

* DRAFT R1-2102247 LS\_RAN2\_L12XCM BI (init): initial version
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## Summary

### Inputs on the initial version

Table 1 Companies’ inputs: initial

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| **Company** | **Input** |
| Apple | We suggest we clarify Q5 and Q6 a little bit. For Q5, RAN2 may not see the difference between inter-band CA and intra-band CA. For Q6, there may be different understanding on the definition of inter-frequency and intra-frequency.  **Question 5**: In regard of inter-band CA issues, what would be the higher-layer impact assuming intra-band CA as opposed to inter-band CA? The unified TCI state introduced in Rel-17 associated with a non-serving cell is applied for CCs at least in a band.  **Question 6**: In regard of inter-frequency issues, what would be the higher-layer impact assuming intra-frequency scenarios as opposed to inter-frequency scenarios? For intra-frequency scenario, it is assumed that SSBs of non-serving cells have the same center frequency and SCS as the SSBs of the serving cell. |
| Ericsson | We do not see why this needs to go to RAN3 or RAN4.  A relevant piece of information to include early is that RAN1 has agreed to support intra-DU scenarios.  We suggest clarifying RAN1’s interpretation of “non-serving cell”:  RAN1 is currently investigating TCI state update (beam indication) for DL reception from and UL transmission using non-serving reference signals – at least for UE-dedicated PDSCH, PDCCH, PUSCH, and PUCCH. A non-serving reference signal is a reference signal that is transmitted from a TRP broadcasting a PCI that is different than the serving PCI, i.e., the PCI in the servingCellConfigCommon. From RAN1’s point of view, such a TRP would correspond to a non-serving cell.  We do not see that RAN1 needs any confirmation to proceed further. The LS is to inform RAN2 of the RAN1 work so that RAN2 can act accordingly:  Overall, we do not see that RAN1 needs any information from RAN2 to progress the work. The LS is to explain and inform RAN2 about the work that we are doing. RAN2 can then act accordingly, as long as the correct explanation is provided.  We suggest reformulating the questions into issues that may or may not require RAN2’s attention:  During the discussions RAN1 has identified the following issues that may or may not require RAN2 attention:  Issue 1: Aspects related to RRC reconfiguration  The procedures addressed by RAN1 (i.e., TCI state update) will not lead to any automatic updates of the RRC configurations, and RAN1 has discussed if such updates would be beneficial or needed. Two issues that have been discussed in particular are if the serving cell needs to be updated, and if it is viable to reuse the same C-RNTI over an area covered by multiple cells.  Issue 2: Aspects related to the CU-DU split  RAN1 has agreed to support intra-DU scenarios.  Issue 3: Aspects related to inter-band CA  One topic that is of particular interest in the FeMIMO WI is inter-band CA, and RAN1 is discussing if there are any particular aspects that should be considered in relation to beam indication.  Issue 4: Aspects related to inter-frequency operation  So far, RAN1 has agreed to support intra-frequency scenarios, whereas inter-frequency scenarios have not been agreed. RAN1 is discussing if there are any particular aspects that should be considered in relation to beam indication.  For the actions, we suggest:  **ACTION:** RAN1 respectfully asks RAN2 to take the above information into account in their future work. |
| Qualcomm | Some wording suggestions for the following sentences  Add “can be” and “if supported”, since RS configured for the non-serving cell is not agreed yet  Add “s” after source RS, since the TCI state can have two RSs  RAN1 is currently investigating TCI state update (beam indication) for DL reception from and UL transmission to non-serving cell(s) – at least on UE-dedicated PDSCH, PDCCH, PUSCH, and PUCCH. In this case, the TCI ~~is~~ can be associated with ~~a~~ source RS(s) configured for the non-serving cell(s) if supported.  To our understanding, selecing pre-configured values is one way to avoid RRC reconfig, so suggest to add it in the example.  **Question 1**: In regard of RRC configuration:   1. Is RRC reconfiguration signaling needed for DL reception from or UL transmission to a non-serving cell, at least on UE-dedicated PDSCH, PDCCH, PUSCH, and PUCCH? If so, which parameter(s)? 2. Can some RRC parameters related to the non-serving cell(s) be updated via dynamic signaling (e.g. MAC CE and/or DCI, potentially selecting pre-configured values) without any additional RRC reconfiguration signaling? |
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Observation/summary: ....

### Inputs on revised version