**3GPP TSG RAN WG1 Meeting #108-e R1-22xxxxx**

**e-Meeting, February 21 – March 3, 2022**

**Title:** [Draft]Reply LS on RAN2 agreements for TRS-based Scell activation

**Response to:** R1-2200890/R2-2201715

**Release:** Rel-17

**Work Item:** LTE\_NR\_DC\_enh2

**Source:** Huawei [RAN WG1]

**To:** RAN WG2

**Cc:**

**Contact Person:**

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**Attachments:**

**1. Overall Description:**

RAN1 thanks RAN2 for the LS on aperiodic CSI-RS for tracking for fast SCell activation. RAN1 answers are as follows.

**Q1:** **RAN2 would like to confirm whether RAN2’s understanding is correct and whether there is any limitation in TRS configuration for fast SCell activation in Rel-17 which needs to be captured in RAN2 spec?**

**Answer**: RAN1 confirm that the RAN2 understanding for trs-info is correct. The following limitations need to be captured in RAN2 specifications,

* CSI-RS can only be configured on a BWP with firstActiveDownlinkBWP-Id. (already reflected in draft CR R2-2201714)
* CSI-RS for tracking for fast SCell activation cannot be one with two NZP CSI-RS resources in one slot. (not correctly reflected in R2-2201714 yet)

Additionally, RAN1 has the following comments on CR R2-2201714 in the LS.

* CSI-RS resources within one CSI-RS resource set should be configured with the same TCI state. To reflect this, the following change is for RAN2 consideration.

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| On top of CR R2-2201714 for TS 38.331  ***SCellActivationRS-Config* information element**  -- ASN1START  -- TAG-SCELLACTIVATIONRS-CONFIG-START  SCellActivationRS-Config-r17 ::= SEQUENCE {  scellActivationRS-Id-r17 SCellActivationRS-ConfigId-r17,  resourceSet-r17 NZP-CSI-RS-ResourceSetID,  gapBetweenBursts-r17 INTEGER (2..31) OPTIONAL, -- Need R  qcl-Info-r17 ~~SEQUENCE (SIZE(1..maxNrofAP-CSI-RS-ResourcesPerSet)) OF TCI-StateId,~~ TCI-StateId,  ...  }  -- TAG-SCELLACTIVATIONRS-CONFIG-STOP  -- ASN1STOP |

* The reference slot in the following excerpt of TS 38.331 (as highlighted below) is not in line with the RAN1 agreements below, which have been captured in S5.2.1.5.3 of TS 38.214. A correction is needed in TS 38.331 specification. Whether updating the description or introducing a new RRC parameter name with a link to TS 38.214 is up to RAN2.

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| ***TS 38.331 text:***  ***aperiodicTriggeringOffset, aperiodicTriggeringOffset-r16***  Offset X between the slot containing the DCI that triggers a set of aperiodic NZP CSI-RS resources and the slot in which the CSI-RS resource set is transmitted. For *aperiodicTriggeringOffset*, ……. For *aperiodicTriggeringOffset-r16*, the value indicates the number of slots. The network configures only one of the fields. When neither field is included, the UE applies the value 0. |

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| Agreement  For the reference slot for triggering offset of temporary RS   * Option 2: the last DL slot of the to-be-activated Scell overlapping with slot n+k as defined in 38.213 sub-clause 4.3 * FFS: the earliest slot no earlier than the reference slot for a UE to receive a triggered temporary RS   Agreement  For efficient SCell activation, the earliest slot for a UE to receive a triggered temporary RS is the reference slot (i.e., the last DL slot of the to-be-activated Scell overlapping with slot n+k as defined in 38.213 sub-clause 4.3). |

**2. Actions:**

**To:** RAN2

**ACTION:** RAN1 respectfully asks RAN2 to take the above answers and comments into consideration.

**3. Date of Next TSG-RAN1 Meetings:**

3GPP RAN1#109-e 16 - 27, May 2022 Online

3GPP RAN1#110 22 - 26, August 2022 Toulouse, FR