**3GPP TSG-RAN WG1 Meeting #104-e R1-21xxxxx**

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

**Title: [DRAFT]** Reply LS on the use of simultaneous CSI-RS resources and ports

**Response to:** R2-2011274, LS on the use of simultaneous CSI-RS resources and ports

**Release:** Rel-15

**Work Item:** NR\_newRAT-Core

**Source:** Moderator (Ericsson)

**To:** RAN WG2

**Contact Person:**

#### Name: Stephen Grant

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**Attachments:** None

**1. Overall Description:**

In R1-200022(R2-2011274), RAN2 has discussed the use of simultaneous CSI-RS resources and ports, and asks RAN1 the following question:

RAN2 has asked RAN1 whether the fields *maxNumberSimultaneousNZP-CSI-RS-ActBWP-AllCC* and *totalNumberPortsSimultaneousNZP-CSI-RS* aresupposed to indicate: the number of **active** CSI-RS resources and ports, respectively; or the number of **configured** CSI-RS resources and ports (including active CSI-RS resources and ports), respectively?

The reason for the question is that the current field description for *maxNumberSimultaneousNZP-CSI-RS-ActBWP-AllCC* in TS 38.306 includes “This parameter limits the total number of NZP-CSI-RS resources that the **NW may configure** across all CCs, and across MCG and SCG in case of NR-DC (irrespective of the associated codebook type).”; and the current field description for *totalNumberPortsSimultaneousNZP-CSI-RS-ActBWP-AllCC*  in TS 38.306 includes “This parameter limits the total number of ports that the **NW may configure** across all NZP-CSI-RS resources across all CCs”.

Response to RAN2

RAN1 has discussed the question from RAN2, and RAN1's understanding is aligned with RAN2's understanding. The UE capability parameters *maxNumberSimultaneousNZP-CSI-RS-ActBWP-AllCC* and *totalNumberPortsSimultaneousNZP-CSI-RS-ActBWP-AllCC* indicate a restriction on the number of active CSI-RS resources and ports, respectively. The definition of "active" CSI-RS/resources ports is defined in the final paragraph of TS 38.214 Section 5.2.1.6.

RAN1 respectively suggests that RAN2 could update the related descriptions in TS 38.306 in order to avoid possible misinterpretation that the UE capability parameters indicate a restriction on the number of configured CSI-RS resources and ports.

**2. Actions:**

**To RAN2:**

**ACTION: RAN1 respectfully asks RAN2 to take the above information into account in their future work.**

**3. Date of Next TSG-RAN WG1 Meetings:**

TSG-RAN WG1 Meeting #104-bis-e 12 Apr. – 20 Apr. 2021 Electronic Meeting

TSG-RAN WG1 Meeting #105-e 19 – 27 May 2021 Electronic Meeting