**3GPP TSG-RAN WG2 Meeting #119R2-220**

**Electronic August 2022**

**Title: DRAFT**LS on further questions on feMIMO RRC parameters

**Response to: -**

**Release:** Rel-17

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

**Source:** ERICSSON to be replaced by 3GPP TSG-RAN WG2

**To:** 3GPP TSG-RAN WG1

**Contact Person:**

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**Attachments:** None

**1. Overall Description:**

RAN2 discussed the field description of *addtionalPCI* in *TCI-state* and *cell* in *QCL-Info*.

The current definition of TCI-state in the RRC specification is so that for each TCI-state, single *additionalPCI* and two qcl-Types (i.e., *qcl-Type*1 and *qcl-Type2*) may be configured. For a qcl-Type, parameters such as *cell*, *referenceSignal*, etc., are configured.

The current field descriptions states:

***additionalPCI***

Indicates that this TCI state refers to an additional PCI different from serving cell PCI, as configured in *ServingCellConfig*.

***cell***

The UE's serving cell in which the *referenceSignal* is configured. If the field is absent, it applies to the serving cell in which the *TCI-State* is configured. The RS can be located on a serving cell other than the serving cell in which the *TCI-State* is configured only if the *qcl-Type* is configured as *typeC* or *typeD*. See TS 38.214 [19] clause 5.1.5.

**Question 1**

RAN2 would like to ask RAN1

1. whether current field description of *additionalPCI*  is correct or whether the additional PCI should refer to the “*cell*” configured in the *QCL-info*.
2. RAN2 assumes *additionalPCI* is per TCI-state, i.e., there is no such case where qcl-Type1 and qcl-Type2 for the same TCI-state associate with different additionalPCI values. Please confirm whether this is also RAN1’s understanding.
3. if b) is confirmed, would there be need to state that “*cell*” cannot be two different values for qcl-Type1 and qcl-Type2?

RAN2 also discussed the same matter for the IE *TCI-UL-State* with respect to the need to update field descriptions of *additionalPCI* or the *servingCellId or ul-powerControl*

**Question 2**

RAN2 would like to ask RAN1 whether current field description of *additionalPCI*  in IE *TCI-UL-State* is correct or whether update is needed for that or for the field description of *servingCellId* and *ul-powerControl* in the same IE

**Pending part on offline discussion:**

RAN2 also discussed about the configuration flexibility of the UL powercontrol.

In Rel-17 unified TCI framework, TCI-State (joint type) and TCI-UL-State-r17 (UL-only type) can be optionally configured with a set of power control parameters (ul-powerControl-r17). According to TS 38.331 V17.1.0, there are two possible configuration cases: a) ul-powerControl-r17 is present in BWP-UplinkDedicated and it is absent in all joint TCI states and UL TCI states, b) ul-powerControl-r17 is absent in BWP-UplinkDedicated and it is present in all joint TCI states and UL TCI states.

However, RAN1’s agreements do not exclude the case that ul-powerControl-r17 is present in some TCI states and is absent in other TCI states (case c)). In case c), ul-powerControl-r17 can be configured in both BWP-UplinkDedicated and joint TCI-State/TCI-UL-State-r17. When the indicated (currently used) TCI state is not configured with ul-powerControl-r17, the UE uses ul-powerControl-r17 in BWP-UplinkDedicated.

**Question 3**

RAN2 would like to ask RAN1 whether current specification is sufficient for UL powercontrol or whether further flexibility can be allowed

**2. Actions:**

**To RAN1 group:**

**ACTION:** RAN2 respectfully asks RAN1 to provide responses to above questions.

**3. Date of Next TSG-RAN WG2 Meetings:**

TSG-RAN WG2 Meeting #119-e October 2022 Electronic

TSG-RAN WG2 Meeting #120 November 2022 Europe