**3GPP TSG-RAN WG4 Meeting #98e R4-2103124**

**Electronic Meeting, 2-13 Nov., 2020**

**Title:** LS on SCell dropping

**Response to:**

**Release: Rel-15**

**Work Item: TEI15**

**Source:** TSG WG RAN4

**To:** TSG WG RAN5

**Cc:**

**Contact Person:**

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**Attachments: -**

**1. Overall Description:**

RAN4 has discussed the Rel-15 UE power scaling behaviour in FR2 CA defined in TS38.213, and also the relation to Pcmax calculation in TS38.101-2 section 6.2A.4 in which the equal PSD among PCC and SCC carriers is required.

RAN4 has reached the following understanding

* The UE prioritizes power on the Pcell and reduces the power on the Scell(s) for transmissions of a given priority when the UE is power limited (38.213)
* The RAN4 requirements on PCMAX for CA do not mandate the UE transmit with equal PSD across CCs at maximum output power
* Equal PSD was assumed for the development of MPR requirements, but the MPR thus specified for the total CA power is applicable to all transmit conditions (priorities)

In particular, RAN4 has been made aware of a problem in conformance testing that Rel-15 FR2 UEs stop transmitting UL signals of NR SCC when it is set to transmit UL signals at maximum power (by R4-2009656, “NR SCC UL power drop behaviour with EN-DC UE in FR2”, Anritsu Corp). These UEs stopped transmitting UL signals of NR SCC also during intra-band contiguous CA operation. To this end, RAN4 has discussed the following two options for verification of the CA test cases:

1. Option 1: Equal PSD between CCs.
2. Option 2: Measure the UE as is even SCC output may be scaled down under CA mode.

RAN4 considers that equal PSD is a preferred test condition to verify the UL CA requirements. However, considering the actual UE behaviour in the field, which is subject to the prioritization rules in 38.213, RAN4 recognizes that testing details (configures/procedures) are ultimately up to RAN5.

The above RAN4 understanding also applies to FR1 CA scenarios.

**2. Actions:**

**To RAN WG5 group:**

**ACTION:** RAN4 respectfully ask RAN5 to take the above information into consideration when defining test cases.

**3. Date of Next TSG WG RAN4 Meetings:**

TSG WG RAN4 Meeting #98bis-e April 12-20, 2021