**3GPP TSG-RAN WG4 Meeting #111 R4-2410611**

**Fukuoka, Japan, May 20 - 24, 2024**

**Title:** WF on NR\_cov\_enh2\_R18

**Agenda Item:** 7.17.3

**Source: Huawei, HiSilicon**

**Document for:** Approval

# 1. On Rel-18 power boosting applicability

## 1.1 How to handle MSD for Rel-18 power boosting extension

**Agreement:**

* For the band combinations that UE indicated as support for Rel-18 power boosting, MSD would only be tested in the cases without power boosting applied, and the new MSD of power boosting cases does not need to be specified and tested again.
  + TS 38.101-1 shall explicitly state that no MSD requirements unique to power boosting operation are defined. How to capture is FFS.
* Case ‘2’ is supported by the Rel-18 power boosting feature. FFS CR wording subject to parallel Rel-17 power class maintenance discussion.

## 1.2. Rel-18 power boosting applicability for inter-band UL CA

**Agreement:**

* For uplink inter-band UL carrier aggregation with a single uplink component carrier configured in each of every bands, Rel-18 power boosting can be applied with following conditions:
  + Only when the UE support *higherPowerLimit-r17* for this band combination which is an eligible CA configuration as specified in Table 6.2A.1.3-1
  + Only one band that the UE supports Rel-18 power boosting can be set [powerBoostPi2BPSKRel18] or [powerBoostQPSKRel18] as 1.

## 1.3. Rel-18 power boosting applicability for FR1+FR2 CA/DC

**Agreement:**

* For FR1+FR2 UL CA and FR1+FR2 DC, power boosting feature is supported in one FR1 NR band, where a single CC is configured in this uplink band.

## 1.4. Sanity check on existing RAN2 signalling aspect

**Agreement:**

* RAN4 to verify that can per FS signalling of associated capabilities allow UE to indicate support of case A (DL CA) but not case B (case descried in issue 1.2) or C (case descried in issue 1.3)?
* Check that when parent BC does not indicate the support of Rel-18 power boosting capability, can UE indicate support of Rel-18 power boosting capability for the same band in fallback BC?

## 1.5. Background only: on ‘cases’ referenced above

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| Case 1: FR1 single band with single uplink CC configured in the band where power boosting capability is indicated in this band.  Case 2: FR1 DL CA with a single uplink CC configured in a band where power boosting capability is indicated. The power boosting feature can be configured in this FR1 NR band.  Case 3: FR1 CA/DC with inter-band UL CA/DC, where a single CC is configured in the uplink bands where power boosting capability is indicated. The power boosting feature can be configured only in one of the bands where capability is indicated.  Case 4: FR1+FR2 UL CA, FR1+FR2 DC, where a single CC is configured in the uplink bands where power boosting capability is indicated. The power boosting feature can be configured in the FR1 NR band |