3GPP TSG-RAN WG4 Meeting #108-bis R4-23xxxxx

Xiamen, China, Oct 09 – 13, 2023

**Title:** draft LS on new per band per BC TxD capability

**Response to:**

**Release:** Rel-18

**Work Item:** 4Rx\_low\_NR\_band\_handheld\_3Tx\_NR\_CA\_ENDC-Core

**Source:** RAN4

**To:** RAN2

**Cc:**

**Contact Person:**

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**Attachments**: N/A

**1. Overall Description:**

TxD for 2Tx was introduced from Rel-16 as a per band UE capability. While in Rel-18, a new WI on 3Tx for inter-band CA/DC was approved, in which one of the objectives is to introduce requirements for the cases of:

* + CA power class or EN-DC power class is PC2
    - PC3 FDD band 1Tx + PC2 TDD band 2Tx (UL MIMO and TxD)
    - PC3 FDD band 1Tx + PC3 TDD band 2Tx (UL MIMO)
    - PC3 TDD band 1Tx + PC2 TDD band 2Tx (UL MIMO)
  + CA power class or EN-DC power class is PC1.5
    - PC3 FDD band 1Tx + PC1.5 TDD band 2Tx (UL MIMO and TxD)

where TxD is supported for one of the bands in the CA/DC band combination. It was agreed in RAN4 that a new per band per band combination UE capability should be introduced to support TxD in the band configured with 2Tx.. And it is also agreed that the new TxD capability should be enabled from Rel-18.

**2. Actions:**

**To RAN2:**

**ACTION:** RAN4 respectfully asks RAN2 to introduce a per FS TxD capability from Rel-18.

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

TSG-RAN4 Meeting#109 13th – 17th Nov 2023 Chicago, USA

TSG-RAN4 Meeting#110 26th Feb – 01st Mar 2023 Athens, Greece