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:**

**Name:** Liu Ye

**E-mail Address:** leo.liuye@huawei.com

**Send any reply LS to: 3GPP Liaisons Coordinator,** [**mailto:3GPPLiaison@etsi.org**](mailto:3GPPLiaison@etsi.org)

**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 a band combination. 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