**3GPP TSG-RAN WG2 Meeting #110-e R2-200xxxx**

**Online, 01 – 11 June 2020**

**Title:** LS on UE capability xDD differentiation for SUL/SDL bands

**Response to:** -

**Release:** Release 15/ Release 16

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

**Source:** TSG RAN WG2

**To:** RAN4, RAN1

**Cc:** -

**Contact Person:**

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**Attachments:** -

**1. Overall Description:**

UE includes the xDD capabilities for the per-UE capabilities which need to be differentiated on the duplex mode(s). RAN2 discussed how to differentiate the UE capabilities by xDD for the SUL/ SDL bands, but RAN2 agreed that this issue cannot be solved without further information from RAN1/RAN4.

RAN2 understands that if a SUL/SDL band corresponds to TDD or FDD band, it applies UE capability for TDD or FDD. According to clause 5.2 in 38.101-1 v15.9.0, NR operating bands in FR1 are defined in Table 5.2-1. There are 2 SDL bands (i.e. n75, n76) and 6 SUL bands (i.e. n80, n81, n82, n83, n84, n86) and all these bands have corresponding TDD or FDD bands. For Rel-16, there are 3 SDL bands (i.e. n29, n75, n76) and 8 SUL bands (i.e. n80, n81, n82, n83, n84, n86, n89, n95) i.e. new bands for n29, n89, n95 are introduced according to the table in 38.101-1 v16.30. It is unclear whether all these bands correspond to TDD or FDD bands. Therefore, it is unclear how UE capability for FDD or TDD can be applied to SDL/SUL in Rel-15 and Rel-16.

RAN2 would like to ask RAN4/RAN1 to answer the following questions:

**Question 1:** Could per-UE capabilities for SUL/SDL bands be differentiated on the duplex mode(s) for Rel-15 and Rel-16?

**Question 2:** Which duplex mode(s) (i.e. FDD or TDD) for the per-UE capabilities which are differentiated by FDD and TDD are applied for SUL/SDL in both Rel-15 and Rel-16?

**2. Actions:**

**To RAN4 and RAN1.**

**ACTION:** RAN2 respectfully asks RAN4/RAN1 to answer the above questions.

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

3GPP RAN2#111 24 – 28 August 2020 eMeeting