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

**Online, 01 – 11 June 2020**

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

**Response to:** -

**Release:** Release 15/ Release 16

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

**Source:** Samsung [TSG RAN WG2]

**To:** RAN4, RAN1

**Cc:**

**Contact Person:**

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

**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.

According to clause 5.2 in 38.101-1 v15.90, 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 these bands have corresponding TDD or FDD bands i.e. all SDL/SUL bands have corresponding 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.

RAN2 couldn’t find any clues that xDD differentiation of per-UE capabilities for SDL/SUL bands follow the rule of TDD/FDD bands, especially for newly added bands in Rel-16 (i.e. n29, n89, n95). RAN2 assume that the differentiation for SUL/SDL bands follows the corresponding pairing where SDL band would follow TDD band differentiation if paired with some TDD band, and SDL band would follow FDD band differentiation if paired with some FDD band.

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

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

**Question 2:** If the answer for above question 1 is yes, how can signal xDD differentiation for SUL/SDL bands 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