**3GPP TSG RAN WG1 Meeting #104-e R1-210xxxx**

**e-Meeting, January 25 – February 05, 2021**

**Title: [Draft] LS on beam switching gap for 60 GHz band**

**Response to:**

**Release:** Rel-17

**Work Item:** NR\_ext\_to\_71GHz

**Source:** Intel Corporation [RAN1]

**To:** RAN4

**Cc:**

**Contact Person:**

#### Name: Daewon Lee

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**Attachments:**

**1. Overall Description:**

RAN1 would like to ask RAN4 on time required for gNBs and UEs operating in 52.6 GHz to 71 GHz to perform the following operations:

* Switching Tx beams
* Switching Rx beams
* Switching from DL to UL
* Switching from UL to DL

In RAN1’s understanding, switching Tx/Rx beams was assumed to be in the order of 100ns (based on TR38.317-2 Section 9.10.2)”, which could be absorbed by the CP with subcarrier spacing supported for Rel-15/16 NR operating in FR2. RAN1 would like to ask RAN4 on whether similar assumption could be made for frequencies between 52.6 ~ 71 GHz and if not, what is the expected time required for Tx and Rx beam switching operations for both gNB and UEs.

Additionally, in RAN1’s understanding, switching from DL-to-UL or UL-to-DL requires up to 13792 Tc (=7.015 µsec) for Rel-15/16 NR operating in FR2 (as specified in 38.211 Section 4.3.2 based on R4-1805766). RAN1 would like to ask RAN4 on whether similar assumption could be made for frequencies between 52.6 ~ 71 GHz and if not, what is the expected time required for DL-to-UL and UL-to-DL switching operations for both gNB and UEs.

RAN1 would like to kindly ask RAN4 to provide information on the above questions. Please note that information on switching time may have impact to RAN1 design and specification and therefore RAN1 would benefit from obtaining this information as early as possible.

**2. Actions:**

**To RAN4:** RAN1 would like to kindly ask RAN4 to provide information on the above questions.

**3. Date of Next TSG-RAN WG1 Meetings:**

TSG-RAN WG1 Meeting #104-bis-e 12 – 20 Apr 2021 Online

TSG-RAN WG1 Meeting #105-e 19 – 27 May 2021 Online