**3GPP TSG RAN WG1 Meeting #107-e R1-211xxxx**

**e-Meeting, November 11 – 19, 2021**

**Title: [Draft] LS on RA-RNTI and MSGB-RNTI for 480 and 960 kHz**

**Response to:**

**Release:** Rel-17

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

**Source:** Intel Corporation [RAN1]

**To:** RAN2

**Cc:**

**Contact Person:**

#### Name: Daewon Lee

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**Attachments:**

**1. Overall Description:**

RAN1 would like to let RAN2 be aware that the RAN1 has made the following agreements regarding updates required for RA-RNTI and MSGB-RNTI for 480 kHz and 960 kHz based Random Access procedure.

* For 480kHz and 960kHz PRACH, reuse the RA-RNTI and MSGB-RNTI formula as FR2 and express the slot indexes t\_id based on 120kHz SCS:
  + RA-RNTI =1+s\_id+14×t\_id+14×80×f\_id +14×80×8×ul\_carrier\_id
  + MSGB-RNTI = 1 + s\_id + 14 × t\_id + 14 × 80 × f\_id + 14 × 80 × 8 × ul\_carrier\_id + 14 × 80 × 8 × 2
    - where the subcarrier spacing to determine t\_id is based on the value of µ specified in clause 5.3.2 in TS 38.211 [8] for µ = {0, 1, 2, 3}
    - and for µ = {5, 6}, t\_id is the index of the first 120 kHz slot in a system frame that contains the PRACH occasion (0 ≤ t\_id < 80)
  + Note: As per previous RAN1 agreement, there is only one 480 or 960 kHz PRACH slot in a 120kHz slot, such that RA-RNTI and MSGB-RNTI does not result in ID collision.

The required updates to RA-RNTI and MSGB-RNTI have been identified by RAN1, which is primarily due to value overflow that would stem from directly using the equations in current specifications.

RAN1 would like to kindly ask RAN2 to update appropriate RAN2 specifications based on RAN1 agreements listed above.

**2. Actions:**

**To RAN4:** RAN1 would like to kindly ask RAN2 to update appropriate RAN2 specifications based on RAN1 agreements listed above.

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

TSG-RAN WG1 Meeting #107-bis-e 17 – 25 Jan 2022 Online

TSG-RAN WG1 Meeting #108-e 21 Feb – 04 Mar 2022 Online