**3GPP TSG-RAN WG4 Meeting # 99-e R4-2107987**

**Electronic Meeting, May. 19-27, 2021**

**Title: LS on synchronous operation between Uu and SL in TDD band**

**Response to:**

**Release: Rel-17**

**Work Item: NR\_SL\_enh-Core**

**Source: RAN4**

**To:** **RAN1**

**Cc:**

**Contact person:**

**Name: Yuan Gao**

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**Attachments:** None

**1. Overall Description:**

Partially used SL with Uu in TDD band, e.g. n79, irrespective of TDM or FDM is being discussed for Rel-17 SL enhancement in RAN4.

In Rel-16 NR V2X, SL transmission timing is aligned with DL timing of Uu based on RAN1 agreements. The same SL transmission timing if applied to Rel-17 SL in the scenario of partially used SL with Uu in TDD band may give rise to interference problem between SL and Uu.

There are two options under discussion in RAN4. One is to follow the Rel-16 agreement to align SL transmission timing with DL timing, and the other one is to reconsider SL transmission timing to align with UL timing to mitigate the interference between Uu and SL, i.e.

* For sidelink transmissions,
  + SL transmission timing is aligned with Uplink timing when Uu and sidelink is TDMed/FDMed coexistence in the same band, including TDM coexistence within the same carrier or different carriers.
  + Otherwise, SL transmission timing is aligned with Downlink timing.

RAN4 respectfully ask RAN1 to clarify that is it feasible from RAN1 perspective to define SL transmission timing to align with UL timing when SL is synchronized to a network?

**2. Actions:**

**To RAN WG1:**

RAN4 respectfully request RAN1 to clarify the above question regarding partially used SL with Uu in TDD band.

**3. Date of Next TSG-RAN WG4 Meetings:**

TSG-RAN WG4 Meeting #100-e            Aug. 16 – Aug. 27, 2021                           Online

TSG-RAN WG4 Meeting #100-e            Nov. 01 – Nov. 12, 2021                           Online