3GPP TSG RAN WG1 #103-e R1-20xxxxx

**e-Meeting, October 26th – November 13th, 2020**

**Title: LS on PUCCH and PUSCH repetition**

**Release: Rel-17**

**Study Item: FS\_NR\_CovEnh**

**Source:** RAN1

**To:** RAN4

**Cc:**

**Attachments:**

**Contact Person:**

**Name:** Yi Huang

**E-mail Address:** yihuang@qti.qualcomm.com

**1. Overall Description:**

In the study of coverage enhancement in Rel-17, DMRS bundling cross PUCCH or PUSCH is identified as a potential scheme to enhance PUCCH or PUSCH coverage. For RAN1 to further study the DMRS bundling scheme, RAN1 made the following agreement to ask feedback from RAN4 on the conditions for UE to keep phase continuity and same power level (with certain tolerance level) cross PUCCH or PUSCH repetitions.

**Agreements: For DMRS bundling cross PUCCH or PUSCH repetitions, send an LS to RAN4 to ask the following**

* **Under what conditions UE can keep phase continuity cross PUCCH or PUSCH repetitions** 
  + **Whether back-to-back PUCCH or PUSCH repetitions is one of the conditions required to keep phase continuity cross the repetitions**
* **Power control tolerance level cross PUCCH or PUSCH repetitions**

**2. Actions:**

RAN1 respectfully asks RAN4 to provide answers to the following questions

* **Question 1: Under what conditions UE can keep phase continuity cross PUCCH or PUSCH repetitions**
* **Question 2: Whether back-to-back PUCCH or PUSCH repetitions is one of the conditions required to keep phase continuity cross the repetitions**
* **Question: Under what conditions UE can meet the power control tolerance level cross PUCCH or PUSCH repetitions**

**3. Date of Next RAN1 Meetings:**

TSG-RAN WG1 Meeting #104-e 25th January – 5th February 2021 E-meeting.

TSG-RAN WG1 Meeting #104bis-e 12th April – 20th April 2021 E-meeting.