**3GPP TSG RAN WG1 #107-e R1-21xxxxx**

**e-Meeting, November 11th – 19th, 2021**

**Title:** [Draft] LS on BFR for CORESET with two activated TCI states

**Response to:**

**Release:** Rel-17

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

**Source:** RAN1

**To:** RAN4

**CC:** RAN2

**Contact Person:**

**Name:**

**E-mail Address:**

**1. Overall Description:**

In Rel-17, RAN1 has agreed SFN mannered PDCCH in which two TCI states can be activated for a CORESET. Two SFN modes have been agreed in RAN1 including network based SFN scheme (i.e. Doppler pre-compensation scheme) and UE based SFN scheme.

However, for implicit BFD RS based on a CORESET with two activated TCI states, RAN1 think how to calculate radio link quality for RLM /BFD is up to RAN4 discussion.

Based on RAN1 discussion, there are two different understandings:

* Option 1: For a CORESET with two activated TCI states, two RS indexes are included in $\overbar{q}\_{0}$ and UE calculates two hypothetical BLER, i.e. two radio link quality for the CORESET
* Option 2: For a CORESET with two activated TCI states, UE calculates single hypothetical BLER, i.e. single radio link quality for the CORESET

RAN1 would like to let RAN4 decide the final solution considering the above options and some other options if RAN4 can identify.

**2. Actions:**

**To RAN4**

**ACTION:**

RAN1 would like to respectfully request RAN4 to take the above information into account.

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

TSG-RAN WG1 Meeting #107b-e 17th Jan. – 25th Jan. 2022 emeeting

TSG-RAN WG1 Meeting #108-e 21st Feb. – 3rd Mar. 2022 emeeting