**3GPP TSG RAN WG1#109-e R1-220xxxx**

**e-Meeting, May 10th – 27th, 2021**

**Title:** DRAFT LS to RAN4 on TCI assumption for RSSI measurement for FR2-2

**Release:** 17

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

**Source:** Qualcomm

**To:** TSG RAN WG4

**Cc:**

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# 1 Overall description

In RAN1 #109e, RAN1 discussed UE TCI assumption for RSSI measurements in FR2-2. The following is a recommended text proposal to be considered in TS 38.133.

\*\*\* < **Beginning of TP#0 for TS 38.133 v17.5.0**> \*\*\*

9.2A.7 Intra-frequency RSSI and Channel occupancy measurements

9.2A.7.1 Intra-frequency RSSI measurements

An RSSI measurement is defined as an intra-frequency measurement provided that the RSSI measurement bandwidth is fully contained within the current carrier bandwidth of the UE.

The UE physical layer shall be capable of performing the RSSI measurements, defined in TS 38.215 [4] on one or more serving carriers operating with CCA, TS 37.213 [33], if the carrier(s) are indicated by higher layers [2], and report the RSSI measurements to higher layers. The UE physical layer shall provide to higher layers a single RSSI sample for each OFDM symbol within each configured RSSI measurement duration [2] occurring with a configured RSSI measurement timing configuration periodicity [2], *rmtc-Periodicity*.

For performing RSSI measurement in FR2-2, UE can assume the configured RSSI measurement resources are QCL-ed with TypeD to the DL RS associated with the TCI state provided in the RMTC configuration. If no TCI state is provided in the RMTC configuration, UE can assume the configured RSSI measurement resources are QCL-ed with TypeD to one of the latest received PDSCH and the latest monitored CORESET in the active BWP of the current carrier.

\*\*\* < Unchanged parts are ommitted> \*\*\*

9.3A.8 Inter-frequency RSSI measurements

An RSSI measurement is defined as an inter-frequency measurement provided that the RSSI measurement bandwidth is not contained within the current carrier bandwidth of the UE.

The UE physical layer shall be capable of performing the RSSI measurements, defined in TS 38.215 [4] on one or more inter-frequency carriers operating with CCA, TS 37.213 [33], if the carrier(s) are indicated by higher layers [2], and report the RSSI measurements to higher layers. The UE physical layer shall provide to higher layers a single RSSI sample for each OFDM symbol within each configured RSSI measurement duration [2] occurring with a configured RSSI measurement timing configuration periodicity [2], *rmtc-Periodicity*. The requirements apply if *rmtc-SubframeOffset* [2] is configured.

For performing RSSI measurement in FR2-2, UE can assume the configured RSSI measurement resources are QCL-ed with TypeD to the DL RS associated with the TCI state provided in the RMTC configuration. If the configured RSSI measurement resources are not confined within the bandwidth of any serving cell, UE can assume that the measurement resources are QCL-ed with TypeD to the DL RS associated with the TCI state of the active BWP of the carrier on which the RMTC configuration is provided. If no TCI state is provided in the RMTC configuration, UE can assume the configured RSSI measurement resources are QCL-ed with TypeD to one of the latest received PDSCH and the latest monitored CORESET in the active BWP of the carrier on which the RMTC configuration is provided.

\*\*\* < **End of TP#0 for TS 38.133 v17.5.0**> \*\*\*

# 2 Actions

**To TSG RAN4**

**ACTION:** RAN1 respectfully asks RAN4 to consider the above recommendations and capture them in RAN4 spec.

# 3 Dates of next TSG RAN WG1 meetings

TSG RAN WG1 Meeting #110 22 - 26 August 2022 Toulouse, FR

TSG RAN WG1 Meeting #110-bis-e 10 - 19 October 2022 Online