**3GPP TSG RAN Meeting #109 RP-252356**

**Beijing, China, 15 – 18 September 2025**

**Agenda Item:**  **9.3.2.3**

**Source: Nokia**

**Title:** **Summary for WI** **on XR (eXtended Reality) for NR Phase 3**

**WI code(s): NR\_XR\_Ph3-Core**

**leading WG: RAN2**

**Release: Rel-19**

### 1 Introduction

This Rel-19 work item is a continuation of the Rel-18 work done to enhance the support of XR services in the RAN and complements the work done in SA groups. It provides enhancements addressing system capacity, efficient and effective mechanisms to meet QoS requirements and lower device power consumption, in the context of the demanding scenarios and traffic characteristics requirements of XR.

### 2 Description

To enable the transmission and reception during some of the measurements gaps configured for RRM measurements, a measurement gap occasion may be cancelled via DCI. Once a measurement gap occasion is cancelled, the network can schedule the UE during the cancelled measurement gap occasion, and as a result, the measurement delay related to measurement objects associated with that gap is extended accordingly. In addition, the UE may provide, via UE Assistance information, a recommended gap occasion cancellation ratio per measurement gap configuration.

In uplink, the granularity of delay status reports is increased to depict the UEs buffers more accurately to the gNB, and buffered PDCP PDUs having a time left before discard crossing a threshold can be prioritised. Furthermore, to enable faster adaptation of the uplink source rate (e.g. to handle to uplink congestion), an uplink physical-layer bit rate available to a QoS flow can be suggested by the gNB, and the UE can also request a desired one. Enhancements are also introduced in RLC to avoid unnecessary retransmissions and ensure timely retransmissions.

To enable faster adaptation of the source rate to uplink congestion, in downlink, the gNB can suggest an uplink physical-layer bit rate available to a QoS flow to the UE, based on the information indicating that the QoS Flow allows rate adaptation from the 5GC. This information is further provided from CU to DU, or from source gNB to the target gNB during the Xn-based handover preparation procedure.

Network interfaces are enhanced for the downlink support of PDCP discard, and timely RLC retransmissions. PDU Set based handling, ECN marking, Burst Arrival Time reporting and PSI Discard are all extended to NR-NR dual connectivity scenarios on the network side. Furthermore, to assist the gNB for radio resource management and scheduling in downlink, the UPF provides Data Burst Size and Time To Next Burst to the gNB. The 5GC may provide the Multi-modal Service ID (MMSID) to NG-RAN, as part of the QoS parameters of the QoS flow, when establishing and/or updating the corresponding QoS Flows, and the support for alternative PDU Set QoS parameters PSDB and PSER is added

For QoS monitoring, the gNB can inform the 5GC when the QoS is not met in DL or UL, and the available bit rate (referring to the bitrate that NG-RAN can provide) for a QoS flow can be reported for the UL and/or DL by the gNB to 5GC.

### 3 References

[1] [RP-250107](https://www.3gpp.org/ftp/tsg_ran/TSG_RAN/TSGR_107/Docs/RP-250107.zip) Revised WID on XR (eXtended Reality) for NR Phase 3