**3GPP TSG-RAN3 Meeting #129bis** **R3-25xxxx**

**Prague, Czech Republic, Oct 13 - 17, 2025**

**Agenda Item:** 12.2.2

**Source:** Qualcomm Incorporated

**Title:** (TP to TR 38.745) AI/ML Based Intra-CU LTM

**Document for:**Agreement

Introduction

This document provides text proposal to TR 38.745 for AI/ML based Intra-CU LTM.

<<<<<<<<<<<<<<<<<<<< First Change >>>>>>>>>>>>>>>>>>>>

4 Use cases and Solutions

4.1 AI/ML based Intra-CU LTM

4.1.1 Use case description

L1/L2 Triggered Mobility is defined in TS 38.300 [x].

LTM is a procedure in which a gNB receives L1 or L3 measurement report(s) from a UE, and on their basis the gNB may change UE serving cell by a cell switch command signalled via a MAC CE. The cell switch command indicates an LTM candidate configuration that the gNB previously prepared and provided to the UE through RRC signalling. Then the UE switches to the target configuration according to the cell switch command. The LTM procedure can be used to reduce the mobility latency.

Intra-CU LTM is specified in TS38.401[x].

AI/ML can be used to optimise Intra-CU LTM procedures to enhance Network and UE performance, optimize resource allocation and reduce mobility failures.

4.1.2 General Principles

Normal Intra-CU LTM scenarios are considered as priority for study.

4.1.3 Solutions and Standard impacts

4.1.3.1 Locations for AI/ML Model Training and AI/ML Model Inference

For CU-DU split architecture, the following solutions are possible:

- AI/ML Model Training is located in the OAM and AI/ML Model Inference is located in the gNB-CU.

- AI/ML Model Training and Model Inference are both located in the gNB-CU.

FFS whether the model inference can be located at gNB-DU to support AI/ML based Intra-CU LTM

4.1.3.2 Input data of AI/ML-assisted Intra-CU LTM

For AI/ML optimization of Intra-CU LTM the following information can be considered as input data:

* Measured/Predicted Radio Resource Status
* Measured/Predicted cell-level UE trajectory
* UE History Information
* Measured/Predicted L3 measurement report

4.1.3.3 Output data of AI/ML-assisted Intra-CU LTM

For AI/ML optimization of Intra-CU LTM the following information can be considered as output data:

* Candidate cell and beam for LTM HO Preparation

4.1.3.4 Feedback of AI/ML-assisted Intra-CU LTM

For optimized Intra-CU LTM operation, the following information can be considered as feedback data:

* Legacy UE Performance
* Measured UE Trajectory
* Measured Resource Status
* SON reports for RLF, SHR, RA

4.1.3.5 Potential standard impacts

Following standard impacts are listed for subsequent Rel-20 normative work:

* F1 interface: