**3GPP T****SG-RAN WG3 Meeting #129 R3-255791**

**Bengaluru, India, 25 – 29 August 2025**

**Agenda item: 10.2**

**Source: Samsung**

**Title: (TP for SON BLCR for TS38.401) MRO for LTM**

**Document for: Discussion & Decision**

# Introduction

The contribution provides TP to BLCR for TS 38.401 on MRO for LTM.

# TP to 38.401 on MRO for LTM

## 7.X MRO support for LTM

For Too Late LTM cell switch and LTM cell switch to Wrong Cell, there are two sub-cases:

* if the first re-establishment attempt cell/ the cell UE attempts LTM recovery is one of the candidate cell provided by the gNB CU, it is the Wrong target cell selection for cell switch at the source gNB DU;
* else, it is Wrong LTM cell preparation at the gNB CU.

The gNB-CU receives a RLF report associated to an LTM mobility event from the UE or via the Failure indication message over Xn. The gNB-CU performs initial analysis. In case of failure due to inappropriate cell switch triggering or Wrong target cell selection for cell switch the gNB-CU may forward the RLF report to the last serving gNB-DU in case of too late LTM cell switch, or to the source gNB-DU in case of too early LTM cell switch or LTM cell switch to wrong cell.

The target gNB-DU identifies that a Beam Failure Recovery (BFR) has happened in the UE shortly after a successful LTM cell switch by detecting a time gap between the successful LTM cell switch and the BFR in the same cell is smaller than the configured threshold (e.g. Tstore\_UE\_cntxt).The target gNB-DU performs initial analysis and may send the recovery beam information to the source gNB-DU via the gNB-CU.

The target gNB-DU identifies that the UE successfully performs a RACH-based access while re-establishing/recovering to the same target cell but to a beam different from the beam used during the failed LTM cell switch execution. The target gNB-DU may send the re-established/recovery beam information to the source gNB-DU via the gNB-CU. The source gNB-DU performs root cause analysis to detect RACH-less LTM failure caused by wrong beam selection.

The target gNB-DU identifies that the UE successfully performed a RACH-based access while re-establishing/recovering to the same target cell and same target beam but with TA value different from the one which was included in CU-DU CELL SWITCH NOTIFICATION message received from gNB-CU at LTM Cell Switch execution. The target gNB-DU sends the TA value used at successful RACH-based access to the source gNB-DU via the gNB-CU.