**3GPP TSG-RAN WG2 Meeting #128 *(draft)R2-2411133***

**Orlando, USA, Nov 18 – 22, 2024**

Agenda Item: 8.6.2

Source: ZTE Corporation

Title: [AT128][116][MOB] Inter-CU LTM (ZTE)

Document for: Discussion, Decision

# Introduction

This document is the report of the following offline discussion:

**[AT128][116][MOB] (ZTE)**

 **Scope:** Discuss remaining topics 5. co-existence of intra-CU LTM and inter-CU LTM, and 6. Inter-CU SN LTM, and attempt to derive conclusions.

 **Intended outcome:** Discussion summary in R2-2411133. F2F offline discussion schedule will be announced by ZTE.

**Deadline: Come back in CB session.**

# Discussion

The F2F offline is from 9:30~10:30 on Thursday in BO3.

The conclusion to proposals is reflected below. The modification on original proposals are shown in red.

**5. Co-existence of intra-CU LTM and inter-CU LTM**

R2-2410443 Dsicussion on Inter-CU LTM ZTE Corporation discussion Rel-19 NR\_Mob\_Ph4-Core

Proposal 4(Modified): From RAN2 perspective, the following coexistence cases in NR-DC can be supported:

• Case 1: Intra-CU MCG LTM + Inter-CU MCG LTM

• Case 2: Intra-CU SCG LTM + Inter-CU SCG LTM

* Agreed.

Proposal 5 (modified): In coexistence cases of inter-CU MCG/SCG LTM and intra-CU MCG/SCG LTM, when inter-CU MCG or SCG LTM is executed, it’s up to the NW to ensure that maintained LTM candidate configurations are valid, e.g. reconfigure or release invalid intra-CU MCG/SCG LTM candidate configurations. UE does not autonomously release invalid intra-CU candidate configurations.

* Agreed.

Proposal 6 (Modified): RAN2 to support intra-CU SCG LTM in MN RRC message (i.e. MN RRCReconfiguration message), in addition to SN RRC message~~, e.g. in order to avoid configuration mismatch problem and frequent RRC reconfiguration in coexistence cases of inter-CU MCG/SCG LTM and intra-CU SCG LTM~~.

* Agreed

Proposal 7(Modified): RAN2 to support intra-CU MCG LTM with SCG configuration, ~~e.g. in order to avoid configuration mismatch problem and frequent RRC reconfiguration in coexistence cases of inter-CU MCG/SCG LTM and intra-CU MCG LTM~~.

* Agreed.

**6. Inter-CU SN LTM**

R2-2409973 Important issues in Inter-CU LTM Apple discussion Rel-19 NR\_Mob\_Ph4-Core

Proposal 5: Introduce a new LTM-Config (e.g., ltm-ConfigSCG-r19) for inter-CU SCG LTM.

* Postponed

R2-2410021 Discussion on inter-CU LTM Xiaomi discussion Rel-19 NR\_Mob\_Ph4-Core

Proposal 10: A single ltm-Config is used to configure both intra-MN MCG LTM and inter-SN SCG LTM, and the unified LTM candidate ID pool is used for both.

[Rapp] Companies want more time to check whether new IE is needed.

* Postponed

R2-2409593 Discussion on Inter-CU LTM CATT discussion Rel-19 NR\_Mob\_Ph4-Core

Proposal 7: It’s up to NW to ensure that the complete configuration includes the MCG part and SCG part configuration when UE combines the reference and candidate configuration for inter-CU SCG LTM.

* Agreed

R2-2409764 Discussion on inter-CU LTM vivo discussion Rel-19 NR\_Mob\_Ph4-Core

Proposal 7(Modified): RAN2 assumes that how to indicate the list of candidate PSCells from source SN to MN is up to RAN3. From RAN2 perspective, in INM, source SN may send measurement results of candidate PSCells to the MN. The MN then forwards the measurement results to the candidate SN(s), and then the candidate SN(s) determines the LTM candidate cells based on the measurement results and the upper limit for the number of PSCells that can be prepared by each candidate SN. The existing IEs defined in INM can be reused as a baseline.

* Agreed

Proposal 10: After acquiring the TA value via the CFRA triggered by the PDCCH order of the source SN, the candidate SN sends the TA value to the MN, and the MN then forwards the TA value to the source SN.

[Rapp] companies think this can be discussed in RAN3.

* Noted.

Proposal 10: Source SN notifies the MN after LTM cell switch is triggered, and the MN forwards the cell switch notification to the target SN.

[Rapp] companies think this can be discussed in RAN3.

* Noted.

# Conclusion

Based on the offline, the conclusion is provided below.

*Agree the below proposals:*

Proposal 1: From RAN2 perspective, the following coexistence cases in NR-DC can be supported:

• Case 1: Intra-CU MCG LTM + Inter-CU MCG LTM

• Case 2: Intra-CU SCG LTM + Inter-CU SCG LTM

Proposal 2: In coexistence cases of inter-CU MCG/SCG LTM and intra-CU MCG/SCG LTM, when inter-CU MCG or SCG LTM is executed, it’s up to the NW to ensure that maintained LTM candidate configurations are valid, e.g. reconfigure or release invalid intra-CU MCG/SCG LTM candidate configurations. UE does not autonomously release invalid intra-CU candidate configurations.

Proposal 3: RAN2 to support intra-CU SCG LTM in MN RRC message (i.e. MN RRCReconfiguration message), in addition to SN RRC message

Proposal 4: RAN2 to support intra-CU MCG LTM with SCG configuration.

Proposal 5: It’s up to NW to ensure that the complete configuration includes the MCG part and SCG part configuration when UE combines the reference and candidate configuration for inter-CU SCG LTM.

Proposal 6: RAN2 assumes that how to indicate the list of candidate PSCells from source SN to MN is up to RAN3. From RAN2 perspective, in INM, source SN may send measurement results of candidate PSCells to the MN. The MN then forwards the measurement results to the candidate SN(s), and then the candidate SN(s) determines the LTM candidate cells based on the measurement results and the upper limit for the number of PSCells that can be prepared by each candidate SN. The existing IEs defined in INM can be reused as a baseline.

*Postpone the below proposals:*

Proposal 7: Introduce a new LTM-Config (e.g., *ltm-ConfigSCG-r19*) for inter-CU SCG LTM.

Proposal 8: A single *ltm-Config* is used to configure both intra-MN MCG LTM and inter-SN SCG LTM, and the unified LTM candidate ID pool is used for both.