**3GPP TSG- WG3 Meeting #**

**, Greece, Feb -**

Agenda Item: 9.2.4

Source: Google (moderator)

Title: Summary of Offline Discussion on CB: # 10\_MCGConfig

Document for: Approval

# Introduction

**CB: # 10\_MCGConfig**

**- Compare the solutions**

**- Provide CRs if agreeable**

(Google - moderator)

Summary of offline disc [R3-230840](Inbox%5CR3-230840.zip)

# For the Chairman’s Notes

**TBU**

# Discussion

At the online session at RAN3#119 and RAN3#118 it was clarified that the scenario is applied for CPA and inter-SN CPC and the issue emerges when the MN consists of a CU and a DU.

The moderator also took some offline discussions with the delegates who gave valuable comments online and basically the comments are clarified or resolved with additional revision to the CR.

## Re-confirm the issue in RAN3

[R2-2203637](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203637.zip) Report of [AT117-e][223][DCCA] CPAC procedures from network perspective (Samsung) Samsung discussion Rel-17 LTE\_NR\_DC\_enh2-Core Late

* 16: (resolving running CR) RAN2 agree on the following proposal with the TP in [R2-2202468](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202468.zip):

“Capture in stage-2 CR that the CPAC configuration may contain MCG and SCG reconfigurations.”

The stage 2 text in 37.340 was a result of the above agreement in RAN2#117-e and it can be seen from the report that all the RAN2 participants supported this proposal.

It should be also noted that although RAN2 had captured the above agreement, it is optional for the MN to include a MCG configuration in the CPAC configuration. To align with the stage 2, we need some solution to support the conditionally prepared/executed MCG configuration in the F1AP and the solution can be optionally implemented. Therefore, in the provided F1AP CR, the conditional IE is made as optional in the UE CONTEXT MODIFICATION REQUEST message and the gNB-DU can further decide whether to provide an updated MCG configuration based on the received CG-Config IE in the CU to DU RRC Information IE. Otherwise, it is not possible for the disaggregated gNB to prepare a MCG configuration in the CPAC configuration and this is clearly inconsistent with the stage 2 specification.

**Proposal 1: The MCG configuration issue for CPAC is identified in F1AP and should be solved in RAN3.**

## Solutions to the issue

**[Option 1]** To support parallel UE Context Modification procedures for CPAC preparation at the MN, it was further noticed that there should be a way for the CU and DU to differentiate between the parallel procedures. One way to achieve so is to add PSCell ID in the UE Context Modification Request message and the existing Requested Target Cell ID IE in the UE Context Modification Response message can be reused with some further semantics and procedure text changes.

**[Option 2]** One extra solution was raised to avoid parallel UE Context Modification procedures for CPAC preparation at the MN. It is the MN-CU to signal the received CG-CandidateList IE(s) to the MN-DU directly and retrieve a list of CellGroupConfig IE(s) from the MN-DU in one UE Context Modification procedure. The MN-CU and MN-DU also need to differentiate the CG-Config IE(s) via the PSCell ID at least in the CG-CandidateList. Regarding the list of CellGroupConfig IE(s), there may be two possible options.

* Option 2A is to define a RAN3 IE to include the list of CellGroupConfig IE(s) and the corresponding PSCell ID.
* Option 2B is to request RAN2 to define a new inter-node RRC container for the list of CellGroupConfig IE(s) for the conditional MCG configurations during the preparation phase and therefore an LS out is required. The UE Context Modification Response message would require a new IE/field to include the new inter-node RRC container.

The two solutions above both work but may require different specification change efforts. Option 1 is simpler in terms of specification impact to both RAN3 and RAN2 (e.g., TS 38.331 if Option 2B is chosen) and the coordination efforts. If there are multiple candidate SNs, for the Option 1 it works the same while for the Option 2 the MN-CU may inevitably send the received CG-CandidateList’s multiple times to the MN-DU or first encode an aggregated CG-CandidateList combining the received CG-CandidateList’s from different candidate SNs and send the aggregated CG-CandidateList to the MN-DU. Option 1 has less specification impact and is consistent with the target/SN side F1AP behavior. As the maximum number of CPAC is limited to 8 according to the RAN2 agreement and the Rel-17 specification, the parallel efforts at the MN side should be acceptable for the Option 1 and there is no difference if multiple candidate SNs are considered.

It should be noted that for both options, different from the target node in CHO or CPAC, the gNB-DU of the MCG does not perform random access with the UE upon CPAC execution. Therefore, it is necessary for the gNB-CU to notify the gNB-DU about CPAC-execution and therefore the gNB-DU can apply the prepared MCG configuration. In such aspect (i.e., an IE to indicate to the gNB-DU about CPAC-execution and the related descriptions), the specification impacts for both solutions are comparable.

Some companies also expressed the concern of the IE naming (i.e., Conditional MCG Information) during online discussion. The moderator therefore proposes to name it as **MCG Config Information** IE, for example (or other name that is acceptable to the group), and provides a draft in the inbox. It should be clear in the procedure text that the gNB-DU considers that the request is for CPAC by the IE.

## Companies to provide valuable comments for the solutions

**Q1: Comments/remarks regarding the preferred options**

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| Company | Option 1 or 2 | Comment |
| Google | Option 1 | Although both options could work, Option 1 has less specification impact. Open to the IE naming and refinement of procedure texts. |
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| **Moderator Summary :**  |

**Proposal 2: RAN3 to agree on Option TBU to solve the issue.**

# Conclusion, Recommendations [if needed]

**TBU**

# References

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| [R3-230490](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_118%5CDocs%5CR3-226460.zip) | Discussion on MCG configuration during CPAC (Google Inc.) | Discussion |
| [R3-230491](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_118%5CDocs%5CR3-226461.zip) | Correction to conditional MCG configuration in CPAC (Google Inc.) | CR1090r2, TS 38.473 v17.3.0, Rel-17, Cat. F |