**3GPP TSG RAN WG2 #113-e R2-210xxxx**

**Online, January 25th – February 5th 2021**

**Title: [DRAFT]** LS on Conditional PSCell Addition/Change agreements

**Response to:**

**Release:** Release 17

**Work Item:** LTE\_NR\_DC\_enh-Core

**Source:** CATT[to be RAN2]

**To:** RAN3

**Cc:**

**Contact Person:**

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**Attachments: -**

**1. Overall Description:**

RAN2 has discussed the support of Conditional PSCell Addition/ Change (CPAC) under Rel-17 WI. The following agreements have been made.

Agreements

1 In SN initiated CPC with MN involvement, the source SN transfers the execution condition(s) to the MN. FFS whether MN needs to comprehend the execution condition set by the source SN. FFS on stage-3 detail of coding of execution condition(s) in the final message.

2 Only SRB1 can be used in CPA and Inter-SN CPC scenarios in Rel-17. The complete message upon CPAC execution for CPA and Inter-SN CPC in Rel-17 should be provided to the MN via SRB1.

3 UE checks the validity of CPAC execution criteria configuration immediately on receiving the CPAC Reconfiguration message.

Compliance check for embedded RRCReconfiguration may be delayed until execution (up to UE implementation). This does not introduce specification changes regarding compliance checking of embedded Reconfiguration message containing configuration of conditional PSCell candidate.

4 For CPC initiated by MN, A4/B1 like execution condition should be supported.

5 Non-conditional SCG RRC Reconfiguration can be sent in the same MN generated RRCRconfiguration message, which carries execution conditions and target candidate configurations e.g. ‎the mrdc-secondaryCellGroup can be sent in the same configuration message with the ‎conditionalReconfiguration for inter-SN CPC.

6a In case of CPA and MN initiated Inter-SN CPC, upon reception of ‎RRCReconfiguration/RRCConnectionReconfiguration message with CPAC configuration, UE responds with RRCReconfigurationComplete/RRCConnectionReconfigurationComplete message to the MN to inform ‎that the message has been received. The message does not include an embedded RRC complete message for source SN.

6b In case of SN initiated Inter-SN CPC, upon reception of ‎RRCReconfiguration/RRCConnectionReconfiguration message with CPAC configuration, UE responds with RRCReconfigurationComplete/RRCConnectionReconfigurationComplete message to MN. This message can include an embedded RRC complete message for source SN.

7 The message carrying ‎conditionalReconfiguration for CPA/CPC is in MN format (i.e. contains ‎both MCG and SCG re-configurations). For the following cases: a). MN-Initiated CPA b). MN-Initiated inter-SN CPC c). SN-initiated inter-SN CPC.

8 In CPA and Inter-SN CPC, upon execution of CPAC, ‎the UE ‎shall ‎reply the RRCReconfigurationComplete/RRCConnectionReconfigurationComplete ‎message to ‎the MN ‎including an embedded RRC complete message to the SN, and then the MN ‎informs the ‎target SN.

9 Working assumption: the configurations of all candidates PSCell configurations for CPA and Inter-SN PSCell change are ‎released upon the successful completion of CPAC, conventional PSCell change or conventional PSCell ‎addition.‎ This can be revisited if critical issues found in a later stage.

10 SCGFailureInformation procedure can be taken as the baseline for CPAC failure ‎handling in Rel-17 ‎scenarios.‎

FFS on the exact content of the message.

FFS if time allows on further ‎enhancements to CPAC failure handling‎

To distinguish the impacts to RAN3, these can be classified as follows:

For SN-initiated CPC with MN involvement:

- Upon configuration of SN-initiated inter-SN CPC, MN may need to forward an SCG RRC reconfiguration complete - message from UE to source SN.

- The source SN transfers the execution condition(s) to the MN. (FFS whether MN needs to comprehend the execution condition set by the source SN.)

For CPA and MN-initiated inter-SN CPC:

- Upon configuration of CPA or MN-initiated inter-SN CPC, MN does not forward an SCG RRC reconfiguration complete - message from UE to source SN.

Common aspects for Rel-17 CPAC:

- SRB1 is used for all CPAC messages (i.e. both for CPAC configuration and CPAC execution completion).

- Upon execution of CPA or MN/SN-initiated inter-SN CPC, MN forwards the SCG RRC reconfiguration complete - message (received from UE) to the target SN.

- CPAC configuration message can include non-conditional SCG RRC reconfiguration (e.g. ‎the *mrdc-secondaryCellGroup* can be sent in the same configuration message with the ‎*conditionalReconfiguration* for inter-SN CPC).

- If CPAC fails, UE indicates it to MN via *SCGFailureInformation* - message (FFS on exact details)

- Working assumption: UE releases all stored CPA/CPC configurations upon successful PSCell addition/change (conditional or non-conditional).

**2. Actions:**

**To RAN3**

**ACTION:**  RAN2 respectfully asks RAN3 to take the above information into account in future work.

**3. Date of Next TSG-RAN2 Meetings:**

3GPP RAN2#113-bis-e 12 April – 20 April 2021 Electronic Meeting

3GPP RAN2#114-e 19 May – 27 May 2021 Electronic Meeting