3GPP TSG-RAN WG2 Meeting #111 electronic [R2-2008121](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2008121.zip)

Online, August 17th - 28th, 2020

**Agenda item: 10.1**

**Source: Vice Chairman (Nokia)**

**Title:** **Report on LTE legacy, Mobility, DCCA, Multi-SIM and RAN slicing**

**Document for: Approval**

**List of offline email discussions:**

**NOTE: the email discussion deadlines are meant to allow at least all regions to have one day to comment (other than weekend) and also give rapporteurs time to update their proposals before the meeting)**

**Organizational**

* [AT111-e][200] Organizational Tero – LTE legacy, LTE Rel-16 and LTE/NR mobility

Scope:

* + - Share plans for the meetings and list of ongoing email discussions for the sessions
    - Share meetings notes and agreements for review and endorsement
    - Flag LSs for presentation

Intended outcome (for LS discussion):

* + - General information sharing about the sessions

Deadline for providing comments to LSs:

* + - Deadline: Friday 2020-08-28 1000 UTC

# THIS FILE ONLY CONTAINS AI 8.2 PART (to be merged)

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## 8.2 MR DC/CA further enhancements

(LTE\_NR\_DC\_enh2-Core; leading WG: RAN2; REL-17; WID: RP-201040)

Time budget: 1 TU

Tdoc Limitation: 2 tdocs

Email max expectation: 2 threads

Focus for this meeting: a) get a common understanding of the WID b) get technical proposals on the table for questions and scrutiny.

### 8.2.1 Organizational, Requirements and Scope

Including work plan and any other rapporteur input.

By Web Conf (Monday August 24th)

Work plan:

[R2-2007676](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007676.zip) Work plan for R17 Further MR-DC enhancements WI Huawei Work Plan Rel-17 LTE\_NR\_DC\_enh2-Core

* Noted

[R2-2007677](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2007677.zip) Status of the work on efficient SCell activation/deactivation Huawei discussion Rel-17 LTE\_NR\_DC\_enh2-Core

- LG wonder if PSCell activation/deactivation is also included in this.

- Huawei think we can discuss later,

- Nokia think we need to discuss

- vivo think CSI-RS measurements in deact state is a remains from R16 so maybe it can be discussed.

- CATT agrees on the proposal for SCell activation / deactivation.

- Chair: think anyway we will let R1 progress somewhat on the SCell act /. deact

* Noted

### 8.2.2 Efficient activation / deactivation mechanism for one SCG and SCells

By Web Conf (Monday August 24th)

*Operator input:*

[R2-2007439](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2007439.zip) Consideration on dormant SCG CMCC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

*(moved from 8.2.3)*

DISCUSSION

- Huawei think “dormant” is not good as it implies certain solution. We should stick to the WI terminology for now. Nokia think that would indeed be ok, and most papers seems to be aligned.

- Nokia think some things need to discuss more, e.g. beam mgmt.

- LG think dormant can be a way. LG think R2 need to study new solutions, e.g. to avoid inter-node latency

- Oppo think we have several possible solutions, and think dormancy can be used for all cells except PScell and PUCCH Scell. Oppo also point out that R1 is not in this objective.

- FW think whether MN need to send the deact indication need to be discussed, this may involve a lot of delay.

- P1 Apple wonder if MN always need to be involved. Apple think there are advantages to avoiding MN involvement when possible. Apple also think there are many ways, MAC CE etc, and then the question is who construct the MAC CE. Can SCG alone do act / deact.

- ZTE think inter-node can be discussed later.

- IDT are ok, think both MN and SN control will be needed. Should try to reuse as much as possible dormant SCell for SCell handling.

- Ericsson think activation can be by MN or UE based, think UE measurements and their reporting need to be understood.

- MTK think PSCell dormancy was discussed in R16, has doubts whether this gives significant benefits. Think SN shall trigger the transition.

- QC think we first need to define the UE behaviour. Either MN or SN can initiate the procedure. QC also have concerns on using SCell dormancy for SCells, as CSI measurements will consume power. First UE behaviour.

- Intel agrees with QC, to first focus on UE, and agrees with Ericsson that we need to understand measurements and reporting.

- CMCC agrees with QC, think P1 includes UE triggered and SN triggered case.

- vivo think how fast the activation can be done is a key and dep on measurements.

P1

- IDT suggest to agree now that all nodes can trigger transitions. Nokia think we can wait.

P2

- vivo are ok with this

- Huawei think this is agreeable, this is in every proposal. QC agrees

- FW think we might need to get input from R1, whether UE would need a PUCCH or not, for UE triggered activation.

- Apple think an alternative is DRX. A question is how UE triggers an activation.

- Nokia agrees

- Apple think we shall not agree this now. Chair: Apple seems to be the only ones objecting.

P3

- Nokia think the CSI reporting and beam management we need to discuss more.

P7

- CATT think we only have one active SCG so we should only have one deactivated.

- CATT think MN makes the decision to deactivate / activate.

* FFS how signalling and inter-node interaction works at activation deactivation (e.g. MN triggered, SN triggered, UE triggered, signalling mechanism, which node is in control etc)
* FFS if for deactived SCG, the UE stop monitoring PDCCH for PSCell and SCells of the SCG
* FFS if For the PSCell in deactivated SCG, the UE performs CSI/RRM measurement and report; AGC; beam management; RLM

*NW Vendor input:*

[R2-2007678](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007678.zip) Discussion on SCG deactivation and activation Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2007068](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007068.zip) On fast deactivation and activation of one SG and SCells Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2007598](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007598.zip) Efficient SCG/SCell (de)activation Ericsson discussion LTE\_NR\_DC\_enh2-Core

[R2-2007009](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007009.zip) Efficient Activation/Deactivation Mechanism for SCG and Scells CATT discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2006900](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2006900.zip) Framework of SCG deactivation and activation ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2007623](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007623.zip) Further enhancements regarding deactivation and resumption for R17 Samsung Telecommunications discussion Rel-17 LTE\_NR\_DC\_enh2-Core

*Other vendor input:*

[R2-2006756](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2006756.zip) On Support of Activation/Deactivation for SCG InterDigital discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2007748](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007748.zip) Efficient SCG activation/deactivation in MR-DC Qualcomm Incorporated discussion Rel-17

[R2-2006806](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2006806.zip) Discussion on SCG suspension OPPO discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2007867](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007867.zip) Discussion on SCG suspension MediaTek Inc. discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2007046](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007046.zip) Discussion on efficient activation mechanism for one SCG Spreadtrum Communications discussion

[R2-2007215](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007215.zip) Efficient activation and deactivation mechanism for SCG and SCells vivo discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2007236](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007236.zip) Enhancements for Rel-17 efficient activation/de-activation Intel Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2007986](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007986.zip) Time-efficient SCG Activation mechanism LG Electronics discussion Rel-17

[R2-2007994](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007994.zip) Discussion of SCG activation/deactivation SHARP Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2007109](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007109.zip) Scoping the usage of SCG suspension Apple discussion Rel-17 LTE\_NR\_DC\_enh2-Core

* [Post110-e][xxx][eDCCA] Efficient activation deactivation of SCG ()

Scope: a) Cover common grounds, e.g. find “easy” agreements, and items that might need limited discussion. b) Identify key performance trade-off decisions that will need to be taken.

Intended outcome: Report to next meeting

Deadline: Long

### 8.2.3 Conditional PSCell change / addition

By Web Conf (Monday August 24th)

*Operator input:*

[R2-2007438](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2007438.zip) Discussion on CPAC scenarios CMCC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

*(moved from 8.2.2)*

CHAIR suggest a simplification:

Proposal: Prioritize inter-SN CPC, and CPA

DISCUSSION

- CATT think we should clarify the scope of the WID, e.g. whether LTE PSCell is included, leftovers from R16 etc, and coexistence of CHO and CPC. The WID says MR-DC so LTE is included in principle. Huawei think that there is not much interest in NE-DC so maybe it is not included

- Intel think CPA has higher priority than CPC, and we can reuse old agreements. Have some doubt on the second scenario of P1. Others are ok.

- Nokia think in the beginning we should just cover the cases in the WID. Think for the moment only priority could be CPA.

- LG support Chair simplified proposal.

- Samsung think Sn initiated CPC would be a priority, and think we need to do early cases that involve R3.

- NEC are ok with chair suggestion.

- Ericsson think CPA is important as there may be new impact in R2. Ericsson think Priority here just means what we start to look at. Think LTE PSCell is not in the WID so it should be excluded.

- Oppo wonder if LTE TS impact is allowed at all. Huawei indicate that 36.331 is an impatcted TS.

- Apple Nokia are ok with removing LTE SCG. Samsung think this isn’t needed, and think we can use the word deprioritzed instead.

- Intel think that CPC and CHO is not a priority. IDT think this is a leftover from R16 so it should still be in scope. Vivo also think this is in scope, if we have time.

- Huawei think the agreement in R16 that we can configure SCG as deactivated may be similar to CPA. CATT think that UE is in charge of CPA but the network is In charge of activation.

- Chair assumes that CPC CHO coexist can be discussed later if needed.

- CATT wonder if enhancements to R16 is in scope. Huawei think that the WI doesn’t include this. Nokia think this should be included but not a priority in the beginning.

- FW also think we will need to address enhancements in R16.

* R2 assumes that the work Will follow what is in the WID, and initially focus on CPA and Inter-SN CPC
* R2 assumes for now that LTE SCG is not included.
* [Post110-e][xxx][eDCCA] Condtional PSCell Change and Addition ()

Scope: Cover common grounds, e.g. confirm which old R16 agreements can be inherited now as “easy” agreements, and items that might need limited discussion.

Intended outcome: Report to next meeting

Deadline: Long

[R2-2008079](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008079.zip) Remaining issues of Conditional PSCell Addition NTT DOCOMO INC. discussion Rel-17 LTE\_NR\_DC\_enh2-Core Late

*NW Vendor input:*

[R2-2007010](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007010.zip) Scope and basic procedure for Conditional PSCell Addition/Change ??(CPAC)? CATT discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2006901](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2006901.zip) Discussion on conditional PSCell addition/change ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2007679](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007679.zip) Discussion on Conditional PSCell addition/change Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2007364](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007364.zip) On the scope of Rel-17 CPAC Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2006976](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2006976.zip) Overview of conditional PSCell addition NEC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2006977](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2006977.zip) Inter-SN Conditional PSCell Change NEC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2007599](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007599.zip) Conditional reconfigurations Ericsson discussion LTE\_NR\_DC\_enh2-Core

[R2-2007624](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007624.zip) Further enhancements on conditional configuration for R17 Samsung Telecommunications discussion Rel-17 LTE\_NR\_DC\_enh2-Core

*UE/Chipset input:*

[R2-2007237](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007237.zip) Rel-17 Conditional PSCell Addition Intel Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2006695](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2006695.zip) Scope and scenario for CPAC vivo discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2007130](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007130.zip) Scenarios and General Principles of CPAC ETRI discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2006805](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2006805.zip) Discussion on conditional PSCell change and addition OPPO discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2007749](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007749.zip) Conditional PSCell addition/change Qualcomm Incorporated discussion Rel-17

[R2-2007089](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007089.zip) Discussion on conditional PSCell change and addition Apple discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2007553](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007553.zip) Inter node CPAC procedure and configuration discussion Futurewei discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2007839](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007839.zip) Conditional PSCell addition and change in MR-DC Potevio discussion LTE\_NR\_DC\_enh2-Core

[R2-2007985](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007985.zip) Considerations of CPAC in Rel-17 LG Electronics discussion Rel-17

[R2-2006757](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2006757.zip) Coexistence of CHO and CPC at the UE InterDigital discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2007052](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_111-e/Docs/R2-2007052.zip) Discussion on conditional PSCell addition or change Spreadtrum Communications discussion