**3GPP TSG-RAN WG2 Meeting #112 electronic R2-2xxxxxx**

**Online, November, 2020**

**Source: RAN2 Chairman (Mediatek)**

**Title: Chairman Notes**

# AT-Meeting Email Discussion List, Main Session

Email discussions with Deadline ***Short UE Cap*** are expected to produce endorsed Draft CRs (to be merged w main NR UE caps), with the deadline ***Nov 6***

* [AT112-e][000] Organizational Main (Chairman)

Scope:

* [AT112-e][001][NR15] Stage-2 Corrections (Nokia)

Treat R2-2008816, R2-2008817, R2-2008818, R2-2008819, R2-2008820, R2-2009308, R2-2009309, R2-2009310, R2-2009311, R2-2008821, R2-2008822

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][002][NR15] MAC I (MediaTek)

Treat R2-20010621, R2-201330, R2-201679, R2-201680, R2-2009348, R2-2009792, R2-2009793, R2-2010156, R2-2010157, R2-2010165, R2-2010166

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][003][NR15] MAC II (Samsung)

Treat R2-2008909, R2-2010622, R2-2010623, R2-2010624, R2-2010426, R2-2010318, R2-2009910, R2-2009911, R2-2010418, R2-20010164, R2-2009482

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][004][NR15] PDCP (Apple)

Treat R2-2009481, R2-2010559. R2-2010560, R2-2010667, R2-2010668

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][005][NR15] RRC Conn Control I (Qualcomm)

Treat R2-2008715, R2-2009183, R2-2009184, R2-2009185, R2-2010563, R2-2010665, R2-2010666, R2-2009355, R2-2009356, R2-2009844, R2-2009845, R2-2010530, R2-2010531, R2-2010557, R2-2010558

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][006][NR15] RRC Conn Control II (ZTE)

Treat R2-2009580, R2-2009581, R2-2009579, R2-2009697, R2-2009233, R2-2009234, R2-2009235, R2-2009698, R2-2009699, R2-2010492, R2-2010584, R2-2009236, R2-2009237, R2-2009582, R2-2009583, R2-2009478

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][007][NR15] System Information and Idle mode (ZTE)

Treat R2-2009394, R2-2009398, R2-2010414, R2-2010436, R2-2009808- R2-2009811, R2-2009782 (from AI 5.4.4, see further below)

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][008][NR15] inter-node RRC (Huawei)

Treat R2-2008727, R2-2010542, R2-2009242, R2-2009243, R2-2010357, R2-2009159, R2-2009160, R2-2009161, R2-2010359, R2-2010360,

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][009][NR15] RRC Misc (Ericsson)

Treat R2-2009840, R2-2009842, R2-2009843, R2-2009074 - R2-2009077, R2-2009477

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][010][NR15] LTE changes (Nokia)

Treat R2-2009950, R2-2008823, R2-2008824, R2-2009946, R2-2010600, R2-2010601

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][011][NR15] UE caps I (Ericsson)

Treat R2-2010512, R2-2010513, R2-2010238, R2-2009630, R2-2010567, R2-2010568, R2-2010539, R2-2010538, R2-2010517 - R2-2010520, R2-2010084

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][012][NR15] UE caps II (ZTE)

Treat R2-2008710, R2-2009238, R2-2009239, R2-2009162, R2-2009163, R2-2009516, R2-2009517, R2-2010537, R2-2010536, R2-2010541, R2-2010540, R2-2009944

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][013][NR15] UE caps III (Huawei)

Treat R2-2009480, R2-2008734, R2-2008770, R2-2008771, R2-2010241, R2-2010242, R2-2009392, R2-2009393, R2-2010239, R2-2010240, R2-2010545, R2-2010546, R2-2010561, R2-2010562

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][014][NR16] RRC general (Ericsson)

Scope:

Intended outcome:

Deadline:

* [AT112-e][015][NR16] UE cap Main (Intel)

Scope: a) Treat tdocs on specific issues as assigned. b) Take into account updated feature lists and UE caps LSes from R1 and R4. c) Merge endorsed output from other R16 UE caps (306 331) email discussions. d) Produce final mega CRs 38306 38331 for RP.

High level plan (detailed deadlines by rapporteur as needed):

Week 1: Resolve specific issues and agree / endorse 331 306 specific changes based on assigned tdocs.

Week 2: Review of updated R1 R4 feature lists and other LS in if any. Take into account outcome of separate short discussions. Review and Agree on corresponding updates to 306 331 based on rapporteur proposal. Rapporteur proposal expected Tuesday Nov 10.

Week 3 (the week after the meeting): Merge of Draft CRs from other long UE caps discussions. Final checking of the mega CRs.

Intended outcome: Agreed CRs 306 331

* AT112-e][016][NR16] Dyn UL skip and other (vivo)

Treat R2-2008711, R2-2009824, R2-2009484, R2-2010051, R2-10010317, R2-2009813, R2-2009485, R2-2009819, R2-2009587, R2-2009486, R2-2010565, R2-2010162

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][017][IAB] Stage-2 (Huawei)

Treat tdocs under 6.2.1

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][018][IAB] BAP (Samsung)

Treat tdocs under 6.2.2

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][019][IAB] NR RRC 38331 (Huawei)

Treat 38331 tdocs under 6.2.4

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][020][IAB] LTE RRC 36331 (vivo)

Treat 36331 tdocs under 6.2.4

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][021][IAB] UE capabilities (Nokia)

Treat tdocs under 6.2.5

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Short UE caps

* [AT112-e][022][R4 NR16] MPE (Nokia)

Treat R2-2009690, R2-2008910, R2-2009164, R2-2009906, R2-2010289, R2-2009166, R2-2010515, R2-2009165, R2-2010516

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][023][R4 NR16] UL 7.5kHz Shift (Apple)

Treat R2-2008740, R2-2009466, R2-2009467, R2-2009468, R2-2009469, R2-2009470, R2-2009471, R2-2009700, R2-2009701, R2-2010227

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][024][R4 NR16] DC Location (Apple)

Determine how to report, what to report, which scenarios to support etc. Treat R2-2010673, R2-2009167, R2-2009168, R2-2010171, R2-2010048, R2-2010228, R2-2009518, R2-2010409, R2-2009371, R2-2010471, R2-2009306

Intended outcome: Determine agreeable parts, Report. For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: EOM (can come back on-line dep on progress)

* [AT112-e][025][R4 NR16] CSI-RS for Mobility (Huawei)

Treat R2-2008749, R2-2010585, R2-2010586, R2-2009775, R2-2009776, R2-2009777, R2-2009365,

Intended outcome: Determine agreeable parts. For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][026][R4 NR16] Miscellaneous (Huawei)

Treat R2-2008747, R2-2010598, R2-2010599, R2-2010358, R2-2008741, R2-2009346, R2-2010226, R2-2009245, R2-2009544

Intended outcome: Determine agreeable parts. For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC, If feasible, NR UE caps 38306 38331 deadline Nov 6.

* [AT112-e][027][NR TEI16] NeedForGap (QC)

Treat R2-2009401, R2-2010547, R2-2010548, R2-2010555, R2-2010556, R2-2010549, R2-2010550, R2-2010553, R2-2010554, R2-2010551, R2-2010552

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

CLOSED

* [AT112-e][028][NR TEI16] Misc Corrections I (Ericsson)

Treat R2-2010514, R2-2009947, R2-2009948, R2-2009949, R2-2008893, R2-2008894, R2-2008895, R2-2009604, R2-2009605, R2-2009606, R2-2010510, R2-2010511, R2-2009985

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][029][NR TEI16] Misc Corrections II (ZTE)

Treat R2-2009488, R2-2009489, R2-2009244, R2-2009812, R2-2010081, R2-2010543, R2-2009240, R2-2009241, R2-2010202, R2-2009849

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][030][eIAB] Fairness Latency Congestion (Samsung)

Scope: A) Confirm easy agreeable proposals captured in R2-2009073 (short deadline), make modifications to the proposals if needed for final agreement.

B) From R2-2009073 and input contributions below put applicable solution proposals on the table, with a short principal solution description, how the solution is intended to help and possibly comments on complexity, if applicable. In case there are many solutions, initial focus could be on promising and widely proposed/supported solutions. Further discussion and decision making is expected on-line week 2.

Intended outcome: Report

Deadline: Ready Nov 11 (for on-line discussion Nov 11), Intermediate deadlines by Rapporteur.

* [AT112-e][031][eIAB] Topology Adaptation (QC)

Scope: A) Confirm at least easy agreeable proposals captured in R2-2009292 (short deadline), make modifications to the proposals if needed for final agreement.

B) From R2-2009292 and input contributions below put applicable solution proposals on the table, with a short principal solution description, how the solution is intended to help and possibly comments on complexity, if applicable. In case there are many solutions, initial focus could be on promising and widely proposed/supported solutions. Further discussion and decision making is expected on-line week 2.

Intended outcome: Report

Deadline: Ready Nov 11 (for on-line discussion Nov 11), Intermediate deadlines by Rapporteur.

* [AT112-e][032][NR17] eNPN LS (Futurewei)

Scope: Treat R2-2010691. Determine status / collect comments among RAN2 companies regarding the asked questions. Attempt agreements in RAN2 on aspects for which agreement seems feasible (if any). Create a reply LS. Depending on progress, some aspects may be brought online week2

Intended outcome: Report and Approved LS out

Deadline: Final: End of meeting. Intermediate deadlines by rapporteur.

* [AT112-e][033][NR17] Introduction of 35 and 45 MHz channel Bandwidths (T-Mobile US)

Scope: Treat R2-2010133.

Not Used

* [AT112-e][034][IoT-NTN] Scenarios (Eutelsat)

A) In general, as stated above: Confirm Scenario Assumptions, e.g. from WID, from TR38.821 for the purpose of RAN2 continued work. Intention is not to replace or preempt R1 scenario work.

B) Specifically, cover relevant proposals in tdocs submitted to this AI.

Intended outcome: Report with agreements and/or acceptable assumptions

Deadline: End of meeting, intermediate deadlines by the rapporteur.

* [AT112-e][035][IoT-NTN] Applicability of TR 38.821 (MediaTek)

A) In general, Identify the extent parts of TR38.821 can be re-used or not re-used for NB-IoT/eMTC support for NTN, identify points for necessary discussions. Focus on R2 led sub-objectives as listed in the SID

B) Specifically, cover relevant proposals in tdocs submitted to this AI.

Intended outcome: Report with agreements

Deadline: End of meeting, intermediate deadlines by the rapporteur.

* [AT112-e][036][MBS] SA2 LS on MBS (Huawei)

Scope: Reply to R2-2008755 Can if needed come back on-line.

Intended outcome: Approved LS out

Deadline: EOM

* [AT112-e][037][IAB] User Plane (Ericsson)

Treat tdocs under 6.2.3

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

* [AT112-e][038][NR QoE] (Ericsson)

Scope: Treat and take into account LS in in R2-2008728. Attempt to identify what the R3 decision may mean for R2. If possible put on the table relevant / promising options for R2, and capture relevant characteristics of the options. If found needed, make and approve a Reply LS to R3

Intended outcome: Report that can be a first step towards making decisions, possibly also an LS out.

Deadline: EOM

* [AT112-e][039][NR16] SI acquisition (Ericsson)

Scope: Treat remaining aspects of papers under 6.1.1 “SI Acquisition”. Identify agreeable parts and agree them. For agreed parts, agree revised CRs.

Intended outcome: Report, agreed CRs.

Deadline: Agreements ready at EOM, Rapporteur may set intermediate deadlines

* [AT112-e][040][IIOT] RRC and UE cap Corrections (CATT)

Scope: Treat tdocs in AI 6.5.2, and AI 6.5.5 (see below)

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Thu Nov 12, 1200 UTC

Short Deadline: UE Cap Endorsed CRs 38306 (if agreeable): Nov 6.

* [AT112-e][041][IIOT] MAC I (Huawei)

Scope: Treat tdocs R2-2009500, R2-2009373, R2-2009375, R2-2009483 R2-20010054, R2-2009541, R2-2009374

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Thu Nov 12, 1200 UTC

* [AT112-e][042][IIOT] MAC II (Samsung)

Scope: Treat tdocs, R2-2009599, R2-2009752, R2-2010525,R2-2009048, R2-2009372, R2-2010052,

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Thu Nov 12, 1200 UTC

* [AT112-e][043][IIOT] MAC II (Nokia)

Scope: Treat R2-2009539, R2-2009540, R2-2009753, R2-2010053, R2-2010100, R2-2010522

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Thu Nov 12, 1200 UTC

* [AT112-e][044][IIOT] PDCP (Ericsson)

Scope: Treat tdocs in AI 6.5.4.1, AI 6.5.4.2

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Thu Nov 12, 1200 UTC

* [AT112-e][045][NR16] Extension of ToAddMod lists (Mediatek)

Scope: Continue discussion on P10, P11, converge to agreements if possible. Review and agree CR.

Intended outcome: Report, agreed CR (if possible)

Deadline: EOM, intermediate deadlines by the Rapporteur.

CLOSED

* [AT112-e][046][NR16] Out-of-order CBG-based re-transmission (Ericsson)

Scope: Treat incoming LS (when it arrives), R2 input (R2-2010049), and make and agree on related Draft CRs.

Intended outcome: Endorsed Draft CRs

Deadline: by the Rapporteur (dep on R1).

* [AT112-e][047][ePowSav] LS on Paging enhancement (Mediatek)

Scope: LS covering decisions and clarifying work split to the extent possible.

Intended outcome: Approved LS to R1

Deadline: EOM

General

RAN2 112e (electronic) has full decision power, i.e. full decision power to make agreements and approvals according to RAN WG2 terms of reference, without any need to ratify decisions at a later RAN2 or other meeting.

Specific methodology

R2 111e is conducted by email, ftp and by on-line web conferences by GoToWebinar + Torhu, in three parallel sessions. To facilitate easy treatment, some AIs/topics may be summarized in summary tdocs. If not assigned in the Agenda, summaries are assigned at/right after tdoc submission

Tdoc Limitation

Tdoc Limitation limits the number of allowed input tdocs for a company as indicated for an Agenda Item for all types of documents. Rapporteur input (email discussion, WI rapporteur, TS rapporteur, assigned CR editor, assigned summary rapporteur etc) and at-meeting decided tdocs do not count towards a tdoc limitation.

Rel-16

Most Rel-16 items do no longer have a tdoc limitation. You are anyway asked to not submit high numbers of tdocs. Please put all change proposals that can logically/reasonably be discussed together in a single tdoc. Do not have repetition between tdocs. Please do not submit both discussion doc and CRs on a topic. If a discussion tdoc is needed, then use a TP as an Annex (and if agreed it can be moved to a CR at the meeting).

Rel-16 miscellaneous corrections CRs

Editors for Rel-16 WI Cat B CRs are asked to, if needed, prepare or be ready to prepare (at the meeting) a miscellaneous corrections CR for their WI/TS. Companies are encouraged to coordinate with the Cat B CR editors for small changes, clarifications, text enhancements etc.

Rel-16 NR UE capabilities

R16 NR UE capabilities related to R1 feature list, R4 feature list and R2 features / capabilities are handled in a common session under Agenda item 6.1.2. R16 NR UE capability modifications are merged into two Mega CRs (38306 38331). Exceptions: DAPS capability is handled under NR mobility AI. V2X capabilities are handed under the V2X AI. NR-U capabilities (Ref RP discussion) is handled in the NR-U parallel session. Other exceptions TBD

# 1 Opening of the meeting

**This e-Meeting**

- This e-Meeting follows 3GPP principles for e-Meetings.

- RAN2 112 electronic has full decision power, i.e. full decision power to make agreements and approvals according to RAN WG2 terms of reference, without any need to ratify decisions at a later RAN2 or other meeting.

- Descriptions on how this meeting is conducted can be found in tdoc on Guidelines under agenda item 2.4 below

## 1.1 Call for IPR

|  |
| --- |
| The attention of the delegates of this Working Group is drawn to the fact that **3GPP Individual Members have the obligation** under the IPR Policies of their respective Organizational Partners **to inform their respective Organizational Partners of Essential IPRs** they become aware of.  The delegates were asked to take note that they were hereby invited:   * to investigate whether their organization or any other organization owns IPRs which were, or were likely to become Essential in respect of the work of 3GPP. * to notify their respective Organizational Partners of all potential IPRs, e.g., for ETSI, by means of the IPR Statement and the Licensing declaration forms (https://www.etsi.org/images/files/IPR/etsi-ipr-form.doc) |

NOTE: IPRs may be declared to the Director-General or Chairman of the SDO, but not to the RAN WG2 Chairman.

## 1.2 Network usage conditions

## 1.3 Other

|  |
| --- |
| In accordance with the Working Procedures it is reaffirmed that:  (i) compliance with all applicable antitrust and competition laws is required;  (ii) timely submissions of work items in advance of TSG or WG meetings are important to allow for full and fair consideration of such matters; and  (iii) the chairman will conduct the meeting with strict impartiality and in the interests of 3GPP |

Note on (i): In case of question please contact your legal counsel.

Note on (ii): WIDs don’t need to be submitted to the RAN2 meeting and will typically not be discussed here either.

[000] Char: The contents of Subclauses 1, 1.1 and 1.3 were announced by email at meeting start. No comments received.

# 2 General

## 2.1 Approval of the agenda

R2-2008700 Agenda for RAN2#112-e Chairman agenda Late

* [000] Approved

## 2.2 Approval of the report of the previous meeting

R2-2008701 RAN2#111-e Meeting Report MCC report Late

* [000] Approved

## 2.3 Reporting from other meetings

## 2.4 Others

R2-2010988 RAN2#112-e Meeting\_Guidelines MCC discussion

* [000] Endorsed

# 3 Incoming liaisons

Note: LSs are moved to the respective agenda items if any.

# 4 EUTRA corrections Rel-15 and earlier

See Appendix A for reference to Work items, work item codes and WIDs.

Only essential corrections. No documents should be submitted to 4. Please submit to 4.x

## 4.1 NB-IoT corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session. Common NB-IoT/eMTC parts treated jointly with 4.2. No web conference is planned for this agenda item

## 4.2 eMTC corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session. Common NB-IoT/eMTC parts treated jointly with 4.1. No web conference is planned for this agenda item.

Including outcome of [Post111-e][922][NBIOT/eMTC R15] UP EDT for DRB using RLC AM (Huawei)

R2-2009723 Report of e-mail discussion [Post111-e][922][NB-IoT/eMTC R15] UP EDT for DRB using RLC AM (Huawei) Huawei, HiSilicon report Rel-15 NB\_IOTenh2-Core, LTE\_eMTC4-Core

R2-2009724 Clarification to UP-EDT Huawei, HiSilicon CR Rel-15 36.300 15.11.0 1298 1 F NB\_IOTenh2-Core, LTE\_eMTC4-Core R2-2007328

R2-2009725 Clarification to UP-EDT Huawei, HiSilicon CR Rel-16 36.300 16.3.0 1299 1 A NB\_IOTenh2-Core, LTE\_eMTC4-Core R2-2007329

R2-2009726 Clarification to UP-EDT Huawei, HiSilicon CR Rel-15 36.331 15.11.0 4477 - F NB\_IOTenh2-Core, LTE\_eMTC4-Core

R2-2009727 Clarification to UP-EDT Huawei, HiSilicon CR Rel-16 36.331 16.2.1 4478 - A NB\_IOTenh2-Core, LTE\_eMTC4-Core

R2-2009734 Addition of cross-TTI MIB/SIB-BR decoding capability Huawei, HiSilicon CR Rel-15 36.306 15.9.0 1793 - F LTE\_eMTC4-Core

R2-2009735 Addition of cross-TTI MIB/SIB-BR decoding capability Huawei, HiSilicon CR Rel-16 36.306 16.2.0 1794 - A LTE\_eMTC4-Core

## 4.3 V2X and Sidelink corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session.

R2-2008769 IEEE 1609 WG Liaison Message to 3GPP regarding defined values for V field in the Release 14 specification of MAC header IEEE 1609 WG LS in Rel-14 To:RAN2 Cc:RAN, RAN1

R2-2009181 Corrections on MAC reset regarding SL BSR cancellation Ericsson CR Rel-12 36.321 12.10.0 1506 - F LTE\_D2D\_Prox-Core

R2-2009213 Corrections on MAC reset regarding SL BSR cancellation Ericsson CR Rel-13 36.321 13.9.0 1507 - A LTE\_D2D\_Prox-Core

R2-2009214 Corrections on MAC reset regarding SL BSR cancellation Ericsson CR Rel-14 36.321 14.13.0 1508 - A LTE\_D2D\_Prox-Core

R2-2009215 Corrections on MAC reset regarding SL BSR cancellation Ericsson CR Rel-15 36.321 15.10.0 1509 - A LTE\_D2D\_Prox-Core

R2-2009216 Corrections on MAC reset regarding SL BSR cancellation Ericsson CR Rel-16 36.321 16.2.0 1510 - A LTE\_D2D\_Prox-Core

R2-2009402 Discussion on the IEEE incoming LS on MAC header V field for LTE V2X SL communication Huawei, Ericsson, CATT, LG Electronics Inc., Samsung, OPPO, ZTE, Sanechips, HiSilicon discussion Rel-14

R2-2009832 UE capability for EUTRA V2X in DC vivo discussion

R2-2010336 Correction on the capability bit v2x-EUTRA of option-1 vivo CR Rel-15 38.306 15.11.0 0444 - F NR\_newRAT-Core

R2-2010337 Correction on the capability bit v2x-EUTRA of option-2 vivo CR Rel-15 38.306 15.11.0 0445 - F NR\_newRAT-Core

R2-2010338 Correction on the capability bit v2x-EUTRA of option-3 vivo CR Rel-15 38.331 15.11.0 2206 - F NR\_newRAT-Core

## 4.4 Positioning corrections Rel-15 and earlier

Documents in this agenda item will be handled by email. No web conference is planned for this agenda item.

## 4.5 Other LTE corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session.

Editorial corrections should be taken up with the specification editor before submitting to avoid CR duplication.

R2-2008901 Removal of DelayBudgetReport message in stage 3 Lenovo, Motorola Mobility CR Rel-14 36.331 14.15.0 4450 - F LTE\_VoLTE\_ViLTE\_enh-Core

R2-2008902 Removal of DelayBudgetReport message in stage 3 Lenovo, Motorola Mobility CR Rel-15 36.331 15.11.0 4451 - A LTE\_VoLTE\_ViLTE\_enh-Core

R2-2008903 Removal of DelayBudgetReport message in stage 3 Lenovo, Motorola Mobility CR Rel-16 36.331 16.2.1 4452 - A LTE\_VoLTE\_ViLTE\_enh-Core

R2-2008904 Removal of DelayBudgetReport message in stage 2 Lenovo, Motorola Mobility CR Rel-14 36.300 14.12.0 1317 - F LTE\_VoLTE\_ViLTE\_enh-Core

R2-2008905 Removal of DelayBudgetReport message in stage 2 Lenovo, Motorola Mobility CR Rel-15 36.300 15.11.0 1318 - A LTE\_VoLTE\_ViLTE\_enh-Core

R2-2008906 Removal of DelayBudgetReport message in stage 2 Lenovo, Motorola Mobility CR Rel-16 36.300 16.3.0 1319 - A LTE\_VoLTE\_ViLTE\_enh-Core

R2-2009428 Clarification to UE capabilities for non-contiguous intra-band CA Nokia, Nokia Shanghai Bell, Qualcomm Incorporated CR Rel-12 36.331 12.19.0 4427 2 F LTE\_CA-Core, TEI12 R2-2008152

R2-2009429 Clarification to UE capabilities for non-contiguous intra-band CA Nokia, Nokia Shanghai Bell, Qualcomm Incorporated CR Rel-13 36.331 13.16.0 4428 2 A LTE\_CA-Core, TEI12 R2-2008153

R2-2009430 Clarification to UE capabilities for non-contiguous intra-band CA Nokia, Nokia Shanghai Bell, Qualcomm Incorporated CR Rel-14 36.331 14.15.0 4429 2 A LTE\_CA-Core, TEI12 R2-2008154

R2-2009431 Clarification to UE capabilities for non-contiguous intra-band CA Nokia, Nokia Shanghai Bell, Qualcomm Incorporated CR Rel-15 36.331 15.11.0 4430 2 A LTE\_CA-Core, TEI12 R2-2008155

R2-2009432 Clarification to UE capabilities for non-contiguous intra-band CA Nokia, Nokia Shanghai Bell, Qualcomm Incorporated CR Rel-16 36.331 16.2.1 4431 2 A LTE\_CA-Core, TEI12 R2-2008156

R2-2009565 PDCP re-establishment for normal DRBs configured with RLC OOD and ROHC Samsung discussion Rel-15 TEI15, LTE\_HRLLC-Core

R2-2009566 CR on PDCP re-establishment when t-Reordering is used Samsung CR Rel-15 36.323 15.6.0 0292 - F TEI15, LTE\_HRLLC-Core

R2-2009567 CR on PDCP re-establishment when t-Reordering is used Samsung CR Rel-16 36.323 16.2.0 0293 - F TEI16, LTE\_HRLLC-Core

R2-2009568 Clarification on ROHC configuration Samsung discussion Rel-15 TEI15, LTE\_HRLLC-Core

R2-2009569 Correction on ROHC configuration Samsung CR Rel-15 36.331 15.11.0 4470 - F TEI15, LTE\_HRLLC-Core

R2-2009570 Correction on ROHC configuration Samsung CR Rel-16 36.331 16.2.1 4471 - F TEI16, LTE\_HRLLC-Core

R2-2009571 Correction on lch-CellRestriction Samsung CR Rel-15 36.321 15.10.0 1511 - F TEI15, LTE\_HRLLC-Core

R2-2009572 Correction on lch-CellRestriction Samsung CR Rel-16 36.321 16.2.0 1512 - F TEI16, LTE\_HRLLC-Core

R2-2009763 Correction to RRC resume for CIoT Google Inc. CR Rel-13 36.331 13.16.0 4484 - F TEI13

R2-2009764 Correction to RRC resume for CIoT Google Inc. CR Rel-14 36.331 14.15.0 4485 - A TEI13

R2-2009801 Miscellaneous Stage-2 corrections Nokia (rapporteur), NEC CR Rel-15 36.300 15.11.0 1323 - F NB\_IOTenh2-Core, LTE\_eMTC4-Core, TEI15

R2-2009921 Corrections to the field descriptions for TDD/FDD capability differentiation Huawei, HiSilicon CR Rel-15 36.331 15.11.0 4389 2 F TEI15 R2-2008157

R2-2009922 Corrections to the field descriptions for TDD/FDD capability differentiation Huawei, HiSilicon CR Rel-16 36.331 16.2.1 4390 2 A TEI15 R2-2008158

R2-2010153 Recommended bit rate query handling at MAC Reset Ericsson CR Rel-14 36.321 14.13.0 1513 - F LTE\_VoLTE\_ViLTE\_enh

R2-2010154 Recommended bit rate query handling at MAC Reset Ericsson CR Rel-15 36.321 15.10.0 1514 - F LTE\_VoLTE\_ViLTE\_enh

R2-2010155 Recommended bit rate query handling at MAC Reset Ericsson CR Rel-16 36.321 16.2.0 1515 - F LTE\_VoLTE\_ViLTE\_enh

# 5 Rel-15 WI: New Radio (NR) Access Technology

(NR\_newRAT-Core; leading WG: RAN1; REL-15; started: Mar. 17; closed: Jun. 19: WID: RP-191971)

Corrections to address issues for functionality developed for NR\_newRAT-Core.

**Note:** Corrections to functionality developed for Rel-15 WI NR\_newRAT-Core shall by default be done for both Rel-15 and Rel-16 (Cat F + Cat A). The marketing status for Rel-15 is however different to Rel-16. For specific corrections when needed it may be valid to discuss whether to make such correction instead only for Rel-16. When/if applicable, email discussions shall determine Release applicablity for such corrections. Rel-16-only corrections to NR\_newRAT-Core need to list both WIs NR\_newRAT-Core and TEI16 on the cover sheet.

## 5.1 Organisational

Incoming LSs, etc.

R2-2008733 Reply LS on UE capability xDD differentiation for SUL/SDL bands (R4-2011687; contact: ZTE) RAN4 LS in Rel-15 NR\_newRAT-Core To:RAN2 Cc:RAN1

* [000] Noted

## 5.2 Stage 2 corrections

You should discuss your stage 2 CRs with the specification rapporteurs before submission.

* [AT112-e][001][NR15] Stage-2 Corrections (Nokia)

Treat R2-2008816, R2-2008817, R2-2008818, R2-2008819, R2-2008820, R2-2009308, R2-2009309, R2-2009310, R2-2009311, R2-2008821, R2-2008822

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

CLOSED

* [Post112-e][001][NR15] Stage-2 UE cap description (Nokia)

Scope: Continue to further refine revisions of R2-2009308/R2-2009309

Intended outcome: Endorsed/Agreed-in-principle CRs (not for RP)

Deadline: Short (not for RP)

R2-2011036 Offline 001 on Stage 2 Corrections Nokia (Rapporteur)

* [001] Noted, proposals are agreed and reflected below

### 5.2.1 TS 3x.300

R2-2008816 Clarification of SCell setup during inter-RAT HO Nokia, Nokia Shanghai Bell discussion NR\_newRAT-Core

* [001] Noted

R2-2008817 Clarification of SCell setup during inter-RAT HO Nokia, Nokia Shanghai Bell CR Rel-15 38.300 15.11.0 0297 - F NR\_newRAT-Core

R2-2008818 Clarification of SCell setup during inter-RAT HO Nokia, Nokia Shanghai Bell CR Rel-16 38.300 16.3.0 0298 - A NR\_newRAT-Core

R2-2008819 Clarification of SCell setup during inter-RAT HO Nokia, Nokia Shanghai Bell CR Rel-15 36.300 15.11.0 1315 - F NR\_newRAT-Core

R2-2008820 Clarification of SCell setup during inter-RAT HO Nokia, Nokia Shanghai Bell CR Rel-16 36.300 16.3.0 1316 - A NR\_newRAT-Core

DISCUSSION

- [001] Rapporteur: there is support to capture in chair notes but not in CRs.

* [001] 4 CRs above are not pursued.
* [001] RAN2 acknowledge that Current Stage-3 specifications allow the target RAT to add SCells for usage with the target PCell in inter-RAT handover scenarios (LTE SA to NR SA and vice-versa); and the intention of LTE and NR Stage-2 is not to restrict SCells addition only for intra-RAT scenarios.

R2-2009310 Cell Terminology Nokia (Rapporteur), Nokia Shanghai Bell, Sanechips, ZTE CR Rel-15 38.300 15.11.0 0303 - F NR\_newRAT-Core

R2-2009311 Cell Terminology Nokia (Rapporteur), Nokia Shanghai Bell, Sanechips, ZTE CR Rel-16 38.300 16.3.0 0304 - A NR\_newRAT-Core

* [001] Not Pursued, not sufficient support

R2-2009308 UE Capabilities Description Nokia (Rapporteur), Ericsson, Nokia Shanghai Bell, Qualcomm Incorporated, Sanechips, ZTE CR Rel-15 38.300 15.11.0 0301 - F NR\_newRAT-Core

DISCUSSION

- [001] Chairman: UE caps has grown very complex. NR UE caps is the most corrected part of R15 Maintenance during the last year. There are often obvious disconnects in online discussions on NR UE caps, and the participation is limited. So, if there is a chance to improve the situation by better high level descriptions, then I am strongly inclined to support such enhancement.

- [001] Chairman: Question: If we agree to have the UE caps description, should we then keep it open for revision for an additional meeting? As this is R15 I think the way to allow more revision would be to agree-in-principle now (but not send to Dec RP), allow further revision in Q1-21 and have real CRs for March RP. Any views?

* [001] A high level description of the UE Capability framework is introduced in the Stage-2.
* [001] Intermediate: revised

CB online Thursday on whether to agree CRs or just agree-in-principle and allow further update next meeting (applicable to 38.300 CRs)

- Rap proposes to discuss the NOTE

- Huawei think we should wait until March RP. Huawei think both Notes are not needed. Huawei understands that the second note is to explain how many FS … think more discussion needed

- Oppo would like at least short email, would be good to remove the notes.

- Intel also provided some proposed change, on the NOTE it is not clear what is the intention, need to discuss

- CATT think we might also need to add some recent updates of UE cap to this discussion.

- Apple think some rewording is needed

- vivo think both notes are useful, and a CR can be endorsed.

* Short Email Discussion to endorse CRs (agreed in principle for final submission to March RP). The endorsed CRs can be used as baseline for further input at next meeting, if needed.

R2-2009309 UE Capabilities Description Nokia (Rapporteur), Ericsson, Nokia Shanghai Bell, Qualcomm Incorporated, Sanechips, ZTE CR Rel-16 38.300 16.3.0 0302 - A NR\_newRAT-Core

* [001] Intermediate: revised (if needed), otherwise agreed or agreed-in-principle

### 5.2.2 TS 37.340

R2-2008821 UE Capabilities Description Nokia, Nokia Shanghai Bell, ZTE Corporation (rapporteur) CR Rel-15 37.340 15.10.0 0232 - F NR\_newRAT-Core

* agreed

R2-2008822 UE Capabilities Description Nokia, Nokia Shanghai Bell, ZTE Corporation (rapporteur) CR Rel-16 37.340 16.3.0 0233 - A NR\_newRAT-Core

* [001] Intermediate: Update category to A

R2-2011127 UE Capabilities Description Nokia, Nokia Shanghai Bell, ZTE Corporation (rapporteur) CR Rel-16 37.340 16.3.0 0233 - A NR\_newRAT-Core

* agreed

## 5.3 Stage 3 user plane corrections

### 5.3.1 MAC

* [AT112-e][002][NR15] MAC I (MediaTek)

Treat R2-20010621, R2-201330, R2-201679, R2-201680, R2-2009348, R2-2009792, R2-2009793, R2-2010156, R2-2010157, R2-2010165, R2-2010166

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

[R2-2011105](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011105.zip)    Report of [AT112-e][002][NR15] MAC I (MeidaTek)            MediaTek          discussion        Rel-15   NR\_newRAT-Core

* [002] Noted

**Configured grant related**

R2-2010621 Activation of CG and DRX Inactivity Timer Ericsson discussion NR\_newRAT-Core

* [002] Topic is Postponed, companies to check their implementation (expected next meeting)

R2-2010330 Clarification on LCP restriction for configured grant type 1 MediaTek Inc. discussion Rel-15 NR\_newRAT-Core

* [002] RAN2 confirms that if configuredGrantType1Allowed is configured for a logical channel, or if the capability LCP-restriction as specified in TS 38.306 is not supported, UL MAC SDUs from this logical channel can be transmitted on a configured grant type 1. Otherwise, UL MAC SDUs from this logical channel cannot be transmitted on a configured grant type 1.
* [002] Noted

R2-2010679 CR on TS 38.331 for LCP restriction of configured grant type 1 MediaTek CR Rel-15 38.331 16.2.0 2272 - F NR\_newRAT-Core

* [002] Revised, fix a typo (i.e. SUDs)

[R2-2011106](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011106.zip) CR on TS 38.331 for LCP restriction of configured grant type 1 MediaTek CR Rel-15 38.331 16.2.0 2272 1 F NR\_newRAT-Core

* [002] Revised, cover page modification

R2-2011155 CR on TS 38.331 for LCP restriction of configured grant type 1 MediaTek CR Rel-15 38.331 16.2.0 2272 2 F NR\_newRAT-Core

* [002] Agreed (unseen)

R2-2010680 CR on TS 38.331 for LCP restriction of configured grant type 1 MediaTek CR Rel-15 38.331 16.2.0 2273 - A NR\_newRAT-Core

* [002] Revised, add clarification to specify UE behavior in field description of allowedCG-List given that configuredGrantType1Allowed is configured or not configured.

[R2-2011107](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011107.zip) CR on TS 38.331 for LCP restriction of configured grant type 1 MediaTek CR Rel-15 38.331 16.2.0 2273 1 A NR\_newRAT-Core

* [002] Revised, cover page modification

R2-2011156 CR on TS 38.331 for LCP restriction of configured grant type 1 MediaTek CR Rel-15 38.331 16.2.0 2273 2 A NR\_newRAT-Core

* [002] Agreed (unseen)

R2-2009348 Clarification on configuredGrantTimer Nokia, Nokia Shanghai Bell, Ericsson, LG CR Rel-15 38.321 15.10.0 0926 - F NR\_newRAT-Core

* [002] Agreed

R2-2009792 Clarification on configured grant (re-)initialization Nokia, Nokia Shanghai Bell CR Rel-15 38.321 15.10.0 0941 - F NR\_newRAT-Core

* [002] The first change (only) is agreed. Revised

[R2-2011108](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011108.zip) Clarification on configured grant (re-)initialization Nokia, Nokia Shanghai Bell CR Rel-15 38.321 15.10.0 0941 1 F NR\_newRAT-Core

* [002] Agreed

R2-2009793 Clarification on configured grant (re-)initialization Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.2.1 0942 - A NR\_newRAT-Core

Moved from 6.1.3

* [002] Revised (same modification)

R2-2011109 Clarification on configured grant (re-)initialization Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.2.1 0942 - A NR\_newRAT-Core

* [002] Agreed

Other I

R2-2010165 Clarification of timer value zero interpretation in MAC Ericsson, Samsung CR Rel-15 38.321 15.10.0 0968 - F NR\_newRAT-Core

* [002] Agreed

R2-2010166 Clarification of timer value zero interpretation in MAC Ericsson, Samsung CR Rel-16 38.321 16.2.1 0969 - A NR\_newRAT-Core

* [002] Agreed

R2-2010156 Recommended bit rate query handling at MAC Reset Ericsson CR Rel-16 38.321 16.2.1 0964 - F NR\_newRAT-Core

* [002] Postponed, allow companies to check their implementation (expected next meeting)

R2-2010157 Recommended bit rate query handling at MAC Reset Ericsson CR Rel-15 38.321 15.10.0 0965 - F NR\_newRAT-Core

* [002] Postponed, allow companies to check their implementation (expected next meeting)
* [AT112-e][003][NR15] MAC II (Samsung)

Treat R2-2008909, R2-2010622, R2-2010623, R2-2010624, R2-2010426, R2-2010318, R2-2009910, R2-2009911, R2-2010418, R2-20010164, R2-2009482

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

R2-2011033    Report of [AT112-e][003][NR15] MAC II (Samsung)            Samsung          discussion        Rel-15   NR\_newRAT-Core

* [003] Noted, proposals are agreed and reflected below

Bundling Related

R2-2011032    Miscellaneous corrections on bundling operation    Samsung, Ericsson, Lenovo, Motorola Mobility, ASUSTeK, Nokia  CR        Rel-15   38.321  15.10.0 0996     -           F          NR\_newRAT-Core

* [003] Agreed

R2-2008909 Fixing a CR implementation error of CR0767 Lenovo, Motorola Mobility, Samsung (Rapporteur) CR Rel-15 38.321 15.10.0 0899 - F NR\_newRAT-Core

* [003] Merged into R2-2011032

R2-2010622 Incorrectly stopping DRX retransmission timer when bundling is used Ericsson CR Rel-16 38.306 16.2.0 0468 - F NR\_newRAT-Core

* [003] Not pursued

R2-2010623 Incorrectly stopping DRX retransmission timer when bundling is used Ericsson CR Rel-16 38.321 16.2.0 0993 - F NR\_newRAT-Core

* [003] Not pursued

R2-2010624 Incorrectly stopping DRX retransmission timer when bundling is used Ericsson CR Rel-16 38.331 16.2.0 2263 - F NR\_newRAT-Core

* [003] Not pursued

R2-2010426 Correction on DRX with bundle transmission of configured uplink grant ASUSTeK CR Rel-16 38.321 16.2.1 0987 - F TEI16

Moved from 6.16

* [003] Revised into R2-2011045 with the following changes:  
  - To replace 'repetition' with 'transmission';  
  - To include the changes in R2-2010164, and to put 'within a bundle' into a bracket i.e. '(within a bundle)';  
  - To replace 'RACH procedure' in subclause 5.12 with 'Random Access procedure'.

R2-2011045   Correction on DRX with bundle transmission of configured uplink grant       ASUSTeK, Ericsson, Samsung, Nokia   CR        Rel-16   38.321  16.2.1   0987     1          F          TEI16

* [003] Agreed

R2-2010318 Further discussions on DRX with bundling operation Huawei, HiSilicon discussion Rel-16 TEI16

Moved from 6.16

* [003] Not pursued

R2-2009910 CR on 38.321 for HARQ process handling of retransmission within a bundle-R15 ZTE Corporation, Sanechips CR Rel-15 38.321 15.10.0 0951 - F NR\_newRAT-Core

* [003] Not pursued

R2-2009911 CR on 38.321 for HARQ process handling of retransmission within a bundle-R16 ZTE Corporation, Sanechips CR Rel-16 38.321 16.2.1 0952 - F NR\_newRAT-Core

* [003] Not pursued

R2-2010418 Clarification for bundling transmission ASUSTeK CR Rel-15 38.321 15.10.0 0983 - F NR\_newRAT-Core

* [003] Updated as discussed in R2-2011033, and merged into R2-2011032

R2-2010164 Consistent use of terminology for bundling in MAC Ericsson, Samsung CR Rel-16 38.321 16.2.1 0967 - F NR\_newRAT-Core

* [003] Changes for Rel-15 are merged into R2-2011032
* [003] Changes for Rel-16 are merged into R2-2011045

Other II

R2-2009482 Clarification on PHR reporting for PUSCH skipping Apple CR Rel-16 38.321 16.2.1 0929 - F NR\_newRAT-Core, TEI16

* [003] Postponed
* [003] The issues can be discussed only for Rel-16

### 5.3.2 RLC

### 5.3.3 PDCP

* [AT112-e][004][NR15] PDCP (Apple)

Treat R2-2009481, R2-2010559. R2-2010560, R2-2010667, R2-2010668

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

[R2-2011126](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011126.zip) Report of [AT112-e][004][NR15] PDCP (Apple) Apple

* [004] Noted, Proposals agreed and reflected below

R2-2009481 NW configuration on PDCP recovery Apple discussion Rel-15 NR\_newRAT-Core

* [004] Noted
* [004] RAN2 understanding that NW may trigger PDCP recovery procedure at least but not restricted by the following cases:

1)    Handover without security change;

2)    bearer type change;

3)  reconfiguration after re-establishment;

4)  uplink primary path switching.

No support to capture this in any TS

R2-2010559 PDCP status report Qualcomm Incorporated CR Rel-15 38.323 15.7.0 0058 - F NR\_newRAT-Core

R2-2010560 PDCP status report Qualcomm Incorporated CR Rel-16 38.323 16.2.0 0059 - A NR\_newRAT-Core

* [004] Both Not pursued

R2-2010667 Corrections on PDCP functionalities Huawei, HiSilicon CR Rel-15 38.323 15.7.0 0060 - F NR\_newRAT-Core

R2-2010668 Corrections on PDCP functionalities Huawei, HiSilicon CR Rel-16 38.323 16.2.0 0061 - A NR\_newRAT-Core

* [004] Both Not pursued

### 5.3.4 SDAP

## 5.4 Stage 3 control plane corrections

### 5.4.1 NR RRC

Including all architecures

#### 5.4.1.1 Connection control

Including L1 Parameters, L2 Parameters, Connection establishment and release, Connection reconfiguration (also reconfig with sync, Handover), Connection resume and release with RRC\_INACTIVE state, Security procedures, re-establishment, RRC processing delay requirements etc.

* [AT112-e][005][NR15] RRC Conn Control I (Qualcomm)

Treat R2-2008715, R2-2009183, R2-2009184, R2-2009185, R2-2010563, R2-2010665, R2-2010666, R2-2009355, R2-2009356, R2-2009844, R2-2009845, R2-2010530, R2-2010531, R2-2010557, R2-2010558

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

R2-2011042 Email discussion summary of [005][NR15] RRC Conn Control I Qualcomm Incorporated

* [005] Noted, proposals agreed and reflected below

[R2-2011184](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011184.zip) Email discussion summary of [005][NR15] RRC Conn Control I, phase 2 Qualcomm Incorporated

* [005] Noted, proposals agreed and reflected below

CB online Friday on Q1, 2-2009355/R2-2009356

DISCUSSION

- Nokia ack that they are ok with the CRs.

[R2-2009355](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009355.zip) Corrections on the configurations of HARQ-ACK spatial bundling and CBG in 38.331 CATT CR Rel-15 38.331 15.11.0 2058 - F NR\_newRAT-Core

DISCUSSION

- [005] Intermediate: Rapporteur P5: Continue to discuss whether to pursue the spec change “*UE cannot be configured with both spatial bundling and codeBlockGroupTransmission within the same cell group*” in phase 2. Opponent can show the specific RAN1 spec to revert it.

[R2-2011192](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011192.zip) Corrections on the configurations of HARQ-ACK spatial bundling and CBG in 38.331 CATT CR Rel-15 38.331 15.11.0 2058 1 F NR\_newRAT-Core

* Agreed

R2-2009356 Corrections on the configurations of HARQ-ACK spatial bundling and CBG in 38.331 CATT CR Rel-16 38.331 16.2.0 2059 - A NR\_newRAT-Core

[R2-2011193](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011193.zip) Corrections on the configurations of HARQ-ACK spatial bundling and CBG in 38.331 CATT CR Rel-16 38.331 16.2.0 2059 1 A NR\_newRAT-Core

* Agreed

L1 Parameters

SRS Carrier Switching

R2-2008715 LS reply on NR SRS carrier switching (R1-2007395; contact: Qualcomm) RAN1 LS in Rel-15 NR\_newRAT-Core To:RAN2

Moved from 5.1

* [005] Noted

R2-2009183 Discussion on SRS carrier switching based on RAN1 reply LS (R1-2007395) Qualcomm Incorporated, ZTE Corporation, Sanechips, Ericsson, MediaTek Inc. discussion Rel-15 NR\_newRAT-Core

* [005] Noted

R2-2009184 Correction for configuration of SRS Carrier Switching Qualcomm Incorporated, ZTE Corporation, Sanechips, Ericsson, MediaTek Inc. CR Rel-15 38.331 15.11.0 2039 - F NR\_newRAT-Core

- [005] Rapporteur P2: Considering 3 companies think there is NBC risk, RAN2 is suggested to online discuss whether to clarify the network does not configure SUL carrier without PUSCH or PUCCH.

* [005] Pursue 2nd change in Rel-15/Rel-16 CR and 3rd change in Rel-16 CR. no wording change is required.
* [005] revised

CB On-Line Thursday, to discuss potential NBC issue, The 1st change in the tdoc.

- QC explains: the proposal is that PUSCH PUCCH is always configured for SUL

- Chair think this is BC (for UE)

- Huawei think this is NBC for the network. Chair: there is no NBC issue in this.

- CMCC would like to use this, and think current network does this.

- QC think in CMCC Huawei config only SRS is configured on SUL, and don’t understand why not PUCCH PUSCH can be configured, bec then additional configuration is needed to take the SUL into use

- Nokia think the cover page only covers the second change, so it is difficult to evaluate NBC or not.

- QC only indicated that for this issue R1 didn’t conclude.

- ZTE agrees R1 didn’t conclude 2nd issue bec R1 didn’t think the scenario is valid. ZTE wonders what is the benefit of having the split configuration as proposed by Huawei/CMCC. ZTE wonder if current UE already support this.

- CATT think this is already possible in the TS, so we should remove it only if it is broken, and we should maintain.

- MTK ack that this wasn’t resolved in R1 and suggest to have this limitation as this is not needed, there are no benefits.

- LG think SUL without PUCCH and PUSCH is a non-realistic configuration, and support the CR.

- QC think it can be ok to have this.

- Chair: The issue here is not whether the change is NBC. The proposed change seems backwards compatible.

- Chair: The discussion seems to be mainly on whether the scenario described is useful or not. As this is existing TS, we update if there is a misunderstanding or an issue or if we have complete consensus. In this case we have none of those (only almost consensus, 2 companies find the scenario useful).

* 1st change is not agreed

[R2-2011212](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011212.zip) Correction for configuration of SRS Carrier Switching Qualcomm Incorporated, ZTE Corporation, Sanechips, Ericsson, MediaTek Inc. CR Rel-15 38.331 15.11.0 2039 1 F NR\_newRAT-Core

* [005] Agreed

R2-2009185 Correction for configuration of SRS Carrier Switching Qualcomm Incorporated, ZTE Corporation, Sanechips, Ericsson, MediaTek Inc. CR Rel-16 38.331 16.2.0 2040 - A NR\_newRAT-Core

* [005] revised

[R2-2011213](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011213.zip) Correction for configuration of SRS Carrier Switching Qualcomm Incorporated, ZTE Corporation, Sanechips, Ericsson, MediaTek Inc. CR Rel-16 38.331 16.2.0 2040 1 A NR\_newRAT-Core

* [005] Agreed

Other

R2-2010563 SRS Resource Set upon PUCCH Release Qualcomm Incorporated CR Rel-16 38.331 16.2.0 2245 - F NR\_newRAT-Core

* [005] Not pursued
* [005] R2 understanding: Upon releasing SRS resource, the Network explicitly releases the SRS Resource Sets without any SRS resource associated

R2-2010665 Corrections on configuration of first active BWPs Huawei, HiSilicon CR Rel-15 38.331 15.11.0 2269 - F NR\_newRAT-Core

* [005] Revised (cover sheet only), Agree Rel-15/Rel-16 CR (R2-2010665/R2-2010666) on configuration of first active BWP with indicating that this is NBC change in cover sheet.

[R2-2011131](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011131.zip) Corrections on configuration of first active BWPs Huawei, HiSilicon CR Rel-15 38.331 15.11.0 2269 1 F NR\_newRAT-Core

* [005] Agreed

R2-2010666 Corrections on configuration of first active BWPs Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2270 - A NR\_newRAT-Core

* [005] Revised (cover sheet only)

[R2-2011132](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011132.zip) Corrections on configuration of first active BWPs Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2270 1 A NR\_newRAT-Core

* [005] Agreed

[R2-2009844](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009844.zip) FH configuration for 1-symbol PUCCH Ericsson CR Rel-15 38.331 15.11.0 2137 - F NR\_newRAT-Core

DISCUSSION

- [005] Intermediate: Rapporteur P6: Not pursue R2-2009844/R2-2009845 on FH configuration for 1-symbol PUCCH, considering it has been captured in Chair Notes.

* [005] not pursued, the CR correctly identifies erroneous configuration case but not sufficient support to capture this in TS.

[R2-2009845](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009845.zip) FH configuration for 1-symbol PUCCH Ericsson CR Rel-16 38.331 16.2.0 2138 - A NR\_newRAT-Core, TEI16

* [005] not pursued, the CR correctly identifies erroneous configuration case but not sufficient support to capture this in TS.

[R2-2010530](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010530.zip) clarification on p-Max in FR2 rel-15 NTT DOCOMO, INC. CR Rel-15 38.331 15.11.0 2236 - F NR\_newRAT-Core

DISCUSSION

- [005] Intermediate: Rapporteur P7: Pursue Rel-15/Rel-16 CR R2-2010530/R2-2010531 with down-selection between the following two ways in phase 2:

Alt-1: “The Network does not configure p-Max for a carrier frequency in FR2”

Alt-2: “if p-Max is present on a carrier frequency in FR2, the UE shall ignore the field and applies the maximum power according to TS 38.101-2 [39]”.

- [005] Rap: 7 companies support **Alt-1**, 2 companies support Alt-2, and one company has no strong opinion. As mentioned by Rapporteur before Question, Alt-1 and Alt-2 don’t really have key difference, and would suggest to go with majority way (i.e. Alt-1).

- [005] Rap: Ericsson requests to postpone.

* [005] Postponed

R2-2010531 Clarification on p-Max in FR2 NTT DOCOMO, INC. CR Rel-16 38.331 16.2.0 2237 - A NR\_newRAT-Core

* [005] Postponed

Others I

R2-2010557 Allowing Deactivation of SCells for Overheating Mitigation Qualcomm Incorporated CR Rel-15 38.331 15.11.0 2242 - F NR\_newRAT-Core

DISCUSSION

- [005] Intermediate: Rapporteur P8: Continue to discuss whether and how to clarify that the Network may also deactivate the active downlink / uplink SCells to alleviate the overheating upon reception of UAI.

- [005] Rap: All companies agreed that the Network may de-configure or deactivate active CC(s) to alleviate overheating issues upon reception of UAI. But only 2 companies supported to capture it in spec. Thus, Rapporteur would suggest: Not pursue Rel-15/Rel-16 CRs. Capture a RAN2 understanding in Chair Notes: “It is up to NW implementation whether and how to act on receiving UAI. The Network may de-configure or deactivate active CC(s) to alleviate overheating issues upon reception of UAI including *reducedCCsDL* or *reducedCCsUL*”.

* [005] RAN2 understands that It is up to NW implementation whether and how to act on receiving UAI. The Network may de-configure or deactivate active CC(s) to alleviate overheating issues upon reception of UAI including *reducedCCsDL* or *reducedCCsUL*
* [005] not Pursued, not sufficient support to modify specification for the above clarification.

R2-2010558 Allowing Deactivation of SCells for Overheating Mitigation Qualcomm Incorporated CR Rel-16 38.331 16.2.0 2243 - A NR\_newRAT-Core

* [005] not Pursued
* [AT112-e][006][NR15] RRC Conn Control II (ZTE)

Treat R2-2009580, R2-2009581, R2-2009579, R2-2009697, R2-2009233, R2-2009234, R2-2009235, R2-2009698, R2-2009699, R2-2010492, R2-2010584, R2-2009236, R2-2009237, R2-2009582, R2-2009583, R2-2009478

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

[R2-2011187](D:\\Documents\\3GPP\\tsg_ran\\WG2\\TSGR2_112-e\\Docs\\R2-2011187.zip" \o "D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011187.zip) [AT112-e][006][NR15] RRC Conn Control II (ZTE) ZTE Corporation Report

* [006] Noted, Proposals are agreed and reflected below

**L2 parameters**

R2-2009580 Correction on rach-ConfigDedicated ZTE Corporation, Sanechips CR Rel-15 38.331 15.11.0 2092 - F NR\_newRAT-Core

R2-2009581 Correction on rach-ConfigDedicated(R16) ZTE Corporation, Sanechips CR Rel-16 38.331 16.2.0 2093 - A NR\_newRAT-Core

* [006] both Postponed

DISCUSSION

- [006] Intermediate, Rapporteur: Based on the comments received over email, some companies raised concern on the CR(1748) agreed last meeting, and suggests to rediscuss whether firstActiveUplinkBWP-Id and firstActiveDownlinkBWP-Id should be mandatory present upon reconfigurationWithSync. Considering this is a sensible topic, and may cause IoT problem. Companies suggest to have more time to check internally, and propose to have long term email discussion until next meeting.

- [006] Intermediate, Rapporteur P1

To discuss the following aspects via email discussion until next meeting:

- Whether to revise the decision made last meeting (e.g. whether firstActiveUplinkBWP-Id should be mandatory or optional present upon reconfigurationWithSync to the same SpCell)

- Issues identified in R2-2009580/9581 if concludes firstActiveUplinkBWP-Id can be optional present upon reconfigurationWithSync.

ONLINE

- Suggestions to have a long email discussion

* [Post112-e][0xx][NR15] Configuration of First Active BWP (ZTE)

Scope: Continue discussion related to R2-2009580/81 and CR1748. Determine way forward for whether firstActiveUplinkBWP-Id should be mandatory or optional present upon reconfigurationWithSync to the same SpCell. If optional, whether to / how to handle potential related issues.

Intended outcome: Report, Agreeable CRs if possible.

Deadline: Long

R2-2009479 Clarification on the SCell RACH configuration Apple CR Rel-16 38.331 16.2.0 2183 - F NR\_newRAT-Core, TEI16

Moved from 6.16

* [006] not Pursued

**Reestablishment**

[R2-2009697](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009697.zip) Clarification on RRC Reestablishment procedure Ericsson discussion Rel-15 NR\_newRAT-Core

DISCUSSION

- [006] intermediate Rapporteur: Continue to discuss if any spec clarification is needed in phase2.

* [006] Noted, P1 - P4 in R2-2009697 are agreed.

DISCUSSION online

- Chair: There are diverging views. The clarification is to resolve issues between Network/UE.

- The main possible misunderstanding seems to be the interpretation of the comma in the second changed section. In this section the intention is that SRB2 is applicable to also the second part.

- Intel think that For these cases network should NOT set this to true for SRB1, as SRB1 is already operating at this point in time.

- LG think the L2 reest shall be set to true carefully, so it is only specified when it is required to be set to true. Think the proposed change will introduce more problems

* P5 is not agreed, no update to TS

**ASN.1**

R2-2009233 Clarify UE behaviour on Need S Need R fields ZTE Corporation, Sanechips discussion Rel-15 NR\_newRAT-Core

* [006] Noted, this topic is postponed (expect next meeting)

DISCUSSION

- [006] Intermediate, Rap P4 Continue discussion in phase 2, companies (especially UE vendors) to check whether UE already behaves as below:

“for scrambling ID related fields (i.e. whose default value is defined as PCI of current serving cell). In case network does not signal the field before (e.g. UE applies default value: PCI), during handover procedure, if the parent field (Need M) is not included in handover command, then for those child scrambling ID fields, the UE will apply default value of “current” serving cell (i.e. PCI of target cell), not the PCI of source cell.”

- [006] Intermediate, Rap P5 If proposal 4 is confirmed, clarify in corresponding field description instead of changing the general principle in 6.1.2. (Update R2-2009234/9235)

- [006] Rap P12: The issue is postponed to next meeting, allow companies to have more time for checking

R2-2009234 CR to clarify UE behaviour on Need S Need R fields ZTE Corporation, Sanechips CR Rel-15 38.331 15.11.0 2044 - F NR\_newRAT-Core

R2-2009235 CR to clarify UE behaviour on Need S Need R fields ZTE Corporation, Sanechips CR Rel-16 38.331 16.2.0 2045 - A NR\_newRAT-Core

* [006] both postponed

SUL terminology

R2-2009698 Correction on terminology for when the UE is configured with SUL Ericsson CR Rel-15 38.331 15.11.0 2105 - F NR\_newRAT-Core

* [006] Merged with rapporteur CR (taking into account the [006] comments from MTK)

R2-2009699 Correction on terminology for when the UE is configured with SUL Ericsson CR Rel-16 38.331 16.2.0 2106 - F NR\_newRAT-Core

* [006] Merged with rapporteur CR (taking into account the [006] comments from MTK)

R2-2010492 Clarification on the terminology ‘serving cell is configured with a supplementary uplink’ Fujitsu discussion Rel-16 NR\_newRAT-Core

Moved from 6.1.1

R2-2010584 Clarification on the terminology ‘serving cell is configured with a supplementary uplink’ Fujitsu CR Rel-16 38.331 16.2.0 1772 1 F NR\_newRAT-Core R2-2007020

Moved from 6.1.1

* [006] Both Not Pursued

Others II

R2-2009236 CR to clarify smtc field in case of SCell addition ZTE Corporation, Sanechips CR Rel-15 38.331 15.11.0 2046 - F NR\_newRAT-Core

DISCUSSION

- [006] Intermediate, Rap P7: RAN2 confirms when adding a SCell without SSB, network is allowed to not provide *smtc* field together with not providing corresponding MO.

- [006] Intermediate, Rap P8: Continue to discuss whether any clarification is needed (depends on whether RRC failure would happen if network provides the smtc field).

- [006] Rap: P13 CR R2-2009236, R2-2009237 are not pursued (based on the assumption that RRC failure will not happen even if *smtc* field is provided).

* [006] RAN2 confirms when adding a SCell without SSB, network is allowed to not provide *smtc* field together with not providing corresponding MO.
* [006] Not Pursued

R2-2009237 CR to clarify smtc field in case of SCell addition ZTE Corporation, Sanechips CR Rel-16 38.331 16.2.0 2047 - A NR\_newRAT-Core

* [006] Not Pursued

R2-2009582 Correction on essential system information ZTE Corporation, Sanechips CR Rel-15 38.331 15.11.0 2094 - F NR\_newRAT-Core

DISCUSSION

- [006] Intermediate, Rap P9: Continue to discuss R2-2009582 and R2-2009583 in phase 2.

- [006] Rap P14: For R2-2009582 and R2-2009583, remove “ as described in 5.2.2.1” and merge to rapporteur CR.

* [006] Merged, remove“ as described in 5.2.2.1” and merge to rapporteur CR.

R2-2009583 Correction on essential system information(R16) ZTE Corporation, Sanechips CR Rel-16 38.331 16.2.0 2095 - A NR\_newRAT-Core

* [006] Merged, remove“ as described in 5.2.2.1” and merge to rapporteur CR.

R2-2009478 Clarification on AS configuration during HO Apple CR Rel-16 38.331 16.2.0 2082 - F NR\_newRAT-Core, TEI16

Moved from 6.16

DISCUSSION

- [006] Intermediate, Rap P10: Continue to discuss R2-2009478 in phase2 (please proponent provides more clarification on the issue that needs to be solved).

* [006] Postponed

#### 5.4.1.2 RRM and Measurements and Measurement Coordination

Including late drop.

#### 5.4.1.3 System information

* [AT112-e][007][NR15] System Information and Idle mode (ZTE)

Treat R2-2009394, R2-2009398, R2-2010414, R2-2010436, R2-2009808- R2-2009811, R2-2009782 (from AI 5.4.4, see further below)

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

R2-2011069 Report of [AT112-e][007][NR15] System Information and Idle mode (ZTE) ZTE Corporation, Sanechips

* [007] Noted, proposals are agreed and reflected below.

SI mapping info

R2-2009394 Clarification on SIB mapping to SI message MediaTek Inc.,Huawei, HiSilicon, Ericsson, Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.11.0 2065 - F NR\_newRAT-Core

- [007] Agreeable with comments

* [007] Revised (take into acct [007] comments from Lenovo)

[R2-2011067](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011067.zip) Clarification on SIB mapping to SI message MediaTek Inc.,Huawei, HiSilicon, Ericsson, Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.11.0 2065 1 F NR\_newRAT-Core

* [007] Agreed

R2-2009398 Clarification on SIB mapping to SI message MediaTek Inc., Huawei, HiSilicon, Ericsson, Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.2.0 2066 - F NR\_newRAT-Core, NR\_pos-Core

- [007] Agreeable with comments

* [007] Revised (take into acct [007] comments from Lenovo)

[R2-2011068](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011068.zip) Clarification on SIB mapping to SI message MediaTek Inc., Huawei, HiSilicon, Ericsson, Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.2.0 2066 1 F NR\_newRAT-Core, NR\_pos-Core

* [007] Agreed

SIB acquisition

R2-2010414 Correction on SIB acquisition Google Inc. CR Rel-15 38.331 15.11.0 2217 - F NR\_newRAT-Core

* [007] Not Pursued

R2-2010436 Correction on SIB acquisition Google Inc. CR Rel-16 38.331 16.2.0 2223 - F NR\_newRAT-Core

Moved from 6.16

* [007] Not Pursued

UAC for AC1 in shared NW

R2-2009808 Correction on uac-AccessCategory1-SelectionAssistanceInfo ZTE corporation, Sanechips, Nokia, Ericsson, CMCC, ChinaTelecom, CATT CR Rel-15 38.331 15.11.0 2129 - F NR\_newRAT-Core

* [007] Not Pursued

R2-2009809 Correction on uac-AccessCategory1-SelectionAssistanceInfo ZTE corporation, Sanechips, Nokia, Ericsson, CMCC, ChinaTelecom, CATT CR Rel-16 38.331 16.2.0 2130 - F NR\_newRAT-Core

- [007] Agreeable with comments

* [007] revised (take into acct [007] comments from Intel, NEC, Lenovo and vivo)

R2-2011070 Correction on uac-AccessCategory1-SelectionAssistanceInfo ZTE corporation, Sanechips, Nokia, Ericsson, CMCC, ChinaTelecom, CATT CR Rel-16 38.331 16.2.0 2130 1 F NR\_newRAT-Core

* [007] Agreed

R2-2009810 Correction on uac-AC1-SelectAssistInfo ZTE corporation, Sanechips, Nokia, Ericsson, CMCC, ChinaTelecom, CATT CR Rel-15 36.331 15.11.0 4487 - F NR\_newRAT-Core

* [007] Not Pursued

R2-2009811 Correction on uac-AC1-SelectAssistInfo ZTE corporation, Sanechips, Nokia, Ericsson, CMCC, ChinaTelecom, CATT CR Rel-16 36.331 16.2.1 4488 - F NR\_newRAT-Core, NB\_IOTenh3-Core

- [007] Agreeable with comments

* [007] revised (take into acct [007] comments from Intel, NEC, Lenovo and vivo)

R2-2011071 Correction on uac-AC1-SelectAssistInfo ZTE corporation, Sanechips, Nokia, Ericsson, CMCC, ChinaTelecom, CATT CR Rel-16 36.331 16.2.1 4488 2 F NR\_newRAT-Core, NB\_IOTenh3-Core

* [007] Agreed

Withdrawn

R2-2010483 Correction on uac-AccessCategory1-SelectionAssistanceInfo ZTE corporation, Sanechips, Nokia, Ericsson, CMCC, ChinaTelecom, CATT CR Rel-15 38.331 15.11.0 2227 - F NR\_newRAT-Core Withdrawn

R2-2010484 Correction on uac-AccessCategory1-SelectionAssistanceInfo ZTE corporation, Sanechips, Nokia, Ericsson, CMCC, ChinaTelecom, CATT CR Rel-16 38.331 16.2.0 2228 - F NR\_newRAT-Core Withdrawn

R2-2010485 Correction on uac-AC1-SelectAssistInfo ZTE corporation, Sanechips, Nokia, Ericsson, CMCC, ChinaTelecom, CATT CR Rel-15 36.331 15.11.0 4513 - F NR\_newRAT-Core Withdrawn

R2-2010486 Correction on uac-AC1-SelectAssistInfo ZTE corporation, Sanechips, Nokia, Ericsson, CMCC, ChinaTelecom, CATT CR Rel-16 36.331 16.2.1 4514 - F NR\_newRAT-Core, NB\_IOTenh3-Core Withdrawn

#### 5.4.1.4 Inter-Node RRC messages

* [AT112-e][008][NR15] inter-node RRC (Huawei)

Treat R2-2008727, R2-2010542, R2-2009242, R2-2009243, R2-2010357, R2-2009159, R2-2009160, R2-2009161, R2-2010359, R2-2010360,

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

[R2-2011028](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011028.zip) Summary for Offline [008][NR15] inter-node RRC (Huawei) Huawei

* [008] Noted

**Band selection**

R2-2008727 Band selection and indication on single connectivity (R3-205765; contact: ZTE) RAN3 LS in Rel-16 NR\_newRAT-Core To:RAN2

Moved from 5.1

* [008] Noted

R2-2010542 Band selection and indication on single connectivity Ericsson discussion NR\_newRAT-Core

* [008] Noted

R2-2009242 Discussion RAN3 LS on band selection and indication ZTE Corporation, Sanechips, Nokia, Nokia Shanghai Bell discussion Rel-16 NR\_newRAT-Core

Moved from 6.12

* [008] Noted

R2-2010357 Disucssion on overlapping band handling Huawei, HiSilicon discussion Rel-16 NR\_newRAT-Core

Moved from 6.16

* [008] Noted

R2-2009243 Reply LS on band selection and indication ZTE Corporation, Sanechips LS out Rel-16 NR\_newRAT-Core To:RAN3

Moved from 6.12

* [008] Revised

[R2-2011188](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011188.zip) Reply LS on band selection and indication ZTE Corporation, Sanechips LS out Rel-16 NR\_newRAT-Core To:RAN3

- [008] Chair: ok, the wording is maybe not perfect, but it seems now agreeable.

* [008] Approved

Other

R2-2009159 Clarification to usage of MN and SN configuration restrictions Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT-Core

* [008] noted

R2-2009160 Clarification to usage of MN and SN configuration restrictions Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.11.0 2035 - F NR\_newRAT-Core

- [008] Intermediate point, Rapporteur: continue the discussion to address the concerns from other companies

- [008] Revised

* [008] Postponed

R2-2009161 Clarification to usage of MN and SN configuration restrictions Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.2.0 2036 - A NR\_newRAT-Core

- [008] Revised

* [008] Postponed

R2-2010359 Clarification on scg-CellGroupConfigEUTRA Huawei, HiSilicon CR Rel-15 38.331 15.11.0 2210 - F NR\_newRAT-Core

- [008] Intermediate point, Rapporteur: Take Ericssons comment into account

* [008] Revised

R2-2011029 Clarification on scg-CellGroupConfigEUTRA Huawei, HiSilicon CR Rel-15 38.331 15.11.0 2210 1 F NR\_newRAT-Core

* [008] merged to the rapporteur CR, contents is agreed

R2-2010360 Clarification on scg-CellGroupConfigEUTRA Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2211 - A NR\_newRAT-Core

* [008] Revised

R2-2011030 Clarification on scg-CellGroupConfigEUTRA Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2211 1 A NR\_newRAT-Core

* [008] merged to the rapporteur CR, contents is agreed

[R2-2010976](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010976.zip) Intra-band EN-DC deployment issue Nokia, Nokia Shanghai Bell discussion NR\_newRAT-Core

=> withdrawn

#### 5.4.1.5 Other

* [AT112-e][009][NR15] RRC Misc (Ericsson)

Treat R2-2009840, R2-2009842, R2-2009843, R2-2009074 - R2-2009077, R2-2009477

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

[R2-2011145](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011145.zip) [AT112-e][009][NR15] RRC Misc Ericsson

* [009] Noted, proposals reflected below

Misc

[R2-2009840](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009840.zip) Miscellaneous non-controversial corrections Set VIII Ericsson CR Rel-15 38.331 15.11.0 2133 - F NR\_newRAT-Core

* [Post112-e][0xx][NR15 NR16] RRC Rapporteur Correction CRs (Ericsson)

Scope: CR approval, Revisions and merged versions of R2-2009840 (R15) and R2-2009841 (R16), converge on finally agreeable wording for CR2136/36.

Intended outcome: Agreed CRs.

Deadline: Short (for RP)

ASN.1 to release

[R2-2009842](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009842.zip) Correction to release of list elements using toReleaseList Ericsson CR Rel-15 38.331 15.11.0 2135 - F NR\_newRAT-Core

[R2-2011149](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011149.zip) Correction to release of list elements using toReleaseList Ericsson CR Rel-15 38.331 15.11.0 2135 1 F NR\_newRAT-Core

[R2-2009843](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009843.zip) Correction to release of list elements using toReleaseList Ericsson CR Rel-16 38.331 16.2.0 2136 - A NR\_newRAT-Core, TEI16

[R2-2011150](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011150.zip) Correction to release of list elements using toReleaseList Ericsson CR Rel-16 38.331 16.2.0 2136 1 A NR\_newRAT-Core, TEI16

- [009] Chair: there seems to be support to have a wording change.

* [009] CR2135/36 are Merged with Rapporteur CRs, assuming that agreeable wording can be found.
* [009] Further discussion on the final wording seems needed for agreement, can be discussed in the email approval discussion for the Rapporteur CRs.

UAI

[R2-2009074](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009074.zip) Correction on UAI during handover vivo, Ericsson, Xiaomi, Intel Corporation CR Rel-16 38.331 16.2.0 2029 - F NR\_newRAT-Core, 5G\_V2X\_NRSL-Core

Moved from 6.1.1

* [009] Agreed

[R2-2009075](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009075.zip) Correction on UAI during handover vivo, Ericsson, Xiaomi, Intel Corporation CR Rel-15 38.331 15.11.0 2030 - F NR\_newRAT-Core

Moved from 6.1.1

* [009] Agreed

[R2-2009076](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009076.zip) Correction on UAI during handover vivo, Ericsson, Xiaomi, Intel Corporation CR Rel-16 36.331 16.2.1 4454 - F LTE\_eV2X-Core, NR\_newRAT-Core

Moved from 6.1.1

* [009] Agreed

[R2-2009077](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009077.zip) Correction on UAI during handover vivo, Ericsson, Xiaomi, Intel Corporation CR Rel-15 36.331 15.11.0 4455 - F NR\_newRAT-Core

Moved from 6.1.1

* [009] Agreed

If supported

[R2-2009477](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009477.zip) Clarification on optional feature without UE AS capability Apple CR Rel-16 38.331 16.2.0 2081 - F NR\_newRAT-Core, TEI16

Moved from 6.16

* [009] Merged to both R16 and R15 Rapporteur RRC CRs. The clarification on optional feature without UE AS capability is agreed and applicable to both Rel-15 and Rel-16.

Withdrawn

R2-2009078 Correction on prohibit timer upon MR-DC release vivo CR Rel-16 38.331 16.2.0 2031 - F NR\_newRAT-Core Withdrawn

### 5.4.2 LTE changes related to NR

SIB19+ extension

[R2-2009950](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009950.zip) Open issues on SIB extension correction Ericsson discussion Rel-15 NR\_newRAT-Core

DISCUSSION Mon NOV 2

P1

- Samsung believes that the ETWS/CMAS issue was in principle there from earlier and the consequence is that the affected SIBs cannot be acquired in one modification period, which is an acceptable consequence.

- Huawei think this was agreed at previous meeting and we don’t need further change to make it work.

- Nokia refers to previous discussions and agrees that the side effect is just a delay.

- Chair: There is no support to change this.

- 1st Round agreement: P1 Not Agreed was superseded by later disc, see below.

P2

- TMO US think there will be a mix of legacy and new UEs and think it is important that we add new SIBs in both branches. Lenovo agrees with TMO US, and think there are operators who doesn’t have any of the problematic UEs.

- Nokia think we should not discuss this and think this was discussed already and is already covered in the interop statement.

- Huawei think that a new release anyway means that we impact UEs, and either way would be ok.

- Samsung don’t see any backwards compatibility issue with P2.

- Chair: We will attempt to make a real decision when we have a SIB to add.

* P2 no agreement for now.

P1 CB Fri after offline

[R2-2011172](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011172.zip) Clarification for SIBs scheduled in schedulingInfoListExt and posSchedulingInfoList Ericsson, Intel, NTT DOCOMO, INC., Samsung, ZTE Corporation, Sanechips, MediaTek Inc., Qualcomm, T-Mobile USA Inc., Apple CR Rel-15 36.331 15.11.0 4533 - F NR\_newRAT-Core

DISCUSSION

- Nokia are ok with the changes, and think that any issue at all related to SIB19+

- AT&T support this proposal, and BT support it as well.

- QC agrees somehow with Nokia, but also think this behaviour was already there. Are inclined to clarify this.

- ZTE think it is not precluded to discuss this in R2, UEs shouldn’t crash. They are technically correct.

- Huawei agrees this is not only R15 change and wonder if we should really start from Rel-15 and for that point we need more time to think about. QC think this is indeed a R15 issue

Chair: there is significant support, some companies want to check

* 1 week email approval
* [Post112-e][0xx][NR15 LTE] Clarification for SIBs scheduled in schedulingInfoListExt and posSchedulingInfoList (Ericsson)

Scope: Allow time to check

Intended outcome: Agreed CRs

Deadline: Short (for RP)

* [AT112-e][010][NR15] LTE changes (Nokia)

Treat R2-2008823, R2-2008824, R2-2009946, R2-2010600, R2-2010601

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

256QAM

[R2-2008823](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008823.zip) Clarification to usage of ul-256QAM-r15 Nokia, Nokia Shanghai Bell CR Rel-15 36.306 15.9.0 1787 - F NR\_newRAT-Core

- [010] Intermediate Rapporteur Proposal 1: CRs R2-2008823 & R2-2008824 are pursued. Ph2 to incorporate modifications suggested by the companies**.**

* [010] revised

[R2-2008824](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008824.zip) Clarification to usage of ul-256QAM-r15 Nokia, Nokia Shanghai Bell CR Rel-16 36.306 16.2.0 1788 - A NR\_newRAT-Core

* [010] revised

Cell Reselection

[R2-2009946](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009946.zip) Clarification for the final check on cell selection criterion Ericsson, Qualcomm discussion Rel-15 NR\_newRAT-Core

- [010] Intermediate Rapporteur Proposal 2: CR R2-2009946 is not pursued as there is 50-50 support. If proponents want to bring up this topic again they can do it at next meeting.

* [010] Not Pursued

SN Release

[R2-2010600](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010600.zip) Correction on p-MaxEUTRA upon SN release ZTE Corporation, Sanechips CR Rel-15 36.331 15.11.0 4523 - F NR\_newRAT-Core

- [010] Intermediate Rapporteur: Most of the companies disagree that this is needed even mentioning earlier discussions and one company thinks this is NBC CR. In discussion, it is confirmed that when nr-Config-r15 is set to "release", all configuration within "setup" will be released.

* [010] Not Pursued

[R2-2010601](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010601.zip) Correction on p-MaxEUTRA upon SN release ZTE Corporation, Sanechips CR Rel-16 36.331 16.2.1 4524 - A NR\_newRAT-Core

* [010] Not Pursued

### 5.4.3 UE capabilities and Capability Coordination

Including Late Drop.

New Input

[R2-2011044](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011044.zip) Clarification on BWCS for inter-ENDC BC with intra-ENDC band combination Bell Mobility, Telus, Nokia, Nokia Shanghai Bell

DISCUSSION

- Oppo wonder if the problem is that UEs in the field don’t apply the CR. Is that the issue? Nokia confirms, and have some additional questions. Oppo winder if this is mandatory for the UE. Yes this is how Nokia understands the R2 TS, but think this understanding is not for everyone.

- Ericsson wonder if we really need to clarify, the field descr seems to indicate that the UE shall report. Ericsson think we might need to check wider.

- ZTE wonders if there is other cases than 3A 3A. Nokia think this is one example, not sure there are more. ZTE are also ok to postpone.

- Apple are ok with email, but also ok to just postpone.

- Huawei are ok with intention, but need time to check ok to postpone,

- vivo wonder if UE doesn't support 3A 3A what to report. Nokia think we need to check UL configuration,

- Nokia suggest 1 week email to clarify the intentions, maybe no CR is needed.

* [Post112-e][xxx][NR15] BWCS for inter-ENDC BC with intra-ENDC band combination (Nokia)

Scope: Based on R2-2011044, collect comments, determine agreeable clarifications.

Intended outcome: Report, possibly draft CR, (unclear what ambition level can be possible).

Deadline: short email discussion (not for RP).

* [AT112-e][011][NR15] UE caps I (Ericsson)

Treat R2-2010512, R2-2010513, R2-2010238, R2-2009630, R2-2010567, R2-2010568, R2-2010539, R2-2010538, R2-2010517 - R2-2010520, R2-2010084

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

Band Combination

[R2-2010238](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010238.zip) Discussion on band for redirection and measurement configuration Huawei, HiSilicon, Ericsson discussion Rel-15 NR\_newRAT-Core

[011] DISCUSSION

- [011] Intermediate, Rapporteur: Continue the discussion on whether the network can configure the band that included in supportedBandListNR (no matter if such band is included in the supportedBandCombinationList of the RF-Parameters and/or RF-ParametersMRDC) as a redirection target band

- [011] Intermediate, Rapporteur: Agree that The network can configure the band that included in *supportedBandListNR* (no matter if such band is included in the *supportedBandCombinationList* of the *RF-Parameters* and/or *RF-ParametersMRDC*) as a measurement object.

* [011] The network can configure the band that included in *supportedBandListNR* (no matter if such band is included in the *supportedBandCombinationList* of the *RF-Parameters* and/or *RF-ParametersMRDC*) as a measurement object.
* [011] RAN2 confirms that in case the UE includes a band in supportedBandListNR but not in supportedBandCombinationList, the UE does not necessarily support stand-alone operation on that band. If the UE gets an RRC release message redirecting the UE to such band, the UE behaviour w.r.t. redirection is undefined.

[R2-2010512](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010512.zip) Clarified meaning of band combinations Ericsson, Huawei, HiSilicon CR Rel-15 38.306 15.11.0 0450 - F NR\_newRAT-Core

[R2-2010513](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010513.zip) Clarified meaning of band combinations Ericsson, Huawei, HiSilicon CR Rel-16 38.306 16.2.0 0451 - A NR\_newRAT-Core

* [011] Both Not Pursued

[R2-2009630](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009630.zip) Further Consideration on the non-CA BC Capability Reporting ZTE Corporation, Sanechips discussion Rel-15 NR\_newRAT-Core

* [011] Noted

[R2-2010567](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010567.zip) CR on the non-CA BC Capability Reporting ZTE Corporation, Sanechips CR Rel-15 38.331 15.11.0 2248 - F NR\_newRAT-Core

[R2-2010568](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010568.zip) CR on the non-CA BC Capability Reporting ZTE Corporation, Sanechips CR Rel-16 38.331 16.2.0 2249 - A NR\_newRAT-Core

* [011] Both not pursued

Feature Set

[R2-2010539](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010539.zip) Definition of fallback per CC feature set Ericsson CR Rel-15 38.306 15.11.0 0457 - F NR\_newRAT-Core

- [011] Intermediate, Rapporteur: To continue discussing: whether there is any parameter in feature set per CC that may be unclear regarding the definition of fallback of feature set per CC (for both Rel-15 and Rel-16); how to capture any identified parameters into the definition of fallback of feature set per CC

* [011] Postponed

[R2-2010538](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010538.zip) Definition of fallback per CC feature set Ericsson CR Rel-16 38.306 16.2.0 0456 - A NR\_newRAT-Core

* [011] Postponed

[R2-2010517](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010517.zip) Removing contradiction on number of FSpUCC and FSpDCC Ericsson, Nokia, Nokia Shanghai-Bell CR Rel-15 38.306 15.11.0 0452 - F NR\_newRAT-Core

- [011] Intermediate, Rapporteur: remove the sentences that contradict 38.331 concerning feature sets per CC

* [011] Revised

[R2-2011082](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011082.zip) Removing contradiction on number of FSpUCC and FSpDCC Ericsson, Nokia, Nokia Shanghai-Bell CR Rel-15 38.306 15.11.0 0452 1 F NR\_newRAT-Core

* [011] Agreed

[R2-2010518](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010518.zip) Removing contradiction on number of FSpUCC and FSpDCC Ericsson, Nokia, Nokia Shanghai-Bell CR Rel-16 38.306 16.2.0 0453 - A NR\_newRAT-Core

* [011] Revised

[R2-2010518](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010518.zip) Removing contradiction on number of FSpUCC and FSpDCC Ericsson, Nokia, Nokia Shanghai-Bell CR Rel-16 38.306 16.2.0 0453 - A NR\_newRAT-Core

* [011] Agreed

[R2-2010519](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010519.zip) Removing contradiction on number of FSpUCC and FSpDCC Ericsson, Nokia, Nokia Shanghai-Bell CR Rel-15 38.331 15.11.0 2233 - F NR\_newRAT-Core

[R2-2010520](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010520.zip) Removing contradiction on number of FSpUCC and FSpDCC Ericsson, Nokia, Nokia Shanghai-Bell CR Rel-16 38.331 16.2.0 2234 - A NR\_newRAT-Core

* [011] Both not pursued

Inter-node

[R2-2010084](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010084.zip) Internode coordination for superset BCs reported by UE Samsung Telecommunications discussion Rel-15 NR\_newRAT-Core

* [011] Noted
* [011] It is confirmed that, when setting or re-negotiating allowedBC-ListMRDC, the MN and SN cannot indicate a fallback band combination that is not included in UE capabilities. (No issue, related to this behaviour, was identified that requires a solution. If particular issues are later identified they can be discussed via company contribution).
* [AT112-e][012][NR15] UE caps II (ZTE)

Treat R2-2008710, R2-2009238, R2-2009239, R2-2009162, R2-2009163, R2-2009516, R2-2009517, R2-2010537, R2-2010536, R2-2010541, R2-2010540, R2-2009944

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

[R2-2011189](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011189.zip) Summary of offline [AT112-e][012][NR15] UE caps II (ZTE) ZTE Corporation

* [012] Noted, proposals are taken into account and reflected below

L1 Capabilities

[R2-2008710](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008710.zip) LS on Interpretation of UE Features in Case of Cross-Carrier Operation (R1-2007334; contact: ZTE) RAN1 LS in Rel-15 NR\_newRAT-Core To:RAN2

* [012] noted

[R2-2009944](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009944.zip) UE capability and cross-slot scheduling for Paging Ericsson discussion Rel-15 NR\_newRAT-Core

DISCUSSION

- [012] Intermediate Rapporteur Proposal 8: RAN2 confirms that “the UE supports K0 = 0 for FR1 and K0 = 0, 1 for FR2 for Paging and System Information, even when the UE does not indicate support for dl-SchedulingOffset-PDSCH-TypeA or dl-SchedulingOffset-PDSCH-TypeB”. For the K0=1 for FR1 and other issues can be further discussed in Phase 2.

- [012] Intermediate Rapporteur Proposal 9: RAN2 confirms that “It is left to operators’ deployment to make sure there is no IOT problems with legacy UEs that don’t support K0>0 for the FR1 and/or K0>1 for the FR2.”

[012] Intermediate CHAIR: Captures P8 and P9 as Agreements from ph1.

- [012] Qualcomm, finds this confusing: Can we confirm that the understanding is still that K0=1 for FR1 is mandatory feature (so the UE shall support), but may not be IOTed?

- [012] Ericsson: We also think that the original RAN1 agreement is that the UE supports K0=1 for both FR1 and FR2.

- [012] MTK: For P8 and P9, I still find it strange for RAN2 to confirm the RAN1 agreement. Why not RAN1 confirm its own agreement

- [012] Huawei: We are still confused why K0=1 for FR1 is mandatory as no reason is provided. R1 TS specifies default configurations A ..

- [012] QC: The default configurations are not related to mandatory optional …

- [012] Ericsson: From 38.822: Mandatory without capability signalling: .. 11) DL scheduling slot offset K0=1 for type 1 CSS without dedicated RRC configuration and for type 0, 0A, and 2 CSS ..

- [012] Huawei: Requests time to check.

[012] Chair: Can continue discussion for 1-week, leading to CRs approval. Meanwhile I remove the earlier captured agreements on P8 and P9.

* [012] Noted

[R2-2009238](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009238.zip) CR to clarify UE capability in case of cross-carrier operation ZTE Corporation, Sanechips, Ericsson CR Rel-15 38.306 15.11.0 0418 - F NR\_newRAT-Core

- [012] Intermediate Rapporteur Proposal 1: Update R2-2009238/R2-2009239 based on the comments from companies (e.g. improve the wording of “per serving cell” etc.), and take into account the new approved RAN1 LS on “Interpretation of UE Features in Case of Cross-Carrier Operation”.

* [012] revised

[R2-2011260](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011260.zip) CR to clarify UE capability in case of cross-carrier operation ZTE Corporation, Sanechips, Ericsson CR Rel-15 38.306 15.11.0 0418 2 F NR\_newRAT-Core

[R2-2009239](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009239.zip) CR to clarify UE capability in case of cross-carrier operation ZTE Corporation, Sanechips, Ericsson CR Rel-16 38.306 16.2.0 0419 - A NR\_newRAT-Core

* [012] revised

[R2-2011261](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011261.zip) CR to clarify UE capability in case of cross-carrier operation ZTE Corporation, Sanechips, Ericsson CR Rel-16 38.306 16.2.0 0419 2 A NR\_newRAT-Core

* [Post112-e][NR15][0xx] UE capability for cross-carrier operation (ZTE)

Scope: Email approval, R2-2011260/R2-2011261 (or possible revisions thereof)

Intended outcome: Agreed CRs

Deadline: Short (for RP)

[R2-2009162](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009162.zip) Correction to BWP capabiltiy descriptions Nokia, Nokia Shanghai Bell CR Rel-15 38.306 15.11.0 0416 - F NR\_newRAT-Core

- [012] Intermediate Rapporteur  Proposal 2: The first change of R2- 2009162 and R21-2009163 is not pursued, the proponent can continue discussion with interested companies.

- [012] Intermediate Rapporteur  Proposal 3: The second change is pursued but need the proponent to further confirm the start version with the companies that think it shall be started from Rel-16.

- [012] Intermediate Rapporteur  Proposal 4: If only the second change was agreed at last, merge the second change into Other CRs.

* [012] Merged (partly) with R2-2009238/R2-2009239

[R2-2009163](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009163.zip) Correction to BWP capabiltiy descriptions Nokia, Nokia Shanghai Bell CR Rel-16 38.306 16.2.0 0417 - A NR\_newRAT-Core

* [012] Merged (partly) with R2-2009238/R2-2009239

[R2-2009516](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009516.zip) Correction of the description of ue-SpecificUL-DL-Assignment Apple CR Rel-15 38.306 15.11.0 0430 - F NR\_newRAT-Core

- [012] Intermediate Rapporteur Proposal 5:  Merge the changes in R2-2009516/R2-2009517 into Other CRs.

* [012] Merged with R2-2009238/R2-2009239

[R2-2009517](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009517.zip) Correction of the description of ue-SpecificUL-DL-Assignment Apple CR Rel-16 38.306 16.2.0 0431 - A NR\_newRAT-Core

* [012] Merged with R2-2009238/R2-2009239

[R2-2010541](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010541.zip) Correction to pdcch-MonitoringSingleOccasion Ericsson CR Rel-15 38.306 15.11.0 0459 - F NR\_newRAT-Core

- [012] Rap Proposal 7: R2- 2010540 and R21-2010541 are pursued and merge into Other CRs.

* [012] Merged with R2-2009238/R2-2009239

[R2-2010540](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010540.zip) Correction to pdcch-MonitoringSingleOccasion Ericsson CR Rel-16 38.306 16.2.0 0458 - A NR\_newRAT-Core

* [012] Merged with R2-2009238/R2-2009239

[R2-2010537](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010537.zip) Correction to the use of simultaneous CSI-RS resources Ericsson CR Rel-15 38.306 15.11.0 0455 - F NR\_newRAT-Core

[R2-2010536](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010536.zip) Correction to the use of simultaneous CSI-RS resources Ericsson CR Rel-16 38.306 16.2.0 0454 - A NR\_newRAT-Core

- [012] Rap Proposal 6: To Decide whether to pursue R2-1010537 and R2-2010536 online.

CB online Thursday

- Nokia think we discussed this a long time ago, and think that active and simultaneous is equivalent, but think this network restriction was to resolve a bug. Nokia think this bring a mandatory change for the network. Not sure how to understand the CR

- Huawei agrees this is the initial intention, but think this may be inconsistent with legacy UE behaviour.

- Samsung also think this may be non backwards compatible, and think if a change is needed, R1 should initiate

- LG think current text reflect the original intention.

- QC think the important part is how legacy UEs implement this. QC are aligned with the intention. Think R1 will not send anything. If we want to ask question to R1 we can send an LS.

- Ericsson would be ok to send an LS.

- Huawei think R1 has already sent an LS and this is indeed aligned with original intention.

- Nokia think sending an LS is ok, but think our analysis is the most important. Think email discussion to next meeting is ok.

- MTK and Xiaomi want time to check.

Chair: There seems to be interest to change. Will not decide now.

- Do we need to send an LS?

- Samsung think we need to have an LS from R1 and also needed is careful UE NBC analysis to agree. LG agrees

* We send an LS to R1, to confirm the intention and alignment with R1 TS
* [Post112-e][0xx][NR15] LS to R1 on the use of simultaneous CSI-RS resources (Ericsson)

Scope: Discuss based on R2-2010537 and [AT112-e][012]. Ask R1 to clarify/confirm intentions, and other Q needed for decision on proposed modification, if any.

Intended outcome: Approved LS

Deadline: short

* [AT112-e][013][NR15] UE caps III (Huawei)

Treat R2-2009480, R2-2008734, R2-2008770, R2-2008771, R2-2010241, R2-2010242, R2-2009392, R2-2009393, R2-2010239, R2-2010240, R2-2010545, R2-2010546, R2-2010561, R2-2010562

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

[R2-2011139](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011139.zip) Summary of offline 013 Rel-15 UE caps III Huawei, HiSilicon

* [013] Noted, proposals agreed and reflected below

L2 capabilities

[R2-2009480](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009480.zip) Clarification on the capability of supportedNumberTAG Apple discussion Rel-15 NR\_newRAT-Core, TEI16

- [013] Rapporteur: 10 companies joined the discussion. 5 companies support the change, 4 companies think the change is NBC and 3 companies want more time to check. There is no clear majority on which direction to go and seems companies need more time to check inter-operability. It is then suggested to postpone the CR and allow companies to check further.

* [013] Postponed

DC related

NE-DC RAN4 features

[R2-2008734](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008734.zip) Reply LS on Clarification on RAN4 features of NE-DC (R4-2011688; contact: Samsung) RAN4 LS in Rel-15 NR\_newRAT-Core To:RAN2

Moved from 5.1

* [013] Noted

[R2-2010241](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010241.zip) Clarification on NE-DC for bandwidth combination set Huawei, HiSilicon, Samsung CR Rel-15 38.306 15.11.0 0440 - F NR\_newRAT-Core

- [013] Intermediate, Rapporteur: 9 companies joined the discussion. 2 companies supported to have changes on syncIntraBandENDC, intraBandENDC-Support and UL-TimingAlignmentEUTRA-NR and 5 companies assume the context of the LS from RAN4 is for SupportedBandwidthCombinationSet and better to get confirmation with RAN4 before having the change. 2 companies are fine with the intention but also fine to wait for RAN4. As no consensus, it is suggested not to have this change at this RAN2 meeting, and companies can check RAN4 status further. All companies agree with the other changes in [3][4][5][6] and also agree to have the changes since Rel-15. As CRs in [5][6] did not include the above controversial part, it is therefore proposed to use CRs in [5][6] as the baseline for further checking the changes.

* [013] agreed

[R2-2010242](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010242.zip) Clarification on NE-DC for bandwidth combination set Huawei, HiSilicon, Samsung CR Rel-16 38.306 16.2.0 0441 - A NR\_newRAT-Core

* [013] agreed

[R2-2008770](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008770.zip) Correction for RAN4 features of NE-DC OPPO, Qualcomm Incorporated CR Rel-15 38.306 15.11.0 0411 - F NR\_newRAT-Core

[R2-2008771](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008771.zip) Correction for RAN4 features of NE-DC OPPO, Qualcomm Incorporated CR Rel-16 38.306 16.2.0 0412 - A NR\_newRAT-Core

* [013] Not Pursued (contents partially agreed in CRs above).

NR-DC

[R2-2009392](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009392.zip) Corrections on PDCP duplication capability for NR-DC Huawei, HiSilicon CR Rel-15 38.331 15.11.0 2063 - F NR\_newRAT-Core

- [013] Intermediate, Rapporteur: 11 companies joined the discussion and all agree with the principle of the CRs, and all agree to change from Rel-15.

* [013] agreed

[R2-2009393](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009393.zip) Corrections on PDCP duplication capability for NR-DC Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2064 - A NR\_newRAT-Core

* [013] agreed

Handover

[R2-2010239](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010239.zip) Clarification on the inter-frequency handover capability Huawei, HiSilicon, Ericsson CR Rel-15 38.306 15.11.0 0438 - F NR\_newRAT-Core

[R2-2010240](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010240.zip) Clarification on the inter-frequency handover capability Huawei, HiSilicon, Ericsson CR Rel-16 38.306 16.2.0 0439 - F NR\_newRAT-Core

DISCUSSION On-LIne

- ZTE think this is NBC, as the previous text says “between” i.e. double direction. ZTE are wondering if these scenarios are really supported by UEs, if not there is no reason to change. Huawei indicate that all others support this change, but agrees that it depends how the UE reports this.

- Ericsson think the correction is correct.

- MTK see this as a clarification.

- Nokia wonder if we can have time to check.

- Ericsson think maybe with some clarifications, common UE cap may be compatible with the previous text.

CB Thursday, time to check.

- Huawei reports that in offline discussion there was no convergence .

DISCUSSION2 ONLINE ON P4 R2-2011139

- P4: to decide whether the below are valid cases for UE capability reporting and decide the way forward.

*- 1) the UE supports the FDD->TDD handover but does not support TDD->FDD handover;*

*- 2) the UE supports handover between FDD and TDD, but does not support inter-frequency handover from FDD or from TDD.*

- Ericsson think the signalling allows such cases. ZTE think this depends on the understanding, ZTE think not

- Samsung think these UC are not realistic.

- ZTE agrees with Samsung, and IOT testing is usually in both directions.

- Huawei think the 1st case could be valid, but think the 2nd case is not valid as it would always be interfreq

- QC also think that between these cases, the 1st one is the more likely, but none of them are important, maybe better to protect backwards compatibility.

- Possible way forward to exclude the support of these cases 1 and 2 (at least for R15), and by that we e.g. can introduce restrictions/clarifications to allow all combinations of current impl, while making the TS clear.

- Ericsson would be ok with the WF. Huawei also.

- Samsung wonder for 2 whether this is also internal FDD and internal TDD? Huawei think this is from FDD or from TDD (i.e. not within). Oppo wonders if this means that within case is mandatory.

* Way forward to support the purpose to allow all combinations of current implementations, while making the TS clear, by introducing restrictions/clarifications, to exclude the support of the cases 1 and 2 above (details TBD)
* [Post112-e][0xx][NR15] Clarification on the inter-frequency handover capability (Huawei)

Scope: Implement the agreement captured for R2-2010239/40

Intended outcome: Agreed CRs

Deadline: Short (for RP)

Differentiation xDD FRx

[R2-2010545](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010545.zip) Clarification on UE capabilities with FDD/TDD differentiation Ericsson, ZTE Corporation, Sanechips CR Rel-15 38.306 15.11.0 0460 - F NR\_newRAT-Core

- [013] Intermediate, Rapporteur: 11 companies joined the discussion and all agree the change in principle. In addition all companies agree this change should be started from Rel-15.

* [013] Agreed

[R2-2010546](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010546.zip) Clarification on UE capabilities with FDD/TDD differentiation Ericsson, ZTE Corporation, Sanechips CR Rel-16 38.306 16.2.0 0461 - F NR\_newRAT-Core

* [013] Agreed

[R2-2010561](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010561.zip) slotAgrregationULConfigGrant capabilities enhancement Qualcomm Incorporated CR Rel-15 38.306 15.11.0 0466 - F NR\_newRAT-Core

[R2-2010562](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010562.zip) slotAgrregationULConfigGrant capabilities enhancement Qualcomm Incorporated CR Rel-15 38.331 15.11.0 2244 - F NR\_newRAT-Core

DISCUSSION On-Line

- Nokia think this is non backwards compatible, and this is problematic. It is too late. Huawei agrees with Nokia, and think some of these parameters are by R1 and it is not suitable that we change. Mediatek agrees. Samsung agrees as well, and think if we do this for Rel16 we need a bit more time. Ericsson also agrees that it is late and current CR is NBC.

- Apple also think this is problematic but have some sympathy and wonder if there is a way to make this backwards compatible.

- QC agrees some Cap changes need to be by R1, but think we can send an LS, and think we can attempt a R16 CR. LG are ok for R16, but wonder if we do this for R16 what happens then with legacy UE caps.

- Chair: there seems to be significant resistance, and only two companies that could consider attempting some support in R16. Not sufficient support.

- QC wonder then if the companies that do not want this whether they are prepared to do this interop testing.

* No agreement, both not pursued

### 5.4.4 Idle inactive mode procedures

This agenda item addresses the idle and inactive behaviour specified in 38.304 or 36.304. Other aspects related to inactive (e.g. state transitions, out of coverage, etc) are covered under RRC agenda items (5.4.1.x)

[R2-2009782](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009782.zip) Clarifications for Inter-RAT Cell Reselection and Mobility State MediaTek Inc. discussion

Treated by email together with System Information, see above.

- [007] Intermediate Rapporteur Proposal 4: To discuss online the following options about whether to count inter-RAT cell reselections during mobility state estimation:

*i) Option 1: Inter-RAT cell reselections should be counted when determining UE mobility state based on the number of cell reselections within a given duration.*

*ii) Option 2: Leave it to UE implementation and send an LS to RAN5 to remove the mobility state test case(s) related to the inter-RAT cell reselection.*

CB online Thursday

- MTK report that there is no consensus offline

- Lenovo support Option 1, but as there seems to be different UE implementations maybe Option 2 can be ok for now, but we should fix this in the TS. No need to decide now on R5 test cases.

- LG also support Option 1, but understand that different coverage of cells. Do not think this is critical.

- Oppo support Option 2, this is not clear in the TS.

- MTK think that 304 need to be clear on IRAT dep if any, otherwise unclear.

- QC agrees this is not clear, but think this should be counted (Option 1). and think the R5 test case is like this and that is ok.

- ZTE think there are different UE impl.

- Samsung think the R5 test case is clear so O1 should be the baseline.

- vivo pref o1.

- Ericsson think spec is not clear and there is different UE impl, so O2 can be acceptable for now.

- Nokia wonder if this impact LTE as well. Think test case shall not specify the behavior.

* Observation: 38.304 is not clear on whether inter-RAT cell changes shall be counted for mobility state estimation. The R5 test case is clear (option 1 – IRAT cell changes are counted). There seems to be different UE implementations.
* postponed

## 5.5 Positioning corrections

Corrections to both the stage 2 and stage 3 aspects related to positioning. Stage 2 CRs should be discussed with the specification rapporteur before submission.

Documents in this agenda item will be handled in a break out session.

[R2-2010138](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010138.zip) Corrections to E-CID positioning Nokia, Nokia Shanghai Bell CR Rel-15 38.305 15.6.0 0042 - F NR\_newRAT-Core

[R2-2010274](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010274.zip) Correction on OTDOA Positioning support in R15 Huawei, HiSilicon CR Rel-16 38.305 16.2.0 0047 - F NR\_newRAT-Core

[R2-2010275](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010275.zip) Correction on OTDOA Positioning support in R16 Huawei, HiSilicon CR Rel-16 38.305 16.2.0 0048 - A NR\_pos-Core

[R2-2010569](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010569.zip) Correction of A-GNSS Periodical retrival of Assistance Data Ericsson CR Rel-15 37.355 15.0.0 0277 - F NR\_newRAT-Core

[R2-2010570](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010570.zip) Correction of A-GNSS Periodical retrival of Assistance Data Ericsson CR Rel-16 37.355 16.2.0 0278 - F NR\_newRAT-Core

[R2-2010571](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010571.zip) Correction of hanging ASN.1 code after END Ericsson CR Rel-15 37.355 15.0.0 0279 - F NR\_newRAT-Core

[R2-2010572](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010572.zip) Correction of hanging ASN.1 code after END Ericsson CR Rel-16 37.355 16.2.0 0280 - F NR\_newRAT-Core

# 6 Rel-16 NR Work Items

Corrections that resolve issues for functionality developed for R16 WIs. While high maintenance intensity is expected, Rel-16 corrections are treated separately per WI.

## 6.1 Rel-16 General

### 6.1.1 General RRC corrections

Corrections that do not fit well elsewhere in the agenda, e.g. cross-WI. Including [Post111-e][901][NR16] Extension scenarios for ToAddMod lists (Mediatek). Including [Post111-e][927][NR16] NR Parameter Names Consolidation (Ericsson)

* [AT112-e][014][NR16] RRC general (Ericsson)

Scope: Treat RRC R16 general sub-topics.

Intended outcome:

Deadline:

[R2-2011146](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011146.zip) [AT112-e][014][NR15] RRC Misc Ericsson

* [014] noted

Rapporteur R16 RRC CR

[R2-2009841](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009841.zip) Miscellaneous non-controversial corrections Set VIII Ericsson CR Rel-16 38.331 16.2.0 2134 - F NR\_newRAT-Core, TEI16

- Ericsson indicate that there were a cpl of offline comments

- Chair: no on-line comments, treat in [014]

* [014] Email approval, short post email discussion together with RRC Misc Corrections CR for R15

NR parameter names

[Post111-e][927][NR16] NR Parameter Names Consolidation (Ericsson)

[R2-2009838](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009838.zip) NR RAN1 Rel-16 ASN.1 consolidated parameter list Ericsson discussion Rel-16 TEI16

=> revised

[R2-2010685](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010685.zip) NR RAN1 Rel-16 ASN.1 consolidated parameter list Ericsson discussion Rel-16 TEI16

DISCUSSION Mon Nov 2

- Ericsson explains that the list is agreeable but there is a configuration parameter missing, in TEI but it is added by R2-2008825

- [014] Chair: Was initially decided to Revise to include the agreed parameter, when agreed, but it was later agreed to just send the LS and ignore the missing parameter.

* [014] Endorsed, for inclusion in LS

[R2-2009839](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009839.zip) Draft Reply LS on updated Rel-16 LTE and NR parameter lists Ericsson LS out Rel-16 LTE\_eMTC5-Core, NB\_IOTenh3-Core, NR\_eMIMO-Core, LTE\_DL\_MIMO\_EE-Core, NR\_Mob\_enh-Core, LTE\_NR\_DC\_CA\_enh-Core, NR\_unlic-Core, NR\_2step\_RACH-Core, NR\_IAB-Core, NR\_L1enh\_URLLC-Core, NR\_UE\_pow\_sav-Core, LTE\_terr\_bcast-Core, NR\_pos-Core, 5G\_V2X\_NRSL-Core, NR\_IIOT-Core To:RAN1 Cc:RAN3

DISCUSSION On-LIne

- Huawei think the R2 naming conventions may not apply completely to R1, and think they should mainly just be explained.

- Ericsson think that the information in the LS is consistent with R1 discussion.

- Nokia think the discussion in R1 is whether they use the full name or not

- Huawei think the text can be made clearer.

- vivo think we can send LS without recommendation.

- Chair: Can massage the text to make the recommendation even more clear.

DISCUSSION On-Line Nov 4

- Huawei propose to ask about the configuration IE, as this is in brackets in R1 TS (R1-2001478).

- Nokia think this parameter is indeed in the R1 parameters list.

- Ericsson think that in the second parameter list from R1 this parameter was included (R2-2006361).

- Chair wonder if the recommendation is now ok, Huawei sent a proposed update.

- Nokia wonder if we then shall tell them how we name the fields. Huawei comment that this is their proposal. Ericsson think we should make it as simple as possible for R1.

- Chair think it would be good to agree the LS and send it this week (with or without the missing parameter), pl check progress in the parallel session.

* Continue by email [014], revised

[R2-2011031](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009839.zip) Draft Reply LS on updated Rel-16 LTE and NR parameter lists Ericsson LS out Rel-16 LTE\_eMTC5-Core, NB\_IOTenh3-Core, NR\_eMIMO-Core, LTE\_DL\_MIMO\_EE-Core, NR\_Mob\_enh-Core, LTE\_NR\_DC\_CA\_enh-Core, NR\_unlic-Core, NR\_2step\_RACH-Core, NR\_IAB-Core, NR\_L1enh\_URLLC-Core, NR\_UE\_pow\_sav-Core, LTE\_terr\_bcast-Core, NR\_pos-Core, 5G\_V2X\_NRSL-Core, NR\_IIOT-Core To:RAN1 Cc:RAN3

* [014] The LS out is Approved, with the attachment of above endorsed *NR RAN1 Rel-16 ASN.1 consolidated parameter list.* Final LS version in R2-2011037

Extension of ToAddMod lists

* [AT112-e][045][NR16] Extension of ToAddMod lists (Mediatek)

Scope: Continue discussion on P10, P11 in R2-2009976, converge to agreements if possible. Review and agree CR.

Intended outcome: Report, agreed CR (if possible)

Deadline: EOM, intermediate deadlines by the Rapporteur.

CLOSED

[R2-2009976](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009976.zip) Summary of email discussion [Post111-e][901] Extension scenarios for ToAddMod lists (MediaTek) MediaTek Inc. discussion Rel-16 NR\_newRAT-Core

DISCUSSION On-Line

- Huawei wonder if we will rename current fields to align? MTK think yes, and the change is not big (it is in the CR). Nokia think we should check so this doesn’t introduce issues. Could even check until next meeting.

* P1, P2, P3, P4, P6 are agreed
* P8 P9 are agreed

Chair: a separate email discussion [045] to continue on P10 and P11

[R2-2009982](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009982.zip) ASN.1 guidelines for extension of ToAddMod/ToRelease lists, and related updates of existing field names MediaTek Inc. CR Rel-16 38.331 16.2.0 2150 - F TEI16

* [045] Postponed

[R2-2009983](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009983.zip) ToRelease list extensions: unresolved issue from [Post111-e][901] Extension scenarios for ToAddMod lists (MediaTek) MediaTek Inc. discussion Rel-16 TEI16

* [045] Noted

[045] Report:

- [045] Rapporteur: We are now past the initial deadline for comments, and this has been a rather quiet discussion; I think people are understandably busy with time-critical work, while this is an issue that can wait since it really only affects how we will draft CRs later in Rel-17.

- [045] Rapporteur: I’ve uploaded a brief summary in the drafts folder (v03\_Rapp). Realistically, we do not have enough input to generate an agreeable CR yet, so I’m suggesting that we could continue in a post-meeting discussion and aim to have a CR for next meeting that can be agreed without further ado.

- [045] Chair: Ok maybe this is best done between meetings, so lets allocate a long email discussion to finalize this,

* [Post112-e][0xx][NR16] Extension of ToAddMod lists (Mediatek)

Scope: Finalize the remaining open points

Intended outcome: Report (discussion summary), Agreeable CR 38331

Deadline: long

R16 Reest or Resume with R15 gNB

[R2-2009416](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009416.zip) Miscellaneous corrections to 38.331 on UE configuration release ZTE Corporation, Sanechips CR Rel-16 38.331 16.2.0 2073 - F TEI16, LTE\_NR\_DC\_CA\_enh-Core, NR\_SON\_MDT-Core

=> revised

[R2-20](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009416.zip)10998 Miscellaneous corrections to 38.331 on UE configuration release ZTE Corporation, Sanechips CR Rel-16 38.331 16.2.0 2073 1 F TEI16, LTE\_NR\_DC\_CA\_enh-Core, NR\_SON\_MDT-Core

On-line first

DISCUSSION

- Nokia think some part can be merged to rapporteur CR and several things are covered in the general section.

- Apple has some sympathy but are thinking that we should have thre release behavours in a single section. Think that SON MDT maybe should continue.

- Ericsson think the first change and all changes with on-demand are wrong, and T316 probably can be considered in general, and T350 is already stopped so no need to stop at resume.

- Huawei also think 5353 changes are not needed, and don’t understand the coversheet explanation, do not understand why there would eb a mismatch. A network will do full configuration if it doesn’t understand the UE config.

- MTK agrees with Ericsson and Huawei. There is no need for this CR.

- vivo also think 5353 changes doesn’t resolve issues, and agrees that ondemand changes are wrong.

- QC also agree that full config is the main method, and UE autonomous release is only for configuration that is not handled by that.

* No consensus, not agreed

SI acquisition

* [AT112-e][039][NR16] SI acquisition (Ericsson)

Scope: Treat remaining aspects of papers under 6.1.1 “SI Acquisition”. Identify agreeable parts and agree them. For agreed parts, agree revised CRs.

Intended outcome: Report, agreed CRs.

Deadline: Agreements ready at EOM, Rapporteur may set intermediate deadlines

[R2-2011038](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011038.zip) Summary of [AT112-e][039][NR16] SI acquisition Ericsson

* [039] noted, proposals are agreed and reflected below.,

[R2-2010272](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010272.zip) Correction on acquisition of MIB and SIB1 Huawei, HiSilicon, Ericsson CR Rel-16 38.331 16.2.0 2198 - F NR\_pos-Core

* [039] Agree with the intention in R2-2010272. CR to be revised to take into account companies inputs.
* [039] revised

[R2-2011190](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011190.zip) Correction on acquisition of MIB and SIB1 Huawei, HiSilicon, Ericsson CR Rel-16 38.331 16.2.0 2198 1 F NR\_pos-Core

* [039] Agreed

[R2-2009101](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009101.zip) Corrections to SI acquisition in RRC\_CONNECTED Samsung Electronics Co., Ltd CR Rel-16 38.331 16.2.0 2033 - F 5G\_V2X\_NRSL-Core, NR\_pos-Core

* [039] Not Pursued

DISCUSSION on-line on the two CRs above, Mon NOV 2.

- Ericsson believe that if the first doc is agreed then the second doc is not needed. MTK agrees but think the text need to be changed also in the second CR, remove the word “stored”. Intel agrees.

- LG think a UE monitors notifications, and think a UE will know when SIB1 is modified and there is no issue to resolve (SS CR)

- QC think it is strange to say from current modification period, but for pos modification period does not apply so UE may need to acquire outside Mod period, but for legacy no need.

- Nokia wonder why a UE would need to acquire SIB1 again and again

- Samsung think there is no intention to impact legacy, the affected text is only executed for the R16 Si acq in connected. QC think we should be careful, and think the CR indeed change legacy behaviour. Samsung think there is some confusion there is no side effect.

- CATT think the refe to modification period in SS CR is not correct, and think it is up to UE implement when to get SIB1.

- Samsung think that 10272 says that the UE then need to always acquire SIB1. Huawei think that the Bcast status may change during modification period, and think that SIB1 would be acquired based on need from upper layer. Ericsson agrees. Samsung think we should specify the condition for acquiring SIB1. Huawei think the SIB1 would just be additionally acquired when application SIB is required.

- Chair: There seems to be support for changes in 10272.

* When UE trigger SIB acquisition in Connected and SIB Bcast status is nonbroadcast, then the UE shall acquire SIB1 without paying respect to modification period (same as Idle mode R15 procedure).

[R2-2009945](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009945.zip) Clarifications for the common search space on the active BWP Ericsson CR Rel-16 38.331 16.2.0 2146 - F NR\_newRAT-Core

Moved from 6.1.3

* [039] The intention of CR R2-2009945 is agreed and the CR is revised according to Ericsson’s comments.
* [039] revised

[R2-2011219](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011219.zip) Clarifications for the common search space on the active BWP Ericsson CR Rel-16 38.331 16.2.0 2146 1 F NR\_newRAT-Core

* [039] Agreed

[R2-2009102](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009102.zip) Corrections to SI acquisition in IDLE\_INACTIVE Samsung Electronics Co., Ltd CR Rel-16 38.331 16.2.0 2034 - F 5G\_V2X\_NRSL-Core, NR\_pos-Core

* [039] Agree with the intention in R2-2009102 related to positioning. The discussion is postponed until the CR in R2-2008806 is handled in the positioning session

Withdrawn

R2-2010493 Clarification on the terminology ‘serving cell is configured with a supplementary uplink’ Fujitsu CR Rel-16 38.331 16.2.0 2229 - F NR\_newRAT-Core Withdrawn

### 6.1.2 NR Feature Lists and UE capabilities

Includes NR UE capability updates related to R1 and R4 feature lists. Including [Post111-e][900][NR16] UE capabilites (Intel)

Plan at R2 112-e for R16 NR UE caps

1. NR R16 UE capability CRs will be by two mega CRs 38331 38306, including all WIs. The outcome of [Post111-e][900][NR16] UE capabilities (Intel) is to be the baseline (expected endorsed at beginning of meeting).

2 Expect that R1 and R4 updated feature lists are available Friday Nov 6. By default, FFS marked items will not be taken into account for signalling implementation (except for Mandatory/Optional FFS).

3 The ***UE capabilities main email discussion / AI 6.1.2*** will take into account R1 and R4 feature lists updated at current meeting, except for WIs/AIs for which this is done in separate long discussions / treatment (see below).

4 ***Separate Short Discussions/Treatment*** for specific issues and input tdocs, will not take into account further updated R1 R4 feature list: Endorsed Draft CRs ready Friday Nov 6.

5 ***Separate Long Discussions/Treatment***, shall take into account further updated R1 R4 feature list: Endorsed Draft CRs ready Nov 13.

6 Separate endorsed Draft CRs 38331 38306 are then merged into the mega CRs, in the UE capabilities Main discussion. The merged result is reviewed, but it is not intended to repeat already done discussions.

7 UE capabilities for V2X, NR Mobility Enh, NR positioning and DCCA are separate long discussions. (there are short discussions for e.g. IAB, NR-U)

8. The ***UE capabilities main email discussion*** is expected to continue after the meeting, to produce final merged and checked mega CRs.

Note RIL handling may be used or not in some phase(s) at the discretion of the Rapporteur.

- Online Main session: Plan was presented Nov 3, No questions or comments.

* [AT112-e][015][NR16] UE cap Main (Intel)
* [Post112-e][015][NR16] UE cap Main (Intel)

Scope: a) Treat tdocs on specific issues as assigned. b) Take into account updated feature lists and UE caps LSes from R1 and R4. c) Merge endorsed output from other R16 UE caps (306 331) email discussions. d) Produce final mega CRs 38306 38331 for RP.

High level plan (detailed deadlines by rapporteur as needed):

Week 1: Resolve specific issues and agree / endorse 331 306 specific changes based on assigned tdocs.

Week 2: Review of updated R1 R4 feature lists and other LS in if any. Take into account outcome of separate short discussions. Review and Agree on corresponding updates to 306 331 based on rapporteur proposal. Rapporteur proposal expected Tuesday Nov 10.

Week 3 (the week after the meeting): Merge of Draft CRs from other long UE caps discussions. Final checking of the mega CRs.

Intended outcome: Agreed CRs 306 331

[R2-2011024](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011024.zip) [AT112-e][015][NR16] UE capabilities (Intel) Intel Corporation

DISCUSSION

P1

- Intel clarifies that p1 only impact descriptnion, not signalling.

P3

- UE cap for SMTC

* Grouping of power saving capabilities into a new section is not pursued for now. Agree to place the features “Relaxed measurement”, “Mobility history information storage”, “Cross RAT RLF Report” and “Radio Link Failure Report for inter-RAT MRO EUTRA” in Section 5.2 “UE receiver features” into meaningful feature groups as proposed in R2-2009663.
* P2 is agreed (from R2-R2-2010993)
* New capability/IOT bit is introduced for the new SMTC configuration for PSCell Addition and SN Change in NR-DC. R2-2009846/9847 are endorsed to merge with mega CRs.
* No change to the existing structure as in the baseline CRs R2-2009278/9279 (i.e. Option 1: group 22-5a and 22-5c (likewise for 22-5b and 22-5d)).

LS in

[R2-2008708](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008708.zip) LS on updated Rel-16 RAN1 UE features lists for NR (R1-2007327; contact: NTT DoCoMo, AT&T) RAN1 LS in Rel-16 NR\_2step\_RACH-Core, NR\_unlic-Core, NR\_IAB-Core, 5G\_V2X\_NRSL-Core, NR\_L1enh\_URLLC-Core, NR\_IIOT-Core, NR\_eMIMO-Core, NR\_UE\_pow\_sav-Core, NR\_pos-Core, NR\_Mob\_enh-Core, LTE\_NR\_DC\_CA\_enh-Core, TEI16, NR\_CLI\_RIM-Core To:RAN2, RAN4

Chair comment: this LS is already taken into account in the CRs below.

* Noted (already taken into acct)

[R2-2008738](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008738.zip) LS on FR1 intra-band UL CA UE capability (R4-2011724; contact: Huawei) RAN4 LS in Rel-16 NR\_RF\_FR1-Core To:RAN2

Moved from 6.15

* Noted (already taken into acct)

[R2-2008739](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008739.zip) LS on UE capability for FR2 inter-band CA (R4-2011741; contact: Nokia) RAN4 LS in Rel-16 NR\_RF\_FR2\_req\_enh To:RAN2

Moved from 6.15

* Noted (already taken into acct)

UE Caps Mega CRs

Outcome of [Post111-e][900][NR16] UE capabilites (Intel)

[R2-2009278](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009278.zip) Release-16 UE capabilities based on RAN1, RAN4 feature lists and RAN2 corrections Intel Corporation CR Rel-16 38.306 16.2.0 0422 - B NR\_UE\_pow\_sav-Core, NR\_IAB-Core, NR\_eMIMO-Core, NR\_IIOT-Core, NR\_2step\_RACH-Core, 5G\_V2X\_NRSL-Core, NR\_Mob\_enh-Core, NR\_pos-Core, NR\_unlic-Core, LTE\_NR\_DC\_CA\_enh-Core, NR\_SON\_MDT-Core, NR\_CLI\_RIM-Core, NG\_RAN\_PRN-Core, TEI16, NR\_L1enh\_URLLC-Core Late

* Endorsed as baseline (expect more update this meeting)

[R2-2009279](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009279.zip) Release-16 UE capabilities based on RAN1, RAN4 feature lists and RAN2 corrections Intel Corporation CR Rel-16 38.331 16.2.0 2051 - B NR\_UE\_pow\_sav-Core, NR\_IAB-Core, NR\_eMIMO-Core, NR\_IIOT-Core, NR\_2step\_RACH-Core, 5G\_V2X\_NRSL-Core, NR\_Mob\_enh-Core, NR\_pos-Core, NR\_unlic-Core, LTE\_NR\_DC\_CA\_enh-Core, NR\_SON\_MDT-Core, NR\_CLI\_RIM-Core, NG\_RAN\_PRN-Core, TEI16, NR\_L1enh\_URLLC-Core Late

* Endorsed as baseline (expect more update this meeting)

DISCUSSION

- Intel explains that 7-5 DC location report is not impl as there is discussion this meeting.

- For 7-3b R4 has left it to R2 if to add new cap. Intel explains that the requested flexibility was already there and nothing has been added.

- On SINR reporting, Cap for semi-persistent SINR reporting is introduced as functional NBC change (ASN.1 is still BC), this has been accepted by everyone.

**TR for Feature lists**

TR 38.822 or Similar

[R2-2009280](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009280.zip) Capturing R1, R2 and R4 feature lists Intel Corporation, ZTE Corporation, Sanechips discussion Rel-16 TEI16

DISCUSSION

- Huawei think it is useful to have a R2 feature list for tracking. Would also be ok to have the feature lists captured in a TR. Huawei think this can be done when feature lists are stable.

- Ericsson also think it is goo to capture feature lists in a TR. Assume as Huawei that this would be a snapshot. Think we can have a new TR for R16.

- Oppo also think a R2 feature list is a good idea that gives better understanding. Oppo think a separate TR for R16 could be helpful, but think we should aim to use this TR for R17 R18 etc.

- Apple has same view as companies above, but think it is better to update current 38.822 TR. Think this can be for Dec.

- Samsung also agree with prev companies, and think using existing TR is easier for the user

- MTK also think we can use the current TR, and also for futre release.

- Lenovo are not convinced for R2 feature list, what would be the additional information? Also, would the TR be maintained?

- Intel assumes the TR is a snapshot so we need to have stability, so no maintenance.

- QC think R2 feature list is good and think the existing TR can be used, and we need to easily distinguish R16 and R15 features.

- ZTE also refer to use the current TR, can have a new section for R16.

- Nokia also think we need this, e.g. FGI numbers etc was a great value for R15. Understand that this is a one-shot thing.

- LG wonder if there is anyone who want to update the R15 features in the TR? Nokia think we will not update the Rel-15 part, and this could be a lot of work.

- Huawei think there are preconditions for R16 features based on R15 features so a single TR is more easy to understand.

- MCC indicate that we don’t use internal TRs for multiple releases normally

- vivo think we don’t want to maintain the TR so there are arguments for keeping this internal

- Intel assumes this work can be done for Feb/March

* RAN2 Agree to capture Rel-16 RAN WG feature list in RAN2 TR.
* RAN2 Agree to generate the Rel-16 L2/3 (RAN2 specific) UE capabilities/features list for Rel-16 since this is currently not available.
* RAN2 assumes that the R16 feature lists are added into 38.822, as there as benefits with having multiple rel information together.
* It is assumed this can be done Feb/March

Chair: Maybe have a between meetings email discussion to create the 1st R2 feature list.

* [Post112-e][0xx][NR16] RAN2 Feature List for TR (Intel)

Scope: Create the 1st R2 feature list.

Intended outcome: Create the 1st agreeable R2 feature list, to be a baseline for final list ready for March.

Deadline: Long

R4 RF FR1

[R2-2009307](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009307.zip) Discussion on RAN4 FG 7-3b Intel Corporation discussion Rel-16 NR\_RF\_FR1-Core

DISCUSSION

- Intel indicate that this was already proposed in the email discussion with no response.

- QC support these proposals, but think what R4 said about “default” was strange.

- ZTE also support.

* RAN2 confirmed that with Rel-15 capability signaling, it is possible to indicate the MIMO capability for each UL CC separately and therefore, new Rel-16 signaling is NOT needed
* RAN2 agree not to introduce any specification change for FG 7-3b.
* RAN2 sends an LS to RAN4, text in 9307 seems agreeable.

[R2-2011023](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011023.zip) Reply LS on FR1 intra-band UL CA UE capability RAN2 LS out

* [015] The outgoing LS is approved

Miscellaneous

[R2-2009277](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009277.zip) Miscellaneous corrections for Rel-16 UE capabilities Intel Corporation CR Rel-16 38.306 16.2.0 0421 - F NR\_unlic-Core, NR\_RF\_FR2\_req\_enh

* Endorsed

[R2-2009663](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009663.zip) Corrections to NR UE capabilities and features Lenovo, Motorola Mobility CR Rel-16 38.306 16.2.0 0432 - F NR\_UE\_pow\_sav-Core, NR\_SON\_MDT-Core

Treat by email in Main UE cap discussion.

* Endorsed (details, see above decisions for R2-2011024)

R2-2010993 Corrections for drx-Adaptation capability Ericsson CR Rel-16 38.306 16.2.0 0612 - F NR\_UE\_pow\_sav-Core

Treat by email in Main UE cap discussion.

* Endorsed (details, see above decisions for R2-2011024)

[R2-2010050](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010050.zip) Correcton for SPS capability Ericsson discussion Rel-16

- Oppo asks for clarification, and think the word “only” should be added.

- Huawei think R16 CR is enough. No ambiguity for R15. Nokia agrees. ZTE agrees as well and think for R15 331 is clear. Ericsson agrees that R15 is clear, but the reader may be confused by the difference between R15 and R16 TS.

* Proposed changed agreed for R16. Merged with Misc Corrections CR.

[R2-2009846](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009846.zip) UE capability for configuration of SMTC of target SCG cell Ericsson CR Rel-16 38.306 16.2.0 0436 - F TEI16

[R2-2009847](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009847.zip) UE capability for configuration of SMTC of target SCG cell Ericsson CR Rel-16 38.331 16.2.0 2139 - F TEI16

DISCSUSSION

- Intel think that there is a line on the cover page that this is mandatory, so the question is if there is a need for IOT bit.

- QC support to add this.

- MTK think this is not needed, as this is a one shot SI for SN addition, and think it doesn't resolve any interoperability issue. ZTE agrees with MTK, this is just for SI, so we don’t need the UE cap. Huawei and Apple also agrees.

- Ericsson will check again.

- QC wonders if we really not have an IOT issue, if the UE uses the wrong SMTC. MTK think that if the UE can use the information the SN addition will just be faster.

- Considered Not agreeable for now. Chair encourages companies to check.

DISCUSSION Nov 4

- Ericsson came back and want to apply normal practice that a configuration IE is used only if the UE support the functionality, and think this need to be considered.

- LG are ok to have this capability, even though the benefit is not clear, there is no harm.

- Intel are also ok. MTK agrees there is no harm, so it is ok.

- Huawei think we can consider this to be optional without signalled UE Cap. Nokia agrees and point out that this is the case for deprioritization request. The gains of the UE reporting this is not clear.

- QC think the network need to know as there are several places where the network can configure this. Apple would like to check this in detail.

- ZTE anyway think this is just assistance info.

- vivo think there are benefits and the network would use this.

* Both Endorsed for inclusion in Mega CRs (see above decisions for R2-2011024).

Out-of-order CBG-based re-tx

Decision RP89e: “Introduce a new FG "Out-of-order CBG-based re-transmission(s) with cancelled initial PUSCH transmission". Details are to be finalised by RAN1 and RAN2.”

* [AT112-e][046][NR16] Out-of-order CBG-based re-transmission (Ericsson)

Scope: Treat incoming LS (when it arrives), R2 input (R2-2010049), and make and agree on related Draft CRs.

Intended outcome: Endorsed Draft CRs

Deadline: by the Rapporteur (dep on R1).

1st DISCUSSION

- Intel think that once we have info from R1, this will need significant discussion.

- Chair: We wait for R1. Separate email discussion on this topic (Ericsson), to be kicked-off as soon as LS from R1 is available. Rapporteur creates a draft for how to capture in R2 TSs.

[R2-2011039](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011039.zip) Summary on [AT112-e][046][NR16] Out-of-order CBG-based re-transmission Ericsson

* [046] Noted
* [046] Add a new capability bit for in-order CBG-based retransmission (i.e., FG 11-12 in LS R2-2011120)
* [046] Clarify in Rel-16 spec that the legacy *cbg-TransIndication-UL* bit indicate the support of both in-order and out-of-order CBG-based retransmissions.

[R2-2010049](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010049.zip) Out-of-order CBG-based re-transmission(s) with cancelled initial PUSCH transmission Ericsson discussion Rel-16

* [046] Noted

[R2-2011220](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011220.zip) Out-of-order CBG-based re-transmission Ericsson DraftCR 38.331 NR\_L1enh\_URLLC-Core

* [046] Endorsed for UE caps merge

[R2-2011221](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011221.zip) Out-of-order CBG-based re-transmission Ericsson DraftCR 38.306 NR\_L1enh\_URLLC-Core

* [046] Endorsed for UE caps merge

### 6.1.3 Other

Other issue that do not fit under any other topic.

* [AT112-e][016][NR16] Dyn UL skip and other (vivo)

Treat R2-2008711, R2-2009824, R2-2009484, R2-2010051, R2-10010317, R2-2009813, R2-2009485, R2-2008862, R2-2009819, R2-2009587, R2-2009486, R2-2010565, R2-2010162

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

[R2-2011136](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011136.zip) Report of [AT112-e][016][NR16] Dyn UL skip and other vivo

* [016] Noted, proposals are agreed and reflected below

Dynamic UL Skipping

On-line first then email

LS in

[R2-2008711](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008711.zip) LS on PUSCH with UL skipping (R1-2007338; contact: vivo) RAN1 LS in Rel-16 NR\_newRAT-Core, TEI16 To:RAN2

Moved from 5.1

* Noted

DISCUSSION

- Chair wonder if the assumption that R15 feature doesn’t work is true.

- vivo think that UCI will overlap with grants so there will be overlap. There may be some cases where R15 feature work

- Huawei wonder about CG, as this may also impact the R2 TS. Samsung agrees. Samsung think we could have a unified behaviour for CG and DG in MAC. Think we should wait for R1.

- Apple think separate R16 cap is cleaner and avoid misinterpretation. Also think the CG need to be included, and this is discussed in R1. This also impact the IIOT prioritization.

- LG think Option 2 doesn’t work as there is already some implementation. Skipping with UCI is a new feature.

- Ericsson also support new UE cap. Think that R15 UE cap shall not be indicated by a R16 UE.

- MTK think also the R15 feature can work e.g. with careful scheduling.

- QC think there are more issue then CG

- Nokia wonder about UE cap Merge. Chair think it depend on how late this is as we wait for R1, we might not merge.

- Oppo wonder why we don’t fix this for R15? Chair think the LS clearly say to fix R16. Vivo think that R15 CG is not an issue.

- Intel think the R15 cap should not be dummified and we need a new R16 cap for CG.

* Wait for R1, e.g. on CG (for the MAC CR)

[016] Ph1 General agreements (tdoc specific ones under the specific tdoc).

* [016] RAN2 confirms that a new UE capability is introduced for Rel-16 dynamic UL skipping.
* [016] RAN2 assumes the field name of the new UE capability is *skipUplinkTxDynamic-r16*.
* [016] RAN2 assumes that the following is introduced for the field description of the new UE capability (this version is preliminary and the wording may be further updated):

Indicates whether the UE supports skipping UL transmission for a dynamic uplink grant indicated on PDCCH only if no data is available for transmission and no UCI to be multiplexed on the corresponding PUSCH of the uplink grant as specified in TS 38.321 [8].

* [016] RAN2 assumes the Rel-16 dynamic UL skipping isper UE level. FFS whether it is mandatory.
* [016] RAN2 assumes the Rel-16 dynamic UL skipping is FDD/TDD differentiation.
* [016] RAN2 assumes the Rel-16 dynamic UL skipping is notFR1/FR2 differentiation.
* [016] The legacy capability bit (i.e. *skipUplinkTxDynamic*) is not dummified.
* [016] A new RRC parameter is introduced to enable Rel-16 dynamic UL skipping. FFS the field name.
* [016] The corresponding 38.321/331/306 CR and reply LS for Rel-16 dynamic UL skipping should be done along with the CG case.

Discussion

[R2-2009824](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009824.zip) Discussion on new UE capability of dynamic UL skipping in Rel-16 vivo, Nokia, Nokia Shanghai Bell, Xiaomi discussion Rel-16

[R2-2009484](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009484.zip) RAN2 Impact on UL skipping enhancement Apple discussion Rel-16 TEI16

Moved from 6.16

[R2-2010051](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010051.zip) PUSCH with UL skipping Ericsson discussion Rel-16

[R2-2010317](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010317.zip) Discussions on the remaining issues on PUSCH with UL skipping Huawei, HiSilicon discussion Rel-16 TEI16

Moved from 6.16

* [016] 4 tdocs noted

MAC CR

[R2-2009813](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009813.zip) Correction to UL skipping of dynamic UL grant vivo, Nokia, Nokia Shanghai Bell, Xiaomi CR Rel-16 38.321 16.2.1 0945 - F TEI16

[R2-2009485](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009485.zip) MAC CR on UL skipping enhancement Apple CR Rel-16 38.321 16.2.1 0930 - F TEI16

Moved from 6.16

[R2-2008862](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008862.zip) Correction on dynamic PUSCH skipping when PUCCH with UCI overlaps with PUSCH CATT CR Rel-16 38.321 16.2.1 0896 - F NR\_IIOT-Core

Moved from 6.5.3

UE Capability

[R2-2009819](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009819.zip) Correction to skipUplinkTxDynamic vivo CR Rel-16 38.306 16.2.0 0435 - F TEI16

Move from 6.1.2

* [016] R2-2009819 is postponed, and the issue can be discussed after deciding whether the Rel-16 dynamic UL skipping is mandatory.

[R2-2009487](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009487.zip) UE capability on UL skipping enhancement Apple CR Rel-16 38.306 16.2.0 0429 - F TEI16

Moved from 6.16

[R2-2009486](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009486.zip) RRC CR on UL skipping enhancement Apple CR Rel-16 38.331 16.2.0 2083 - F TEI16

Moved from 6.16

Draft LSout

[R2-2010565](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010565.zip) Draft reply LS on PUSCH with UL skipping vivo LS out TEI16 To:RAN1

SR

[R2-2010162](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010162.zip) Alignment of SR clause Ericsson, Samsung, LG Electronics CR Rel-16 38.321 16.2.1 0732 3 F NR\_unlic-Core, NR\_eMIMO-Core, NR\_IAB\_enh R2-2007713

* [016] Revised (take into acct comments)

[R2-2011137](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011137.zip) Alignment of SR clause Ericsson, Samsung, LG Electronics CR Rel-16 38.321 16.2.1 0732 4 F NR\_unlic-Core, NR\_eMIMO-Core, NR\_IAB\_enh R2-2010162

* [016] Agreed

## 6.2 Integrated Access and Backhaul

(NR\_IAB-Core; leading WG: RAN2; REL-16; started: Dec 18; target Aug 20; WID: RP-200840; SR: RP-201234, R1, R2, R3 core parts are 100% complete).

Limit: 5 email threads

### 6.2.1 General and Stage-2 Corrections

Incoming LS. 38300 36300 37340

* [AT112-e][017][IAB] Stage-2 (Huawei)

Treat tdocs under 6.2.1

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

[R2-2011008](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011008.zip) Summary of [AT112-e][017][IAB] Stage-2 Huawei, HiSilicon

* [017] noted
* [017] Agree the intention of adding IABOtherInformation for SRB3 in section 7.5 of TS 37.340, assuming the wording can be updated, if needed in phase 2 discussion.
* [017] Consider R2-2010151 as “Not Agreed”.
* [017] Agree the intention of first change in R2-2010351, i.e. clarify the non-DRB operations for MT different from UE in sec. 9.2.1.3 in TS 38.300, assuming the wording can be updated, if needed in phase 2 discussion.

[R2-2009321](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009321.zip) CR to 37.340 on SRB3 description vivo CR Rel-16 37.340 16.3.0 0234 - F NR\_IAB-Core

* [017] Agreed

[R2-2010351](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010351.zip) Corrections on non DRB operation for IAB-MT Huawei, HiSilicon CR Rel-16 38.300 16.3.0 0318 - F NR\_IAB-Core

* [017] Revised

[R2-2011053](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011053.zip) Corrections on non DRB operation for IAB-MT Huawei, HiSilicon CR Rel-16 38.300 16.3.0 0318 1 F NR\_IAB-Core

* [017] Agreed

[R2-2010151](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010151.zip) Clarification to BAP routing ID handling Ericsson CR Rel-16 38.300 16.3.0 0313 - F NR\_IAB-Core

* [017] not Agreed

### 6.2.2 BAP Corrections

38340

[R2-2009662](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009662.zip) The case of traffic of child nodes of a migrating node Samsung, ZTE, Nokia, Nokia Shanghai Bell discussion

DISCUSSION On-Line

- LG indicate that our previous discussions concluded that nothing need to be changed, not even a note is needed.

- Huawei think the main problem that is addressed is the possible waste of some resources, which is not a serious issue. Also for some packets latency may be improved, but this may be better addressed in the next release.

- QC think R3 deliberatly designed this for R16 and is addressing this in R17. We don’t need to do anything.

- Ericsson think a Note doesn’t help at all, some new functionality is needed to improve the situation.

- vivo think there is no need to discard packets, and think the packets can be transmitted after the interruption, and there is nothing new needed.

- Apple agrees this is an issue, not sure this is in R17 scope.

- Samsung agrees the issue cannot be fully resolved in R16, but think a NOTE is useful to acknowledge the issue, and remove unclarity for implementers.

* Noted, not sufficient support (not even for a note)
* [AT112-e][018][IAB] BAP (Samsung)

Treat tdocs under 6.2.2

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

[R2-2009748](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009748.zip) Miscellaneous corrections to 38.340 for IAB Huawei, HiSilicon, Ericsson CR Rel-16 38.340 16.2.0 0009 - F NR\_IAB-Core

- [018] Rap, Intermediate: P1: The CR can be agreed, with the following changes: Remove unaffected sections from the CR altogether (Section 2, 6). Add missing clauses to the list of affected clauses in the CR’s cover sheet (Clause 5.3.1, 5.4.1)

- [018] Rap, Intermediate: P2: Agree the following addition in the end to the NOTE in section 5.2.1.1 “whose BAP address matches the DESTINATION field”. [018] Chair comment: Wording can be further elaborated.

* [018] revised

[R2-2011052](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011052.zip) Miscellaneous corrections to 38.340 for IAB Huawei, HiSilicon, Ericsson CR Rel-16 38.340 16.2.0 0009 1 F NR\_IAB-Core

* [018] Agreed

[R2-2009178](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009178.zip) BAP behaviour at RLF Samsung Electronics GmbH CR Rel-16 38.340 16.2.0 0008 - F NR\_IAB-Core

[R2-2009927](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009927.zip) Handling descendant node traffic at HO Samsung, ZTE CR Rel-16 38.340 16.2.0 0010 - F NR\_IAB-Core

* [018] not Pursued

### 6.2.3 User plane Corrections

38321

* [AT112-e][037][IAB] User Plane (Ericsson)

Treat tdocs under 6.2.3

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

[R2-2011130](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011130.zip) Summary of [AT112-e][037][IAB] User Plane Ericsson

* [037] noted, proposals are agreed and reflected below

[R2-2009745](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009745.zip) Correction on Tdelta Huawei, HiSilicon CR Rel-16 38.321 16.2.1 0938 - F NR\_IAB-Core

[R2-2011054](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011054.zip) Correction on Tdelta Huawei, HiSilicon, Ericsson, Samsung CR Rel-16 38.321 16.2.1 0938 1 F NR\_IAB-Core

* [037] Agreed

[R2-2010152](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010152.zip) Correction to tDelta Ericsson CR Rel-16 38.321 16.2.1 0963 - F NR\_IAB-Core

* [037] not pursued, the CR above is used instead

DISCUSSION on the 2 CRs R2-2009745, R2-2010152 above:

* [037] For Section 6.1.3.21 adopt the fix in R2-2009745. For Section 5.18.18 adopt a combination of the fix in R2-2009745 and R2-2010152 (see [037] for details).

[R2-2010150](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010150.zip) Pre-emptive BSR handling at MAC Reset Ericsson CR Rel-16 38.321 16.2.1 0962 - F NR\_IAB-Core

* [037] Agreed

[R2-2010419](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010419.zip) Correction on the condition check in Pre-emptive BSR procedure ASUSTeK CR Rel-16 38.321 16.2.1 0984 - F NR\_IAB-Core

* [037] Agreed

[R2-2009324](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009324.zip) CR to 38.322 on Backhaul RLC Channel vivo CR Rel-16 38.322 16.1.0 0037 - F NR\_IAB-Core

Moved from 6.2.6

* [037] Agree with the intention of R2-2009324, but some rewording is needed.
* [037] Revise R2-2009324 with the following NOTE in Section 4.2.1: NOTE: In case the upper layer is BAP as defined in TS 38.340 [xx], an RLC channel refers to a Backhaul RLC channel.
* [037] revised

[R2-2011123](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011123.zip) CR to 38.322 on Backhaul RLC Channel vivo, Ericsson CR Rel-16 38.322 16.1.0 0037 1 F NR\_IAB-Core

* [037] Agreed

R2-2010684 Summary of Rel-16 IAB UP issues and corrections Samsung discussion Rel-16 NR\_IAB-Core

### 6.2.4 RRC Corrections

38331 36331

38331

* [AT112-e][019][IAB] NR RRC 38331 (Huawei)

Treat 38331 tdocs under 6.2.4

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

[R2-2011009](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011009.zip) Summary of [AT112-e][019][IAB] NR RRC 38331 Huawei, HiSilicon

* [019] noted, the proposals are agreed and are reflected below

Miscellaneous

[R2-2010149](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010149.zip) RRC Miscellaneous Corrections Ericsson, Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2184 - F NR\_IAB-Core

* [019] revised

[R2-2011115](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011115.zip) RRC Miscellaneous Corrections Ericsson, Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2184 1 F NR\_IAB-Core

* [019] Agreed

[R2-2009323](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009323.zip) Miscellaneous corrections to TS 38.331 for IAB vivo CR Rel-16 38.331 16.2.0 2054 - F NR\_IAB-Core

* [019] Merge into R2-2010149 (wording to be reviewed by offline phase 2), except for the change of adding “This field is also used to indicate the minimum IAB-MT capabilities set that the IAB-MT shall support as defined in TS 38.306 [26]”;

[R2-2010638](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010638.zip) Miscellaneous corrections for IAB Samsung R&D Institute UK CR Rel-16 38.331 16.2.0 2266 - F NR\_IAB-Core

* [019] Merge into R2-2010149 (wording to be reviewed by offline phase 2)

[R2-2009747](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009747.zip) Correction on configuration of availabilityIndicator Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2123 - F NR\_IAB-Core

* [019] Postponed

[R2-2009746](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009746.zip) Correction on non-DRB for IAB-MT Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2122 - F NR\_IAB-Core

* [019] Agree the intention of R2-2009746.
* [019] revised

[R2-2011050](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011050.zip) Correction on non-DRB for IAB-MT Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2122 1 F NR\_IAB-Core

* [019] Agreed

[R2-2009749](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009749.zip) Corrections on BH RLC bearer Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2124 - F NR\_IAB-Core

* [019] Agree the intention of R2-2009749, but use “BH RLC channel” instead of BH RLC bearer
* [019] revised

[R2-2011049](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011049.zip) Corrections on BH RLC bearer Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2124 1 F NR\_IAB-Core

* [019] Agreed

[R2-2010229](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010229.zip) Support of Rel-16 features for SCG in EN-DC and NR-DC Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2192 - F NR\_IAB-Core, NR\_Mob\_enh-Core

Moved from 6.1.3

- Chair: Review this doc also in the NR mob email discussion.

* [019] Agree the intention of 1st and 3rd change in R2-2010229 to only handle the EN-DC case for IAB, assuming the LTE CR is needed. The mobility part change is pending on the confirmation from other session.
* [019] revised

[R2-2011051](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011051.zip) Support of Rel-16 features for SCG in EN-DC and NR-DC Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2192 1 F NR\_IAB-Core

- [019] Huawei explains that the mobility part has been taken out from this CR.

* [019] Agreed

[R2-2009005](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009005.zip) Correction on RRC function description for IAB Fujitsu CR Rel-16 38.331 16.2.0 2025 - F NR\_IAB-Core

* [019] Merge into R2-2010149 (wording to be reviewed by offline phase 2): the 2nd change in R2-2009005 updated as “of UE and logical channel of IAB-MT”

Failure Handling

[R2-2009750](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009750.zip) Corrections on intra-donor CU RLF recovery and RLF cause determination Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2125 - F NR\_IAB-Core

* [019] Merge into R2-2010149 (wording to be reviewed by offline phase 2): 1st change in R2-2009750;
* [019] Update R2-2009750 to agree with the change in procedure part in sec. 5.3.10.4.
* [019] The intention of R2-2009750 for sec. 5.3.7.2 is not agreed.
* [019] revised

[R2-2011048](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011048.zip) Corrections on intra-donor CU RLF recovery and RLF cause determination Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2125 1 F NR\_IAB-Core

* [019] Agreed

[R2-2010635](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010635.zip) Transmission suspension on BH RLC channel upon IAB-MT failure Samsung R&D Institute UK CR Rel-16 38.331 16.2.0 2265 - F NR\_IAB-Core

* [019] Agreed

[R2-2009390](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009390.zip) CR for TS38.331 on RLF cause for IAB BH RLF ZTE, Sanechips CR Rel-16 38.331 16.2.0 2062 - F NR\_IAB-Core

* [019] not Pursued

[R2-2010602](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010602.zip) Cause value due to the reception of BH RLF indication Lenovo, Motorola Mobility CR Rel-16 38.331 16.2.0 2257 - F NR\_IAB-Core

* [019] not Pursued

36331

* [AT112-e][020][IAB] LTE RRC 36331 (vivo)

Treat 36331 tdocs under 6.2.4

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

[R2-2011180](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011180.zip) Report of [AT112-e][020][IAB] LTE RRC 36331 (vivo) vivo

* [020] Noted, proposals are taken into account and reflected below

[R2-2009322](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009322.zip) Miscellaneous corrections to TS 36.331 for IAB vivo CR Rel-16 36.331 16.2.1 4459 - F NR\_IAB-Core

* [020] Agree the intention of R2-2009322, except for the change of adding “This field is also used to indicate the minimum IAB-MT capabilities set that the IAB-MT shall support as defined in TS 38.306 [87]”,
* [020] revised

[R2-2011179](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011179.zip) Miscellaneous corrections to TS 36.331 for IAB vivo CR Rel-16 36.331 16.2.1 4459 1 F NR\_IAB-Core

* [020] Agreed

[R2-2010230](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010230.zip) Support of Rel-16 features for SCG in EN-DC Huawei, HiSilicon CR Rel-16 36.331 16.2.1 4501 - F NR\_IAB-Core

Moved from 6.1.3

* [020] Agreed

### 6.2.5 UE capabilities

Including corrections and remaining open issues if any on RAN2 capabilities and minimum capabilities of IAB MT.

* [AT112-e][021][IAB] UE capabilities (Nokia)

Treat tdocs under 6.2.5

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, endorsed CRs. Reply LS

Deadline: Short UE caps

DISCUSSION on-line

- Nokia reports that the email discussion is converging.

- One field will not be used and need to be dummified.

[R2-2011003](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011003.zip) Summary on [AT112-e][021][IAB] UE capabilities (Nokia) Nokia, Nokia Shanghai Bell

* [021] Noted

At Intermediate point**:**

* [021] RAN2 agrees to send a LS to RAN4 to inform that that from RAN2 perspective:

**- there is no impact to RAN2 design/signalling if Feature 2-8 (Power class) is not applicable to IAB-MT**

**- it is feasible that that IAB-MT ignores the NS signalling and P-max.**

* [021] Remove the capability multipleNS-And-Pmax-IAB.
* [021] Reflecting RAN4 requirements that IAB-MT should ignore the advertised NS during the initial access procedure.
* [021] Capture behaviour to IAB-MT when ignoring the advertised NS values and P-max in TS38.331, details acc to discussion.
* [021] Have clarification to the field description of *powerClass* and *ue-PowerClass* on non-applicability to IAB-MT.

[R2-2011019](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011019.zip) Draft Reply LS on IAB-MT feature list Nokia LS out

* [021] The Draft LS is approved, final version in R2-2011273

[R2-2009417](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009417.zip) Clarification on IAB-MT capability for Multiple NS Nokia, Nokia Shanghai Bell CR Rel-16 38.306 16.2.0 0427 - F NR\_IAB-Core

* revised

[R2-2011020](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011020.zip) Clarification on Power class, Multiple NS and Pmax applicability to IAB-MT Nokia, Nokia Shanghai Bell, Huawei CR Rel-16 38.306 16.2.0 0427 1 F NR\_IAB-Core

* [021] CR is endorsed for merge into UE cap Mega CR

[R2-2009418](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009418.zip) Clarification on Multiple NS and Pmax applicability to IAB-MT Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.2.0 2074 - F NR\_IAB-Core

* revised

[R2-2011021](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011021.zip) Clarification on Multiple NS and Pmax applicability to IAB-MT Nokia, Nokia Shanghai Bell , Huawei CR Rel-16 38.331 16.2.0 2074 1 F NR\_IAB-Core

* [021] CR is endorsed for merge into UE cap Mega CR

[R2-2008954](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008954.zip) Discussion on the Issues from RAN4 LS on IAB-MT Feature List CATT discussion Rel-16 NR\_IAB-Core

* [021] Noted

[R2-2010352](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010352.zip) Corrections based on RAN4 LS about IAB-MT feature Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2208 - F NR\_IAB-Core

* [021] Merged w CR 2074

[R2-2010353](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010353.zip) Corrections based on RAN4 LS about IAB-MT feature Huawei, HiSilicon CR Rel-16 38.306 16.2.0 0446 - F NR\_IAB-Core

* [021] Merged w CR 0427

### 6.2.6 Other Corrections

E.g. 3x.304

## 6.3 NR-based Access to Unlicensed Spectrum

(NR\_unlic-Core; leading WG: RAN1; REL-16; started: Dec 18; Closed June 20; WID: RP-192926; SR; RP-201141; R1 and R2 are 100% Complete). Documents in this agenda item will be handled in a break out session.).

Limit: 4 email threads

### 6.3.1 General and Stage-2 Corrections

Including incoming LSs, Wi or TS rapporteur inputs, etc.

[R2-2008702](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008702.zip) LS on UE behavior for P/SP-CSI-RS reception in NR-U (R1-2006195; contact: MediaTek) RAN1 LS in Rel-16 NR\_unlic-Core To:RAN4 Cc:RAN2

[R2-2008718](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008718.zip) Reply LS on UE declaring beam failure due to LBT failures during active TCI switching (R1-2007424; contact: Nokia) RAN1 LS in Rel-16 NR\_unlic-Core To:RAN4 Cc:RAN2

[R2-2008743](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008743.zip) LS reply to RAN1on UE capability on wideband carrier operation for NR-U (R4-2011931; contact: MediaTek) RAN4 LS in Rel-16 NR\_unlic-Core To:RAN1, RAN2

[R2-2009560](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009560.zip) Miscellaneous corrections for NR-U Qualcomm Incorporated CR Rel-16 38.331 16.2.0 2091 - F NR\_unlic-Core

[R2-2010399](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010399.zip) Discussion on NR-U capabilities Qualcomm Incorporated discussion

### 6.3.2 User plane

[R2-2008858](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008858.zip) Corrections on autonomous retransmissions CATT CR Rel-16 38.321 16.2.1 0895 - F NR\_unlic-Core

[R2-2009297](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009297.zip) Correction on early termination for repetitions Huawei, HiSilicon CR Rel-16 38.321 16.2.1 0923 - F NR\_unlic-Core

[R2-2009298](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009298.zip) Correction on autonomous retransmission for NR-U Huawei, HiSilicon CR Rel-16 38.321 16.2.1 0924 - F NR\_unlic-Core

[R2-2009300](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009300.zip) Correction to NDI toggling for Configured Grant for NRU Huawei, HiSilicon CR Rel-16 38.321 16.2.1 0925 - F NR\_unlic-Core

[R2-2010136](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010136.zip) Clarification of PUCCH resource usage in NR-U Qualcomm Incorporated CR Rel-16 38.321 16.2.1 0961 - F NR\_unlic-Core

[R2-2010163](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010163.zip) Correction of HARQ operation for NR-U Ericsson CR Rel-16 38.321 16.2.1 0966 - F NR\_unlic-Core

[R2-2010420](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010420.zip) Clarification for bundling transmission ASUSTek CR Rel-16 38.321 16.2.1 0985 - F NR\_unlic-Core

[R2-2010440](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010440.zip) Consideration on multiple CG with HARQ sharing LG Electronics UK discussion NR\_unlic-Core

### 6.3.3 Control plane

[R2-2009194](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009194.zip) Editorial Corrections in RRC for NR-U ZTE Corporation, Sanechips CR Rel-16 38.331 16.2.0 2041 - D NR\_unlic-Core

[R2-2009195](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009195.zip) Correction to NR-U Energy Detection Threshold configuration ZTE Corporation, Sanechips CR Rel-16 38.331 16.2.0 2042 - F NR\_unlic-Core

[R2-2009295](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009295.zip) Correction on description for extendedRAR-window Huawei, HiSilicon CR Rel-16 38.306 16.2.0 0424 - F NR\_unlic-Core

[R2-2009296](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009296.zip) Correction of field description for ra-ResponseWindow Huawei, HiSilicon, Ericsson CR Rel-16 38.331 16.2.0 2052 - F NR\_unlic-Core, NR\_2step\_RACH-Core

[R2-2009299](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009299.zip) Correction on ssb-SubcarrierOffset in MIB Huawei, HiSilicon, Ericsson CR Rel-16 38.331 16.2.0 2053 - F NR\_unlic-Core

[R2-2009349](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009349.zip) Clarification on HARQ processes sharing Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.2.0 2055 - F NR\_unlic-Core

[R2-2009545](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009545.zip) UE expects clarification Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.2.0 2088 - F NR\_unlic-Core

[R2-2009546](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009546.zip) RMTC measurement timing Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.2.0 2089 - F NR\_unlic-Core

[R2-2009602](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009602.zip) Corrections on cg-RetransmissionTimer Lenovo, Motorola Mobility, LG Electronics CR Rel-16 38.331 16.2.0 2096 - F NR\_unlic-Core

[R2-2009999](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009999.zip) Miscellaneous corrections Ericsson CR Rel-16 38.331 16.2.0 2155 - F NR\_unlic-Core

[R2-2010000](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010000.zip) Correction on csi-RS-ValidationWithDCI Ericsson CR Rel-16 38.331 16.2.0 2156 - F NR\_unlic-Core

[R2-2010001](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010001.zip) Correction to search space switching config Ericsson CR Rel-16 38.331 16.2.0 2157 - F NR\_unlic-Core

[R2-2010002](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010002.zip) Correction on freqMonitorLocations Ericsson CR Rel-16 38.331 16.2.0 2158 - F NR\_unlic-Core

## 6.4 NR V2X

(5G\_V2X\_NRSL-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Aug 20; WID: RP-200129; SR: RP-200431). Documents in this agenda item will be handled in a break out session

Limit: 7 email threads

### 6.4.1 General and Stage-2 corrections

Including incoming LSs, rapporteur inputs, etc.

[R2-2008712](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008712.zip) Reply LS on UE capability (R1-2007339; contact: Oppo) RAN1 LS in Rel-16 5G\_V2X\_NRSL-Core To:RAN2 Cc:RAN4

[R2-2008713](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008713.zip) Reply LS on maximum data rate for NR sidelink (R1-2007353; contact: Samsung) RAN1 LS in Rel-16 5G\_V2X\_NRSL-Core To:RAN2

[R2-2008714](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008714.zip) Reply LS to RAN2 on physical layer related agreements (R1-2007389; contact: Intel) RAN1 LS in Rel-16 5G\_V2X\_NRSL-Core To:RAN2

[R2-2008735](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008735.zip) LS on definition of NR V2X con-current operation (R4-2011713; contact: Huawei) RAN4 LS in Rel-16 5G\_V2X\_NRSL-Core To:RAN1, RAN2

[R2-2008757](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008757.zip) LS on Tx Profile for NR PC5 (S2-2006191; contact: LGE) SA2 LS in Rel-16 eV2XARC To:RAN2

R2-2008941 Draft LS to RAN1 on in-device coexistence operation LG Electronics France LS out Rel-16 5G\_V2X\_NRSL-Core To:RAN1 Withdrawn

[R2-2009050](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009050.zip) [draft]LS on calculation of CG type 1 and type 2 ZTE Corporation, Sanechips LS out Rel-16 5G\_V2X\_NRSL-Core To:RAN1

[R2-2009404](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009404.zip) Correction on V2X functions in TS 38.300 Huawei, HiSilicon CR Rel-16 38.300 16.3.0 0308 - F 5G\_V2X\_NRSL-Core

[R2-2009408](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009408.zip) On the need of Tx profile for Rel-16 NR sidelink communication Huawei, HiSilicon discussion

[R2-2009409](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009409.zip) [Draft] Reply LS on TX profile for NR PC5 Huawei, HiSilicon LS out Rel-16 5G\_V2X\_NRSL-Core To:SA2

[R2-2009410](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009410.zip) [Draft] Reply LS on definition of NR V2X con-current operation Huawei, HiSilicon LS out Rel-16 5G\_V2X\_NRSL-Core To:RAN4

[R2-2009825](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009825.zip) Stage-2 corrections on 38.300 vivo CR Rel-16 38.300 16.3.0 0288 1 F 5G\_V2X\_NRSL-Core R2-2007868

[R2-2010185](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010185.zip) Correction for NR SL communication Samsung Electronics CR Rel-16 38.300 16.3.0 0290 1 F 5G\_V2X\_NRSL-Core R2-2007920

[R2-2010687](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010687.zip) Reply LS on the re-keying procedure for NR SL (C1-206576; contact: CATT) CT1 LS in Rel-16 eV2XARC To:RAN2 Cc:SA3

### 6.4.2 Control plane corrections

CR rapporteur can provide miscellaneous CRs to collect small changes. Please contact / coordinate with CR rapporteur company for small changes.

[R2-2008784](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008784.zip) Correction on value range of sl-NumSSB-WithinPeriod OPPO CR Rel-16 38.331 16.2.0 2013 - F 5G\_V2X\_NRSL-Core

[R2-2008875](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008875.zip) Discussion on left issue of 38.304 and 36.304 CATT discussion Rel-16 5G\_V2X\_NRSL-Core

[R2-2008876](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008876.zip) Correction to TS 38.304 CATT CR Rel-16 38.304 16.2.0 0188 - F 5G\_V2X\_NRSL-Core

[R2-2008877](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008877.zip) Correction to TS 36.304 CATT CR Rel-16 36.304 16.2.0 0813 - F 5G\_V2X\_NRSL-Core

[R2-2008878](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008878.zip) Clarification on the description of sl-AssistanceConfigNR CATT CR Rel-16 38.331 16.2.0 2022 - F 5G\_V2X\_NRSL-Core

[R2-2008942](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008942.zip) Discussion on synchronization procedure under in-device coexistence operation LG Electronics France discussion Rel-16 38.331 5G\_V2X\_NRSL-Core

[R2-2009049](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009049.zip) Corrections on sl-TimeResource in TS 38.331 ZTE Corporation, Sanechips CR Rel-16 38.331 16.2.0 2026 - F 5G\_V2X\_NRSL-Core

[R2-2009053](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009053.zip) CR on TS 38.331 for slot interval between neighboring sidelink SSBs ZTE Corporation, Sanechips CR Rel-16 38.331 16.2.0 2027 - F 5G\_V2X\_NRSL-Core

[R2-2009100](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009100.zip) DAPS HO and NR Sidelink Communication Samsung Electronics Co., Ltd discussion Rel-16 5G\_V2X\_NRSL-Core

[R2-2009317](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009317.zip) Addition of the E-UTRA ARFCN in crossRAT SL SHARP Corporation discussion 5G\_V2X\_NRSL-Core

[R2-2009403](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009403.zip) Correction on the definition of RLC-ParametersSidelink-r16 Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2068 - F 5G\_V2X\_NRSL-Core

[R2-2009405](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009405.zip) Clarification on the SL measurement configuration update Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2069 - F 5G\_V2X\_NRSL-Core

[R2-2009406](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009406.zip) Correction on SDAP related procedures and configurations in TS 38.331 Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2070 - F 5G\_V2X\_NRSL-Core

[R2-2009407](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009407.zip) CR on L1 parameters for NR sidelink communication Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2071 - F 5G\_V2X\_NRSL-Core

[R2-2009520](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009520.zip) Correction on Stored Sidelink Measurement Configuration Apple, Ericsson CR Rel-16 38.331 16.2.0 2085 - F 5G\_V2X\_NRSL-Core

[R2-2009664](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009664.zip) Corrections to NR V2X and Sidelink Lenovo, Motorola Mobility CR Rel-16 38.331 16.2.0 2101 - F 5G\_V2X\_NRSL-Core

[R2-2009676](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009676.zip) Left issue on inter-frequency operation for NR-V2X OPPO discussion Rel-16 5G\_V2X\_NRSL-Core

[R2-2009702](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009702.zip) Correction on protection information for sidelink messages Ericsson CR Rel-16 36.331 16.2.1 4476 - F 5G\_V2X\_NRSL-Core

[R2-2009703](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009703.zip) Correction on operations of sidelink DRB release, addition, and modification Ericsson CR Rel-16 38.331 16.2.0 2108 - F 5G\_V2X\_NRSL-Core

[R2-2009704](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009704.zip) Missing value for sl-DCI-ToSL-Trans Ericsson CR Rel-16 38.331 16.2.0 2109 - F 5G\_V2X\_NRSL-Core

[R2-2009705](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009705.zip) Correction on S-SSB periodicity values Ericsson CR Rel-16 38.331 16.2.0 2110 - F 5G\_V2X\_NRSL-Core

[R2-2009706](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009706.zip) Missing sidelink-related field descriptions Ericsson CR Rel-16 38.331 16.2.0 2111 - F 5G\_V2X\_NRSL-Core

[R2-2009709](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009709.zip) Adding protection information for sidelink messages Ericsson CR Rel-16 38.331 16.2.0 2114 - F 5G\_V2X\_NRSL-Core

[R2-2009710](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009710.zip) Missing SidelinkUEInformation in processing delay requirements Ericsson CR Rel-16 38.331 16.2.0 2115 - F 5G\_V2X\_NRSL-Core

[R2-2009711](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009711.zip) Correction on setting of sl-FailureList in SidelinkUEInformation Ericsson CR Rel-16 38.331 16.2.0 2116 - F 5G\_V2X\_NRSL-Core

[R2-2009712](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009712.zip) Corrections to sidelink radio link failure Ericsson CR Rel-16 38.331 16.2.0 2117 - F 5G\_V2X\_NRSL-Core

[R2-2009713](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009713.zip) Correction on sidelink reset configuration Ericsson CR Rel-16 38.331 16.2.0 2118 - F 5G\_V2X\_NRSL-Core

[R2-2009714](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009714.zip) Correction on conditions for sidelink DRB release Ericsson CR Rel-16 38.331 16.2.0 2119 - F 5G\_V2X\_NRSL-Core

[R2-2009715](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009715.zip) Correction to transmission of MasterInformationBlockSidelink Ericsson CR Rel-16 38.331 16.2.0 1842 1 F 5G\_V2X\_NRSL-Core R2-2007395

[R2-2009718](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009718.zip) Correction to the setting of empty SL RRC messages Ericsson CR Rel-16 38.331 16.2.0 1826 1 F 5G\_V2X\_NRSL-Core R2-2007282

[R2-2009778](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009778.zip) Correction to UEAssistanceInformation for sidelink communication Google Inc. CR Rel-16 38.331 16.2.0 2128 - F 5G\_V2X\_NRSL-Core

[R2-2009826](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009826.zip) Miscellaneous corrections to 38.331 on SL operation vivo CR Rel-16 38.331 16.2.0 2131 - F 5G\_V2X\_NRSL-Core

[R2-2009827](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009827.zip) 38.304 Correction on cell (re)selection for sidelink UE vivo CR Rel-16 38.304 16.2.0 0191 - F 5G\_V2X\_NRSL-Core

[R2-2009828](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009828.zip) 36.304 Correction on cell (re)selection for sidelink UE vivo CR Rel-16 36.304 16.2.0 0815 - F 5G\_V2X\_NRSL-Core

[R2-2009836](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009836.zip) Transmission of SidelinkUEInformation Google Inc. CR Rel-16 36.331 16.2.1 4490 - F 5G\_V2X\_NRSL-Core

[R2-2009837](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009837.zip) Transmission of SidelinkUEInformationNR Google Inc. CR Rel-16 38.331 16.2.0 2132 - F 5G\_V2X\_NRSL-Core

[R2-2009989](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009989.zip) Correction to ASN.1 inclusion conditions for V2X SL and UL prioritization thresholds MediaTek Inc., Ericsson, vivo, OPPO CR Rel-16 38.331 16.2.0 2152 - F 5G\_V2X\_NRSL-Core

[R2-2009990](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009990.zip) Clarification with respect to validity of configured SL grant type 1 received in HO command Nokia, Nokia Shanghai Bell discussion Rel-16 5G\_V2X\_NRSL-Core

[R2-2010012](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010012.zip) Correction on configured grant validity under RLF Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.2.0 2160 - F 5G\_V2X\_NRSL-Core Withdrawn

[R2-2010017](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010017.zip) Discussion of SLRB configuration mismatch Nokia, Nokia Shanghai Bell discussion Rel-16 38.331 5G\_V2X\_NRSL-Core

[R2-2010060](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010060.zip) Correction on SL configured grant type 1 validity under RLF Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.2.0 2171 - F 5G\_V2X\_NRSL-Core

[R2-2010235](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010235.zip) Corrections on 36.331 for LTE V2X cross RAT configuration ZTE Corporation, Sanechips CR Rel-16 36.331 16.2.1 4502 - F 5G\_V2X\_NRSL-Core

[R2-2010300](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010300.zip) Miscellaneous corrections on TS 36.331 Huawei, Hisilicon CR Rel-16 36.331 16.2.1 4508 - F 5G\_V2X\_NRSL-Core

[R2-2010301](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010301.zip) Miscellaneous corrections on TS 38.331 Huawei, Hisilicon CR Rel-16 38.331 16.2.0 2204 - F 5G\_V2X\_NRSL-Core Withdrawn

[R2-2010302](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010302.zip) Correction on trigger of SL specific MAC reset in TS 38.331 Huawei, Hisilicon CR Rel-16 38.331 16.2.0 2205 - F 5G\_V2X\_NRSL-Core

[R2-2010421](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010421.zip) Corrections on resource reservation period configuration ASUSTeK CR Rel-16 38.331 16.2.0 2219 - F 5G\_V2X\_NRSL-Core

[R2-2010422](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010422.zip) Correction on RRC reconfiguration failure for SL ASUSTeK CR Rel-16 38.331 16.2.0 2220 - F 5G\_V2X\_NRSL-Core

[R2-2010423](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010423.zip) Correction on RRC reconfiguration failure for SL ASUSTeK CR Rel-16 36.331 16.2.1 4511 - F 5G\_V2X\_NRSL-Core

[R2-2010442](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010442.zip) On synchronization alignment between V2X SL and NR SL in the in-device coexistence environment Huawei, HiSilicon discussion

[R2-2010443](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010443.zip) Correction on sidelink capability transfer procedure Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2224 - F 5G\_V2X\_NRSL

[R2-2010495](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010495.zip) Miscellaneous corrections on TS 38.331 Huawei, Hisilicon CR Rel-16 38.331 16.2.0 2230 - F 5G\_V2X\_NRSL-Core

[R2-2010678](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010678.zip) Correction on MCS range OPPO CR Rel-16 38.331 16.2.0 2271 - F 5G\_V2X\_NRSL-Core

### 6.4.3 User plane corrections

CR rapporteur can provide miscellaneous CRs to collect small changes. Please contact / coordinate with CR rapporteur company for small changes. Including [POST111-e][707][V2X] CR update to new RAN1 decisions (LG)

[R2-2008781](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008781.zip) Correction for cast type indicator OPPO CR Rel-16 38.321 16.2.1 0891 - F 5G\_V2X\_NRSL-Core

[R2-2008782](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008782.zip) Correction on CG maximum retransmission number OPPO CR Rel-16 38.321 16.2.1 0892 - F 5G\_V2X\_NRSL-Core

[R2-2008783](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008783.zip) Miscellaneous correction on NR V2X OPPO CR Rel-16 38.321 16.2.1 0893 - F 5G\_V2X\_NRSL-Core

[R2-2008798](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008798.zip) 36321\_Correction of prioritization between SL and UL OPPO CR Rel-16 36.321 16.2.0 1504 - F 5G\_V2X\_NRSL-Core

[R2-2008799](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008799.zip) 38321\_Correction of prioritization between SL and UL OPPO CR Rel-16 38.321 16.2.1 0894 - F 5G\_V2X\_NRSL-Core

[R2-2008800](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008800.zip) Discussion on resource and HARQ process id of configured grant OPPO discussion Rel-16 5G\_V2X\_NRSL-Core R2-2006769

R2-2008801 Discussion on resource and HARQ process id of configured grant OPPO discussion Rel-16 5G\_V2X\_NRSL-Core R2-2006769 Withdrawn

[R2-2008879](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008879.zip) clarification on priority handling CATT CR Rel-16 38.321 16.2.1 0897 - F 5G\_V2X\_NRSL-Core

[R2-2009044](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009044.zip) Discussion on CG resource calculation ZTE Corporation, Sanechips discussion 5G\_V2X\_NRSL-Core

[R2-2009045](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009045.zip) CR for TS 38.321 on calculation of CG type1 and type 2 ZTE Corporation, Sanechips CR Rel-16 38.321 16.2.1 0903 - F 5G\_V2X\_NRSL-Core

[R2-2009046](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009046.zip) Correction on resource reselection for (pre-)emption ZTE Corporation, Sanechips CR Rel-16 38.321 16.2.1 0904 - F 5G\_V2X\_NRSL-Core

[R2-2009047](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009047.zip) CR for TS 38.321 for NR V2X on miscellaneous issues ZTE Corporation, Sanechips CR Rel-16 38.321 16.2.1 0905 - F 5G\_V2X\_NRSL-Core

[R2-2009052](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009052.zip) CR for TS 36.321 for NR V2X on miscellaneous issues ZTE Corporation, Sanechips CR Rel-16 36.321 16.2.0 1505 - F 5G\_V2X\_NRSL-Core

[R2-2009182](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009182.zip) Priority handling on CSI reporting MAC CE Ericsson discussion Rel-16 5G\_V2X\_NRSL-Core

[R2-2009207](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009207.zip) Correction on Zone Configuration per Communication Range InterDigital, Apple CR Rel-16 38.321 16.2.0 0910 - F 5G\_V2X\_NRSL-Core

[R2-2009208](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009208.zip) Discussion on setting of range parameter in SCI InterDigital, Apple, Ericsson, Qualcomm, Nokia, Mediatek, Fraunhofer HHI, Fraunhofer IIS, Convida Wireless discussion Rel-16 5G\_V2X\_NRSL-Core R2-2006762

[R2-2009209](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009209.zip) Corrections for setting of range parameter in SCI InterDigital, Apple, Ericsson, Qualcomm, Nokia, Mediatek, Fraunhofer HHI, Fraunhofer IIS, Convida Wireless CR Rel-16 38.321 16.2.0 0911 - F 5G\_V2X\_NRSL-Core

[R2-2009217](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009217.zip) Correction to sidelink MAC reset Ericsson CR Rel-16 38.321 16.2.1 0912 - F 5G\_V2X\_NRSL-Core

[R2-2009218](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009218.zip) corrections to MAC spec regarding SL-CSI reporting MAC CE Ericsson CR Rel-16 38.321 16.2.1 0913 - F 5G\_V2X\_NRSL-Core

[R2-2009219](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009219.zip) Correction to SL grant terminology Ericsson CR Rel-16 38.321 16.2.1 0914 - F 5G\_V2X\_NRSL-Core

[R2-2009220](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009220.zip) Correction to SL configured grant activation and deactivation Ericsson CR Rel-16 38.321 16.2.1 0915 - F 5G\_V2X\_NRSL-Core

[R2-2009221](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009221.zip) Corrections on counting number of transmissions of a MAC PDU Ericsson CR Rel-16 38.321 16.2.1 0916 - F 5G\_V2X\_NRSL-Core

[R2-2009222](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009222.zip) corrections to MAC spec regarding CG deactivation - Option 1 Ericsson CR Rel-16 38.321 16.2.1 0917 - F 5G\_V2X\_NRSL-Core

[R2-2009223](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009223.zip) corrections to MAC spec regarding CG deactivation - Option 2 Ericsson CR Rel-16 38.321 16.2.1 0918 - F 5G\_V2X\_NRSL-Core

[R2-2009224](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009224.zip) corrections to RRC spec regarding CG deactivation - Option 2 Ericsson CR Rel-16 38.331 16.2.0 2043 - F 5G\_V2X\_NRSL-Core

[R2-2009225](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009225.zip) corrections to MAC spec regarding prioritization between UL and SL Ericsson CR Rel-16 38.321 16.2.1 0919 - F 5G\_V2X\_NRSL-Core

[R2-2009226](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009226.zip) UE actions in case of CG deactivation Ericsson discussion Rel-16 5G\_V2X\_NRSL-Core

[R2-2009227](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009227.zip) open issues on UL SL prioritization Ericsson discussion Rel-16 5G\_V2X\_NRSL-Core

[R2-2009250](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009250.zip) Report of [Post111-e][707][V2X] CR update to new RAN1 decisions LG Electronics France report Rel-16 5G\_V2X\_NRSL-Core

[R2-2009251](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009251.zip) [Post111-e][707][V2X] LS on RAN1 agreement on pre-emption LG Electronics France LS out Rel-16 5G\_V2X\_NRSL-Core To:RAN1

[R2-2009252](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009252.zip) [Post111-e][707][V2X] Corrections to 5G V2X with NR Sidelink LG Electronics France CR Rel-16 38.321 16.2.1 0920 - F 5G\_V2X\_NRSL-Core

[R2-2009253](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009253.zip) Correction to pre-emption check for Sidelink resource allocation mode 2 LG Electronics France CR Rel-16 38.321 16.2.1 0921 - F 5G\_V2X\_NRSL-Core

[R2-2009254](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009254.zip) Corrections to SR prioritization for NR sidelink communication LG Electronics France CR Rel-16 38.321 16.2.1 0922 - F 5G\_V2X\_NRSL-Core

[R2-2009318](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009318.zip) Discussion on resource determination of SL configured grant SHARP Corporation discussion 5G\_V2X\_NRSL-Core

[R2-2009519](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009519.zip) Correction on TX UE handling of last transmission of MAC PDU Apple, InterDigital Inc. CR Rel-16 38.321 16.2.1 0931 - F 5G\_V2X\_NRSL-Core

[R2-2009829](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009829.zip) Support RLC Re-establishment vivo discussion R2-2007873

[R2-2009830](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009830.zip) misalignment SL/UL prioritization betwwen MAC and PHY vivo discussion

[R2-2009831](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009831.zip) Miscellaneous corrections for MAC vivo CR Rel-16 38.321 16.2.1 0946 - F 5G\_V2X\_NRSL-Core

[R2-2010010](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010010.zip) On toggling of the NDI in SL resource allocation mode 1 Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.2.1 0954 - F 5G\_V2X\_NRSL-Core

[R2-2010080](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010080.zip) Correction to the logical channel selection procedure Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.2.1 0959 - F 5G\_V2X\_NRSL-Core

[R2-2010186](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010186.zip) Correction to sidelink specific MAC reset Samsung Electronics CR Rel-16 38.321 16.2.1 0864 1 F 5G\_V2X\_NRSL-Core R2-2007929

[R2-2010303](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010303.zip) Miscellaneous corrections on TS 38.321 Huawei, Hisilicon CR Rel-16 38.321 16.2.1 0971 - F 5G\_V2X\_NRSL-Core

[R2-2010304](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010304.zip) Correction on MCS selection Huawei, Hisilicon CR Rel-16 38.321 16.2.1 0972 - F 5G\_V2X\_NRSL-Core

[R2-2010305](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010305.zip) Correction on the clear of dynamic sidelink grants Huawei, Hisilicon CR Rel-16 38.321 16.2.1 0973 - F 5G\_V2X\_NRSL-Core

[R2-2010306](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010306.zip) Correction on the UE behaviour before the next period of SL CG Huawei, Hisilicon CR Rel-16 38.321 16.2.1 0974 - F 5G\_V2X\_NRSL-Core

[R2-2010307](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010307.zip) Correction on the prioritization between UL MAC PDU and SL SR Huawei, Hisilicon CR Rel-16 38.321 16.2.1 0975 - F 5G\_V2X\_NRSL-Core

[R2-2010308](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010308.zip) Correction on the handling of collision among multiple SL grants Huawei, Hisilicon CR Rel-16 38.321 16.2.1 0976 - F 5G\_V2X\_NRSL-Core

[R2-2010309](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010309.zip) Correction on the MAC reset Huawei, Hisilicon CR Rel-16 38.321 16.2.1 0977 - F 5G\_V2X\_NRSL-Core

[R2-2010310](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010310.zip) Correction on HARQ process ID calculation for SL CG Huawei, Hisilicon CR Rel-16 38.321 16.2.1 0978 - F 5G\_V2X\_NRSL-Core

[R2-2010311](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010311.zip) Correction on the condition to clear configured sidelink grant Huawei, Hisilicon CR Rel-16 38.321 16.2.1 0979 - F 5G\_V2X\_NRSL-Core

[R2-2010312](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010312.zip) Correction on resource (re-)selection for mode 2 Huawei, Hisilicon CR Rel-16 38.321 16.2.1 0980 - F 5G\_V2X\_NRSL-Core

[R2-2010313](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010313.zip) Discussion on sidelink process association Huawei, Hisilicon discussion

[R2-2010314](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010314.zip) Discussion on NDI maintenance Huawei, Hisilicon discussion

[R2-2010315](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010315.zip) Discussion on Sidelink process management for RX UE Huawei, Hisilicon discussion

[R2-2010316](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010316.zip) Discussion on retransmission on the selected sidelink grant and the configured sidelink grant Huawei, Hisilicon discussion

[R2-2010424](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010424.zip) MAC Corrections for NR V2X ASUSTeK CR Rel-16 38.321 16.2.1 0986 - F 5G\_V2X\_NRSL-Core

[R2-2010425](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010425.zip) RRC Corrections for SL PUCCH configuration ASUSTeK CR Rel-16 38.331 16.2.0 2221 - F 5G\_V2X\_NRSL-Core

[R2-2010491](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010491.zip) Correction on resource re-selection vivo CR Rel-16 38.321 16.2.1 0990 - F 5G\_V2X\_NRSL-Core

[R2-2010677](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010677.zip) Correction on MCS range OPPO CR Rel-16 38.321 16.2.1 0995 - F 5G\_V2X\_NRSL-Core

[R2-2010977](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010977.zip) Left issues on security handling OPPO, CATT discussion Rel-16 5G\_V2X\_NRSL-Core

### 6.4.4 UE capabilities

Please contact / coordinate with CR rapporteur for small changes. Including [POST111-e][708][V2X] Update of capability CRs (OPPO)

[R2-2008785](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008785.zip) Summary of [POST111-e][708][V2X] Update of capability CRs (OPPO) OPPO report Rel-16 5G\_V2X\_NRSL-Core

[R2-2008786](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008786.zip) Draft 38.331 CR for V2X UE capability OPPO draftCR Rel-16 38.331 16.2.0 B 5G\_V2X\_NRSL-Core

[R2-2008787](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008787.zip) Draft 38.306 CR for V2X UE capability OPPO draftCR Rel-16 38.306 16.2.0 B 5G\_V2X\_NRSL-Core

[R2-2008788](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008788.zip) Draft 36.331 CR for V2X UE capability OPPO CR Rel-16 36.331 16.2.1 4449 - B 5G\_V2X\_NRSL-Core

[R2-2008789](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008789.zip) Draft 36.306 CR for V2X UE capability OPPO CR Rel-16 36.306 16.2.0 1786 - B 5G\_V2X\_NRSL-Core

[R2-2008790](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008790.zip) [Draft] Reply LS on maximum data rate for NR sidelink OPPO LS out Rel-16 5G\_V2X\_NRSL-Core To:RAN1

[R2-2008938](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008938.zip) Correction on LTE V2X UE capability OPPO, Huawei, HiSilicon, Samsung discussion Rel-16 5G\_V2X\_NRSL-Core

[R2-2009707](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009707.zip) Correction on UECapabilityEnquirySidelink (Alt.2) Ericsson CR Rel-16 38.331 16.2.0 2112 - F 5G\_V2X\_NRSL-Core

[R2-2009708](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009708.zip) Correction on UECapabilityEnquirySidelink (Alt.1) Ericsson CR Rel-16 38.331 16.2.0 2113 - F 5G\_V2X\_NRSL-Core

[R2-2009716](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009716.zip) Clarificationon on field description for supportedBandCombinationListSidelinkEUTRA-NR Ericsson CR Rel-16 38.331 16.2.0 2120 - F 5G\_V2X\_NRSL-Core

[R2-2009717](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009717.zip) Correction on setting frequencyBandListFilterSidelink over PC5 Ericsson CR Rel-16 38.331 16.2.0 2121 - F 5G\_V2X\_NRSL-Core

[R2-2009719](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009719.zip) Clarification on field description for supportedBandCombinationListSidelinkEUTRA-NR Ericsson CR Rel-16 38.306 16.2.0 0434 - F 5G\_V2X\_NRSL-Core

## 6.5 NR Industrial Internet of Things (IoT)

(NR\_IIOT-Core; leading WG: RAN2; REL-16; started: Mar 19; Completed: Jun 20; WID: RP-200797; SR: RP-200796)

Limit: 5 email threads

### 6.5.1 General and Stage-2 corrections

Incoming LS etc.

[R2-2008752](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008752.zip) Reply LS on 3GPP NR Rel-16 URLLC and IIoT performance evaluation (RP-202097; contact: Ericsson) RAN LS in Rel-16 NR\_IIOT-Core To:5G-ACIA Cc:RAN1, RAN2, SA1

* [000] Noted

### 6.5.2 RRC Corrections

* [AT112-e][040][IIOT] RRC and UE cap Corrections (CATT)

Scope: Treat tdocs in AI 6.5.2, and AI 6.5.5 (see below)

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Thu Nov 12, 1200 UTC

Short Deadline: UE Cap Endorsed CRs 38306 (if agreeable): Nov 6.

[R2-2011128](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011128.zip) Summary of [AT112-e][040][IIOT] RRC and UE cap Corrections CATT

* [040] Noted, proposals agreed and reflected below

Time Aspects

[R2-2008864](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008864.zip) Clarification on referenceTimePreferenceReporting in RRC Reconfiguration Procedure CATT CR Rel-16 38.331 16.2.0 2021 - F NR\_IIOT-Core

* [040] The description of referenceTimePreferenceReporting is added in clause 5.3.5.9 “Other configuration” as captured in the draft CR: [38.331\_CR2021\_(Rel-16)\_R2-20xxxxx referenceTimePreferenceReporting - Alt](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_112-e/Inbox/Drafts/%5BOffline-040%5D%5BIIOT%5D%20RRC%20and%20UE%20cap%20Corrections%20(CATT)/38.331_CR2021_(Rel-16)_R2-20xxxxx%20referenceTimePreferenceReporting%20-%20Alt.docx).
* [040] The typo referenceTimeInfoInterestPreference in clause 5.7.4.2 shall be fixed (Interest to be removed).
* [040] revised

[R2-2011129](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011129.zip) Clarification on referenceTimePreferenceReporting in RRC Reconfiguration Procedure CATT, Ericsson CR Rel-16 38.331 16.2.0 2021 1 F NR\_IIOT-Core

* [040] Agreed

[R2-2010102](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010102.zip) Correction regarding TimeReferenceSFN only for CG Type 1 Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2174 - F NR\_IIOT-Core

* [040] Not Pursued

[R2-2010101](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010101.zip) Correction on UE preference for reference time information provisioning Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2173 - F NR\_IIOT-Core

* [040] Not Pursued

EHC

[R2-2010103](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010103.zip) Correction regarding reconfigure EHC Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2175 - F NR\_IIOT-Core

- [040] Intermediate point, Rapporteur: The EHC issue discussed in Section 2.2.2 is yet to be solved and Rapporteur proposes a Phase 2 with another round of feedback to a new question Q5c in order to progress the issue.

* [040] revised

[R2-2011209](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011209.zip) Correction regarding reconfigure EHC Huawei, HiSilicon, Ericsson, Samsung CR Rel-16 38.331 16.2.0 2175 1 F NR\_IIOT-Core

* [040] Agreed

CG related

[R2-2009909](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009909.zip) CR on 38.331 for DL BWP configuration and LCH configuration for NRIIOT ZTE Corporation, Sanechips CR Rel-16 38.331 16.2.0 2142 - F NR\_IIOT-Core

* [040] The first change in CR R2-2009909 is agreed.
* [040] The second change in CR R2-2009909 is not pursued.
* [040] revised

[R2-2011268](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011268.zip) CR on 38.331 for DL BWP configuration and LCH configuration for NRIIOT ZTE Corporation, Sanechips CR Rel-16 38.331 16.2.0 2142 2 F NR\_IIOT-Core

* [040] Agreed

Intra-UE prioritization

[R2-2009499](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009499.zip) Clarification of Uplink Cancellation Priority Configuration Apple discussion Rel-16 NR\_IIOT-Core

* [040] Not Agreed. There is no need to clarify further the term “intra-UE priority indicator” in the field description of uplinkCancellationPriority.

### 6.5.5 Other

[R2-2009376](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009376.zip) Correction on the pre-requisite condition for dci-UL-PriorityIndicator-r16 Huawei, HiSilicon CR Rel-16 38.306 16.2.0 0426 - F NR\_IIOT-Core

* [040] Endorsed for Merge

[R2-2008863](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008863.zip) Correction on dynamic PUSCH skipping when PUCCH with UCI overlaps with PUSCH CATT CR Rel-16 38.306 16.2.0 0414 - F NR\_IIOT-Core

* [040] not Pursued

### 6.5.3 MAC Corrections

Intra UE Prioritization

[R2-2009500](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009500.zip) Configuration Options for Intra-UE Prioritization Apple discussion Rel-16 NR\_IIOT-Core

[R2-2010054](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010054.zip) Intra-UE Prioritization inter-group feature dependency Ericsson discussion Rel-16 NR\_IIOT-Core

* Both noted

DISCUSSION on-line on Apple P4-7 and Ericsson P

- CATT think we don’t need any global parameter

- Huawei agrees.

- MTK also think all is clear and think a change will be confusing.

- Oppo Samsung Intel also agrees.

- Apple think the global parameter makes things more simple and with less confusion.

Apple P1-3

- MTK wonders what is unclear

- Apple think this is clear only if you read multiple TSes.

- Chair: Other companies don’t think any clarifications are needed.

* No need to introduce additional configuration for Phy Priority and L2 priority feature.
* [AT112-e][041][IIOT] MAC I (Huawei)

Scope: Treat tdocs R2-2009500, R2-2009373, R2-2009375, R2-2009483 R2-20010054, R2-2009541, R2-2009374

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Thu Nov 12, 1200 UTC

[R2-2011058](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011058.zip) Summary of [AT112-e][041][IIOT] MAC I Huawei, HiSilicon

* [041] Noted, proposals agreed and reflected below

[R2-2009373](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009373.zip) Clarification on the condition of a de-prioritized grant Huawei, HiSilicon CR Rel-16 38.321 16.2.1 0928 - F NR\_IIOT-Core

* [041] Revised, contents Endorsed

[R2-2011210](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011210.zip) Clarification on the condition of a de-prioritized grant Huawei, HiSilicon CR Rel-16 38.321 16.2.1 0928 1 F NR\_IIOT-Core

* [041] Agreed

[R2-2009483](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009483.zip) Clarification on the SR and PUSCH conflict with equal LCH priority Apple discussion Rel-16 NR\_IIOT-Core

[R2-2009375](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009375.zip) Clarification of PHY behaviour for Data & SR overlapping with equal L1 priority Huawei, HiSilicon discussion Rel-16 NR\_IIOT-Core

* [041] Both docs above Noted
* [041] RAN2 confirms the intended UE behaviour: For the case of overlapping PUSCH and SR with equal L1 priority and MAC has not yet delivered MAC PDU for the PUSCH to PHY, if SR is prioritized in MAC, MAC shall not deliver the MAC PDU for the PUSCH and shall instruct PHY for SR transmission.
* [041] Send LS to RAN1 to inform this confirmation in description, asks RAN1 to confirm if the intended UE behaviour can be supported.

[R2-2009541](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009541.zip) Consideration on L2 priority and PHY priority feature OPPO discussion Rel-16 NR\_IIOT-Core

[R2-2009374](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009374.zip) Clarification of configuration for physical layer prioritization Huawei, HiSilicon discussion Rel-16 NR\_IIOT-Core

* [041] Both docs above Noted
* [041] RAN2 confirm that LCH based prioritization and PHY based prioritization can be configured independently.

[R2-2011124](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011124.zip) LS on overlapped data and SR are of equal L1 priority RAN2 LS out

* LS out is approved (this is the final version)
* [AT112-e][042][IIOT] MAC II (Samsung)

Scope: Treat tdocs, R2-2009599, R2-2009752, R2-2010525,R2-2009048, R2-2009372, R2-2010052,

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Thu Nov 12, 1200 UTC

[R2-2011153](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011153.zip) Report of Offline 042: MAC II (Samsung) Samsung

* [042] Noted, proposals are agreed and reflected below

Determination of priority

[R2-2009599](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009599.zip) Priority of Uplink Grant Samsung, Ericsson discussion Rel-16 NR\_IIOT-Core

* [042] Revision in P1 in Phase 1 conclusion section (v20) can be agreed

[R2-2011154](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011154.zip) Priority of Uplink Grant Samsung, Ericsson CR Rel-16 38.321 16.2.1 0998 - F NR\_IIOT-Core

* [042] Agreed

[R2-2009752](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009752.zip) Clarification of Grant Priority Determination Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.2.1 0939 - F NR\_IIOT-Core

* [042] Not Pursued

Impact of UL skipping

[R2-2010525](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010525.zip) PUSCH Carrying Multiplexed UCI in Intra-UE Prioritization Samsung discussion Rel-16 NR\_IIOT-Core

* [042] Noted

TC-RNTI

[R2-2009048](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009048.zip) CR on 38.321 for the UL transmission scheduled with TC-RNTI ZTE Corporation, Sanechips CR Rel-16 38.321 16.2.1 0906 - F NR\_IIOT-Core

* [042] The case of uplink grant received in RAR is postponed, may be resolved in RAN2#113.
* [042] Postponed

[R2-2009372](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009372.zip) Correction on resource overlapping with grants addressed to T-C-RNTI Huawei, HiSilicon CR Rel-16 38.321 16.2.1 0927 - F NR\_IIOT-Core

* [042] Revision in P2 in Phase 1 conclusion section (v20) can be agreed
* [042] revised

[R2-2011157](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011157.zip) Correction on resource overlapping with grants addressed to T-C-RNTI Huawei, HiSilicon CR Rel-16 38.321 16.2.1 0927 2 F NR\_IIOT-Core

* [042] Agreed

SPS

[R2-2010052](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010052.zip) Correction for SPS HARQ process ID calculation Ericsson CR Rel-16 38.321 16.2.1 0957 - F NR\_IIOT-Core

* [042] revised to correct typo found by Apple
* [042] revision is agreed unseen

[R2-2011143](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011143.zip) Correction for SPS HARQ process ID calculation Ericsson CR Rel-16 38.321 16.2.1 0957 1 F NR\_IIOT-Core

* [042] Agreed

CG related

* [AT112-e][043][IIOT] MAC II (Nokia)

Scope: Treat R2-2009539, R2-2009540, R2-2009753, R2-2010053, R2-2010100, R2-2010522

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Thu Nov 12, 1200 UTC

[R2-2011074](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011074.zip) Summary of e-mail discussion: [AT112-e][043][IIOT] MAC II (Nokia) Nokia, Nokia Shanghai Bell

* [043] Noted, proposals are agreed and reflected below

[043] ph1 Agreements:

* [043] RAN2 should change MAC CR to (1) solve the autonomous transmission blocking problem due to CG timer running, and (2) clarify the meaning of “transmission has not been performed”.
* [043] A CG timer (that has started) should be stopped when a CG PUSCH with the corresponding HARQ process has been deprioritized or cancelled. The TP in R2-2009753 can be used as a baseline for MAC specification change to capture this behaviour, wherein the meaning of “transmission has not been performed” should be also clarified.
* [043] Change the MAC specification text in 5.4.1 as: “if the MAC entity is configured with *lch-basedPrioritization*, and the PUSCH duration of the configured uplink grant does not overlap with the PUSCH duration of an uplink grant received in a Random Access Response or the PUSCH duration of a MSGA payload for this serving cell;”
* [043] FFS if UL resource checking is needed before triggering Multiple Entry Configured Grant Confirmation MAC CE.
* [043] Change the MAC specification text in 5.8.2 as: “cancel all triggered configured uplink grant confirmation(s).”

[R2-2009753](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009753.zip) Configured grant timer termination upon PUSCH cancellation Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.2.1 0940 - F NR\_IIOT-Core

* [043] Merged with CR0997

[R2-2010053](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010053.zip) Clarification for CG overlapping with PUSCH duration of MSGA Ericsson CR Rel-16 38.321 16.2.1 0958 - F NR\_IIOT-Core

* [043] Merged with CR0997

[R2-2010522](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010522.zip) Correction of Multiple Entry Configured Grant Confirmation Samsung CR Rel-16 38.321 16.2.1 0992 - F NR\_IIOT-Core

* [043] Merged with CR0997

[R2-2011075](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011075.zip) Configured Grant related MAC CR for IIoT Nokia, Nokia Shanghai Bell, Ericsson, Samsung CR Rel-16 38.321 16.2.1 0997 - F NR\_IIOT-Core

* [043] Agreed

[R2-2009539](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009539.zip) Correction on autonomous transmission for the deprioritized CG-Alt1 OPPO CR Rel-16 38.321 16.2.1 0932 - F NR\_IIOT-Core

[R2-2009540](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009540.zip) Correction on autonomous transmission for the deprioritized CG-Alt2 OPPO CR Rel-16 38.321 16.2.1 0933 - F NR\_IIOT-Core

[R2-2010100](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010100.zip) Correction on construction of Multiple Entry CG Confirmation MAC CE Huawei, HiSilicon CR Rel-16 38.321 16.2.1 0960 - F NR\_IIOT-Core

* [043] 3 CRs Not Pursued

### 6.5.4 PDCP Corrections

* [AT112-e][044][IIOT] PDCP (Ericsson)

Scope: Treat tdocs in AI 6.5.4.1, AI 6.5.4.2

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Thu Nov 12, 1200 UTC

[R2-2011006](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011006.zip) Summary on [AT112e][044][IIOT] PDCP Corrections (Ericsson) Ericsson

* [044] Noted, proposals are agreed and reflected below

#### 6.5.4.1 Duplication

[R2-2009908](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009908.zip) Correction on 38.323 for PDCP duplication with more than two RLC entities for SRB ZTE Corporation, Sanechips CR Rel-16 38.323 16.2.0 0057 - F NR\_IIOT-Core

* [044] Not Pursued

[R2-2010055](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010055.zip) Corrections for PDCP duplication Ericsson discussion Rel-16 NR\_IIOT-Core

* [044] Noted
* [044] Change the conditional presence of *PDCP-CADuplication* in IE *LogicalChannelConfig* to that ”the field is mandatory present if the DRB/SRB associated with this logical channel is configured with PDCP CA duplication in UL in the cell group in which this IE is included (i.e. the PDCP entity is associated with multiple RLC entities belonging to this cell group). Otherwise the field is optionally present, need R.”
* [044] Modify the conditional presence of *MoreThanTwoRLC-DRB* in IE *PDCP-Config* to that ”For DRBs, this field is mandatory present upon RRC reconfiguration with setup of a PDCP entity for a radio bearer with more than two associated logical channels and upon RRC reconfiguration with the association of one or more additional logical channel(s) to the PDCP entity so that the PDCP entity has more than two associated logical channels.”

[R2-2011197](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011197.zip) Corrections for PDCP duplication introduced in IIoT Ericsson CR Rel-16 38.331 16.2.0 2284 1 F NR\_IIOT-Core

* [044] Agreed

#### 6.5.4.2 Ethernet Header Compression

[R2-2009564](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009564.zip) CR on LTE PDCP re-establishment for UM DRB when t-Reordering is used Samsung CR Rel-16 36.323 16.2.0 0291 - F NR\_IIOT-Core

* [044] changes proposed in R2-2009564 are agreed,
* [044] update CR cover page of R2-2009564 and RAN2 can consider further editorial comments (if any).

[R2-2011063](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011063.zip) CR on LTE PDCP re-establishment for UM DRB when t-Reordering is used Samsung CR Rel-16 36.323 16.2.0 0291 1 F NR\_IIOT-Core

* [044] Agreed

[R2-2010056](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010056.zip) Corrections for EHC Ericsson discussion Rel-16 NR\_IIOT-Core

- [044] No consensus to clarify RHC reset.

* [044] Noted

## 6.6 NR Positioning Support

(NR\_pos-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Jun 20; WID: RP-200218, SR: RP-201342). R2 and R1 parts are 100% complete (NR TEI16 Positioning)

Documents in this agenda item will be handled in a break out session

Limit: 5 email threads

### 6.6.1 General and Stage 2 corrections

Including incoming LSs, Including impact to 36.305 and 38.305. Stage 2 corrections should be discussed with the specification rapporteur before submission.

This agenda item may use a summary document (decision to be made based on submitted tdocs).

[R2-2008746](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008746.zip) Reply LS on positioning SRS during DRX inactive time (R4-2012143; contact: Apple) RAN4 LS in Rel-16 NR\_pos-Core To:RAN2 Cc:RAN1

[R2-2008748](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008748.zip) LS on new measurement gap patterns for positioning measurements (R4-2012285; contact: Ericsson) RAN4 LS in Rel-16 NR\_pos-Core To:RAN4 Cc:RAN2

[R2-2008803](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008803.zip) Minor corrections on TS 36.305 CATT CR Rel-16 36.305 16.2.0 0093 - F NR\_newRAT-Core

[R2-2008804](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008804.zip) Minor corrections on TS 38.305 CATT CR Rel-16 38.305 16.2.0 0035 - F NR\_newRAT-Core

R2-2008805 Correction on the NOTE in architecture figure in TS 38.305 CATT CR Rel-16 38.305 16.2.0 0036 - F NR\_newRAT-Core Withdrawn

[R2-2009000](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009000.zip) Remove the NOTE in architecture figure in TS 38.305 Intel Corporation CR Rel-16 38.305 16.2.0 0037 - F NR\_pos-Core

[R2-2010067](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010067.zip) Activation Time for Periodic UL SRS Transmission Ericsson discussion Rel-16

[R2-2010068](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010068.zip) Correction to SUPL support for NR positioning methods Ericsson CR Rel-16 38.305 16.2.0 0038 - F NR\_pos-Core

[R2-2010069](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010069.zip) Correction of stage 2 positioning architecture aspects Ericsson CR Rel-16 38.305 16.2.0 0039 - F NR\_pos-Core

[R2-2010070](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010070.zip) Missing Updates for Aperiodic UL SRS Support Ericsson CR Rel-16 38.305 16.2.0 0040 - F NR\_pos-Core

[R2-2010092](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010092.zip) SUPL support for NR positioning methods Qualcomm Incorporated CR Rel-16 38.305 16.2.0 0041 - F NR\_pos-Core

[R2-2010141](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010141.zip) Corrections to E-CID and NR E-CID positioning Nokia, Nokia Shanghai Bell CR Rel-16 38.305 16.2.0 0043 - F NR\_pos-Core

[R2-2010266](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010266.zip) Miscellaneous corrections for 38305 Huawei, HiSilicon CR Rel-16 38.305 16.2.0 0044 - F NR\_pos-Core

[R2-2010267](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010267.zip) Correction to stage2 spec for SRS (de-)activaton Huawei, HiSilicon CR Rel-16 38.305 16.2.0 0045 - F NR\_pos-Core

[R2-2010268](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010268.zip) Correction to stage2 of NR ECID Huawei, HiSilicon CR Rel-16 38.305 16.2.0 0046 - F NR\_pos-Core

[R2-2010573](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010573.zip) Clarification on usage of ECID procedure Ericsson CR Rel-16 38.305 16.2.0 0049 - F NR\_pos-Core

[R2-2010574](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010574.zip) Updates on missing deferred location requests Ericsson CR Rel-16 38.305 16.2.0 0050 - F NR\_pos-Core

[R2-2010575](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010575.zip) Alignment of the position information format with SA2 specification Ericsson CR Rel-16 38.305 16.2.0 0051 - F NR\_pos-Core

[R2-2010657](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010657.zip) Miscellaneous correction for stage 2 Ericsson CR Rel-16 38.305 16.2.0 0052 - F NR\_pos-Core

[R2-2010674](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010674.zip) Summary document for agenda item 6.6.1 - NR Positioning Stage2 Nokia, Nokia Shanghai Bell discussion Rel-16 NR\_pos-Core Late

### 6.6.2 RRC corrections

Including impact to 36.331, 38.331, and 38.306.

This agenda item may use a summary document (decision to be made based on submitted tdocs).

[R2-2008806](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008806.zip) Corrections on 38.331 to capture agreements of area scope for posSIB validity CATT,Ericsson CR Rel-16 38.331 16.2.0 2014 - F NR\_newRAT-Core

[R2-2008807](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008807.zip) Corrections on description of sfn-Offset and sfn0-Offset in SSB-Configuration in TS 38.331 CATT CR Rel-16 38.331 16.2.0 2015 - F NR\_newRAT-Core

[R2-2008808](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008808.zip) Correction on the missed description of sfn-SSB-Offset in SSB-Configuration in TS 38.331 CATT CR Rel-16 38.331 16.2.0 2016 - F NR\_newRAT-Core

[R2-2010071](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010071.zip) Corrections and update for RRC Positioning Ericsson CR Rel-16 38.331 16.2.0 2172 - F NR\_pos-Core

[R2-2010269](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010269.zip) CR on SI window for positioning SI message Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2196 - F NR\_pos-Core

[R2-2010270](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010270.zip) Correction on posSRS configuration Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2197 - F NR\_pos-Core

[R2-2010273](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010273.zip) Correction on posSIB broadcastStatus Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2199 - F NR\_pos-Core

[R2-2010709](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010709.zip) Summary for RRC Corrections for Positioning Ericsson discussion

### 6.6.3 LPP corrections

This agenda item may use a summary document (decision to be made based on submitted tdocs).

R2-2008809 Correction on sfn-SSB-Offset in NR-SSB-Config-r16 in TS 37.355 CATT CR Rel-16 37.355 16.2.0 0273 - F NR\_newRAT-Core Withdrawn

[R2-2009042](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009042.zip) Discussion on whether PRS ID can be reused on different frequency layers vivo Mobile Communication Co., discussion

[R2-2010093](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010093.zip) Clarification of quality and time stamp for RSTD measurements Qualcomm Incorporated CR Rel-16 37.355 16.2.0 0274 - F NR\_pos-Core

[R2-2010263](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010263.zip) Correction on PRS configuration Huawei, HiSilicon CR Rel-16 37.355 16.2.0 0275 - F NR\_pos-Core

[R2-2010264](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010264.zip) Correction on NR E-CID Huawei, HiSilicon CR Rel-16 37.355 16.2.0 0276 - F NR\_pos-Core

[R2-2010265](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010265.zip) LPP corrections on UE capability signaling Huawei, HiSilicon discussion Rel-16 NR\_pos-Core

[R2-2010975](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010975.zip) Summary of LPP corrections agenda item 6.6.3 Qualcomm Incorporated discussion

### 6.6.4 MAC corrections

[R2-2010066](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010066.zip) SRS for Positioning transmission in Connected mode DRX Ericsson discussion Rel-16

[R2-2010271](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010271.zip) Correction on SP posSRS (de-)activation MAC CE Huawei, HiSilicon CR Rel-16 38.321 16.2.0 0970 - F NR\_pos-Core

### 6.6.5 Other

## 6.7 NR mobility enhancements

(NR\_Mob\_enh-Core; leading WG: RAN2; REL-16; started: Jun 18; Completed June 20; WID: RP-192277; SR RP-201273). Documents in this agenda item will be handled in a break out session).

Documents under 6.7 will be treated together with documents in 7.4.

No documents should be submitted to 6.7. Please submit to 6.7.x

Editorial corrections should be taken up with the specification editor before submitting to avoid CR duplication.

Limit: 8 email threads (with 7.4)

### 6.7.1 General and Stage-2 Corrections

Including incoming LSs (if any).

[R2-2009312](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009312.zip) Miscellaneous corrections to Mobility Enhancements Nokia (Rapporteur), Ericsson, Intel Corporation, Nokia Shanghai Bell, Sanechips, ZTE CR Rel-16 38.300 16.3.0 0305 - F NR\_Mob\_enh-Core

[R2-2009386](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009386.zip) Clarification on CHO in LTE-DC ZTE Corporation, Sanechips CR Rel-16 36.300 16.3.0 1321 - F LTE\_feMob-Core

[R2-2009995](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009995.zip) Clarification of CHO simultaneous with DAPS Ericsson discussion NR\_Mob\_enh-Core

[R2-2010187](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010187.zip) Correction on TS 38.300 for CHO Huawei, HiSilicon CR Rel-16 38.300 16.3.0 0314 - F NR\_Mob\_enh-Core

[R2-2010188](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010188.zip) Correction on TS 36.300 for CHO Huawei, HiSilicon CR Rel-16 36.300 16.3.0 1326 - F LTE\_feMob-Core

[R2-2010354](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010354.zip) Miscellaneous corrections for Mobility Enhancements ZTE Corporation, Sanechips, Ericsson CR Rel-16 37.340 16.3.0 0236 - F NR\_Mob\_enh-Core

[R2-2010651](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010651.zip) Correction to RLF in case of DAPS HO Samsung Electronics Co., Ltd CR Rel-16 38.300 16.3.0 0322 - F NR\_Mob\_enh-Core

### 6.7.2 Conditional handover related corrections

This AI jointly addresses corrections to NR and LTE CHO.

[R2-2009472](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009472.zip) Target cell ID parsing in CHO and CPAC Apple CR Rel-16 38.331 16.2.0 2080 - F NR\_Mob\_enh-Core

[R2-2009533](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009533.zip) Correction on configuration of triggerCondition for CHO CATT CR Rel-16 36.331 16.2.1 4466 - F LTE\_feMob-Core

[R2-2009639](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009639.zip) Correction to conditional reconfiguration evaluation ITRI CR Rel-16 38.331 16.2.0 2099 - F NR\_Mob\_enh-Core

[R2-2009640](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009640.zip) Correction to remove conditional reconfiguration related measurement configuration ITRI CR Rel-16 38.331 16.2.0 2100 - F NR\_Mob\_enh-Core

[R2-2009848](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009848.zip) Correction to attemptCondReconfig in ConditionalReconfiguration Ericsson CR Rel-16 38.331 16.2.0 2140 - F NR\_Mob\_enh-Core

[R2-2009996](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009996.zip) Missing release of VarConditionalReconfig Ericsson CR Rel-16 38.331 16.2.0 2153 - F NR\_Mob\_enh-Core

[R2-2009997](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009997.zip) Missing release of VarConditionalReconfiguration Ericsson CR Rel-16 36.331 16.2.1 4491 - F NR\_Mob\_enh-Core

[R2-2009998](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009998.zip) Inability to comply with conditional reconfiguration Ericsson CR Rel-16 38.331 16.2.0 2154 - F NR\_Mob\_enh-Core

[R2-2010189](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010189.zip) Correction on TS 38.331 for CHO Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2185 - F NR\_Mob\_enh-Core

[R2-2010190](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010190.zip) Correction on TS 36.331 for CHO Huawei, HiSilicon CR Rel-16 36.331 16.2.1 4498 - F LTE\_feMob-Core

[R2-2010205](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010205.zip) Issue on failure handling of handover without key change for the UE configured with attemptCondReconfig SHARP Corporation discussion Rel-16 NR\_Mob\_enh-Core

[R2-2010206](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010206.zip) Correction of reconfiguration with sync failure procedure for the UE configured with attemptCondReconfig SHARP Corporation CR Rel-16 38.331 16.2.0 2190 - F NR\_Mob\_enh-Core

[R2-2010253](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010253.zip) UE information transmission in NR CHO case SHARP Corporation, Ericsson discussion Rel-16 NR\_Mob\_enh-Core R2-2007718

[R2-2010254](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010254.zip) Clarification on UE information transmission in CHO case(38.331) SHARP Corporation, Ericsson CR Rel-16 38.331 16.2.0 2194 - F NR\_Mob\_enh-Core

### 6.7.3 Conditional PSCell change for intra-SN corrections

Including corrections for CPC.

[R2-2009766](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009766.zip) Corrections to CPC with and without SRB3 involved Nokia, Nokia Shanghai Bell, ZTE Corporation (Rapporteur) CR Rel-16 37.340 16.3.0 0220 1 F NR\_Mob\_enh-Core R2-2007360

[R2-2010589](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010589.zip) Correction to CG-Config for CPC Google Inc. CR Rel-16 38.331 16.2.0 2251 - F NR\_Mob\_enh-Core

### 6.7.4 UE capability corrections

Including UE capability aspects of NR mobility WI and joint LTE/NR capability corrections..

Including outcome of [Post111-e][921][DAPS] DAPS capability structure clarifications (Huawei)

[R2-2008827](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008827.zip) NR DAPS capability corrections Nokia, Nokia Shanghai Bell discussion NR\_Mob\_enh-Core

R2-2008828 NR DAPS capability corrections Nokia, Nokia Shanghai Bell CR Rel-16 38.306 16.2.0 0413 - F NR\_Mob\_enh-Core Withdrawn

R2-2008829 NR DAPS capability corrections Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.2.0 2018 - F NR\_Mob\_enh-Core Withdrawn

[R2-2009273](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009273.zip) The supported combination among FRx/xDD CHO/CPC capabilities Intel Corporation discussion Rel-16 NR\_Mob\_enh-Core, LTE\_feMob-Core

[R2-2009281](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009281.zip) Clarification on the setting of FRx&xDD CHO&CPC capabilities Intel Corporation CR Rel-16 38.306 16.2.0 0423 - F NR\_Mob\_enh-Core

[R2-2009655](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009655.zip) Correction on CA-ParametersNR for DAPS handover NEC draftCR Rel-16 38.331 16.2.0 NR\_Mob\_enh-Core

[R2-2009783](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009783.zip) UE Capabilities for Intra-frequency DAPS Handover MediaTek Inc. discussion

[R2-2010292](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010292.zip) Report of [Post111-e][921][DAPS] DAPS capability structure clarifications (Huawei) Huawei, HiSilicon discussion Rel-16 NR\_Mob\_enh-Core

[R2-2010293](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010293.zip) Clarification on NR DAPS UE capability Huawei, HiSilicon CR Rel-16 38.306 16.2.0 0442 - F NR\_Mob\_enh-Core

[R2-2010296](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010296.zip) Clarification on CHO and CPC capabilities between different modes Huawei, HiSilicon CR Rel-16 38.306 16.2.0 0443 - F NR\_Mob\_enh-Core

[R2-2010500](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010500.zip) Remaining open issues for DAPS capabilities Ericsson discussion

### 6.7.5 Other

Including corrections to DAPS that are NR-specific without equivalent LTE impacts

[R2-2009607](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009607.zip) Release of mTRP operation before DAPS handover Samsung discussion Rel-16 NR\_Mob\_enh-Core

[R2-2009665](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009665.zip) Minor corrections to NR mobility enhancements Lenovo, Motorola Mobility CR Rel-16 38.331 16.2.0 2102 - F NR\_Mob\_enh-Core

[R2-2010415](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010415.zip) Correction on DAPS power configuration Google Inc. CR Rel-16 38.331 16.2.0 2218 - F NR\_Mob\_enh-Core

## 6.8 DC and CA enhancements

(LTE\_NR\_DC\_CA\_enh-Core; leading WG: RAN2; REL-16; started: Jun 18; Target Aug 20; WI RP-200791, SR: RP-201218) R1 and R2 parts are 100% complete.

No documents should be submitted to 6.8. Please submit to 6.8.x

Editorial corrections should be taken up with the specification editor before submitting to avoid CR duplication.

Limit: 5 email threads

### 6.8.1 General and Stage-2 Corrections

Including incoming LSs rapporteur inputs, including corrections discussions going beyond a specific TS, cross group discussions.

R2-2008706 Reply LS on UL PC for NR-DC (R1-2007261; contact: Apple) RAN1 LS in Rel-16 LTE\_NR\_DC\_CA\_enh-Core To:RAN2

R2-2008736 Reply LS on power control for NR-DC (R4-2011721; contact: vivo) RAN4 LS in Rel-16 LTE\_NR\_DC\_CA\_enh-Core To:RAN2 Cc:RAN1

R2-2008744 LS response on measurement capability for EMR (R4-2012112; contact: Ericsson) RAN4 LS in Rel-16 LTE\_NR\_DC\_CA\_enh-Core To:RAN2

R2-2008750 LS on EMR measurement requirements in NR (R4-2012297; contact: Ericsson) RAN4 LS in Rel-16 LTE\_NR\_DC\_CA\_enh-Core To:RAN2

R2-2009548 CR for 37.340 on power control for NR\_DC Nokia, Nokia Shanghai Bell, Samsung, Ericsson CR Rel-16 37.340 16.3.0 0235 - B LTE\_NR\_DC\_CA\_enh-Core

R2-2010018 Misc corrections for Rel-16 DCCA Ericsson CR Rel-16 38.331 16.2.0 2161 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010019 Misc corrections for Rel-16 DCCA Ericsson CR Rel-16 36.331 16.2.1 4492 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010020 Misc corrections for Rel-16 DCCA Ericsson CR Rel-16 38.300 16.3.0 0312 - F LTE\_NR\_DC\_CA\_enh-Core Late

R2-2010021 Misc corrections for Rel-16 DCCA Ericsson CR Rel-16 36.300 16.3.0 1325 - F LTE\_NR\_DC\_CA\_enh-Core Late

### 6.8.2 Fast Scell activation

R2-2008920 Considerations on fast (de)active of Scell KDDI Corporation discussion

R2-2008927 Correction on RA upon BWP switching to dormant BWP Asia Pacific Telecom co. Ltd CR Rel-16 38.321 16.2.1 0901 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2009549 Dormancy correction Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.2.0 0934 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2009550 BWP support for dormancy Nokia, Nokia Shanghai Bell discussion Rel-16 LTE\_NR\_DC\_CA\_enh-Core

R2-2009573 Corrections on bwp-InactivityTimer Samsung CR Rel-16 38.321 16.2.1 0935 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010022 Timing of direct SCell activation upon RRC configuration Ericsson CR Rel-16 38.321 16.2.1 0956 - F LTE\_NR\_DC\_CA\_enh-Core

### 6.8.3 Early measurement reporting

R2-2009352 Miscellaneous corrections on early measurement reporting in 38.331 CATT CR Rel-16 38.331 16.2.0 2056 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2009353 Miscellaneous corrections on early measurement reporting in 36.331 CATT CR Rel-16 36.331 16.2.1 4460 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2009551 Measurement applicability and validity Nokia, Nokia Shanghai Bell CR Rel-15 36.331 15.11.0 4468 - F LTE\_euCA-Core

R2-2009552 Measurement applicability and validity Nokia, Nokia Shanghai Bell CR Rel-16 36.331 16.2.1 4469 - F LTE\_euCA-Core, LTE\_NR\_DC\_CA\_enh-Core

R2-2009553 Measurement applicability and validity Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.2.0 2090 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010023 Serving cell results for early measurements Ericsson CR Rel-16 38.331 16.2.0 2162 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010024 Early measurement requirements Ericsson discussion LTE\_NR\_DC\_CA\_enh-Core

R2-2010653 Reporting of dle/inactive measurement not obtained in the current cell Huawei, HiSilicon CR Rel-16 36.331 16.2.1 4528 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010654 Reporting of dle/inactive measurement not obtained in the current cell Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2268 - F LTE\_NR\_DC\_CA\_enh-Core

### 6.8.4 Other DCCA corrections

Including NR-NR DC, MCG SCell and SCG configuration with RRC resume, Fast MCG link recovery, and RRC corrections that doesn’t fit under the other headings.

Including outcome of [Post111-e][918][DCCA] SCell SMTC window for Unaligned CA (CMCC)

Including capability signalling based on agreements in RP-202030.

R2-2008968 Clarification of NR-DC with unaligned CA Qualcomm Incorporated discussion Rel-16 LTE\_NR\_DC\_CA\_enh-Core

R2-2009354 Miscellaneous corrections for Rel-16 DCCA in 38.331 CATT CR Rel-16 38.331 16.2.0 2057 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2009414 Correction on tdm-PatternConfig2 configuration upon MR-DC Release MediaTek Inc. CR Rel-16 38.331 16.2.0 2072 - F LTE\_NR\_DC\_CA\_enh-Core Withdrawn

R2-2009415 Correction on tdm-PatternConfig2 configuration upon MR-DC Release MediaTek Inc. CR Rel-16 36.331 16.2.1 4462 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010025 Missing fields for Toffset coordination Ericsson, Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.2.0 2163 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010026 Correction on sk-counter in RRCResume Ericsson CR Rel-16 38.331 16.2.0 2164 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010027 Correction on p-UE-FR2 for NR-DC power control Ericsson, NTTDOCOMO CR Rel-16 38.331 16.2.0 2165 - F LTE\_NR\_DC\_CA\_enh-Core Revised

R2-2010028 Processing delay requirements for DLInformationTransferMRDC Ericsson CR Rel-16 38.331 16.2.0 2166 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010112 Correction on p-UE-FR2 for NR-DC power control Ericsson, NTTDOCOMO CR Rel-16 38.331 16.2.0 2165 1 F LTE\_NR\_DC\_CA\_enh-Core R2-2010027

R2-2010115 Remaining issues on Toffset for NR-DC power control Huawei, HiSilicon discussion Rel-16 LTE\_NR\_DC\_CA\_enh-Core

R2-2010116 Correction on SCG-related fields in RRCConnection Resume Huawei, HiSilicon CR Rel-16 36.331 16.2.1 4495 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010117 Correction for fast MCG link recovery via SRB3 in NR-DC Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2177 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010118 Processing delay requirements for RRC resume Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2178 - C LTE\_NR\_DC\_CA\_enh-Core

R2-2010119 Processing delay requirements for RRC resume Huawei, HiSilicon CR Rel-16 36.331 16.2.1 4496 - C LTE\_NR\_DC\_CA\_enh-Core

R2-2010120 Miscellaneous corrections for DCCA Huawei, HiSilicon CR Rel-16 36.331 16.2.1 4497 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010121 Corrections for resume with SCG Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2179 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010122 Correction for fast MCG link recovery in (NG)EN-DC Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2180 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010255 UE information transmission in LTE fast MCG recovery case SHARP Corporation discussion Rel-16 LTE\_NR\_DC\_CA\_enh-Core

R2-2010256 Clarification on UE information transmission in fast MCG recovery case(36.331) SHARP Corporation CR Rel-16 36.331 16.2.1 4504 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010291 Correction on p-UE-FR2 in NR-DC power control vivo CR Rel-16 38.331 16.2.0 2201 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010340 Correction on p-UE-FR2 for NR-DC power control in FR2 Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2207 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010378 Summary of [Post111-e][918][R16 DCCA] SCell SMTC window for Unaligned CA (CMCC) CMCC discussion Rel-16 LTE\_NR\_DC\_CA\_enh-Core

R2-2010379 CR for Unaligned CA in TS 38.331 CMCC,MediaTek Inc. CR Rel-16 38.331 16.2.0 2212 - C LTE\_NR\_DC\_CA\_enh-Core

R2-2010380 CR for Unaligned CA in TS 38.306 CMCC,MediaTek Inc. CR Rel-16 38.306 16.2.0 0447 - C LTE\_NR\_DC\_CA\_enh-Core

R2-2010566 Clarification on ULInformationTransferMRDC Google Inc. CR Rel-16 38.331 16.2.0 2247 - F NR\_Mob\_enh-Core, LTE\_NR\_DC\_CA\_enh-Core

R2-2010647 Miscellaneous corrections for RRC Transfer procedure Samsung R&D Institute UK CR Rel-16 37.340 16.3.0 0237 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010650 Corrections on messages encapsulated in ULInformationTransferMRDC Samsung R&D Institute UK CR Rel-16 36.331 16.2.1 4527 - F LTE\_NR\_DC\_CA\_enh-Core

### 6.8.5 UE capabilities

R2-2009186 Correction to 36.306 on UE capability of direct SCell activation Qualcomm Incorporated, Ericsson CR Rel-16 36.306 16.2.0 1790 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2009187 Correction to 36.331 on UE capability of direct SCell activation Qualcomm Incorporated, Ericsson CR Rel-16 36.331 16.2.1 4456 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2009437 Capability for beam level NR early measurement reporting MediaTek Inc. CR Rel-16 36.331 16.2.1 4463 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2009438 Capability for beam level NR early measurement reporting MediaTek Inc. CR Rel-16 36.306 16.2.0 1791 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2009554 Direct Scell activation capability Nokia, Nokia Shanghai Bell discussion Rel-16 LTE\_NR\_DC\_CA\_enh-Core

R2-2009666 Adding missing field descriptions of Multi-RAT DC and CA enhancements capabilities Lenovo, Motorola Mobility CR Rel-16 36.331 16.2.1 4474 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010029 Cell group filtering for NR-DC Ericsson discussion LTE\_NR\_DC\_CA\_enh-Core

R2-2010030 Clarification on cross-carrier A-CSI triggering capability Ericsson CR Rel-16 38.306 16.2.0 0437 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010031 Correction on early measurement capabilities Ericsson CR Rel-16 36.306 16.2.0 1795 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010032 Correction on early measurement capabilities Ericsson CR Rel-16 36.331 16.2.1 4493 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010114 UE capability of direct E-UTRAN SCG SCell activation Huawei, HiSilicon discussion Rel-16 LTE\_NR\_DC\_CA\_enh-Core

R2-2010341 Adding UE capability for beam level early measurement reporting (36331) Huawei, HiSilicon CR Rel-16 36.331 16.2.1 4510 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010342 Adding UE capability for beam level early measurement reporting (36306) Huawei, HiSilicon CR Rel-16 36.306 16.2.0 1797 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2010343 Clarification on UE capability of cross-carrier scheduling with different numerologies Huawei, HiSilicon discussion Rel-16 LTE\_NR\_DC\_CA\_enh-Core

R2-2010593 MCG and SCG differentiation in asynchronous NR-DC Samsung Electronics discussion Rel-16

## 6.9 UE Power Saving in NR

(NR\_UE\_pow\_sav-Core; leading WG: RAN1; REL-16; started: Mar 19; Completed Jun 20; WID: RP-200494; SR: RP-200913).

Limit: 3-4 email threads

### 6.9.1 General and Stage-2 corrections

Including incoming LSs, rapporteur inputs, etc

[R2-2008726](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008726.zip) Reply LS on NR SCG release for power saving (R3-205764; contact: ZTE) RAN3 LS in Rel-16 NR\_UE\_pow\_sav-Core To:RAN2

[R2-2008745](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008745.zip) Reply LS on RRM relaxation in power saving (R4-2012122; contact: Huawei) RAN4 LS in Rel-16 NR\_UE\_pow\_sav-Core To:RAN2

### 6.9.2 User plane Corrections

[R2-2008953](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008953.zip) MAC CR for specification redundance between MAC and PHY Xiaomi Communications CR Rel-16 38.321 16.2.1 0902 - F NR\_UE\_pow\_sav-Core

[R2-2009691](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009691.zip) Correction on DCP for power sving vivo CR Rel-16 38.321 16.2.1 0937 - F NR\_UE\_pow\_sav-Core

### 6.9.3 Control plane Corrections

[R2-2009928](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009928.zip) Correction on RRC state preference - Opt 1 Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.2.0 2144 - F NR\_UE\_pow\_sav-Core

[R2-2009929](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009929.zip) Correction on RRC state preference – Opt 2 Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.2.0 2145 - F NR\_UE\_pow\_sav-Core

[R2-2009079](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009079.zip) Duplicated capture for RRM relaxation in RAN2 and RAN4 vivo discussion Rel-16 NR\_UE\_pow\_sav-Core

[R2-2009080](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009080.zip) Summary of RRM relaxation behaviors vivo, CATT discussion Rel-16 NR\_UE\_pow\_sav-Core R2-2008569

[R2-2009081](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009081.zip) [Draft] LS to RAN4 on RRM measurement relaxation in power saving vivo LS out Rel-16 NR\_UE\_pow\_sav-Core To:RAN4

[R2-2009082](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009082.zip) Correction on field description of highPriorityMeasRelax vivo CR Rel-16 38.331 16.2.0 2032 - F NR\_UE\_pow\_sav-Core

[R2-2009370](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009370.zip) Correction on cell reselection within 1 hour measurement interval CATT CR Rel-16 38.304 16.2.0 0189 - F NR\_UE\_pow\_sav-Core Withdrawn

[R2-2009462](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009462.zip) UE assistance information for DRX preference on secondary DRX group - Option1 OPPO, Ericsson CR Rel-16 38.331 16.2.0 2075 - F NR\_UE\_pow\_sav-Core

[R2-2009463](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009463.zip) UE assistance information for DRX preference on secondary DRX group - Option2 OPPO, Ericsson, Qualcomm, Apple, Xiaomi CR Rel-16 38.331 16.2.0 2076 - F NR\_UE\_pow\_sav-Core

[R2-2009952](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009952.zip) Way forward relaxed RRM requirements in RAN2 and RAN4 Ericsson discussion Rel-16 NR\_newRAT-Core

[R2-2010243](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010243.zip) Correction on otherConfig for RRCResume Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2193 - F NR\_UE\_pow\_sav-Core

[R2-2010595](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010595.zip) Correction on RRM relaxation Samsung Electronics CR Rel-16 38.304 16.2.0 0193 - F NR\_UE\_pow\_sav-Core

[R2-2010597](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010597.zip) Correction on cell reselection within 1 hour measurement interval CATT CR Rel-16 38.304 16.2.0 0194 - F NR\_UE\_pow\_sav-Core

## 6.10 SON MDT support for NR

(NR\_SON\_MDT-Core; leading WG: RAN3; REL-16; started: Jun 19; Completed June 20; WID: RP-191776; SR RP-200773). Documents in this agenda item will be handled in a break out session

Limit: 4-5 email threads

### 6.10.1 General and stage-2 corrections

Including incoming LSs, TS 37.320 corrections

[R2-2008764](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008764.zip) LS Reply on QoS Monitoring for URLLC (S5-204537; contact: Intel) SA5 LS in Rel-16 To:RAN3, SA2 Cc:RAN2

[R2-2008765](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008765.zip) Reply LS on the user consent for trace reporting (S5-204542; contact: Huawei) SA5 LS in Rel-16 TEI16 To:RAN2, RAN3, SA3

[R2-2009419](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009419.zip) User consent principles Nokia, Nokia Shanghai Bell, Ericsson discussion Rel-16 NR\_SON\_MDT-Core

[R2-2009420](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009420.zip) Draft reply LS on the user consent for trace reporting Nokia, Nokia Shanghai Bell LS out Rel-16 NR\_SON\_MDT-Core To:SA5, RAN3, SA3

[R2-2009679](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009679.zip) Corrections to TS 37.320 vivo CR Rel-16 37.320 16.2.0 0091 - F NR\_SON\_MDT-Core

[R2-2010039](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010039.zip) Editorial Corrections Ericsson, Nokia , CMCC CR Rel-16 37.320 16.2.0 0092 - F NR\_SON\_MDT-Core

[R2-2010040](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010040.zip) On end of measurement collection period related to WLAN and BT measurements Ericsson CR Rel-16 37.320 16.2.0 0093 - F NR\_SON\_MDT-Core

R2-2010398 Summary for AI 6.10.1 on General and stage-2 corrections CMCC discussion Rel-17 NR\_SON\_MDT-Core Late

[R2-2010408](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010408.zip) Clarification on Area Checking Samsung CR Rel-16 37.320 16.2.0 0095 - F NR\_SON\_MDT-Core

[R2-2010611](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010611.zip) On time stamp inclusion for event triggered logged MDT Ericsson CR Rel-16 37.320 16.2.0 0096 - F NR\_SON\_MDT-Core

[R2-2010614](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010614.zip) On Time To Trigger (TTT) configuration associated to L1 event in logged MDT Ericsson CR Rel-16 37.320 16.2.0 0097 - F NR\_SON\_MDT-Core

[R2-2010690](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010690.zip) LS on Clarification on URLLC QoS Monitoring (S2-2007825; contact: Huawei) SA2 LS in Rel-16 5G\_URLLC To:RAN3, CT4 Cc:SA5, RAN2

### 6.10.2 TS 38.314 corrections

[R2-2008919](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008919.zip) Corrections for L2 Measurement CATT CR Rel-16 38.314 16.1.0 0004 - F NR\_SON\_MDT-Core

[R2-2009681](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009681.zip) Miscellaneous corrections to TS 38.314 vivo CR Rel-16 38.314 16.1.0 0005 - F NR\_SON\_MDT-Core

[R2-2010038](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010038.zip) On clarification related to delay measurements in split RAN architecture Ericsson CR Rel-16 38.314 16.1.0 0006 - F NR\_SON\_MDT-Core

[R2-2010041](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010041.zip) Miscellaneous corrections Ericsson, CMCC CR Rel-16 38.314 16.1.0 0007 - F NR\_SON\_MDT-Core

[R2-2010042](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010042.zip) On the usage of #ActiveUEs in inter node messages Ericsson CR Rel-16 38.314 16.1.0 0008 - F NR\_SON\_MDT-Core

[R2-2010191](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010191.zip) Discussion on average Uu delay measurement for L2M Huawei, HiSilicon discussion Rel-16 NR\_SON\_MDT-Core

[R2-2010192](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010192.zip) Discussion on D1 measurement for L2M Huawei, HiSilicon discussion Rel-16 NR\_SON\_MDT-Core

R2-2010193 Correction on TS 38.314 on latency measurements Huawei, HiSilicon CR Rel-16 38.314 16.1.0 0009 - F NR\_SON\_MDT-Core Withdrawn

R2-2010363 Summary for AI 6.10.2 on TS 38.314 corrections CMCC discussion Rel-16 NR\_SON\_MDT-Core Late

[R2-2010610](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010610.zip) On EUTRA related L2 measurements for EN-DC Ericsson discussion

[R2-2010612](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010612.zip) On the clarification of end time of UL PDCP Packet Average Delay Ericsson CR Rel-16 38.314 16.1.0 0010 - F NR\_SON\_MDT-Core

[R2-2010656](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010656.zip) Introduction of MIMO layer based PRB usage measurement CMCC discussion Rel-16 NR\_SON\_MDT-Core Late

[R2-2010663](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010663.zip) Introduction of MIMO layer based PRB usage measurement CMCC CR Rel-16 38.314 16.1.0 0011 - B NR\_SON\_MDT-Core Late

### 6.10.3 RRC corrections

[R2-2008839](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008839.zip) Clarification for CEF Report CATT discussion Rel-16 NR\_SON\_MDT-Core

[R2-2008840](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008840.zip) Corrections for CEF Report CATT CR Rel-16 38.331 16.2.0 2019 - F NR\_SON\_MDT-Core

[R2-2008841](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008841.zip) Correction on RLF Report for Re-connection CATT CR Rel-16 38.331 16.2.0 2020 - F NR\_SON\_MDT-Core

[R2-2008928](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008928.zip) Correction on RLF Report Content Handover from NR to LTE Failure MediaTek Inc. CR Rel-16 38.331 16.2.0 2024 - F NR\_SON\_MDT, NR\_SON\_MDT-Core, e\_5GMDT, NR\_SON\_MDT-UEConTest

R2-2009421 Clarification on UE logging procedure for event-based triger Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.2.0 2143 - F NR\_SON\_MDT-Core Withdrawn

[R2-2009521](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009521.zip) Correction on RLF Report Apple CR Rel-16 38.331 16.2.0 2086 - F NR\_SON\_MDT-Core

[R2-2009522](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009522.zip) Correction on RLF Report Apple CR Rel-16 36.331 16.2.1 4465 - F NR\_SON\_MDT-Core

[R2-2009677](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009677.zip) Correction to TS 36.331 on logged MDT configuration vivo CR Rel-16 36.331 16.2.1 4475 - F NR\_SON\_MDT-Core

[R2-2009678](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009678.zip) Correction to TS 38.331 on logged MDT configuration vivo CR Rel-16 38.331 16.2.0 2103 - F NR\_SON\_MDT-Core

[R2-2009680](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009680.zip) Miscellaneous corrections to TS 38.331 on SON and MDT vivo CR Rel-16 38.331 16.2.0 2104 - F NR\_SON\_MDT-Core

[R2-2009882](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009882.zip) Correction to MDT Google Inc. CR Rel-16 38.331 16.2.0 2141 - F NR\_SON\_MDT-Core

[R2-2010036](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010036.zip) On miscellaneous corrections Ericsson CR Rel-16 38.331 16.2.0 2168 - F NR\_SON\_MDT-Core

[R2-2010037](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010037.zip) On overriding prevention of signalling based MDT with management based MDT Ericsson discussion

[R2-2010043](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010043.zip) On ra-purpose field description Ericsson CR Rel-16 38.331 16.2.0 2169 - F NR\_SON\_MDT-Core

[R2-2010044](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010044.zip) Configuration of WLAN BT and Sensor for CEF reporting Ericsson CR Rel-16 38.331 16.2.0 2170 - F NR\_SON\_MDT-Core

[R2-2010082](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010082.zip) Logged MDT support for non-SIB4 frequencies (early measurments) Samsung Telecommunications discussion NR\_SON\_MDT-Core

[R2-2010083](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010083.zip) Clarification on logged MDT for non-SIB4 frequencies Samsung Telecommunications CR Rel-16 38.331 16.2.0 1805 1 F NR\_SON\_MDT-Core R2-2007225

[R2-2010089](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010089.zip) Ambiguity on retrieval of WLAN and BT location info for Logged MDT Samsung Telecommunications discussion Rel-16 NR\_SON\_MDT-Core

[R2-2010194](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010194.zip) Discussion on user consent Huawei, HiSilicon discussion Rel-16 NR\_SON\_MDT-Core

[R2-2010195](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010195.zip) Correction on user consent for TS 38.331 Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2186 - F NR\_SON\_MDT-Core

[R2-2010196](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010196.zip) Correction on user consent for TS 36.331 Huawei, HiSilicon CR Rel-16 36.331 16.2.1 4499 - F NR\_SON\_MDT-Core

[R2-2010197](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010197.zip) Correction on user consent for TS 37.320 Huawei, HiSilicon CR Rel-16 37.320 16.2.0 0094 - F NR\_SON\_MDT-Core

[R2-2010198](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010198.zip) Draft reply LS on user consent Huawei LS out Rel-16 NR\_SON\_MDT-Core To:SA5 Cc:RAN3, SA3

[R2-2010199](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010199.zip) Correction on the release of obtainCommonLocation Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2187 - F NR\_SON\_MDT-Core

[R2-2010200](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010200.zip) Correction on Inter-RAT SON for 38.331 Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2188 - F NR\_SON\_MDT-Core

[R2-2010201](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010201.zip) Correction on Inter-RAT SON for 36.331 Huawei, HiSilicon CR Rel-16 36.331 16.2.1 4500 - F NR\_SON\_MDT-Core

[R2-2010221](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010221.zip) Summary on 6.10.3 RRC corrections Huawei discussion Rel-16 NR\_SON\_MDT-Core Late

[R2-2010327](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010327.zip) Correction on timer T316 handling Samsung Electronics Co., Ltd CR Rel-16 36.331 16.2.1 4509 - F NR\_SON\_MDT-Core

[R2-2010410](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010410.zip) Miscellaneous Correction on MDT Samsung CR Rel-16 38.331 16.2.0 2216 - F NR\_SON\_MDT-Core

[R2-2010581](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010581.zip) Correction for clearing VarRLF-Report regarding T316 Quectel draftCR Rel-16 36.331 16.2.1 C NR\_SON\_MDT-Core

R2-2010582 Correction for clearing VarRLF-Report regarding T316 Quectel draftCR Rel-16 36.331 16.2.1 C NR\_SON\_MDT-Core Withdrawn

[R2-2010590](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010590.zip) Correction on RA report Samsung Electronics CR Rel-16 38.331 16.2.0 2252 - F NR\_SON\_MDT-Core

[R2-2010591](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010591.zip) Correction on RLF report Samsung Electronics CR Rel-16 38.331 16.2.0 2253 - F NR\_SON\_MDT-Core

[R2-2010603](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010603.zip) Clarification on location configuration in logged MDT ZTE Corporation, Sanechips discussion Rel-16

[R2-2010604](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010604.zip) draftCR on location related configuration for logged MDT Alt1 ZTE Corporation, Sanechips draftCR Rel-16 38.331 16.2.0 F NR\_SON\_MDT-Core

[R2-2010605](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010605.zip) draftCR on location related configuration for logged MDT Alt2 ZTE Corporation, Sanechips draftCR Rel-16 38.331 16.2.0 F NR\_SON\_MDT-Core

[R2-2010606](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010606.zip) Correction to 38331 on RA report ZTE Corporation, Sanechips CR Rel-16 38.331 16.2.0 2255 - F NR\_SON\_MDT-Core

[R2-2010607](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010607.zip) Correction to 38331 on delay measurement ZTE Corporation, Sanechips CR Rel-16 38.331 16.2.0 2256 - F NR\_SON\_MDT-Core

[R2-2010609](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010609.zip) Changes related to RAReport and logged MDT report contents NBC change Ericsson CR Rel-16 38.331 16.2.0 2258 - C NR\_SON\_MDT-Core

[R2-2010613](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010613.zip) On mobility history information associated to Connected mode changes Ericsson CR Rel-16 38.331 16.2.0 2259 - F NR\_SON\_MDT-Core

[R2-2010615](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010615.zip) An indication of reconfiguration with sync type in RLF report Ericsson CR Rel-16 38.331 16.2.0 2260 - F NR\_SON\_MDT-Core

[R2-2010616](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010616.zip) On the lack measResultServingCell availability in Any Cell Selection state Ericsson discussion

[R2-2010617](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010617.zip) On Neighbour cells measurements in logged MDT Ericsson discussion

[R2-2010618](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010618.zip) Resolving issues related to PLMN identity list in RAReport Ericsson CR Rel-16 38.331 16.2.0 2261 - F NR\_SON\_MDT-Core

[R2-2010619](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010619.zip) Changes related to RAReport and logged MDT report contents BC change Ericsson CR Rel-16 38.331 16.2.0 2262 - C NR\_SON\_MDT-Core

[R2-2010662](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010662.zip) Correction on RLF Report for Re-connection CATT CR Rel-16 36.331 16.2.0 4529 - F NR\_SON\_MDT-Core

## 6.11 2-step RACH for NR

(NR\_2step\_RACH-Core; leading WG: RAN1; REL-16; started: Dec 18; Completed: June 20; WID: RP-200085; SR: RP-200622).

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### 6.11.1 General and Stage-2 Corrections

### 6.11.2 User plane corrections

[R2-2009794](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009794.zip) Clarification on the PRACH occasion frequency domain index Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.2.1 0943 - F NR\_2step\_RACH-Core

[R2-2009969](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009969.zip) 2-step RA parameter corrections Ericsson CR Rel-16 38.321 16.2.1 0953 - F NR\_2step\_RACH-Core

[R2-2010402](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010402.zip) Correction on BSR for two-step RA Huawei, HiSilicon CR Rel-16 38.321 16.2.1 0981 - F NR\_2step\_RACH-Core

[R2-2010405](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010405.zip) Correction on DELTA\_PREAMBLE for 2-step RA Huawei, HiSilicon CR Rel-16 38.321 16.2.1 0982 - F NR\_2step\_RACH-Core

### 6.11.3 Control plane corrections

[R2-2009968](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009968.zip) 2-step RA parameter corrections Ericsson CR Rel-16 38.331 16.2.0 2149 - F NR\_2step\_RACH-Core

[R2-2010403](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010403.zip) Correction on msgA-PUSCH-Config Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2213 - F NR\_2step\_RACH-Core

[R2-2010404](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010404.zip) Correction on msgA-DMRS-Config Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2214 - F NR\_2step\_RACH-Core

## 6.12 NR Other Control Plane WIs

(SRVCC\_NR\_to\_UMTS-Core; leading WG: RAN2; REL-16; started: Dec 18; Completed; Mar 20; WID: RP-190713)

(RACS-RAN-Core, leading WG: RAN2; REL-16; started: Mar 19; completed: Jun 20; WID: RP-191088)

(NG\_RAN\_PRN-Core; leading WG: RAN3; REL-16; started: Mar 19; completed: June 20; WID: RP-200122)

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[R2-2008753](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008753.zip) Reply LS on human-readable network name (HRNN) (CP-201361/S1-203197) (S1-203272; contact: vivo) SA1 LS in Rel-16 To:SA2, CT, CT1, RAN2 Cc:CT4

[R2-2008762](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008762.zip) Reply LS on Clarification of CAG only UE accessing EPS network (S2-2007809; contact: Oppo) SA2 LS in Rel-16 Vertical\_LAN To:CT1 Cc:RAN2

[R2-2009065](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009065.zip) Considerations on parameter selection for shared cells Nokia, Nokia Shanghai Bell discussion Rel-16 NG\_RAN\_PRN-Core

[R2-2009066](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009066.zip) Corrections for PNI-NPN related parameter selection Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.2.0 2028 - F NG\_RAN\_PRN-Core

[R2-2009625](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009625.zip) Further Clarification on the Forbidden Tracking Areas ZTE Corporation, Sanechips discussion Rel-16 NG\_RAN\_PRN-Core

[R2-2009626](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009626.zip) Further Clarification on the NPN-only cell ZTE Corporation, Sanechips discussion Rel-16 NG\_RAN\_PRN-Core

[R2-2009628](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009628.zip) CR on Forbidden Tracking Areas ZTE Corporation, Sanechips CR Rel-16 38.304 16.2.0 0190 - F NG\_RAN\_PRN-Core

[R2-2009627](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009627.zip) CR on non-CAG-capable UE ZTE Corporation, Sanechips CR Rel-16 38.300 16.3.0 0309 - F NG\_RAN\_PRN-Core

[R2-2009629](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009629.zip) CR on NPN-only Cell ZTE Corporation, Sanechips CR Rel-16 38.331 16.2.0 2098 - F NG\_RAN\_PRN-Core

[R2-2010015](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010015.zip) Selecting index for PLMN, SNPN and UAC parameters Ericsson discussion

[R2-2010016](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010016.zip) Aligning use of PNI-NPN in RAN2 specs to SA2 specs Ericsson discussion

[R2-2010355](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010355.zip) Discussion on selected CAG Huawei, HiSilicon discussion Rel-16 NG\_RAN\_PRN-Core

[R2-2010033](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010033.zip) Clarification on the total number of CAG identifiers Lenovo, Motorola Mobility CR Rel-16 38.331 16.2.0 2167 - F NG\_RAN\_PRN-Core

[R2-2010356](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010356.zip) Discussion on the selection between PLMN and PNI-NPNs Huawei, HiSilicon discussion Rel-16 NG\_RAN\_PRN-Core

[R2-2010630](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010630.zip) 38.300 Correction on the SNPN-only cell vivo CR Rel-16 38.300 16.3.0 0320 - F NG\_RAN\_PRN-Core

[R2-2010631](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010631.zip) 38.300 Correction on CAG information vivo CR Rel-16 38.300 16.3.0 0321 - F NG\_RAN\_PRN-Core

[R2-2010632](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010632.zip) 38.331 Clarification on the release of RRC connection vivo CR Rel-16 38.331 16.2.0 2264 - F NG\_RAN\_PRN-Core

[R2-2010496](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010496.zip) Clarification on the selection of suitable cell Huawei, HiSilicon CR Rel-16 38.304 16.2.0 0192 - F NG\_RAN\_PRN-Core

[R2-2010259](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010259.zip) Dynamic UMTS Radio Capability impact on SRVCC and RACS Huawei, HiSilicon, Vodafone, China Unicom CR Rel-16 38.300 16.3.0 0317 - F SRVCC\_NR\_to\_UMTS-Core, RACS-RAN-Core

[R2-2010407](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010407.zip) Clarification on SRVCC handover Google Inc. CR Rel-16 38.331 16.2.0 2215 - F SRVCC\_NR\_to\_UMTS-Core

## 6.13 NR eMIMO

(NR\_eMIMO-Core, leading WG: RAN1; REL-16; started: Jun 18; target; Aug 20; WID: RP-200474; R2 part completed)

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[R2-2009905](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009905.zip) BFR on SCell ZTE Corporation, Sanechips, Nokia (Rapporteur) CR Rel-16 38.300 16.3.0 0310 - F NR\_eMIMO-Core

### 6.13.1 User plane corrections

[R2-2009098](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009098.zip) Correction to parameter list for beam failure recovery procedure Samsung Electronics Co., Ltd CR Rel-16 38.321 16.2.1 0907 - F NR\_eMIMO-Core

[R2-2009795](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009795.zip) BFR triggering with candidate beam search Nokia, Nokia Shanghai Bell, Ericsson, ZTE discussion Rel-16 NR\_eMIMO-Core

[R2-2009796](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009796.zip) Clarification on the BFR trigger upon candidate search Nokia, Nokia Shanghai Bell, Ericsson, ZTE CR Rel-16 38.321 16.2.1 0944 - F NR\_eMIMO-Core

[R2-2009797](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009797.zip) Draft LS on BFR requirements time reference Nokia LS out Rel-16 NR\_eMIMO-Core To:RAN WG4

[R2-2009903](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009903.zip) 38.321 Correction on Enhanced PUCCH Spatial Relation ActivationDeactivation MAC CE ZTE Corporation, Sanechips CR Rel-16 38.321 16.2.1 0947 - F NR\_eMIMO-Core

[R2-2009904](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009904.zip) Miscellaneous on 38.321 for BFR and BFR MAC CE ZTE Corporation, Sanechips CR Rel-16 38.321 16.2.1 0948 - F NR\_eMIMO-Core

[R2-2010009](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010009.zip) Correction on BFR MAC CE generation Qualcomm Incorporated, Samsung CR Rel-16 38.321 16.2.1 0885 1 F NR\_eMIMO-Core R2-2008219

[R2-2010013](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010013.zip) Discussion on Enhanced TCI States Activation/Deactivation for UE-specific PDSCH MAC CE on multiple CC case Qualcomm Incorporated discussion Rel-16 NR\_eMIMO-Core

[R2-2010014](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010014.zip) Correction on Enhanced TCI States Activation/Deactivation for UE-specific PDSCH MAC CE Qualcomm Incorporated CR Rel-16 38.321 16.2.1 0955 - F NR\_eMIMO-Core

[R2-2010494](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010494.zip) Correction to bitmap length determination in MAC CEs for BFR Fujitsu CR Rel-16 38.321 16.2.1 0991 - F NR\_eMIMO-Core

[R2-2010628](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010628.zip) Multi-CC simultaneous TCI activation with multi-TRP/panel transmission Ericsson discussion Rel-16 NR\_eMIMO-Core

[R2-2010634](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010634.zip) Reply LS on multi-CC simultaneous TCI activation with multi-TRP/panel transmission Ericsson LS out Rel-16 NR\_eMIMO-Core To:RAN1

[R2-2010637](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010637.zip) Correction for CC list operation for TCI state update MAC CE Ericsson, Samsung CR Rel-16 38.321 16.2.1 0994 - F NR\_eMIMO-Core

### 6.13.2 Control plane corrections

[R2-2009169](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009169.zip) Clarification to DCI format 1-2 TDRA Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.2.0 2038 - F NR\_eMIMO-Core

[R2-2009170](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009170.zip) Stage-2 description of multi-TRP Nokia (Rapporteur) CR Rel-16 38.300 16.3.0 0300 - F NR\_eMIMO-Core

[R2-2010011](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010011.zip) Correction on BFD resource on SCell Qualcomm Incorporated CR Rel-16 38.331 16.2.0 2159 - F NR\_eMIMO-Core

[R2-2010126](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010126.zip) Correction on HARQ ACK/NACK feedback configuration Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2181 - F NR\_eMIMO-Core

[R2-2010127](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010127.zip) Correction on slot based repetition Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2182 - F NR\_eMIMO-Core

[R2-2010625](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010625.zip) On number for supported CORESETs Ericsson discussion Rel-16 NR\_eMIMO-Core

[R2-2010636](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010636.zip) Clarification for multiDCI-MultiTRP-r16 applicability Ericsson CR Rel-16 38.306 16.2.0 0469 - F NR\_eMIMO-Core

R2-2010655 Correction on slot based repetition Huawei, HiSilicon CR Rel-16 38.306 16.2.0 0470 - F NR\_eMIMO-Core Late

## 6.14 NR Other R1 WIs

(NR\_CLI\_RIM; leading WG: RAN1; REL-16; started: Dec 18; Completed: Jun 20; WID: RP-191997;)

(NR\_L1enh\_URLLC-Core, leading WG: RAN1; REL-16; Completed: June 20; WID: RP-191584)

(R1 Led NR TEI16, Other R1 led items)

Documents in this agenda item will be handled in a break out session

Limit: 5 email threads

[R2-2008705](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008705.zip) Reply LS on exchange of information related to SRS-RSRP measurement resource configuration for UE-CLI (R1-2007187; contact: ZTE) RAN1 LS in Rel-16 NR\_CLI\_RIM To:RAN3 Cc:RAN2

[R2-2008729](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008729.zip) Full slot formats support in TDD UL-DL configuration (R3-205794; contact: Qualcomm) RAN3 LS in Rel-16 NR\_CLI\_RIM To:RAN1, RAN2

[R2-2010172](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010172.zip) DRAFT Reply LS on Full slot formats support in TDD UL-DL configuration Qualcomm Incorporated LS out Rel-16 NR\_CLI\_RIM To:RAN3 Cc:RAN1

[R2-2010521](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010521.zip) Supported slot formats in RAN2 specifications Ericsson discussion

### 6.14.1 User plane corrections

### 6.14.2 Control plane corrections

[R2-2008825](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008825.zip) Missing configuration for half-DuplexTDD-CA-SameSCS-r16 Nokia, Nokia Shanghai Bell, Ericsson CR Rel-16 38.331 16.2.0 2017 - B TEI16

[R2-2008826](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008826.zip) Missing configuration for half-DuplexTDD-CA-SameSCS-r16 Nokia, Nokia Shanghai Bell LS out TEI16 To:RAN1

DISCUSSION MAIN SESSION AI 6.1.1 Mon NOV 2

- The two documents above were presented, as the missing parameter is required to complete parameter name consolidation and LS to R1 in main session. Chair think we don't agree these CR + LS now as they were listed for another session.

- Huawei would like time to check the CR.

- Chair: The RRC Parameter Name is agreeable, but as Huawei want to check, the parent IE can anyway not be agreed immediately. Parameter name LS can wait a bit more.

[R2-2010134](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010134.zip) Discussion on RAN3 LS on full slot format support Huawei, HiSilicon discussion Rel-16 NR\_CLI\_RIM-Core

## 6.15 NR Other R4 WIs

(NR\_HST, NR\_RRM\_enh-Core, NR\_RF\_FR1, NR\_RF\_FR2\_req\_enh, NR\_n66\_BW, LTE\_NR\_B41\_Bn41\_PC29dBm-Core, NR\_CSIRS\_L3meas, R4 Led NR TEI16, other R4 led items)

Limit: 6 email threads

**MPE**

* [AT112-e][022][R4 NR16] MPE (Nokia)

Treat R2-2009690, R2-2008910, R2-2009164, R2-2009906, R2-2010289, R2-2009166, R2-2010515, R2-2009165, R2-2010516

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

MAC

[R2-2009690](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009690.zip) Miscellaneous correction on MPE reporting to 38.321 LG Electronics Inc., Ericsson, Apple CR Rel-16 38.321 16.2.1 0936 - F NR\_RF\_FR2\_req\_enh

* [022] revised, include the agreeable parts from the MAC CRs in [R2-2009164](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_112-e/Docs/R2-2009164.zip) and [R2-2008910](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_112-e/Docs/R2-2008910.zip)
* [022] Discuss in phase 2 if MAC needs to be updated to for non-support of indicating MPE status for cross-MAC entity FR2 serving cells.

[R2-2011134](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011134.zip) Miscellaneous correction on MPE reporting to 38.321 LG Electronics Inc., Ericsson, Apple, Nokia, Nokia Shanghai Bell, Lenovo, Motorola Mobility CR Rel-16 38.321 16.2.1 0936 1 F NR\_RF\_FR2\_req\_enh

* [022] Agreed

[R2-2008910](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008910.zip) Correction of MPE reporting field name Lenovo, Motorola Mobility CR Rel-16 38.321 16.2.1 0900 - F NR\_RF\_FR2\_req\_enh

* [022] Agreeable parts merged with CR0936

[R2-2009164](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009164.zip) Corrections to MPE reporting Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.2.1 0909 - F NR\_RF\_FR2\_req\_enh

* [022] Agreeable parts merged with CR0936

MAC - relative threshold trigger

[R2-2009906](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009906.zip) 38.321 Correction on MPE reporting triggered by the relative threshold ZTE Corporation, Sanechips CR Rel-16 38.321 16.2.1 0949 - F NR\_RF\_FR2\_req\_enh

* [022] Not Pursued
* [022] The parameter *phr-Tx-PowerFactorChange* is also used for MPE relative reporting as per previous agreements. No need to clarify this further unless issues are found.

[R2-2010289](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010289.zip) 38.331 Correction on relative threshold for MPE configuration ZTE Corporation, Sanechips CR Rel-16 38.331 16.2.0 2200 - F NR\_RF\_FR2\_req\_enh

* [022] Not Pursued
* [022] The parameter *phr-Tx-PowerFactorChange* is also used for MPE relative reporting as per previous agreements. No need to clarify this further unless issues are found.

Stage 2

[R2-2009166](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009166.zip) Stage-2 description of MPE reporting Nokia (Rapporteur) CR Rel-16 38.300 16.3.0 0299 - F NR\_RF\_FR2\_req\_enh

[R2-2010981](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010981.zip) Stage-2 description of MPE reporting Nokia (Rapporteur) CR Rel-16 38.300 16.3.0 0299 1 F NR\_RF\_FR2\_req\_enh

* [022] Agree to have a Stage-2 description of MPE, according to baseline of the description in [R2-2010981](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_112-e/Docs/R2-2010981.zip). Wording changes according to above to be discussed in phase 2.
* [022] R2-2010981 is Agreed

[R2-2010515](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010515.zip) Introduction of MPE reporting Ericsson CR Rel-16 38.300 16.3.0 0319 - F NR\_RF\_FR2\_req\_enh

* [022] Not Pursued

Dual Connectivity and Handover

[R2-2010516](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010516.zip) MPE for EN-DC, NE-DC, NR-DC and DAPS Ericsson discussion

* [022] Noted
* [022] MPE reporting is not supported in LTE MAC in Rel-16.
* [022] No modifications to MPE reporting during DAPS handover in Rel-16.

[R2-2009165](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009165.zip) Corrections to inter-node signalling for MPE reporting Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.2.0 2037 - F NR\_RF\_FR2\_req\_enh

* [022] Not Pursued
* [022] The inter-node signalling in *HandoverPreparationInformation* will not support MPE information as per [R2-2009165](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_112-e/Docs/R2-2009165.zip) in Rel-16.
* [022] Do not support inter-node signalling for MPE information in NR-DC as per [R2-2009165](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_112-e/Docs/R2-2009165.zip) in Rel-16.

**UL 7.5kHz shift**

* [AT112-e][023][R4 NR16] UL 7.5kHz Shift (Apple)

Treat R2-2008740, R2-2009466, R2-2009467, R2-2009468, R2-2009469, R2-2009470, R2-2009471, R2-2009700, R2-2009701, R2-2010227

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

[R2-2011046](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011046.zip) Summary on [AT112-e][023][R4 NR16] UL 7.5kHz Shift (Apple) Apple

DISCUSSION on-line

P1

- Nokia so not support P1, and think the UE is mandated to support this UL shift, and think the Note is not applicable any more. Chair wonder if this is mandatory for all SCS. Apple think for 15kHz SCS some bands it is mandatory, but it is not clear for others.

- Intel would like to know what the R4 agreements is. Intel think that for 30 kHz SCS there is no agreement, and wonder what scenarios wold be applicable. Intel think we need more detailed view from R4. LG agrees that we need clarifications from R4, but think there are no current bands for which this is problematic. LG don’t support P1 right now.

- QC support to do something, at least for forward compatibility. Ericsson support something for forward compatibility. Ericsson think that for 30kHz SCS this is not supported.

- T-Mobile think UE shall bar the cell if it doesn’t support the UL shift. Vodafone support TMO and think we need to have a lok at R16 and forward ..

- Nokia think RP-202093 RP-202098 specifies clearly what is required, and there this is all mandatory. QC wonder if Nokia think that UE need to support all permutations. QC is worried about forward compatibility. Nokia wonder if this is about R15 or R16.

- Apple think this is more severe for R15 UEs. And P2 is for this case.

- Huawei agrees with Nokias observations, but also think there could be some case where R17 change may not be compatible with R16 UE. Nor sure what was the RP disc.

- Samsung think the main question is if current bands can be changed to apply the Shift. We will likely need to do something for forward compatibility.

- vivo don’t think we need to change R15 behaviour. R16 change cold be ok.

- ZTE think indeed we may need to do something for forward compatibility, for R16, but some UE behaviour can be specified rather than SIB

- Oppo think a UE not support the shift is not compatible with a cell having this shit. UE behaviour should be specified, not left for impl.

- Ericsson agrees that for R15 we don’t need to do anything. A non-compatible UE will fail RACH. For R16 we can still do a change.

- MTK prefer to have something for forward compatibility.

- Nokia think we should check with R4. If the shift is mandatory for a band then there is no case. Nokia think we may need an LS to R4

- Intel think that for n48 and n90 R4 specified new bands. Intel would be ok to have R2 TS change if this was indeed the R4 intention.

- BT are wondering about why to preclude R15 and go only to R16. Apple think that for R15 we may end up with Backwards compatibility issues.

- Samsung think R15 UEs may need this, and think one way would be to allow early implementation.

- Nokia proposes as a compromise to update the cover to indicate that this is strictly for forward compatibility, and that such problem cases are not present today.

- LG wonder about capability bits. LG think that for handover control this is needed. Ericsson think a capability isn’t needed. Ericsson and Huawei think this is not needed now. possible if R4 introduces bands where this is optnional. Samsung are ok without Cap bit for now. QC also think this is ok as per band this is mandatory, when R4 indicate something we can introduce then. ZTE agrees R4 TS is clear.

- intel think in P1 “R4 agreement” need to be removed.

P2

- Apple think we should capture the behaviour for a R15 UE.

- Ericsson think not.

- vivo think this is not specified but a UE impl would likely give up failed access after a while.

* Change to RAN2 spec is needed to support that if a UE does not support UL 7.5kHz shift for the given network configuration, the UE should avoid camping on this cell and consider this cell as barred.
* Introduce the change to RAN2 spec to support UL 7.5kHz shift for TDD bands, based on R2-2010983. The CR should be possible for early impl.
* Indicate on the cover some text that this is strictly for forward compatibility, and that such problem cases are not present today (detailed text TBD)

Continue with CR by email [023]

[R2-2008740](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008740.zip) LS on clarification for the UE behaviour when UL 7.5kHz shift is optionally supported by a UE (R4-2011746; contact: Apple) RAN4 LS in Rel-16 NR\_n48\_LTE\_48\_coex-Core To:RAN2

* [023] Noted

[R2-2009466](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009466.zip) Discussion on UL 7.5kHz shift in NR TDD bands Apple discussion Rel-16 TEI16, NR\_n48\_LTE\_48\_coex-Core, DSS\_LTE\_B38\_NR\_Bn38-Core, DSS\_LTE\_B40\_NR\_Bn40

* [023] Noted

[R2-2010227](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010227.zip) Discussion on supporting 7.5KHz shift for TDD bands Huawei, HiSilicon discussion Rel-16 NR\_n48\_LTE\_48\_coex-Core

* [023] Noted

[R2-2009701](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009701.zip) UE behaviour when UL 7.5KHz shift is not supported Ericsson CR Rel-16 38.331 16.2.0 2107 - F NR\_n48\_LTE\_48\_coex-Core

=> revised

[R2-2010983](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010983.zip) UE behaviour when UL 7.5KHz shift is not supported Ericsson CR Rel-16 38.331 16.2.0 2107 1 F NR\_n48\_LTE\_48\_coex-Core

* [023] Revised

R2-2011066 UE behaviour when UL 7.5KHz shift is not supported Ericsson CR Rel-16 38.331 16.2.0 2107 1 F NR\_n48\_LTE\_48\_coex-Core

* [023] Agreed

[R2-2009467](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009467.zip) UE support on UL 7.5kHz shift in TDD bands – Alt 1 Apple CR Rel-16 38.331 16.2.0 2077 - F TEI16, NR\_n48\_LTE\_48\_coex-Core, DSS\_LTE\_B38\_NR\_Bn38-Core, DSS\_LTE\_B40\_NR\_Bn40

[R2-2009468](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009468.zip) UE support on UL 7.5kHz shift in TDD bands – Alt 2 Apple CR Rel-16 38.331 16.2.0 2078 - F TEI16, NR\_n48\_LTE\_48\_coex-Core, DSS\_LTE\_B38\_NR\_Bn38-Core, DSS\_LTE\_B40\_NR\_Bn40

[R2-2009469](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009469.zip) UE support on UL 7.5kHz shift in TDD bands – Alt 3 Apple CR Rel-16 38.331 16.2.0 2079 - F TEI16, NR\_n48\_LTE\_48\_coex-Core, DSS\_LTE\_B38\_NR\_Bn38-Core, DSS\_LTE\_B40\_NR\_Bn40

[R2-2009470](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009470.zip) UE support on UL 7.5kHz shift in TDD bands Apple CR Rel-16 38.306 16.2.0 0428 - F TEI16, NR\_n48\_LTE\_48\_coex-Core, DSS\_LTE\_B38\_NR\_Bn38-Core, DSS\_LTE\_B40\_NR\_Bn40

[R2-2009471](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009471.zip) Draft response LS on UE capability for UL 7.5kHz shift in TDD bands Apple LS out Rel-16 TEI16, NR\_n48\_LTE\_48\_coex-Core, DSS\_LTE\_B38\_NR\_Bn38-Core, DSS\_LTE\_B40\_NR\_Bn40 To:RAN4

Withdrawn:

[R2-2009700](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009700.zip) UE capability for UL 7.5KHz shift in NR TDD with 30KHz SCS Ericsson CR Rel-16 38.306 16.2.0 0433 - F NR\_n48\_LTE\_48\_coex-Core

* [AT112-e][024][R4 NR16] DC Location (Apple)

Determine how to report, what to report, which scenarios to support etc. Treat R2-2010673, R2-2009167, R2-2009168, R2-2010171, R2-2010048, R2-2010228, R2-2009518, R2-2010409, R2-2009371, R2-2010471, R2-2009306

Intended outcome: Determine agreeable parts, Report. For agreeable parts, agreed CRs, and a reply LS.

Deadline: Intermediate deadline(s) by Rapporteur, Final: EOM (can come back on-line dep on progress)

* THIS TOPIC IS postponed to next meeting

**DC location**

Kick-off on-line first

[R2-2010673](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010673.zip) LS on additional DC location reporting for intra-band UL CA (R4-2011906; contact: Qualcomm) RAN4 LS in Rel-16 NR\_RF\_FR1-Core [R2-2008737](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008737.zip) To:RAN1, RAN2

DISCUSSION On-Line

- QC think we should discuss feasibility first before going into solutions.

- Apple suggest CB on Monday.

- Huawei think a major difference is whether we use RRC or MAC CE solution. Think R4 is working on another CR.

- QC think we need a solution eventually, not just replying to R4 questions.

- Intel think we need to follow RP guidance and do a RRC based signalling solution.

- MTK also think there are two directions, DCI based trigger and RRC based trigger but the DCI based was precluded by RP, so we should use RRC.

- Oppo think the key is whether UE report all possible DC location info or just one. Think we should not only restrict to 2 CCs.

- Ericsson also support RRC solution. Think the second approach is want R4 wanted but gave the first as an alternative

- LG also support RRC based signalling, and think this is feasible. We can ask R4 about more details. Think we should be careful to not say everything is feasible.

- Samsung support RRC, and think just extending current is not sufficiently scalable.

- Nokia think majority prefers RRC, and think MAC raises more questions. R4 are still working on this.

- Apple wonder if companies that want to go with RRC if we then also restrict to 2 CCs. Could also ask this to R4 if we ask R4.

- Apple think a MAC CE solution would report just one value, and this is future proof. This goes in the direction of O1 from R4.

- Intel think there are concerns about both solutions, RRC due to signalling overhead, but RP also restricted the requirement to 2CCs, and to be forward compatible.

- Nokia hopes that R4 will conclude this is possible to derive from UE caps.

- Chair: a majority seems to want to use RRC.

- Nokia want to clarify that the requirement is min 2 UL CC per UE (NOT 2 per FR1 + 2 per FR2). Chair: It seems everyone has this understanding.

* LS is Noted

[R2-2009306](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009306.zip) DC location information reporting Intel Corporation discussion Rel-16 NR\_RF\_FR1-Core

Move from 6.1.2

[R2-2010171](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010171.zip) DC location reporting for intra-band UL CA Qualcomm Incorporated discussion Rel-16 NR\_RF\_FR1-Core

[R2-2010409](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010409.zip) Discussion on support of additional DC location reporting for intra-band UL CA Samsung Electronics Co., Ltd discussion Rel-16 TEI16

[R2-2010048](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010048.zip) DC location reporting for intra-band UL CA Ericsson discussion Rel-16

DISCUSSION on-line, Parts of the 4 docs above

- Ericsson think that Network request with details on what to report makes RRC solution future proof.

* We use RRC, Continue by email

[R2-2009167](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009167.zip) DC location reporting for UL CA Nokia, Nokia Shanghai Bell discussion Rel-16 NR\_RF\_FR1-Core

[R2-2009168](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009168.zip) Draft LS reply on DC location reporting Nokia, Nokia Shanghai Bell LS out Rel-16 NR\_RF\_FR1-Core To:RAN1, RAN4

[R2-2010228](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010228.zip) On the signaling for additional DC location reporting Huawei, HiSilicon discussion Rel-16 NR\_RF\_FR1-Core

[R2-2009518](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009518.zip) Dynamic Reporting of Tx DC Location for UL CA Apple discussion Rel-16 NR\_RF\_FR1-Core

[R2-2009371](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009371.zip) Discussion on DC location reporting for intra-band UL CA CATT discussion Rel-16

[R2-2010471](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010471.zip) Discussion on additional DC location reporting for intra-band UL CA OPPO discussion Rel-16 NR\_RF\_FR1-Core

**CSI-RS mobility**

* [AT112-e][025][R4 NR16] CSI-RS for Mobility (Huawei)

Treat R2-2008749, R2-2010585, R2-2010586, R2-2009775, R2-2009776, R2-2009777, R2-2009365,

Intended outcome: Determine agreeable parts. For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

[R2-2011025](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011025.zip) Summary for Offline [025][R4 NR16] CSI-RS for Mobility Huawei, HiSilicon Report

* [025] Noted, proposals agreed and reflected below

[025] DECISIONS

* [025] Add the UE capability *increasedNumberofCSIRSPerMO-r16* as per RAN1 agreements.
* [025] There’s no need to modify the RAN2 signalling related to CSI-RS resources (for L3 mobility) configuration and reporting.
* [025] Update the field description of *csi-rs-ResourceList-Mobility* to include the new UE capability (taking ZTE’s comments into account).
* [025] Do not extend the value range *maxNumberCSI-RS-RRM-RS-SINR*.
* [025] Do not send a reply LS to RAN4.

[R2-2008749](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008749.zip) LS on number of configurable CSI-RS resources per MO (R4-2012291; contact: Huawei) RAN4 LS in Rel-16 NR\_CSIRS\_L3meas-Core To:RAN1, RAN2

* [025] Noted

[R2-2009775](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009775.zip) On increasing the number of CSI-RS resources for L3 mobility Nokia, Nokia Shanghai Bell discussion Rel-16 NR\_CSIRS\_L3meas

* [025] Noted

[R2-2010585](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010585.zip) 38331 CR for CSI-RS-ResourceConfigMobility Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2250 - C NR\_CSIRS\_L3meas-Core

* [025] revised

[R2-2011026](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011026.zip) 38331 CR for CSI-RS-ResourceConfigMobility Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2250 1 C NR\_CSIRS\_L3meas-Core

* [025] Agreed

[R2-2010586](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010586.zip) 38306 CR for supporting a maximum of 192 CSI-RS resources per MO Huawei, HiSilicon CR Rel-16 38.306 16.2.0 0467 - C NR\_CSIRS\_L3meas-Core

* [025] revised

[R2-2011027](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010586.zip) 38306 CR for supporting a maximum of 192 CSI-RS resources per MO Huawei, HiSilicon CR Rel-16 38.306 16.2.0 0467 1 C NR\_CSIRS\_L3meas-Core

* [025] endorsed, for merge

[R2-2011047](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011047.zip) 38331 CR for increasedNumberofCSIRSPerMO Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2283 - C NR\_CSIRS\_L3meas-Core

- [025] this is the UE caps RRC CR.

* [025] endorsed, for merge

[R2-2009776](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009776.zip) Draft LS response on increasing the number of CSI-RS resources for L3 mobility Nokia, Nokia Shanghai Bell LS out Rel-16 NR\_CSIRS\_L3meas To:RAN1, RAN4

[R2-2009777](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009777.zip) Draft 38331 CR on increasing the number of CSI-RS resources for L3 mobility Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.2.0 2127 - F NR\_CSIRS\_L3meas

[R2-2009365](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009365.zip) Increase of the maximum number of configured CSI-RS resources per MO CATT CR Rel-16 38.331 16.2.0 2060 - F NR\_CSIRS\_L3meas-Core

* [AT112-e][026][R4 NR16] Miscellaneous (Huawei)

Treat R2-2008747, R2-2010598, R2-2010599, R2-2010358, R2-2008741, R2-2009346, R2-2010226, R2-2009245, R2-2009544

Intended outcome: Determine agreeable parts. For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC, If feasible, NR UE caps 38306 38331 deadline Nov 6.

[R2-2011140](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011140.zip) Summary of offline 026 Rel-16 miscellaneous RAN4 issues Huawei, HiSilicon

* [026] Noted, proposals agreed and reflected below

Autonomous gap CGI

Treat by email

[R2-2008747](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008747.zip) Reply LS on CGI reading with autonomous gaps (R4-2012156; contact: ZTE) RAN4 LS in Rel-16 NR\_IIOT\_URLLC\_enh-Core To:RAN2

* [026] Noted

[R2-2010598](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010598.zip) Correction to 38.331 on T321 for autonomous gap based CGI in FR2 ZTE Corporation, Sanechips CR Rel-16 38.331 16.2.0 2254 - F NR\_RRM\_enh-Core

- [026] Rapporteur, Intermediate: R2-2010598 and R2-2010599 are pursued. Detailed comments to the CRs, if any, can be further reviewed in Part 2.

* [026] Agreed

[R2-2010599](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010599.zip) Correction to 36.331 on T321 for autonomous gap based CGI in FR2 ZTE Corporation, Sanechips CR Rel-16 36.331 16.2.1 4522 - F NR\_RRM\_enh-Core

* [026] Agreed

[R2-2010358](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010358.zip) 38331 CR on CGI reading with autonomous gaps Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2209 - F NR\_newRAT-Core

* [026] not pursued

HPUE

By email only, short UE cap

[R2-2008741](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008741.zip) LS on UE capability for PC2 inter-band EN-DC (LTE FDD+NR TDD) (R4-2011787; contact: China Unicom) RAN4 LS in Rel-16 ENDC\_UE\_PC2\_FDD\_TDD To:RAN2

* [015] noted

[R2-2009346](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009346.zip) 38306 CR for the support of EN-DC FDD+TDD HPUE China Unicom, Huawei, HiSilicon CR Rel-16 38.306 16.2.0 0425 - B ENDC\_UE\_PC2\_FDD\_TDD-Core

[R2-2010226](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010226.zip) support of EN-DC TDD-FDD HPUE Huawei, HiSilicon, China Unicom CR Rel-16 38.331 16.2.0 2191 - F ENDC\_UE\_PC2\_FDD\_TDD-Core

* [026] Both Not Pursued, already included in CR [015]

UL TX Switching

[R2-2009245](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009245.zip) CR to add prerequisite of UL Tx switching capability ZTE Corporation, Sanechips CR Rel-16 38.306 16.2.0 0420 - F NR\_RF\_FR1

- [026] Rap, intermediate: 12 companies joined the discussion, 6 companies supported the proposal, 3 companies are against the proposal because the proposal is not consistent with RAN1/RAN4 agreement, 3 companies also think RAN2 should not change the agreement without RAN1 confirmation. There is no consensus and thus it is suggested to go online to decide whether to pursue this change.

- [026] Rap, intermediate: R2-2009245 needs an online discussion for decision.

DISCUSSION ON-LINE

- Huawei think R1 and R4 has agreed. Huawei think this should be initiated in R1 R4

- ZTE think R1 and R4 has not discussed this at all, and think this issue was found when implementing in R2 TS, and think the current text causes confusion. ZTE think the only way to get clarification is to send an LS. QC agrees with ZTE.

- Ericsson wonder about the LS.

- vivo have checked and think now that R1 has indeed agreed this and there is no need to send an LS.

- ZTE are surprised whether this has been discussed in R1, is there any evidence that this has been discussed. Huawei think that in 22-1 it is clear that inter-band CA is a prerequisite.

- Companies can check with R1 what the situation is. QC think this has been discussed several times. Huawei think the impression will be that R2 will change agreement. Oppo are ok to send an LS, Nokia are ok to send an LS. ZTE think we don’t need to ask to change an agreement in the LS.

- Chair: It is proposed to send an LS to R1 and ask about intention and correctness of the current prerequisite for 22-1 and 22-2 for Option-1-only-UE. Proponent of R2-2009245 think this has not been adequately covered (if at all) by R1. All companies except one are ok to send the LS.

* Huawei makes a sustained objection to send an LS to R1.

CA emission

Email Only

[R2-2009544](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009544.zip) NR CA additional spectrum emission requirements Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.2.0 1775 1 B NR\_RF\_FR1-Core R2-2007065

- [026] Rap, intermediate: All companies support this change and 1 company has the question on whether this is also applied to Rel-15. As responded by several companies, this change is only applied to Rel-16 as UL CA for some bands is supported in Rel-16.it is therefore suggested to pursue the CR in [R2-2009544](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009544.zip).

- [026] Rap, intermediate: Proposal 4: [R2-2009544](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009544.zip) is pursued. Detailed comments to the CR, if any, can be further reviewed in Part 2.

* [026] revised (if needed)

[R2-2011135](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011135.zip) NR CA additional spectrum emission requirements Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.2.0 1775 2 B NR\_RF\_FR1-Core R2-2007065

* [026] Agreed

**Withdrawn**

[R2-2008737](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008737.zip) LS on additional DC location reporting for intra-band UL CA (R4-2011906; contact: Qualcomm) RAN4 LS in Rel-16 NR\_RF\_FR1-Core To:RAN1, RAN2 Withdrawn

R2-2009907 38.331 Correction on relative threshold for MPE configuration ZTE Corporation, Sanechips CR Rel-16 38.321 16.2.0 0950 - F NR\_RF\_FR2\_req\_enh Withdrawn

## 6.16 NR Other

(R2 led NR TEI16, LSs from CT/SA requesting RAN2 action).

Limit: 2 email threads

**LS in**

[R2-2008722](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008722.zip) Reply LS on energy efficiency (R3-205657; contact: Ericsson) RAN3 LS in Rel-16 FS\_EE5G To:SA5 Cc:RAN2, SA

* [000] Noted

**TEI16 Corrections**

Corrections to functions added for WI TEI16

* [AT112-e][027][NR TEI16] NeedForGap (QC)

Treat R2-2009401, R2-2010547, R2-2010548, R2-2010555, R2-2010556, R2-2010549, R2-2010550, R2-2010553, R2-2010554, R2-2010551, R2-2010552

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

CLOSED

NeedForGap related NR

Treat on-line first, if possible

[R2-2009401](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009401.zip) Clarification on NeedForGap reporting in NR-DC and NE-DC MediaTek Inc., ZTE Corporation, Sanechips CR Rel-16 38.331 16.2.0 2067 - F NR\_newRAT-Core

* [027] Not pursued

[R2-2010547](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010547.zip) 1 bit capbility for gap requirment info for EN-DC Qualcomm Incorporated CR Rel-16 38.306 16.2.0 0462 - B TEI16

Moved From 6.1

[R2-2010548](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010548.zip) 1 bit capbility for gap requirment info for EN-DC Qualcomm Incorporated CR Rel-16 38.331 16.2.0 2238 - B TEI16

Moved From 6.1

[R2-2010555](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010555.zip) NeedForGap for EN-DC Qualcomm Incorporated CR Rel-16 38.306 16.2.0 0465 - B TEI16

Moved From 6.1

[R2-2010556](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010556.zip) NeedForGap for EN-DC Qualcomm Incorporated CR Rel-16 38.331 16.2.0 2241 - B TEI16

Moved From 6.1

[R2-2010549](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010549.zip) 1 bit capbility for gap requirment info for NR Qualcomm Incorporated CR Rel-16 38.306 16.2.0 0463 - B TEI16

Moved From 6.1

[R2-2010550](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010550.zip) 1 bit capbility for gap requirment info for NR Qualcomm Incorporated CR Rel-16 38.331 16.2.0 2239 - B TEI16

Moved From 6.1

[R2-2010553](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010553.zip) gap capability dynamic reporting for NR-DC Qualcomm Incorporated CR Rel-16 38.306 16.2.0 0464 - B TEI16

Moved From 6.1

[R2-2010554](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010554.zip) gap capability dynamic reporting for NR-DC Qualcomm Incorporated CR Rel-16 38.331 16.2.0 2240 - B TEI16

NeedForGap related LTE

Treat on-line first, if possible

[R2-2010551](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010551.zip) 1 bit capbility for gap requirment info for LTE Qualcomm Incorporated CR Rel-16 36.306 16.2.0 1799 - C LTE\_feMob-Core

Moved from 7.4.3

[R2-2010552](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010552.zip) 1 bit capbility for gap requirment info for LTE Qualcomm Incorporated CR Rel-16 36.331 16.2.1 4521 - C LTE\_feMob-Core

Moved from 7.4.3

On-line discussion Nov 4, on all the 1-bit + dynamic proposals above (10 tdocs)

- MTK wonder about the 1-bit approach is about Fr1 Fr2 separation etc. Wonder if this overlaps with R15 function.

- QC think the 1-bit refers to need gap for FR1 and/or FR2, in capability message. MTK wonders then if this is a new feature that is not decided by R4. MTK point out that R4 has specified gapless measurement in R16.

- QC think the size of UE cap is huge and doesn’t work in the field.

- MTK think for EN\_DC we then have both this semi-static approach in addition to normal cap report. MTK wonder if this is complementary or what. QC clarifies that it may override.

- ZTE wonder how frequent the UE can signal this 1-bit support. QC think it is different per vendor. ZTE think the cap is fixed, regardless current config, and wonder if the UE can support such cap.

- on 1-bit, Huawei think for NR we have already improved and there isn’t much issues. Huawei think the DC case was precluded in the beginning of need for gap discussion due to complexity. Agree for LTE

- QC think there is significant latency in the current methods that is addressed by this change, and think DC cases need to be included.

- Nokia agree with Huawei for 1-bit that for NR there is no issue, and for LTE we already have ways to control which bands are reported. Agree with ZTE that 1-bit is a very strong req for UE. Nokia would like to filter per band. Think DC cases comes with complexity.

- Apple are interested to do something. For 1-bit for LTE, what happens if this is reported to a RAN node that doesn’t support this. QC think this is controlled by the network. Apple think it would need to be sent again by the UE if the network doesn’t support this.

- Intel think that for the dynamic reporting it can be discussed. For 1-bit UE cap Intel has same concerns as other companies. Intel think this is similar to existing functionality for FR2.

- Ericsson are in general supportive of these discussions, in particular for EN-DC (to NR). Is this when EN-DC uses FR1 for SCG.

- LG is concerned about this kind of proposal at this late stage. Understand that this is just optimization, and should not be discussed.

- vivo think this can be discussed but need some time, e.g. for next release.

2nd round

- QC think that at least for LTE the 1-bit cap should be considered. Ericsson are interested in this. Huawei are also open to continue discuss for LTE as the size would be large.

- MTK think that for this case the reporting is there in R15, and think the size is no problem because we have both band filter, and segmentation. Not convinced that we need to do this.

- LG think Rel-16 is closed and think this cannot be discuss this now, oppose also this discussion.

- Nokia wonder if the 1-bit is for saying “always need gap” or “never need gap” is applied. QC think both (when the bit is present).

- Ericsson think that for EN-DC there is no current solution that the UE can indicate that it doesn’t need gaps. MTK think there is per-FR-gap indication, so there is some case, but MTK acknowledge that this is not a complete solution, and we can enhance in future release. QC think the existing solution is associated with other requirements, not just gaps.

- Chair (1st round): There is some interest, for 1-bit approach both for NR and LTE, and for extending dynamic reporting to DC cases, but there are also concerns to do this now as R16 is closed and these are optimizations.

- Chair (2nd round): It is clear that R16 is closed, and we can only do this if there is no opposition, but now there is some opposition

* For R16: No 1-bit approach, neither for NR nor for LTE, and no extension of dynamic reporting to DC cases.
* [AT112-e][028][NR TEI16] Misc Corrections I (Ericsson)

Treat R2-2010514, R2-2009947, R2-2009948, R2-2009099, R2-2009949, R2-2008893, R2-2008894, R2-2008895, R2-2009604, R2-2009605, R2-2009606, R2-2010510, R2-2010511, R2-2009985

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

[R2-2011072](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011072.zip) Email report [AT112-e][028][NR TEI16] Misc Corrections I Ericsson

* [028] Noted, Proposals are reflected below

[R2-2011214](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011214.zip) Email report [AT112-e][028][NR TEI16] Misc Corrections I phase 2 Ericsson

* [028] Noted, Proposals are reflected below

Full data rate UP IP

[R2-2008721](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008721.zip) Reply LS on mandatory support of full rate user plane integrity protection for 5G ( R3-205653; contact: Qualcomm) LS in Rel-16 To:SA, RAN, CT, CT1, SA2, SA3, RAN2

* [000] Noted

[R2-2008756](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008756.zip) LS on mandatory support of full rate user plane integrity protection for 5G (S2-2006181; contact: Qualcomm) SA2 LS in Rel-16 TEI16 To:SA Cc:CT1, SA3, RAN2, RAN3, RAN, CT

* [000] Noted

[R2-2010514](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010514.zip) Full rate UP IP correction Ericsson discussion

* [028] The proposed TP is discussed for agreement in phase 2

[R2-2011199](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011199.zip) Full rate UP IP correction Ericsson, Deutsche Telekom, Intel Corporation CR Rel-16 37.340 16.3.0 0239 - F TEI16

* [029] Agreed

Secondary DRX

[R2-2009947](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009947.zip) Secondary DRX group description is missing Ericsson, Qualcomm CR Rel-16 38.300 16.3.0 0311 - F TEI16

* [028] Only the first two sentences of the TP in [R2-2009947](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_112-e/Docs/R2-2009947.zip) are discussed for agreement in phase 2.
* [028] With the change to remove “timer” from “on-duration timer” the secondary DRX group description is agreeable.
* [028] revised

[R2-2011200](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011200.zip) Secondary DRX group description is missing Ericsson, Qualcomm CR Rel-16 38.300 16.3.0 0311 1 F TEI16

- [028] Nokia: Our input has not been considered

- [028] Rap: prefer 1 week email discussion

* [Post112-e][0xx] Secondary DRX group description (Ericsson)

Scope: Take into account more comments, finish the 38300 CR on Secondary DRX.

Intended outcome: Agreed 38300 CR

Deadline: Short (for RP)

[R2-2009948](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009948.zip) Clarification for aperiodic CSI and secondary DRX group Ericsson, Qualcomm CR Rel-16 38.331 16.2.0 2147 - F TEI16

- [028] CHAIRMAN: Note there was limited support for this. The fact that this is postponed is not considered an invitation for a major discussion next meeting, it mainly gives companies a chance to think one more round.

* [028] Bullet points 1-4 are further discussed in phase 2:

1. Aperiodic CSI request may wakeup the other DRX group impacting the UE power consumption

2. Aperiodic CSI request should be considered the same as cross carrier scheduling with secondary DRX

3. Support of aperiodic CSI with secondary DRX impacts RAN1

4. Aperiodic CSI with secondary DRX is an optimization

* [028] Postponed

[R2-2009099](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009099.zip) Corrections to Active time determination Samsung Electronics Co., Ltd CR Rel-16 38.321 16.2.1 0908 - F NR\_UE\_pow\_sav-Core

Moved from 6.9.2 per request from source. If agreed, the WI code should be revised to TEI16

* [028] Not Pursued

[R2-2009949](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009949.zip) Secondary DRX and architecture options Ericsson, Qualcomm discussion Rel-16 TEI16

* [028] The corrections in [R2-2009949](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_112-e/Docs/R2-2009949.zip) are discussed for agreement in phase 2

Secondary DRX – Enhancement Scell Activation

[R2-2008893](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008893.zip) Correction to DRX state of SCells in secondary DRX group upon SCell activation Qualcomm Incorporated, Ericsson CR Rel-16 38.321 16.2.0 0898 - F TEI16

* [028] Not Pursued

[R2-2008894](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008894.zip) UE capability for DRX state of secondary DRX group upon SCell activation Qualcomm Incorporated, Ericsson CR Rel-16 38.306 16.2.0 0415 - F TEI16

* [028] Not Pursued

[R2-2008895](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008895.zip) Configuration and capability signaling for DRX state of secondary DRX group upon SCell activation Qualcomm Incorporated, Ericsson CR Rel-16 38.331 16.2.0 2023 - F TEI16

* [028] Not Pursued

[R2-2011198](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011198.zip) Clarification for secondary DRX Ericsson CR Rel-16 37.340 16.3.0 0239 - F TEI16

* [028] Agreed

DL segmentation

[R2-2009604](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009604.zip) Timer handling for DL segmented RRC message Samsung discussion Rel-16 TEI16

* [028] Noted

[R2-2009605](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009605.zip) T319 timer handling for DL segmented RRC messages Samsung CR Rel-16 38.331 16.2.0 2097 - F TEI16

* [028] Not Pursued

[R2-2009606](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009606.zip) T300 timer handling for DL segmented RRC messages Samsung CR Rel-16 36.331 16.2.1 4473 - F TEI16

* [028] Not Pursued

[R2-2009985](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009985.zip) Discarding of stored DL RRC message segments when UE transitions to RRC\_IDLE MediaTek Inc. CR Rel-16 38.331 16.2.0 2151 - F TEI16

* [028] Agreed

[R2-2010510](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010510.zip) RRC segmentation for handover and dual connectivity Ericsson CR Rel-16 36.331 16.2.1 4520 - F TEI16

* [028] Not Pursued

[R2-2010511](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010511.zip) RRC segmentation for handover and dual connectivity Ericsson CR Rel-16 38.331 16.2.0 2232 - F TEI16

* [028] Not Pursued
* [028] LS should be sent to RAN3

[R2-2011201](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011201.zip) [DRAFT] LS on DL RRC segmentation Ericsson LSout

* [028] LS is approved, final version in R2-2011266
* [AT112-e][029][NR TEI16] Misc Corrections II (ZTE)

Treat R2-2009488, R2-2009489, R2-2009244, R2-2009812, R2-2010081, R2-2010543, R2-2009240, R2-2009241, R2-2010202, R2-2009849

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

[R2-2011176](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011176.zip) [AT112-e][029][NR TEI16] Misc Corrections II (ZTE) ZTE Corporation

* [029] Noted, proposals agreed and reflected below

Processing time for DL segmentation and NeedForGap

[R2-2009488](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009488.zip) Discussion on RRC processing delay Apple discussion Rel-16 TEI16

- [029] Chair on P1: It seems there was not 100% consensus on this point, but as most UE vendors were supportive and non-supportive companies were network vendors, it can be concluded that this change is needed, so I assume this can be accepted.

* [029] Extending RRC processing time for RRC message segmentation is supported, to discuss detailed solution via long term email disc until next meeting.
* [029] Extending RRC processing time for dynamic NeedForGaps reporting is not supported.
* [Post112-e][0xx][NR TEI16] RRC processing time with segmentation (Apple)

Scope: Make progress based on R2-2009488 and related discussion at R2 112-e.

Intended outcome: Report, agreeable CR

Deadline: long

[R2-2009489](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009489.zip) RRC CR on RRC processing delay Apple CR Rel-16 38.331 16.2.0 2084 - F TEI16

CSI-RS resource in INM

[R2-2009244](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009244.zip) CR to introduce different SCSs of CSI-RS resource in INM ZTE Corporation, Sanechips CR Rel-16 38.331 16.2.0 2049 - F TEI16

* [029] Not Pursued

Overheating

[R2-2009812](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009812.zip) Miscellaneous corrections on overheating assistance information for NR SCG ZTE corporation, Sanechips CR Rel-16 36.331 16.2.1 4489 - F TEI16

* [029] The 1st and 3rd changes in CR R2-2009812 are agreed (update CR to only include these two parts, the 2nd change will be discussed together with below).
* [029] revised

[R2-2011171](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011171.zip) Miscellaneous corrections on overheating assistance information for NR SCG ZTE corporation, Sanechips CR Rel-16 36.331 16.2.1 4489 1 F TEI16

* [029] Agreed

[R2-2010081](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010081.zip) Correction regarding overheating assistance for SCG Samsung Telecommunications CR Rel-16 36.331 16.2.1 4494 - F TEI16

- [029] Continue to discuss the update of R2-2010081 in phase 2.

* [029] revised

[R2-2011222](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011222.zip) Correction regarding overheating assistance for SCG Samsung Telecommunications CR Rel-16 36.331 16.2.1 4494 1 F TEI16

* [029] Agreed

[R2-2010543](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010543.zip) UE indication when it no longer experiences overheating Ericsson discussion NR\_newRAT-Core

- [029] Rapporteur: Continue to discuss R2-2010543 in phase 2, including:

- Whether UE needs to inform network overheating of SCG is resolved? And whether absence of *overheatingAssistanceForSCG* field is sufficient for this purpose?

- Continue to discuss Proposal 2 to ensure all companies have the same understanding on inter-node operation.

* [029] Noted
* [029] Discuss by email to next meeting
* [AT112-e][0xx][NR TEI16] UE indication when it no longer experiences overheating (Ericsson)

Scope: Based on R2-2010543, find solution, prepare for decisions next meeting

Intended outcome: Report

Deadline: Long

VoiceFallback

[R2-2009240](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009240.zip) Clarify the usage of voiceFallbackIndication for emergency service ZTE Corporation, Sanechips discussion Rel-16 TEI16

- [029] Rapporteur: Continue to discuss P2 in R2-2009240 (whether to extend voiceFallbackIndication-r16 to "emergency service fallback" scenario).

* [029] RAN2 confirms network is allowed to include voiceFallbackIndication-r16 in RRCRelease when triggers "EPS fallback for IMS voice" and QoS Flow establishment request for Emergency Services (No spec change is needed).
* [029] Regarding how to support “first attempt E-UTRAN cell upon HO failure” in case of emergency service fallback, postpone the discussion to next meeting. Following options can be considered:

Opt 1: leave it to UE implemetation;

Opt 2: reuse voiceFallbackIndication-r16 sent by network (FFS on new capability).

* [029] this topic is postponed (expected next meeting)

[R2-2009241](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009241.zip) CR to clarify the usage of voiceFallbackIndication for emergency service ZTE Corporation, Sanechips CR Rel-16 38.331 16.2.0 2048 - F TEI16

* [029] postponed

eCall flag in sharing NW

[R2-2010202](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010202.zip) Discussion on emergency services in RAN sharing scenario Huawei, HiSilicon discussion Rel-16 TEI16

- [029] Nokia: We do not see a need for the stage 2 CR. It just adds a reference to 23.501, and we do not think that adding this reference will really clarify anything new.

- [029] Rapporteur: Continue to discuss stage 2 TS 38.300 CR in phase 2. Chair: Can continue discuss whether the change is to 38300 is needed

* [029] Clarification in TS 38.331 is not needed.

[R2-2011181](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011181.zip) Clarification on the indication of eCall over IMS Ericsson CR Rel-16 38.300 16.2.0 0325 - F TEI16

* [029] Agreed

**TEI16 Semi-New proposal**

Redirection and INACTIVE

[R2-2009849](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009849.zip) Release with Redirect in 2 steps Ericsson discussion Rel-16 TEI16

DISCUSSION on-line (brief)

- Chair asks for high level comments, can we have this in R16 or not.

- QC understands this is just a leftover from R15, and CT1 indeed have done the required change. ZTE also support this.

- Chair: No high level objections, so the discussion on details continues by email [029], and if no detailed issues assume this will be agreed.

- ZTE wonder if Ericsson will provide CRs. Ericsson confirms.

[029] DISCUSSION

- [029] Intermediate point Rap: Continue to discuss Stage2/Stage3 CRs in phase 2 (Please Ericsson provides separate TS 38.331, TS38.306, TS38.300 CRs for phase 2 discussion)

- [029] Intermediate point Rap: Continue to discuss how to handle the scenario when UE resumes to a different gNB.

* [029] will support release with redirection in response to a ResumeRequest for both with/without anchor change cases.
* [029] For anchor change scenario, the current gNB is responsible for determining the redirection.
* [029] Discussion on detail mechanism and CRs is postponed to next meeting.

**TEI16 New Functionality – Not Treated**

MAC timer restart

[R2-2010448](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010448.zip) Correction to MAC timer procedures Qualcomm Incorporated CR Rel-16 38.321 16.2.0 0988 - F TEI16

[R2-2010449](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010449.zip) UE capability for not restarting MAC timers Qualcomm Incorporated CR Rel-16 38.306 16.2.0 0448 - F TEI16

[R2-2010450](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010450.zip) Configuration and capability signaling for not restarting MAC timers Qualcomm Incorporated CR Rel-16 38.331 16.2.0 2225 - F TEI16

Combined RRC procedure

[R2-2009925](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009925.zip) On combined RRC procedures Nokia, Nokia Shanghai Bell, Ericsson discussion Rel-16 TEI16 R2-2007549

[R2-2009926](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009926.zip) RRC processing delays for combined procedures Nokia, Nokia Shanghai Bell, Ericsson CR Rel-16 38.331 16.2.0 1288 6 F TEI16 R2-2007557

Band selection (inter-node)

[R2-2010527](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010527.zip) Discussion on band combination selection NTT DOCOMO, INC. discussion Rel-16 Late

[R2-2010528](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010528.zip) Optimization for band combination selection NTT DOCOMO, INC. CR Rel-16 38.331 16.2.0 2235 - F NR\_newRAT-Core, TEI16

[R2-2010649](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010649.zip) Optimization for band combination selection over inter-node RRC message (2) NTT DOCOMO INC. CR Rel-16 38.331 16.2.0 2267 - F NR\_newRAT-Core, TEI16

IRAT Cell reselection

[R2-2010257](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010257.zip) New RRC Release cause for inter-RAT cell (re)selection in RRC\_INACTIVE Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2195 - F TEI16

[R2-2010258](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010258.zip) New RRC Release cause for inter-RAT cell (re)selection in RRC\_INACTIVE Huawei, HiSilicon CR Rel-16 36.331 16.2.1 4505 - F TEI16

UAC

[R2-2010417](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010417.zip) Discussion on UE behaviours for access barring alleviation Google Inc. discussion Rel-16 38.331 TEI16

Connection Fallback

[R2-2010434](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010434.zip) Clarification on RRC connection fallback handling Google Inc. discussion Rel-16 38.331 TEI16

C-DRX configuration negotiation

[R2-2010564](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010564.zip) Supported C-DRX configurations by the network Qualcomm Incorporated CR Rel-16 38.331 16.2.0 2246 - C NR\_newRAT-Core

Moved from 5.4.1.1

**Withdrawn**

R2-2010203 Clarification on emergency call in RAN sharing scenario Huawei, HiSilicon CR Rel-16 38.300 16.3.0 0315 - F TEI16 Withdrawn

R2-2010204 Clarification on emergency call in RAN sharing scenario Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2189 - F TEI16 Withdrawn

R2-2010487 Miscellaneous corrections on overheating assistance information for NR SCG ZTE corporation, Sanechips CR Rel-16 36.331 16.2.1 4515 - F TEI16 Withdrawn

# 7 Rel-16 EUTRA Work Items

Essential corrections

## 7.1 EUTRA Rel-16 General

No documents should be submitted to 7.1. Please submit to.7.1.x

Editorial corrections should be taken up with the specification editor before submitting to avoid CR duplication.

### 7.1.1 Cross WI RRC corrections

Including [Post111-e][928][LTE16] EUTRA Parameter Names Consolidation (Samsung)

[R2-2009608](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009608.zip) Updated consolidated parameter list for Rel-16 LTE Samsung discussion Rel-16 LTE\_eMTC5-Core, NB\_IOTenh3-Core, LTE\_DL\_MIMO\_EE-Core, LTE\_terr\_bcast-Core

[R2-2009609](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009609.zip) Reply LS on updated Rel-16 LTE parameter lists Samsung LS out Rel-16 LTE\_eMTC5-Core, NB\_IOTenh3-Core, LTE\_DL\_MIMO\_EE-Core, LTE\_terr\_bcast-Core To:RAN WG1, RAN WG4

### 7.1.2 Feature Lists and UE capabilities

[R2-2008703](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008703.zip) LS on updated Rel-16 RAN1 UE features list for LTE (R1-2007139; contact: NTT DoCoMo, AT&T) RAN1 LS in Rel-16 LTE\_eMTC5-Core, NB\_IOTenh3-Core, LTE\_DL\_MIMO\_EE-Core, LTE\_terr\_bcast-Core, 5G\_V2X\_NRSL-Core, TEI16 To:RAN2 Cc:RAN4

[R2-2008709](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008709.zip) LS on updated Rel-16 RAN1 UE features lists for LTE (R1-2007329; contact: NTT DoCoMo, AT&T) RAN1 LS in Rel-16 LTE\_eMTC5-Core, NB\_IOTenh3-Core, LTE\_DL\_MIMO\_EE-Core, LTE\_terr\_bcast-Core, 5G\_V2X\_NRSL-Core, TEI16 To:RAN2 Cc:RAN4

[R2-2008742](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008742.zip) LS on Rel-16 updated RAN4 UE features lists for LTE and NR (R4-2011929; contact: CMCC) RAN4 LS in Rel-16 To:RAN2 Cc:RAN1

## 7.2 Additional MTC enhancements for LTE

(LTE\_eMTC5-Core; LTE\_eMTC5-Core; leading WG: RAN1; REL-16; started: Jun 18; Completed: June 20; WID: RP192875;)

Documents in this agenda item will be handled in a break out session.

Some sub-items in 7.2 and 7.3 may be treated jointly.

Limit: 5-6 email threads

### 7.2.1 General and Stage-2 corrections

Including incoming LSs

[R2-2010497](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010497.zip) Support for eDRX cyle beyond 10.24s in RRC\_INACTIVE LG Electronics UK CR Rel-16 36.300 16.3.0 1328 - C LTE\_eMTC5-Core

### 7.2.2 Coexistence with NR corrections

Coexistence with NR for MTC and NB-IoT is treated jointly under this AI.

### 7.2.3 Connection to 5GC corrections

Connection to 5GC for MTC and NB-IoT is treated jointly under this AI.

[R2-2009051](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009051.zip) Discussion for clarification on SIB acquisition for eMTC UE in RRC\_INACTIVE ZTE Corporation, Sanechips discussion Rel-16 LTE\_eMTC5-Core

[R2-2009738](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009738.zip) Correction to the DRX cycle on RRC\_INACTIVE for eMTC Huawei, HiSilicon CR Rel-16 36.331 16.2.1 4483 - F LTE\_eMTC5-Core

[R2-2010461](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010461.zip) Clarification on SIB acquisition for eMTC UE in RRC\_INACTIVE ZTE Corporation, Sanechips CR Rel-16 36.331 16.2.1 4512 - F LTE\_eMTC5-Core

### 7.2.4 MTC UE capabilities corrections

[R2-2009447](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009447.zip) UE capability for RSS on the same 2 RBs of the MPDCCH narrowband Qualcomm Inc, Ericsson CR Rel-16 36.331 16.2.1 4464 - F LTE\_eMTC5-Core

[R2-2009448](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009448.zip) RSS and relaxed monitoring capabilities for eMTC Qualcomm Inc, Ericsson CR Rel-16 36.306 16.2.0 1792 - F LTE\_eMTC5-Core

[R2-2009736](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009736.zip) Addition of missing capabilities for eMTC R16 Huawei, HiSilicon CR Rel-16 36.306 16.2.0 1780 2 F LTE\_eMTC5-Core R2-2008236

[R2-2009737](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009737.zip) Addition of missing capabilities for eMTC R16 Huawei, HiSilicon CR Rel-16 36.331 16.2.1 4482 - F LTE\_eMTC5-Core

### 7.2.5 Other MTC specific corrections

Including corrections related to Mobile-terminated MT early data transmission EDT corrections, Scheduling multiple DL/UL transport blocks corrections, Quality report in Msg3, MPDCCH performance improvement using CRS, Improvements for non-BL UEs, Stand-alone deployment, Mobility enhancements and other MTC specific topics.

## 7.3 Additional enhancements for NB-IoT

(NB\_IOTenh3-Core; leading WG: RAN1; REL-16; started: Jun 18; Completed: June 20; WID: RP-200293)

Documents in this agenda item will be handled in a break out session

Some sub-items in 7.2 and 7.3 may be treated jointly.

Limit: 5-6 email threads

### 7.3.1 General and Stage-2 Corrections

Including incoming LSs etc

[R2-2008758](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008758.zip) Reply LS on system support for WUS (S2-2006478; contact: Qualcomm) SA2 LS in Rel-15 NB\_IOTenh3-Core, LTE\_eMTC5-Core To:RAN2, RAN3

### 7.3.2 UE-group wake-up signal (WUS) Corrections

UE group wake Up signal for MTC and NB-IoT is treated jointly under this Agenda Item.

[R2-2009024](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009024.zip) Discussion for correction on paging narrowband selection for eMTC UE ZTE Corporation, Sanechips discussion Rel-16 LTE\_eMTC5-Core

[R2-2009728](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009728.zip) Clarification on the last used cell for GWUS Huawei, HiSilicon CR Rel-16 36.331 16.2.1 4479 - F NB\_IOTenh3-Core, LTE\_eMTC5-Core

[R2-2009729](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009729.zip) Clarification on the last used cell for GWUS Huawei, HiSilicon CR Rel-16 36.304 16.2.0 0814 - F NB\_IOTenh3-Core, LTE\_eMTC5-Core

[R2-2010057](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010057.zip) Correction on paging narrowband selection for eMTC UE ZTE Corporation, Sanechips CR Rel-16 36.304 16.2.0 0816 - F LTE\_eMTC5-Core

[R2-2010236](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010236.zip) Clarification on WUS group set selection Ericsson CR Rel-16 36.304 16.2.0 0817 - F LTE\_eMTC5-Core, NB\_IOTenh3-Core

### 7.3.3 Transmission in preconfigured resources corrections

Transmission in preconfigured resources for MTC and NB-IoT is treated jointly under this Agenda Item.

[R2-2009730](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009730.zip) Clarification on the reference (N)RSRP for the first TA validation for PUR Huawei, HiSilicon CR Rel-16 36.331 16.2.1 4480 - F NB\_IOTenh3-Core, LTE\_eMTC5-Core

### 7.3.4 Other NB-IoT Specific corrections

NB-IoT specific topics

[R2-2009733](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009733.zip) Correction to CP RRC Connection Reestablishment in 5GC Huawei, HiSilicon CR Rel-16 36.331 16.2.1 4481 - F NB\_IOTenh3-Core

## 7.4 Even further mobility enhancement in E-UTRAN

(LTE\_feMob-Core; leading WG: RAN2; REL-16; started: Jun 18; Completed: June 20; WID: RP-190921)

No documents should be submitted to 7.4. Please submit to.7.4.x

Documents under 7.4 will be treated together with documents in 6.7

Editorial corrections should be taken up with the specification editor before submitting to avoid CR duplication.

### 7.4.1 General and Stage-2 Corrections

Including incoming LSs (if any)

[R2-2008717](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008717.zip) LS response on power sharing for LTE mobility enhancements (R1-2007420; contact: Ericsson) RAN1 LS in Rel-16 LTE\_feMob-Core To:RAN2

[R2-2010207](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010207.zip) Correction for the definition of DAPS handover (36.300) SHARP Corporation CR Rel-16 36.300 16.3.0 1327 - F LTE\_feMob-Core

[R2-2010208](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010208.zip) Correction for the definition of DAPS handover (38.300) SHARP Corporation CR Rel-16 38.300 16.3.0 0316 - F NR\_Mob\_enh-Core

### 7.4.2 DAPS handover Corrections

This AI jointly addresses corrections to NR and LTE DAPS.

Including corrections to control and user plane for DAPS HO.

Including discussion on how to avoid mTRP usage during DAPS HO as per RAN#89e discussion.

[R2-2009272](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009272.zip) Release SCells/SCG configuration during DAPS HO Intel Corporation discussion Rel-16 NR\_Mob\_enh-Core, LTE\_feMob-Core

[R2-2009275](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009275.zip) Support of DAPS handover without key change Intel Corporation, Ericsson discussion Rel-16 NR\_Mob\_enh-Core R2-2006935

[R2-2009276](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009276.zip) Miscellaneous corrections for Mobility Enhancements Intel Corporation (Rapporteur), Ericsson CR Rel-16 38.331 16.2.0 2050 - F NR\_Mob\_enh-Core

[R2-2009380](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009380.zip) Discussion on SCells and SCG release in DAPS HO ZTE Corporation, Sanechips, Ericsson discussion Rel-16

[R2-2009381](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009381.zip) Clarification on SCells and SCG release in DAPS HO - 38.300 ZTE Corporation, Sanechips, Ericsson CR Rel-16 38.300 16.3.0 0306 - F NR\_Mob\_enh-Core

[R2-2009382](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009382.zip) Clarification on SCells and SCG release in DAPS HO - 36.300 ZTE Corporation, Sanechips, Ericsson CR Rel-16 36.300 16.3.0 1320 - F LTE\_feMob-Core

[R2-2009383](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009383.zip) Clarification on no support of multi-TRP with DAPS HO - 38.331 ZTE Corporation, Sanechips, Ericsson CR Rel-16 38.331 16.2.0 2061 - F NR\_Mob\_enh-Core

[R2-2009384](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009384.zip) Clarification on no support of multi-TRP with DAPS HO - 38.300 ZTE Corporation, Sanechips, Ericsson CR Rel-16 38.300 16.3.0 0307 - F NR\_Mob\_enh-Core

[R2-2009534](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009534.zip) Correction on Source Cell Group and Source SpCell on DAPS CATT,Ericsson CR Rel-16 38.331 16.2.0 2087 - F NR\_Mob\_enh-Core

[R2-2009535](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009535.zip) Corrections on DAPS in 36.331 CATT,Ericsson CR Rel-16 36.331 16.2.1 4467 - F LTE\_feMob-Core

[R2-2009559](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009559.zip) Handling of SCells and mTRP during DAPS HO Qualcomm Incorporated discussion

[R2-2009654](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009654.zip) Handling of expiry of dataInacticityTimer for DAPS NEC discussion Rel-16 LTE\_feMob-Core

[R2-2009765](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009765.zip) Clarification on no DAPS HO in MR-DC Nokia, Nokia Shanghai Bell CR Rel-16 36.300 16.3.0 1301 1 F LTE\_feMob-Core R2-2007358

[R2-2009767](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009767.zip) On how to release SCells when DAPS HO is configured Nokia, Nokia Shanghai Bell discussion Rel-16 LTE\_feMob-Core

[R2-2009768](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009768.zip) Draft 38331 CR SCells during DAPS HO Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.2.0 2126 - F NR\_Mob\_enh-Core

[R2-2009769](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009769.zip) Draft 36331 CR SCells during DAPS HO Nokia, Nokia Shanghai Bell CR Rel-16 36.331 16.2.1 4486 - F LTE\_feMob-Core

[R2-2009770](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009770.zip) Prohibiting simultaneous DAPS and multi-TRP operation Nokia, Nokia Shanghai Bell discussion Rel-16 NR\_Mob\_enh-Core

[R2-2010105](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010105.zip) Clarification of SCells, mTRP, and DC during DAPS HO Qualcomm Incorporated CR Rel-16 38.331 16.2.0 2176 - F NR\_Mob\_enh-Core

[R2-2010209](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010209.zip) Potential security issue on DAPS handover with key change failure SHARP Corporation discussion Rel-16 NR\_Mob\_enh-Core R2-2007790

[R2-2010210](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010210.zip) [Draft] LS to SA3 on security handling for DAPS handover SHARP Corporation LS out Rel-16 NR\_Mob\_enh-Core R2-2007791 To:SA3

[R2-2010294](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010294.zip) Correction on RLF handling in DAPS Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2202 - F NR\_Mob\_enh-Core

[R2-2010295](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010295.zip) Correction on RLF handling in DAPS Huawei, HiSilicon CR Rel-16 36.331 16.2.1 4506 - F LTE\_feMob-Core

[R2-2010297](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010297.zip) Correction on reestablishRLC for DAPS Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2203 - F NR\_Mob\_enh-Core

[R2-2010328](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010328.zip) DAPS HO without security key change LG Electronics Inc. discussion LTE\_feMob-Core

[R2-2010435](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010435.zip) Correction on DAPS OPPO CR Rel-16 38.331 16.2.0 2222 - F NR\_Mob\_enh-Core

[R2-2010499](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010499.zip) RLF in source during DAPS Ericsson discussion

[R2-2010501](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010501.zip) Handling of dataInactivityTimer for DAPS Ericsson discussion

[R2-2010504](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010504.zip) Miscellaneous mobility-related corrections Ericsson, ETRI CR Rel-16 36.331 16.2.1 4518 - F LTE\_feMob-Core

[R2-2010505](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010505.zip) Release source cell configuration at DAPS handover Ericsson CR Rel-16 38.331 16.2.0 2231 - F NR\_Mob\_enh-Core

[R2-2010506](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010506.zip) DAPS handover for bearers configured with NR PDCP Ericsson CR Rel-16 36.331 16.2.1 4519 - F LTE\_feMob-Core

[R2-2010507](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010507.zip) Clarifications on DAPS and conditional handover for LTE-5GC Ericsson CR Rel-16 36.300 16.3.0 1329 - F LTE\_feMob-Core

[R2-2010639](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010639.zip) Discussion on source release indication Huawei, HiSilicon discussion Rel-16 NR\_Mob\_enh-Core, LTE\_feMob-Core

[R2-2010640](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010640.zip) Discussion on releasing source MCG SCells and mTRP Huawei, HiSilicon discussion Rel-16 NR\_Mob\_enh-Core, LTE\_feMob-Core

### 7.4.3 UE capability corrections

Including UE capability aspects of LTE mobility WI that are LTE-specific.

[R2-2009188](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009188.zip) Clarifications to LTE DAPS capabilities Nokia, Nokia Shanghai Bell discussion Rel-16 LTE\_feMob-Core

[R2-2010298](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010298.zip) Correction on LTE DAPS UE capability Huawei, HiSilicon CR Rel-16 36.331 16.2.1 4507 - F LTE\_feMob-Core

[R2-2010299](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010299.zip) Correction on LTE DAPS UE capability Huawei, HiSilicon CR Rel-16 36.306 16.2.0 1796 - F LTE\_feMob-Core

[R2-2010498](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010498.zip) Restriction on PHR for DAPS Ericsson, China Telecom, LG Electronics Inc., Nokia, Nokia Shanghai-Bell, MediaTek, Vivo, CATT CR Rel-16 36.331 16.2.1 4516 - F LTE\_feMob-Core

[R2-2010502](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010502.zip) Introducing power sharing for DAPS handover Ericsson, Qualcomm CR Rel-16 36.306 16.2.0 1798 - F LTE\_feMob-Core

=> Revised in [R2-2010681](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010681.zip)

[R2-2010681](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010681.zip) Introducing power sharing for DAPS handover Ericsson, Qualcomm, Huawei CR Rel-16 36.306 16.2.0 1798 1 F LTE\_feMob-Core

[R2-2010503](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010503.zip) Introducing power sharing for DAPS handover Ericsson, Qualcomm CR Rel-16 36.331 16.2.1 4517 - F LTE\_feMob-Core

=> Revised in [R2-2010682](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010682.zip)

[R2-2010682](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010682.zip) Introducing power sharing for DAPS handover Ericsson, Qualcomm, Huawei CR Rel-16 36.331 16.2.1 4517 1 F LTE\_feMob-Core

### 7.4.4 Other corrections

Only corrections not fitting other agenda items.

Including CHO aspects that are LTE-specific without equivalent NR impacts:

[R2-2010251](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010251.zip) UE information transmission in LTE CHO case SHARP Corporation, Ericsson discussion Rel-16 LTE\_feMob-Core

[R2-2010252](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010252.zip) Clarification on UE information transmission in CHO case(36.331) SHARP Corporation, Ericsson CR Rel-16 36.331 16.2.1 4503 - F LTE\_feMob-Core

[R2-2010641](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010641.zip) Cell selection upon RRCConnectionReestablishment Samsung R&D Institute UK CR Rel-16 36.331 16.2.1 4525 - F LTE\_feMob-Core

[R2-2010645](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010645.zip) Miscellaneous corrections on LTE CHO procedures Samsung R&D Institute UK CR Rel-16 36.331 16.2.1 4526 - F LTE\_feMob-Core

## 7.5 LTE Other WIs

(LTE\_terr\_bcast-Core, LTE\_DL\_MIMO\_EE-Core, LTE\_high\_speed\_enh2-Core; LTE TEI16 Non-positioning)

(Documents relating to Rel-16 LTE but for which there is no existing RAN WI/SI, e.g. LSs from CT/SA requesting RAN2 action)

Editorial corrections should be taken up with the specification editor before submitting to avoid CR duplication.

Including TEI16 corrections and issues that do not fit under any other topic.

[R2-2008704](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008704.zip) LS on Updates to TS 36.300 on terrestrial broadcast (R1-2007154; contact: Qualcomm) RAN1 LS in Rel-16 LTE\_terr\_bcast-Core To:RAN2

[R2-2008907](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008907.zip) Corrections to UE capabilities Lenovo, Motorola Mobility (Rapporteur) CR Rel-16 36.306 16.2.0 1789 - F NR\_IIOT-Core, LTE\_DL\_MIMO\_EE-Core, LTE\_eMTC5-Core, TEI16

[R2-2008908](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008908.zip) Corrections to UE capabilities and SIB25 Lenovo, Motorola Mobility, Ericsson CR Rel-16 36.331 16.2.1 4453 - F LTE\_DL\_MIMO\_EE-Core, LTE\_eMTC5-Core, TEI16

[R2-2009385](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009385.zip) Correction on T312 timer information ZTE Corporation, Sanechips CR Rel-16 36.331 16.2.0 4461 - F LTE\_feMob-Core

[R2-2009433](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009433.zip) Clarification to Fallback band combination definition Nokia, Nokia Shanghai Bell CR Rel-16 36.306 16.2.0 1782 1 F TEI16 R2-2007518

[R2-2009446](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009446.zip) CP length and reference signal for MBSFN with sub-carrier spacing of 0.375 KkHz and 2.5 kKHz Qualcomm Inc CR Rel-16 36.300 16.3.0 1322 - F LTE\_terr\_bcast-Core

[R2-2009603](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009603.zip) Minor changes collected by Rapporteur Samsung CR Rel-16 36.331 16.2.1 4472 - F LTE\_NR\_DC\_CA\_enh-Core

[R2-2009802](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009802.zip) Miscellaneous Stage-2 corrections Nokia (rapporteur), NEC, Lenovo, Motorola Mobility, Intel Corporation, ZTE, Sanechips, Ericsson CR Rel-16 36.300 16.3.0 1324 - F NB\_IOTenh2-Core, LTE\_eMTC4-Core, NB\_IOTenh3-Core, LTE\_eMTC5-Core, LTE\_feMob-Core, TEI16

## 7.6 LTE Positioning

(NavIC, LTE TEI16 Positioning)

Documents in this agenda item will be handled by email. No web conference is planned for this agenda item.

# 8 Rel-17 NR Work Items

## 8.1 NR Multicast

(NR\_MBS-Core; leading WG: RAN2; REL-17; WID: RP-201038)

Time budget: 2 TU

Tdoc Limitation: 6 tdocs

Email max expectation: 4-6 threads

### 8.1.1 Organizational Requirements Scope and Architecture

Including stage-2 proposals. Including [Post111-e][904][MBS] L2 Architecture (Huawei). Including discussion of the SA2 LS in S2-2006044.

Work Plan

[R2-2009334](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009334.zip) Updated NR MBS workplan Huawei, CMCC, HiSilicon discussion Rel-17 NR\_MBS-Core

- Huawei explain that WP is just updated to the TUs from RP.

* Noted

CR

[R2-2009343](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009343.zip) 38.300 running CR for NR MBS Huawei, HiSilicon draftCR Rel-17 38.300 16.3.0 B NR\_MBS-Core

- This is a skeleton. For some sections we may need input from R3.

- Chair think we usually also has a tmp section capturing agreements

- Lenovo think we use to only capture R2 agreement. Huawei think R3 contents indeed is needed.

- Nokia wonders if we can trust the rapporteur to get R3 parts and to update per meeting wo LSes.

- Huawei think that if R3 can agree text then the rapporteur can do the merge.

* Revised (to capture meeting output)

LS

[R2-2008751](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008751.zip) Reply LS on RAN impact of FS\_5MBS Study (RP-202086; contact: Huawei) RAN LS in Rel-17 FS\_5MBS, NR\_MBS-Core To:SA, SA2 Cc:RAN2, RAN3

[R2-2008768](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008768.zip) Reply LS on RAN impact of FS\_5MBS Study (SP-200884; contact: Huawei) SA LS in Rel-17 FS\_5MBS, NR\_MBS-Core To:RAN, SA2 Cc:RAN2, RAN3

* Both Noted
* [AT112-e][036][MBS] SA2 LS on MBS (Huawei)

Scope: Reply to R2-2008755 Can if needed come back on-line.

Intended outcome: Approved LS out

Deadline: EOM

[R2-2008755](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008755.zip) LS on RAN impact of FS\_5MBS Study (S2-2006044; contact: Huawei) SA2 LS in Rel-17 FS\_5MBS, NR\_MBS-Core To:SA, RAN, RAN2, RAN3

* Noted

[R2-2011170](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011170.zip) [DRAFT] Reply LS on RAN impact of FS\_5MBS Study Huawei LS out Rel-17 FS\_5MBS, NR\_MBS-Core To:SA2, RAN3, SA Cc: RAN

* [036] LS out is approved. Final version in R2-2011271

[R2-2011022](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011022.zip) Summary of [AT112-e][036][MBS] SA2 LS on MBS Huawei

DISCUSSION

P1

- ZTE wonder if Network means RAN or Core network. Huawei think we just need a simple solution. ZTE think as long as there is visibility to RAN, then some definition is needed.

- CMCC think the proposal is acceptable.

- Intel think the definition in SA2 is that multicast session is to deliver multicast application and same as for broadcast and broadcast application. Huawei think this is not correct.

P2/2a

- QC agrees that we can limit to Connected.

- ZTE think we need to support all states for scalability.

- MTK are ok w P2 and think the main discussion of 2a etc whether UE can be switched to Inactive or Idle when ther eis no data. Huawei think this is the next p

- vivo would like to not exclude inactive and Idle. Lenovo also agrees and think the UE can receive low QoS data in inactive and Idle. Ericsson agrees, and think we may need to switch users from connected to Idle/Inactive (and back). CATT also think for multicast there can be low QoS and high QoS data for multicast and suggest rewording.

- OPPO think we can assume that Multicast service require high QoS, but support 2-1, and think bcast can be used for low QoS. ZTE think that multicast QoS can be low and ca use mode 2. Intel agrees.

- Intel think high QoS is not just reliability but also latency

- Nokia agrees that we can assume to use Bcast for low QoS and for Multicast we can assume high QoS and that the UE is in connected. Any other permutation can be looked at if time towards the end of the work. BT agrees with Oppo and Nokia. Huawei agrees. QC agrees as well.

- AT&T support Ericsson and wonder how this will be controlled. Chair assumes NAS need to control the UE.

- Samsung prefer to use connected only for all delivery of Data.

- FW think we should add that mode 1 involves feedback.

- CMCC think Bcast is not for inactive.

- Convida think Mcast can use any QoS and the word delivery mode is not so good

- NEC think that IoT devices require low power consumption, so the UE state is important.

- Ericsson cannot accept that MCAST will not support service in IDLE or INACTIVE.

- Lenovo think Bcast Mcast can be decided based on assistance info and are not sure what the TS impact of the two delivery modes is.

- LG think this was also discussed at RP. And think both Mcast and Bcast are available in both connected and Idle. LG think this need to be confirmed by RP.

P3/3a/3b

- Ericsson think whether a UE can go to Idle depends on expected inactivity period and latency requirements, and are concerned that the RAN decided switch Connected – Inactive and CN decides switch to Idle.

- MTK think this shall be based on Delivery mode, where for mode 1 the UE should not go to Idle mode (or inactive).

- Oppo think that we need to consider the data loss during transition.

- FW think this is anyway under network control.

- Xiaomi think that for inactive there is no issue, Connected / Inactive is transparent to CN.

P4

- Huawei suggest to not discuss

- QC think P4 seems reasonable. Ericsson think all possible options need further discussion.

P5

- vivo think we should wait also with this one.

- Xiaomi think the activation / deactivation can even be transparent to RAN.

- ZTE are not sure who shall detect whether no data is ongoing. If CN maybe Sa2 should decide. For legacy, e.g. MCE can suspend/restore.

- FW think indeed there may be RAN impact, but we can let SA2 decide first.

- Samsung think P5 and P6 are ok.

P8

- Ericsson think SA2 asked about information for PTP PTM switch. This said information may be need, but not for PTP PTM switch. Oppo agrees. ZTE agrees and think this can be progressed further.

- Vivo agrees that this info is not only for PTP PTM switch, and think the interest indication can replace the subscribe info. Intel agrees.

- Lenovo think this info do not exclude other.

- CATT think this is also up to R3.

- QC think the subscription info, QoS req and Radio conditions is sufficient and it is up to RAN to decide PTP PTM.

- Nokia think that the fuzzy text now is not useful.

* For Rel-17, R2 specifies two *modes*:

**1: One *delivery mode* for high QoS (reliability, latency) requirement, to be available in CONNECTED (possibly the UE can switch to other states when there is no data reception TBD)**

**2: One *delivery mode* for “low” QoS requirement, where the UE can also receive data in INACTIVE/IDLE (details TBD).**

**R2 assumes (for R17) that delivery mode 1 is used only for multicast sessions.**

**R2 assumes that delivery mode 2 is used for broadcast sessions.**

**The applicability of delivery mode 2 to multicast sessions is FFS.**

* No data: When there is no data ongoing for the multicast session, the UE can stay in RRC\_CONNECTED. Other cases FFS
* It is up to SA2 to decide whether the multicast session activation/deactivation mechanism is supported or not, and RAN2 will discuss if there is any RAN2 impacts based on SA2 inputs.
* It is up to SA2 to decide on the support of local MBS service, and RAN2 will discuss the RAN2 impacts based on SA2 inputs.
* In general, Information of MBS services/groups subscribed by the UE (e.g. TMGI) and QOS requirements of a MBS service should be provided to RAN. Detail information e.g. for PTM PTP switch if any is FFS.

[R2-2009335](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009335.zip) Discussion on SA2 LS on RAN impact of FS\_5MBS Study Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

[R2-2009336](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009336.zip) Draft reply LS to SA2 on RAN impact of FS\_5MBS Study Huawei, HiSilicon LS out Rel-17 NR\_MBS-Core To:SA, SA2, RAN3 Cc:RAN

[R2-2009822](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009822.zip) draft\_Reply LS on RAN impact of FS\_5MBS Study ZTE, Sanechips LS out Rel-17 To:SA2, RAN3

[R2-2009954](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009954.zip) SA2 questions about RRC state transitions for multicast Ericsson discussion Rel-17 NR\_MBS-Core

Broadcast Multicast

[R2-2009036](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009036.zip) NR Multicast Vs Broadcast comparison and Radio Bearer Architecture aspects Qualcomm Inc discussion Rel-17 NR\_MBS-Core

[R2-2009668](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009668.zip) Framework for NR MBS Broadcast and Multicast services Lenovo, Motorola Mobility discussion Rel-17 NR\_MBS-Core

General and Control Plane

[R2-2010234](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010234.zip) Consideration of control plane aspects for NR MBS Kyocera discussion Rel-17

[R2-2009196](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009196.zip) MBS L2 Architecture, user plane and control plane Intel Corporation discussion Rel-17 NR\_MBS-Core

[R2-2010214](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010214.zip) General considerations on NR MBS vivo discussion

L2 Architecture

[R2-2009337](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009337.zip) Summary of Email discussion Post111-e-904 MBS L2 Architecture Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

DISCUSSION

P1

- Xiaomi think SDAP is not needed in the UE side. Oppo agrees with Xiaomi.

- CMCC think SA2 has decided that there can be multiple QoS flows per Session so this is needed. CMCC think R2 can decide how to map QoS flow to DRB. Huawei and Apple and Lenovo agrees

- MTK think SDAP may be needed in both UE and Network. In the UE do to demuxing.

- ZTE think this is a M:N mapping. QC agrees and think at least Network SDAP is needed.

P4/5

- Ericsson wonder why SA2 need to be involved.

- Huawei think we may need to ask anyway.

- QC think MSF function is optional, but think RAN is the suitable place for the main UP processing.

- Oppo think we need to confirm RoHC before deciding on PDCP.

- LG think that for LTE we didn’t have PDCP and we asked SA2 to specify ROHC. If we decide to have PDCP then we don’t need to ask SA2 on ROHC. Apple agrees

- Sony wonder if ROHC is applicable to Bcast as well. Huawei think yes. QC think the protocol stack will be similar/same but the functionality may be somewhat different, but ROHC can apply to both.

- Samsung think we can just agree, we don’t need working assumptions, this is pure R2 fuctionality.

P7

- LG think PDCP SR and retransmission can be used for normal transmission and retransmission,

- Chair: Skip P7 for now.

P8

- CATT think we need to clarify if this is for PTP PTM or both. MTK think for Both.

- LG think this is obvious, and all existing functions can be used.

P10

- Skipped for now

P16/P17

- Intel think a single RLC entity per PDCP entity per pair of PTP PTM, everything gets simpler.

- QC think a single RLC entity is simpler. The point of a single RLC entity is that it is easier to support RLC AM also for PTM.

- MTK agrees with Intel and QC to have the combined RLC-AM entity for PTM PTP. MTK think that also a PDCP based anchor could work.

- Fujitsu wonder if th two RLC entites can be one RLC AM and one RLC UM.

- vivo prefer PDCP anchor solution, and think this enables lossless HO and PTM PTP switch, and think we only need one solution.

- Futurewei think Common RLC it is difficult to adapt to different radio conditions of PTM PTP links when RLC entity is the same.

- Huawei think that the mobility need to be handled by PDCP in any case, but wonder if split bearer is needed at all when supporting RLC-AM. Intel think that also for service continuity there can be a single RLC entity (for both PTM and PTP). Xiaomi think single RLC entity is mostly beneficial in intra-DU scenarios.

Chair: it seems there are two proposals on the table

1) P16P17 with PDCP as the anchor

2) To have also a Common PTP PTM RLC entity to easier support RLC AM for PTM.

Will come back to this discussion.

* The function of mapping from QoS flows to MBS RBs in SDAP is needed for NR MBS. TBD whether any SDAP header is needed.
* (Working assumption) no SDAP functions other than “mapping from QoS flows to radio bearers” and “transfer of user plane data” are supported for MBS. FFS whether to support QoS flows to radio bearers remapping.
* In general: RAN2 wait for SA3’s progress for discussing security issues. TBD whether we need to send LS to SA3.
* RoHC (at least U-mode) can be configured for NR MBS bearers. This is applicable for Mcast, assume this is applicable also to broadcast.
* RoHC is located at PDCP.
* The reordering and in-order delivery function in PDCP is supported for NR MBS.
* The following PDCP functions are also supported for NR MBS: transfer of data; maintenance of PDCP SNs; duplicate discarding. Other PDCP functions are FFS.
* RLC AM is supported for PTP transmission of NR MBS.
* RLC UM is supported for PTP transmission of NR MBS.
* RLC UM is supported for PTM transmission of NR MBS.
* RLC TM is not supported for PTP transmission of NR MBS.
* RLC TM is not supported for PTM transmission of NR MBS.
* FFS for PTM if multiplexing/de-multiplexing of different logical channels are to be supported in MAC for NR MBS.

[R2-2008791](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008791.zip) Discussion on Requirement and Architecture of MBS CATT discussion Rel-17 NR\_MBS-Core

[R2-2010064](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010064.zip) On Stage-2 aspects and overview of NR MBS Samsung discussion

[R2-2008865](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008865.zip) Considerations on Protocol stack and network architecture OPPO discussion Rel-17 NR\_MBS-Core

[R2-2008929](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008929.zip) Discussioin on the protocol stack for NR MBS CHENGDU TD TECH LTD. discussion Late

L2 Architecture - PTP PTM

[R2-2009303](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009303.zip) MBS Protocol Architecture and Logical Channel Aggregation Futurewei discussion Rel-17 NR\_MBS-Core

[R2-2009740](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009740.zip) L2 architecture for NR MBS ZTE, Sanechips discussion Rel-17

[R2-2009883](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009883.zip) Security for PTP and PTM switching Sony discussion Rel-17 NR\_MBS-Core

[R2-2010411](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010411.zip) Discussion on user-plane channel structure for MBS LG Electronics Inc. discussion Rel-17 NR\_MBS-Core

### 8.1.2 Connected mode UEs

#### 8.1.2.1 Reliability

General reliability. Whether to support RLC-AM or not for PTM.

RLC-AM

[R2-2009197](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009197.zip) MBS service reliability improvement Intel Corporation discussion Rel-17 NR\_MBS-Core

[R2-2009034](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009034.zip) NR Multicast PTM bearer RLC AM mode operation Qualcomm Inc, British Telecom, Kyocera discussion Rel-17 NR\_MBS-Core

[R2-2008792](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008792.zip) Reliability Enhancement for PTM Transmission CATT discussion Rel-17 NR\_MBS-Core

DISCUSSION on RLC-AM for PTM

- QC understood that CATT are proposing ARQ in PDCP instead.

- CMCC think RLC AM comes with huge complexity. CMCC doesn’t understand how the combined RLC shall work. MTK agrees and think the complexity is high. Vivo also think so, and wonder why PTM is used at all it very high reliability is required.

- Futurewei think the main argument against RLC-AM is complexity, but it might be simple, and think if PDCP loss is a criterion for reporting modifications are needed in any case.

- Samsung think reliability can also be achieved by other means, and think RLC-UM is sufficient.

- ZTE observes that the assumption seems to be that PTP and PTM shall deliver the same reliability, which seems like a wrong assumption. ZTE think switching PTP PTM is much simpler than RLC-AM for PTM

- LG think majority of companies assume some PDCP impact, and majority think RLC AM for PTM is complex.

- Nokia think the QC paper shows that RLC AM is indeed complex.

- IDT think split bearer concept is very well known, and will be simpler.

- Firstnet would like to have as much reliability as possible. Firstnet request R2 to support both HARQ and RLC-AM for Multicast.

- BT think RLC AM is required for reliability.

- Spreadtrum think UE need to be able to receive PTM and PTP simultaneously.

SOH Support RLC-AM for PTM (this is just indicative for information, to be removed in the final chair notes.

- Yes: AT&T, BT, Convida, FirstNet, Kyocera, Sony, Intel, Futurewei, Oppo, Qualcomm, APT, Xiaomi.

- No: Fujitsu, Sharp, ZTE, vivo, LG, Ericsson, CATT, Apple, Samsung, Google, Lenovo, Nokia, Huawei, IDT, CMCC, MTK, NEC, Spreadtrum,

DISCUSSION

- Ericsson think reliability is very important but think it can be achieved also without RLC-AM, and as this is a simpler solution this should be the baseline,

- Huawei think there is a lot of work in this WI, and much better than LTE with HARQ and switching.

- Nokia think MBMS in the past has been complex and the complexity has not been implemented.

- Futurewei think we can still have ARQ over PTM, even without RLC-AM.

Chairman: Think that most other functions is not dependent on RLC-AM. Furthermore the scope of the WI is a bit large for the TU allocation, Understand similar to Ericsson that reliability can be achieved with mechanisms other than RLC-AM for PTM (but the cost wrt resource usage may be different dep on mechanism). Suggest to assume for now that RLC-AM is not supported for PTM. If it is shown to be needed it can be added, i.e. this can be revisited.

* Working assumption: RLC-AM for PTM is not supported (can be revisited but it means that proponents of RLC-AM for PTM need to demonstrate the need, to change this).

Next day:

- Qualcomm do not want to accept this working assumption. QC want to not make decisions until proper evaluations has been done.

- Oppo think the modelling is important

- LG think reliability can still be there even without RLC-AM for PTM, there are two legs and we have RLC-AM for PTP.

Chair would be ok to evaluate performance, go thought the numbers, to estimate e.g. reliability.

- QC would support this

- Ericsson are interested.

- Huawei think it is difficult and we need R1 info.

-> DISCUSS EMAIL DISCUSSIONS OFFLINE

[R2-2009304](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009304.zip) ARQ of PTM with Logical Channel Aggregation Futurewei discussion Rel-17 NR\_MBS-Core

[R2-2009612](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009612.zip) Reliability of NR MBS NEC discussion Rel-17 NR\_MBS-Core

[R2-2009575](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009575.zip) Reliable MBS Transmission Sharp discussion

[R2-2009600](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009600.zip) Reliability Enhancements for NR MBS Samsung discussion Rel-17 NR\_MBS-Core

Split bearer, Switching, PDCP etc

[R2-2010412](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010412.zip) Discussion on reliability improvement and UL feedback in NR multicast LG Electronics Inc. discussion Rel-17 NR\_MBS-Core

[R2-2009313](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009313.zip) PDCP Operation for MBS Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MBS-Core

[R2-2009494](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009494.zip) Consideration on MBS transmission reliability Apple discussion Rel-17 NR\_MBS-Core

[R2-2009961](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009961.zip) Reliability for multicast operation Ericsson discussion Rel-17 NR\_MBS-Core

[R2-2009338](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009338.zip) Reliability enhancement for NR MBS Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

[R2-2009741](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009741.zip) Consideration on MBS reliability guarantee ZTE, Sanechips discussion Rel-17

General

[R2-2010382](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010382.zip) Consideration on Reliability Enhancement for MBS CMCC discussion Rel-17 NR\_MBS-Core

[R2-2009154](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009154.zip) Discussion on reliability of MBS service Spreadtrum Communications discussion Rel-17 NR\_MBS-Core

[R2-2008866](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008866.zip) Discussion on reliability for MBS reception OPPO discussion Rel-17 NR\_MBS-Core

[R2-2010160](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010160.zip) On reliability enhancement for NR multicast and broadcast Convida Wireless discussion Rel-17

[R2-2010215](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010215.zip) Discussion reliability for RRC\_CONNECTED UEs vivo discussion

[R2-2010643](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010643.zip) Discussion on UE mode in CONNECTED states TD Tech discussion Rel-17 NR\_MBS-Core Late

HARQ

[R2-2009126](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009126.zip) HARQ operation for NR MBS reliable transmission MediaTek Inc. discussion Rel-17 NR\_MBS-Core

[R2-2009879](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009879.zip) On HARQ and RLC for 5G MBS reliability Lenovo, Motorola Mobility discussion Rel-17

[R2-2008932](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008932.zip) Consideration on reliability for NR MBS CHENGDU TD TECH LTD. discussion Late

#### 8.1.2.2 Dynamic PTM PTP switch with service continuity

[R2-2009037](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009037.zip) Enhancements for supporting loss less PTM PTP switching Qualcomm Inc discussion Rel-17 NR\_MBS-Core

[R2-2008867](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008867.zip) Dynamic PTM and PTP switching with service continuity OPPO discussion Rel-17 NR\_MBS-Core

[R2-2009440](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009440.zip) Dynamic PTP PTM switch LG Electronics Inc. discussion

[R2-2009127](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009127.zip) Dynamic PTM-PTP switch MediaTek Inc. discussion Rel-17 NR\_MBS-Core

[R2-2009314](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009314.zip) MBS split bearer configuration and PTP/PTM switching Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MBS-Core

[R2-2008930](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008930.zip) Dynamic switch between PTM and PTP with service continuity CHENGDU TD TECH LTD. discussion Late

[R2-2008989](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008989.zip) Dynamic switch between PTM and PTP for service continuity Intel Corporation discussion Rel-17 NR\_MBS-Core

[R2-2009103](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009103.zip) Consideration on PTP/PTM switching Shanghai Jiao Tong University discussion Rel-17

[R2-2009128](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009128.zip) NR MBS Radio Bearer Structure MediaTek Inc. discussion Rel-17 NR\_MBS-Core

[R2-2009155](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009155.zip) Discussion on dynamic PTM PTP switch Spreadtrum Communications discussion Rel-17 NR\_MBS-Core

[R2-2009305](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009305.zip) Service Continuity during Dynamic PTM/PTP Switch with Logical Channel Aggregation Futurewei discussion Rel-17 NR\_MBS-Core

[R2-2009339](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009339.zip) Support of dynamic switch between PTP and PTM Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

[R2-2008793](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008793.zip) Open Issues on Dynamic PTM and PTP Switch CATT discussion Rel-17 NR\_MBS-Core

[R2-2009495](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009495.zip) PTM PTP switch with MBS service continuity Apple discussion Rel-17 NR\_MBS-Core

[R2-2009576](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009576.zip) Dynamic switch between PTP and PTM Sharp discussion

[R2-2009601](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009601.zip) PTM PTP Switching and MBS Bearer Type Samsung discussion Rel-17 NR\_MBS-Core

[R2-2009613](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009613.zip) Service Continuity for Connected mode UE NEC discussion Rel-17 NR\_MBS-Core

[R2-2009614](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009614.zip) Simultaneous transmission of multicast/unicast NEC discussion Rel-17 NR\_MBS-Core

[R2-2009641](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009641.zip) Discussion on the counting scheme for dynamically switching PTM and PTP ITRI discussion NR\_MBS-Core

[R2-2009673](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009673.zip) Clarification on the dynamic switching in MAC Beijing Xiaomi Mobile Software discussion Rel-17 NR\_MBS-Core

[R2-2009742](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009742.zip) Dynamic mode switching for NR MBS ZTE, Sanechips discussion Rel-17

[R2-2009880](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009880.zip) 5G MBS dynamic switch between PTP and PTM with service continuity Lenovo, Motorola Mobility discussion Rel-17

[R2-2009959](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009959.zip) PTM to PTP Dynamic Switch Ericsson discussion Rel-17 NR\_MBS-Core

[R2-2010139](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010139.zip) Dynamic PTM/PTP Switching Convida Wireless discussion Rel-17

[R2-2010216](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010216.zip) Dynamic PTM PTP switch for RRC Connected UE vivo discussion R2-2007034

[R2-2010383](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010383.zip) Discussion on Dynamic PTM PTP switch with service continuity CMCC discussion Rel-17 NR\_MBS-Core

#### 8.1.2.3 Mobility with Service continuity

Including [Post111-e][905][MBS] Connected Mode Mobility with Service Continuity (CMCC)

[R2-2010385](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010385.zip) Summary of [Post111-e][905][MBS] Connected Mode Mobility with Service Continuity (CMCC) CMCC discussion Rel-17 NR\_MBS-Core

P1/P2

- CMCC proposes that we decide to support lossless handover.

- ZTE think R2 may need to evaluate stack impact first. ZTE think we may have impact on GTP-U tunnel, and think we need to first evaluate.

- CMCC think we should first look at requirements and then solution. R3 has also discussed this.

- Lenovo agrees to support lossless, and agrees with CMCC.

- LG think it is too early, as mechanisms are being looked at now for reliability.

- QC think we need to support lossless, and think we have requirements for this.

- CATT think that at least PTP – PTP mobility can achieve lossless.

- MTK think lossless shall be supported for certain services, but shall not be applied for all scenarios. We likely need a PTP channel to achieve lossless. Solution wise PDCP or RLC based is not much difference.

- Oppo agrees to lossless requirement, whether we rely on PTP PTM is FFS.

- Convida think this need to be supported ..

- BT think we should support lossless, the QoS requires this.

- ZTE think the WID says service continuity which is not necessarily acc to the WID. ZTE further think this violates QoS modelling. Huawei think the WID also specifies support for v2x.

- Nokia think MBS-MBS is too vague.

- Firstnet ack that this is required.

P3

- QC think P3 is ok. QC think R3 is already working on this so we don’t need to send an LS

P4

- MTK agrees in general but think this is a combination of network and UE side.

- QC think we shall remove the word unicast.

- Huawei think we shall just say that data forwarding shall be supported.

- CMCC think that for data forwarding SN synch is needed.

- OPPO think RLC-AM in the bullet 2 is not clear, is it for PTP or PTM.

- Ericsson proposes to skip the second bullet, and think we shall assume the legacy model need to be supported. If we agree B2 it need to be clarified first.

- ZTE think these are lots of R3 issues, think we can agree that legacy mechanism is used.

- Spreadtrum think that if target transmission is faster than src the forwarding might be needed.

- FW think PTP need to be configured at the target. FW think that buffering at the target may be used as well, the key is anyway PTP.

* R2 aim to support lossless handover for MBS-MBS mobility for service that requires this (TBD which detailed scenario but at least PTP-PTP)
* In order to support the lossless handover for 5G MBS services, at least DL PDCP SN synchronization and continuity between the source cell and the target cell should be guaranteed by the network side to realize. The design of specific approach to realize this can be involved with WG RAN3.
* From network side, the source gNB may forward the data to the target gNB and the target gNB will deliver the forwarding data. Meanwhile, the SN STATUS TRANSFER should be extended to cover the PDCP SN for MBS data; Then (TBD after or in parallel) the UE receives the MBS in the target cell by the target cell according to target configuration.
* From UE side, PDCP status report may be supported as well.

[R2-2009496](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009496.zip) Mobility with MBS service continuity Apple discussion Rel-17 NR\_MBS-Core

[R2-2010384](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010384.zip) Discussion on Mobility with Service Continuity CMCC discussion Rel-17 NR\_MBS-Core

[R2-2009340](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009340.zip) Service continuity during inter-cell mobility Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

[R2-2009035](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009035.zip) NR Multicast Broadcast mobility enhancements with service continuity Qualcomm Inc discussion Rel-17 NR\_MBS-Core

[R2-2009054](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009054.zip) HO for NR MBS MediaTek Inc. discussion

[R2-2008794](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008794.zip) Open Issues on Mobility with Service Continuity CATT discussion Rel-17 NR\_MBS-Core

[R2-2008868](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008868.zip) Discussion on mobility with MBS Service continuity OPPO discussion Rel-17 NR\_MBS-Core

[R2-2008931](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008931.zip) Discussion on mobility with service continuity CHENGDU TD TECH LTD. discussion Late

[R2-2008945](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008945.zip) Reliability and latency handling during NR multicast mobility TCL Communication Ltd. discussion Rel-17

[R2-2008990](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008990.zip) MBS service continuity in mobility Intel Corporation discussion Rel-17 NR\_MBS-Core

[R2-2009156](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009156.zip) Discussion on sevice continuity during mobility Spreadtrum Communications discussion Rel-17 NR\_MBS-Core

[R2-2009444](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009444.zip) MBS service continuity LG Electronics Inc. discussion

[R2-2009461](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009461.zip) General Considerations on Mobility with Service Continuity Samsung R&D Institute India discussion

[R2-2009674](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009674.zip) UE assistance information for connected mobility Beijing Xiaomi Mobile Software discussion Rel-17 NR\_MBS-Core

[R2-2009743](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009743.zip) Consideration on lossless handover for NR MBS ZTE, Sanechips discussion Rel-17

[R2-2009881](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009881.zip) Connected Mode Mobility with Service Continuity Lenovo, Motorola Mobility discussion Rel-17

[R2-2009884](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009884.zip) PTP/PTM MRB and RLM Sony discussion Rel-17 NR\_MBS-Core

[R2-2009960](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009960.zip) Mobility for NR MBS Ericsson discussion Rel-17 NR\_MBS-Core

[R2-2010143](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010143.zip) MBS Mobility Management Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MBS-Core

[R2-2010217](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010217.zip) MBS Service Continuity for RRC Connected UE vivo discussion R2-2007035

#### 8.1.2.4 Other

Including e.g. RAN2 aspects of group scheduling.

[R2-2009537](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009537.zip) Group Scheduling and Multiplexing Aspects Samsung R&D Institute India discussion

[R2-2009962](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009962.zip) Aspects of Group Sscheduling Ericsson discussion Rel-17 NR\_MBS-Core

[R2-2010218](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010218.zip) Control of transmission area and group scheduling vivo discussion R2-2007036

[R2-2008874](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008874.zip) Discussion on group-based scheduling for MBS OPPO discussion Rel-17 NR\_MBS-Core

[R2-2008795](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008795.zip) Discussion on Miscellaneous Issues CATT discussion Rel-17 NR\_MBS-Core

[R2-2008934](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008934.zip) RAN2 related aspects for NR MBS CHENGDU TD TECH LTD. discussion Late

[R2-2009315](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009315.zip) Miscellaneous Aspects of MBS Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MBS-Core

[R2-2009320](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009320.zip) Discussion on RAN level QoS handling for MBS service area TCL Communication Ltd. discussion Rel-17

[R2-2009341](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009341.zip) General aspects for NR MBS Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

[R2-2009445](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009445.zip) Consideration on properties of NR for multicastbroadcast LG Electronics Inc. discussion

[R2-2009497](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009497.zip) MBS reception in CONNECTED state Apple discussion Rel-17 NR\_MBS-Core

[R2-2010386](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010386.zip) Discussion on Beam Level MBS Deployment CMCC discussion Rel-17 NR\_MBS-Core

### 8.1.3 Idle and Inactive mode UEs

Including [Post111-e][906][MBS] Idle mode support (CATT)

[R2-2008796](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008796.zip) Summary of Email Discussion Post111-e906 MBS Idle mode support CATT discussion Rel-17 NR\_MBS-Core

DISCUSSION

- Proposal (mod): UE receives the MBS configuration (for broadcast/delivery mode 2) by BCCH and/or MCCH (TBD), and this can be received in Idle / Inactive mode. Connected mode FFS (dep on UE cap and where service is provided etc). A notification mechanism is used to announce the change of MBS Control information.

- Sony support the mod proposal

- Samsung think we don’t need to have two solution, just a connected state solution. We don’t need to explore all solutions at the same time.

- Chair think we already decided on two delivery modes where one is supported for Idle/Inactive. The question now is more about how control info can be received.

- FW support B and B variant.

- Nokia think we got clear guidance from RP and SP. But also share the concern from Samsung that WI is large. Wonder if P2 is for multicast as well. CATT clarifies it is for bcast.

- QC think that the mod proposal means that this is used for Bcast.

- MTK support these proposals

- LG think MCCH and BCCH is more efficient for Idle / Inactive and think notification mech can be included

- vivo think that we should address also P4.

- Huawei think that many things can be he same, IEs and detailed configuration parameters. Even though delivered by different messages.

- ZTE think that we can copy paste LTE solution, and we should mention Connected as well, not B-variant

- OPPO think that the PTM is confusing.

- CMCC support B-variant but think the correct wording is broadcast “session”

- Intel also support B/B-variant, but think BCCH is very limited by modification period. Nokia agrees, but think there may be a limitation of UE receive capabilities.

- FW think from service point of view rec in CONNECTED may be required. QC think that for control signalling there should be no restriction and this should be possible in connected.

- Chair: Keep FFS bec we need to stop.

* UE receives the MBS configuration (for broadcast/delivery mode 2) by BCCH and/or MCCH (TBD), and this can be received in Idle / Inactive mode. Connected mode FFS (dep on UE cap and where service is provided etc). A notification mechanism is used to announce the change of MBS Control information.

[R2-2008797](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008797.zip) Further Discussion on MBS Idle Mode Support CATT, CBN discussion Rel-17 NR\_MBS-Core

[R2-2008869](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008869.zip) Discussion on MBS reception of idle or inactive mode UE OPPO discussion Rel-17 NR\_MBS-Core

[R2-2008933](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008933.zip) NR MBS for RRC\_IDLE/RRC\_INACTIVE UE CHENGDU TD TECH LTD. discussion Late

[R2-2008940](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008940.zip) IDLE/INACTIVE UE support for NR MBS TCL Communication Ltd. discussion Rel-17

[R2-2008991](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008991.zip) MBS support for IDLE and INACTIVE states Intel Corporation discussion Rel-17 NR\_MBS-Core

[R2-2009038](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009038.zip) NR Multicast-Broadcast services and configuration for UEs in different RRC states Qualcomm Inc discussion Rel-17 NR\_MBS-Core

[R2-2009157](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009157.zip) MBS for Idle and Inactive mode UE Spreadtrum Communications discussion Rel-17 NR\_MBS-Core

[R2-2009283](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009283.zip) Discussion on NR MBS structure allowing service for idle UEs Futurewei discussion Rel-17 NR\_MBS-Core

[R2-2009319](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009319.zip) Consideration on MBS support in idle/inactive modes ETRI discussion NR\_MBS-Core

[R2-2009342](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009342.zip) RRC states for MBS reception and Idle/Inactive UE support Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

[R2-2009441](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009441.zip) MBS in IDLEI NACTIVE LG Electronics Inc. discussion

[R2-2009498](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009498.zip) MBS reception in IDLE/INACTIVE state Apple discussion Rel-17 NR\_MBS-Core

[R2-2009555](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009555.zip) IDLE and INACTIVE state UE operation Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MBS-Core

[R2-2009579](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009579.zip) Discussion on introducing counting and UE interest indication mechanism for UE in idle/inactive mode China Unicom discussion NR\_MBS-Core

[R2-2009611](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009611.zip) IDLE /IN\_ACTIVE UE support of MBS NEC discussion Rel-17 NR\_MBS-Core

[R2-2009744](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009744.zip) Support of Idle and Inactive mode UEs for NR MBS ZTE, Sanechips discussion Rel-17

[R2-2009902](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009902.zip) Open issues on MBS idle mode support MediaTek Inc. discussion Rel-17

[R2-2009953](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009953.zip) MBS reception in Idle and Inactive mode Ericsson discussion Rel-17 NR\_MBS-Core

[R2-2010078](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010078.zip) RRC IDLE/ INACTIVE aspects of NR MBS Samsung discussion

[R2-2010145](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010145.zip) On NR multicast and broadcast for RRC\_IDLE/RRC\_INACTIVE UEs Convida Wireless discussion

[R2-2010219](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010219.zip) Discussion on Idle and Inactive mode UEs vivo discussion R2-2007037

[R2-2010387](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010387.zip) Discussion on Idle and Inactive UE MBS Reception CMCC discussion Rel-17 NR\_MBS-Core

[R2-2010644](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010644.zip) Discussion on MBS support for UE in IDLE and INACTIVE states TD Tech discussion Rel-17 NR\_MBS-Core Late

## 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: 3 threads

No documents should be submitted to 8.2. Please submit to.8.2.x

### 8.2.1 Organizational Requirements and Scope

Including work plan and any other rapporteur input.

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

Including outcome of [Post111-e][919][eDCCA] Efficient activation deactivation of SCG (Huawei)

[R2-2008870](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008870.zip) Discussion on SCG suspension or deactivation OPPO discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2009150](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009150.zip) Discussion on efficient activation mechanism for one SCG Spreadtrum Communications discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2009246](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009246.zip) Further consideration on SCG activation and deactivation ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2009259](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009259.zip) On Support of Activation/Deactivation for SCG InterDigital discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2009284](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009284.zip) Further discuss the issues with SCG fast activation Futurewei discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2009357](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009357.zip) Efficient Activation/Deactivation Mechanism for SCG CATT discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2009439](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009439.zip) Discussion on SCG suspension MediaTek Inc. discussion Rel-17 LTE\_NR\_DC\_enh2-Core R2-2007867

[R2-2009531](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009531.zip) Open items on SCG deactivation feature Apple discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2009547](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009547.zip) On fast deactivation and activation of one SG and SCells Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2009590](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009590.zip) Discussion on efficient deactivation mechanism for the SCG China Unicom discussion LTE\_NR\_DC\_enh2-Core

[R2-2009814](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009814.zip) SCG deactivation upon SCG addition NEC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2009867](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009867.zip) On SCG deactivatoin and activation Lenovo, Motorola Mobility discussion Rel-17

[R2-2009913](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009913.zip) Discussion on efficient SCG activation/deactivation China Telecommunications discussion

[R2-2009942](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009942.zip) Signalling for Rel-17 efficient SCG de-activation/re-activation Intel Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2010062](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010062.zip) Efficient SCG (de)activation Ericsson discussion Rel-17

[R2-2010087](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010087.zip) Progressing SCG deactivation and resumption for R17 Samsung Telecommunications discussion Rel-17 LTE\_NR\_DC\_enh2-Core

=> Revised in [R2-2010683](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010683.zip)

[R2-2010683](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010683.zip) Progressing SCG deactivation and resumption for R17 Samsung Telecommunications discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2010123](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010123.zip) [Post111-e][919][eDCCA] Efficient activation deactivation of SCG Discussion on SCG deactivation and activation Huawei discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2010124](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010124.zip) Discussion on SCG deactivation and activation Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2010132](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010132.zip) Efficient SCG activation/deactivation in MR-DC Qualcomm Incorporated discussion Rel-17

[R2-2010231](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010231.zip) Signalling for SCG activation SHARP Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2010283](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010283.zip) Efficient SCG Activation mechanism LG Electronics discussion Rel-17 R2-2007986

[R2-2010290](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010290.zip) Activation and deactivation mechanism for SCG and SCells vivo discussion Rel-17

[R2-2010372](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010372.zip) Considerations on SCG activation or deactivation CMCC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

### 8.2.3 Conditional PSCell change addition

Including outcome of [Post111-e][920][eDCCA] Condtional PSCell Change and Addition (CATT)

[R2-2009088](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009088.zip) Conditional PSCell change / addition vivo discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2009158](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009158.zip) CPC configuration number restriction Spreadtrum Communications discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2009260](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009260.zip) Coexistence of CHO and CPC InterDigital discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2009285](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009285.zip) CPAC failure handling discussio Futurewei discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2009358](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009358.zip) Discussion on Further CPAC Enhancements CATT discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2009359](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009359.zip) Introduction of CPA and MN Initiated Inter-SN CPC CATT draftCR Rel-17 37.340 16.3.0 B LTE\_NR\_DC\_enh2-Core

[R2-2009360](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009360.zip) Summary of [Post111-e][920][eDCCA] Conditional PSCell Change and Addition (CATT) CATT discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2009379](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009379.zip) Discussion on conditional PSCell addition/change ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2009475](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009475.zip) Discussion on conditional PSCell change and addition Apple discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2009592](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009592.zip) Discussion on inter-SN conditional PSCell change (SN initiated) China Unicom discussion LTE\_NR\_DC\_enh2-Core

[R2-2009596](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009596.zip) Discussion on conditional PSCell change and addition OPPO discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2009771](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009771.zip) On Rel-17 Conditional PSCell Addition and Change (CPAC) Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2009815](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009815.zip) Conditional PSCell addition procedure NEC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2009816](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009816.zip) Framework of Inter-SN Conditional PSCell change NEC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2009868](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009868.zip) Issues on inter-SN CPC Lenovo, Motorola Mobility discussion Rel-17

[R2-2010003](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010003.zip) Conditional PSCell Change / Addition Ericsson discussion LTE\_NR\_DC\_enh2-Core

[R2-2010088](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010088.zip) Progressing conditional configuration for R17 Samsung Telecommunications discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2010125](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010125.zip) Discussion on support of conditional PSCell change/addition Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2010130](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010130.zip) Configuration of Conditional PSCell addition/change Qualcomm Incorporated discussion Rel-17

[R2-2010248](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010248.zip) Discussion on SN initiated CPC and CPAC Execution ETRI discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2010282](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010282.zip) Considerations of CPAC in Rel-17 LG Electronics discussion Rel-17 R2-2007985

[R2-2010373](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010373.zip) Discussions about CPAC procedures CMCC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2010529](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010529.zip) Regarding inter MN-SN signaling design for Conditional PSCell Addition Intel Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2010626](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010626.zip) Further consideration for Conditional PSCell addition and change NTT DOCOMO INC. discussion Rel-17 LTE\_NR\_DC\_enh2-Core Late

## 8.3 Multi SIM

(LTE\_NR\_MUSIM-Core; leading WG: RAN2; REL-17; WID: RP-201309)

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

Email max expectation: 3 threads

[R2-2008831](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008831.zip) Discussion on various scenarios of UE switching from network for activities on another network China Telecommunications discussion Rel-17

[R2-2008832](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008832.zip) Support of UE capabilities coordination for Dual Tx/Dual Rx Multi-USIM UEs China Telecommunications discussion

### 8.3.1 Organizational Requirements and Scope

Including work plan and any other rapporteur input.

Including outcome of [Post111-e][917][NR][Multi-SIM] Work prioritization for Multi-SIM (vivo)

[R2-2008754](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008754.zip) LS on System support for Multi-USIM devices (S2-2006037; contact: Intel) SA2 LS in Rel-17 FS\_MUSIM To:RAN2, RAN3, SA3

[R2-2009325](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009325.zip) Summary of [Post111-e][917][Multi-SIM] Multi-Sim vivo discussion

[R2-2009885](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009885.zip) Discussion on Multi SIM Sony, Convida Wireless discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2009943](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009943.zip) [DRAFT] Reply LS on System support for Multi-USIM devices Intel Corporation LS out Rel-17 LTE\_NR\_MUSIM-Core To:SA2 Cc:RAN3

[R2-2010689](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010689.zip) Reply to LS S2-2006037 on System support for Multi-USIM devices (S3-202687; contact: Nokia) SA3 LS in Rel-17 FS\_MUSIM To:SA2, RAN2, RAN3

### 8.3.2 Paging collision avoidance

Including discussion on enhancement(s) to address the collision due to reception of paging when the UE is in IDLE/INACTIVE mode in both the networks associated with respective SIMs [RAN2]

[R2-2008871](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008871.zip) Discussion on paging collision issue for multi-SIM OPPO discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2008955](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008955.zip) Discussion on Paging Collision Avoidance CATT discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2009264](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009264.zip) Analysis of solutions for paging collision Nokia, Nokia Shanghai Bell discussion Rel-17

[R2-2009326](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009326.zip) Evaluation on Paging Collision Solutions vivo discussion

[R2-2009505](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009505.zip) MUSIM Page Collision Avoidance Apple discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2009538](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009538.zip) Effective Solution for Paging Collision Avoidance Samsung R&D Institute India discussion

[R2-2009556](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009556.zip) Preventing paging collisions for Multi-SIM Qualcomm Incorporated discussion

[R2-2009622](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009622.zip) Consideration on the Paging Collision ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2009659](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009659.zip) Consideration on Multi-SIM China Telecom discussion

[R2-2009692](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009692.zip) Definition and solution for paging collision, RRC Inactive, SI change Lenovo, Motorola Mobility discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2009739](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009739.zip) Guidance for SA2 on Solution #16 for Key Issue 2 VODAFONE Group Plc discussion Withdrawn

[R2-2009779](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009779.zip) Discussion of the paging collision problem Xiaomi Communications discussion

[R2-2009780](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009780.zip) Guidance for SA2 on Solution #16 for Key Issue 2 VODAFONE Group Plc discussion

[R2-2009786](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009786.zip) Support for Multi-SIM Devices - Paging Collision MediaTek Inc. discussion

[R2-2009851](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009851.zip) On Paging Collision Avoidance Huawei, HiSilicon discussion Rel-17

[R2-2009940](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009940.zip) “Effective” solution for paging collision avoidance Intel Corporation discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2009971](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009971.zip) Response to SA2 LS S2-2006037: Paging Repetition in RAN and UE Implementation-based solution aspects VODAFONE Group Plc discussion

[R2-2010284](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010284.zip) Consideration of Paging Collision Avoidance LG Electronics discussion Rel-17

[R2-2010427](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010427.zip) UE indication of paging collision for Multi-SIM ASUSTeK discussion LTE\_NR\_MUSIM-Core

[R2-2010445](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010445.zip) Considerations for Paging Collision for Multi-SIM UEs Charter Communications, Inc discussion Rel-17

R2-2010482 Consideration on slice specific cell selection and reselection ZTE corporation, Sanechips discussion Rel-17 FS\_NR\_slice Withdrawn

[R2-2010534](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010534.zip) Paging collision avoidance Ericsson discussion LTE\_NR\_MUSIM-Core

[R2-2010596](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010596.zip) RAN2 Impacts of Multi-USIM Paging Futurewei Technologies discussion

### 8.3.3 UE notification on network switching for multi-SIM

Including discussion on mechanism for UE to notify Network A of its switch from Network A (for MUSIM purpose)

[R2-2008872](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008872.zip) Discussion on graceful leaving and busy indication OPPO discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2008956](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008956.zip) Discussion on UE Notification on Network Switching CATT discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2009265](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009265.zip) Scenarios and Impact analysis for Switching Notification Nokia, Nokia Shanghai Bell discussion Rel-17

[R2-2009327](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009327.zip) UE notification on network switching for multi-SIM vivo discussion

[R2-2009328](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009328.zip) Discussion on Busy Indication Procedure vivo discussion

[R2-2009506](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009506.zip) MUSIM Network Switching Apple discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2009557](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009557.zip) Switching between two links for Multi-SIM Qualcomm Incorporated discussion

[R2-2009623](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009623.zip) Consideration on the Switching Notification Procedure ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2009658](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009658.zip) RRC-based coordinated switch for multi-USIM UE NEC discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2009781](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009781.zip) Discussion of the UE switching problem Xiaomi Communications discussion

[R2-2009787](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009787.zip) Support for Multi-SIM Devices - Notification upon Network Switching MediaTek Inc. discussion

[R2-2009856](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009856.zip) Switching Notification in MUSIM Lenovo, Motorola Mobility discussion Rel-17

[R2-2009941](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009941.zip) Regarding UE notification on network switching for multi-SIM Intel Corporation discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2010246](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010246.zip) On coordinated switch from NW for MUSIM device Huawei, HiSilicon discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2010286](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010286.zip) SIM Switching Handling in MUSIM LG Electronics discussion Rel-17

[R2-2010350](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010350.zip) Discussion on switching mechanism for multi-SIM Samsung Electronics Co., Ltd discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2010428](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010428.zip) Mechanism for UE to notify network switching ASUSTeK discussion LTE\_NR\_MUSIM-Core

[R2-2010477](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010477.zip) Network Switching for Multi-SIM UEs Charter Communications, Inc discussion Rel-17

R2-2010481 Consideration on the slice specific RACH configuration ZTE corporation, Sanechips discussion Rel-17 FS\_NR\_slice Withdrawn

[R2-2010544](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010544.zip) Graceful leaving for a MultiSIM device Ericsson discussion LTE\_NR\_MUSIM-Core R2-2007602

[R2-2010620](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010620.zip) RAN2 impacts of multi-SIM UE notifications on network switching Futurewei Technologies discussion

### 8.3.4 Paging with service indication

Including discussions on mechanism for an incoming page to indicate to the UE whether the service is voLTE/VoNR (pending SA2 feedback).

This agenda item may be deprioritized in this meeting.

[R2-2008873](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008873.zip) Discussion on paging cause for multi-SIM OPPO discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2008957](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008957.zip) Discussion on Paging with Service Indication CATT discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2009153](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009153.zip) Discussion on the open issues of paging transmission Spreadtrum Communications discussion Rel-17 LTE\_NR\_MUSIM

[R2-2009266](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009266.zip) On RAN impacts for on paging cause Nokia, Nokia Shanghai Bell discussion Rel-17

[R2-2009507](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009507.zip) MUSIM Paging with Service Indication Apple discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2009558](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009558.zip) Paging prioritization and response for MUSIM Qualcomm Incorporated discussion

[R2-2009624](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009624.zip) Consideration on the Paging Cause ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2009791](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009791.zip) Support for Multi-SIM Devices - Paging Cause MediaTek Inc. discussion

[R2-2009852](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009852.zip) Discussion on the paging with service indication Huawei, HiSilicon discussion Rel-17

[R2-2010250](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010250.zip) Discussion on support of paging cause for multi-SIM Samsung Electronics Co., Ltd discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2010285](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010285.zip) Consideration on Paging Cause Indication LG Electronics discussion Rel-17

[R2-2010416](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010416.zip) Discussion of the paging cause support for MUSIM Xiaomi Communications discussion

[R2-2010535](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010535.zip) Introduction of a Paging cause indication Ericsson discussion LTE\_NR\_MUSIM-Core R2-2007603

## 8.4 NR IAB enhancements

(NR\_IAB\_enh-Core; leading WG: RAN2; REL-17; WID: RP-201293)

Time budget: 1 TU

Tdoc Limitation: 2 tdocs

Email max expectation: 2-3 threads

### 8.4.1 Organizational Requirements and Scope

Including work plan and any other rapporteur input.

[R2-2009291](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009291.zip) Updated workplan for Rel-17 IAB Qualcomm Incorporated (WI Rapporteur) Work Plan Rel-17 R2-2006964

* Noted

### 8.4.2 Enhancements to improve topology-wide fairness multi-hop latency and congestion mitigation

Including [Post111-e][902][eIAB] Enhancements to improve topology-wide fairness, multi-hop latency and congestion mitigation (Samsung)

* [AT112-e][030][eIAB] Fairness Latency Congestion (Samsung)

Scope: A) Confirm easy agreeable proposals captured in R2-2009073 (short deadline), make modifications to the proposals if needed for final agreement.

B) From R2-2009073 and input contributions below put applicable solution proposals on the table, with a short principal solution description, how the solution is intended to help and possibly comments on complexity, if applicable. In case there are many solutions, initial focus could be on promising and widely proposed/supported solutions. Further discussion and decision making is expected on-line week 2.

Intended outcome: Report

Deadline: Ready Nov 11 (for on-line discussion Nov 11), Intermediate deadlines by Rapporteur.

* [Post112-e][030][eIAB] Way Forward (Samsung)

Scope: Continue the discussion on Ways forward to best utilize the already done discussions and the provided summaries in a constructive way for decision making next meeting. Assume long email discussions shall continue

Intended outcome: Carefully crafted definitions of long email discussions

Deadline: short

[R2-2009073](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009073.zip) Report from email discussion [Post111-e][902][eIAB] Samsung Electronics GmbH report

[R2-2011061](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011061.zip) Report from email discussion [Post111-e][902][eIAB] Enhancements to improve topology-wide fairness, multi-hop latency and congestion mitigation (Samsung) Samsung Electronics GmbH report

DISCUSSION

P2/P3

- QC wonder if we really shall try to define fairness.

- vivo think fairness is about best effort service, this definition is not correct

- Apple think no of hops is the critical problem for “fairness”. Think the proposal is ok.

- Huawei are surprised that companies didn’t comment during the email discussion. We should find a problem / the issue.

- FW think that even for best effort traffic there is e.g. PDB.

- AT&T think the proposal is ok.

- QC think starvation and best effort doesn’t show up here.

- CATT think fairness need load balancing. Intel agrees.

- Ericsson think P3 is ok.

- QC are worried we will go too quick into solutions.

P4

- LG think that IAB donor can handle fairness properly. We need to find a problem first. Ericsson think LG has a point, we need to solve problems that are not already resolved.

- Samsung think the proposal is to discuss.

- QC think one issue is that schedulers don’t have enough info from the CU

- Intel think that for Dstream LG has a point that CU has a lot of info, but for Upstream maybe not.

P5

- LG think we can go to P10. P5-P9 are covered by other. Samsung think P7-P10 need discussion,

P7

- Ericsson think maybe some HbH FC and E2E FC can sometimes have equivalent functionality.

P8/P9

- Chair think we need concrete proposals. Not spend time to discuss

- Samsung think this is just general.

P10

- FW think local routing and multi-route may be the same thing. Maybe we should just let discussions on local routing take place first.

- QC think that route switching is ok but packet spreading doesn’t work.

- LG think this is very different to local routing. There is no PDCP layer so this should be deprioritized.

- CATT think this should not be deprioritized. Think this is DAPS.

- AT&T think we could say that we’d wait for R3 input.

* R2 assumes Rel-17 IAB work will not define any new end-user QoS metrics on top of the existing 5G QoS framework.
* Rel-17 IAB work will comprise agreeing on a definition of topology-wide fairness.
* Topology-wide fairness provides mechanisms for the management of QoS so that the required QoS is met across the topology, regardless of where a UE attaches to the IAB network. Variants of this definition is not precluded. FFS how the success of such mechanisms is evaluated.
* RAN2 will not discuss enhancements to DL E2E flow control without input from RAN3
* FFS if RAN2 will deprioritize splitting data of a radio bearer into two or more paths (RAN3 agreements to deprioritize Multi-Route Support with data split in IAB)

[R2-2011142](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011142.zip) Discussion summary - [AT112-e][030][eIAB] Samsung

- Chair wonder if observations on widely supported and supported by 5 companies can be considered a first list of candidates to start evaluating.

- AT&T think we can capture the priority category C1 C2 etc. Samsung think this is not so good.

- LG think that the solutions cannot be determined from these descriptions. LG think for latency and congestion we can use this but not for fairness.

- QC think this is progress, and we should use this list.

- Ericsson agrees the list is nice but too early to down-scope. Think we need to evaluate the complexity as well.

- IDT also think it is too early to select. Think indeed we can start with categories.

- Samsung point out that this is a list with wide/significant support and describes solution,

- Sony think solution 1 had wide support and low complex.

- Apple agrees this is useful but think the evaluation criteria may be tricky.

- ZTE don’t understand several detailed proposals, think we can have yet another email discussion.

- QC agrees and we need to make a sanity check of the proposals.

- Chair wonder if we can take the next step by looking in more detail to the benefit of different proposals and group them acc to commonality/difference. Huawei think we also categorize acc to problem/issue. AT&T think also complexity. CATT support.

* Specify an long email discussion, offline how to best take next step an use this result [030]

[R2-2008848](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008848.zip) Consideration on topology-wide fairness, multi-hop latency and congestion mitigation CATT discussion Rel-17 NR\_IAB\_enh-Core

[R2-2009329](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009329.zip) Discussion on congestion, RLF, latency and fairness handling vivo discussion

[R2-2009388](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009388.zip) Discussion on topology-wide fairness multi-hop latency and congestion mitigation ZTE, Sanechips discussion Rel-17

[R2-2009651](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009651.zip) Enhancements for topology-wide fairness, multi-hop latency and congestion mitigation Huawei, HiSilicon discussion Rel-17 NR\_IAB\_enh-Core

[R2-2009667](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009667.zip) Discussion on topology-wide fairness, multi-hop latency and congestion mitigation LG Electronics discussion NR\_IAB\_enh-Core

[R2-2010099](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010099.zip) Rel. 17 IAB enhancements for fairness, multi-hop latency reduction, and congestion mitigation Futurewei Technologies discussion R2-2007840

[R2-2010159](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010159.zip) On Topology-wide Fairness, Multi-hop Latency and Congestion Mitigation Ericsson discussion NR\_IAB\_enh-Core

[R2-2009006](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009006.zip) Discussion on the fairness enforcement for IAB Fujitsu discussion Rel-17 NR\_IAB\_enh-Core

[R2-2009089](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009089.zip) On topology-wide fairness Samsung Electronics GmbH discussion

[R2-2009200](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009200.zip) Discussion on Topology-wide fairness and flow control enhancement Intel Corporation discussion Rel-17 NR\_IAB\_enh-Core

[R2-2009293](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009293.zip) Simulations on fairness support in IAB topology Qualcomm Incorporated discussion Rel-17 R2-2006965

[R2-2009509](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009509.zip) Fairness metrics in multi-hop eIAB networks Apple discussion Rel-17 NR\_IAB\_enh-Core

[R2-2009886](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009886.zip) Topology-wide fairness enhancements Sony discussion Rel-17 NR\_IAB\_enh-Core

[R2-2009090](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009090.zip) Enhancements to multi-hop latency and congestion mitigation Samsung Electronics GmbH discussion

[R2-2009261](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009261.zip) On multi-hop latency and congestion mitigation InterDigital discussion Rel-17 NR\_IAB\_enh-Core

[R2-2009798](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009798.zip) Hop-by-hop flow control in uplink Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IAB\_enh-Core

[R2-2009332](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009332.zip) Multi-hop scheduling and local routing enhancements for IAB AT&T discussion

[R2-2010489](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010489.zip) Discussion on congestion mitigation enhancements ETRI discussion

### 8.4.3 Topology adaptation enhancements

Including [Post111-e][903][eIAB] Topology adaptation enhancements RAN2 scope (Qualcomm)

* [AT112-e][031][eIAB] Topology Adaptation (QC)

Scope: A) Confirm at least easy agreeable proposals captured in R2-2009292 (short deadline), make modifications to the proposals if needed for final agreement.

B) From R2-2009292 and input contributions below put applicable solution proposals on the table, with a short principal solution description, how the solution is intended to help and possibly comments on complexity, if applicable. In case there are many solutions, initial focus could be on promising and widely proposed/supported solutions. Further discussion and decision making is expected on-line week 2.

Intended outcome: Report

Deadline: Ready Nov 11 (for on-line discussion Nov 11), Intermediate deadlines by Rapporteur.

[R2-2009292](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009292.zip) Report of email discussion on topology adaptation enhancements RAN2 scope Qualcomm Incorporated discussion Rel-17

* [031] Noted

[R2-2011040](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011040.zip) [AT112-e][031][eIAB] Topology Adaptation (QC) Qualcomm Incorporated discussion Rel-17

P0

- QC think signalling load red is e.g. when a group of users need to be relocated

- Nokia think load balancing is R3 but also has some R2 impact.

- LG are not sure signalling load is a major issue to resolve. Can be addressed e.g. by CHO.

- Ericsson think we need to do the same excersize here, go thought solutions and map to objectives.

- QC think this is a list of potential goal. We might not need to address all.

P1

- Ericsson think we need to discuss pros and cons. It is not obvious. What is the objective?

- LG agrees with Ericsson and think the end solution will be different for each objective.

- Huawei think we can indeed discuss CHO, it is an existing solution. CATT support Huawei.

- Samsung think adaptation of CHO for IAB is straightforward, e.g. for robustness.

- IDT think there may need to be enhancements such as other triggering conditions. However for DAPS we don’t support BH RLC channels for the moment. IDT think then there will be service interruption.

- Nokia think indeed r16 CHO can be a baseline, and we can start from there. Ericsson agree this can be done, but think the target cell need to be prepared, and reserve resources. Ericsson think an issue if that CHO requires preparation

- Chair: there is high interest for CHO. When discussing enhancements we need to evaluate in the light of the objective.

P2

- QC think DAPS had less support and it was ok to keep FFS.

- Chair: we don’t need to preclude now, but we can observe that the interest for DAPS is less than CHO.

- Nokia think we don’t need to support DAPS

- Ericsson think DAPS and CHO are addressing different use cases, so DAPS should be on the table same as CHO. We should evaluate the need,

P4

- QC think that inter-donor is the issue. QC think that there are lots of control and RRM issues in the multi-Donor architecture.

- IDT think this is a R3 issue.

- Chair think we can just wait.

P5

- QC think many companies didn’t understand how this can work. Has lower priority.

- LG would not like to do this at all, and think the side effect is the increased hop count. Think there are other methods that are better. There are no benefits cmp to other method and there are side effects.

P13

- QC think local rerouting need some carefulness, there could be issues.

- FW wonder what is the topology-wide objective

- LG think local rerouting is controlled by the CU and is naybe used temporarily.

* Consider enhancements to topology adaptation that improve:

Robustness, e.g., to rapid shadowing,

service-interruption,

load balancing among different IAB-nodes, IAB-donor-DUs and IAB-donor-CUs, and

reduction in signaling load.

* RAN2 to discuss enhancements to RLF indication/handling with the focus on the reduction of service interruption after BH RLF.
* CHO and potential IAB-specific enhancements of CHO is on the table.
* DAPS and potential IAB-specific enhancements of DAPS is not precluded for now (but as there is no PDCP it is not clear how to support DAPS).
* For message bundling, RAN2 at least wait for more progress to be made in RAN3 on topology adaptation procedures.
* RAN2 to discuss local rerouting, including the benefits over central route determination, and on how topology-wide objectives can beaddressed.

[R2-2011125](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011125.zip)

Chair: Similar to other topic, we should try to use this baseline, take some steps, and prepare for decisions at next meeting. Continuation by email to discuss the exact scope of a continuation discussion between meetings. Evaluate in the light of the objectives is one part (i.e settle the objective for each proposed enhancement). Same email disc as previous [031]

[R2-2008849](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008849.zip) Consideration on Topology adaptation enhancements CATT discussion Rel-17 NR\_IAB\_enh-Core

[R2-2009007](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009007.zip) CHO for UE or IAB-MT on migration Fujitsu discussion Rel-17 NR\_IAB\_enh-Core

[R2-2009201](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009201.zip) Enhancements to establish efficient topologies and backhaul failure recovery Intel Corporation discussion Rel-17 NR\_IAB\_enh-Core

[R2-2009262](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009262.zip) On IAB Topology Adaptation InterDigital discussion Rel-17 NR\_IAB\_enh-Core

[R2-2009330](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009330.zip) Consideration of Inter-CU IAB Migration vivo discussion

[R2-2009387](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009387.zip) Considerations on topology adaptation enhancements ZTE, Sanechips discussion Rel-17

[R2-2009422](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009422.zip) On topology adaptation enhancements Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IAB\_enh-Core Revised

[R2-2009508](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009508.zip) Better Cell Selection for eIAB nodes for improved topology adaptation Apple discussion Rel-17 NR\_IAB\_enh-Core

[R2-2009610](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009610.zip) Topology optimization in IAB NEC discussion Rel-17 NR\_IAB\_enh-Core

[R2-2009652](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009652.zip) Consideration of topology adaptation enhancement for R17-IAB Huawei, HiSilicon discussion Rel-17 NR\_IAB\_enh-Core

[R2-2009887](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009887.zip) Topology adaptation enhancements in IAB Sony discussion Rel-17 NR\_IAB\_enh-Core

[R2-2010137](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010137.zip) Consideration on avoiding RLF recovery at former descendent nodes Sharp discussion Rel-17

[R2-2010158](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010158.zip) On WI scope and solutions for topology adaptation and inter-CU migration Ericsson discussion NR\_IAB\_enh-Core

[R2-2010233](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010233.zip) Consideration of topology adaptation enhancements for eIAB Kyocera discussion Rel-17

[R2-2010441](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010441.zip) BAP Packet Duplication and BH RLF Indication Enhancements LG Electronics France discussion NR\_IAB\_enh-Core

[R2-2010490](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010490.zip) RAN2 impacts of Rel.17 IAB topology adaptation enhancements Futurewei Technologies discussion R2-2007984

R2-2010670 On topology adaptation enhancements Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IAB\_enh-Core Withdrawn

[R2-2010671](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010671.zip) On topology adaptation enhancements Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IAB\_enh-Core [R2-2009422](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009422.zip)

### 8.4.4 Duplexing enhancements RAN2 scope

Expected to not be treated at this meeting, 1 tdoc in addition to tdoc limitation is allowed for this sub-AI for information exchange.

[R2-2009091](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009091.zip) Views on duplexing enhancements Samsung Electronics GmbH discussion

[R2-2009389](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009389.zip) Discussion on duplexing enhancement ZTE, Sanechips discussion Rel-17

[R2-2009653](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009653.zip) Duplexing enhancements for R17 IAB Huawei, HiSilicon discussion Rel-17 NR\_IAB\_enh-Core

## 8.5 NR IIoT URLLC

(NR\_IIOT\_URLLC\_enh-Core; leading WG: RAN2; REL-17; WID: RP-201310)

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

Email max expectation: 2-3 threads

Focus to clarify the scope, understand the dependencies to other groups, get proposals on the table.

### 8.5.1 Organizational

Rapporteur input

[R2-2008720](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008720.zip) LS on propagation delay compensation enhancements (R1-2007446; contact: Huawei) RAN1 LS in Rel-17 NR\_IIOT\_URLLC\_enh-Core To:RAN2

[R2-2010692](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010692.zip) LS on Use of Survival Time for Deterministic Applications in 5GS (S2-2007880; contact: Nokia) SA2 LS in Rel-17 FS\_IIOT To:RAN2, RAN3 Cc:SA1

[R2-2009754](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009754.zip) Updated Work Plan for NR IIoT/URLLC Nokia Work Plan Rel-17 NR\_IIOT\_URLLC\_enh-Core

### 8.5.2 Enhancements for support of time synchronization

Including requirements and scope. Including [Post111-e][924][R17 URLLC/IIoT] Propagation delay for TSN (Nokia)

[R2-2008855](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008855.zip) Discussion on enhancements for support of time synchronization Huawei, HiSilicon discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2008856](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008856.zip) Draft Reply LS on propagation delay compensation enhancements Huawei, HiSilicon LS out Rel-17 NR\_IIOT\_URLLC\_enh-Core To:RAN1

[R2-2008880](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008880.zip) Propagation Delay Compensation Enhancements Ericsson discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2008972](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008972.zip) Propagation Delay Compensation for TSN Qualcomm Incorporated discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2009060](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009060.zip) Further consideration on time synchronization and PDC in TSN ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd discussion Rel-17

[R2-2009118](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009118.zip) On propagation delay compensation MediaTek Inc. discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core R2-2007611

[R2-2009270](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009270.zip) Enhancements for Propagation Delay Compensation and Mobility Intel Corporation discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2009561](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009561.zip) Consideration of time synchronization enhancement for TSN OPPO discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2009672](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009672.zip) Mobility related issues for the propagation delay compensation Beijing Xiaomi Mobile Software discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2009755](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009755.zip) Summary of email discussion [Post111-e][924][R17 URLLC/IIoT] Propagation delay for TSN (Nokia) Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2009756](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009756.zip) [DRAFT] Reply LS on propagation delay compensation enhancements Nokia, Nokia Shanghai Bell LS out Rel-17 NR\_IIOT\_URLLC\_enh-Core To:RAN1

[R2-2009757](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009757.zip) Discussion on propagation delay compensation mechanisms Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2009865](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009865.zip) Considerations on time synchronization enhancement Lenovo, Motorola Mobility discussion Rel-17

[R2-2009915](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009915.zip) Discussion on enhancements for TSN time synchronization China Telecommunications discussion

[R2-2010173](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010173.zip) Mobility aspects of time synchronization Sequans Communications discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2010211](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010211.zip) Discussion on the propagation delay compensation vivo discussion R2-2007145

[R2-2010381](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010381.zip) Enhancements for support of time synchronization for TSN CMCC discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2010413](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010413.zip) Discussion on propagation delay compensation for support of time synchronization LG Electronics Inc. discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2010523](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010523.zip) RAN2 Aspects on Timing Synchronization Samsung discussion Rel-17

[R2-2010532](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010532.zip) Uplink time synchronization NTT DOCOMO, INC. discussion Rel-17

### 8.5.3 Uplink enhancements for URLLC in unlicensed controlled environments

RAN2 aspects related to URLLC in unlicensed controlled environments. Initial discussion on potential impacts, including requirements and scope

[R2-2008853](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008853.zip) Discussion about uplink enhancements for URLLC in unlicensed controlled environment Huawei, HiSilicon discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2008859](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008859.zip) Co-existence of NR-U and IIOT in R16 CATT discussion NR\_IIOT\_URLLC\_enh-Core

[R2-2008860](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008860.zip) Protocol selection for IIoT on unlicensed spectrum CATT discussion NR\_IIOT\_URLLC\_enh-Core

[R2-2008881](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008881.zip) Harmonizing UL CG enhancements in NR-U and URLLC Ericsson discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2008974](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008974.zip) CG Harmonization in Unlicensed Controlled Environment Qualcomm Incorporated discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2008976](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008976.zip) Uplink enhancements for URLLC in unlicensed controlled environments Intel Corporation discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2009117](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009117.zip) On configured grant harmonization MediaTek Inc. discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2009501](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009501.zip) Potential UL enhancements for URLLC in unlicensed environments Apple discussion Rel-17

[R2-2009562](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009562.zip) Consideration on URLLC over NRU OPPO discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2009598](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009598.zip) Enhancements for URLLC in unlicensed controlled environments Lenovo, Motorola Mobility discussion Rel-17

[R2-2009758](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009758.zip) Uplink CG Harmonization for NR-U and URLLC Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2009900](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009900.zip) Considerations in unlicensed URLLC Sony Europe B.V. discussion Rel-17 NR\_IIOT\_URLLC\_enh-Perf

[R2-2009912](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009912.zip) Considerations on the harmonization of enhanced configured grant on shared spectrum channel ZTE Corporation, Sanechips discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2009914](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009914.zip) Discussion on CG harmonization for IIoT in unlicensed spectrum Google Inc. discussion

[R2-2010110](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010110.zip) IIoT operation in unlicensed controlled environments InterDigital discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2010212](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010212.zip) Harmonizing CG enhancements in NR-U and URLLC/IIoT vivo discussion R2-2007146

[R2-2010374](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010374.zip) Discussion on CG harmonization for URLLC in unlicensed controlled environments CMCC discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2010437](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010437.zip) Consideration on timers for URLLC/IIoT in unlicensed controlled environments III discussion NR\_IIOT\_URLLC\_enh-Core

[R2-2010439](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010439.zip) Harmonized support of IIOT on unlicensed band LG Electronics Inc. discussion NR\_IIOT\_URLLC\_enh-Core

[R2-2010524](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010524.zip) Uplink Enhancements for Unlicensed Spectrum Samsung discussion Rel-17

### 8.5.4 RAN enhancements based on new QoS

RAN enhancements based on new QoS related parameters if any, e.g. survival time, burst spread, decided in SA2. [RAN2, RAN3]

[R2-2008854](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008854.zip) Discussion on RAN enhancements based on new QoS related parameters Huawei, HiSilicon discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2008861](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008861.zip) RAN enhancement based on New QoS CATT discussion NR\_IIOT\_URLLC\_enh-Core

[R2-2008882](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008882.zip) RAN enhancements based on new QoS related parameters Ericsson discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2008985](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008985.zip) RAN Enhancements to Support New QoS Parameters for TSN Intel Corporation discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2009062](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009062.zip) New QoS related parameters in TSN ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd discussion Rel-17

[R2-2009130](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009130.zip) U-plane aspect for RAN enhancement to support new QoS Fujitsu discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2009179](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009179.zip) Concept and use of survival timer Samsung Electronics GmbH discussion

[R2-2009563](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009563.zip) Consideration on RAN enhancement based on new QoS OPPO discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2009671](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009671.zip) RAN impacts of the IIOT QoS parameters Beijing Xiaomi Mobile Software discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2009759](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009759.zip) RAN Enhancement for Survival Time Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2009870](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009870.zip) Discuss on the mechanism to guarantee the survival time Lenovo, Motorola Mobility discussion Rel-17

[R2-2010111](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010111.zip) Enhancements based on new QoS requirements InterDigital discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2010213](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010213.zip) Discussion on IIOT QoS impacts in RAN vivo discussion

[R2-2010375](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010375.zip) Discussion on the support of RAN enhancement for new QoS parameters CMCC discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2010438](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010438.zip) Discussion on RAN enhancements based on Survival Time III discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2010444](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010444.zip) Support of determinstic IIOT Traffic LG Electronics UK discussion NR\_IIOT\_URLLC\_enh-Core

## 8.6 Small Data enhancements

(NR\_SmallData\_INACTIVE-Core; leading WG: RAN2; REL-17; WID: RP-201305)

Time budget: 1.5 TU

Tdoc Limitation: 4 tdocs

Email max expectation: 3 threads

### 8.6.1 Organizational

In coming LSs, rapporteur input for email discussions summaires etc (tdocs in this don’t count towards tdoc limit). Including [Post111-e][925][R17 Small Data] Agreeable details of RRC-based solution (RACH and CG) (ZTE)

[R2-2009189](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009189.zip) Small Data] Agreeable details of RRC-based solution (RACH and CG) Rapporteur (ZTE) report

### 8.6.2 Security aspects

[R2-2008958](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008958.zip) Discussion on the Security for Small Data Transmission vivo discussion

[R2-2008992](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008992.zip) Security aspect for SDT Intel Corporation discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009012](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009012.zip) Security aspects for small data transmission in inactive state OPPO discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009366](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009366.zip) Security aspects on SDT CATT discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009490](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009490.zip) Security aspect on SDT procedure Apple discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009920](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009920.zip) Security aspects of SDT Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SmallData\_INACTIVE

[R2-2009931](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009931.zip) Discussion about security aspects for small data transmission Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009991](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009991.zip) Draft LS on Need of MAC-I for UE authentication NEC Telecom MODUS Ltd. LS out To:SA3

### 8.6.3 Control plane aspects

Support of RRC-less SDT, SDT type selection and switch between SDT and normal resume procedure, Cell reselection and failure handling, etc, except security aspects. Including [Post111-e][926][R17 Small Data] Context fetch (Ericsson)

[R2-2008959](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008959.zip) Duscussion on RRC-Controlled Small Data Transmission vivo discussion

[R2-2008993](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008993.zip) SDT control plane procedures and failure handling Intel Corporation discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009013](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009013.zip) Discussion on Control plane aspects for small data transmission OPPO discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009055](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009055.zip) RRC-less SDT over CG MediaTek Inc., Apple discussion

[R2-2009095](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009095.zip) Control Plane Aspects of SDT Samsung Electronics Co., Ltd discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009131](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009131.zip) Open issue in [Post111-e][926]: TAT handling Fujitsu discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009132](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009132.zip) Identified issue in [Post111-e][926]: CA and PDCP CA duplication Fujitsu discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009151](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009151.zip) Discussion on the general aspects for small data transmission Spreadtrum Communications discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009190](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009190.zip) Control plane aspects of SDT ZTE Corporation, Sanechips discussion

[R2-2009316](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009316.zip) Discussion on RRC procedure for small data transmission SHARP Corporation discussion NR\_SmallData\_INACTIVE-Core

[R2-2009344](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009344.zip) Timer configuration for SDT failure detection ETRI discussion

[R2-2009347](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009347.zip) Differentiation and triggering of SDT procedure Potevio discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009367](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009367.zip) Considerations on general aspects and subsequent SDT CATT discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009460](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009460.zip) Anchor relocation for Small Data Transmission LG Electronics Inc. discussion NR\_SmallData\_INACTIVE-Core

[R2-2009491](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009491.zip) Control plane aspects on SDT procedure Apple discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009643](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009643.zip) Discussion on how to handle cell reselection during T319 for the case of SDT ITRI discussion NR\_SmallData\_INACTIVE-Core

[R2-2009656](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009656.zip) Control plane issues for SDT NEC discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009675](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009675.zip) Discussion on the RRC-less SDT Beijing Xiaomi Mobile Software discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009873](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009873.zip) Analysis on RA selection and RNAU Lenovo, Motorola Mobility discussion Rel-17

[R2-2009875](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009875.zip) Consideration on RRC-less SDT and subsequent data transmission Lenovo, Motorola Mobility discussion Rel-17

[R2-2009888](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009888.zip) Discussion on context fetch, anchor relocation and subsequent SDT in NR Sony discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009919](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009919.zip) SDT control plane aspects for RACH based schemes Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SmallData\_INACTIVE

[R2-2009930](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009930.zip) SDT aspects common for RACH-based and CG-based SDT scheme Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009966](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009966.zip) RRC aspects for SDT Ericsson discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009967](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009967.zip) Report of [Post111-e][926][SmallData] ContextFetch\_email Ericsson (rapporteur) report Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009978](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009978.zip) Support of RRC-less SDT NEC Telecom MODUS Ltd. discussion

[R2-2010008](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010008.zip) Control plane aspects on NR small data transmission Qualcomm Incorporated discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2010109](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010109.zip) Small data transmission failure and cell reselection InterDigital discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2010388](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010388.zip) SDT type selection and switch procedure CMCC discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2010429](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010429.zip) Discussion on subsequent small data transmission ASUSTeK discussion NR\_SmallData\_INACTIVE-Core

### 8.6.4 Aspects specific to RACH based schemes

RA type selection, Separate RA resource pool for SDT

Details of context fetch, support of anchor relocation and no anchor relocation and procedural aspects related to RAN2

[R2-2008960](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008960.zip) Supporting Small Data Transmission via RA Procedure vivo discussion

[R2-2008994](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008994.zip) RACH selection and User plane aspects with and without anchor relocation Intel Corporation discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009014](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009014.zip) Discussion on RACH based small data transmission OPPO discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009056](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009056.zip) RA-based SDT MediaTek Inc. discussion

[R2-2009096](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009096.zip) Criteria for performing 2 step or 4 step RACH based SDT Samsung Electronics Co., Ltd discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009097](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009097.zip) RACH configuration for Small Data Transmission Samsung Electronics Co., Ltd discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009119](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009119.zip) Timer issues for subsequent data transmissions PANASONIC R&D Center Germany discussion

[R2-2009152](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009152.zip) Discussion on small data transmission for RACH-based scheme Spreadtrum Communications discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009191](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009191.zip) RACH based small data transmission ZTE Corporation, Sanechips discussion

[R2-2009193](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009193.zip) Context fetch and data forwarding for SDT ZTE Corporation, Sanechips discussion

[R2-2009368](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009368.zip) Analysis on SDT without Context relocation CATT discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009457](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009457.zip) RACH-based Small Data Transmission LG Electronics Inc. discussion NR\_SmallData\_INACTIVE-Core

[R2-2009492](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009492.zip) Context fetch procedure for SDT Apple discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009646](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009646.zip) Discussion on RA-based Small Data Transmission TCL Communication Ltd. discussion Rel-17

[R2-2009657](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009657.zip) Subsequent data transmission for SDT NEC discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009799](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009799.zip) Details on RACH specific schemes Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009872](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009872.zip) The basic principle for small data transmissions Lenovo, Motorola Mobility discussion Rel-17

[R2-2009889](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009889.zip) Details of RA-based schemes for SDT in NR Sony discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009963](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009963.zip) Details of RACH based SDT Ericsson discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009965](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009965.zip) Subsequent transmissions after initial SDT Ericsson discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2010006](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010006.zip) Discussion on RACH based NR small data transmission Qualcomm Incorporated discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2010106](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010106.zip) RACH-based SDT selection and configuration InterDigital discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2010232](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010232.zip) 2-step RACH and 4-step RACH selection criteria for SDT Xiaomi discussion

[R2-2010280](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010280.zip) Small data transmission with RA-based scheme Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2010281](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010281.zip) Small data transmission with CG-based scheme Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2010389](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010389.zip) Some consideration on RACH based scheme CMCC discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2010390](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010390.zip) Anchor relocation and context fetch CMCC discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2010430](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010430.zip) Data forwarding without UE DRB configuration ASUSTeK discussion NR\_SmallData\_INACTIVE-Core

[R2-2010431](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010431.zip) Discussion on initiating SDT based on radio condition ASUSTeK discussion NR\_SmallData\_INACTIVE-Core

### 8.6.5 Aspects specific to CG based schemes

Configuration of CG resources, Validity of CG resources, handling of beam selection for CG etc

[R2-2008935](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008935.zip) Handling of subsequent small data transmission in RRC\_INACTIVE PANASONIC R&D Center Germany discussion

[R2-2008961](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008961.zip) Supporting Small Data Transmission via CG configuration vivo discussion

[R2-2008995](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008995.zip) Handling of Configured grant for SDT Intel Corporation discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009015](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009015.zip) Discussion on CG based small data transmission OPPO discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009057](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009057.zip) CG-based SDT MediaTek Inc. discussion

[R2-2009094](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009094.zip) Configured Grant based Small Data Transmission Samsung Electronics Co., Ltd discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009192](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009192.zip) Configured grant based small data transmission ZTE Corporation, Sanechips discussion

[R2-2009345](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009345.zip) SDT handling in RRC\_INACTIVE state ETRI discussion

[R2-2009350](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009350.zip) Discussion on aspects specific to CG based SDT Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009369](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009369.zip) Analysis on SDT Procedures using CG CATT discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009458](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009458.zip) Coexistence of CG and RACH configuraiton for SDT LG Electronics Inc. discussion NR\_SmallData\_INACTIVE-Core

[R2-2009459](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009459.zip) CG resources for Small Data Transmission LG Electronics Inc. discussion NR\_SmallData\_INACTIVE-Core

[R2-2009493](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009493.zip) CG based SDT procedure Apple discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009649](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009649.zip) TAT maintenance for CG based SDT ITL discussion Rel-17

[R2-2009874](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009874.zip) Consideration on CG based small data transmission Lenovo, Motorola Mobility discussion Rel-17

[R2-2009890](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009890.zip) Details of CG-based schemes for SDT in NR Sony discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009964](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009964.zip) Details of CG based SDT Ericsson discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2009973](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009973.zip) Discussion on CG-based Small Data Transmissions NEC Telecom MODUS Ltd. discussion

[R2-2010007](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010007.zip) Discussion on CG based NR small data transmission Qualcomm Incorporated discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2010107](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010107.zip) CG-based SDT selection and configuration InterDigital discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2010108](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010108.zip) Beam selection and maintenance for CG-based SDT InterDigital discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2010391](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010391.zip) Consideration on CG based SDT CMCC discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2010432](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010432.zip) Association between Pre-configured PUSCH resources and beam ASUSTeK discussion NR\_SmallData\_INACTIVE-Core

## 8.7 NR Sidelink relay SI

(FS\_NR\_SL\_relay; leading WG: RAN2; REL-17; WID: RP-201474)

Time budget: 1.5 TU

Tdoc Limitation: 5 tdocs

Email max expectation: 4 threads

### 8.7.1 Organizational

TR updates, rapporteur inputs, other organizational documents. Documents in this AI do not count towards the tdoc limitation.

[R2-2008760](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008760.zip) LS on Direct Discovery and Relay in SA2 (S2-2006587; contact: Oppo) SA2 LS in Rel-17 FS\_5G\_ProSe To:RAN2 Cc:RAN1

[R2-2008926](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008926.zip) [Draft] Reply LS on Direct Discovery and Relay CATT LS out Rel-17 5G\_V2X\_NRSL-Core To:SA2 Cc:RAN1

[R2-2010676](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010676.zip) [Draft] Reply LS on Direct Discovery and Relay OPPO LS out Rel-17 FS\_NR\_SL\_relay To:SA2 Cc:RAN1

[R2-2010693](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010693.zip) LS on SA2 progress on UE-to-Network Relay and UE-to-UE Relay (S2-2007945; contact: OPPO) SA2 LS in Rel-17 FS\_5G\_ProSe To:RAN2, SA3

### 8.7.2 Scope requirements and scenarios

Refinements to the contents of the TR regarding high-level requirements and assumptions on supported scenarios.

This agenda item may use a summary document (decision to be made based on submitted tdocs).

[R2-2008779](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008779.zip) Left issues on Scenarios for sidelink relay OPPO discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008921](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008921.zip) Further Clarification on the Scenarios for NR Sidelink Relay CATT discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008939](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008939.zip) Work planning of R17 SL relay OPPO Work Plan Rel-17 FS\_NR\_SL\_relay

[R2-2009584](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009584.zip) Further discussion on scope and scenarios of SL relay vivo discussion Rel-17

[R2-2009693](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009693.zip) Coverage Extension using Relays Lenovo, Motorola Mobility discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009694](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009694.zip) QoS support when using Relays Lenovo, Motorola Mobility discussion FS\_NR\_SL\_relay

[R2-2010658](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010658.zip) Scenarios for NR sidelink relay LG Electronics Inc. discussion Rel-17

### 8.7.3 Relaying Mechanisms and their characteristics

Start to populate the TR. Put on the table mechanisms, their characteristics at least with respect to aspects A-F for L2 and L3 relay etc.

#### 8.7.3.1 Protocol stacks and procedures

Including report of [Post111-e][627][Relay] Remaining issues on L2 architecture

[R2-2008777](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008777.zip) Left issues on CP procedure for L2 U2N Relay OPPO discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008922](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008922.zip) On-demand SI Delivery for Remote UE CATT discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008962](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008962.zip) Discussion on remaining issues of L3 relay Qualcomm Incorporated discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008964](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008964.zip) Discussion on remaining issues of L2 relay Qualcomm Incorporated discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008966](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008966.zip) RRC state and essential RRC procedures in L2 U2N relay Qualcomm Incorporated discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008983](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008983.zip) Open aspects of L2 relaying Intel Corporation discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009030](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009030.zip) Discussion on remaining issues on L2 relay architecture ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009033](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009033.zip) Discussion on Remaining issues on L3 relay ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009122](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009122.zip) Email Report of Post111-e 627 Relay Remaining issues on L2 architecture MediaTek Inc. discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009123](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009123.zip) Adaptation layer for PC5 at L2 UE-to-Network Relay MediaTek Inc. discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009124](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009124.zip) Overhead in N3IWF based L3 relaying architecture MediaTek Inc. discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009144](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009144.zip) Remaining issues on the adaptation layer for Layer-2 Relay Spreadtrum Communications discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009202](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009202.zip) Control Plane Aspects for UE to NW Relays InterDigital discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009203](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009203.zip) Connection Establishment and Maintenance for L2 Relays InterDigital discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009206](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009206.zip) Discussion on L2 Relay Architecture and QoS InterDigital discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009230](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009230.zip) RAN2 impacts introduced by Layer 2 SL relay Ericsson discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009302](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009302.zip) QoS Control with Sidelink Relay Futurewei discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009525](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009525.zip) Discussion on data forwarding mechanisms for Layer 2 UE-to-UE Relay Apple discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009526](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009526.zip) Discussion on RRC\_INACTIVE remote UE Apple discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009585](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009585.zip) Open issues on Layer-2 relay vivo discussion Rel-17

[R2-2009660](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009660.zip) L2 relaying open issues Samsung Electronics GmbH discussion

[R2-2009661](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009661.zip) Need for relaying of on-demand SI Samsung Electronics GmbH discussion

[R2-2009720](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009720.zip) Discussion on L3 UE-to-NW relay architecture Ericsson discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009891](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009891.zip) SL L2 architectrure Sony discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009901](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009901.zip) Protocol stack design for U2N relay and U2U relay case Lenovo, Motorola Mobility discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009939](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009939.zip) Discussion on L2 based UE-to-Network Nokia, Nokia Shanghai Bell discussion FS\_NR\_SL\_relay

[R2-2010129](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010129.zip) Needed Information in Adaptation Layer Header for L2 UE-to-UE Relay Convida Wireless discussion Rel-17

[R2-2010344](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010344.zip) Remaining issues on protocol stacks and procedures for L2 relay Huawei, HiSilicon discussion Rel-17 FS\_NR\_SL\_relay

[R2-2010345](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010345.zip) NAS transmission and QoS management in L3 U2N relay Huawei, HiSilicon discussion Rel-17 FS\_NR\_SL\_relay

#### 8.7.3.2 Service continuity

Including report of [Post111-e][621][Relay] Service continuity

[R2-2008780](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008780.zip) Left issues on Service continuity for L2 U2N relay OPPO discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008923](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008923.zip) Further Clarification on the L2 Service Continuity CATT discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008967](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008967.zip) Remaining issues on the mobility procedures for L2 relay Qualcomm Incorporated discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009031](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009031.zip) Discussion on Service continuity ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009068](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009068.zip) L3 relay enhancements to improve path switching Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009125](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009125.zip) Service Continuity for L2 Relay and L3 Relay MediaTek Inc. discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009145](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009145.zip) Discussion on service continuity for Layer-2 UE-to-Network Relay Spreadtrum Communications discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009171](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009171.zip) Service continuity via L3 UE-to-Network relaying Samsung Electronics discussion Rel-17

[R2-2009177](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009177.zip) Service Continuity Scenarios and AS-Layer Procedures Fraunhofer HHI, Fraunhofer IIS discussion Rel-17

[R2-2009271](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009271.zip) Further details on Service Continuity for Relaying Intel Corporation discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009301](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009301.zip) Service Continuity with Sidelink Relay Futurewei discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009476](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009476.zip) Discussion on service continuity for layer 2 UE to NW relay Apple discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009586](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009586.zip) Service continuity for L2 and L3 relay vivo discussion Rel-17

[R2-2009721](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009721.zip) Service continuity procedure and scenarios for sidelink relay Ericsson discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009938](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009938.zip) Service Continuity for UE2UE Relay Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_SL\_relay

[R2-2010329](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010329.zip) Clarification of remote UE mobility ETRI discussion Rel-17 FS\_NR\_SL\_relay

[R2-2010346](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010346.zip) Summary email discussion [621][Relay] of Service continuity Huawei, HiSilicon report Rel-17 FS\_NR\_SL\_relay

[R2-2010469](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010469.zip) Discussion on service continuity Xiaomi communications discussion

[R2-2010588](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010588.zip) Service continuity for SL relay LG Electronics Inc. discussion Rel-17 FS\_NR\_SL\_relay

[R2-2010659](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010659.zip) Service continuity for Remote UE LG Electronics Inc. discussion Rel-17

#### 8.7.3.3 Relay selection

Including report of [Post111-e][622][Relay] Relay selection and reselection

[R2-2008924](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008924.zip) Further Discussion on NR Sidelink Relay Selection and Reselection CATT discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008987](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008987.zip) Further details on relay reselection Intel Corporation discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009029](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009029.zip) Discussion on Relay initiation and (re-)selection ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009069](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009069.zip) Discussion on relay selection and reselection Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009148](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009148.zip) Discussion on relay selection and reselcetion Spreadtrum Communications discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009172](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009172.zip) Consideration on relay reselection criteria Samsung Electronics discussion Rel-17

[R2-2009176](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009176.zip) Relay (re)selection enhancement MediaTek Inc. discussion Rel-17

[R2-2009205](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009205.zip) Relay Selection and Reselection InterDigital discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009229](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009229.zip) Remaining aspects for relay selection and reselection Ericsson discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009523](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009523.zip) Summary Report of [Post111-e][622][Relay] Relay selection and reselection Apple discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009588](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009588.zip) SL-RSRP and SD-RSRP comparioson and additional criterion for relay (re-)selection vivo discussion Rel-17

[R2-2009634](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009634.zip) Considerations on relay selection and reselection KT Corp. discussion

[R2-2009857](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009857.zip) Relay reselection in the failure case Lenovo, Motorola Mobility discussion Rel-17

[R2-2009892](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009892.zip) SL Relay selection Sony discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009972](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009972.zip) NR Sidelink Relay (Re-)Selection Criterion and Procedure Fraunhofer IIS, Fraunhofer HHI discussion Rel-17

[R2-2010005](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010005.zip) Relay reselection based on discovery Kyocera discussion

[R2-2010347](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010347.zip) Remaining issues on relay selection and reselection Huawei, HiSilicon discussion Rel-17 FS\_NR\_SL\_relay

[R2-2010652](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010652.zip) PC5 link failure handling for NR sidelink relay LG Electronics Inc. discussion Rel-17

#### 8.7.3.4 Other

This agenda item may use a summary document (decision to be made based on submitted tdocs).

[R2-2008778](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008778.zip) Left issues on QoS, Security and L23 comparison OPPO discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009650](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009650.zip) View on Paging Option 2 in L2 relay ITL discussion Rel-17

[R2-2009858](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009858.zip) Considerations on the UE-to-Network relay and UE-to-UE relay case Lenovo, Motorola Mobility discussion Rel-17

[R2-2010104](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010104.zip) Release procedure for SL Relaying support Intel Corporation discussion Rel-17 FS\_NR\_SL\_relay

### 8.7.4 Discovery model and procedure for sidelink relaying

Including report of [Post111-e][623][Relay] Remaining issues on relay discovery

[R2-2008802](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008802.zip) Discussion on AS layer protocol of discovery message for SL relay OPPO discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008815](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008815.zip) Summary of [Post111-e][623][Relay]Remaining issues on relay discovery (rapporteur) OPPO discussion Rel-17 FS\_NR\_SL\_relay Revised

[R2-2008925](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008925.zip) Discussion on discovery message CATT discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008965](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008965.zip) Remaining issues on discovery and relay (re)selection Qualcomm Incorporated discussion Rel-17 FS\_NR\_SL\_relay

[R2-2008977](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008977.zip) Further details on SL discovery for relaying Intel Corporation discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009032](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009032.zip) Discussion on relay discovery and link management ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009149](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009149.zip) Discussion on remaining issues on relay discovery Spreadtrum Communications discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009173](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009173.zip) Sidelink relay discovery open issue Samsung Electronics discussion Rel-17

[R2-2009204](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009204.zip) Discovery Procedure for SL Relays InterDigital discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009228](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009228.zip) Remaining aspects for discovery Ericsson discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009524](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009524.zip) Discussion on remaining issues on NR Sidelink Relay discovery Apple discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009587](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009587.zip) Remaining issues of sidelink relay discovery procedure vivo discussion Rel-17

[R2-2009633](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009633.zip) Considerations on discovery for sidelink relay KT Corp. discussion

[R2-2009638](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009638.zip) Discussion on differentiation of discovery message SHARP Corporation discussion Rel-17

[R2-2009970](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009970.zip) NR Sidelink Relaying Discovery Fraunhofer IIS, Fraunhofer HHI discussion Rel-17

[R2-2009994](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009994.zip) Discovery resources for sidelink relaying Kyocera discussion

[R2-2010046](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010046.zip) Discussion on relay discovery model and procedure Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_SL\_relay

[R2-2010331](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010331.zip) On relay discovery MediaTek Inc. discussion Rel-17 FS\_NR\_SL\_relay

[R2-2010348](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010348.zip) Remaining issues on relay discovery Huawei, HiSilicon discussion Rel-17 FS\_NR\_SL\_relay

[R2-2010349](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010349.zip) Discussion on the discovery aspects related to SA2 LS S2-2006587 Huawei, HiSilicon discussion Rel-17 FS\_NR\_SL\_relay

[R2-2010467](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010467.zip) Discussion on scenario regarding non SL relay capable gNB Xiaomi communications discussion

[R2-2010660](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010660.zip) Remaining issues on discovery for NR sidelink relay LG Electronics Inc. discussion Rel-17

[R2-2010661](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010661.zip) Summary of [Post111-e][623][Relay]Remaining issues on relay discovery (rapporteur) OPPO discussion Rel-17 FS\_NR\_SL\_relay [R2-2008815](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008815.zip) Late

## 8.8 RAN slicing SI

(FS\_NR\_slice; leading WG: RAN2; REL-17; WID: RP-193254)

Time budget: 0.5 TU

Tdoc Limitation: 2 tdocs

Email max expectation: 2 threads

### 8.8.1 Organizational

Including work plan, TR updates and any other rapporteur input.

Including outcome of [Post111-e][916][RAN slicing] RAN slicing study questions (CMCC)

[R2-2008732](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008732.zip) LS on Enhancement of RAN Slicing (R3-205802; contact: Qualcomm) RAN3 LS in Rel-17 FS\_NR\_slice To:SA2 Cc:RAN2

[R2-2008759](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008759.zip) LS on Cell Configuration within TA/RA to Support Allowed NSSAI (S2-2006526; contact: ZTE) SA2 LS in Rel-17 FS\_eNS\_Ph2 To:RAN2, RAN3, CT1

[R2-2009669](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009669.zip) Considerations on scenarios and solution space of RAN slicing enhancements Lenovo, Motorola Mobility discussion Rel-17 FS\_NR\_slice

[R2-2010183](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010183.zip) Discussion on restricting the rate per UE per network slice Huawei, HiSilicon discussion Rel-17 TEI17 Late

[R2-2010184](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010184.zip) Draft reply LS on restricting the rate per UE per network slice Huawei LS out Rel-17 FS\_eNS\_Ph2 To:SA2 Cc:RAN3 Late

[R2-2010364](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010364.zip) Revised Work Plan for RAN Slicing CMCC, ZTE Work Plan Rel-17 FS\_NR\_slice R2-2007420

[R2-2010365](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010365.zip) Draft TR 38.832 CMCC, ZTE draft TR Rel-17 38.832 0.2.0 FS\_NR\_slice

[R2-2010366](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010366.zip) Report of [Post111-e][916][Slicing] Open issues for RAN slicing CMCC discussion Rel-17 FS\_NR\_slice

[R2-2010488](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010488.zip) Reply LS on Cell Configuration within TA/RA to Support Allowed NSSAI Qualcomm Incorporated LS out Rel-17 FS\_NR\_slice To:SA2, RAN3, CT1

[R2-2010646](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010646.zip) Draft reply LS on Cell Configuration within TA/RA to Support Allowed NSSAI ZTE corporation, Sanechips LS out Rel-17 FS\_NR\_slice To:SA2 Cc:CT1, RAN3

[R2-2010688](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010688.zip) LS on Cell Configuration within TA/RA to Support Allowed NSSAI (C1-206760; contact: Nokia) CT1 LS in Rel-17 FS\_eNS\_Ph2 To:SA2 Cc:RAN2, RAN3

[R2-2010694](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010694.zip) LS on restricting the rate per UE per network slice (S2-2007946; contact: Nokia) SA2 LS in Rel-17 FS\_eNS\_Ph2 To:RAN2, RAN3

[R2-2010695](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010695.zip) LS Reply on Enhancement of RAN Slicing (S2-2008240; contact: ZTE) SA2 LS in Rel-17 FS\_eNS\_Ph2 To:RAN3 Cc:RAN2

### 8.8.2 Slice based cell reselection under network control

Including discussion on proposals to address the issues for cell reselection identified in email discussion and whether or to which extent existing mechanisms can address them

[R2-2008857](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008857.zip) Considerations on slice aware cell priority KDDI Corporation discussion

[R2-2008917](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008917.zip) Slice based Cell Reselection under Network Control CATT discussion Rel-17 FS\_NR\_slice

[R2-2008949](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008949.zip) Cell (re)selection based on preferred frequency(s) per slice Beijing Xiaomi Software Tech discussion

[R2-2008950](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008950.zip) Deployment scenarios of RAN slicing based on SA2 LSout Beijing Xiaomi Software Tech discussion

[R2-2008963](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008963.zip) Further discussion on RAN slicing enhancement Qualcomm Incorporated discussion FS\_NR\_slice

[R2-2009067](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009067.zip) Considerations for Slice-based cell (re)selection Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_slice

[R2-2009143](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009143.zip) Discussion on slice based cell reselection Spreadtrum Communications discussion Rel-17 FS\_NR\_slice

[R2-2009174](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009174.zip) Slice information for cell reselection Samsung Electronics discussion Rel-17

[R2-2009198](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009198.zip) Consideration for slice based cell (re)selection Intel Corporation discussion Rel-17 FS\_NR\_slice

[R2-2009288](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009288.zip) 5G RAN Slicing Framework During Cell Selection / Reselection Phases MITRE Corporation, DoD, NTIA discussion Rel-17 38.832

[R2-2009473](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009473.zip) Discussion on slice based cell selection and re-selection Apple discussion Rel-17 FS\_NR\_slice

[R2-2009536](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009536.zip) Discussion on slice based cell reselection under network control China Unicom discussion FS\_NR\_slice

[R2-2009542](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009542.zip) Consideration on slice-based cell (re)selection OPPO discussion Rel-17 FS\_NR\_slice

[R2-2009644](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009644.zip) Assistant information to enable UE fast access network slice ITRI discussion FS\_NR\_slice

[R2-2009689](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009689.zip) Remaining issues on slice-based (re)-selection vivo discussion Rel-17 FS\_NR\_slice

[R2-2009807](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009807.zip) Consideration on slice specific cell selection and reselection ZTE corporation, Sanechips discussion Rel-17 FS\_NR\_slice

[R2-2009979](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009979.zip) Evaluation of Access delay to slice Ericsson discussion Rel-17 FS\_NR\_slice

[R2-2009986](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009986.zip) Solutions for fast access to slice Ericsson discussion Rel-17 FS\_NR\_slice

[R2-2010063](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010063.zip) Cell selection and reselection for RAN slicing Google discussion

[R2-2010065](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010065.zip) Discussion on Network Slicing’s Impact on Cell (Re-)Selection Convida Wireless discussion Rel-17 FS\_NR\_slice

[R2-2010181](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010181.zip) Slice based Cell (re)selection under network control Huawei, HiSilicon discussion Rel-17 FS\_NR\_slice

[R2-2010222](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010222.zip) Further discussion on how to decide intended slice for idle mobility LG Electronics UK discussion Rel-17

[R2-2010367](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010367.zip) Discussion on SA2 LS and solutions for slice-based cell reselection CMCC discussion Rel-17 FS\_NR\_slice

### 8.8.3 Slice based RACH configuration or access barring

Including discussion on proposals to address the issues for RACH/access barring identified in email discussion and whether or to which extent existing mechanisms can address them

[R2-2009175](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009175.zip) RACH configuration for RAN slicing Samsung Electronics discussion Rel-17

[R2-2009199](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009199.zip) Consideration of Slice based RACH Intel Corporation discussion Rel-17 FS\_NR\_slice

R2-2009423 RACH prioritisation for slices Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_slice

[R2-2009474](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009474.zip) Discussion on slice based RACH and cell barring Apple discussion Rel-17 FS\_NR\_slice

[R2-2009543](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009543.zip) Consideration on slice-based RACH OPPO discussion Rel-17 FS\_NR\_slice

[R2-2009688](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009688.zip) Remaining issues on RACH and service continuity vivo discussion Rel-17 FS\_NR\_slice

[R2-2009806](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009806.zip) Consideration on the slice specific RACH configuration ZTE corporation, Sanechips discussion Rel-17 FS\_NR\_slice

[R2-2009974](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009974.zip) RACH enhancements to enable UE fast access to the intended slice NEC Telecom MODUS Ltd. discussion

[R2-2010182](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010182.zip) Slice based RACH configuration or access barring Huawei, HiSilicon discussion Rel-17 FS\_NR\_slice

[R2-2010223](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010223.zip) Discussion on slice aware overload control LG Electronics UK discussion Rel-17

## 8.9 UE Power Saving

(NR\_UE\_pow\_sav\_enh-Core; leading WG: RAN2; REL-17; WID: RP-200938)

Time budget: 1 TU

Tdoc Limitation: 2 tdocs

Email max expectation: 2 threads

### 8.9.1 Organizational Scope and Requirements

E.g. Rapporteur input

[R2-2008716](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008716.zip) LS on evaluation methodology for connected mode UE power saving enhancements (R1-2007419; contact: vivo, MediaTek) RAN1 LS in Rel-17 NR\_UE\_pow\_sav\_enh To:RAN2 Cc:RAN4

- Ericsson wonder about the Note in the WID that R1 will ask R2 if blw is utilized, and also will R2 really evaluate anything for connected mode?

- vivo clarifies that for the moment it is mainly R1 features for CONN mode, but possibly later R2 would need to do some evaluation, e.g. on RLM relax etc.

- LG think some companies are not willing to accept Connected mode impact to power saving in R2 at all.

- Ericsson have concerns that there is too much overlap for R2 w R1 scope. Chair think this is not 100% clear cut but agrees that we need to be efficient.

- vivo think R4 will start with RLM BFD relax.

- Apple wonder if this will be different to R16 Way of working. Chair think fundamentally not.

- LG think DCI based power saving shall not be discussed in R2. LG think R2 might discuss BFDRLM relax

* Noted

[R2-2008719](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008719.zip) LS on evaluation methodology for UE power saving enhancements (R1-2007425; contact: MediaTek) RAN1 LS in Rel-17 NR\_UE\_pow\_sav\_enh-Core To:RAN2 Cc:RAN4

- Oppo wonder what is the intention with the two LSes.

* Noted

### 8.9.2 Idle inactive-mode UE power saving

Including [Post111-e][907][ePowSav] UE grouping (Mediatek)

GENERAL

[R2-2009784](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009784.zip) Report of [Post111-e][907][ePowSav] UE grouping (Mediatek) MediaTek Inc. report

DISCUSSION

P1

- Ericsson are not happy with the email discussion result. Ericsson don’t like to have a complex solution and think WUS PEI is too complex.

P4/5/6

- The character of the indication/scheduling signal

4: based on paging DCI,

5: PEI or WUS (early)

6: Cross-slot scheduling (somewhat early wrt PDSCH)

- QC: solution 6 would be PDCCH same timing as legacy, PDSCH somewhat later. Vivo think is existing model is used there is no enhancement. Vivo think this is similar to WUS.

- ZTE would prefer 4 or 5. Regarding 6, the power saving efficiency is not good.

- Vivo think solution for indication / scheduling signal shall be done in R1 and R2 should focus only in grouping.

- Nokia think we shouldn’t even discuss 4 5 6. R1 are already evaluating. CATT agrees with Nokia and think we cannot decide anything until R1 has made some progress. Samsung agrees and think R1 is evaluating, and think cross-slor is also applied for 5.

- CATT think P456 are just a first step.

- MTK think we can preclude P4.

- Apple think the cross-slot doesn't give much power saving, but would like to still consider it. Apple are ok to send an LS

- MTK think R2 can ask R1 to evaluate candidate solutions.

- LG think it is important that we have cross-slot scheduling.

- Intel support P456. Assume that R1 will evaluate. Sony agrees with Intel on P456, but think cross-slot scheduling is a separate aspect.

- QC think R2 is the lead group for this topic. Chair wonder if we need to send an LS, and clarify expectations. BT think QC has covered the comments. BT would like to ask R1 about P456, and are very interested in PEI, cross slot scheduling.

- Huawei are ok to send an LS, and agrees with QC that R2 should have the final say. Convida agrees, and think R2 can provide candidate solutions. Convida further think we shold ask R1 for evaluation results to make a final decision.

- vivo think we should only mention P4 to R1 as this is the R2 solution. Xiaomi think R1 is evaluating R2 aspects, and think LS is not needed, R1 can just continue and R2 can wait.

P2

- QC think there are misunderstandings, e.g. there is no impact on legacy UEs. Paging load may be impacted, but overlapping indication has low probability, so it can be handled, and think this is a good solution.

- MTK think this is a non-flexible solution, nu of groups will be fixed etc, and think the flexibility is important as we will only have one solution. ZTE agrees.

- Sequans support Qualcomm, and think multiple P-RNTI is flexible enough.

- xiaomi wonder if we only need two P-RNTI? Don’t we need one per subgroup? And this will impact DCI load/collision probability. ZTE agrees. QC think we can use combination P-RNTI to indicate combination of paging groups.

- Chair think we can maybe decide. Nokia think we can decide. Vivo have concerns on power saving gain.

- Ericsson think there is an impact on legacy UEs, as sometimes you want to reach all UEs, and there is not PDCCH capacity for multiple PRNTI.

P3

- Oppo want to ask R1 about this solution. Chair think this is just about group indication, not about physical signals.

* Confirm that UE grouping is considered a candidate of paging enhancement for UE power saving
* RAN2 have discussed and considered “paging indication for UE subgroups using paging DCI”, “paging early indication or wake-up signal (WUS) for UE subgroups”, “cross-slot scheduling of paging for UE subgroups”.
* RAN2 understands that RAN1 have started to evaluate performance and complexity. RAN2 assumes that RAN1 continues with this evaluation, in order that decisions can be made regarding the paging indication/scheduling solution. As R2 is the leading group for this WI objective it is expected that final decisions are made by R2.
* Will send an LS to R1 (action to be discussed offline).
* The solution of PRNTI based group discrimination is deprioritized from RAN2 perspective
* The solution of “paging for UE subgroups using different time/frequency resources” is de-prioritized from RAN2 perspective.
* [AT112-e][047][ePowSav] LS on Paging enhancement (Mediatek)

Scope: LS covering decisions and clarifying work split to the extent possible.

Intended outcome: Approved LS to R1

Deadline: EOM

[R2-2008952](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008952.zip) Discussion on paging enhancement Xiaomi Communications discussion

[R2-2009785](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009785.zip) Paging Enhancements for UE Power Saving in NR MediaTek Inc. discussion

[R2-2010244](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010244.zip) Paging enhancements for idle/inactive-mode UE Huawei, HiSilicon, British Telecom discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2009955](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009955.zip) Paging enhancement to reduce unnecessary UE paging receptions Ericsson discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2010079](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010079.zip) Paging Enhancements for UE Power Savings Convida Wireless discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2009878](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009878.zip) Consideration on Idle/inactive-mode UE power saving Lenovo, Motorola Mobility discussion Rel-17

Group determination

* [Post112-e][0xx][Pow17] Paging subgroup determination ()

Scope: For how to determine which paging subgroup a UE belongs to, several methods have been proposed, applying hash based on UE-ID similar to today, take into account paging probability, power consumption sensitivity etc. Objective to pave the way for agreements next meeting. Quantitative analysis argumentation is allowed (this is RAN2 scope).

Intended outcome: Report

Deadline: Long

[R2-2009274](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009274.zip) Paging enhancement using UE subgrouping Intel Corporation discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2009092](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009092.zip) Paging Enhancements to Reduce False Alarms Samsung Electronics Co., Ltd discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2010397](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010397.zip) UE Power profile based UE subgrouping CMCC discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2010629](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010629.zip) Further consideration on the UE grouping methods ZTE corporation, Sanechips discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

Paging / Group indication

[R2-2008892](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008892.zip) Power saving enhancements for paging reception Qualcomm Incorporated discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2009083](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009083.zip) Paging enhancement in idle inactive mode for power saving vivo discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2009442](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009442.zip) Paging enhancement for power saving LG Electronics Inc. discussion

[R2-2009351](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009351.zip) General requirements for potential paging enhancement Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2009503](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009503.zip) NR UE Power Save Wakeup and Paging Reception Apple discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2009893](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009893.zip) Discussion on reduction of unnecessary UE paging receptions Sony discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2009642](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009642.zip) Discussion on the UE grouping method ITRI discussion NR\_UE\_pow\_sav\_enh-Core

[R2-2009464](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009464.zip) Discussion on UE group based paging OPPO discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

Other

[R2-2009502](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009502.zip) NR UE Power Save False Paging Mitigation Apple discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

TRS CSI-RS for Idle Inactive

[R2-2010245](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010245.zip) On potential TRS/CSI-RS for idle/inactive-mode UE Huawei, HiSilicon discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2009956](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009956.zip) Exposure of connected mode TRS occasions to Idle and Inactive mode Ericsson discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2008946](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008946.zip) Discussion on TRS CSI-RS for RRC-IDLE and RRC-INACTIVE State UE Xiaomi Communications discussion

[R2-2009918](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009918.zip) Potential TRS/CSI-RS occasion(s) Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2009465](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009465.zip) Potential RAN2 impacts for TRS/CSI-RS configuration OPPO discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

Exceeding tdoc limitation

[R2-2009504](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009504.zip) NR UE Power Save UE Paging Grouping Apple discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

### 8.9.3 Other aspects RAN2 impacts

RLM BFD Relaxation (R4)

[R2-2009084](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009084.zip) RAN2 impact on RLM/BFD relaxation for power saving vivo discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

## 8.10 NR Non-Terrestrial Networks (NTN)

(NR\_NTN\_solutions-Core; leading WG: RAN2; REL-17; WID: RP-201256)

Time budget: 2 TU

Tdoc Limitation: 6 tdocs

Email max expectation: 4-5 threads

### 8.10.1 Organizational

Rapporteur inputs and other organizational documents. Documents in this AI do not count towards the tdoc limitation.

[R2-2008730](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008730.zip) Reply LS on SA WG2 assumptions from conclusion of study on architecture aspects for using satellite access in 5G (R3-205795;; contact: Qualcomm) RAN3 LS in Rel-17 NR\_NTN\_solutions-Core To:SA2, RAN2, CT1

[R2-2008884](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008884.zip) NR-NTN: Positioning Methods Fraunhofer IIS, Fraunhofer HHI discussion Rel-17 38.821 R2-2006699

[R2-2009136](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009136.zip) NR-NTN: TP for TS 38.300 Thales, Huawei, CATT, ZTE other Rel-17 38.300

R2-2009377 Discussion on CT1 LS on NAS procedure guard timers for GEO satellite OPPO discussion Rel-17 NR\_NTN\_solutions-Core Late

R2-2009378 Draft reply LS on NAS procedure guard timers for GEO satellite OPPO LS out Rel-17 NR\_NTN\_solutions-Core To:CT1 Cc:SA2 Late

[R2-2009695](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009695.zip) NR\_NTN\_solutions work plan THALES Work Plan Rel-17

[R2-2010686](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010686.zip) LS on NAS procedure guard timers for GEO satellite (C1-205967; contact: OPPO) CT1 LS in Rel-17 5GSAT\_ARCH-CT To:RAN2 Cc:SA2

[R2-2010696](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010696.zip) Reply LS on SA WG2 assumptions from conclusion of study on architecture aspects for using satellite access in 5G (S2-2008307; contact: Intel) SA2 LS in Rel-17 5GSAT\_ARCH To:RAN3 Cc:RAN2, SA3-LI, SA5

[R2-2010697](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010697.zip) LS on signalling of satellite backhaul connection (S2-2008308;contact: Samsung) SA2 LS in Rel-17 5GSAT\_ARCH To:RAN3 Cc:RAN1, RAN2

### 8.10.2 User Plane

#### 8.10.2.1 RACH aspects

Including the outcome of Post111-e][908][NTN] RACH and HARQ feedback aspects

[R2-2008911](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008911.zip) RACH Aspects for an NTN- Observations and Proposals Samsung Research America discussion

[R2-2008936](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008936.zip) Discussion on DRX operation associated with blind retransmission PANASONIC R&D Center Germany discussion

[R2-2008979](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008979.zip) MAC issues for NTN Intel Corporation discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2008980](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008980.zip) Timing advance for NTN Intel Corporation discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2008998](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008998.zip) Consideration on TA compensation for HAPS and ATG case Beijing Xiaomi Mobile Software discussion Rel-17

[R2-2009063](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009063.zip) Enhancements for NTN on MAC Layer Nomor Research GmbH, Thales discussion Rel-17 R2-2006702

[R2-2009107](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009107.zip) Discussion on RACH in NTN OPPO discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009139](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009139.zip) Discussion on Random Access Spreadtrum Communications discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009451](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009451.zip) Random Access procedure with timing reference at gateway vs satellite Qualcomm Inc discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009514](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009514.zip) On preamble ambiguity in NTN networks Apple discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009595](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009595.zip) Discussion on HARQ and RACH aspects in NTN Asia Pacific Telecom co. Ltd discussion NR\_NTN\_solutions-Core

[R2-2009635](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009635.zip) Consideration on MAC enhancements for NTN Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009636](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009636.zip) Consideration on varying RTD for earth fixed beam case Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009860](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009860.zip) Considerations on timing advance pre-compensation in NTN Lenovo, Motorola Mobility discussion Rel-17

[R2-2009861](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009861.zip) Preamble ambiguity for UE without TA pre-compensation capability Lenovo, Motorola Mobility discussion Rel-17

[R2-2009932](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009932.zip) Considerations on RACH procedure enhancements in NTN CAICT discussion

[R2-2009975](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009975.zip) Support of UEs with/without UE-specific pre-compensation NEC Telecom MODUS Ltd. discussion

[R2-2009981](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009981.zip) Discussion on 2-step RACH adaptation in NTN Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009984](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009984.zip) NTN timers and common delay update in moving satellite scenario Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2010091](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010091.zip) Timing Advance management in NTN ETRI discussion Rel-17 NR\_NTN\_solutions

[R2-2010169](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010169.zip) On Random Access in NTN Ericsson discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2010319](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010319.zip) Considerations on Random Access in NTN ZTE Corporation, Sanechips discussion Rel-17

[R2-2010339](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010339.zip) Enhancement on random access procedure LG Electronics Inc. discussion NR\_NTN\_solutions-Core

[R2-2010393](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010393.zip) Discussion on pre-compensation in NTN CMCC discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2010451](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010451.zip) Delay calculation and compensation in NTN InterDigital discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2010455](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010455.zip) Summary of [Post111-e][908][NTN] RACH and HARQ feedback aspects InterDigital discussion Rel-17 NR\_NTN\_solutions-Core Late

[R2-2010456](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010456.zip) [DRAFT] LS to RAN1 on RAN2 agreements for ra-ResponseWindow and msgB-ResponseWindow InterDigital LS out Rel-17 NR\_NTN\_solutions-Core To:RAN1 Late

[R2-2010457](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010457.zip) [DRAFT] LS to RAN1 on RAN2 agreements for enabling/disabling HARQ UL retransmission InterDigital LS out Rel-17 NR\_NTN\_solutions-Core To:RAN1 Late

[R2-2010664](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010664.zip) Considerations on scheduling request in NTN CAICT discussion

#### 8.10.2.2 Other MAC aspects

[R2-2008836](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008836.zip) Discussion on Other MAC aspects enhancements in NR NTN CATT discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2008912](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008912.zip) MAC Aspects for an NTN- Observations and Proposals Samsung Research America discussion

[R2-2008969](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008969.zip) Round trip delay offset for configured grant timers MediaTek Inc. discussion

[R2-2008970](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008970.zip) LCP impact of disabling HARQ uplink retransmission MediaTek Inc. discussion

[R2-2008997](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008997.zip) Consideration on HARQ blind retransmission Beijing Xiaomi Mobile Software discussion Rel-17

[R2-2009064](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009064.zip) Enhancements on UL scheduling for NTN Nomor Research GmbH, Thales discussion Rel-17

[R2-2009108](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009108.zip) HARQ impact on MAC procedures in NTN OPPO discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009109](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009109.zip) Discussion on other MAC issues in NTN OPPO discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009140](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009140.zip) Discussion on HARQ and related timers Spreadtrum Communications discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009452](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009452.zip) UL HARQ process without HARQ retransmission Qualcomm Inc discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009511](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009511.zip) On user plane latency reduction mechanisms in NTN networks Apple discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009864](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009864.zip) Discussion on DRX for NTN Lenovo, Motorola Mobility discussion Rel-17

[R2-2009895](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009895.zip) Other MAC aspects in NTN Sony discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009987](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009987.zip) Discussion on HARQ and UL scheduling enhancement aspects in NTN Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2010168](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010168.zip) On scheduling, HARQ, and DRX for NTN Ericsson discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2010320](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010320.zip) Considerations on HARQ in NTN ZTE Corporation, Sanechips discussion Rel-17

[R2-2010334](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010334.zip) Discussion on disabling HARQ feedback and uplink retransmission LG Electronics Inc. discussion NR\_NTN\_solutions-Core

[R2-2010335](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010335.zip) Discussion on scheduling enhancement LG Electronics Inc. discussion NR\_NTN\_solutions-Core

[R2-2010368](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010368.zip) Further discussion of HARQ operation for NTN CMCC discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2010369](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010369.zip) HARQ enhancement for NTN system CMCC discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2010533](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010533.zip) HARQ aspects in NTN ETRI discussion

#### 8.10.2.3 RLC and PDCP aspects

Including the outcome of Post111-e][909][NTN] RLC and PDCP aspects

[R2-2008896](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008896.zip) [POST111e][909][NTN] Email Discussions Summary on RLC and PDCP aspects (MediaTek) MediaTek Inc. discussion

[R2-2008913](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008913.zip) RLC and PDCP Aspects for an NTN- Observations and Proposals Samsung Research America discussion

[R2-2009070](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009070.zip) Remaining Aspects on Enhancements for NTN on RLC and PDCP Timers Nomor Research GmbH, Thales discussion Rel-17

[R2-2009647](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009647.zip) Consideration of RLC and PDCP in NTN China Telecom discussion

[R2-2010167](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010167.zip) On RLC and PDCP for NTN Ericsson discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2010170](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010170.zip) Additional RLC and PDCP aspects for NTN Sequans Communications discussion Rel-17 NR\_NTN\_solutions-Core

### 8.10.3 Control Plane

Also identify things not covered in the TR that need to be covered, if any.

#### 8.10.3.1 Earth fixed moving beams related issues

Including the outcome of Post111-e][910[NTN] Impacts of earth fixed and moving beams

[R2-2008838](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008838.zip) Discussion on tracking area for earth moving cells CATT discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2008914](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008914.zip) Beam Aspects for an NTN- Observations and Proposals Samsung Research America discussion

[R2-2009110](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009110.zip) Discussion on earth fixed and moving cells OPPO discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009141](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009141.zip) Discussion on Floor Layout Information Spreadtrum Communications discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009256](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009256.zip) Earth fixed/moving beams related issues THALES discussion Rel-17

[R2-2009453](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009453.zip) Gateway switch procedure for earth fixed and moving beam scenario Qualcomm Inc discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009512](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009512.zip) Analysis of mobility management solutions with earth fixed and earth moving beams/cells in NTN networks Apple discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009773](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009773.zip) On Feeder Link Mobility in Transparent Satellite Payload Scenarios Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009805](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009805.zip) Tracking area management for earth moving cells ZTE corporation, Sanechips discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009820](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009820.zip) [POST111e][910][NTN] Impacts of earth fixed and moving beams (Ericsson) Ericsson report

[R2-2009823](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009823.zip) Aspects for Earth fixed and Earth moving beams for NTN Ericsson discussion NR\_NTN\_solutions-Core

[R2-2009977](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009977.zip) Mobility scenarios of Earth fixed/moving beams NEC Telecom MODUS Ltd. discussion

[R2-2009980](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009980.zip) TAI update for earth moving cell NEC Telecom MODUS Ltd. discussion

[R2-2010261](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010261.zip) Discussion on soft feeder link switch Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2010377](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010377.zip) Considerations on Soft TAI Update CMCC discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2010447](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010447.zip) Discussion on service link/feeder link switch in NTN Xiaomi Communications discussion

[R2-2010452](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010452.zip) Feeder-link switch InterDigital discussion Rel-17 NR\_NTN\_solutions-Core

R2-2010480 Tracking area management for earth moving cells ZTE corporation, Sanechips discussion Rel-17 NR\_NTN\_solutions-Core Withdrawn

#### 8.10.3.2 Idle Inactive mode

Idle/inactive mode specific issues.

Including cell selection/reselection & system information.

[R2-2008814](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008814.zip) Consideration on idle mode issues in NTN CAICT discussion

[R2-2008837](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008837.zip) Remaining Issues of IDLE and Inactive Mode for NTN CATT discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2008897](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008897.zip) On Cell Re-selection in NR-NTN MediaTek Inc. discussion

[R2-2008898](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008898.zip) Improving Tracking Area Updates in NR-NTN MediaTek Inc. discussion

[R2-2008915](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008915.zip) Idle and Inactive Mode Aspects for an NTN- Observations and Proposals Samsung Research America discussion

[R2-2008984](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008984.zip) Idle mode operation in NTN Intel Corporation discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009111](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009111.zip) Discussion on idle/inactive mode procedures in NTN OPPO discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009120](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009120.zip) Fixed Tracking Area and the Tracking Area Code in NTN PANASONIC R&D Center Germany discussion R2-2006821

[R2-2009142](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009142.zip) Discussion on Mobility Spreadtrum Communications discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009255](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009255.zip) Idle mode procedures in NR NTN THALES discussion Rel-17

[R2-2009454](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009454.zip) Cell selection and reselection enhancements Qualcomm Inc discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009510](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009510.zip) Cell Selection and Reselection solutions for NTN networks Apple discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009597](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009597.zip) Control Plane for Idle mode UE Xiaomi discussion Rel-17

[R2-2009621](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009621.zip) Enhancements on cell reselection Xiaomi discussion Rel-17

[R2-2009637](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009637.zip) Discussion on RRC\_IDLE mode issues in NTN Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009645](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009645.zip) Ephemeris data to be included in system information ITRI discussion NR\_NTN\_solutions-Core

[R2-2009648](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009648.zip) The consideration of satellite ephemeris in NTN China Telecom discussion

[R2-2009774](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009774.zip) IDLE mode aspects for Non-Terrestrial Networks (NTN) Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009818](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009818.zip) Idle mode aspects for NTN Ericsson LM discussion NR\_NTN\_solutions-Core

[R2-2009862](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009862.zip) Ephemeris data provision in NTN Lenovo, Motorola Mobility discussion Rel-17

[R2-2009894](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009894.zip) Idle mode aspects in NTN Sony discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2010094](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010094.zip) Earth moving beam scenarios in Earth fixed tracking areas ETRI discussion Rel-17 NR\_NTN\_solutions

[R2-2010260](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010260.zip) Considerations on satellite ephemeris Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2010370](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010370.zip) Discussion of UE location information assistant for cell selection and reselection in NTN CMCC discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2010453](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010453.zip) Satellite ephemeris in NTN InterDigital discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2010578](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010578.zip) Idle mode issues in NR NTN LG Electronics Inc. discussion Rel-17 NR\_NTN\_solutions-Core

#### 8.10.3.3 Connected mode

Connected mode specific issues.

Including the outcome of Post111-e][911[NTN] Connected mode aspects

[R2-2008833](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008833.zip) Feeder Link Switch CATT discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2008834](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008834.zip) Open Issues for Measurements in NTN CATT discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2008835](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008835.zip) Discussion on UE-based location requirement in NR NTN CATT discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2008916](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008916.zip) Connected Mode Aspects for an NTN- Observations and Proposals Samsung Research America discussion

[R2-2008973](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008973.zip) Service continuity between NTN and TN HUGHES Network Systems Ltd, Thales, BT, Turkcell, Vodafone discussion Rel-17 38.821

[R2-2008981](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008981.zip) Feeder link switch over for NTN Intel Corporation discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2008982](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008982.zip) Mobility enhancement for NTN Intel Corporation discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009112](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009112.zip) Discussion on mobility management for connected mode UE in NTN OPPO discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009121](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009121.zip) Overhead Reduction for the Handover Procedure in NTN PANASONIC R&D Center Germany discussion R2-2006822

[R2-2009443](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009443.zip) Measurement window enhancements LG Electronics Inc. discussion

[R2-2009455](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009455.zip) Configuration and triggering of CHO Qualcomm Inc discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009456](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009456.zip) SMTC and measurement gap configuration Qualcomm Inc discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009513](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009513.zip) Analysis of proposed conditional handover solutions for NTN Networks Apple discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009772](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009772.zip) Simulation assumptions for evaluating NTN mobility Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_NTN\_solutions-Core R2-2007363

[R2-2009803](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009803.zip) Report of [Post111-e] [911] [NTN] Connected mode aspects (ZTE) ZTE corporation, Sanechips discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009804](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009804.zip) Consideration on the measurement configuration and reporting in NTN ZTE corporation, Sanechips discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2009821](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009821.zip) Connected mode aspects for NTN Ericsson discussion

[R2-2009859](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009859.zip) Conditional handover in NTN Lenovo, Motorola Mobility discussion Rel-17

[R2-2009863](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009863.zip) Considerations on measurements in NTN Lenovo, Motorola Mobility discussion Rel-17

[R2-2009896](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009896.zip) Mobility management in NTN Sony discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2010262](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010262.zip) Discussion on enhancements for connected mode in NTN Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2010371](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010371.zip) Discussion of mobility enhancements for NTN CMCC discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2010446](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010446.zip) Discussion on mobility management in NTN Xiaomi Communications discussion

[R2-2010454](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010454.zip) Connected mode mobility in NTN InterDigital discussion Rel-17 NR\_NTN\_solutions-Core R2-2007618

R2-2010478 Report of [Post111-e] [911] [NTN] Connected mode aspects (ZTE) ZTE corporation, Sanechips discussion Rel-17 NR\_NTN\_solutions-Core Withdrawn

R2-2010479 Consideration on the measurement configuration and reporting in NTN ZTE corporation, Sanechips discussion Rel-17 NR\_NTN\_solutions-Core Withdrawn

[R2-2010579](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010579.zip) New triggering condition for CHO in NTN LG Electronics Inc. discussion Rel-17 NR\_NTN\_solutions-Core

## 8.11 NR positioning enhancements SI

(FS\_NR\_pos\_enh; leading WG: RAN1; REL-17; WID: RP-202094)

Time budget: 1 TU

Tdoc Limitation: 4 tdocs

Email max expectation: 3 threads

### 8.11.1 Organizational

Rapporteur inputs and other organizational documents. Documents in this AI do not count towards the tdoc limitation.

[R2-2008707](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008707.zip) LS on Latency of NR Positioning Protocols (R1-2007264; contact: Intel) RAN1 LS in Rel-17 FS\_NR\_pos\_enh To:RAN2 Cc:RAN3, SA2

[R2-2010576](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010576.zip) draft LS to capture TP for TR 38.857 Ericsson LS out Rel-17 To:RAN1

[R2-2010577](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010577.zip) TP for TR 38.857 Study on NR Positioning Ericsson, Swift Navigation report Rel-17 38.857

### 8.11.2 Enhancements for commercial use cases

Scope and general discussion related to the RAN2 objective on enhancements to support high accuracy, low latency, network efficiency, and device efficiency for commercial use cases.

Including report of [Post111-e][625][POS] End-to-end latency analysis

This agenda item will use a summary document.

[R2-2008775](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008775.zip) Discussion on on-demand DL-PRS OPPO discussion Rel-17 FS\_NR\_pos\_enh

[R2-2008776](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008776.zip) Positioning in RRC\_IDLE and RRC\_INACTIVE state OPPO discussion Rel-17 FS\_NR\_pos\_enh

[R2-2008810](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008810.zip) Further discussion on ehancements for commercial use cases CATT discussion Rel-17 FS\_NR\_pos\_enh

[R2-2008885](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008885.zip) Discussion on Positioning in Idle/Inactive mode InterDigital, Inc. discussion Rel-17 FS\_NR\_pos\_enh

[R2-2008886](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008886.zip) Discussion on End-to-End Latency Reduction for DL/UL Positioning InterDigital, Inc. discussion Rel-17 FS\_NR\_pos\_enh

[R2-2008887](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008887.zip) Discussion on On Demand Reference Signals for Positioning InterDigital, Inc. discussion Rel-17 FS\_NR\_pos\_enh

[R2-2009001](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009001.zip) Report of [Post111-e][625][POS] End-to-end latency analysis (Intel) Intel Corporation discussion Rel-17 FS\_NR\_pos\_enh

[R2-2009002](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009002.zip) Support of positioning in idle/inactive mode Intel Corporation discussion Rel-17

[R2-2009023](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009023.zip) Solution directions to reduce end-to-end latency Intel Corporation discussion Rel-17 FS\_NR\_pos\_enh

[R2-2009039](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009039.zip) Discussion on positioning enhancement vivo Mobile Communication Co., discussion FS\_NR\_pos\_enh

[R2-2009040](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009040.zip) Procedure of on-demand PRS vivo Mobile Communication Co., discussion FS\_NR\_pos\_enh

[R2-2009041](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009041.zip) Positioning in RRC idle and inactive state vivo Mobile Communication Co., discussion FS\_NR\_pos\_enh

[R2-2009137](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009137.zip) Discussion on positioning enhancements for commercial use cases Spreadtrum Communications discussion Rel-17 FS\_NR\_pos\_enh

[R2-2009286](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009286.zip) Reporting movement models Fraunhofer IIS discussion R2-2007238 Revised

[R2-2009287](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009287.zip) Reporting the situational quality of RAT and RAT-independent technologies Fraunhofer IIS, Fraunhofer HHI discussion R2-2007246

[R2-2009574](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009574.zip) Discussion on PRS enhancements Beijing Xiaomi Electronics discussion Rel-17

[R2-2009577](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009577.zip) Positioning enhancements on RRC idle/inactive UE and latency reduction Beijing Xiaomi Electronics discussion Rel-17

[R2-2009897](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009897.zip) Considerations on potential positioning enhancements Sony discussion Rel-17 FS\_NR\_pos\_enh

[R2-2010072](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010072.zip) Enhancements for commercial use cases Ericsson discussion Rel-17

[R2-2010095](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010095.zip) NR Positioning Enhancements Qualcomm Incorporated discussion

[R2-2010096](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010096.zip) NR Positioning Latency Analysis and Enhancements Qualcomm Incorporated discussion

[R2-2010097](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010097.zip) On-Demand PRS Qualcomm Incorporated discussion

[R2-2010131](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010131.zip) Reporting movement models Fraunhofer IIS, Fraunhofer HHI discussion [R2-2009286](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009286.zip)

[R2-2010161](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010161.zip) On-demand PRS transmission and dynamic PRS resource allocation Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_pos\_enh R2-2007128

[R2-2010276](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010276.zip) Discussion on IDLE INACTIVE pos, on-demand PRS and latency analysis Huawei, HiSilicon discussion Rel-17 FS\_NR\_pos\_enh

[R2-2010277](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010277.zip) Discussion on R17 positioning enhancement Huawei, HiSilicon discussion Rel-17 FS\_NR\_pos\_enh

[R2-2010472](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010472.zip) Disucssion on IDLE/INACTIVE mode positioning ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_pos\_enh

[R2-2010473](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010473.zip) Discussion on on-demand PRS ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_pos\_enh

[R2-2010627](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010627.zip) Discussion on enhancement for commercial use cases Samsung R&D Institute UK discussion

[R2-2010648](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010648.zip) Support for positioning in idle/inactive mode Samsung R&D Institute UK discussion

[R2-2010669](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010669.zip) Summary of 8.11.2 Enhancements for commercial use cases CATT discussion Rel-17 FS\_NR\_pos\_enh Late

### 8.11.3 Integrity and reliability of assistance data and position information

#### 8.11.3.1 KPIs and use cases

Including report of [Post111-e][626][POS] Integrity use cases and specification impacts

[R2-2008811](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008811.zip) Discussion on integrity service level CATT discussion Rel-17 FS\_NR\_pos\_enh

[R2-2009129](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009129.zip) Summary of [Post111-e][626][POS] Email Discussion on integrity use cases and specification impacts Swift Navigation discussion

[R2-2009760](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009760.zip) Positioning integrity for Industrial IoT use cases Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_pos\_enh

[R2-2009898](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009898.zip) Discussion on Integrity of positioning information Sony discussion Rel-17 FS\_NR\_pos\_enh

[R2-2010074](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010074.zip) Industrial IoT use-case Ericsson discussion Rel-17

[R2-2010090](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010090.zip) Integrity and reliability for IIoT positioning use cases Convida Wireless discussion Rel-17 38.857 FS\_NR\_pos\_enh

[R2-2010098](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010098.zip) Discussion on including PL Availability as an additional integrity KPI ESA discussion Rel-17 FS\_NR\_pos\_enh

[R2-2010475](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010475.zip) Discussion on integrity&error source factor transmission ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_pos\_enh

#### 8.11.3.2 Error sources threat models occurrence rates and failure modes

This agenda item may use a summary document (decision to be made based on submitted tdocs).

[R2-2008812](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008812.zip) Discussion on error sources, threat models, occurrence rates and failure modes CATT discussion Rel-17 FS\_NR\_pos\_enh

[R2-2009282](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009282.zip) Error sources, threat models, occurrence rates and failure modes Fraunhofer IIS discussion Revised

[R2-2009331](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009331.zip) Discussion on GNSS Integrity Errors Swift Navigation, Ericsson, Intel Corporation, u-blox discussion

[R2-2010061](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010061.zip) Text Proposal on GNSS position integrity error sources ESA discussion Rel-17 38.857 FS\_NR\_pos\_enh

[R2-2010073](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010073.zip) GNSS position integrity error sources Ericsson discussion Rel-17

[R2-2010135](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010135.zip) Error sources, threat models, occurrence rates and failure modes Fraunhofer IIS, Fraunhofer HHI discussion [R2-2009282](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009282.zip)

[R2-2010278](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010278.zip) Discussion on threat models and failure modes Huawei, HiSilicon discussion Rel-17 FS\_NR\_pos\_enh

[R2-2010642](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010642.zip) Introduction of Integrity monitoring for GNSS and its error Samsung R&D Institute UK discussion

[R2-2010700](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010700.zip) Summary of 8.11.3.2 Error sources threat models occurrence rates and failure modes Intel Corporation discussion Rel-17 FS\_NR\_pos\_enh

#### 8.11.3.3 Methodologies for network-assisted and UE-assisted integrity

This agenda item may use a summary document (decision to be made based on submitted tdocs).

[R2-2008774](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008774.zip) Discussion on methodology for integrity OPPO discussion Rel-17 FS\_NR\_pos\_enh

[R2-2008813](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008813.zip) Discussion on methodologies for network-assisted and UE-assisted integrity CATT discussion Rel-17 FS\_NR\_pos\_enh

[R2-2008888](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008888.zip) Discussion on methodologies for network-assisted and UE-assisted integrity InterDigital, Inc. discussion Rel-17 FS\_NR\_pos\_enh

[R2-2009003](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009003.zip) Methodologies for network-assisted and UE-assisted integrity Intel Corporation, Swift Navigation discussion Rel-17

[R2-2009043](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009043.zip) Integrity signaling and procedures vivo Mobile Communication Co., discussion

[R2-2009138](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009138.zip) Discussion on integrity methodologies for network-assisted and UE-assisted integrity Spreadtrum Communications discussion Rel-17 FS\_NR\_pos\_enh

[R2-2009333](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009333.zip) TP for GNSS Integrity Methodologies Swift Navigation, Ericsson, Intel Corporation, u-blox discussion

[R2-2009530](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009530.zip) Discussion on Positioning Integrity Apple discussion Rel-17 FS\_NR\_pos\_enh

[R2-2009578](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009578.zip) Discussion on methodologies for positioning integrity Beijing Xiaomi Electronics discussion Rel-17

[R2-2009761](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009761.zip) Signalling for Positioning Integrity Support Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_pos\_enh

[R2-2010075](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010075.zip) Methodologies for network-assisted and UE-assisted integrity Ericsson discussion Rel-17

[R2-2010279](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010279.zip) Discussion for network-assisted and UE-assisted integrity Huawei, HiSilicon discussion Rel-17 FS\_NR\_pos\_enh

[R2-2010474](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010474.zip) Discussion of the methodologies for network-assisted and UE-assisted integrity ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_pos\_enh

[R2-2010675](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010675.zip) Summary of 8.11.3.3: Methodologies for network-assisted and UE-assisted integrity InterDigital discussion Rel-17 FS\_NR\_pos\_enh

## 8.12 Reduced Capability SI

(FS\_NR\_redcap; leading WG: RAN1; REL-17; WID: RP-201386)

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

Email max expectation: 3 threads

### 8.12.1 Organizational

Rapporteur inputs and other organizational documents. Documents in this AI do not count towards the tdoc limitation.

Including outcome of [Post111-e][912][REDCAP] TP for the TR

[R2-2009615](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009615.zip) Way forward for RedCap in RAN2 Ericsson discussion FS\_NR\_redcap

[R2-2009616](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009616.zip) TR38875 update Ericsson discussion FS\_NR\_redcap

[R2-2009617](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009617.zip) Summary of [Post111-e][912][RedCap] TP for TR Ericsson report FS\_NR\_redcap

### 8.12.2 Framework for reduced capabilities

[R2-2008951](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008951.zip) General views on Higher-layer impacts for Redcap devices Xiaomi Communications discussion

#### 8.12.2.1 Principles for how to define and constrain reduced capabilities

Including outcome of [Post111-e][913][REDCAP] Definition and constraining of reduced capabilities

[R2-2008889](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008889.zip) Define and constrain RedCap UEs Qualcomm Incorporated discussion Rel-17 FS\_NR\_redcap

[R2-2009004](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009004.zip) Report of [POST111e][913][REDCAP] Definition and constraining of reduced capabilities (Intel) Intel Corporation discussion Rel-17 FS\_NR\_redcap

[R2-2009008](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009008.zip) Device type definition and how to signal the device type to network Fujitsu discussion Rel-17 FS\_NR\_redcap

[R2-2009085](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009085.zip) UE type defination and constraining for RedCap UEs vivo, Guangdong Genius discussion Rel-17 FS\_NR\_redcap

[R2-2009104](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009104.zip) Discussion on definition of reduced capabilities OPPO discussion Rel-17 FS\_NR\_redcap

[R2-2009115](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009115.zip) On the definition of a RedCap device type MediaTek Inc. discussion Rel-17 FS\_NR\_redcap R2-2007492

[R2-2009248](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009248.zip) Consideration on definition and constraining of Reduced Capability ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_redcap

[R2-2009361](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009361.zip) On Definition and Constraint of Reduced Capabilities CATT discussion Rel-17 FS\_NR\_redcap

[R2-2009618](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009618.zip) Framework and principles for RedCap Ericsson discussion FS\_NR\_redcap

[R2-2009762](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009762.zip) Discussion on how to define and constrain the REDCAP UE China Telecommunications discussion

[R2-2009933](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009933.zip) Capability framework and constraining of RedCap UE Huawei, HiSilicon discussion Rel-17 FS\_NR\_redcap

R2-2009957 Discussion on how to ensure devices only access to intended services China Telecommunications discussion Rel-17 Late

[R2-2009958](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009958.zip) Discussion on how to ensure devices only access to intended services China Telecommunications discussion Rel-17

[R2-2010225](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010225.zip) Discussion on the intended use cases for RedCap UEs LG Electronics UK discussion Rel-17

[R2-2010376](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010376.zip) Discussion on the definition and constraining of reduced capabilities CMCC discussion Rel-17 FS\_NR\_redcap

[R2-2010458](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010458.zip) Reduced capability device type definition InterDigital discussion Rel-17 FS\_NR\_redcap

#### 8.12.2.2 Identification and access restrictions

Including outcome of [Post111-e][914][REDCAP] UE identification and access restrictions

[R2-2008890](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008890.zip) Impact of reduced capabilities on idle mode procedures Qualcomm Incorporated discussion Rel-17 FS\_NR\_redcap

[R2-2008947](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008947.zip) Discussion on Identification and UE access restrictions for Redcap devices Xiaomi Communications discussion

[R2-2008996](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008996.zip) Early identification of RedCap UEs Samsung discussion Rel-17 FS\_NR\_redcap

[R2-2009009](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009009.zip) Access restriction of RedCap UE Fujitsu discussion Rel-17 FS\_NR\_redcap

[R2-2009010](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009010.zip) UAC for RedCap UE Intel Corporation, Facebook discussion Rel-17 FS\_NR\_redcap

[R2-2009086](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009086.zip) Identification and access restrictions for RedCap UEs vivo, Guangdong Genius discussion Rel-17 FS\_NR\_redcap

[R2-2009105](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009105.zip) Discussion on RedCap UE’s access control OPPO discussion Rel-17 FS\_NR\_redcap

[R2-2009249](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009249.zip) Further consideration on Identification and access restrictions ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_redcap

[R2-2009362](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009362.zip) On Identification and Access Restrictions for Reduced Capabilities UE CATT discussion Rel-17 FS\_NR\_redcap

[R2-2009515](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009515.zip) Ineffectiveness of MSG3 based RAN node identification of RedCap UE Apple discussion Rel-17 FS\_NR\_redcap

[R2-2009619](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009619.zip) Identification and access control of RedCap Ues Ericsson discussion FS\_NR\_redcap

[R2-2009670](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009670.zip) Early identification of Redcap UEs Lenovo, Motorola Mobility discussion Rel-17 FS\_NR\_redcap

[R2-2009751](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009751.zip) Discussion on identification and access restriction of REDCAP UE China Telecommunications discussion

[R2-2009800](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009800.zip) Cell access for REDCAP UE with reduced bandwidth Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_redcap

[R2-2009817](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009817.zip) RedCap UE identification options NEC discussion Rel-17 FS\_NR\_redcap

[R2-2009871](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009871.zip) Cell restriction and UAC enhancement for REDCAP Ues Lenovo, Motorola Mobility discussion Rel-17

[R2-2009916](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009916.zip) Cell access restrictions for REDCAP UE Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_redcap

[R2-2009934](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009934.zip) Identification and access restriction of RedCap UE Huawei, HiSilicon discussion Rel-17 FS\_NR\_redcap

[R2-2009936](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009936.zip) Summary of email discussion 914 on UE identification and access restrictions Huawei report Rel-17 FS\_NR\_redcap

[R2-2010224](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010224.zip) Consideration on access restriction during Msg3 LG Electronics UK discussion Rel-17

### 8.12.3 UE power saving and battery lifetime enhancement

UE power saving and battery lifetime enhancement for reduced capability UEs in applicable use cases (e.g. delay tolerant case).

Including outcome of [Post111-e][915][REDCAP] UE power saving features

[R2-2008891](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008891.zip) DRX enhancements for RedCap UEs Qualcomm Incorporated discussion Rel-17 FS\_NR\_redcap

[R2-2008948](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008948.zip) Discussion on e-DRX for Redcap Devices Beijing Xiaomi Mobile Software discussion

[R2-2009011](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009011.zip) Support of extend paging DRX cycle for Inactive UE Intel Corporation discussion Rel-17

[R2-2009022](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009022.zip) Relax measurement for stationary and low mobility devices Intel Corporation discussion Rel-17 FS\_NR\_redcap

[R2-2009087](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009087.zip) RRM relaxation for power saving vivo, Guangdong Genius discussion Rel-17 FS\_NR\_redcap

[R2-2009106](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009106.zip) Discussion on RRM relaxation OPPO discussion Rel-17 FS\_NR\_redcap

[R2-2009116](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009116.zip) Further considerations for eDRX MediaTek Inc. discussion Rel-17 FS\_NR\_redcap

[R2-2009247](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009247.zip) Discussion on eDRX for Redcap UE ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_redcap

[R2-2009363](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009363.zip) On eDRX for NR RRC Inactive and Idle CATT discussion Rel-17 FS\_NR\_redcap

[R2-2009364](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009364.zip) Summary of email discussion 915 - UE power saving features CATT discussion Rel-17 FS\_NR\_redcap

[R2-2009532](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009532.zip) Support of 2.56 eDRX cycle and emergency broadcast reception for RedCap UEs Apple, Facebook discussion Rel-17 FS\_NR\_redcap

[R2-2009620](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009620.zip) RedCap power saving enhancements Ericsson discussion FS\_NR\_redcap

[R2-2009877](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009877.zip) RRM relaxation for stationary UE with reduced capability Lenovo, Motorola Mobility discussion Rel-17

[R2-2009917](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009917.zip) Power saving and battery lifetime enhancement for REDCAP UE Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_redcap

[R2-2009935](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009935.zip) eDRX and RRM measurement relaxation for RedCap UE Huawei, HiSilicon discussion Rel-17 FS\_NR\_redcap

[R2-2010113](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010113.zip) eDRX for Reduced Capability NR Devices Convida Wireless discussion Rel-17

[R2-2010392](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010392.zip) eDRX for reduced capability UE CMCC discussion Rel-17 FS\_NR\_redcap

[R2-2010406](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010406.zip) Introducing Extended DRX for RRC Inactive and/or Idle Samsung discussion FS\_NR\_redcap

[R2-2010580](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010580.zip) RRM relaxation for stationary RedCap Ues LG Electronics Inc. discussion Rel-17 FS\_NR\_redcap

[R2-2010592](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010592.zip) RRM relaxation for RedCap devices Samsung Electronics discussion Rel-17

## 8.13 SON MDT

(NR\_ENDC\_SON\_MDT\_enh-Core; leading WG: RAN3; REL-17; WID: RP-201281)

Time budget: 1 TU

Tdoc Limitation: 6 tdocs

Email max expectation: 6 threads

[R2-2010085](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010085.zip) Immediate MDT with MR-DC and Intermediate MDT for early measurements Samsung Telecommunications discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2010086](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010086.zip) Logged MDT with MR-DC and related early measurments aspects Samsung Telecommunications discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

### 8.13.1 Organizational

[R2-2008723](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008723.zip) LS to RAN2 on RACH report for SgNB (R3-205662; contact: CATT) RAN3 LS in Rel-17 NR\_ENDC\_SON\_MDT\_enh To:RAN2

[R2-2008725](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008725.zip) LS on Successful Handover Report (R3-205759; contact: Samsung) RAN3 LS in Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core To:RAN2

[R2-2008731](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008731.zip) LS to RAN2 on RACH report for 2-step RACH (R3-205797; contact: CATT) RAN3 LS in Rel-17 NR\_ENDC\_SON\_MDT\_enh To:RAN2

[R2-2008763](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008763.zip) Reply LS on limitation of Propagation of immediate MDT configuration in case of Xn inter-RAT HO (S5-204474; contact: Ericsson) SA5 LS in Rel-17 To:RAN3, RAN2, CT4

[R2-2008842](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008842.zip) [draft] Reply LS on UE RACH report for SgNBs CATT LS out Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core To:RAN3

[R2-2008843](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008843.zip) [draft] Reply LS on RACH report for 2-step RACH CATT LS out Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core To:RAN3

### 8.13.2 SON

#### 8.13.2.1 Handover related SON aspects

Including conditional handover and DAPS

[R2-2008844](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008844.zip) Discussion on CHO and DAPS Mobility Enhancement CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2008999](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008999.zip) CHO support for MDT/SON Intel Corporation discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh

[R2-2009017](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009017.zip) Consideration on handover related SON OPPO discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2009396](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009396.zip) SON aspects of DAPS HO and Fast MCG Recovery Optimizations QUALCOMM Incorporated discussion Rel-17

[R2-2009424](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009424.zip) SON for MRO Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2009632](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009632.zip) Discussion on RLF report in CHO and DAPS case SHARP Corporation discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh, NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2009682](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009682.zip) Discussion on SON enhancements for Successful HO vivo discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2009683](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009683.zip) Discussion on SON enhancements for DAPS HO vivo discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2009853](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009853.zip) MRO Enhancement for Inter-RAT handover Lenovo, Motorola Mobility discussion Rel-17

[R2-2009854](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009854.zip) SON Enhancements for CHO Lenovo, Motorola Mobility discussion Rel-17

[R2-2009855](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009855.zip) MRO Enhancement for DAPS Handover Lenovo, Motorola Mobility discussion Rel-17

[R2-2010146](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010146.zip) CHO and DAPS-related SON aspects Ericsson discussion NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2010174](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010174.zip) Discussion on handover related SON aspects Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2010321](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010321.zip) Handover related SON aspects ZTE Corporation, Sanechips discussion Rel-17

[R2-2010361](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010361.zip) SON Enhancements related to HO Samsung discussion NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2010394](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010394.zip) SON Enhancement for CHO and DAPS CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2010509](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010509.zip) Disucssion on rel-17 radio link failure report NTT DOCOMO, INC. discussion

#### 8.13.2.2 2-step RA related SON aspects

[R2-2008845](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008845.zip) Discussion on RACH Report for 2-step RACH CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2009019](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009019.zip) Discussion on 2-step RACH reporting for SON OPPO discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2009061](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009061.zip) Discussion on 2-step RA aspects of SON China Telecom Corporation Ltd. discussion

[R2-2009399](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009399.zip) RA-report enhancements for 2-step RACH QUALCOMM Incorporated discussion Rel-17

[R2-2009425](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009425.zip) 2-step RACH reporting Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core R2-2007516

[R2-2009631](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009631.zip) Discussion on RA information for 2-step RA SHARP Corporation discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2009684](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009684.zip) Discussion on SON enhancements for 2-step RACH vivo discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2010147](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010147.zip) 2-Step RA information reported by the UE for SON purposes Ericsson discussion NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2010175](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010175.zip) Discussion on 2 step RA related SON aspects Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2010322](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010322.zip) Enhance UE reporting for 2stepRA ZTE Corporation, Sanechips discussion Rel-17

[R2-2010362](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010362.zip) SON Enhancements related to 2-step RA Samsung discussion NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2010395](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010395.zip) SON Enhancement for 2-step RA CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

#### 8.13.2.3 Other WID related SON features

Including RAN3 input features, successful handover report, MRO for SN change failure, RACH optimization enhancements, UL-DL coverage mismatch,…

[R2-2008918](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008918.zip) UE RACH Report for SN CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2009018](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009018.zip) Consideration on successful handover report and UE history information in EN-DC OPPO discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2009397](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009397.zip) Successful Handover Report QUALCOMM Incorporated discussion Rel-17

[R2-2009400](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009400.zip) Enhancements to Mobility History Information QUALCOMM Incorporated discussion Rel-17

[R2-2009426](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009426.zip) Refined UL Coverage Outage Detection Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core R2-2007516

[R2-2009685](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009685.zip) Discussion on RACH report for SgNB vivo discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2009850](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009850.zip) MRO Enhancement for fast MCG link recovery Lenovo, Motorola Mobility discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2010148](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010148.zip) Other WID related SON features Ericsson discussion NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2010176](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010176.zip) Discussion on other SON aspects Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2010323](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010323.zip) Considerations on RAN3 concerned issues ZTE Corporation, Sanechips discussion Rel-17

[R2-2010400](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010400.zip) Enhancements related to successful HO report & MCGFailureInformation Samsung discussion NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2010459](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010459.zip) Discussion on successful handover report NTT DOCOMO, INC. discussion

[R2-2010508](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010508.zip) Discussion on collection of UE history information in EN-DC NTT DOCOMO, INC. discussion Late

[R2-2010526](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010526.zip) Discussion on conditional PSCell addition/change failure report NTT DOCOMO, INC. discussion Late

[R2-2010608](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010608.zip) Discussion on rel-17 Radio Link Failure Report for CG failure aspects NTT DOCOMO INC. discussion Rel-17

### 8.13.3 MDT

[R2-2009263](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009263.zip) On the need for enhancements to the MDT framework Fraunhofer HHI, Fraunhofer IIS discussion Rel-17

R2-2010220 Summary on 8.13.3 MDT Huawei discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core Late

=> withdrawn

#### 8.13.3.1 Immediate MDT enhancements

including M5/M6/M7 in all bearer type scenarios, immediate MDT for MR-DC

[R2-2008846](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008846.zip) Immediate MDT Enhancements for M6 CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2009020](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009020.zip) Enhancement of Immediate MDT in MR-DC OPPO discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2009395](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009395.zip) On the configuration and accuracy of M5, M6, and M7 measurements in split-bearer QUALCOMM Incorporated discussion Rel-17

[R2-2009427](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009427.zip) Immediate MDT enhancements Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2009687](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009687.zip) Discussion on immediate MDT enhancements vivo discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2010034](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010034.zip) On Immediate MDT Enhancements Ericsson discussion

[R2-2010177](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010177.zip) Discussion on immediate MDT enhancements Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2010324](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010324.zip) Immediate MDT enhancements ZTE Corporation, Sanechips discussion Rel-17

R2-2010698 Summary on 8.13.3.1 Immediate MDT enhancements Huawei discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

#### 8.13.3.2 Logged MDT enhancements

[R2-2008847](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008847.zip) Logged MDT in DC Scenario CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2009016](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009016.zip) Consideration of logged MDT enhancements OPPO discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2009391](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009391.zip) Logged measurement Enhancements QUALCOMM Incorporated discussion Rel-17

[R2-2009434](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009434.zip) Enhancements for Logged MDT and RLFreporting Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2009686](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009686.zip) Discussion on logged MDT enhancements vivo discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2010035](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010035.zip) On logged MDT related enhancements Ericsson discussion

[R2-2010178](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010178.zip) Discussion on logged MDT enhancements Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2010325](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010325.zip) Logged MDT enhancements ZTE Corporation, Sanechips discussion Rel-17

[R2-2010396](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010396.zip) MDT enhancement for on-demand SI CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2010401](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010401.zip) MDT Enhancements Samsung discussion NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2010462](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010462.zip) Discussion on erroneous connection release Xiaomi communications discussion

[R2-2010699](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010699.zip) Summary on 8.13.3.2 Logged MDT enhancements Huawei discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

### 8.13.4 L2 Measurements

[R2-2009021](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009021.zip) L2 measurement for split bearers OPPO discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2009435](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009435.zip) Need for L2 measurements enhancements Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2010045](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010045.zip) On additional layer-2 measurements Ericsson discussion

[R2-2010179](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010179.zip) Discussion on L2M Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2010326](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010326.zip) Consideration on L2 measurement enhancement ZTE Corporation, Sanechips discussion Rel-17

## 8.14 NR QoE SI

(FS\_NR\_QoE; leading WG: RAN3; REL-17; WID: RP-193256)

Time budget: 0 TU

Tdoc Limitation: 1 tdocs

Email max expectation: 0 threads

Not Treated AT meeting. Can open incoming LSes if any.

* [AT112-e][038][NR QoE] (Ericsson)

Scope: Treat and take into account LS in in R2-2008728. Attempt to identify what the R3 decision may mean for R2. If possible put on the table relevant / promising options for R2, and capture relevant characteristics of the options. If found needed, make and approve a Reply LS to R3

Intended outcome: Report that can be a first step towards making decisions, possibly also an LS out.

Deadline: EOM

[R2-2011158](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011158.zip) Handling of RAN3 LS on QoE Measurement Collection Ericsson

* [038] Noted

DISCUSSION

- [038] Rap: In summary, companies are not ready to agree on a solution without discussion in RAN2. Therefore, it is proposed to reply to RAN3 that RAN2 will discuss the feasibility of using RRC signaling for transport of QoE reports when RAN2 starts the QoE study.

- [038] Rap: Proposal 1: Reply to RAN3 that RAN2 will discuss the feasibility of using RRC signaling for transport of QoE reports when RAN2 starts the QoE study.

- [038] Chair: Three were objections to send also such LS, so [038] ended with no outcome.

- [038] Chair Observation: This SI seems under-dimensioned in R2. Assumption for TU allocation was that LTE solution can be more or less copy-pasted. Chair will report to RP.

[R2-2011159](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011159.zip) Draft Reply LS on Transport of NR QoE Reports in the RAN Ericsson

* [038] Not Agreed

LS in

[R2-2008728](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008728.zip) LS on Transport of NR QoE Reports in the RAN (R3-205785; contact: Ericsson) RAN3 LS in Rel-17 FS\_NR\_QoE To:RAN2

* [038] Noted

[R2-2008724](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008724.zip) New service type of NR QoE (R3-205724; contact: ZTE) RAN3 LS in Rel-17 FS\_NR\_QoE To:SA4 Cc:RAN2 ,SA5, SA2

* [038] Noted

General

[R2-2009436](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009436.zip) QoE Measurement Collection in NR Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_QoE

[R2-2009594](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009594.zip) Introduce the VR and MBMS service for NR QoE China Unicom discussion FS\_NR\_QoE

[R2-2010004](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010004.zip) Mobility Support for NR QoE Management Ericsson discussion FS\_NR\_QoE

[R2-2010180](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010180.zip) Discussion on NR QoE Huawei, HiSilicon discussion Rel-17 FS\_NR\_QoE

[R2-2010476](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010476.zip) Discussion on QoE in NR ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_QoE

[R2-2010594](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010594.zip) NR QoE management Samsung Electronics discussion Rel-17

## 8.15 NR Sidelink enhancements

(NR\_SL\_enh-Core; leading WG: RAN1; REL-17; WID: RP-201516)

Time budget: 1.5 TU

Tdoc Limitation: 3 tdocs (this is the initial meeting)

Email max expectation: 3-4 threads

### 8.15.1 Organizational

[R2-2010672](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010672.zip) LS on PC5 DRX operation (S2-2008326; contact: LGE) SA2 LS in Rel-17 FS\_eV2XARC\_Ph2 To:RAN2 Cc:RAN1

[R2-2008767](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008767.zip) Reply LS to extend the scope of eV2X (SP-191379; contact: Telecom Italia) SA LS in Rel-17 FS\_eV2XARC\_Ph2 To:5GAA WG4 Cc:SA2, SA1, RAN, RAN2

[R2-2008761](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008761.zip) LS on new PQI support for PC5 communication (S2-2006588; contact: Oppo) SA2 LS in Rel-17 FS\_5G\_ProSe To:RAN1 Cc:RAN2

[R2-2008944](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008944.zip) RAN2 Work Plan for Release-17 NR Sidelink enhancements LG Electronics France discussion Rel-17 NR\_SL\_enh-Core

[R2-2009025](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009025.zip) draft LS to RAN1 on SL DRX ZTE Corporation, Sanechips LS out Rel-17 NR\_SL\_enh-Core To:RAN1

### 8.15.2 SL DRX for broadcast groupcast and unicast

[R2-2008772](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008772.zip) Discussion on DRX for sidelink OPPO discussion Rel-17 NR\_SL\_enh-Core

[R2-2008850](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008850.zip) Discussion on Sidelink DRX CATT discussion Rel-17 NR\_SL\_enh-Core

[R2-2008943](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008943.zip) Discussion on Sidelink DRX LG Electronics France discussion Rel-17 NR\_SL\_enh-Core

[R2-2008971](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008971.zip) Methods for configuring SL DRX and Paging Sierra Wireless, S.A. discussion Rel-17

[R2-2008978](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008978.zip) On general sidelink DRX design Intel Corporation discussion Rel-17

[R2-2008988](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008988.zip) Alignment of DRX wake up times Intel Corporation discussion Rel-17 NR\_SL\_enh-Core

[R2-2009026](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009026.zip) Discussion on Sidelink DRX ZTE Corporation, Sanechips discussion Rel-17 NR\_SL\_enh-Core

[R2-2009133](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009133.zip) Sidelink DRX for Power Saving Fujitsu discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009210](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009210.zip) Initial Discussion on SL DRX InterDigital discussion Rel-17 NR\_SL\_enh-Core

[R2-2009211](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009211.zip) Discussion on Uu DRX for SL UE InterDigital discussion Rel-17 NR\_SL\_enh-Core

[R2-2009231](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009231.zip) DRX for sidelink communications Ericsson discussion Rel-17 NR\_SL\_enh-Core

[R2-2009232](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009232.zip) Interaction between partial sensing and DRX Ericsson discussion Rel-17 NR\_SL\_enh-Core

[R2-2009289](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009289.zip) Considerations for SL DRX Samsung Research America discussion

[R2-2009413](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009413.zip) Consideration on the sidelink DRX for unicast, groupcast and broadcast Huawei, HiSilicon discussion

[R2-2009527](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009527.zip) Discussion on Sidelink DRX Apple discussion Rel-17 NR\_SL\_enh-Core

[R2-2009696](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009696.zip) Discontinuous reception and transmission in SL Lenovo, Motorola Mobility discussion NR\_SL\_enh-Core

[R2-2009833](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009833.zip) SL DRX for broadcast groupcast and unicast vivo discussion

[R2-2009899](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009899.zip) Discussion on Introduction of Sidelink DRX Sony discussion Rel-17 NR\_SL\_enh-Core

[R2-2009923](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009923.zip) Discussion on Sidelink DRX Qualcomm Finland RFFE Oy discussion Rel-17

[R2-2009993](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009993.zip) NR SL DRX Fraunhofer IIS, Fraunhofer HHI discussion Rel-17

[R2-2010058](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010058.zip) On configuration and operation of SL DRX Nokia, Nokia Shanghai Bell discussion NR\_SL\_enh-Core

[R2-2010140](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010140.zip) Sidelink DRX Considerations Convida Wireless discussion Rel-17

[R2-2010142](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010142.zip) Sidelink and Uu DRX Convida Wireless discussion Rel-17

[R2-2010332](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010332.zip) On SL DRX MediaTek Inc. discussion Rel-17 NR\_SL\_enh-Core

[R2-2010433](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010433.zip) Discussion on Sidelink DRX ASUSTeK discussion NR\_SL\_enh-Core

[R2-2010468](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010468.zip) Discussion on sidelink DRX timer handling Xiaomi communications discussion

### 8.15.3 Resource allocation enhancements RAN2 scope

[R2-2008773](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008773.zip) Discussion on Inter-UE Coordination for sidelink OPPO discussion Rel-17 NR\_SL\_enh-Core

[R2-2008851](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008851.zip) Consideration on Resource Allocation Enhancements CATT discussion Rel-17 NR\_SL\_enh-Core

[R2-2008986](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008986.zip) Resource Allocation Enhancements for NR Sidelink Intel Corporation discussion Rel-17 NR\_SL\_enh-Core

[R2-2009027](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009027.zip) resource allocation to reduce power consumption ZTE Corporation, Sanechips discussion Rel-17 NR\_SL\_enh-Core

[R2-2009028](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009028.zip) Discussion on sidelink inter-UE coordination ZTE Corporation, Sanechips discussion Rel-17 NR\_SL\_enh-Core

[R2-2009134](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009134.zip) Dual-mode Configuration and Selection Mechanism for NR Sidelink Fujitsu discussion Rel-17 FS\_NR\_SL\_relay

[R2-2009212](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009212.zip) RAN2 Aspects of Resource Allocation with Inter-UE Coordination InterDigital discussion Rel-17 NR\_SL\_enh-Core

[R2-2009290](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009290.zip) Enhanced resource allocation Samsung Research America discussion

[R2-2009411](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009411.zip) Consideration on resource allocation enhancement in Rel-17 NR SL enhancement Huawei, HiSilicon discussion

[R2-2009528](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009528.zip) Discussion on Resource Allocation for Pedestrian UE Apple discussion Rel-17 NR\_SL\_enh-Core

[R2-2009722](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009722.zip) Need of resource allocation enhancements for sidelink mode 2 Ericsson discussion Rel-17 NR\_SL\_enh-Core

[R2-2009834](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009834.zip) Uu and SL DRX impact to resource allocation mode 1 and mode 2 vivo discussion

[R2-2009869](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009869.zip) Discussion on sidelink resource allocation enhancements in mode2 Lenovo, Motorola Mobility discussion Rel-17

[R2-2009924](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009924.zip) Discussion on Reliability and Latency Qualcomm Finland RFFE Oy discussion Rel-17

[R2-2009992](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009992.zip) Resource Allocation Enhancements Fraunhofer HHI, Fraunhofer IIS discussion

[R2-2010047](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010047.zip) Discussion on RAN2 scope for resource allocation enhancement Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SL\_enh-Core

[R2-2010144](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010144.zip) On Resource Allocation Mode 2 Enhancement for NR Sidelink Convida Wireless discussion Rel-17

[R2-2010333](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010333.zip) On SL Resource allocation enhancements MediaTek Inc. discussion Rel-17 NR\_SL\_enh-Core

[R2-2010583](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010583.zip) Inter-UE coordination for NR V2X LG Electronics Inc. discussion Rel-17 NR\_SL\_enh-Core

[R2-2010587](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010587.zip) Power efficient resource allocation LG Electronics Inc. discussion Rel-17 NR\_SL\_enh-Core

### 8.15.4 Other

[R2-2008830](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008830.zip) Discussion on geo-area confinement for non-ITS sidelink band OPPO discussion Rel-17 NR\_SL\_enh

[R2-2008852](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008852.zip) Sidelink Operation Using Non-ITS Band in a Pre-defined Geographic Area CATT discussion Rel-17 NR\_SL\_enh

[R2-2009135](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009135.zip) Geographic Location based Frequency Resource Operation for NR Sidelink Fujitsu discussion Rel-17 NR\_SL\_enh

[R2-2009294](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009294.zip) SL operation confined to a predetermined geo-area discussion Samsung Research America Rel-17 NR\_SL\_enh

[R2-2009412](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009412.zip) Discussion on WI objective 5: confining sidelink operation to a predetermined geographic area(s) for a given frequency range Huawei, HiSilicon discussion Rel-17 NR\_SL\_enh

[R2-2009529](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009529.zip) Discussion on Geographical area restriction for NR SL Apple discussion Rel-17 NR\_SL\_enh

[R2-2009835](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009835.zip) Mechanism to support confined sidelink operation vivo discussion Rel-17 NR\_SL\_enh

[R2-2009866](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009866.zip) Views on Predetermined geographic area(s) for sidelink Lenovo, Motorola Mobility discussion Rel-17 NR\_SL\_enh

[R2-2009937](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009937.zip) UE Tx Profile Qualcomm Finland RFFE Oy discussion Rel-17 NR\_SL\_enh

[R2-2010059](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010059.zip) Discussion on Simultaneous mode 1 and mode 2 operation and LCP enhancements Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SL\_enh

[R2-2010633](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010633.zip) Geographic-Area restriction on SL operation MediaTek Inc. discussion Rel-17 NR\_SL\_enh

## 8.16 NR R17 Other

Time budget: TU

Tdoc Limitation: tdocs

Email max expectation: threads

This item carries the otherwise unbudgeted time to treat LSes for not yet started items.

* [AT112-e][032][NR17] eNPN LS (Futurewei)

Scope: Treat R2-2010691. Determine status / collect comments among RAN2 companies regarding the asked questions. Attempt agreements in RAN2 on aspects for which agreement seems feasible (if any). Create a reply LS. Depending on progress, some aspects may be brought online week2

Intended outcome: Report and Approved LS out

Deadline: Final: End of meeting. Intermediate deadlines by rapporteur.

[R2-2010691](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010691.zip) LS on questions to RAN WGs on dual Radio UE (2Rx/2Tx or 2Rx/1Tx) support for simultaneous communication with both SNPN and PLMN (S2-2007827; contact: Futurewei) SA2 LS in Rel-17 FS\_eNPN To:RAN2

* [032] Noted

[R2-2011226](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011226.zip) [DRAFT] Reply LS on questions to RAN WGs on dual Radio UE (2Rx/2Tx or 2Rx/1Tx) support for simultaneous communication with both SNPN and PLMN Futurewei

DISCUSSION On-Line Friday last day:

- Chairman: As there is an SA2 meeting next week. We attempt to approve the outgoing LS Today Friday.

- Chair: If we can restrict changes to minor wording changes or removals only we can approve today. If we need addition of new information we will need to postpone to Monday.

- Ericsson think we should mention that we might have misunderstood Q2.

- FW agrees that w might have misunderstood but think our answer was detailed, so if they don’t find what they look for they will ask again. Nokia agrees.

- Chair expect companies to reply ASAP (after the online session now), before EOM. If a major change or an addition is required we postpone to Monday evening. Expect declare approved at EOM.

PLAN:

+ Aim to not change much, minor wording changes, and removals are ok.

+ Comments and edits are Welcome from NOW until EOM (3h45min)

+ Expect declare approved at EOM

+ If the plan doesn’t work, i.e. if some companies find that they require more extensive change, or cannot accept this proposed fast approval, then We postpone and make another attempt at Approval Late Monday evening UTC

* Noted, continue by email, following the plan above plan, which is endorsed

[R2-2011270](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2011270.zip) Reply LS on questions to RAN WGs on dual Radio UE (2Rx/2Tx or 2Rx/1Tx) support for simultaneous communication with both SNPN and PLMN RAN2 LS out

* [032] LS out is approved (this is the final version)

Not Treated (for now)

[R2-2010128](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010128.zip) Periodic SRS in SCell dormant BWP Qualcomm Incorporated discussion Rel-17

[R2-2010133](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010133.zip) Introduction of 35 and 45 MHz channel Bandwidths T-Mobile USA Inc. LS out Rel-17 NR\_FR1\_35MHz\_45MHz\_BW To:RAN4

# 9 Rel-17 EUTRA Work Items

## 9.1 NB-IoT and eMTC enhancements

(NB\_IOTenh4\_LTE\_eMTC6-Core; leading WG: RAN1; REL-17; WID: RP-201306)

Time budget: 1 TU

Tdoc Limitation: 2 tdocs

Email max expectation: 2 threads

Focus on two objectives only.

### 9.1.1 Organizational

### 9.1.2 NB-IoT neighbor cell measurements and corresponding measurement triggering before RLF

Including outcome of [Post111-e][923][NBIOT R17] RLF Enhancements (Qualcomm)

[R2-2008937](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008937.zip) Impact on Static devices THALES discussion

[R2-2009058](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009058.zip) Further consideration on measurement in connected mode ZTE Corporation, Sanechips discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2009146](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009146.zip) Discussion on the corresponding measurement before RLF Spreadtrum Communications discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2009268](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009268.zip) Enhancements for Re-establishment time reduction Nokia, Nokia Shanghai Bell discussion Rel-17

[R2-2009731](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009731.zip) Neighbour cell measurements in RRC\_CONNECTED Huawei, HiSilicon discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2009788](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009788.zip) Report for [Post111-e][923][NBIOT R17] RLF Enhancements (Qualcomm) Qualcomm Incorporated discussion Rel-15 NB\_IOTenh2-Core

[R2-2009789](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009789.zip) Way forward for connected mode neighbour cell measurement in NB-IoT Qualcomm Incorporated discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2009876](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009876.zip) Neighbor cell measurements triggering before RLF Lenovo, Motorola Mobility discussion Rel-17

[R2-2010076](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010076.zip) Reducing time taken for reestablishment procedures in NB-IoT Ericsson discussion Rel-17

[R2-2010249](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010249.zip) Discussion on Total Interruption Time ETRI discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2010460](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010460.zip) Measurement before radio link failure MediaTek Inc. discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

### 9.1.3 NB-IoT carrier selection based on the coverage level, and associated carrier specific configuration

[R2-2009059](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009059.zip) Further consideration on multi carriers configuration and selection ZTE Corporation, Sanechips discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2009147](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009147.zip) Discussion on enhanced paging carrier selection and multi carrier configuration Spreadtrum Communications discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2009180](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009180.zip) NB-IoT carrier selection and configuration based on coverage level Ericsson discussion Rel-17

[R2-2009269](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009269.zip) Analysis on carrier selection options for NB-IoT Nokia, Nokia Shanghai Bell discussion Rel-17

[R2-2009732](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009732.zip) Paging carrier selection based on CEL and on DRX Huawei, HiSilicon discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2009790](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009790.zip) Support for NB-IoT carrier selection based on the coverage level Qualcomm Incorporated discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

R2-2010077 NB-IoT carrier selection and configuration based on coverage level Ericsson discussion Rel-17 Withdrawn

[R2-2010470](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010470.zip) Carrier selection enhancement MediaTek Inc. discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

## 9.2 SI on NB-IoT and eMTC support for NTN

(FS\_LTE\_NBIOT\_eMTC\_NTN; leading WG: RAN1; REL-17; SID: RP-193235)

Time budget: 0 TU (Per RP agreement, this item will start by email, there will be no on-line discussion)

Tdoc Limitation: 2 tdocs

Email max expectation: 2 threads

Initial focus will be to clarify scope more detailed than in the SID, i.e. Start identifying the extent parts of “NR over NTN” TR can be re-used or not re-used for NB-IoT/eMTC support for NTN. Scenarios in the WID and as defined by RAN1 possibly complemented by RAN2 can be assumed.

### 9.2.1 Scenarios

Confirm Scenario Assumptions, e.g. from WID, from TR38.821 for the purpose of RAN2 continued work. R2 assumptions shall not replace/preempt R1 scenario work. It is assumed that this topic can be kept small/simple. In case decision cannot be taken, an assumption to allow contiued work should be taken, where the assumption can be verified later (e.g. in R2 or R1).

* [AT112-e][034][IoT-NTN] Scenarios (Eutelsat)

A) In general, as stated above: Confirm Scenario Assumptions, e.g. from WID, from TR38.821 for the purpose of RAN2 continued work. Intention is not to replace or preempt R1 scenario work.

B) Specifically, cover relevant proposals in tdocs submitted to this AI.

Intended outcome: Report with agreements and/or acceptable assumptions

Deadline: End of meeting, intermediate deadlines by the rapporteur.

[R2-2008975](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008975.zip) Email summary discussion on NTN Scenarios applicable to NB-IoT/eMTC Eutelsat S.A. discussion Late

This document is the report from the offline discussion [AT112-e][034][IoT-NTN]

DECISIONS and COMMENTS

- [034] Chairman explanation 1: the proposed statement that the *IoT NTN scenarios A, B, and C can be studied* is not accepted by me due to easy misunderstanding. It could be easily interpreted that the study shall focus on scenarios, which is not the case. The scenarios and use case assumption are references and a baseline to help give the study on technical solutions some focus and in some cases determine which solutions are preferable.

- [034] Chairman explanation 2: There is overwhelming support to assume support for EPC, and motivation is market driven, i.e. there are real and strong motives. The support to assume 5GCN is less, and the motives seems to be mostly “there is no reason to exclude”, which seems vague, however there seems to be significant support so it is difficult to exclude at this stage.

* [034] For 2.4.1-2, the proposed way forward to include the table 1 as reference scenarios for IoT NTN study in a TP for TR 36.763 is agreed
* [034] IoT NTN scenarios A, B, and C are in the scope of the study
* [034] For 2.4.1-3, the proposed way forward is to include the table including NTN IoT Device Densities for the use case of fixed devices in a TP for TR36.763 is agreed, where the values in the table are directly from TR 38.821 as agreed for IoT connectivity in Rel-16 NR NTN SI, Including the three Notes.
* [034] For 2.4.1-4, Support for EPC is assumed, Support for 5GCN is TBD.

[034] Comment 2.4.1-3: User densities for the use case of moving UEs with max UE speed of 120 km/h can be further discussed in RAN2#113e, if needed.

[034] Comment - All: The intention is not to pre-empt RAN1 work. If RAN1 have agreed something slightly different, alignment is needed.

[R2-2008883](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008883.zip) IoT NTN scenarios and UE density Eutelsat S.A. discussion Rel-17

[R2-2009071](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009071.zip) Consideration on the scenarios for IoT over NTN ZTE Corporation, Sanechips discussion Rel-17 FS\_LTE\_NBIOT\_eMTC\_NTN

[R2-2009114](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009114.zip) Discussion on scenarios for NB-IoT and eMTC in NTN OPPO discussion Rel-17 FS\_LTE\_NBIOT\_eMTC\_NTN

[R2-2009267](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009267.zip) oOn NB-IoT/eMTC for NTN scenarios and Performance requirements Nokia, Nokia Shanghai Bell discussion Rel-16

[R2-2009449](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009449.zip) Scenarios and assumption for IoT NTN Qualcomm Inc discussion Rel-17 FS\_LTE\_NBIOT\_eMTC\_NTN

[R2-2009589](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009589.zip) Discussion on scenarios for NB-IoT and eMTC NTN Xiaomi discussion Rel-17

[R2-2010237](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010237.zip) NTN IoT scope, scenarios, architecture, and requirements Ericsson discussion FS\_LTE\_NBIOT\_eMTC\_NTN

[R2-2010287](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010287.zip) Discussion on NTN scenarios for NB-IoT Huawei, HiSilicon discussion Rel-17 FS\_LTE\_NBIOT\_eMTC\_NTN

* [034] All 8 tdocs above are Noted

### 9.2.2 Applicability of TR 38.821

Identify the extent parts of TR38.821 can be re-used or not re-used for NB-IoT/eMTC support for NTN, identify points for necessary discussions. Focus on R2 led sub-objectives as listed in the SID: Aspects related to HARQ operation [RAN2, RAN1], General aspects related to timers (e.g. SR, DRX, etc.) [RAN2], RAN2 aspects related to idle mode and connected mode mobility: RLF-based for NB-IoT, Handover-based for eMTC [RAN2], System information enhancements [RAN2], Tracking area enhancements [RAN2]

* [AT112-e][035][IoT-NTN] Applicability of TR 38.821 (MediaTek)

A) In general, Identify the extent parts of TR38.821 can be re-used or not re-used for NB-IoT/eMTC support for NTN, identify points for necessary discussions. Focus on R2 led sub-objectives as listed in the SID

B) Specifically, cover relevant proposals in tdocs submitted to this AI.

Intended outcome: Report with agreements

Deadline: End of meeting, intermediate deadlines by the rapporteur.

R2-2011228 [IoT-NTN] Applicability of TR 38.821 on eMTC/NB-IoT based NTN (MediaTek) MediaTek Inc.

This document is the report from the offline discussion [AT112-e][035][IoT-NTN]

- [035] Chairman: Agreements below as proposed by Rapporteur, except, in three places the agreement uses the word Assumed where the proposal was stronger. The reasons are a) the outcome wasn’t so crystal clear in the discussion, b) Ran2 shouldn’t make firm decisions on things that we think is in RAN1 domain.

* [035] 1: The challenges associated with the expiry of MAC timers in NR-NTN remain the same in eMTC/NB-IoT NTN and high RTT of NTN is the primary cause of this.
* [035] 2: An offset will be used to delay (adjust) the start of ra-ResponseWindow and mac-ContentionResolutionTimer in eMTC/NB-IoT NTN, similar to NR-NTN. Further discussion is needed for the SR-Prohibit timer. Offset estimation process and the offset value are FFS.
* [035] 3: It is *assumed* that If the start of the ra-ResponseWindow is accurately compensated and no extension of repetition is required, there is no need to extend the ra-ResponseWindowSize for eMTC over NTN, similar to NR-NTN.
* [035] 4: RAN2 *assumes* that PRACH capacity in eMTC/NB-IoT over NTN will be evaluated to check whether it can support the large cell size of GEO/LEO. However, RAN2 believes this is more of a RAN1 topic and thus recommends companies to submit their contributions in RAN1.
* [035] 5: RAN2 should wait for RAN1’s decision on TA in eMTC/NB-IoT NTN.
* [035] 6: It is FFS whether there is any need to disable HARQ feedback in eMTC/NB-IoT NTN.
* [035] 7: RAN2 *assumes* to reuse NR-NTN agreements as baseline for the starting of HARQ-RTT-Timer and UL-HARQ-RTT-Timer in eMTC/NB-IoT NTN.
* [035] 8: Unlike NR-NTN, as latency is not a critical performance requirement in NB-IoT devices, UL scheduling enhancement for delay reduction is not necessary for NB-IoT over NTN.
* [035] 9: It is FFS if there is any need to extend RLC t-Reordering timer in eMTC/NB-IoT NTN.
* [035] 10: There is no need to extend RLC and PDCP SN length for eMTC/NB-IoT NTN, similar to NR-NTN.
* [035] 11: RAN2 will discuss on providing satellite ephemeris data and other information using System Information (SI) message for eMTC/NB-IoT NTN.
* [035] 12: RAN2 will use cell selection/reselection for NR-NTN as the baseline and discuss further about the detailed solutions in eMTC/NB-IoT NTN.
* [035] 13: RAN2 will discuss the impact of eDRX cycle on cell reselection procedure in eMTC/NB-IoT over NTN.
* [035] 14: RAN2 will use earth-fixed Tracking Area concept of NR-NTN in eMTC/NB-IoT NTN.
* [035] 15: RAN2 should wait until agreements regarding TAU are made in the NR-NTN WI, and use those for eMTC/NB-IoT over NTN, if applicable.
* [035] 16: RAN2 agrees to use Rel-16 RLF-based NB-IoT mobility as a baseline for mobility in NB-IoT over NTN.
* [035] 17: RAN2 will wait until agreements regarding handover, including Conditional Handover, solutions are made in the NR-NTN WI, discuss if it would be beneficial for eMTC over NTN, if adopted.
* [035] 18: RAN2 should wait for RAN1’s input on supporting multiple beams per cell for eMTC/NB-IoT over NTN.

[R2-2008899](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008899.zip) On User-Plane Timers in NB-IoT based NTN MediaTek Inc. discussion

[R2-2008900](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008900.zip) On Disabling HARQ in NB-IoT based NTN MediaTek Inc. discussion

[R2-2009072](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009072.zip) Consideration on the applicability of NR NTN to IoT over NTN ZTE Corporation, Sanechips discussion Rel-17 FS\_LTE\_NBIOT\_eMTC\_NTN

[R2-2009113](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009113.zip) Discussion on NB-Io/eMTC support for NTN OPPO discussion Rel-17 FS\_LTE\_NBIOT\_eMTC\_NTN

[R2-2009450](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009450.zip) Applicability of NR NTN SI and WI solutions Qualcomm Inc discussion Rel-17 FS\_LTE\_NBIOT\_eMTC\_NTN

[R2-2009591](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009591.zip) Initial discussion on NB-IoT and eMTC NTN Xiaomi discussion Rel-17

[R2-2009988](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009988.zip) IoT features and applicability of NR NTN solutions for IoT over NTN Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_LTE\_NBIOT\_eMTC\_NTN

[R2-2010247](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010247.zip) Applicability of NR NTN to NB-IoT/LTE-M UEs that support NTN Ericsson discussion FS\_LTE\_NBIOT\_eMTC\_NTN

[R2-2010288](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010288.zip) Discussion on applicability of TR 38.821 to NTN NB-IoT Huawei, HiSilicon discussion Rel-17 FS\_LTE\_NBIOT\_eMTC\_NTN

* [035] All 9 tdocs above are Noted

Withdrawn

R2-2009593 Initial discussion on NB-IoT and eMTC NTN Xiaomi discussion Rel-17 Withdrawn

## 9.3 EUTRA R17 Other

Time budget: 0 TU

Tdoc Limitation: X tdocs

Email max expectation: X threads

# 10Breakout session reports

No documents shall be submitted to this AI or its sub-AIs. It is only for at-meeting-generated contents.

Breakout session reports will be approved by email.

* [Post112-e][000] General (Chairman)

Intended outcome: Approval of Breakpour session reports

Deadline: Short

## 10.1 Session on LTE legacy, Mobility, DCCA, Multi-SIM and RAN slicing

[R2-2010701](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010701.zip) Report from session on LTE legacy, LTE TEI16 and NR/LTE Rel-16 Mobility Vice Chairman (Nokia)

## 10.2 Session on R16 eMIMO, CLI, PRN, RACS and R17 NTN and RedCap

[R2-2010702](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010702.zip) Report from Break-Out Session on SRVCC, CLI, PRN, eMIMO, RACS Vice Chairman (ZTE)

## 10.3 Session on eMTC

[R2-2010703](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010703.zip) Report eMTC breakout session Session chair (Ericsson)

## 10.4 Session on NR-U, Power Savings, NTN and 2-step RACH

[R2-2010704](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010704.zip) Session minutes for NR-U, Power Savings, NTN and 2-step RACH Session chair (InterDigital)

## 10.5 Session on positioning and sidelink relay

[R2-2010705](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010705.zip) Report from session on Rel-15 and 16 LTE and NR positioning Session chair (MediaTek)

## 10.6 Session on SON/MDT

R2-2010706 Report from SOM/MDT session Session chair (CMCC

## 10.7 Session on NB-IoT

[R2-2010707](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010707.zip) Report NB-IoT breakout session Session chair (Huawei)

## 10.8 Session on LTE V2X and NR V2X

[R2-2010708](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010708.zip) Report from session on LTE V2X and NR V2X Session chair (Samsung)