3GPP TSG-RAN WG2 Meeting #116 electronic R2-2xxxxxx

Online, November 1-12, 2021

Source: RAN2 Chairman (MediaTek)

Title: Skeleton Notes

# AT-Meeting Email / Offline Discussion List, Main Session

Discussions with Deadline **Schedule 1**:

A **first round** with **Deadline for comments W1 Thur Feb 24th 1200 UTC** to settle scope what is agreeable etc

A Final round with **Final deadline W2 Wed March 2nd 1200 UTC** to settle details / agree CRs etc.

Additional deadlines check points etc if needed are defined by the Rapporteur of each discussion respectively. In case some parts of an email discussion need more time, doesn’t converge, need not yet planned on-line treatment, then Rapporteur please contact chair.

* [AT117-e][000] Organizational Main (Chair)

 Scope: Opening and closing of the meeting, Treat AIs 1 & 2, LSes that do not need actions. Anything going beyond other discussions can be raised, for the meeting or Main session.

 Deadline: EOM

 Numbers **[001] – [024]** used for Pre Discussions

* [AT117-e][025][NR15] User-plane Corrections (Huawei)

 Scope: Treat R2-2202109, R2-2203129, R2-2203130, R2-2203241, R2-2203242, R2-2203240, R2-2202552, R2-2202553, R2-2203239, R2-2202194. Ph1 Determine agreeable parts. P2 agree CRs for agreeable parts.

 Intended outcome: Report, Agreed CRs.

 Deadline: Schedule 1

* [AT117-e][026][NR15] NAS procedure not subject to UAC (Apple)

 Scope: Treat R2-2202104, R2-2202535, R2-2202536, R2-2202537, R2-2202538, R2-2203487. Ph1 Determine agreeable parts, Ph2 For agreeable parts, progress CRs, and reply LS out.

 Intended outcome: Report, Agreed CRs, Approved LS out.

 Deadline: Schedule 1

* [AT117-e][027][NR15] RRC misc I (Ericsson)

 Scope: Treat R2-2202106, R2-2202272, R2-2202273, R2-2202393, R2-2203498, R2-2203499, R2-2203335, R2-2203336

 Ph1 Determine agreeable parts, Ph2 For agreeable parts, progress CRs.

 Intended outcome: Report, Agreed CRs

 Deadline: Schedule 1

* [AT117-e][028][NR15] RRC misc II (Intel)

 Scope: Treat R2-2202637, R2-2202638, R2-2202639, R2-2203327, R2-2203328

 Ph1 Determine agreeable parts, Ph2 For agreeable parts, progress CRs

 Intended outcome: Report, Agreed CRs.

 Deadline: Schedule 1

* [AT117-e][029][NR15] RRC Inter-Node Signalling (Nokia)

 Scope: Treat R2-2202121, R2-2203500, R2-2203501, R2-2202806, R2-2202807, R2-2202808, R2-2202123, R2-2203321, R2-2203322. Ph1 Determine agreeable parts, Ph2 For agreeable parts, progress CRs, (reply LSes out only if needed).

 Intended outcome: Report, Agreed CRs

 Deadline: Schedule 1

* [AT117-e][030][NR16] User-plane Related Corrections (vivo)

 Scope: Treat R2-2202524, R2-2202110, R2-2202326 (RRC CR), R2-2203484, R2-2203131.

 Ph1 Determine agreeable parts. P2 agree CRs for agreeable parts.

 Intended outcome: Report, Agreed CRs.

 Deadline: Schedule 1

* [AT117-e][031][NR16] Connection Control I (Ericsson)

 Scope: Treat R2-2203408, R2-2202228, R2-2203410, R2-2203255, R2-2203132, R2-2202232, R2-2203438. Ph1 Determine agreeable parts, Ph2 for agreeable parts, progress CRs.

 Intended outcome: Report, Agreed CRs.

 Deadline: Schedule 1

* [AT117-e][032][NR1615] Connection Control II (Lenovo)

 Scope: Treat R2-2203407 (or 3706), R2-2203267, R2-2202835, R2-2202836, R2-2202872, R2-2202876, R2-2202222, R2-2202915, R2-2203477, R2-2202917. Ph1 Determine agreeable parts, Ph2 for agreeable parts, progress CRs.

 Intended outcome: Report, Agreed CRs.

 Deadline: Schedule 1

* [AT117-e][033][NR1615] RRC Other (Samsung)

 Scope: Treat R2-2202296, R2-2202297, R2-2202298, R2-2202763, R2-2202990, R2-2202991, R2-2203439, R2-2203441, R2-2203442. Ph1 Determine agreeable parts, Ph2 for agreeable parts, progress CRs.

 Intended outcome: Report, Agreed CRs.

 Deadline: Schedule 1

* [AT117-e][034][NR16] UE capabilities I (Intel)

 Scope: Treat R2-2202146, R2-2202107, R2-2202665, R2-2203163, R2-2203167, R2-22002195, R2-2202196, R2-2203488, R2-2202293. Ph1 Determine agreeable parts, Ph2 for agreeable parts, progress CRs.

 Intended outcome: Report, Agreed CRs.

 Deadline: Schedule 1

* [AT117-e][035][NR1615] UE capabilities II (Huawei)

 Scope: Treat R2-2202810, R2-2202811, R2-2203268, R2-2203492, R2-2202229, R2-2202108, R2-2203510, R2-2203490, R2-2203491, R2-2203409, R2-2202525, R2-2202526. Ph1 Determine agreeable parts, Ph2 for agreeable parts, progress CRs.

 Intended outcome: Report, Agreed CRs.

 Deadline: Schedule 1

* [AT117-e][036][NR1516] Idle Inactive procedures (Lenovo)

 Scope: Treat R2-2202539, R2-2202220, R2-2202221. Ph1 Determine agreeable parts, Ph2 for agreeable parts, progress CRs.

 Intended outcome: Report, Agreed CRs.

 Deadline: Schedule 1

* [AT117-e][037][R17] ASN.1 review (Ericsson)

 Scope: Start after on-line. Discuss the details,

 Intended outcome: Enhanced ASN.1 review process, Detailed plan.

 Deadline: EOM

* [AT117-e][038][NR17] UE caps Main (Intel)

 Scope: Treat R2-2202662, R2-2202113, R2-2202154, R2-2202657, R2-2202658, Progress UE capabilities based on R1 and R4 feature lists, following the plan in R2-2202662, if needed determine questions for LS out. Record found Open Issues. This discussion is expected to continue as a post discussion after R2 117-e, merging UE capabilities from endorsed WI specific CRs (or draft CRs).

 Intended outcome: Report, R17 NR UE Cap Mega CRs 38306 38331,

 Deadline: Intermediate deadlines by Rapporteur, check point at EOM to see if partial endorsement is possible (to limit/focus the scope for the post discussion).

* [AT117-e][039][NR17] Gaps Coordination (MediaTek)

 Scope: Take into account R2-2202985, R2-2203346, R2-2202864, R2-2202888, R2-2202943, R2-2202209, R2-2202321. Identify points for coordination that seems immediately agreeable. Determine whether LS out to RAN4 is needed, and if so, converge on an LS. Lower priority: can also attempt to identify Open Issues that may be helpful for further work in Q2.

 Intended outcome: Report, Approved LS out if applicable

 Deadline: Friday W1 (for immediately agreeable coord points, and LS out), EOM: remaining parts if any.

* [AT117-e][040][MBS] Reply LS on max no of MBS sessions that can be associated to a PDU session (Ericsson)

 Scope: Collection opinions and determine agreements in order to reply to Reply to LS in R2-2200141 (received at R2 116bis-e)

 Intended outcome: Agreeable LS out (and a Report if applicable).

 Deadline: W1 Thursday (for on-line CB W1 Friday)

* [AT117-e][041][MBS] CR and Rapporteur Resolutions (Huawei)

 Scope: For all CR Rapporteur resolutions, and the updated CRs, Collect comments, Address simple comments, to reach endorsable state. Aim to agree the CR Rapporteur resolutions and endorse the CRs (such that changes-on-changes redundant editors notes etc then can be removed). For MAC, the rapporteur proposes two options, a choice should be made. Rapporteur of this discussion is responsible for collecting comments into a document, and report on those. Each CR rapporteur is responsible for CR update, if update is needed.

 Intended outcome: Report. Agreement of Resolutions to Rapporteur issues. CRs, revised if needed, that are endorsable.

 Deadline: W1 Thursday (for on-line endorsement W1 Friday)

* [AT117-e][042][MBS] Invited tdocs open Issues UP (Samsung)

 Scope: Take into account submitted tdocs. Address the FFS on CSI and SRS reporting due to MBS DRX, and from the updated OIlist: Small correction on RX\_DELIV formula to avoid HFN<0. Determine agreeable part, pave the way for on-line agreement.

 Intended outcome: Report

 Deadline: W1 Thursday (for online CB W1 Friday).

* [AT117-e][043][MBS] Invited tdocs open Issues CP (Nokia)

 Scope: Take into account submitted tdocs. Address the questions in R3-221469 LS on NR RRC to support split NR-RAN architecture for NR MBS. Determine agreeable part, pave the way for on-line agreement.

 Intended outcome: Report

 Deadline: W1 Thursday (for online CB W1 Friday).

* [AT117-e][044][MBS] UE capabilities (MediaTek)

 Scope: Ph1 Collect comments on the initial CRs in R2-2202786, R2-2202787, as a basis for further updates. Treat R2-2202269, R2-2202671, R2-2203118, R2-2203120. Avoid overlap with the other issues discussions. Determine agreeable parts, discussion points etc.

 Intended outcome: Report

 Deadline: W1 Thursday, for online CB W1 Friday.

* [AT117-e][045][QoE] RRC CR (Ericsson)

 Scope: Review the CR provided in R2-2203428, including the proposed R2117e New resolutions to capture the impact due to LS’ins, including check of previous meeting updates (as there was no formal endorsement). IF new LSes arrive during the meeting, they can be taken into account offline by this email discussion.

 Intended outcome: ph1: Endorsable CR, Report if applicable.

 Deadline: VERY SHORT ph1 W1 Wednesday (for online endorsement W1 Thursday).

* [AT117-e][046][QoE] Invited tdocs Open Issues (Ericsson)

 Scope: Consider the invited input, and tdocs provided under 8.14.3.2 excluding issues handled in R2-2202878, or in the RRC CR, or under 8.14.4 or issues where we are still waiting for input from other groups (there is overlap in some tdocs). For the invited input and non-excluded contents, determine agreeable parts, discussion points and remaining open issues (if any). Determine need for LS outs if any.

 Intended outcome: Report

 Deadline: W1 Friday (for online CB W2 Monday).

* [AT117-e][047][QoE] UE capability (CMCC)

 Scope: Treat R2-2202827, R2-2202988, R2-2203347, R2-2203404, R2-2203429, determine agreeable parts and discussion points. Determine need for LS outs if any.

 Intended outcome: Report

 Deadline: W1 Friday (for online CB W2 Monday).

* [AT117-e][048][eNPN] Open Issues (Nokia)

 Scope: Treat tdocs on open issues: R2-2202208, R2-2202620, R2-2202832, R2-2202855, R2-2202889, R2-2202896, R2-2202898, R2-2203075, R2-2203264, R2-2203447, Also, review the CR in R2-2202636 and consider the open issues listed there, for UE capabilities.

 Intended outcome: Report

 Deadline: W1 Friday (for on-line CB W2 Monday). It is expected that this discussion continues W2 for final agreement of the CRs.

* [AT117-e][049][NR17TEI] In-principle Agreed CRs and related docs (ZTE)

 Scope: Treat R2-2202225, R2-2202395, R2-2202396, Has comments: R2-2202397, R2-2202398, R2-2202399, R2-2202400, R2-2202626, R2-2202627, R2-2202628, R2-2202629, R2-22083306, Non-IPA: R2-2202608. Check IPA CRs, and determine revisions if needed. Take into account the comments provided in R2-2202225. Determine whether the not yet agreed CR in R2-2202608 or some variant is agreeable.

 Intended outcome: Report, Agreed CRs, Endorsed NR UE cap CRs (for merge)

 Deadline: Schedule 1

* [AT117-e][050][NR17TEI] Explicit Indication of SI Scheduling start position (Ericsson)

 Scope: Treat R2-2203365

 Intended outcome: Agreed CR.

 Deadline: W1 Friday (if possible)

* [AT117-e][051][UDC] Open Issues and CRs (CATT)

 Scope: Ph1 Address the UDC Open Issues aiming to close all, Collect comments on major issues and/or blocking points in the provided CRs if any. Ph2 The discussion will continue W2 aiming for CR agreement (focusing on smaller things).

 Intended outcome: Report

 Deadline: Ph1 W1 Friday (for On-line CB Monday W2).

* [AT117-e][052][NR17] IPA CRs (Xiaomi)

 Scope: Treat R2-2202765, R2-2202766, R2-2203714, R2-2203715, R2-2203123, R2-2203124, R2-2202151, R2-2203138, R2-2203139, R2-2203322, R2-2203323. Check the CRs (incl cover sheet) determine revisions if needed. Agree CRs (submitted or revisions).

 Intended outcome: Report, Agreed CRs, Endorsed UE cap CRs (or draft CRs) (38306, 38331) for Merge.

 Deadline: Schedule 1

* [AT117-e][053][NR17] UL TX Switching (China Telecom)

 Scope: Treat R2-2203117, R2-2202812, R2-2202814, R2-2203114, R2-2202813, R2-2203115, R2-2203116. Determine agreeable parts. Agree/endorse CRs.

 Intended outcome: Report, Agreed CRs, Endorsed UE cap CRs (or draft CRs) (38306, 38331) for Merge.

 Deadline: EOM

* [AT117-e][054][NR17] PUCCH SCell Activation (Huawei)

 Scope: Delay start of this discussion until R1 has provided another LS (expected end of W1), and take the R1 LS and decisions into account. Treat R2-2202815, R2-2202816, R2-2202817, R2-2202499, R2-2202450, R2-2202884, R2-2203318, R2-2202219. Determine agreeable parts, e.g. whether TS change is needed and for which release. Agree CRs if applicable and LS out.

 Intended outcome: Report, Approved LS out, Agreed CRs (if applicable)

 Deadline: EOM

* [AT117-e][055][NR17] PUCCH SCell Activation Invalid TA (CATT)

 Scope: Delay start of this discussion until R1 has replied to the LS in R2-2200133/R4-2120420, and take the R1 reply into account. Treat R2-2202149, R2-2203016, R2-2203017

 Intended outcome: Report, Approved LS out (if need for TS change is identified, outcome should also include CRs).

 Deadline: EOM

* [AT117-e][056][NR17] FR1 HST (CMCC)

 Scope: Treat R2-2202171, R2-2202157, R2-2202869, R2-2202870. Ph1 Determine agreeable parts and converge on discussion points if any, Ph2 agree CRs (and Reply LS only if needed).

 Intended outcome: Report, Agreed CR 38331, endorsed UE cap CRs (or draft CRs) (38306, 38331) for Merge.

 Deadline: Schedule 1

* [AT117-e][057][NR17] FR2 HST (Nokia)

 Scope: Treat R2-2202167, R2-2203187, R2-2203188, R2-2202867,. Ph1 Determine agreeable parts and converge on discussion points if any, Ph2 agree CRs (and Reply LS only if needed).

 Intended outcome: Report, Agreed CR 38331, endorsed UE cap CRs (or draft CRs) (38306, 38331) for Merge.

 Deadline: Schedule 1

* [AT117-e][058][NR17] FR2 UL Gap (Apple)

 Scope: Treat R2-2202155, R2-2202156, R2-2202508, R2-2202918, R2-2202510, R2-2202511, R2-2202507, R2-2202509. Ph1 Determine agreeable parts and converge on discussion points if any, Ph2 agree CRs (and Reply LS only if needed).

 Intended outcome: Report, Agreed CRs, endorsed UE cap CRs (38306, 38331) for Merge.

 Deadline: Schedule 1

* [AT117-e][059][NR17] FR2 CA BW Classes and CBM (Nokia)

 Scope: Treat R2-2202377, R2-2202904, R2-2203122, R2-2203024, R2-2202905, R2-2202389, R2-2202390, R2-2202910, R2-2202911, R2-2202912, R2-2202913, R2-2203493, R2-2203494, R2-2202365, R2-2202366. Ph1 Determine agreeable parts and converge on discussion points if any, Ph2 agree CRs and Reply LS out.

 Intended outcome: Report, Agreed CRs (CRs with certain early impl. character need to be separate CRs), Approved LS out

 Deadline: Schedule 1

* [AT117-e][060][NR17] DSS (Ericsson)

 Scope: Treat R2-2202214, R2-2202215, R2-2202216. Take into account an expected RAN1 LS to resolve Open issues for CR in R2-2202216. If the expected LS arrives late, e.g. at EOM, the discussion can be continued as a Post meeting discussion.

 Intended outcome: Report, Agreed CRs

 Deadline: EOM.

* [AT117-e][061][NR17] n77 variants (Bell Mobility)

 Scope: Treat R2-2202183. Collect one round of comments, based on comments determine whether any action need to be taken by RAN2 (or whether to just wait for RAN4). IF actions are to be taken, CB online W2 Monday

 Intended outcome: Report

 Deadline: W1 Friday

* [AT117-e][062][NR17] MINT (Ericsson)

 Scope: Treat R2-2202176, R2-2202226, R2-2202264, R2-2202256, R2-2202257, R2-2202258, R2-2202259, R2-2202260, R2-2202261, R2-2202262, R2-2202263. Ph1 Check the CRs, converge on discussion points if any and determine agreeable parts, Ph2 finally agree CRs.

 Intended outcome: Report, Agreed CRs, endorsed NR UE cap CRs (38306, 38331) for Merge.

 Deadline: EOM.

ADDED W1 Monday

* [AT117-e][009][feMIMO] RRC 1 (Ericsson)

 Scope: Take into account on-line. Make further progress based on non-resolved parts of R2-2203050 if any. Progress P10 and P14 from R2-2203719. Take into account new LS from RAN1 when/if it becomes available, to the extent reasonable. Update RRC CR. (this discussion will also continue as a post discussion for the CR). Determine agreeable parts, identify discussion points if any.

 Intended outcome: Report, revised RRC CR (CR might not be needed for CB).

 Deadline: In time for online CB W2 Wednesday

* [AT117-e][063][feMIMO] LS out (Ericsson)

 Scope: Initial LS out, asking questions to R1 according to initial on-line discussion. Can also discuss other easily agreeable or potentially necessary questions to ask R1, if any.

 Intended outcome: Approved LS out.

 Deadline: W1 Friday

* [AT117-e][011][IoT-NTN] User Plane (OPPO)

 Scope: Based on R2-2203160 and related on-line discussion + based on R2-2203721 issue on cfg of event triggered TA report and issue Whether SR is triggered if no available/sufficient UL-SCH resources for the triggered TA reporting.

 - For items that are dependent on NR NTN, kick off the relevant discussion points once NR NTN decision has been taken. For items with no dependency, discussion can be kicked off immediately, and result should be ready for first CB occasion.

 - Determine agreeable parts, Aim to agree less controversial points offline (with no CB). Identify CB points. Controversial points and/or very late points (with no time for offline decision) can CB on-line.

 Intended outcome: Report

 Deadline: In time for first on-line CB W2 Tuesday, later CB TBD.

* [AT117-e][012][IoT-NTN] Control Plane (Huawei)

 Scope: Based on R2-2203221 progress P5a and P7, address whether to move t-service to other SIB, address P5 from R2-22003721, Include OI 2.11 and OI 2.12 from AI 9.2.5. based on R2-2203220 progress the details, based on R2-2203457 (Ericsson), progress the details (proponent to drive the argumentation if any). Determine agreeable parts, Aim to agree offline, if needed identify CB points.

 Intended outcome: Report.

 Deadline: In time for on-line CB W2 Tuesday

* [AT117-e][015][IoT-NTN] Miscellaneous Issues (MediaTek)

 Scope: Based on R2-2203721 (and related summarized input), Include OI 2.13 and OI 2.14 from AI 9.2.5, and progress the following:

 - P3 on cell reselection priority

 - Location Reporting in IoT-NTN, and kick this part off as soon as LS reply is received (e.g. for NB-IoT), and/or as soon as relevant progress is achieved for NR NTN (e.g. for eMTC).

 - UE report of remaining GNSS validity duration (Chair comment: this is a R1 agreement and can thus be followed, however the R1 agreed range might not be sufficient for this reporting to be useful, suggest to discuss this).

 - For Prediction of discontinus coverage, on using mean parameters: Can attempt to address/elaborate the earlier defined FFS: *FFS whether additional assumptions (like averaging time) need to be clarified, e.g. to have predictable performance*, and other relevant considerations, if any.

 - For Prediction of discontinus coverage, on estimating radio coverage with higher spatial accuracy: additional new parameters, like satellite footprint reference location on ground and coverage radius (condition that they shall be defined without RAN1 involvement).

 - Determine agreeable parts, Aim to agree less controversial points offline (with no CB). Identify CB points.

 Intended outcome: Report

 Deadline: In time for first on-line CB W2 Tuesday, later CB TBD.

* [AT117-e][064][IoT-NTN] UE capabilites (Nokia)

 Scope: a) review the CR (it is new) b) based on Input to 9.2.4, address the open issues. Determine agreeable parts, identify discussion points and pave the way for efficient on-line CB. For OI4.4 focus for now on the need, rather than solutions, e.g. attempt to identify which capabilities should be indicated per deployment option, if any.

 Intended outcome: Report

 Deadline: In time for on-line CB W2 Tuesday

* [AT117-e][018][MGE] Pre-configured MG patterns (Intel)

 Scope: Based on R2-2203523, progress remaining proposals. Determine agreeable parts, points for discussion, open issues if needed. Converge as far as possible to reduce the need for on-line discussion

 Intended outcome: Report

 Deadline: In time for on-line CB W2 Tuesday

* [AT117-e][019][MGE] Network Controlled Small Gap (Apple)

 Scope: Based on R2-2203713, determine agreeable parts, points for discussion, open issues if needed. Converge as far as possible to reduce the need for on-line discussion.

 Intended outcome: Report

 Deadline: In time for on-line CB W2 Tuesday

* [AT117-e][020][MGE] UE capabilites (Intel)

 Scope: Based on R2-2203522. Determine agreeable parts, points for discussion, open issues if needed. Converge as far as possible to reduce the need for on-line discussion. Treat R2-2202462 and R2-2202463, collect comments and update accordingly, in preparation to endorse for merge revisions at EOM. (i.e. the time to make the last changes, review and endorse the draft CRs will be very short)

 Intended outcome: Report (revised draft CRs may be provided for W2 Tuesday if there is some discussion point that needs the CRs).

 Deadline: In time for on-line CB W2 Tuesday

* [AT117-e][065][MGE] RRC (MediaTek)

 Scope: Treat R2-2202877. Determine agreeable parts, points for discussion, open issues if needed. Converge offline if possible. Can also open for comments on R2-2202868. (this discussion may continue as a post disc for CR approval).

 Intended outcome: Report

 Deadline: In time for on-line CB W2 Tuesday (even if no CB is needed).

ADDED W1 Tuesday

* [AT117-e][003][eIAB] Open Issues (Qualcomm)

 Scope: Based on R2-2202329, progress remaining proposals. Determine agreeable parts, points for discussion if needed, open issues if needed. Aim for offline agreement, if not possible then pave the way for efficient on-line.

 Intended outcome: Report

 Deadline: In time for on-line CB W2 Wednesday

* [AT117-e][021][eIAB] BAP (Huawei)

 Scope: Based on R2-2203527, progress remaining proposals. Treat also R2-2202373. Determine agreeable parts, points for discussion if needed, open issues if needed. Aim for offline agreement, if not possible then pave the way for efficient on-line. This discussion will continue as post meeting discussion for BAP CR, and updated BAP CR (taking into acc this meetings agreements) can also be reviewed as part of this discussion.

 Intended outcome: Report (assume that CR revision is not needed for CB).

 Deadline: In time for on-line CB W2 Wednesday

* [AT117-e][014][eIAB] MAC (Samsung)

 Scope: Wait for RAN1 LS, kick off discussion when received. Based RAN1 LS and R2-2203278, progress remaining proposals (on MAC CEs). Determine agreeable parts, points for discussion if needed, open issues if needed. Aim for offline agreement, if not possible then pave the way for efficient on-line. This discussion will continue as post meeting discussion for MAC CR, and updated MAC CR (taking into acc this meetings agreements) can also be reviewed as part of this discussion.

 Intended outcome: Report (assume that CR revision is not needed for CB).

 Deadline: In time for on-line CB W2 Wednesday

* [AT117-e][022][eIAB] UE capabilities (Intel)

 Scope: Treat R2-2203702. Determine agreeable parts, points for discussion if needed, open issues if needed. Aim for offline agreement, if not possible then pave the way for efficient on-line. Review Updated draft CRs for UE capabilities (pl provide), including agreements from prev. meeting, and all agreeable points from this meeting (e.g. this discussion and the open issues discussion).

 Intended outcome: Report, Draft CRs (38306, 38331) endorsed.

 Deadline: In time for on-line CB W2 Wednesday (Report) if CB is needed or W2 Thursday (CRs) if needed

**[012]** and **[015]** were modified/corrected, see above

ADDED W1 Wed

* [AT117-e][004][ePowSav] PEI and paging subgrouping (MediaTek)

 Scope:

 Following the on-line discussion on R2-2202769:

 a) clarify details on UE behaviour for PEI in last cell, e.g. UE storing last cell info etc, and related TS impacts (can ask input on what need to be clarified).

 b) whether we can assume that PEI with no subgrouping is implemented by using PEI + UEID subgrouping with one subgroup, or whether also other variants should be supported.

 Treat R2-2203720 (taking into account on-line agreements).

 Determine agreeable points, points for discussion if needed

 Intended outcome: Report.

 Deadline: In time for CB online W2 Tuesday

* [AT117-e][005][ePowSav] TRS / CSI-RS Open Issues (CATT)

 Scope: Progress the discussion on Using TRS / CSI RS with eDRX, e.g. a) Clarify necessary restrictions assumptions for how this can work assuming no specific modifications, b) Consider if and how to handle situation when such restrictions assumptions seems unreasonable (are there such situations?), e.g. if to exclude eDRX UEs (and how), whether some simple enhancement can improve the situation.

 Intended outcome: Report

 Deadline: In time for CB online W2 Tuesday

* [AT117-e][006][ePowSav] RLM BFD relaxation (vivo)

 Scope: Continue with Detailed aspects taking into account LS in, specify configuration etc, and whether a Reply LS is needed, see e.g. R2-2202306. Aim to agree offline, CB only if needed.

 Intended outcome: Report, TPs (if applicable), Approved Reply LS (if applicable)

 Deadline: W2 Tuesday (offline only)

* [AT117-e][024][ePowSav] PDCCH skip (Samsung)

 Scope: Treat R2-2203708. Determine agreeable points, points for discussion if needed

 Intended outcome: Report

 Deadline: In time for CB online W2 Tuesday

* [AT117-e][016][feMIMO] MAC (Samsung)

 Scope: Take into account on-line. Make further progress based on non-resolved parts of R2-2203709. Take into account new LS from RAN1 when/if it becomes available, to the extent reasonable. Update MAC CR. (This discussion will also continue as a post discussion for the CR). Determine agreeable parts, identify discussion points if any.

 Intended outcome: Report, revised MAC CR (CR might not be needed for CB).

 Deadline: In time for online CB W2 Wednesday

**[009]** and **[063]** were modified, see above

ADDED W1 Thursday

* [AT117-e][065][MBS] LS on SIB reception for receiving Bcast on Scell (Huawei)

 Deadline: CB W1 Friday

# 1 Opening of the meeting

**This e-Meeting**

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

- RAN2 117 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. .

## 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/ To avoid email system overload, please don’t attach files and documents to emails e.g. for offline email discussions, but instead use files placed on the ftp server instead. Inbox/Drafts folder is used for AT-meeting offline discussions.

## 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.

# 2 General

## 2.1 Approval of the agenda

R2-2202101 Agenda for RAN2#117-e Chairman agenda

## 2.2 Approval of the report of the previous meeting

R2-2202102 RAN2#116bis-e Meeting Report MCC report

## 2.3 Reporting from other meetings

## 2.4 Others

R2-2202103 RAN2 Handbook 02-22 MCC discussion

Instructions – UE capabilites

There is no specific coordination for EUTRA UE capabilities. WI specific CRs shall be developed.

For Rel17 NR UE capabilities the following applies:

1: Aim to Work on mega CRs (one mega CR for TS 38.306 and one for TS 38.331). This work is done under Agenda Item AI 8.0.2

2: Coordinate centrally incorporation in CRs of RAN1 / RAN4 features for all Rel17 WIs. This work is done under Agenda Item AI 8.0.2 and changes are done directly to the mega CRs. There could be exceptions, case by case, where RAN1 / RAN4 features are treated under a WI-specific Agenda Item instead.

3: RAN2 should only implement in the CRs the features / feature groups from the RAN1 and RAN4 feature list without any FFS (no highlighted yellow, [] and/or marked as FFS/TBD). Also UE Capabilities that are dependent on such FFS features should not be implemented.

4: R2 Features and capabilities developed only in R2, are developed individually per WI, under WI-specific Agenda Items. Draft CRs (running CRs) for 38.331 and 38.306 are produced. The 306 CRs shall include an annex containing the RAN2 determined UE capabilities in the feature list format (similar to annex containing RAN2 agreements) for easy compilation into the TR38.822 in the later stage.

5. At the end of R2 117 (Feb meeting), endorsed WI specific UE capability CRs will be merged into the mega CRs, and the mega CRs will be provided to TSG RAN. Any exception to this need to be decided case by case.

Tdoc Limitations

RAN2#117-e focuses on closing of Rel-17. A common tdoc limitation has been imposed on AI5 + AI6. It is expected that companies will need to prioritize.

Tdoc limitations – instructions (reminder)

Tdoc limitations doesn’t apply to Rapporteur Input, i.e.

- Assigned summary rapporteur input of the summary.

- Email / offline discussions outcomes by discussion rapporteur,

- WI rapporteurs input for WI planning etc,

- TS rapporteur input for TS maintenance

- Assigned Editor of Running CRs input to update the running CR and input of one tdoc to facilitate addressing of CR open issues.

- Contact Company of a LSin that triggers RAN2 action may submit one tdoc to facilitate the LS reply. This only applies to one of the contact companies in case there are several (default the first).

Tdoc limitations doesn’t apply to Input created at the meeting, revisions, assigned documents etc.

Tdoc limitations doesn’t apply to shadow / mirror CRs (Cat A).

Tdoc limitations applies to all other submitted tdocs.

# 3 Incoming liaisons

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

Rel-18 LSin’s will not be treated at current meeting. Rel-18 LSin’s will be treated in Q3. In case some LS is particularly urgent and treatment is not complex, it could be considered for Q2.

R2-2202181 Reply LS on energy efficiency as guiding principle for new solutions (S5-221501; contact: Orange) SA5 LS in Rel-18 To:SA Cc:RAN, CT, SA1, SA2, SA3, SA4, SA6, RAN1, RAN2, RAN3, RAN4, RAN5, CT1, CT3, CT4, CT6

Chair Comment: RAN2 is just CCed, no action, don’t see a reason to postpone to open again later

[000] Propose noted

# 4 EUTRA corrections Rel-15 and earlier

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

R2-2203295 Clarification of RSRP measurement triggering for number of cells for UAVs Ericsson CR Rel-15 36.331 15.16.0 4772 - F NR\_UAV-Core

R2-2203297 Clarification of RSRP measurement triggering for number of cells for UAVs Ericsson CR Rel-16 36.331 16.7.0 4773 - A NR\_UAV-Core

## 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.

R2-2203214 Correction to DRX active time after a Scheduling Request or a SPS BSR has been sent in NB-IoT Huawei, HiSilicon CR Rel-15 36.321 15.11.0 1528 - F NB\_IOTenh2-Core

R2-2203215 Correction to DRX active time after a Scheduling Request or a SPS BSR has been sent in NB-IoT Huawei, HiSilicon CR Rel-16 36.321 16.6.0 1529 - A NB\_IOTenh2-Core

R2-2203480 Discussion on enabling 2 HARQ processes and HARQ RTT timer in NB-IoT Ericsson discussion NB\_IOTenh-Core

R2-2203486 Clarification on CDRX and two HARQ interaction for NB-IoT Ericsson CR Rel-14 36.321 14.13.0 1530 - F NB\_IOTenh-Core

R2-2203495 Clarification on CDRX and two HARQ interaction for NB-IoT Ericsson CR Rel-15 36.321 15.11.0 1531 - A NB\_IOTenh-Core

R2-2203496 Clarification on CDRX and two HARQ interaction for NB-IoT Ericsson CR Rel-16 36.321 16.6.0 1532 - A NB\_IOTenh-Core

## 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.

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

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

## 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.

Purely editorial corrections should be avoided, text enhancements may be deprioritized. Corrections should be taken up with the specification editor before submitting to avoid CR duplication. If this is not done, the contribution may not be treated.

R2-2202218 Dummify empty sequence in FlightPathInfoReport-r15 and other corrections Lenovo, Motorola Mobility CR Rel-15 36.331 15.16.0 4753 - F LTE\_Aerial-Core, TEI15

R2-2202219 Dummify empty sequence in FlightPathInfoReport-r15 and other corrections Lenovo, Motorola Mobility CR Rel-16 36.331 16.7.0 4754 - A LTE\_Aerial-Core, TEI16

R2-2203238 Discussion on handling QoE configuration in full configuration Google Inc. discussion Rel-15 36.331 LTE\_QMC\_Streaming-Core R2-2201532

# 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)

Only essential corrections. Please submit CRs marked “NR\_newRAT-Core, TEI16” under one of the below clauses.

Tdoc limitation: AI5 + AI6: 14

## 5.1 Organisational

Incoming LSs, etc.

## 5.2 Stage 2 corrections

Includes corrections to TS 38.300 and TS 37.340. You should discuss your stage 2 CRs with the specification rapporteurs before submission.

## 5.3 User Plane corrections

* [AT117-e][025][NR15] User-plane Corrections (Huawei)

 Scope: Treat R2-2202109, R2-2203129, R2-2203130, R2-2203241, R2-2203242, R2-2203240, R2-2202552, R2-2202553, R2-2203239, R2-2202194. Ph1 Determine agreeable parts. P2 agree CRs for agreeable parts.

 Intended outcome: Report, Agreed CRs.

 Deadline: Schedule 1

### 5.3.1 MAC

Initial state

R2-2202109 Reply LS on initial state of elements controlled by MAC CEs (R1-2112860, Contact: Huawei) LS in Rel-15 To:RAN2 Cc:RAN4

R2-2203129 Clarification on the initial state of elements controlled by MAC CE (based on LS R1-2112860, Contact: Huawei) Huawei, HiSilicon CR Rel-15 38.321 15.12.0 1208 - F NR\_newRAT-Core, TEI16

R2-2203130 Clarification on the initial state of elements controlled by MAC CE (based on LS R1-2112860, Contact: Huawei) Huawei, HiSilicon CR Rel-16 38.321 16.7.0 1209 - F NR\_newRAT-Core, TEI16

R2-2203241 Correction to 38.321 on the term of the handover in handling of MAC CE ZTE Corporation,Sanechips CR Rel-16 38.321 16.7.0 1212 - F NR\_newRAT-Core

R2-2203242 Discussion on Initial State of Elements Controled by MAC CEs ZTE Corporation,Sanechips discussion Rel-15 NR\_newRAT-Core

R2-2203240 Correction to 38.321 on the term of the handover in handling of MAC CE ZTE Corporation,Sanechips CR Rel-15 38.321 15.12.0 1211 - F NR\_newRAT-Core

Others

R2-2202552 Clarification on the DRX RTT Timer operation with UL skipping configuration Apple CR Rel-15 38.321 15.12.0 1195 - F NR\_newRAT-Core

R2-2202553 Clarification on the DRX RTT Timer operation with UL skipping configuration Apple CR Rel-16 38.321 16.7.0 1196 - A NR\_newRAT-Core

R2-2203239 Discussion on An Abnormal Case for Retransmission ZTE Corporation,OPPO, Sanechips discussion Rel-15 NR\_newRAT-Core

### 5.3.2 RLC PDCP SDAP

R2-2202194 Discussion on handling of discardOnPDCP OPPO discussion Rel-15 NR\_newRAT-Core

## 5.4 Control Plane corrections

### 5.4.1 NR RRC

Includes NR RRC and Changes that are applied to both NR RRC and LTE RRC, except UE capabilities.

NAS procedures not subject to UAC

Offline, CB online W2 if needed

* [AT117-e][026][NR15] NAS procedure not subject to UAC (Apple)

 Scope: Treat R2-2202104, R2-2202535, R2-2202536, R2-2202537, R2-2202538, R2-2203487. Ph1 Determine agreeable parts, Ph2 For agreeable parts, progress CRs, and reply LS out.

 Intended outcome: Report, Agreed CRs, Approved LS out.

 Deadline: Schedule 1

R2-2202104 LS on NAS procedure not subject to UAC (C1-217227; contact: Apple) CT1 LS in Rel-15 To:RAN2

Moved from 5.1

R2-2202535 Discussion on RRC handling of NAS triggers not subject to UAC Apple discussion Rel-15 NR\_newRAT-Core

R2-2202536 Correction on RRC resume of NAS triggers without access category Apple CR Rel-15 38.331 15.16.0 2895 - F NR\_newRAT-Core

R2-2202537 Correction on RRC resume of NAS triggers without access category Apple CR Rel-16 38.331 16.7.0 2896 - A NR\_newRAT-Core

R2-2202538 [Draft] Reply LS on NAS procedure not subject to UAC Apple LS out NR\_newRAT-Core To:CT1

R2-2203487 Discussion on NAS-triggered resume procedure without UAC Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

Power limitation in DC

Wait for Reply LSes from RAN1 and RAN4

R2-2202173 LS on configuration of p-MaxEUTRA and p-NR-FR1 (R5-217995; contact: Huawei) RAN5 LS in Rel-15 To:RAN1, RAN2, RAN4

Moved from 5.1

R2-2203133 Draft reply LS on configuration of p-MaxEUTRA and p-NR-FR1 Huawei, HiSilicon LS out Rel-15 NR\_newRAT-Core To:RAN5 Cc:RAN1, RAN4

Moved from 5.3.1

R2-2202655 Discussion on configuration of p-MaxEUTRA and p-NR-FR1 ZTE Corporation, Sanechips discussion Rel-15 NR\_newRAT-Core

R2-2202656 [Draft] Reply LS on configuration of p-MaxEUTRA and p-NR-FR1 ZTE Corporation, Sanechips LS out Rel-15 NR\_newRAT-Core To:RAN5 Cc:RAN1, RAN4

R2-2202798 Reply LS on configuration of p-MaxEUTRA and p-NR-FR1 vivo LS out Rel-15 NR\_newRAT-Core To:RAN5 Cc:RAN1, RAN4

Miscellaneous I

Offline

* [AT117-e][027][NR15] RRC misc I (Ericsson)

 Scope: Treat R2-2202106, R2-2202272, R2-2202273, R2-2202393, R2-2203498, R2-2203499, R2-2203335, R2-2203336

 Ph1 Determine agreeable parts, Ph2 For agreeable parts, progress CRs.

 Intended outcome: Report, Agreed CRs

 Deadline: Schedule 1

RMSI search space

R2-2202106 Reply LS on RMSI reception based on non-zero search space (R1-2112765; contact:OPPO) RAN1 LS in Rel-15 To:RAN2

Moved from 5.1

R2-2202272 Clarification of search space configuration for RMSI-R15 OPPO CR Rel-15 38.331 15.16.0 2884 - F NR\_newRAT-Core

R2-2202273 Clarification of search space configuration for RMSI-R16 OPPO CR Rel-16 38.331 16.7.0 2885 - A NR\_newRAT-Core

Measurements and Gaps

R2-2202393 Clarification on per UE/per FR gap setup and release inconsistency Nokia, Nokia Shanghai Bell discussion Rel-15

R2-2203498 Clarification on servingCellMO (R15) Huawei, HiSilicon CR Rel-15 38.331 15.16.0 2962 - F NR\_newRAT-Core

R2-2203499 Clarification on servingCellMO (R16) Huawei, HiSilicon CR Rel-16 38.331 16.7.0 2963 - A NR\_newRAT-Core

R2-2203335 On rsType to be used for beam measurements Ericsson CR Rel-15 38.331 15.16.0 2947 - F NR\_newRAT-Core

R2-2203336 On rsType to be used for beam measurements Ericsson CR Rel-16 38.331 16.7.0 2948 - A NR\_newRAT-Core

Miscellaneous II

Offline

* [AT117-e][028][NR15] RRC misc II (Intel)

 Scope: Treat R2-2202637, R2-2202638, R2-2202639, R2-2203327, R2-2203328

 Ph1 Determine agreeable parts, Ph2 For agreeable parts, progress CRs

 Intended outcome: Report, Agreed CRs.

 Deadline: Schedule 1

Security

R2-2202637 Issues with use of NCC for KgNB derivation during re-establishment and Resume procedure Intel Corporation discussion Rel-15 38.331 NR\_newRAT-Core

R2-2202638 Correction of NCC storage during re-establishment and Resume Intel Corporation CR Rel-15 38.331 15.16.0 2899 - F NR\_newRAT-Core

R2-2202639 Correction of NCC storage during re-establishment and Resume Intel Corporation CR Rel-16 38.331 16.7.0 2900 - A NR\_newRAT-Core

Full Configuration

R2-2203327 Correction on Full configuration ZTE Corporation, Sanechips CR Rel-15 38.331 15.16.0 2941 - F NR\_newRAT-Core

R2-2203328 Correction on Full configuration(R16) ZTE Corporation, Sanechips CR Rel-16 38.331 16.7.0 2942 - A NR\_newRAT-Core

Inter-node Signalling

Offline

* [AT117-e][029][NR15] RRC Inter-Node Signalling (Nokia)

 Scope: Treat R2-2202121, R2-2203500, R2-2203501, R2-2202806, R2-2202807, R2-2202808, R2-2202123, R2-2203321, R2-2203322. Ph1 Determine agreeable parts, Ph2 For agreeable parts, progress CRs, (reply LSes out only if needed).

 Intended outcome: Report, Agreed CRs

 Deadline: Schedule 1

Inter-MN HO without SN change

R2-2202121 Reply LS on inter-MN handover without SN change (R3-216165; contact: Huawei) RAN3 LS in Rel-15 To:RAN2

Moved from 5.1

R2-2203500 Clarification on inter-MN handover without SN change (R15) Huawei, HiSilicon, Nokia, Nokia Shanghai Bell, Ericsson, ZTE Corporation, Samsung CR Rel-15 37.340 15.15.0 0299 - F NR\_newRAT-Core

R2-2203501 Clarification on inter-MN handover without SN change (R16) Huawei, HiSilicon, Nokia, Nokia Shanghai Bell, Ericsson, ZTE Corporation, Samsung CR Rel-16 37.340 16.8.0 0300 - A NR\_newRAT-Core

R2-2202806 Signalling in inter-MN HO without SN change NEC discussion Rel-15 NR\_newRAT-Core

R2-2202807 Clarification on inter-MN handover without SN change NEC CR Rel-15 38.331 15.16.0 2907 - F NR\_newRAT-Core

R2-2202808 Clarification on inter-MN handover without SN change NEC CR Rel-16 38.331 16.7.0 2908 - A NR\_newRAT-Core

SN initiated release of SCG

R2-2202123 Reply LS on signalling SN initiated release of SCG (R3-216236; contact: Ericsson) RAN3 LS in Rel-15 To:RAN2

Moved from 5.1

R2-2203320 Clarification on SN initiated release of an SCG Ericsson, Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.16.0 2938 - F NR\_newRAT-Core

R2-2203321 Clarification on SN initiated release of an SCG Ericsson, Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.7.0 2939 - A NR\_newRAT-Core

### 5.4.2 LTE changes

### 5.4.3 UE capabilities

Including impacts to 38.306 (and 36.306) and the associated impact to 38.331 (and 36,331).

### 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)

## 5.5 Positioning corrections

Corrections to both the stage 2 and stage 3 aspects related to positioning. Stage 2 CRs shall be discussed with the specification rapporteur (Sven Fischer sfischer@qti.qualcomm.com) before submission. Stage 2 CRs not discussed with the specification rapporteur will not be treated.

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

R2-2202597 Corretion on the object identifier of LPP ASN.1 for R15 Huawei, HiSilicon CR Rel-15 37.355 15.2.0 0328 - F NR\_newRAT-Core

R2-2202598 Corretion on the object identifier of LPP ASN.1 for R16 Huawei, HiSilicon CR Rel-16 37.355 16.7.0 0329 - A NR\_newRAT-Core

R2-2202599 Discussion on the object identifier of LPP ASN.1 Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

# 6 Rel-16 NR Work Items

Essential corrections only.

Tdoc Limitation: See common tdoc limitation with AI 5

## 6.1 Common

Includes the following WIs and input that doesn’t fit elsewhere.

(NR\_IAB-Core; leading WG: RAN2; REL-16; started: Dec 18; target Aug 20; WID: RP-200840)

(NR\_unlic-Core; leading WG: RAN1; REL-16; started: Dec 18; Closed June 20; WID: RP-192926).

(NR\_IIOT-Core; leading WG: RAN2; REL-16; started: Mar 19; Completed: Jun 20; WID: RP-200797)

(NR\_UE\_pow\_sav-Core; leading WG: RAN1; REL-16; started: Mar 19; Completed Jun 20; WID: RP-200494).

(NR\_2step\_RACH-Core; leading WG: RAN1; REL-16; started: Dec 18; Completed: June 20; WID: RP-200085).

(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)

(NR\_eMIMO-Core, leading WG: RAN1; REL-16; started: Jun 18; target; Aug 20; WID: RP-200474;)

(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)

(LTE\_NR\_DC\_CA\_enh-Core; leading WG: RAN2; REL-16; started: Jun 18; Target Aug 20; WI RP-200791)

(NR\_Mob\_enh-Core; leading WG: RAN2; REL-16; started: Jun 18; Completed June 20; WID: RP-192277).

(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,)

(NR TEI16).

LTE mob enh corrections that are common with NR mobility enhancements should be submitted to this AI 6.1.X. LTE-only corrections, see AI 7.

### 6.1.1 Organisational

Incoming LSs, etc.

### 6.1.2 Stage 2 corrections

You should discuss your stage 2 CRs with the specification rapporteurs before submission. Includes impact to 38.300, 36.300, 37.340

### 6.1.3 User Plane corrections

* [AT117-e][030][NR16] User-plane Related Corrections (vivo)

 Scope: Treat R2-2202524, R2-2202110, R2-2202326 (RRC CR), R2-2203484, R2-2203131.

 Ph1 Determine agreeable parts. P2 agree CRs for agreeable parts.

 Intended outcome: Report, Agreed CRs.

 Deadline: Schedule 1

#### 6.1.3.1 MAC

UL skip

R2-2202524 Procedure level alignment of UL skipping Apple CR Rel-16 38.321 16.7.0 1192 - D NR\_IIOT-Core

R2-2202110 Reply LS on UL skipping with LCH prioritization (R1-2112862; contact: vivo) RAN1 LS in Rel-16 To:RAN2

Moved Here

R2-2202326 Correction on UL skipping with LCH Prioritization in Rel-16 vivo CR Rel-16 38.331 16.7.0 2888 - F NR\_L1enh\_URLLC-Core, NR\_IIOT-Core

Moved Here. Better keep together with UP.

DRX with bundling

R2-2203484 Correction to DRX operation with bundling controlled in the DCI Ericsson, Nokia, T-Mobile USA, Verizon, Docomo discussion Rel-16 NR\_L1enh\_URLLC

#### 6.1.3.2 RLC

#### 6.1.3.3 PDCP

R2-2203131 Joint EHC and RoHC when Type is not present in Ethernet header Huawei, HiSilicon discussion Rel-16 NR\_IIOT-Core

#### 6.1.3.4 SDAP

#### 6.1.3.5 BAP

### 6.1.4 Control Plane corrections

#### 6.1.4.1 NR RRC

In case a correction need to mirrored for both NR RRC and LTE RRC, the corrections should be submitted under the same AI (i.e. the sub-AIs below this).

##### 6.1.4.1.1 Connection control

* [AT117-e][031][NR16] Connection Control I (Ericsson)

 Scope: Treat R2-2203408, R2-2202228, R2-2203410, R2-2203255, R2-2203132, R2-2202232, R2-2203438. Ph1 Determine agreeable parts, Ph2 for agreeable parts, progress CRs.

 Intended outcome: Report, Agreed CRs.

 Deadline: Schedule 1

Connection Control I

R15 newRAT

R2-2203408 Non-comprehended fields in ServingCellConfigCommon Ericsson CR Rel-16 38.331 16.7.0 2955 - F NR\_newRAT-Core, TEI16

Moved from 6.1.4

R2-2202228 Handling of ServingCellConfigCommon Qualcomm Incorporated CR Rel-16 38.331 16.7.0 2880 - F TEI16

R2-2203410 Clarification of commonSearchSpaceList Ericsson CR Rel-16 38.331 16.7.0 2957 - F NR\_newRAT-Core, TEI16

Moved from 6.1.4

IAB

R2-2203255 Correction to RRC reconfiguration for IAB Google Inc. CR Rel-16 38.331 16.7.0 2874 1 F NR\_IAB-Core R2-2201540

URLLC

R2-2203132 Correction on invalid symbol pattern Huawei, HiSilicon CR Rel-16 38.331 16.7.0 2929 - F NR\_L1enh\_URLLC-Core

UE Pow sav

R2-2202232 Correction to the reference of DCI format 2\_6 field descriptions ROHDE & SCHWARZ CR Rel-16 38.331 16.7.0 2881 - F NR\_UE\_pow\_sav-Core

UE assistance Overheating

R2-2203438 Miscellaneous aspects on UAI Ericsson discussion

Connection Control II

* [AT117-e][032][NR1615] Connection Control II (Lenovo)

 Scope: Treat R2-2203407 (or 3706), R2-2203267, R2-2202835, R2-2202836, R2-2202872, R2-2202876, R2-2202222, R2-2202915, R2-2203477, R2-2202917. Ph1 Determine agreeable parts, Ph2 for agreeable parts, progress CRs.

 Intended outcome: Report, Agreed CRs.

 Deadline: Schedule 1

NS value configuration

R2-2203407 NS\_55 in NR CA Ericsson discussion Rel-16 NR\_RF\_FR1-Core, TEI16

Moved from 6.1.4

R2-2203706 NS\_55 in NR CA Ericsson discussion Rel-16 NR\_RF\_FR1-Core, TEI16

DC location reporting

R2-2203267 Clarification on meaning of dual PA in DC location reporting Nokia, Nokia Shanghai Bell discussion Rel-16 NR\_RF\_FR1-Core

Conditional Configuration

R2-2202835 Correction on conditional reconfiguraiton execution for only one triggered cell Xiaomi, Samsung, NEC, Nokia, Nokia Shanghai Bell, LG Electronics, CATT, OPPO, Ericsson CR Rel-16 38.331 16.7.0 2911 - F NR\_Mob\_enh-Core

R2-2202836 Correction on conditional reconfiguraiton execution for only one triggered cell Xiaomi, Samsung, NEC, Nokia, Nokia Shanghai Bell, LG Electronics, CATT, OPPO, Ericsson CR Rel-16 36.331 16.7.0 4764 - F NR\_Mob\_enh-Core

R2-2202872 Conditional configuration handling upon going to RRC\_IDLE Lenovo, Motorola Mobility, Sharp CR Rel-16 38.331 16.7.0 2914 - F NR\_Mob\_enh-Core

R2-2202876 Conditional configuration handling upon going to RRC\_IDLE Lenovo, Motorola Mobility, Sharp CR Rel-16 36.331 16.7.0 4765 - F LTE\_feMob-Core

SRVCC to 3G

R2-2202222 Addition of missing description on mobility support for 5G SRVCC to 3G Lenovo, Motorola Mobility CR Rel-16 38.331 16.7.0 2879 - F SRVCC\_NR\_to\_UMTS-Core

NPN

R2-2202915 Correction on inclusion of selectedPLMN-Identity in RRCResumeComplete MediaTek Inc. CR Rel-16 38.331 16.7.0 2917 - F NG\_RAN\_PRN-Core, NR\_newRAT-Core

HST

R2-2203477 Clarification on highSpeedConfig for HST Huawei, HiSilicon, CMCC CR Rel-16 38.331 16.7.0 2960 - F NR\_HST-Core

##### 6.1.4.1.2 RRM and Measurements

Need for Gap

R2-2202917 Clarification on target band filter in NeedForGap configuration MediaTek Inc. CR Rel-16 38.331 16.7.0 2918 - F NR\_newRAT-Core, TEI16

##### 6.1.4.1.3 System Information and Paging

##### 6.1.4.1.4 Inter-Node RRC messages

##### 6.1.4.1.5 Other

* [AT117-e][033][NR1615] RRC Other (Samsung)

 Scope: Treat R2-2202296, R2-2202297, R2-2202298, R2-2202763, R2-2202990, R2-2202991, R2-2203439, R2-2203441, R2-2203442. Ph1 Determine agreeable parts, Ph2 for agreeable parts, progress CRs.

 Intended outcome: Report, Agreed CRs.

 Deadline: Schedule 1

RRC message Segmentation

R2-2202296 Discussion on RRC message segmentation Samsung discussion Rel-16

R2-2202297 Correction to RRC message segmentation Samsung CR Rel-16 38.331 16.7.0 2886 - F TEI16

R2-2202298 Correction to RRC message segmentation Samsung CR Rel-16 36.331 16.7.0 4757 - F TEI16

R2-2202763 Discussion on parallel transmission of segmented RRC messages Lenovo, Motorola Mobility discussion Rel-16 TEI16

R2-2202990 Correction on UL message segmentation Samsung CR Rel-16 38.331 16.7.0 2920 - F RACS-RAN-Core

R2-2202991 Correction on UL message segmentation Samsung CR Rel-16 36.331 16.7.0 4768 - F RACS-RAN-Core

R2-2203439 UL RRC segmentation capability Ericsson discussion

Terminology

R2-2203441 Correction on Non-numerical K1 Value vivo CR Rel-16 38.321 16.7.0 1216 - F NR\_unlic-Core

R2-2203442 Correction on Non-numerical K1 Value vivo CR Rel-16 38.331 16.7.0 2959 - F NR\_unlic-Core

#### 6.1.4.2 LTE changes

LTE-specific changes for these WIs. Changes that are applied to both LTE and NR shall be treated together under respective Agenda item other than this one.

#### 6.1.4.3 UE capabilities

* [AT117-e][034][NR16] UE capabilities I (Intel)

 Scope: Treat R2-2202146, R2-2202107, R2-2202665, R2-2203163, R2-2203167, R2-22002195, R2-2202196, R2-2203488, R2-2202293. Ph1 Determine agreeable parts, Ph2 for agreeable parts, progress CRs.

 Intended outcome: Report, Agreed CRs.

 Deadline: Schedule 1

38.822

R2-2202146 LS on Rel-16 updated RAN4 UE features lists for LTE and NR (R4-2118536; contact: CMCC) RAN4 LS in Rel-16 To:RAN2 Cc:RAN1

Moved from 8.0.2

R2-2202107 LS on updated Rel-16 RAN1 UE features lists for NR after RAN1#107-e (R1-2112778; contact: NTT DOCOMO) RAN1 LS in Rel-16 To:RAN2 Cc:RAN4

Moved from 8.0.2

R2-2202665 Miscellaneous updates on TR38.822 Intel Corporation CR Rel-16 38.822 16.2.0 0009 - F NR\_pos-Core, NR\_RF\_TxD-Core, NR\_unlic-Core, NR\_IAB-Core

Moved from 8.0.2

Misc.

R2-2203163 Rename of field extendedBand-n77 Samsung R&D Institute UK CR Rel-16 38.306 16.7.0 0691 - D NR\_RF\_FR1-Core

R2-2203167 Rename of field extendedBand-n77 Samsung R&D Institute UK CR Rel-16 38.331 16.7.0 2931 - D NR\_RF\_FR1-Core

DAPS

R2-2202195 Left issues on DAPS capability OPPO discussion Rel-16 NR\_Mob\_enh-Core

R2-2203488 Discussion on DAPS capabilities and configuration Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

R2-2202293 Correction on DAPS capability OPPO CR Rel-16 38.306 16.7.0 0677 - F NR\_Mob\_enh-Core

* [AT117-e][035][NR1615] UE capabilities II (Huawei)

 Scope: Treat R2-2202810, R2-2202811, R2-2203268, R2-2203492, R2-2202229, R2-2202108, R2-2203510, R2-2203490, R2-2203491, R2-2203409, R2-2202525, R2-2202526. Ph1 Determine agreeable parts, Ph2 for agreeable parts, progress CRs.

 Intended outcome: Report, Agreed CRs.

 Deadline: Schedule 1

UL MIMO coherence for UL TX switching

R2-2202810 Adding UE capability of UL MIMO coherence for UL Tx switching Huawei, HiSilicon, China Telecom, Apple CR Rel-16 38.306 16.7.0 0635 2 F NR\_RF\_FR1-Core R2-2110483

R2-2202811 Adding UE capability of UL MIMO coherence for UL Tx switching Huawei, HiSilicon, China Telecom, Apple CR Rel-16 38.331 16.7.0 2786 2 F NR\_RF\_FR1-Core R2-2110484

**eMIMO**

R2-2203268 UE capabilities for UL full power modes Nokia, Nokia Shanghai Bell discussion Rel-16 NR\_eMIMO-Core

R2-2203492 Correction on ssb-csirs-SINR-measurement-r16 capability Huawei, HiSilicon CR Rel-16 38.306 16.7.0 0695 - F NR\_eMIMO-Core

BWP

R2-2202229 Discussion on BWP operation without bandwidth restriction Qualcomm Incorporated, ZTE Corporation discussion Rel-16 TEI16

PDCCH Blind detection

R2-2202108 Reply LS on PDCCH Blind Detection in CA (R1-2112833; contact: Huawei) RAN1 LS in Rel-16 To:RAN2

Moved from 6.1.1

R2-2203489 Discussion on PDCCH Blind Detection in CA Huawei, HiSilicon discussion Rel-16 NR\_L1enh\_URLLC-Core

=> Revised in R2-2203510

R2-2203510 Discussion on PDCCH Blind Detection in CA Huawei, HiSilicon discussion Rel-16 NR\_L1enh\_URLLC-Core R2-2203489 Late

R2-2203490 Correction on PDCCH Blind Detection in CA Huawei, HiSilicon CR Rel-16 38.331 16.7.0 2961 - F NR\_L1enh\_URLLC-Core

R2-2203491 Correction on PDCCH Blind Detection in CA Huawei, HiSilicon CR Rel-16 38.306 16.7.0 0694 - F NR\_L1enh\_URLLC-Core

BCS

R2-2203409 BCS for non-CA band combination Ericsson CR Rel-16 38.331 16.7.0 2956 - F NR\_newRAT-Core, TEI16

Moved from 6.1.4

R15 DC combination without CA

R2-2202525 Support of DC combination without CA Apple CR Rel-15 38.306 15.16.0 0680 - F NR\_newRAT-Core

R2-2202526 Support of DC combination without CA Apple CR Rel-16 38.306 16.7.0 0681 - A NR\_newRAT-Core

Withdrawn

R2-2202527 Support of Multi-DCI based multi-TRP PUSCH operation Apple CR Rel-16 38.331 16.7.0 2894 - F NR\_eMIMO-Core Withdrawn

R2-2202528 Support of Multi-DCI based multi-TRP PUSCH operation Apple CR Rel-16 38.306 16.7.0 0682 - F NR\_eMIMO-Core Withdrawn

#### 6.1.4.4 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

* [AT117-e][036][NR1516] Idle Inactive procedures (Lenovo)

 Scope: Treat R2-2202539, R2-2202220, R2-2202221. Ph1 Determine agreeable parts, Ph2 for agreeable parts, progress CRs.

 Intended outcome: Report, Agreed CRs.

 Deadline: Schedule 1

R2-2202539 Correction for cell reselection on CAG cells in white list Apple CR Rel-16 38.304 16.7.0 0229 - F NG\_RAN\_PRN-Core

Chair Comment: Please align language, white list is no longer allowed.

R15 Corrections

R2-2202220 Addition of missing description on handling of Access Identities when cell is reserved for operator use Lenovo, Motorola Mobility, Nokia, Nokia Shanghai Bell, Ericsson CR Rel-15 36.304 15.7.0 0837 - F LTE\_5GCN\_connect-Core

R2-2202221 Addition of missing description on handling of Access Identities when cell is reserved for operator use Lenovo, Motorola Mobility, Nokia, Nokia Shanghai Bell, Ericsson CR Rel-16 36.304 16.6.0 0838 - A LTE\_5GCN\_connect-Core

## 6.2 NR V2X

(5G\_V2X\_NRSL-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Aug 20; WID: RP-200129).

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

Tdoc Limitation: See tdoc limitation for Agenda Item 6

CR rapporteurs will take care of miscellaneous CRs to collect small changes. Please contact / coordinate with CR rapporteur company first for small changes (e.g. non-controversial clarification/correction, editorial correction, etc.).

### 6.2.1 General and Stage-2 corrections

Including incoming LSs, rapporteur inputs, etc.

R2-2202147 LS on Signalling of PC2 V2X intra-band concurrent operation (R4-2119992; contact: Xiaomi) RAN4 LS in Rel-16 To:RAN2

R2-2202148 LS on PEMAX for NR-V2X (R4-2120047; contact: Huawei, CATT) RAN4 LS in Rel-16 To:RAN1, RAN2

R2-2202196 Discussion on RAN4 LS on power class capability (R4-2119992) OPPO discussion Rel-16 5G\_V2X\_NRSL-Core

R2-2202197 Introduction of NR V2X power class OPPO CR Rel-16 38.306 16.7.0 0673 - B 5G\_V2X\_NRSL-Core

R2-2202198 Introduction of NR V2X power class OPPO CR Rel-16 38.331 16.7.0 2876 - B 5G\_V2X\_NRSL-Core

R2-2202199 Discussion on RAN4 LS on P\_EMAX (R4-2120047) OPPO discussion Rel-16 5G\_V2X\_NRSL-Core

R2-2202470 Draft reply LS on PEMAX for NR-V2X Qualcomm Finland RFFE Oy LS out Rel-16 5G\_V2X\_NRSL-Core To:RAN4

R2-2202715 Draft reply LS on Pemax for NR-V2X Huawei, HiSilicon, CATT LS out Rel-16 5G\_V2X\_NRSL-Core To:RAN4 Cc:RAN1

R2-2202837 Draft Reply LS on new power class capability for NR-V2X Xiaomi LS out To:RAN4

R2-2202838 Introduction of sidelink power class capability Xiaomi, Ericsson CR Rel-16 38.331 16.7.0 2912 - B 5G\_V2X\_NRSL-Core

R2-2202839 Introduction of sidelink power class capability Xiaomi, Ericsson CR Rel-16 38.306 16.7.0 0688 - B 5G\_V2X\_NRSL-Core

R2-2203146 Discussion on RAN4 LS on new power class capability for NR-V2X Xiaomi discussion

R2-2203173 Draft reply LS on PEMAX for NR-V2X vivo LS out Rel-16 To:RAN4 Cc:RAN1

R2-2203175 PEMAX for NR-V2X vivo discussion Rel-16

### 6.2.2 Control plane corrections

This agenda item may utilize a summary document on RRC (Huawei).

R2-2202714 Miscelleneous CR on 38.331 Huawei, HiSilicon CR Rel-16 38.331 16.7.0 2903 - F 5G\_V2X\_NRSL-Core

R2-2202723 Summary of RRC corrections Huawei, HiSilicon discussion Rel-16 5G\_V2X\_NRSL-Core Late

R2-2203174 Clarification on SL power control parameter vivo CR Rel-16 38.331 16.7.0 2932 - F 5G\_V2X\_NRSL-Core

R2-2203286 Correction on HARQ attribute of SL SRB option1 ZTE Corporation, Sanechips, OPPO CR Rel-16 38.331 16.7.0 2935 - F 5G\_V2X\_NRSL-Core

R2-2203287 Correction on HARQ attribute of SL SRB option2b ZTE Corporation, Sanechips,vivo CR Rel-16 38.331 16.7.0 2936 - F 5G\_V2X\_NRSL-Core

R2-2203289 Corrections on TS 38.304 ZTE Corporation, Sanechips CR Rel-16 38.304 16.7.0 0231 - F 5G\_V2X\_NRSL-Core

### 6.2.3 User plane corrections

Including [Post116-e][710][V2X/SL]. This agenda item may utilize a summary document on MAC (LG).

R2-2202193 Correction on UL-SL prioritization\_option1 OPPO CR Rel-16 38.321 16.7.0 1187 - F 5G\_V2X\_NRSL-Core

R2-2202211 Clarification on SDU type field usage for SL-SRB Samsung, Apple CR Rel-16 38.323 16.6.0 0084 - F 5G\_V2X\_NRSL-Core

R2-2202299 Correction on UL-SL prioritization\_option2 OPPO CR Rel-16 38.321 16.7.0 1188 - F 5G\_V2X\_NRSL-Core

R2-2202360 Corrections on Unexpected SL-BSR Trigger for SL-CSI MAC CE CATT CR Rel-16 38.321 16.7.0 1189 - F 5G\_V2X\_NRSL-Core

R2-2202361 Summary [POST116-e][710][V2X/SL] PDCP/RLC Entity Maintenance for SL-SRBs (CATT) CATT report Rel-16 5G\_V2X\_NRSL-Core

R2-2202362 Corrections on MAC filtering issue for the first unicast PC5-S signalling CATT draftCR Rel-16 38.321 16.7.0 F 5G\_V2X\_NRSL-Core

R2-2202363 Corrections on RLC entity establishment issue for the first unicast PC5-S signalling CATT draftCR Rel-16 38.322 16.2.0 F 5G\_V2X\_NRSL-Core

R2-2202364 Corrections on PDCP entity establishment issue for the first unicast PC5-S signalling CATT draftCR Rel-16 38.323 16.6.0 F 5G\_V2X\_NRSL-Core

R2-2202534 Correction on the PDB derivation from LCH priority Apple, OPPO CR Rel-16 38.321 16.7.0 1193 - F 5G\_V2X\_NRSL-Core

R2-2202716 Clarification on the UL and NR SL prioritization Huawei, HiSilicon, Lenovo, Motorola Mobility CR Rel-16 38.321 16.7.0 1201 - F 5G\_V2X\_NRSL-Core

R2-2202843 Correction on SL HARQ feedback indicator ASUSTeK CR Rel-17 38.321 16.7.0 1202 - F 5G\_V2X\_NRSL-Core

R2-2202947 Rapporteur CR on 38.321 LG Electronics France (Rapporteur) CR Rel-16 38.321 16.7.0 1205 - F NR\_SL\_enh-Core Late

R2-2202949 Correction of RV indication Samsung CR Rel-16 38.321 16.7.0 1207 - F 5G\_V2X\_NRSL-Core

R2-2202956 Summary of MAC corrections LG Electronics France discussion 5G\_V2X\_NRSL-Core Late

R2-2203288 Correction on HARQ attribute of SL SRB option2a ZTE Corporation, Sanechips CR Rel-16 38.321 16.7.0 1213 - F 5G\_V2X\_NRSL-Core

R2-2203290 Discussion on HARQ attribute of SL SRB ZTE Corporation, Sanechips,vivo discussion Rel-16

R2-2203451 Correction on NACK reporting on PUCCH for NR SL Huawei, HiSilicon, OPPO CR Rel-16 38.321 16.7.0 1217 - F 5G\_V2X\_NRSL-Core

R2-2203479 Correction on NACK reporting on PUCCH for NR SL Huawei, HiSilicon, OPPO CR Rel-16 38.321 16.7.0 1218 - F 5G\_V2X\_NRSL-Core

## 6.3 NR Positioning Support

(NR\_pos-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Jun 20; WID: RP-200218).

(NR TEI16 Positioning)

Documents in this agenda item will be handled by email. No web conference is planned for this agenda item, and non-urgent documents may be postponed to next meeting.

Tdoc Limitation: See tdoc limitation for Agenda Item 6

### 6.3.1 General and Stage 2 corrections

Including incoming LSs, Including impact to 36.305 and 38.305. Stage 2 corrections shall be discussed with the specification rapporteur (Sven Fischer sfischer@qti.qualcomm.com) before submission. Stage 2 CRs not discussed with the specification rapporteur will not be treated.

This agenda item may use a summary document (decision to be made based on submitted tdocs).

R2-2202119 Reply LS to RAN2 on the misalignment in SRS configuration (R3-216009; contact: Samsung) RAN3 LS in Rel-16 To:RAN2 Cc:SA2

R2-2202406 Miscellaneous corrections in TS 38.305 CATT CR Rel-16 38.305 16.7.0 0085 - F NR\_pos-Core

### 6.3.2 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).

R2-2202407 Corrections on the description of maxNrofSRS-PosResources-1-r16 CATT CR Rel-16 38.331 16.7.0 2890 - F NR\_pos-Core

R2-2202596 Correction on srs-PosResourceIdList in RRC Huawei, HiSilicon CR Rel-16 38.331 16.7.0 2897 - F NR\_pos-Core

### 6.3.3 LPP corrections

This agenda item may use a summary document (decision to be made based on submitted tdocs).

R2-2202224 Addition of missing need code for the BDS TGD2 parameter Lenovo, Motorola Mobility CR Rel-16 37.355 16.7.0 0326 - F TEI16

R2-2203275 Correction of reference TRP for DL-AoD and Multi-RTT measurement report Qualcomm Incorporated CR Rel-16 37.355 16.7.0 0330 - F NR\_pos-Core

R2-2203277 Correction to NR-DL-PRS-ResourcesCapability field description Qualcomm Incorporated CR Rel-16 37.355 16.7.0 0331 - F NR\_pos-Core

R2-2203367 Introducing new high accuracy GAD shape with scalable uncertainty Ericsson, T-Mobile USA CR Rel-16 37.355 16.7.0 0333 - B TEI16

R2-2203368 Clarification on LPP segmentation Ericsson CR Rel-16 37.355 16.7.0 0334 - F NR\_pos-Core

### 6.3.4 MAC corrections

## 6.4 SON/MDT support for NR

(NR\_SON\_MDT-Core; leading WG: RAN3; REL-16; started: Jun 19; Completed June 20; WID: RP-191776).

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

Tdoc Limitation: See tdoc limitation for Agenda Item 6

### 6.4.1 General and stage-2 corrections

Including incoming LSs, TS 37.320 corrections

R2-2202223 Corrections to SON/MDT capabilities Lenovo, Motorola Mobility CR Rel-16 38.306 16.7.0 0675 - F NR\_SON\_MDT-Core

Moved from 6.1.4.3

### 6.4.2 TS 38.314 corrections

R2-2202707 Correction to R16 38.314 on PRB Usage for MIMO CMCC CR Rel-16 38.314 16.4.0 0021 - F NR\_SON\_MDT-Core

### 6.4.3 RRC corrections

R2-2202502 Addition of missing information into RA-InformationCommon-r16 Apple, Ericsson CR Rel-16 38.331 16.7.0 2892 - F NR\_SON\_MDT-Core

R2-2202737 Correction on LTE UE RLF Report China Telecom, CATT, Ericsson discussion

R2-2202783 Corrections on LTE UE RLF Report China Telecom, CATT, Ericsson CR Rel-16 38.331 16.7.0 2906 - F NR\_SON\_MDT-Core

R2-2203330 On DAPS handover failure handling Ericsson CR Rel-16 38.331 16.7.0 2943 - F NR\_SON\_MDT-Core

R2-2203332 On including SSB and CSI-RS measurements in RLF report Ericsson CR Rel-16 38.331 16.7.0 2944 - F NR\_SON\_MDT-Core

R2-2203333 On ObtainCommonLocation related configuration Ericsson CR Rel-16 38.331 16.7.0 2945 - F NR\_SON\_MDT-Core

R2-2203334 On sensor information configuration Ericsson CR Rel-16 38.331 16.7.0 2946 - F NR\_SON\_MDT-Core

# 7 Rel-16 EUTRA Work Items

Only essential corrections. No documents should be submitted to 7. Please submit to 7.x

## 7.1 EUTRA Rel-16 General

No documents should be submitted to 7.1. Please submit to.7.1.x

Purely editorial corrections should be avoided, text enhancements may be deprioritized. Corrections should be taken up with the specification editor before submitting to avoid CR duplication. If this is not done, the contribution may not be treated.

### 7.1.1 Cross WI RRC corrections

Including RRC corrections that impact multiple WIs and require discussion in the common session.

### 7.1.2 Feature Lists and UE capabilities

Corrections to UE capabilities should be taken up with the 36.331 and 36.306 specification editors before submitting to avoid CR duplication. If this is not done, the contribution may not be treated.

## 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 documents in 7.2 and 7.3 may be treated jointly.

## 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 documents in 7.2 and 7.3 may be treated jointly.

R2-2202633 Discussion on the issue for random access on multicarrier for NB-IoT CMCC discussion Rel-16 NB\_IOTenh3-Core

R2-2202634 Solution for random access issue on multiCarrier in NB-IoT CMCC draftCR Rel-16 36.331 16.7.0 F NB\_IOTenh3-Core

R2-2202635 Solution for random access issue on multiCarrier in NB-IoT CMCC draftCR Rel-16 36.321 16.6.0 F NB\_IOTenh3-Core

## 7.4 LTE Other WIs

(LTE\_feMob-Core; leading WG: RAN2; REL-16; started: Jun 18; Completed: June 20; WID: RP-190921)

(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)

Including TEI16 corrections and issues that do not fit under any other topic.

Purely editorial corrections should be avoided, text enhancements may be deprioritized. Corrections should be taken up with the specification editor before submitting to avoid CR duplication. If this is not done, the contribution may not be treated.

For LTE mobility enhancements, only corrections that are LTE-specific should be submitted to this AI. Corrections that impact or are common with NR mobility enhancements should be submitted to 6.1.X instead.

R2-2202122 Reply LS on Bearer pre-emption rate limit issue for GBR bearer establishment in MC systems (R3-216196; contact: Nokia) RAN3 LS in Rel-16 To:SA6 Cc:RAN, RAN2

R2-2202929 Minor changes collected by Rapporteur Samsung CR Rel-16 36.331 16.7.0 4766 - F NB\_IOTenh3-Core

## 7.5 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

## 8.0 General

Please input to 8.0.x. These AIs includes General Aspects regarding Rel 17, both NR and LTE, organizational and planning, common aspects regarding UE caps, RRC parameters, running CRs, need for organized inter-WI coord etc. A main purpose of this AI is to provide opportunity for rapporteurs and other highly interested to illuminate important aspects for the finalization phases of Rel-17. Input to this AI is optional. Note that the multi-WI topic of RACH indication and partitioning is handled under a separate AI.

### 8.0.1 RRC

Including discussions on plan for ASN.1 review. Note that Rel-17 Cat B RRC CRs (maybe with some exception) are expected to be WI-specific.

ASN.1 Review

Online first, offline to settle the details

* [AT117-e][037][R17] ASN.1 review (Ericsson, Samsung)

 Scope: Start after on-line. Discuss the details, based on rapporteurs initiative, can e.g. discuss remaining aspects in R2-2203417 and R2-22002600.

 Intended outcome: Enhanced ASN.1 review process, Detailed plan.

 Deadline: EOM

R2-2203417 Rel-17 ASN.1 review plan Ericsson discussion Rel-17 TEI17

- Lenovo think the time plan is very though.

- MCC think that baseline RRC version can be available EoMarch (TS checking would then need to be done also during inactive period days).

- Chair indicate that it is not completely decided yet whether June TSG RAN is f2f or e-meeting (decision March 1). If f2f then it will be 1 week earlier than last time plan endorsed at TSG RAN, and also the R2 118 would be moved 1 week earlier.

- Huawei has some concerns with the tight time plan if R2 118 is moved 1 week earlier, maybe no ASN.1 ad-hoc.

- A number of companies prefer Rel-16 approach, as it is easier to organize the work acc to WIs.

- Xiaomi wonder if there will be assigned work focus. Ericsson think it can be done, but usually companies check everything anyway, so not sure.

- Huawei would prefer to include UE caps in the ASN.1 review. Think UE caps are complex.

- Intel think that UE cap Mega CRs will be submitted to TSG RAN and included in the specifications, so nothing special is needed to include UE caps in the ASN.1 reivew.

* We use the Rel-16 approach, i.e. comments and bookkeeping with the global ASN.1 review file, WI specific solutions can be in separate CRs, WI specific issues can be treated in parallel sessions.

R2-2202600 Considerations on the organization of R17 ASN.1 review Huawei, HiSilicon discussion Rel-17

DISCUSSION

P1

- Ericsson think it is difficult to prioritize ASN.1 only as it is all somewhat entangled.

- ESC think that ETSI forge may be used for file handling check-in check-out etc.

P6

- Ericsson think FTP is just very simple and used by everyone.

General

- Chair think proposal details can be discussed offline [037]

* For ASN.1 review, can prioritize issues with protocol impact.

L1 Parameters (all WIs / AIs)

R2-2202111 LS on updated Rel-17 NR higher-layers parameter list (R1-2200700; contact: Ericsson) RAN1 LS in Rel-17 To:RAN2, RAN3 Cc:RAN4

Chair: To be taken into account for all the relevant WIs / AIs. To be reflected in WI-specific CRs

### 8.0.2 UE capabilities

Feature lists from other groups and UE cap Mega CRs will be treated under this AI, except for NR\_ext\_to\_71GHz-Core and NR\_pos\_enh-Core for which all UE caps are treated under WI specific AI. Specific issues may be reallocated to WI-specific AIs.

Briefly online to confirm plan, then offline, can CB online W2 for specific issues.

* [AT117-e][038][NR17] UE caps Main (Intel)

 Scope: Treat R2-2202662, R2-2202113, R2-2202154, R2-2202657, R2-2202658, Progress UE capabilities based on R1 and R4 feature lists, following the plan in R2-2202662, if needed determine questions for LS out. Record found Open Issues. This discussion is expected to continue as a post discussion after R2 117-e, merging UE capabilities from endorsed WI specific CRs (or draft CRs).

 Intended outcome: Report, R17 NR UE Cap Mega CRs 38306 38331,

 Deadline: Intermediate deadlines by Rapporteur, check point at EOM to see if partial endorsement is possible (to limit/focus the scope for the post discussion).

R2-2202662 Rel-17 UE capability handling Intel Corporation discussion Rel-17 NR\_MBS-Core, NR\_IAB\_enh-Core, NR\_IIOT\_URLLC\_enh-Core, NR\_UE\_pow\_sav\_enh-Core, NR\_NTN\_solutions-Core, NR\_pos\_enh-Core, NR\_redcap-Core, NR\_SL\_enh-Core, NR\_feMIMO-Core, NR\_cov\_enh-Core, NR\_DL1024QAM\_FR1

DISCUSSION

- ZTE point out that parameter names are different between R1 and R2, and rapporteurs need to keep track of this

- Huawei wonder if we need to finish RAN2 features, if there are FFSes, what do we do. Chair think for R2 FFS we should not implement if the FFS if structure is impacted. Ericsson think we don’t have many such FFSes

- Vivo wonder if we need the LS

- Ericsson think we may inform something about naming mapping eg to FGs. Intel think this mapping is by the feature list for UE caps.

- CATT think the schedule now says that CRs cannot be worked on in Post discussions

- QC think that the P5 also applies to TEI, and wonder about the identification of features. Chair think it may be possible to use the TEI CR identifier

* All proposals are agreed

R2-2202663 Draft Reply LS to Rel-17 RAN1 and RAN4 feature list Intel Corporation LS out Rel-17 NR\_MBS-Core, NR\_IAB\_enh-Core, NR\_IIOT\_URLLC\_enh-Core, NR\_UE\_pow\_sav\_enh-Core, NR\_NTN\_solutions-Core, NR\_pos\_enh-Core, NR\_redcap-Core, NR\_SL\_enh-Core, NR\_feMIMO-Core, NR\_cov\_enh-Core, NR\_DL1024QAM\_FR1 To:RAN1. RAN4

DISCUSSION

- ZTE think that SDT is missing in the list of WIs

- Huawei: within brackets: remove no, replace and with or,

* With Comments above Approved in R2-2203730

R2-2202113 LS on updated Rel-17 RAN1 UE features list for NR (R1-2200781; contact: NTT DOCOMO) RAN1 LS in Rel-17 To:RAN2 Cc:RAN4

R2-2202154 LS on Rel-17 RAN4 UE feature list for NR (R4-2202401; contact: CMCC) RAN4 LS in Rel-17 To:RAN2 Cc:RAN1

R2-2202657 Release-17 UE capabilities based on R1 and R4 feature lists (TS38.306) Intel Corporation CR Rel-17 38.306 16.7.0 0685 - B NR\_MBS-Core, NR\_IAB\_enh-Core, NR\_IIOT\_URLLC\_enh-Core, NR\_UE\_pow\_sav\_enh-Core, NR\_NTN\_solutions-Core, NR\_pos\_enh-Core, NR\_redcap-Core, NR\_SL\_enh-Core, NR\_feMIMO-Core, NR\_cov\_enh-Core, NR\_DL1024QAM\_FR1

R2-2202658 Release-17 UE capabilities based on R1 and R4 feature lists (TS38.331) Intel Corporation CR Rel-17 38.331 16.7.0 2901 - B NR\_MBS-Core, NR\_IAB\_enh-Core, NR\_IIOT\_URLLC\_enh-Core, NR\_UE\_pow\_sav\_enh-Core, NR\_NTN\_solutions-Core, NR\_pos\_enh-Core, NR\_redcap-Core, NR\_SL\_enh-Core, NR\_feMIMO-Core, NR\_cov\_enh-Core, NR\_DL1024QAM\_FR1

### 8.0.3 Gaps Coordination

Tdoc limitation: 1

This AI is complementary to other AIs.

Treat offline, on-line CB Monday W2 if needed

* [AT117-e][039][NR17] Gaps Coordination (MediaTek)

 Scope: Take into account R2-2202985, R2-2203346, R2-2202864, R2-2202888, R2-2202943, R2-2202209, R2-2202321. Identify points for coordination that seems immediately agreeable. Determine whether LS out to RAN4 is needed, and if so, converge on an LS. Lower priority: can also attempt to identify Open Issues that may be helpful for further work in Q2.

 Intended outcome: Report, Approved LS out if applicable

 Deadline: Friday W1 (for immediately agreeable coord points, and LS out), EOM: remaining parts if any.

R2-2202985 Consideration on gaps coordination ZTE Corporation, Sanechips discussion Rel-17

R2-2203446 Gaps coordination Ericsson discussion Rel-17

R2-2202864 Discussion on gap coordination MediaTek Inc. discussion R2-2201238

R2-2202888 Discussion on gaps coordination Huawei, HiSilicon discussion Rel-17 NR\_MG\_enh-Core

R2-2202943 Discussion on gaps coordination Samsung Electronics Co., Ltd discussion Rel-17 NR\_MG\_enh-Core

R2-2202209 Consideration for Gaps Coordination OPPO discussion Rel-17

R2-2202321 Discussion on Gap coordination vivo discussion Rel-17 NR\_MG\_enh-Core, LTE\_NR\_MUSIM-Core, NR\_pos\_enh-Core

### 8.0.4 Other

Online first

E.g. cross WI coordination on MAC CEs.

R2-2203317 Cross WI coordination on MAC CEs and LCIDs Huawei, HiSilicon discussion Rel-17

* Noted

A related TEI-proposal

R2-2203285 LCID configuration for MAC CEs Nokia, Nokia Shanghai Bell discussion Rel-17 TEI17

* Noted

DISCUSSION

- Huawei think the issue is which MAC CEs shall use LCID vs eLCID

- Nokia think LCIDs can be configured, as they are normally not used at the same time

- vivo think there may be some issues for resolving if configuring LCIDs want to keep simple.

- Apple ok with HW paper, Nok proposal not needed.

- LGE think indeed there is an issue, and want to discus offline. Need to also consider LCP

- ZTE support HW paper, think we discussed similar to NOK proposal in R16 and was rejected. OPPO agrees.

- Ericsson ok with HW approach, think it is too late for Nok. Think we are already following HW proposal. Intel agrees.

- Nokia think the difference to R16 is that we are introducing more and more features.

- Samsung think each WI can do this and we can harmonize during impl phase.

- LGE think it is better to coordinate LCP priority now. Huawei agrees.

* Confirm that coverage limited cases shall use LCID, other cases use eLCID.
* Expect that LCP priority for MAC CEs may need to be corrected to achieve inter WI consistency, can do that later.

## 8.1 NR Multicast

(NR\_MBS-Core; leading WG: RAN2; REL-17; WID: RP-201038)

Time budget: 2 TU

Tdoc Limitation: 4 tdocs

### 8.1.1 General

#### 8.1.1.1 Organizational

Tdoc Limitation: 0

Planning etc

R2-2203316 Open issue list for NR MBS Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

#### 8.1.1.2 LS in

Tdoc Limitation: 0

LS in. For LSes that need action or has impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided.

[R2-2202114](file:///C%3A%5CUsers%5Cjohan%5COneDrive%5CDokument%5C3GPP%5Ctsg_ran%5CWG2_RL2%5CTSGR2_117-e%5CDocs%5CR2-2202114.zip) LS reply to MBS broadcast reception on SCell and non-serving cell (R1-2200798; contact: Huawei) RAN1 LS in Rel-17 To:RAN2

[R2-2202141](file:///C%3A%5CUsers%5Cjohan%5COneDrive%5CDokument%5C3GPP%5Ctsg_ran%5CWG2_RL2%5CTSGR2_117-e%5CDocs%5CR2-2202141.zip) LS on NR RRC to support split NR-RAN architecture for NR MBS (R3-221469; contact: Ericsson) RAN3 LS in Rel-17 To:RAN2

[R2-2202142](file:///C%3A%5CUsers%5Cjohan%5COneDrive%5CDokument%5C3GPP%5Ctsg_ran%5CWG2_RL2%5CTSGR2_117-e%5CDocs%5CR2-2202142.zip) Reply LS on paging for multicast session activation notification (R3-221470; contact: Samsung) RAN3 LS in Rel-17 To:RAN2 Cc:SA2

[R2-2202130](file:///C%3A%5CUsers%5Cjohan%5COneDrive%5CDokument%5C3GPP%5Ctsg_ran%5CWG2_RL2%5CTSGR2_117-e%5CDocs%5CR2-2202130.zip) LS on MBS Service Area Identity and start procedure for broadcast service (R3-221302; contact: CATT) RAN3 LS in Rel-17 To:SA2 Cc:SA6, RAN2

* [AT117-e][040][MBS] Reply LS on max no of MBS sessions that can be associated to a PDU session (Ericsson)

 Scope: Collection opinions and determine agreements in order to reply to Reply to LS in R2-2200141 (received at R2 116bis-e)

 Intended outcome: Agreeable LS out (and a Report if applicable).

 Deadline: W1 Thusday (for on-line CB W1 Friday)

#### 8.1.1.3 CRs and Rapporteur Resolutions

Tdoc Limitation: 0.

CR Rapporteurs to provide running CRs, potentially updated, Provide resolution proposals to Rapporteur Handled Open Issues, see R2-2202025.

* [AT117-e][041][MBS] CR and Rapporteur Resolutions (Huawei)

 Scope: For all CR Rapporteur resolutions, and the updated CRs, Collect comments, Address simple comments, to reach endorsable state. Aim to agree the CR Rapporteur resolutions and endorse the CRs (such that changes-on-changes redundant editors notes etc then can be removed). For MAC, the rapporteur proposes two options, a choice should be made. Rapporteur of this discussion is responsible for collecting comments into a document, and report on those. Each CR rapporteur is responsible for CR update, if update is needed.

 Intended outcome: Report. Agreement of Resolutions to Rapporteur issues. CRs, revised if needed, that are endorsable.

 Deadline: W1 Thursday (for on-line endorsement W1 Friday)

MAC

R2-2202245 Introduction of NR MBS in 38.321 OPPO CR Rel-17 38.321 16.7.0 1184 - B NR\_MBS-Core

R2-2202246 Resolution proposals to Rapporteur Handled Open Issues in MAC CR OPPO discussion Rel-17 NR\_MBS-Core

R2-2203149 Correction on MBS DRX due to PTP for PTM retransmission OPPO draftCR Rel-17 38.321 16.7.0: B NR\_MBS-Core

Idle Inactive

R2-2202271 38\_304\_Running\_CR\_for\_MBS\_in\_NR CATT CR Rel-17 38.304 16.7.0 0221 3 B NR\_MBS-Core R2-2201971

R2-2202385 Resolution to Rapporteur Handled Open Issues in 38.304 CR CATT discussion Rel-17 NR\_MBS-Core

RRC

R2-2203341 Introduction of NR MBS into TS 38.331 Huawei, HiSilicon CR Rel-17 38.331 16.7.0 2949 - B NR\_MBS-Core Late

R2-2203342 Rapporteur handled issues for RRC CR of NR MBS Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core Late

Stage 2

R2-2202727 38.300 Running CR for MBS in NR CMCC CR Rel-17 38.300 16.8.0 0409 - B NR\_MBS-Core

RLC

R2-2202277 38.322 Running CR for NR MBS vivo, Huawei, HiSilicon CR Rel-17 38.322 16.2.0 0045 - B NR\_MBS-Core

SDAP

R2-2202300 Introduction of NR MBS Samsung CR Rel-17 37.324 16.3.0 0022 - B NR\_MBS-Core

### 8.1.3 Open Issues

#### 8.1.3.1 Pre-discussions

Tdoc Limitation: 0.

Pre117-e discussions to gather company input on specific Open Issues.

Please see R2-2202025: 11 RRC related Open issues, 6 MAC related Open issues, 1 38304 Open Issue, 1 PDCP Open Issue, 1 38300 Open Issue, 2 UE caps Open Isseus, 4 Other Open Issues (exact organization into different discussions is TBD)

Companies to provide input into the following discussion:

[Pre117-e][001][MBS] CP open Issues Input (Huawei)

[Pre117-e][002][MBS] UP open Issues Input (Samsung)

[R2-2203343](file:///C%3A%5CUsers%5Cjohan%5COneDrive%5CDokument%5C3GPP%5Ctsg_ran%5CWG2_RL2%5CTSGR2_117-e%5CDocs%5CR2-2203343.zip) Report of: [Pre117-e][001][MBS] CP open Issues Input Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core Late

[R2-2203764](file:///C%3A%5CUsers%5Cjohan%5COneDrive%5CDokument%5C3GPP%5Ctsg_ran%5CWG2_RL2%5CTSGR2_117-e%5CDocs%5CR2-2203764.zip) Report of: [Pre117-e][001][MBS] CP open Issues Input Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core Late

**Proposal 14: The following optional UE capabilities are introduced:**

* **MBS broadcast reception on SCell**
* **MBS broadcast reception on non-serving cell (for UE in RRC Connected state)**

**Proposal 15: MBS broadcast reception on SCell and MBS broadcast reception on non-serving cell capabilities are signalled per UE.**

**Proposal 16: RAN2 to decide on the option to allow the UE to receive MBS broadcast on SCell:**

* **SIBx of Scell is provided in dedicated RRC signalling**
* **UE interested to receive a service on SCell needs to read SIBx from SCell directly (this is against RAN1 agreement, so an LS to RAN1 to reconfirm feasibility is needed)**

DISCUSSION

- LGE wonder if reassembly is disabled for MCCH. Huwei think yes, but think the values can be reconfigured. LGE think for MTCH segmentation is used. Huawei think that it is just for signalling optimization.

- QC think the up to RAN3 desc for P10 can be removed.

- CMCC think for P1 sn-length of 6 would be more reasonable. Huawei think 12 was the majority view. Intel agrees and think this is not configured but fixed. Huawei would be ok with 6 and think it works.

- P7: OPPO wonder about RRC inactive, and wonder about NAS impact. Huawei think we just do this in AS. Nokia agrees that it is difficult to involve NAS. Vivo also agree on P7 and P8

- P9: vivo think we need a FFS on the paging groups.

- P10: LGE think it si not clear whether MRB can be reconfigured at HO from UM to AM. This need to be confirmed from Stage-3 point of view

- p10 ZTE think this is contradicting R2 decisions/assumptions. Huawei think it can be supported and there was support by most companies. ZTE think DF is initiated by the src node, could be a lot of TS impact.

P4

- Nokia wonder that if we have DRX why do we need the window? Why do we need two ways of configuring. Huawei think that the easiest to just follow R1 agreement and configure a window. Nokia think R1 is assuming DRX configuration. MTK has the same view as Nokia.

- CMCC think that coupling DRX and Window is complex.

P14

- OPPO wonder if SCell is SCell on MCG or also SCG. Huawei assumes MCG and think SCG is out of scope of WI.

- MTK think that SCell reception may need to support rx of SIB in special way so this could be low priority. Think we can allow non-serving cell Bcast RX but no UE capability signalling needed, separate receiver.

- Nokia are interested in the Scell capability, and network would need to know. Regarding non-serving cell RX, maybe not critical to specify, but ok to support with low impact

P16

- QC think R1 already agreed to use dedicated signalling.

- QC think for P15, this should not be per UE, but instead e.g. per component carrier

- CATT support dedicated RRC signalling

- ZTE think direct SIB read is same as legacy and is reasonable. Dedicated RRC delivery may be complicated. Samsung think dedicated delivery may not work.

- MTK wonder what is the impact of UE unicast reception if we support Bcast on Scell. Nokia wonder why BCCH cannot be received on SCell if MCCH MTCH can be received. Huawei think this was simply a R1 agreement

* P1 (for broadcast): Confirm the following fixed configuration for MCCH:

• RLC: sn-FieldLength = 6

• RLC: t-Reassembly = ms0

* P2 (for broadcast): Confirm the following default configuration for MTCH:

• PDCP: t-Reordering = 0

• PDCP: pdcp-SN-SizeDL = 18

• PDCP: No RoHC default configuration

• RLC: sn-FieldLength = 12

• RLC: t-Reassembly = ms0

* P5: MBS Interest Indication is not exchanged during SCG change operation (no specifications impact).
* P6: There is no need for any modifications for MII framework needs to allow the UE to indicate the UE is interested in MBS broadcast on SCell (or non-serving cell).
* P7: UEs configured with Access Identity 1 / 2 / 11-15 should utilize mps-PriorityAccess / mcs-PriorityAccess / highPriorityAccess as a resume cause, respectively, when replying to group paging (i.e. the same as in the case of unicast RAN paging).
* P8: There is no need to specify any specific establishment cause handling due to Group Paging of RRC IDLE UEs configured with special Access Identities (AIs 1, 2, 11-15).
* P9: RAN2 confirms the following values for multiplicity and type constraints parameters for NR MBS:

• maxDCI-4-2-Size-r17 = 140

• maxFreqMBS-r17 = 5, FFS if higher value, e.g. 8 or 16 is needed

• maxNrofDRX-ConfigPTM-r17 = 64

• maxNrofMBS-ServiceListPerUE-r17 = 16

• maxNrofMBS-Session-r17 = 1024

• maxNrofMRB-Broadcast-r17 = 4, FFS if a higher value, e.g. 8, is needed

• maxNrofPageGroup-r17 = 32

• maxNrofPDSCH-ConfigPTM-1-r17 = 15

• maxG-RNTI-r17 = 16, FFS the final value should be different based on the related RAN1 discussion on UE capabilities

• maxG-CS-RNTI-r17 = 8, FFS the final value should be different based on the related RAN1 discussions on UE capabilities and G-CS-RNTI to MBS SPS mapping

• maxMRB-r17 = 16

• maxSAI-MBS-r17 = 64

• maxNeighCell-MBS-r17 = 8

* P10: It is assumed that Data forwarding and/or PDCP SR can be used during handover in case the UE is configured with PTP RLC AM entity in the target cell, regardless of whether PTP RLC AM entity was configured in the source cell.
* P11: No further optimizations are pursued for neither solution 1 nor 2 in Rel-17, i.e. it is up to network and/or UE implementation how to minimize/avoid data loss during handover to non-MBS supporting node with either solution 1 or 2, as agreed in the last meeting.
* P12: RoHC is mandatory for UEs supporting MBS broadcast:

• At least profiles 0x0000, 0x0001, 0x0002 are supported. FFS other profiles.

• FFS how many RoHC context sessions the UE has to mandatorily support. The number between 2 and 16 should be chosen.

- RoHC profile 0x0006 is not used / configurable for broadcast MRB.

* P4: (for broadcast) MTCH window (e.g. periodicity and offset) is configurable per G-RNTI. The PDCCH occasion to SSB mapping will be described in TS 38.331, as per RAN1/RAN2 agreements.
* Send LS to R1 asking about SIB reception for receiving Bcast on Scell, considering that MCCH also need to be received.
* CB W1 Friday on the LS out, [AT117-e][065][MBS] LS on SIB reception for receiving Bcast on Scell (Huawei)

[R2-2202685](file:///C%3A%5CUsers%5Cjohan%5COneDrive%5CDokument%5C3GPP%5Ctsg_ran%5CWG2_RL2%5CTSGR2_117-e%5CDocs%5CR2-2202685.zip) Report of [Pre117-e][002][MBS] UP open Issues Input Samsung discussion Rel-17 NR\_MBS-Core Late

#### 8.1.3.2 Invited Input

Invited company input on the following Open Issues Please see R2-2202025

- MAC: FFS to CSI and SRS reporting due to MBS DRX.

- Other: the questions in R3-221469 LS on NR RRC to support split NR-RAN architecture for NR MBS

UP

* [AT117-e][042][MBS] Invited tdocs open Issues UP (Samsung)

 Scope: Take into account submitted tdocs. Address the FFS on CSI and SRS reporting due to MBS DRX, and from the updated OIlist: Small correction on RX\_DELIV formula to avoid HFN<0. Determine agreeable part, pave the way for on-line agreement.

 Intended outcome: Report

 Deadline: W1 Thursday (for online CB W1 Friday).

R2-2202301 Discussion on CSI reporting and RX\_DELIV initialization Huawei, Qualcomm,HiSilicon discussion Rel-17 NR\_MBS-Core

R2-2202242 Discussion on open issues in MAC running CR OPPO discussion Rel-17 NR\_MBS-Core

R2-2202268 Consideration on UP Remaining Issues of MBS CATT, CBN discussion Rel-17 NR\_MBS-Core

R2-2202278 Open issue for CSI and SRS reporting due to MBS DRX NEC Europe Ltd discussion Rel-17 NR\_MBS-Core

R2-2202333 Discussion on CSI and SRS reporting for MBS MediaTek inc. discussion Rel-17 NR\_MBS-Core

R2-2202425 Discussion on CSI and SRS reporting due to MBS DRX Spreadtrum Communications discussion Rel-17

R2-2202554 MBS DRX mechanism Apple discussion Rel-17 NR\_MBS-Core

R2-2202624 Discussion on CSI and SRS reporting CMCC discussion Rel-17 NR\_MBS-Core

R2-2202642 CSI and SRS reporting due to MBS DRX Intel Corporation discussion Rel-17 NR\_MBS-Core

R2-2202683 CSI and SRS reporting in Multicast DRX Samsung discussion Rel-17 NR\_MBS-Core

R2-2202799 On CSI-report and SRS transmission at DRX with MBS and unicast Futurewei discussion Rel-17 NR\_MBS-Core

R2-2202830 Remaining issues on DRX Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

R2-2203121 CSI and SRS reporting in MBS DRX Xiaomi Communications discussion Rel-17 NR\_MBS-Core

R2-2203311 CSI and SRS reporting in MBS DRX ZTE, Sanechips discussion Rel-17 NR\_MBS-Core

CP

* [AT117-e][043][MBS] Invited tdocs open Issues CP (Nokia)

 Scope: Take into account submitted tdocs. Address the questions in R3-221469 LS on NR RRC to support split NR-RAN architecture for NR MBS. Determine agreeable part, pave the way for on-line agreement.

 Intended outcome: Report

 Deadline: W1 Thursday (for online CB W1 Friday).

R2-2203226 Common RRC Structure for MBS Multicast Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MBS-Core

R2-2202782 MRB ID Scope and Uniqueness Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MBS-Core

R2-2202267 Discussion on Questions for Split NR-RAN Architecture from RAN3 LS CATT discussion Rel-17 NR\_MBS-Core

R2-2202334 Discussion on MBS split NR-RAN architecture based on RAN3 LS MediaTek inc. discussion Rel-17 NR\_MBS-Core

R2-2202335 Draft LS on the support of MBS split NR-RAN architecture MediaTek inc. LS out Rel-17 NR\_MBS-Core To:RAN3

R2-2202368 Discussion on LS on NR RRC to support split NR-RAN architecture for NR MBS TD Tech, Chengdu TD Tech discussion Rel-17

R2-2202426 Discussion on Supporting split NR-RAN architecture for NR MBS Spreadtrum Communications discussion Rel-17

R2-2202625 Discussion on RRC to support split NR-RAN architecture for NR MBS CMCC discussion Rel-17 NR\_MBS-Core

R2-2202644 Support of split NR-RAN architecture for NR MBS Intel Corporation discussion Rel-17 NR\_MBS-Core

R2-2202684 Discussion on MBS RRC Configuration for Split RAN Samsung discussion Rel-17 NR\_MBS-Core

R2-2202978 Discussion on NR RRC to Support Split NR-RAN Architecture for NR MBS vivo discussion Rel-17 NR\_MBS-Core

R2-2203156 Discussion on open issues for NR MBS LG Electronics Inc. discussion Rel-17 NR\_MBS-Core

R2-2203312 NR RRC to support split NR-RAN architecture for NR MBS ZTE, Sanechips discussion Rel-17 NR\_MBS-Core

R2-2203345 Discussion on RRC support of split NR-RAN architecture for NR MBS Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core Late

R2-2202555 Support of MBS in MR-DC Apple discussion Rel-17 NR\_MBS-Core

### 8.1.4 UE capabilities

Features / UE caps developed in RAN2. Note that this AI is complementary to AI 8.0.2.

* [AT117-e][044][MBS] UE capabilities (MediaTek)

 Scope: Ph1 Collect comments on the initial CRs in R2-2202786, R2-2202787, as a basis for further updates. Treat R2-2202269, R2-2202671, R2-2203118, R2-2203120. Avoid overlap with the other issues discussions. Determine agreeable parts, discussion points etc.

 Intended outcome: Report

 Deadline: W1 Thursday, for online CB W1 Friday.

R2-2202786 Draft 306 CR for MBS UE capabilities MediaTek Inc. draftCR Rel-17 38.306 16.7.0 B NR\_MBS-Core

R2-2202787 Draft 331 CR for MBS UE capabilities MediaTek Inc. draftCR Rel-17 38.331 16.7.0 B NR\_MBS-Core

R2-2202269 Discussions on NR MBS UE Capabilities CATT, CBN discussion Rel-17 NR\_MBS-Core

R2-2202671 MBS UE capability for supporting Multicast MRBs Qualcomm India Pvt Ltd discussion Rel-17 NR\_MBS\_enh-Core R2-2200531

R2-2203118 Remaining issue of MBS UE capability Xiaomi Communications discussion Rel-17 NR\_MBS-Core

R2-2203120 Discussion on MBS support on MRDC Xiaomi Communications discussion Rel-17 NR\_MBS-Core R2-2201380

### 8.1.5 Other

Issues not covered elsewhere.

#### 8.1.5.1 Control Plane

R2-2203344 Remaining CP open issues Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core Late

R2-2202243 Discussion on beam sweeping transmission for MTCH OPPO discussion Rel-17 NR\_MBS-Core

R2-2202244 Open issues for broadcast reception over SCell or non-serving Cell OPPO discussion Rel-17 NR\_MBS-Core

R2-2202270 Discussion on Other Issues about MBS CATT discussion Rel-17 NR\_MBS-Core

R2-2202294 Remaining Open Issues for MBS CP Samsung discussion

R2-2202332 MBS Control Plane Issues Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MBS-Core

R2-2202336 Discussion on MBS broadcast reception on SCell and non-serving cell MediaTek Inc. discussion Rel-17 NR\_MBS-Core

R2-2202369 Analysis of MBS reception interruption time during UE mobility in LTE TD Tech, Chengdu TD Tech discussion Rel-17 Withdrawn

R2-2202370 Open issues on control plane for broadcast mode TD Tech, Chengdu TD Tech discussion Rel-17

R2-2202386 MBS reception interruption problem in LTE and SFN in NR MBS TD Tech, Chengdu TD Tech discussion Rel-17

R2-2202574 Discussion multicast service reception in Scell Lenovo, Motorola Mobility discussion Rel-17

R2-2202753 Lossless handover for PTM InterDigital, Inc. discussion Rel-17 NR\_MBS-Core

R2-2202754 Discussion on PTM activation/deactivation for MBS Interdigital Inc., OPPO, CMCC, ZTE, SJTU, NERCDTV, Lenovo, Motorola Mobility, Spreadtrum, TCL, Xiaomi, MediaTek, Qualcomm, Kyocera, Apple, Sharp, China Unicom, CBN, China Telecom discussion Rel-17 NR\_MBS-Core

R2-2202875 NR MBS UAC enhancement aspects Qualcomm Inc discussion Rel-17 NR\_MBS-Core R2-2200532

R2-2202909 Frequency of interest in MBS Interest Indication Kyocera discussion Rel-17

R2-2202979 Loss-lee Handover Procedure from MBS-supporting Node to Non-MBS Supporting Node vivo discussion Rel-17 NR\_MBS-Core

R2-2202980 Loss-less Handover Procedure between MBS-supporting nodes vivo discussion Rel-17 NR\_MBS-Core

R2-2203201 UE based PTM to PTP switch Sony discussion Rel-17 NR\_MBS-Core R2-2200905

R2-2203313 Discussion on MBS reception in DC and CA scenarios ZTE, Sanechips discussion Rel-17 NR\_MBS-Core

R2-2203314 UE initiated mode switch for Multicast ZTE, Sanechips, Kyocera, InterDigital, CMCC, OPPO, Apple discussion Rel-17 NR\_MBS-Core R2-2201411

R2-2203349 MCCH modification period Intel Corporation discussion Rel-17 NR\_MBS-Core

#### 8.1.5.2 User Plane

R2-2202241 Discussion on Header Compression for MBS OPPO discussion Rel-17 NR\_MBS-Core

R2-2202295 Remaining Open Issues for MBS UP Samsung discussion

R2-2202331 MBS User Plane Issues Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MBS-Core

R2-2202371 Open issues on user plane for NR MBS TD Tech, Chengdu TD Tech discussion Rel-17

R2-2202401 Discussion on MBS power saving issue Shanghai Jiao Tong University discussion

R2-2202755 PDCP status report triggering for MBS mode switching InterDigital, Inc. discussion Rel-17 NR\_MBS-Core

R2-2203119 Slow-moving PDCP reception window issue Xiaomi Communications discussion Rel-17 NR\_MBS-Core R2-2201383

## 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: 5 tdocs

No documents should be submitted to 8.2. Please submit to.8.2.x

Contributions should illustrate the Stage-3 details of the proposals (e.g. in an Annex containing TP against the running CRs). If a contribution does not provide TP, it may be deprioritized.

Contributions should focus on remaining open issues needed to close the WI from RAN2 perspective (e.g. as discussed in [201])

### 8.2.1 Organizational, Requirements and Scope

Including LSs, any rapporteur inputs and results of the (informative) running CR email discussions [210]-[215]

Including rapporteur input on remaining open issues needed to close the WI.

R2-2202129 Reply LS on inter-MN RRC resume without SN change (R3-221290; contact: Ericsson) RAN3 LS in Rel-17 To:RAN2

R2-2202170 LS on Measurement requirement for deactivated SCG (R4-2202781; contact: Ericsson) RAN4 LS in Rel-17 To:RAN2

R2-2202481 Draft 331 CR for DCCA UE capabilities Intel Corporation draftCR Rel-17 38.331 16.7.0 B LTE\_NR\_DC\_enh2-Core

R2-2202482 Draft 306 CR for DCCA UE capabilities Intel Corporation draftCR Rel-17 38.306 16.7.0 B LTE\_NR\_DC\_enh2-Core

R2-2202651 Introduction of SCG activation and deactivation ZTE Corporation, Sanechips CR Rel-17 37.340 16.8.0 0293 - B LTE\_NR\_DC\_enh2-Core

R2-2202794 Introduction of SCG activation and deactivation vivo CR Rel-17 38.321 16.7.0 1203 - B LTE\_NR\_DC\_enh2-Core Late

R2-2203094 Introduction of CPA and inter-SN CPC CATT CATT CR Rel-17 37.340 16.8.0 0297 - B LTE\_NR\_DC\_enh2-Core

R2-2203095 Introduction of CPA and inter-SN CPC CATT CATT CR Rel-17 38.331 16.7.0 2926 - B LTE\_NR\_DC\_enh2-Core

R2-2203096 Introduction of CPA and inter-SN CPC CATT CATT CR Rel-17 36.331 16.7.0 4770 - B LTE\_NR\_DC\_enh2-Core

R2-2203195 Introduction of eCADC vivo CR Rel-17 38.321 16.7.0 1210 - B LTE\_NR\_DC\_enh2-Core

R2-2203370 Introduction of efficient SCG activation/deactivation Huawei, HiSilicon draftCR Rel-17 36.331 16.7.0 LTE\_NR\_DC\_enh2-Core

R2-2203371 Introduction of efficient SCG activation/deactivation Huawei, HiSilicon draftCR Rel-17 38.331 16.7.0 LTE\_NR\_DC\_enh2-Core

R2-2203372 Introduction of further multi-RAT dual-connectivity enhancements Huawei, HiSilicon CR Rel-17 36.331 16.7.0 4774 - B LTE\_NR\_DC\_enh2-Core

R2-2203373 Introduction of further multi-RAT dual-connectivity enhancements Huawei, HiSilicon CR Rel-17 38.331 16.7.0 2954 - B LTE\_NR\_DC\_enh2-Core Late

R2-2203389 Discussion on the LS from RAN4 on measurement requirements Ericsson discussion LTE\_NR\_DC\_enh2-Core

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

No documents should be submitted to 8.2.2. Please submit to.8.2.2.x

#### 8.2.2.1 UE behaviour while SCG is deactivated

This agenda item may use a summary document (decision to be made based on submitted tdocs) focusing on essential open issues in UE behaviour while SCG is deactivated (as per open issue list).

Including discussion on UE behaviour while SCG is deactivated (e.g. TA timer and RLM/BFD, MCG power limitation and PDCCH blind decoding limitations)

[Pre117-e][220][DCCA] Summary of UE behaviour while SCG is deactivated (Huawei)

Scope: Provide summary of UE behaviour while SCG is deactivated according to open issue list.

Intended outcome: Discussion summary in R2-220xxxx.

Deadline: TBD

R2-2202248 How to model the PSCell in SCG deactivation? OPPO discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202250 SCG deactivation indication when resuming from RRC\_INACTIVE due to MO data OPPO discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202280 QoS flow remapping during SCG deactivation Fujitsu discussion Rel-17 LTE\_NR\_DC\_enh2-Core R2-2200308

R2-2202575 Discussion on UE behavior with SCG deactivated Lenovo, Motorola Mobility discussion Rel-17

R2-2202649 Discussion on UE behaviour when SCG is deactivated ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202679 Views on several issues Samsung Electronics discussion LTE\_NR\_DC\_enh2-Core

R2-2202680 DC power sharing for deactivated SCG Samsung Electronics discussion LTE\_NR\_DC\_enh2-Core R2-2200583

R2-2202705 UE behaviour while SCG is deactivated Qualcomm Incorporated discussion Rel-17

R2-2202756 UE behavior while the SCG is deactivated InterDigital, Inc. discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202767 Deactivation of SCG LG Electronics Finland discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202795 Discussion on UE behaviour while SCG is deactivated vivo discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202919 TA timer and RLM/BFD while the SCG is deactivated MediaTek Inc. discussion

R2-2203097 Discussions on UE Behavior in Deactivated SCG CATT discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2203176 Open Issues on UE Behavior NTT DOCOMO INC. discussion Rel-17

R2-2203184 UE behaviour while SCG is deactivated Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core Late

R2-2203374 [Pre117-e][220][DCCA] Summary of UE behaviour while SCG is deactivated (Huawei) Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core Late

R2-2203375 Open issues on UE behaviours while the SCG is deactivated Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2203390 UE behaviour while SCG is deactivated Ericsson discussion LTE\_NR\_DC\_enh2-Core

#### 8.2.2.2 Actions at SCG activation and deactivation

Including discussion on actions that occur at SCG activation or deactivation (e.g. UL split bearer handling, MAC actions, BWP used when SCG (de)activation is triggered)

R2-2202247 L2 based SCG activation and SCG RRM OPPO discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202281 Proposal for releasing statusReportRequired for SCG bearers at SCG deactivation Fujitsu discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202282 Remaining issues on UL data arrival for SCG Fujitsu discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202351 Futher discussion on actions at SCG activation or deactivation Transsion Holdings discussion Rel-17

R2-2202413 Discussion on activation and deactivation of SCG Spreadtrum Communications discussion Rel-17

R2-2202576 MAC related issues upon SCG activation and deactivation Lenovo, Motorola Mobility discussion Rel-17

R2-2202650 Activation of deactivated SCG ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202701 Actions at SCG activation and deactivation Qualcomm Incorporated discussion Rel-17

R2-2202757 Deactivation of SCG InterDigital, Inc. discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202758 Activation of SCG InterDigital, Inc. discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202796 Discussion on actions at SCG activation and deactivation vivo discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202809 Remaining issues on SCG deactivation NEC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2203039 Remaining issues for MAC procedure in deactivated SCG SHARP Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core R2-2201319

R2-2203061 split bearer handling upon SCG deactivation Sharp discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2203087 Open issues on SCG deactivation DENSO CORPORATION discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2203092 Discussion on partial MAC reset upon SCG deactivation LG Electronics Inc. discussion LTE\_NR\_DC\_enh2-Core

R2-2203098 Remaining Issues on Actions at SCG Activation and Deactivation CATT discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2203099 Discussion on RRC Aspects of SCG Deactivation CATT discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2203166 Discussion on data transmission to MN for split bearer LG Electronics Inc. discussion LTE\_NR\_DC\_enh2-Core

R2-2203177 Open Issues on SCG Activation and Deactivation NTT DOCOMO INC. discussion Rel-17

R2-2203185 UL data handling at SCG deactivation Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core Late

R2-2203186 Actions at SCG activation and deactivation Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core Late

R2-2203376 Handling of uplink split bearers and BWP when the SCG deactivated Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2203377 MAC CE based SCG activation Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2203378 Draft Reply LS on efficient activation de-activation mechanism for one SCG Huawei, HiSilicon LS out Rel-17 LTE\_NR\_DC\_enh2-Core To:RAN4

R2-2203391 Actions at SCG activation and deactivation Ericsson discussion LTE\_NR\_DC\_enh2-Core

R2-2203414 Remaining Issues related to SCG Activation LG Electronics discussion Rel-17 LTE\_NR\_DC\_enh2-Core

#### 8.2.2.3 Other aspects of SCG activation/deactivation

Including essential parts of SCG activation/deactivation that do not fit under other AIs. For any proposals provided in this AI, TPs are required to be provided to illustrate the necessity and impacts of the topic. Proposals that do not provide Stage-3 details will not be treated.

This agenda item may be deprioritized in this meeting .

R2-2202249 Fast MCG recovery via deactivated SCG OPPO discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202531 CR TP for 38.331 on MCG Failure Recovery in deactivated SCG Apple, Vivo, ZTE Corporation, LG Electronics, NTT DOCOMO, Inc. discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202532 CR TP for 36.331 on MCG Failure Recovery in deactivated SCG Apple, Vivo, ZTE Corporation, LG Electronics, NTT DOCOMO, Inc. discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202533 CR TP for 38.321 on MCG Failure Recovery in deactivated SCG Apple, Vivo, ZTE Corporation, NTT DOCOMO, Inc. discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202703 Other aspects of SCG activation and deactivation Qualcomm Incorporated discussion Rel-17

R2-2202780 Open issues on UE-requested SCG (de)activation CMCC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202800 Discussion on MCG failure recovery via deactivated SCG Futurewei discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202923 Further discussion on TCI State indication in RRC MediaTek Inc. discussion R2-2201295

R2-2203040 Remaining issues for RRM measurement in deactivated SCG SHARP Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2203062 Fast MCG link recovery via deactivated SCG Sharp discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2203085 Consideration on MCG link recovery with deactivated SCG CMCC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

### 8.2.3 Conditional PSCell change / addition

No documents should be submitted to 8.2.3. Please submit to.8.2.3.x

#### 8.2.3.1 CPAC procedures from network perspective

Including discussion on network aspects of CPAC (e.g. inter-node messages, coexistence of Rel-16 and Rel-17 procedures)

R2-2202304 Discussion on CPAC procedures from NW perspective vivo discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202468 Open issues on Rel-17 CPAC procedures from NW perspective Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202577 On support of CPAC replace Lenovo, Motorola Mobility discussion Rel-17

R2-2202702 CPAC procedures from network perspective Qualcomm Incorporated discussion Rel-17

R2-2202824 Remaining issues on CPAC from NW perspective ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202914 Discussion on the CG-CandidateList Google Inc. discussion LTE\_NR\_DC\_enh2-Core R2-2200361

R2-2202916 Support modification and cancellation of C-PSCells in the CG-CandidateList Google Inc. draftCR Rel-17 38.331 16.7.0 B LTE\_NR\_DC\_enh2-Core R2-2200362

R2-2203045 Discussion on support for coexistence of Rel-16 and Rel-17 CPC NTT DOCOMO INC. discussion

R2-2203100 Remaining issues on CPAC from NW perspective CATT discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2203170 Remaining issues for CPAC in network perspective Samsung R&D Institute UK discussion

R2-2203432 CPAC network procedures Ericsson discussion Rel-17 LTE\_NR\_DC\_enh2-Core

#### 8.2.3.2 CPAC procedures from UE perspective

Including discussion on relation with deactivated SCG (e.g. is CPC triggered even if the SCG is deactivated SCG, can the CPC command include deactivated SCG, maximum number of CPC configurations, unsynchronized update of MCG configuration at CPC execution, full configuration changes)

R2-2202305 Discussion on CPAC procedures from UE perspective vivo discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202469 Open issues on Rel-17 CPAC procedures from UE perspective Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202516 Text proposal to Uu siganling in CPAC Apple discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202578 Discussion on CPAC with deactivated SCG Lenovo, Motorola Mobility discussion Rel-17

R2-2202777 Discussion on CPAC related open issues LG Electronics discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202825 Remaining issues on CPAC from UE perspective ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202924 Discussion on UE behaviour upon CPC execution MediaTek Inc. discussion

R2-2203101 Remaining issues on CPAC from UE perspective CATT discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2203171 Remaining issues for CPAC in UE perspective Samsung R&D Institute UK discussion

R2-2203379 Remaining issues for CPAC Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2203433 UE procedures and signalling for CPAC Ericsson discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2203476 CPC and SCG deactivation Sharp discussion Rel-17 LTE\_NR\_DC\_enh2-Core

#### 8.2.3.3 Other CPAC aspects

Including essential parts of CPAC that do not fit under other AIs. For any proposals provided in this AI, TPs are required to be provided to illustrate the necessity and impacts of the topic. Proposals that do not provide Stage-3 details will not be treated.

This agenda item may be deprioritized in this meeting .

R2-2202579 Coexistence of CHO and CPAC Lenovo, Motorola Mobility discussion Rel-17

R2-2202759 Coexistence of CHO and CPC InterDigital, Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202760 SCG failure recovery with CPAC InterDigital, Inc. discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202826 Discussion on coexistence of CHO and CPAC ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_DC\_enh2-Core

### 8.2.4 Temporary RS for SCell activation

Including discussion on any essential aspects that were not yet covered by endorsed CRs

This agenda item may be deprioritized in this meeting.

R2-2202251 TP correction for TRS ID in 38321 OPPO discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202252 Introduction of TRS based SCell activation in 38.321 OPPO CR Rel-17 38.321 16.7.0 1185 - B LTE\_NR\_DC\_enh2-Core

R2-2202253 Introduction of TRS based SCell activation in 38.331 OPPO CR Rel-17 38.331 16.7.0 2882 - B LTE\_NR\_DC\_enh2-Core

R2-2202681 Leftover issues for TRS based SCell activation Samsung Electronics discussion LTE\_NR\_DC\_enh2-Core

R2-2202797 Discussion on Temporary RS activation for fast SCell activation vivo discussion Rel-17 LTE\_NR\_DC\_enh2-Core

### 8.2.5 UE capabilities

Including finalization of RAN2 feature list input on SCG deactivation, CPAC and efficient SCell activation needed to create UE capability CRs.

If changes are proposed against the baseline endorsed in previous meeting, the proposals should illustrate the differences to the baseline illustrated in R2-2109676.

R2-2202480 Discussion on remaining issues on DCCA UE capabilities Intel Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202483 CR TP for 38.331 on DCCA UE capabilities Intel Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202484 CR TP for 38.306 on DCCA UE capabilities Intel Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202485 CR TP for 36.331 on DCCA UE capabilities Intel Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2202486 CR TP for 36.306 on DCCA UE capabilities Intel Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2203380 UE capability for CPAC and SCG (de)activation Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2203392 UE capabilities for Rel-17 MR-DC enhancements Ericsson discussion LTE\_NR\_DC\_enh2-Core

## 8.3 Multi SIM

(LTE\_NR\_MUSIM-Core; leading WG: RAN2; REL-17; WID: RP-212610)

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

Contributions should illustrate the Stage-3 details of the proposals (e.g. in an Annex containing TP against the running CRs). If a contribution does not provide TP, it may be deprioritized.

Contributions should focus on remaining open issues needed to close the WI from RAN2 perspective (e.g. as discussed in [202])

### 8.3.1 Organizational, Requirements and Scope

Including LSs, any rapporteur inputs and results of the (informative) running CR email discussions [235]-[239]

R2-2202696 Introduction of MUSIM UE Capabilities Huawei, HiSilicon CR Rel-17 38.331 16.7.0 2875 1 B LTE\_NR\_MUSIM-Core R2-2202009

R2-2202697 Introduction of MUSIM UE Capabilities Huawei, HiSilicon CR Rel-17 38.306 16.7.0 0672 1 B LTE\_NR\_MUSIM-Core R2-2202010

R2-2202962 Capture RAN2 agreements on RRC for MUSIM vivo(Rapporteur) CR Rel-17 38.331 16.7.0 2919 - B LTE\_NR\_MUSIM-Core

R2-2202963 [Post116bis-e][202][MUSIM] Open issues for MUSIM (vivo) vivo discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2203013 Introduction of MUSIM for LTE Samsung Electronics Co., Ltd CR Rel-17 36.331 16.7.0 4769 - B LTE\_NR\_MUSIM-Core

R2-2203273 Introduction of Multi-USIM devices to 36.304 China Telecommunications CR Rel-17 36.304 16.6.0 0842 - B LTE\_NR\_MUSIM, LTE\_NR\_MUSIM-Core R2-2201697

R2-2203436 Running CR to 38300 for Multi-USIM devices support Ericsson CR Rel-17 38.300 16.8.0 0422 - B LTE\_NR\_MUSIM-Core

R2-2203437 Running CR to 36300 for Multi-USIM devices support Ericsson CR Rel-17 36.300 16.7.0 1355 - B LTE\_NR\_MUSIM-Core

### 8.3.2 Paging collision avoidance

This agenda item will be deprioritized in this meeting unless additional feedback from SA2/CT1 is received. Proposals that do not provide Stage-3 details will not be treated.

### 8.3.3 UE notification on network switching for multi-SIM

Including discussion on NW switching for multi-SIM with leaving from and staying in RRC\_CONNECTED

This agenda item may use a summary document (decision to be made based on submitted tdocs) considering stage-3 details of MUSIM (including UAI, gap configuration and NW switching with leaving RRC\_CONNECTED)

[Pre117-e][230][MUSIM] Summary Stage-3 details of MUSIM (vivo)

Scope: Provide summary of Stage-3 aspects of MUSIM configuration according to open issue list.

Intended outcome: Summary document in R2-220xxxx.

Deadline: TBD

R2-2202206 Remaining Key Issues for MUSIM Gap OPPO discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2202207 Remaining Key Issues for Leaving Connected Mode OPPO discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2202240 Finalizing NW switching with leaving from RRC\_CONNECTED Samsung Electronics Co., Ltd discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2202254 Discussion on UE requested MUSIM gap release Samsung Electronics Co., Ltd discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2202419 Remaining issues about UE indication on switching Spreadtrum Communications discussion Rel-17

R2-2202517 Open Issues in MUSIM Network Switching Apple discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2202518 Miscellaneous Issues in MUSIM Apple discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2202573 Remaining issues for switching notification and busy indication Lenovo, Motorola Mobility discussion Rel-17

R2-2202645 Open issues on Network switching and Gap release signalling Intel Corporation discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2202698 Remaining issues for NW switching without leaving RRC\_CONNECTED Huawei, HiSilicon discussion Rel-17

R2-2202699 Remaining issues for NW switching with leaving RRC\_CONNECTED Huawei, HiSilicon discussion Rel-17

R2-2202740 On remaining issues for MUSIM Gap configuration Nokia, Nokia Shanghai Bells discussion Rel-17

R2-2202741 On remaining issues for switching notification for leaving RRC connection Nokia, Nokia Shanghai Bells discussion Rel-17

R2-2202768 RRC Connection release request procedure for MUSIM and power saving Sharp discussion R2-2201216

R2-2202770 Stop using of MUSIM Gap requested to be released Sharp discussion

R2-2202833 Remaining issues of Network switching for MUSIM China Telecom discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2202844 Interaction between NAS and AS for network switching ASUSTeK discussion Rel-17 36.304 LTE\_NR\_MUSIM-Core

R2-2202845 Configured time for network switching ASUSTeK discussion Rel-17 38.331 LTE\_NR\_MUSIM-Core

R2-2202856 Remaining issues on MUSIM gap configuration LG Electronics discussion Rel-17 LTE\_NR\_MUSIM-Core Withdrawn

R2-2202880 Consideration on the Remaining Issues of the Scheduling Gap ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2202925 Remaining issue for NW switching with leaving RRC\_CONNECTED MediaTek Inc. discussion

R2-2202938 Remain issues for network switching with leaving RRC\_CONNECTED SHARP Corporation discussion R2-2201228

R2-2202964 Remaining issue on network switching vivo discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2203227 Remaining issues on MUSIM gap configuration LG Electronics France discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2203415 Remaining Issues on Switching with RRC Release LG Electronics discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2203416 Considerations on Busy Indication LG Electronics discussion Rel-17 LTE\_NR\_MUSIM-Core R2-2201577

R2-2203434 Remaining discussion on switchover procedures Ericsson discussion

R2-2203440 Corrections to the NR RRC CR for MUSIM (38.331) Ericsson draftCR Rel-17 38.331 16.7.0 F LTE\_NR\_MUSIM-Core

### 8.3.4 Paging with service indication

This agenda item will be deprioritized in this meeting unless additional feedback from SA2/CT1 is received. Proposals that do not provide Stage-3 details will not be treated.

R2-2202239 Clarification on UE behavior for NAS-based busy indication in RRC\_INACTIVE Samsung Electronics Co., Ltd discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2202965 Remaining issue on paging cause feature vivo discussion Rel-17 LTE\_NR\_MUSIM-Core

### 8.3.5 UE capabilities and other aspects

Including finalization of RAN2 feature list input on MUSIM and remaining details needed to create UE capability CRs.

Including discussion on essential aspects of MUSIM that need to be resolved during Rel-17 but are not covered by other agenda items.

If changes are proposed against the baseline endorsed in previous meeting, the proposals should illustrate the differences to the baseline illustrated in R2-2109625.

R2-2202646 MUSIM remaining issue on gap capability signalling Intel Corporation discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2202700 Remaining issues for MUSIM UE Capabilities Huawei, HiSilicon discussion Rel-17

R2-2202752 Discussion on MUSIM band conflict scenarios Nokia, Nokia Shanghai Bell discussion Rel-17

R2-2202885 Consideration on the MUSIM UE capability reporting ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2202893 Consideration on the band collision issue ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2202936 UE Capabilities for MUSIM Gap Pattern OPPO discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2202966 Remaining issue on UE capabilities vivo discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2203435 Remaining aspects on UE capabilities for Multi-USIM and other issues Ericsson discussion

## 8.4 NR IAB enhancements

(NR\_IAB\_enh-Core; leading WG: RAN2; REL-17; WID: RP-211548)

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

RP 92e: DAPS-like solutions to be deprioritized.

RP 93e: Enhancements to improve topology-wide fairness and multi-hop latency to be deprioritized. RAN2-led efforts on enhancements to LCG-range extension, RLF indications and local rerouting to continue.

### 8.4.1 General

* [AT117-e][003][eIAB] Open Issues (Qualcomm)

 Scope: Based on R2-2202329, progress remaining proposals. Determine agreeable parts, points for discussion if needed, open issues if needed. Aim for offline agreement, if not possible then pave the way for efficient on-line.

 Intended outcome: Report

 Deadline: In time for on-line CB W2 Wednesday

* [AT117-e][021][eIAB] BAP (Huawei)

 Scope: Based on R2-2203527, progress remaining proposals. Treat also R2-2202373. Determine agreeable parts, points for discussion if needed, open issues if needed. Aim for offline agreement, if not possible then pave the way for efficient on-line. This discussion will continue as post meeting discussion for BAP CR, and updated BAP CR (taking into acc this meetings agreements) can also be reviewed as part of this discussion.

 Intended outcome: Report (assume that CR revision is not needed for CB).

 Deadline: In time for on-line CB W2 Wednesday

* [AT117-e][014][eIAB] MAC (Samsung)

 Scope: Wait for RAN1 LS, kick off discussion when received. Based RAN1 LS and R2-2203278, progress remaining proposals (on MAC CEs). Determine agreeable parts, points for discussion if needed, open issues if needed. Aim for offline agreement, if not possible then pave the way for efficient on-line. This discussion will continue as post meeting discussion for MAC CR, and updated MAC CR (taking into acc this meetings agreements) can also be reviewed as part of this discussion.

 Intended outcome: Report (assume that CR revision is not needed for CB).

 Deadline: In time for on-line CB W2 Wednesday

* [AT117-e][022][eIAB] UE capabilities (Intel)

 Scope: Treat R2-2203702. Determine agreeable parts, points for discussion if needed, open issues if needed. Aim for offline agreement, if not possible then pave the way for efficient on-line. Review Updated draft CRs for UE capabilities (pl provide), including agreements from prev. meeting, and all agreeable points from this meeting (e.g. this discussion and the open issues discussion).

 Intended outcome: Report, Draft CRs (38306, 38331) endorsed.

 Deadline: In time for on-line CB W2 Wednesday (Report) if CB is needed or W2 Thursday (CRs) if needed

#### 8.4.1.1 Organizational

Tdoc Limitation: 0

Planning etc

R2-2202327 Updated Rel-17 IAB Workplan Qualcomm Incorporated, Samsung (WI rapporteurs) Work Plan Rel-17 NR\_IAB\_enh R2-2200194

- QC indicate that there is a LS from R1 on MAC CEs expected early next week.

* Noted

#### 8.4.1.2 LS in

Tdoc Limitation: 0

LS in. For LSes that need action or has impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided.

R2-2202172 LS on range of power control parameters for eIAB (R4-2203020; contact: Samsung) RAN4 LS in Rel-17 To:RAN1 Cc:RAN2

* Noted

#### 8.4.1.3 CRs and Rapporteur Resolutions

Tdoc Limitation: 0.

CR Rapporteurs to provide running CRs, potentially updated, and provide resolution proposals to Rapporteur Handled Open Issues, See also R2-2202050

[Stage-2 OIs: Update with latest agreements, and address of ALL editor’s Notes]

[BAP OIs: Aspects BAP#5, BAP#6, BAP#7, BAP#9].

R2-2202328 Running CR to TS 38.300 for eIAB Qualcomm Incorporated discussion Rel-17 NR\_IAB\_enh R2-2111450

R2-2202372 Running CR of TS 38.340 for eIAB Huawei, HiSilicon CR Rel-17 38.340 16.5.0 0020 - B NR\_IAB\_enh-Core

R2-2202373 Resolution proposals to Rapporteur Handled Open Issues BAP#5,6,7,9 Huawei, HiSilicon discussion Rel-17 NR\_IAB\_enh-Core

R2-2203276 Running CR to 38.321 on Integrated Access and Backhaul for NR Rel-17 Samsung Electronics GmbH CR Rel-17 38.321 16.7.0 1171 4 B NR\_IAB\_enh-Core R2-2201984

R2-2203471 Enhancements to Integrated Access and Backhaul for NR Ericsson CR Rel-17 38.331 16.7.0 2811 4 B NR\_IAB\_enh-Core R2-2201993

R2-2202967 Capture RAN2 agreements on CP-UP separation support in NR eIAB vivo(Rapporteur) CR Rel-17 37.340 16.8.0 0296 - B NR\_IAB-Core

### 8.4.3 Open Issues

#### 8.4.3.1 Pre-discussions

Tdoc Limitation: 0.

Pre117-e discussions to gather company input on specific Open Issues, see R2-2202050:

- MAC CE for beam indication signaling (as proposed by RAN1)

- Remaining Issues on RLF indication not related to BAP#6, BAP#7 BAP#9 (focus Stage 3). Including input on BAP#8

- RAN3’s working assumption on Solution 1 for latency reduction of intra-donor topology adaptation. Identification of potential obstacles and how to overcome them.

- UE capabilities for the IAB-MT’s inter-CU HO and NR DC

- RRC: Remaining aspects of CP-UP separation (focus Stage 3).

Companies to provide input into the following discussion:

[Pre117-e][003][eIAB] eIAB Open Issues Input (Qualcomm)

[Pre117-e][014][eIAB] eIAB MAC Open Issues Input (Samsung)

R2-2202329 [Pre117-e][003][eIAB] eIAB Open Issues Input Qualcomm Incorporated (Rapporteur) discussion Rel-17 NR\_IAB\_enh

DISCUSSION

- Ericsson think we don’t need to allow propagation at all

- LG think the proposal (below) allows dual connected nodes to send typ2 indication to trigger child node re-routing unnecessarily.

* Type-2/3 indication MAY be propagated, if the situation in the node doing the propagation is such that all BAP links are affected by the condition (e.g. single connected) (additional decision if to propagate or not can be left for implementation).
* Type-2/3 indication is not propagated if the situation in the node doing the propagation is such that some BAP links are un-affected by the condition (e.g. dual connected).
* For the 2 above agreements, no stage-3 impact is foreseen.
* For Type-2/3 indication in any case there is no routing information included.
* The Rel-16 term “BH RLF indication” is used for type-4 indication in Rel-17.

R2-2203278 Summary of discussion [Pre117-e][014][eIAB] eIAB MAC Open Issues Input (Samsung) Samsung Electronics GmbH report Late

DISCUSSION

- Samsung explain that the CR already implements 9, 10, 11

P8

- LG think O1 has an issue. Bitmap isn’t truncated, and bitmap is now extended. Think the O1 doesn’t work. O3 has functional issues. O2 is the only clear and workable option. ZTE prefer O2, don’t want to have new format for padding BSR. Nokia doesn’t have strong opinion but think O2 is simpler and there is no need to optimize padding BSR. Apple prefer O2 but could tolerate also O3. Intel prefer O2.

- Ericsson think O2 involves loss of info. O3 is more flexible and can use the remaining space better. Samsung agrees with Ericsson. Huawei think Q3 refers to legacy format, no strong opinion. Vivo agrees O3 is better as less info is lost. LG think O3 is a new format.

- Chair asks if we can go with O2.

* Align terminology with RAN1: use Toffset,2 as the designation for the content of the Case-7 timing offset MAC CE (instead of the currently used Tdelta\_Case7).
* Rename this MAC CE to “Case-7 timing advance offset MAC CE” and have it in a separate clause 6.1.3.y, thereby reverting the clause 6.1.3.21 to its original content.
* Keep the description of both MAC CEs (Timing Delta MAC CE, and the Case-7 timing offset MAC CE) in the same clause (5.18.18).
* (O2) For the case of Padding BSR when logicalChannelGroup-IABExt-r17 is configured, Report Extended Short Truncated BSR in lieu of Extended Long Truncated BSR, if the number of padding bits cannot include the fixed size of 256 LCGi plus subheader of the Extended Long Truncated BSR;

#### 8.4.3.2 Invited Input

Company input on the following Open Issues, See R2-2202050:

- BAP re-writing mapping configurations for UL inter-donor-DU re-routing, including include option a to d (identified in [Post116bis-e][079]).

- Aspects BAP#1, BAP#4, BAP#2, BAP#3 (identified in [Post116bis-e][078]).

R2-2203527 Report of [Pre117-e][021][eIAB] AI summary of 8.4.3.2 Invited Input Huawei, HiSilicon

DISCUSSION

P1

- Chair wonder if wildcard is part of a, i.e. to wildcard path IDs for ingress? Huawei think maybe, QC think no.

- Nokia think BAP address should be supported.

- ZTE think c is acceptable, a works, b is not good as all packets would be delivered for a single path potentially causing congestion.

- LG think a is based on re-routing configuration, c is based on the normal routing table. B only has one entry, it should be possible to have different routes based on QoS for example. Vivo agrees, and think a is better. Samsung think this is not the case, QoS is not relevant.

- Ericsson think a is more general as it handles all cases, but think also c is a possible way. b is workable. Intel agrees that a is more general and can be used for both inter and intra scenarios, and think also c can be a backup.

- Lenovo think a can be the baseline, but c can be allowed as a backup.

- Huawei think a is the way to go

- QC think a has the issue that we need specific indicator separating intra and inter top cases. Ericsson think also C could work.

P2

- QC think this proposal is not needed for C

P4

- Samsung wonder if this is really majority view. Has concerns.

* We go with Option c (if we find that some config is needed we include also Option b), where Option c = Rewriting mapping for inter-donor-DU re-routing is based on the BAP routing IDs included in the routing entries configured for each parent, and Option b = Rewriting mapping for inter-donor-DU re-routing is based on a default egress BAP routing ID(s) configured for each parent link.

R2-2202255 BAP re-writing mapping confirguration NEC discussion Rel-17 NR\_IAB\_enh-Core

R2-2202330 Remaining BAP issues for eIAB Qualcomm Incorporated discussion Rel-17 NR\_IAB\_enh

R2-2202346 Discussion on the BAP open issues Fujitsu discussion Rel-17 NR\_IAB\_enh-Core

R2-2202374 BAP open issues on option a to d and issues BAP#1, #3 and #4 Huawei, HiSilicon discussion Rel-17 NR\_IAB\_enh-Core

R2-2202382 Further considerations on local re-routing ZTE, Sanechips discussion Rel-17

R2-2202383 Discussion on re-routing and header rewriting configuration ZTE, Sanechips discussion Rel-17

R2-2202583 Discussion on remaining issues for BAP routing Lenovo, Motorola Mobility discussion Rel-17

R2-2202643 Discussion on remaining BAP open issues Intel Corporation discussion Rel-17 NR\_IAB\_enh-Core

R2-2202761 Remaining issues regarding BH RLF indications InterDigital, Inc. discussion Rel-17 NR\_IAB\_enh-Core

R2-2202908 BAP open issues on BAP#01, BAP#03 and BAP#04 Kyocera discussion Rel-17

R2-2202968 Remaining Issues of Inter-donor DU Rerouting vivo discussion Rel-17 NR\_IAB-Core

R2-2202969 Remaining Issues of Inter-Topology Routing and Rerouting vivo discussion Rel-17 NR\_IAB-Core

R2-2203053 Discussion on BAP re-writing mapping configurations for UL inter-donor-DU re-routing LG Electronics Inc. discussion Rel-17 NR\_IAB\_enh-Core

R2-2203054 Discussion on identified BAP open issues (BAP#1, BAP#2, BAP#3, BAP#4) LG Electronics Inc. discussion Rel-17 NR\_IAB\_enh-Core

R2-2203105 BAP open issues Samsung Electronics GmbH discussion

R2-2203402 BAP header rewriting and inter-donor-DU re-routing Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IAB\_enh-Core

R2-2203403 Simplified text proposal for BAP routing and header rewriting Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IAB\_enh-Core

R2-2203469 BAP open issues Ericsson discussion NR\_IAB\_enh-Core

R2-2203507 Header Rewriting for Inter-to-intra topology re-routing Futurewei Technologies discussion

### 8.4.4 UE capabilities

Features / UE caps developed in RAN2. Note that this AI is complementary to AI 8.0.2. Input to this subclause shall not overlap with any input to any of previous subclasues.

R2-2203702 AI summary of AI 8.4.4 UE capabilities (Intel) Intel

R2-2202376 UE capability issues for eIAB Huawei, HiSilicon discussion Rel-17 NR\_IAB\_enh-Core

R2-2202384 Discussion on R17 IAB-MT capabilities ZTE, Sanechips discussion Rel-17

R2-2202970 Remaining UE capability for IAB-MT vivo discussion Rel-17 NR\_IAB-Core

R2-2203113 eIAB UE capabilities - open issues Samsung Electronics GmbH discussion

R2-2203212 Discussion on UE capability for local rerouting Intel Corporation discussion Rel-17 NR\_IAB\_enh-Core

R2-2203467 On eIAB capabilities Ericsson discussion NR\_IAB\_enh-Core

### 8.4.5 Other

Issues not covered elsewhere.

R2-2202375 TP for the Extended BSR Huawei, HiSilicon discussion Rel-17 NR\_IAB\_enh-Core

R2-2202762 CHO in IAB InterDigital, Inc. discussion Rel-17 NR\_IAB\_enh-Core

R2-2202907 Miscellaneous issues in BAP running CR Kyocera discussion Rel-17

R2-2203213 Discussion on RAN2 impact of Solution 1 for Intra-donor CU service interruption reduction Intel Corporation discussion Rel-17 NR\_IAB\_enh-Core

R2-2203265 Resolving open issues on BH RLF indications LG Electronics France discussion Rel-17

R2-2203400 Remaining details on RLF indications and re-routing aspects upon RLF Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IAB\_enh-Core R2-2201051

R2-2203466 RAN2 impact of miscellaneous features driven by RAN3 and RAN1 Ericsson discussion NR\_IAB\_enh-Core

## 8.5 NR IIoT URLLC

(NR\_IIOT\_URLLC\_enh-Core; leading WG: RAN2; REL-17; WID: RP-210854)

Time budget: 1 TU

Tdoc Limitation: 2 tdocs

### 8.5.1 Organizational

Including open issues for control plane and user plane [POST116bis-e][512][IIoT] UP open issues (Samsung) and [POST116bis-e][513][IIoT] CP open issues (Ericsson)

NOTE: NO contributions on these critical open issues are expected

R2-2202325 Introduction of enhanced IIoT&URLLC support for NR Ericsson CR Rel-17 38.331 16.7.0 2887 - B NR\_IIOT\_URLLC\_enh

R2-2202464 Draft 38.306 CR for Rel-17 NR IIoT URLLC UE capabilities Intel Corporation draftCR Rel-17 38.306 16.7.0 B NR\_IIOT\_URLLC\_enh-Core

R2-2202465 Draft 38.331 CR for Rel-17 NR IIoT URLLC UE capabilities Intel Corporation draftCR Rel-17 38.331 16.7.0 B NR\_IIOT\_URLLC\_enh-Core

R2-2202522 RAN1 feature impact on intra-UE prioritization in MAC Apple discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

R2-2202682 Introduction of enhanced IIoT&URLLC support for NR Samsung CR Rel-17 38.321 16.7.0 1200 - B NR\_IIOT\_URLLC\_enh-Core

R2-2202686 Report of [POST116bis-e][512][IIoT] UP open issue Samsung discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core Late

R2-2203196 Introduction of Rel-17 IIoT/URLLC to TS 38.300 Nokia, Nokia Shanghai Bell CR Rel-17 38.300 16.8.0 0416 - B NR\_IIOT\_URLLC\_enh

R2-2203291 Propagation Delay Compensation for TSN Qualcomm Incorporated discussion Rel-17 Withdrawn

R2-2203302 Summary of [POST116bis-e][513][IIoT] CP open issues (Ericsson) Ericsson discussion NR\_IIOT\_URLLC\_enh Late

### 8.5.2 Enhancements for support of time synchronization

RAN1 progress if any should be taken into account.

Contributions should only be focused on important issues not included in open issues email discussion.

R2-2202182 RE: LS on Time Synchronization IEEE 1588 WG LS in To:RAN, SA Cc:RAN2

R2-2202437 Remaining issues on time synchronization enhancement OPPO discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

R2-2202580 Left issues for time synchronization Lenovo, Motorola Mobility discussion Rel-17

R2-2202708 Discussion on remaining issues for accurate time synchronization Huawei, HiSilicon discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

R2-2202728 Remaining Issues on PDC Enhancement CMCC discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

R2-2202750 Remaining issues of time synchronization ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

R2-2202784 Simplifying the PRS procedure forRemaining Issues of RTT-based PDC CATT discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

R2-2202894 Remaining issues for PDC vivo discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

R2-2203197 Propagation Delay Compensation signalling Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IIOT\_URLLC\_enh

R2-2203303 MAC CE update for SRS Spatial Relation Indication Ericsson discussion NR\_IIOT\_URLLC\_enh

R2-2203461 Propagation Delay Compensation for TSN Qualcomm Incorporated discussion Rel-17

### 8.5.3 Uplink enhancements for URLLC in unlicensed controlled environments

Contributions should only be focused on important issues not included in open issues email discussion. Proposals related to DRX HARQ RTT timer for one-shot HARQ feedback for NR-U will be treated in in this AI taking into account R2 116-e agreement for R2-2110948 and RAN1 agreements. The Rel-17 RAN1 enhancements one-shot request per HARQ process should be consistend with solution for Rel-16 NR-U where all HARQ processes are enabled.

R2-2202444 Discussion on the DRX impact of enhanced HARQ feedback and intra-UE prioritization Lenovo, Motorola Mobility discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

R2-2202946 Configured grant mode switching for IIoT/URLLC in UCE III discussion NR\_IIOT\_URLLC\_enh-Core

R2-2203294 RAN2 impacts of RAN1 Agreements on Enhanced HARQ feedback Qualcomm Incorporated discussion

R2-2203304 Multi-TB scheduling in UCE Ericsson discussion NR\_IIOT\_URLLC\_enh

### 8.5.4 RAN enhancements based on new QoS

Contributions should only be focused on important issues NOT included in open issues email discussion.

R2-2202283 Analysis on N>1 Fujitsu discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core R2-2200309

R2-2202284 Survival Time Mode and Measurement Gap Fujitsu discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core R2-2200310

R2-2202438 Remaining issues on survival time OPPO discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

R2-2202445 Remaining issues on the support of survival time Lenovo, Motorola Mobility discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

R2-2202523 Remaining issues on RAN enhancements for new QoS Apple discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

R2-2202709 Discussion about UE behaviours for Survival Time state operation Huawei, HiSilicon discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

R2-2202726 Remaining Issues on QoS enhancement CMCC discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

R2-2202751 N and combined Tx-side timer for IIoT QoS ZTE, Sanechips, China Southern Power Grid Co., Ltd, TCL Communication Ltd., vivo discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core R2-2200704

R2-2202785 On the support of N>1 for Survival Time solution CATT discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

R2-2202834 Additional aspects on resource in Survival Time III discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

R2-2202895 Discussion on Radio Resource for the duplicated legs in ST vivo discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

R2-2203125 Remaining issues of survival time requirements Xiaomi Communications discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core R2-2201375

R2-2203144 Finalising Survival Time related enhancements Samsung Electronics GmbH discussion

R2-2203198 On Closure of Survival Time Objective Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IIOT\_URLLC\_enh

R2-2203460 Remaining issues on the support of survival time InterDigital discussion Rel-18 NR\_IIOT\_URLLC\_enh-Core

## 8.6 Small Data enhancements

(NR\_SmallData\_INACTIVE-Core; leading WG: RAN2; REL-17; WID: RP-212594)

Time budget: 1.5 TU

Tdoc Limitation: 2 tdocs

### 8.6.1 Organiztional

In coming LSs, rapporteur input for email discussions summaires etc (tdocs in this don’t count towards tdoc limit).

Inputs expected for 38.321 CR (Huawei), 38.331 CR (ZTE), 38.300 CR (Nokia)

Including [Post116-e][506][SDT] RRC running CR update (ZTE), [Post116-e][507][SDT] MAC running CR update (Huawei), and [Post116-e][508][SDT] Stage-2 running CR update (Nokia)

R2-2202143 Reply LS on the ROHC continuity for SDT (R3-221471; contact: Huawei) RAN3 LS in Rel-17 To:RAN2

R2-2202144 LS on handling of DL non-SDT during SDT procedure (R3-221472; contact: CATT) RAN3 LS in Rel-17 To:RAN2

R2-2202594 Running MAC CR for small data Huawei, HiSilicon draftCR Rel-17 38.321 16.7.0 B NR\_SmallData\_INACTIVE-Core Withdrawn

R2-2202595 Summary of [Post116-e][507][SDT] MAC running CR update (Huawei) Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core Withdrawn

R2-2202611 Introduction of Small Data Transmission for MAC spec Huawei, HiSilicon CR Rel-17 38.321 16.7.0 1198 - B NR\_SmallData\_INACTIVE-Core Late

R2-2202612 Summary of [POST116bis-e][510][Sdata] Running MAC CR Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core Late

R2-2202672 UE capabilities for Rel-17 SDT Intel Corporation draftCR Rel-17 38.306 16.7.0 B NR\_SmallData\_INACTIVE-Core

R2-2202673 UE capabilities for Rel-17 SDT Intel Corporation draftCR Rel-17 38.331 16.7.0 B NR\_SmallData\_INACTIVE-Core

R2-2203279 Stage-2 introduction of SDT Nokia, Nokia Shanghai Bell CR Rel-17 38.300 16.8.0 0357 6 B NR\_SmallData\_INACTIVE-Core R2-2202014

R2-2203296 Introduction of SDT ZTE Corporation (rapporteur) CR Rel-17 38.331 16.7.0 2937 - B NR\_SmallData\_INACTIVE-Core Late

### 8.6.2 User plane common aspects

Including email discussion [POST116bis-e][510][Sdata] UP open issues (Huawei) – NO contributions on these issues.

Any other contributions should focus on important issues not covered by open issues email discussions. Issues that have been discussed and not agreed in the past should not be brought again, unless there is large support (i.e. large number of companies co-sourced contributions)

R2-2202274 Discussion on user plane issues of SDT OPPO discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2202342 CG-SDT-TAT expiry handing during the CG-SDT procedure Samsung Electronics Co., Ltd discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2202446 Remaining UP issues for SDT Lenovo, Motorola Mobility discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2202609 Summary of [POST116bis-e][510][Sdata] UP open issues (Huawei) Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core Late

R2-2202610 Remaining issues for SDT user plane Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2202735 Remaining issues of user plane aspects of SDT China Telecom discussion

R2-2202959 Remaining issues on UP aspects of SDT Qualcomm Incorporated discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2202983 Remaining UP Issues on SDT Procedure vivo discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2203008 Remaining user plane aspects of SDT NEC discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2203158 User Plane Aspects for SDT Ericsson discussion Rel-17 NR\_MT\_SDT-Core Late

R2-2203280 UP and CG aspects for SDT Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2203458 Remaining UP issues for SDT InterDigital discussion Rel-17 NR\_SmallData\_INACTIVE-Core

### 8.6.3 Control plane common aspects

Including email discussion [POST116bis-e][511][Sdata] CP open issues (ZTE) - NO contributions on these issues

Any other contributions should focus on important issues not covered by open issues email discussions. Issues that have been discussed and not agreed in the past should not be brought again, unless there is large support (i.e. large number of companies co-sourced contributions)

One co-sourced contributions and/or TPs on DCCH/CCCH solution will not count towards contribution limit.

R2-2202275 Discussion on control plane issues of SDT OPPO discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2202556 Control plane aspects of SDT Apple discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2202590 Analysis on CP open issue of SDT Lenovo, Motorola Mobility discussion Rel-17

R2-2202674 Additional discussion on identified open CP issues Intel Corporation discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2202736 Remaining issues of control plane aspects of SDT China Telecom discussion

R2-2202805 Handling of DL non-SDT during SDT CATT discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2202846 Remaining issue on CS-RNTI configuration for CG-SDT ASUSTeK discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2202960 Remaining issues on CP aspects of SDT Qualcomm Incorporated discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2202982 Further Consideration on the Handling of non-SDT Data Arrival vivo discussion Rel-17 NR\_SmallData\_INACTIVE-Core R2-2201441

R2-2203009 Remaining control plane aspects of SDT NEC discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2203155 CP aspects for SDT Ericsson discussion Rel-17 NR\_MT\_SDT-Core Late

R2-2203299 [POST116bis-e][511][Sdata] - Running CR comments summary ZTE Wistron Telecom AB report

R2-2203300 [POST116bis-e][511][Sdata] - CP open issue list summary ZTE Wistron Telecom AB report

R2-2203337 Control plane common aspects for SDT Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core Late

R2-2203338 CCCH based non-SDT data indication Huawei, HiSilicon draftCR Rel-17 38.331 16.7.0 NR\_SmallData\_INACTIVE-Core Late

R2-2203353 SDT control plane aspects Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SmallData\_INACTIVE

R2-2203475 Introduction of DCCH solution for non-SDT data arrival Intel Corporation, ZTE Corporation, Sanechips, Samsung, Xiaomi, MediaTek, Radisys, Reliance JIO, Qualcomm, CMCC, OPPO, Lenovo, Sony, Apple, CATT, AT&T draftCR Rel-17 38.331 16.7.0 NR\_SmallData\_INACTIVE-Core

## 8.7 NR Sidelink relay

(NR\_SL\_Relay-Core; leading WG: RAN2; REL-17; WID: RP-212601)

Time budget: 2 TU

Tdoc Limitation: 3 tdocs

### 8.7.1 Organizational

Incoming LSs, TS updates, rapporteur inputs. This AI is reserved for rapporteur and organizational inputs. Documents in this AI do not count towards the tdoc limitation. For LSes that need action or have impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided. Related documents and proposed responses from companies other than the contact company should be submitted to the corresponding technical agenda item (and do count towards the tdoc limitation).

R2-2202127 Reply LS for authorization information for 5G ProSe Layer-3 Remote UE (R3-221202; contact: CATT) RAN3 LS in Rel-17 To:SA2, RAN2

R2-2202136 LS on mapping configuration of sidelink relay (R3-221411; contact: Samsung) RAN3 LS in Rel-17 To:RAN2

R2-2202201 Work planning for R17 SL relay OPPO, CMCC Work Plan Rel-17 NR\_SL\_relay-Core

R2-2202202 Remaining open issues for R17 SL relay OPPO discussion Rel-17 NR\_SL\_relay-Core

R2-2202276 Running CR for TS 38.351 OPPO draft TS Rel-17 38.351 0.4.0 NR\_SL\_relay-Core

R2-2202343 Stage 2 CR on Introduction of R17 SL Relay MediaTek Inc. CR Rel-17 38.300 16.8.0 0403 - B NR\_SL\_relay-Core

R2-2202543 Introduction of Sidelink Relay Apple CR Rel-17 38.321 16.7.0 1194 - B NR\_SL\_relay-Core

R2-2202544 Discussion on remaining issues of MAC CR Apple discussion Rel-17 NR\_SL\_relay-Core

R2-2202738 RRC corrections on path switch NEC Corporation discussion Rel-17 NR\_SL\_relay\_enh-Core

R2-2202781 Stage 2 Running CR on Introduction of R17 SL Relay MediaTek Inc. CR Rel-17 38.300 16.8.0 0410 - B NR\_SL\_relay-Core Withdrawn

R2-2202819 Introduction of SL relay Huawei, HiSilicon CR Rel-17 38.331 16.7.0 2910 - B NR\_SL\_relay-Core

R2-2202820 Stage3 open issues handling for RRC CR Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

R2-2202847 Reflecting agreement on sidelink resource allocation mode configuration for L2 U2N remote UE in RRC running CR ASUSTeK discussion Rel-17 38.331 NR\_SL\_relay-Core

R2-2202950 Introduction of SL Relay in 38.322 Samsung CR Rel-17 38.322 16.2.0 0046 - B NR\_SL\_relay-Core

R2-2202951 Introduction of SL Relay in 38.323 Samsung CR Rel-17 38.323 16.6.0 0086 - B NR\_SL\_relay-Core

R2-2202952 Discussion on RAN3 LS on mapping configuration of sidelink relay Samsung discussion Rel-17 NR\_SL\_relay-Core

R2-2203324 38.304 CR for SL relay Ericsson CR Rel-17 38.304 16.7.0 0232 - B NR\_SL\_relay-Core

R2-2203325 Way forward on open issues in 38.304 for SL relay Ericsson discussion Rel-17 NR\_SL\_relay-Core

### 8.7.2 Open issues

No documents should be submitted to 8.7.2. Please submit to 8.7.2.x.

#### 8.7.2.1 Control plane procedures

Including connection management, SI delivery, paging, access control for remote UE.

Including report of [Pre117-e][605][Relay] Open issues on relay control plane procedures (Huawei).

R2-2202184 Remaining issues on control plane procedure of L2 U2N relay Qualcomm Incorporated discussion NR\_SL\_relay-Core

R2-2202340 Left issue on NR sidelink relay control plane procedure OPPO discussion Rel-17 NR\_SL\_relay-Core

R2-2202344 Discussion on notification of cell reselection and HO of a relay UE SHARP Corporation discussion NR\_SL\_relay-Core

R2-2202345 Discussion on SRAP config SHARP Corporation discussion NR\_SL\_relay-Core

R2-2202357 Indication to Upper Layer to Trigger Service Request of L2 Relay CATT discussion Rel-17 NR\_SL\_relay-Core

R2-2202358 Impacts on RAN of AN Release of Relay UE CATT discussion Rel-17 NR\_SL\_relay-Core

R2-2202379 Further discussion on RRC connection establishment of remote UE ZTE, Sanechips discussion Rel-17

R2-2202411 Remaining open issues on control plane procedures for L2 U2N relay Spreadtrum Communications discussion Rel-17

R2-2202471 On Capturing the Agreements Related to SI in the RRC CR InterDigital discussion Rel-17 NR\_SL\_relay-Core

R2-2202472 Cause Value Setting for Connection Establishment for UE to NW Relays InterDigital discussion Rel-17 NR\_SL\_relay-Core

R2-2202473 Handling the Sidelink Notification Message InterDigital discussion Rel-17 NR\_SL\_relay-Core

R2-2202567 Further Discussion on L2 CP Issue O6.03 vivo discussion

R2-2202569 Draft reply LS on establishment/resume cause value on L2 SL Relay vivo LS out To:CT1 Cc:SA2, RAN3

R2-2202822 Summary of [Pre117-e][605][Relay] Open issues on relay control plane procedures Huawei, HiSilicon report Rel-17 NR\_SL\_relay-Core Late

R2-2202953 Open issue on SI request over PC5 Samsung discussion Rel-17 NR\_SL\_relay-Core

R2-2203135 Considerations on cause codes Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SL\_relay\_enh-Core

R2-2203148 Discussion on connection control open issues Xiaomi discussion

R2-2203178 Remaining issues on CP Lenovo, Motorola Mobility discussion NR\_SL\_relay-Core

R2-2203272 Support of relay UE in RRC\_IDLE/INACTIVE state during direct to indirect path switching Nokia, Nokia Shanghai Bell discussion NR\_SL\_relay\_enh-Core Late

R2-2203306 Setting cause value for Relay UE access Intel Corporation discussion Rel-17 NR\_SL\_relay-Core

R2-2203308 Discussion on added latency for paging forwarding Nokia, Nokia Shanghai Bell discussion NR\_SL\_relay-Core

R2-2203326 Remaining issues on control plane for L2 sidelink relay Ericsson discussion Rel-17 NR\_SL\_relay-Core

#### 8.7.2.2 Service continuity

Service continuity between Uu and relay paths, limited to intra-gNB cases.

Including report of [Pre117-e][603][Relay] Open issues on relay service continuity (CATT)

R2-2202185 Remaining issues on service continuity of L2 U2N relay Qualcomm Incorporated discussion NR\_SL\_relay-Core

R2-2202341 Left issue on NR sidelink relay service continuity OPPO discussion Rel-17 NR\_SL\_relay-Core

R2-2202356 Report of [Pre117-e][603][Relay] Open Issues on Relay Service Continuity (CATT) CATT report Rel-17 NR\_SL\_relay-Core Late

R2-2202380 Remaining issues on service continuity ZTE, Sanechips discussion Rel-17

R2-2202545 Discussion on remaining issues for direct-to-indirect path switch Apple discussion Rel-17 NR\_SL\_relay-Core

R2-2202584 Path switching in L2 U2N relay case Lenovo, Motorola Mobility discussion Rel-17

R2-2202821 Stage3 issue on NCGI reporting in measurement result Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

R2-2202848 Potential issues on multiple PDU sessions handling during U2N direct to indirect path switching ASUSTeK discussion Rel-17 NR\_SL\_relay-Core

R2-2203202 Service continuity open issues in L2 NR sidelink relay Sony discussion Rel-17 NR\_SL\_relay-Core

#### 8.7.2.3 Adaptation layer design

Including bearer mapping, remote UE identification, security aspects if any.

Including report of [Pre117-e][604][Relay] Open issues on relay adaptation layer (OPPO)

R2-2202200 Summary of [Pre117-e][604][Relay] Open issues on relay adaptation layer (OPPO) OPPO report Rel-17 NR\_SL\_relay-Core Late

R2-2202392 Discussion on SRAP for L2 U2N relay Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

R2-2202429 Remaining issues of the adaptation layer Ericsson discussion Rel-17 NR\_SL\_relay-Core

R2-2202675 Remaining issue on sidelink adaptation layer Qualcomm Incorporated discussion NR\_SL\_relay-Core

R2-2202854 SRAP header format design CMCC discussion Rel-17 NR\_SL\_relay-Core Withdrawn

R2-2202897 Discussion on UE's L2 ID Sharp discussion

R2-2203172 SRAP - miscellaneous issues Samsung Electronics GmbH discussion

#### 8.7.2.4 QoS

Mechanisms for E2E QoS management.

Including report of [Pre117-e][602][Relay] Open issues on relay QoS (Samsung)

R2-2202339 Left issue on QoS for layer 2 relay OPPO discussion Rel-17 NR\_SL\_relay-Core

R2-2202381 Miscellaneous issues on bearer mapping and QoS ZTE, Sanechips discussion Rel-17

R2-2202428 Aspects for QoS management with SL relay Ericsson discussion Rel-17 NR\_SL\_relay-Core

R2-2202954 Open issue on new code-point for address resolution protocol (ARP) in PDCP SDU type Samsung discussion Rel-17 NR\_SL\_relay-Core

R2-2202955 Summary of [Pre117-e][602][Relay] Open issues on relay QoS (Samsung) Samsung discussion Rel-17 NR\_SL\_relay-Core Late

#### 8.7.2.5 Discovery and re/selection

Including 5G ProSe Direct Discovery for the non-relaying case. Re-using LTE discovery and re/selection as baseline.

Including report of [Pre117-e][601][Relay] Discovery and relay re/selection (ZTE)

R2-2202186 Remaining issues on discovery and relay (re)selection Qualcomm Incorporated discussion NR\_SL\_relay-Core

R2-2202378 Summary of [Pre117-e][601][Relay] Discovery and relay re-selection (ZTE) ZTE, Sanechips discussion Rel-17 Late

R2-2202412 Remaining issues on NotificationMessageSidelink message Spreadtrum Communications discussion Rel-17

R2-2202568 Remaining issues on Discovery and Relay (re)selection vivo discussion

R2-2202585 Discovery and Relay (re)selection in L2 and L3 relay case Lenovo, Motorola Mobility discussion Rel-17

R2-2202849 Issues on priority between PC5 signalling and SL discovery ASUSTeK discussion Rel-17 38.321 NR\_SL\_relay-Core

R2-2203233 Discussion on relay re-selection and discovery Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

R2-2203506 Sidelink discovery support as indicated within SIB12 Beijing Xiaomi Mobile Software discussion Rel-17

#### 8.7.2.6 UE capabilities

Including report of [Pre117-e][606][Relay] Open issues on relay UE capabilities (Qualcomm)

R2-2202359 Further Discussion on UE Capability CATT discussion Rel-17 NR\_SL\_relay-Core

R2-2202676 Summary report of offline606 - Open issues on relay UE capabilities (Qualcomm) Qualcomm Incorporated discussion NR\_SL\_relay-Core Late

### 8.7.3 Other

Any other topics on NR sidelink relay.

## 8.8 RAN slicing

(NR\_Slice -Core; leading WG: RAN2; REL-17; WID: RP-212534)

Time budget: 0.5 TU

Tdoc Limitation: 3 tdocs

Contributions should illustrate the Stage-3 details of the proposals (e.g. in an Annex containing TP against the running CRs). If a contribution does not provide TP, it may be deprioritized.

Contributions should focus on remaining open issues needed to close the WI from RAN2 perspective (e.g. as discussed in [203])

### 8.8.1 Organizational

Including LSs, any rapporteur inputs and results of the (informative) running CR email discussions [241]-[243]

Including rapporteur input on remaining open issues needed to close the WI.

R2-2202443 Introduction of RAN Slicing OPPO CR Rel-17 38.321 16.7.0 1190 - B NR\_slice-Core

R2-2202616 List of open issues for RAN slicing WI CMCC discussion Rel-17 FS\_NR\_slice R2-2201730

R2-2203021 Report of [Post116-e][243][Slicing] Running NR RRC CR for RAN slicing (Huawei) Huawei discussion Rel-17 NR\_slice-Core

R2-2203022 NR RRC CR for RAN slicing Huawei, HiSilicon CR Rel-17 38.331 16.7.0 2921 - B NR\_slice-Core

R2-2203069 RAN enhancements in the support of slicing Nokia, Nokia Shanghai Bell CR Rel-17 38.300 16.8.0 0413 - B NR\_slice-Core

### 8.8.2 Cell reselection

This agenda item may use a summary document (decision to be made based on submitted tdocs)

Including discussion (with TPs) on how to realize the slice-specific reselection without using specific slice priority value formula when evaluating cell reselection

Including discussion on slice groups and details of how to handle (e.g. slice group mapping to RA, PCI list and/or TAC per slice, UE behaviour if gNB doesn't provide supported slice group info on the best ranked cell, handling of low priority slices, etc.)

[Pre117-e][240][Slicing] Summary of slice-specific cell reselection (CMCC)

Scope: Provide summary of Stage-3 aspects of MUSIM configuration according to open issue list.

Intended outcome: Summary document in R2-220xxxx.

Deadline: TBD

R2-2202187 Remaining issues on slice specific cell reselection Qualcomm Incorporated discussion NR\_slice-Core

R2-2202350 Considerations on the slice group in slice based cell reselection Beijing Xiaomi Software Tech discussion

R2-2202416 Discussion on the details of slice based cell reselection procedure Spreadtrum Communications discussion Rel-17

R2-2202417 Discussion on remaining issues for slice based cell reselection Spreadtrum Communications discussion Rel-17

R2-2202439 Remaining issues on slice-specific cell reselection OPPO discussion Rel-17 NR\_slice-Core

R2-2202514 Text Proposal for slice based cell re-selection Apple, BT plc discussion Rel-17 NR\_slice-Core

R2-2202617 Discussion on open issues for slice based cell reselection CMCC discussion Rel-17 FS\_NR\_slice

R2-2202640 Further considerations of slice based cell reselection without formula Intel Corporation discussion Rel-17 NR\_slice-Core

R2-2202690 The remaining issues on slice based cell reselection CATT discussion Rel-17 NR\_slice-Core

R2-2203018 Discussion on slice based Cell reselection under network control Huawei, HiSilicon discussion Rel-17 NR\_slice-Core

R2-2203070 Considerations on slice groups Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_slice-Core

R2-2203071 Slice-based cell reselection proposal Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_slice-Core

R2-2203086 Discussion on slice based cell reselection LG Electronics UK discussion Rel-17

R2-2203145 Discussion on slice based cell re-selection China Telecommunications discussion Rel-17 NR\_slice-Core Late

R2-2203150 Discussion on slice based cell re-selection China Telecommunications discussion Rel-17 NR\_slice-Core

R2-2203179 Remaining open points on RAN slicing Samsung R&D Institute UK discussion

R2-2203183 Way forward and TP for RAN Slicing solution Lenovo, Motorola Mobility discussion NR\_slice-Core

R2-2203234 Cell reselection relevant open issues (38.304) NEC Telecom MODUS Ltd. discussion

R2-2203235 Cell reselection relevant open issues (RRC) NEC Telecom MODUS Ltd. discussion

R2-2203266 Realising Prioritisation rules for option A without Formula Samsung R&D Institute UK, Qualcomm Incorporated discussion

R2-2203271 Text Proposal for 38.304 on cell reselection for RAN slicing Samsung R&D Institute UK, Qualcomm Incorporated, OPPO discussion

R2-2203387 Leftover issues in slice based cell reselection ZTE corporation,Sanechips discussion Rel-17 NR\_slice-Core

R2-2203411 RAN Slicing enhancements in shared RAN Ericsson discussion Rel-17 NR\_slice-Core

R2-2203412 On open issues for cell re-selection Ericsson discussion Rel-17 NR\_slice-Core

R2-2203452 Slice information provided by RRCRelease SHARP Corporation discussion Rel-17 R2-2201200 Late

R2-2203509 [Pre117-e][240][Slicing] Summary of slice-specific cell reselection (CMCC) CMCC discussion Rel-17 NR\_slice-Core Late

### 8.8.3 RACH

Including discussion based on remaining open issues for RAN slicing-specific RACH prioritization that are not discussed as part of the common RACH prioritization agenda (if any)

NOTE: The common discussion on Rel-17 RACH partitioning will be discussed under AI 8.18. This AI will only consider RACH partitioning from slicing perspective.

R2-2202188 Remaining issues on slice specific RACH Qualcomm Incorporated discussion NR\_slice-Core

R2-2202418 Consideration on remaining issues for slice specific RACH Spreadtrum Communications discussion Rel-17

R2-2202440 Remaining issues on slice-specific RACH OPPO discussion Rel-17 NR\_slice-Core

R2-2202515 Discussion on RACH in slicing Apple discussion Rel-17 NR\_slice-Core

R2-2202618 Discussion on open issues for slice based RACH configuration CMCC discussion Rel-17 FS\_NR\_slice

R2-2202691 The remaining issues on slice specific random access CATT discussion Rel-17 NR\_slice-Core

R2-2203019 Discussion on slice based RACH configuration Huawei, HiSilicon discussion Rel-17 NR\_slice-Core

R2-2203064 Remaining issues on slice based RACH LG Electronics Inc. discussion Rel-17 NR\_slice-Core

R2-2203388 Further consideration on slice specific RACH ZTE corporation,Sanechips discussion Rel-17 NR\_slice-Core

R2-2203401 Detailed RRC signalling for RACH prioritization configuration Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_slice-Core

### 8.8.4 UE capabilities

Including discussion on UE capabilities related to RAN2-defined features for RAN slicing. If changes are proposed against the baseline endorsed in previous meeting, the proposals should illustrate the differences to the baseline illustrated in R2-2109627.

R2-2202189 Further discussion on UE capablity related to RAN slicing enhancement Qualcomm Incorporated discussion NR\_slice-Core

R2-2202210 Considerations on UE capability for RAN slicing Beijing Xiaomi Software Tech discussion Rel-17

R2-2202441 Remaining issues on UE capability for Slicing OPPO discussion Rel-17 NR\_slice-Core

R2-2202619 Discussion on UE capability for RAN slicing enhancement CMCC discussion Rel-17 FS\_NR\_slice

R2-2202641 UE capability for Slicing enhancement Intel Corporation discussion Rel-17 NR\_slice-Core

R2-2202692 Analysis on UE capability for RAN slicing enhancement CATT discussion Rel-17 NR\_slice-Core

R2-2203020 Discussion on UE capabilities for RAN slicing Huawei, HiSilicon discussion Rel-17 NR\_slice-Core

R2-2203413 UE Capabilities for Slice-based Cell re-selection and RA Ericsson discussion Rel-17 NR\_slice-Core

## 8.9 UE Power Saving

(NR\_UE\_pow\_sav\_enh-Core; leading WG: RAN2; REL-17; WID: RP-212632)

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

RP 93e: PEI: Support PDCCH-based PEI as the only option.

### 8.9.1 General

* [AT117-e][004][ePowSav] PEI and paging subgrouping (MediaTek)

 Scope:

 Following the on-line discussion on R2-2202769:

 a) clarify details on UE behaviour for PEI in last cell, e.g. UE storing last cell info etc, and related TS impacts (can ask input on what need to be clarified).

 b) whether we can assume that PEI with no subgrouping is implemented by using PEI + UEID subgrouping with one subgroup, or whether also other variants should be supported.

 Treat R2-2203720 (taking into account on-line agreements).

 Determine agreeable points, points for discussion if needed

 Intended outcome: Report.

 Deadline: In time for CB online W2 Tuesday

* [AT117-e][005][ePowSav] TRS / CSI-RS Open Issues (CATT)

 Scope: Progress the discussion on Using TRS / CSI RS with eDRX, e.g. a) Clarify necessary restrictions assumptions for how this can work assuming no specific modifications, b) Consider if and how to handle situation when such restrictions assumptions seems unreasonable (are there such situations?), e.g. if to exclude eDRX UEs (and how), whether some simple enhancement can improve the situation.

 Intended outcome: Report

 Deadline: In time for CB online W2 Tuesday

* [AT117-e][006][ePowSav] RLM BFD relaxation (vivo)

 Scope: Continue with Detailed aspects taking into account LS in, specify configuration etc, and whether a Reply LS is needed, see e.g. R2-2202306. Aim to agree offline, CB only if needed.

 Intended outcome: Report, TPs (if applicable), Approved Reply LS (if applicable)

 Deadline: W2 Tuesday (offline only)

* [AT117-e][024][ePowSav] PDCCH skip (Samsung)

 Scope: Treat R2-2203708. Determine agreeable points, points for discussion if needed

 Intended outcome: Report

 Deadline: In time for CB online W2 Tuesday

#### 8.9.1.1 Organizational

Tdoc Limitation: 0

Planning etc

#### 8.9.1.2 LS in

Tdoc Limitation: 0

LS in. For LSes that need action or has impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided. Open Issues see R2-2201785

RLM/BFD relaxation (wait for RAN4)

OI 3.4: Granularity for RLM/BFD relaxation enable/disable (e.g. per-UE/CG/Serving cell)

OI 3.5: How to provide the criteria configuration for RLM relaxation and BFD relaxation for low mobility criterion?

OI 3.6: How to provide the criteria configuration for RLM relaxation and BFD relaxation for serving cell quality criterion?

OI 3.7: How to evaluate the low mobility criterion for RLM/BFD relaxation?

OI 3.8: How to evaluate the serving cell quality criterion for RLM/BFD relaxation?

PDCCH Skip (Wait for RAN1)

OI 4.4: In case UE cannot monitor DCP due to PDCCH skipping, whether a) Physical layer of UE reports a value of 1 for Wake-up indication bit to higher layer or b) Physical layer of UE does not report Wake-up indication bit to higher layer.

R2-2202112 LS on UE capability for paging enhancement (R1-2200768; contact: Ericsson) RAN1 LS in Rel-17 To:RAN2

* Noted

R2-2202115 LS on Paging Enhancement (R1-2200800; contact: MediaTek) RAN1 LS in Rel-17 To:RAN2

- MTK think most of these are included in the CRs

* Noted

R2-2202168 LS on signalings for enabling RLM and BFD relaxation in R17 UE power saving (R4-2202769; contact: vivo) RAN4 LS in Rel-17 To:RAN2 Cc:RAN1

- Chair wonder what this means to R4: The RLM/BFD relaxation is enabled by explicit signalling. vivo think it is clear that R4 intends enable / disable the feature = configuration. Nokia think R4 didn’t conclude on this.

- Xiaomi wonder if the capability is separate for RLM BFD. Vivo think this was not clarified in R4.

* Noted

R2-2202306 Discussion on reply LS on signaling for RLM BFD relaxation vivo discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

#### 8.9.1.3 CRs and Rapporteur Resolutions

Tdoc Limitation: 0.

CR Rapporteurs to provide running CRs, potentially updated, and Provide resolution proposals to Rapporteur Handled Open Issues. See also R2-2201785:

PEI and Subgrouping - OI 1.10: Modifications of the content and location of PEI configurations (based on RAN1 progress),

OI 1.11: It is FFS how to extend for DCI\_format 2\_7. Wait for further RAN1 input.

OI 1.12: Whether to add the note according to RAN1 agreement: PEI-O can be configured by network to be placed close to or overlapped with an earlier SS burst before its associated POs.

OI 1.13: FFS how to number the PDCCH monitoring occasions for PEI.

OI 1.14: FFS whether to have a separate clause for subgrouping or merge it into the previous clause for PEI in 7.x as a subclause (e.g. 7.x.y).

OI 1.15: Whether we need a note in spec on this agreement: “R2 assumes that all the cells within the registration area supports the same number of CN assigned subgroups, i.e. no remapping of CN assigned group ID to RAN subgroup ID”

OI 1.16: Detailed parameter alignment between TS38.304 and TS 38.331.

TRS / CSI-RS - OI 2.6: RAN2 to wait for further RAN1 input on whether TRS/CSI-RS configuration can be split as common and TRS specific part

OI 2.7: FFS if scramblingID is per TRS resource set, or per TRS resource

OI 2.8: FFS: the number of configured TRS resource sets is not larger than the number of actual transmitted SSBs determined according to ssb-PositionsInBurst in SIB1.

OI 2.9: Whether/Which part related to TRS/CSI-RS needs to be captured in TS 38.304.

OI 2.10: Detailed parameter alignment between TS38.304 and TS 38.331.

PDCCH Skip - OI 4.2: How to capture searchSpaceSwitchTimer-r17 is FFS as the granularity is FFS.

OI 4.3: How to capture PDCCHSkippingDurationList and PDCCHSkippingDuration are FFS as the granularity is FFS.

UE cap - OI 5.4: How to capture PDCCH monitoring adaptation capabilities in RAN2 TS?

R2-2202307 Introduction of ePowSav in TS 38.304 vivo (Rapporteur) CR Rel-17 38.304 16.7.0 0227 - B NR\_UE\_pow\_sav\_enh-Core

R2-2202308 Discussion on type-3 open issues in TS 38.304 (Rapporteur resolutions) vivo discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2203058 Introduction of ePowSav in TS 38.331 CATT CR Rel-17 38.331 16.7.0 2924 - B NR\_UE\_pow\_sav\_enh-Core

R2-2203232 Introduction of UE power saving enhancements In 38.300 Huawei, HiSilicon CR Rel-17 38.300 16.8.0 0417 - B NR\_UE\_pow\_sav\_enh-Core

### 8.9.3 Open Issues

#### 8.9.3.1 Pre-discussions

Tdoc Limitation: 0.

Pre117-e discussions to gather company input on specific Open Issues See R2-2201785

PEI and paging subgrouping

OI 1.1: How to indicate whether UE monitor PEI in last used cell or any other cells?

OI 1.2: Identify valid cases where UE is unable to monitor subgroup PEI configured by network. Then decide if there can be any rule for subgroup PEI monitoring, or UE simply monitor paging as per legacy.

OI 1.3: RAN2 assumes that PEI can be used “without” subgrouping. FFS whether the bits in the PEI for subgrouping then need to have any particular meaning, or whether this would be done by just having one subgroup.

TRS / CSI-RS

OI 2.1 RAN2 to confirm TRS/CSI-RS can be applied to eDRX UEs.

OI 2.2: Whether / how to address the delay required for updating a TRS/CSI-RS configuration due to the eDRX acquisition period (1024 H-SFN)

OI 2.3: A UE which acquired SIB-X with a TRS/CSI-RS configuration but didn’t yet receive an associated L1-based availability indication considers the configured TRS/CSI-RS as [FFS: “unavailable” or “available”]

OI 2.4: Aspects on SIB-X sizing and segmentation: Can segmentation be avoided? If not, how to segment?

OI 2.5: If a UE acquired SIB-X with a TRS/CSI-RS configuration but didn’t yet receive an associated L1-based availability indication, should UE consider the configured TRS/CSI-RS as “unavailable” or “available”?

BFR-BFD relaxation

OI 3.1: Can UE start/stop RLM/BFD relaxation by itself if it meets/fails the relaxation criteria?

OI 3.2: Should UE report fulfilment or not (entry/exit) to network for RLM/BFD relaxation?

OI 3.3: Should NW be able to enable/disable RLM/BFD relaxation with explicit indication irrespective if the RLM/BFD relaxation criteria is configured or not?”

UE caps

OI 5.1: How to capture UE AS capabilities for PEI/subgrouping in RAN2 TS?

OI 5.2: For TRS/CSI-RS occasion support in Idle and inactive mode, should gNB need to know UE support it?

OI 5.3: UE AS capabilities for RLM/BFD relaxation

Companies to provide input into the following discussion:

[Pre117-e][004][ePowSav] PEI and paging subgrouping Open Issues Input (MediaTek)

[Pre117-e][005][ePowSav] TRS / CSI-RS Open Issues Input (CATT)

[Pre117-e][006][ePowSav] BFR-BFD relaxation Open Issues Input (vivo)

[Pre117-e][007][ePowSav] UE caps Open Issues Input (Intel)

R2-2202309 Summary of [Pre117-e][006][ePowSav] RLM BFD relaxation (vivo) vivo discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core Late

DISCUSSION

- Nokia think Network need to know when the UE is doing relaxation or not. Nokia think KPIs in connected mode are very important. Huawei agrees. Ericsson agrees and think the reporting could be configurable. ZTE think this impacts network performance, if possible would like to have explicit indication (could be e.g. MAC CE).

P1P2

- QC think P2 is not needed. UE will respect the criteria, and this status doesn’t need to be reported. CATT, LG agrees. Vivo agrees as well. Samsung agrees

- CATT think we should not report, think the network should be able to indicate to the UE to stop relaxation. QC think this can be achieved with RRC.

- APPLe are concerned about overhead.

- MTK think that signalling will increase power consumption and defeat the purpose.

Chair proposes

- a) UE can start/stop RLM/BFD relaxation by itself if it meets/fails the relaxation criteria.

- b) The feature is configured by RRC dedicated signalling, this is the only enable disable function that is supported.

Nokia voices a sustained objection

Working Agreement:

* UE can start/stop RLM/BFD relaxation by itself if it meets/fails the relaxation criteria.
* The feature is configured by RRC dedicated signalling, this is the only enable disable function that is supported.

Continue offline, on detailed aspects, configuration etc, and whether a Reply LS is needed.

R2-2202664 Summary report of [Pre117-e][007][ePowSav] UE capabilities Intel Corporation discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core Late

DISCUSSION

P1

- Chair asks if we can then go with PEI + subgrouping

- CATT think this should not be done. Vivo agrees.

- QC can compromise and think PEI + UEID can be one capability, UEID is quite simple and involves just RAN.

- Intel think that if UE support only PEI and network configures PEI + subgrouping, it doesn’t work.

P4P5

- Ericsson think P5 is useful. Huawei Apple and QC think no.

P67

- Huawei apple xiaomi and QC think separate is better

- QC think this need to be per FR, clearly BFD could be somewhat different for FR1 and FR2 .. Intel think this means per band. Huawei support per FR. Ericsson think the algorithm is the same why differentiate?

- Huawei wonder if per FR means different per FR2-1 and FR2-2. Intel think principels for FR2-2 is discussed in 71G WI.

* PEI + UEID subgrouping is one capability
* gNB does not need to know the UE capability for TRS/CSI-RS in idle and inactive mode. Introduce R1 29-2 as optional without capability signalling
* Introduce 2 separate capability bits for RLM relaxation feature and for BFD relaxation feature
* The capability bit(s) for RLM and BFD relaxation shall be per UE with FR differentiation

R2-2202769 Summary of [Pre117-e][004][ePowSav] PEI and paging subgrouping (MediaTek) MediaTek Inc. discussion Late

DISCUSSION

P3

- Nokia think it is not needed.

- QC has different understanding, Chair think we can make this crystal clear offline and address potential issues.

P6

- ZTE

P7

- Apple think this contradicts what we agreed on UE cap.

P1

- Sequans think this doesn’t work, think that SIB control is too slow and too statistical in nature. Xiaomi agrees.

- Intel believes the cell indication is to adapt to load of the cell.

- CMCC think service is already differentiated based on grouping.

- VDF think this is also about how AMF pages, but think that per cell control at least gives some level of control.

- MTK indicate that SIB control had clear majority support.

Can discuss the next level details offline

P3-P7 Chair wonder whether we can assume that PEI with no subgrouping is implemented by using PEI + UEID subgrouping with one subgroup.

- Ericsson think the RAN1 already agreed the PEI interpretation in case no of subgroups are 0 or 1.

- QC think that UE cannot support PEI without subgrouping given the previous agreement.

Continue offline.

* Network indicates whether UE monitors PEI in last used cell in system information.

R2-2203059 Summary of [Pre117-e[005][ePowSav] TRS / CSI-RS Open Issues Input (CATT) CATT discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core Late

DISCUSSION

P1

- OPPO think we have different acquisition for eDRX up to 6h, which may be difficult. May make the feature not useful.

- LGE think that during PTW UE can understand SI change, by SIB modification for eDRX as discussed for redcap.

* A UE which acquired SIB-X with a TRS/CSI-RS configuration but didn’t yet receive an associated L1-based availability indication considers the configured TRS/CSI-RS as “unavailable”.
* RAN2 reuses the existing mechanism used for SIB12 for implementing the SIBX segmentation

Continue disc offline regarding eDRX

#### 8.9.3.2 Invited Input

Company tdocs invited for input on the following open issues

##### 8.9.3.2.1 PEI and paging subgrouping

OI 1.4: RAN2 has a preference to support PEI with both DRX and eDRX; FFS on potential issues (e.g., PEI and PTW).

OI 1.5: FFS on the detailed NAS signalling between AMF and UE for CN assigned subgrouping.

OI 1.6: When AMF has assigned a UE with a Paging subgroup, some signaling should be supported between AMF and gNB(s) to inform gNB(s) about the related subgroup information for paging a UE in RRC\_IDLE/RRC\_INACTIVE. Exact information is FFS. The message(s) and associated design are up to RAN3.

OI 1.7: It is FFS when a UE in RRC\_INACTIVE has been assigned by CN a Paging subgroup, whether some signaling should be introduced between gNBs to inform each other about the UE’s subgroup for RAN paging.

OI 1.8: Handling in scenarios where certain gNB within a RNA does not support CN controlled subgrouping

OI 1.9: When K=1, the PEI configuration can be either (1) subgroupConfig is absent (i.e., PEI without subgrouping) or (2) subgroupConfig is present and subgroupNumPerPO=1. FFS if UE PHY processing for DCI format 2\_7 is the same.

R2-2203720 Summary of 8.9.3.2.1 PEI and Paging Subgrouping MediaTek Inc.

R2-2202279 Open issues for PEI and paging subgrouping NEC Europe Ltd discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2202285 Open Issues for PEI and paging subgrouping Samsung Electronics Co., Ltd discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2202286 UE Identity for paging subgrouping with eDRX Samsung Electronics Co., Ltd discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2202310 Discussion on remaining open issues on PEI and subgrouping vivo discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2202353 Discussing on PEI and paging subgrouping Xiaomi Communications discussion

R2-2202519 Open Issues in Enhanced NR UE Power Save PEI / Paging Subgrouping Apple discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2202771 Open Issues for PEI and Paging Subgrouping MediaTek Inc. discussion

R2-2202881 PEI and subgrouping remaining issues Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2202882 Impact of subgrouping on other WGs Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2202993 Discussion on PEI and paging subgrouping OPPO discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2203036 R2-22xxxxx Remaining issues on PEI LG Electronics Inc discussion Rel-17

R2-2203229 Remaining issues on CN controlled subgrouping Huawei, HiSilicon discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2203231 PEI with eDRX Huawei, HiSilicon discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2203243 Considerations on PEI without Subgrouping Configuration ZTE Corporation,Sanechips discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2203244 Considerations on PEI and Subgrouping Information in Xn and NG interface ZTE Corporation,Sanechips discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2203245 Considerations on Open Issues of PEI and Subgrouping ZTE Corporation,Sanechips discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2203252 PEI and paging subgrouping Ericsson discussion

R2-2203292 (OI 1.4) Considerations on support of PEI with eDRX Interdigital, Inc. discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2203305 Remaining issue on PEI mobility Intel Corporation discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2203474 Handling of gNB not supporting CN-assigned subgrouping Futurewei Technologies discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2203478 On supporting PEI with eDRX Futurewei Technologies discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

##### 8.9.3.2.2 PDCCH Skip

OI 4.1: Should UE ignore PDCCH skipping (i.e., PDCCH skipping is cancelled) while UL HARQ reTx timer is running?”

[Pre117-e][024][ePowSav] AI summary of AI 8.9.3.2.2 PDCCH Skip (Samsung)

R2-2203708 [Pre117-e][024][ePowSav] Summary of AI 8.9.3.2.2 PDCCH Skip (Samsung) Samsung

R2-2202287 PDCCH Skipping in RRC\_CONNECTED Samsung Electronics Co., Ltd discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2202311 Discussion on PDCCH Skipping in RRC\_CONNECTED vivo discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2202883 UL PUSCH transmission impact on PDCCH skipping Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2202994 Discussion on PDCCH skipping OPPO discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2203230 PDCCH skipping while UL reTx timer is running Huawei, HiSilicon discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2203253 DCI-based power saving adaptation during DRX Active Time Ericsson discussion

8.9.4 UE capabilities

Features / UE caps developed in RAN2. Note that this AI is complementary to AI 8.0.2. Input to this subclasue shall not overlap with any input to previous subclauses.

R2-2202355 Discussing on remaining issues of UE capability for paging enhancement Xiaomi Communications discussion

### 8.9.5 Other

Issues not covered elsewhere.

R2-2202312 Discussion on TRS availability when SI change vivo discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2202354 Discussion on remaining issues on UE power saving Xiaomi Communications discussion

R2-2202779 Further considerations on UE assistance information CMCC discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2202995 Discussion on PEI indication determination in RRC INACTIVE OPPO discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2203068 TRS/CSI-RS configuration in RRC\_CONNECTED DENSO CORPORATION discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2203254 TRS exposure Ericsson discussion

## 8.10 NR Non-Terrestrial Networks (NTN)

(NR\_NTN\_solutions-Core; leading WG: RAN2; REL-17; WID: RP-211557)

Time budget: 1.5 TU

Tdoc Limitation: 4 tdocs

### 8.10.1 Organizational

LSs, rapporteur inputs and other organizational documents. Rapporteur inputs and other pre-assigned documents in this AI do not count towards the tdoc limitation.

#### 8.10.1.1 LS in

For LSes that need action: one tdoc by contact company to address the LS and potential reply is considered.

Rapporteur input may be provided.

R2-2202131 Reply LS on LS on TAC reporting in ULI and support of SAs and FAs for NR Satellite Access (R3-220121/S2-2109337) (R3-221370; contact: Qualcomm) RAN3 LS in Rel-17 To:SA2 Cc:RAN2, CT1

R2-2202132 LS on RAN Initiated Release due to out-of-PLMN area condition (R3-221379; contact: Qualcomm) RAN3 LS in Rel-17 To:SA2 Cc:CT1, RAN2

#### 8.10.1.2 CRs

CR Rapporteurs to provide running CRs, potentially updated.

R2-2202233 Stg2 running CR - NTN THALES draftCR Rel-17 38.300 16.8.0 NR\_NTN\_solutions

R2-2202234 NTN RAN3's stg2 BL CR THALES draftCR Rel-17 38.300 16.8.0 NR\_NTN\_solutions

R2-2202456 Draft 331 CR for NR NTN UE capabilities Intel Corporation draftCR Rel-17 38.331 16.7.0 B NR\_NTN\_solutions-Core

R2-2202457 Draft 306 CR for NR NTN UE capabilities Intel Corporation draftCR Rel-17 38.306 16.7.0 B NR\_NTN\_solutions-Core

R2-2203157 Introduction of Release-17 NTN Ericsson CR Rel-17 38.331 16.7.0 2930 - B NR\_NTN\_enh-Core

R2-2203385 Introduction of NTN ZTE corporation,Sanechips CR Rel-17 38.304 16.7.0 0233 - B NR\_NTN\_solutions-Core

R2-2203425 Stage 3 NTN running CR for 38.321 - RAN2#117 InterDigital CR Rel-17 38.321 16.7.0 1215 - B NR\_NTN\_solutions-Core

### 8.10.2 User Plane

#### 8.10.2.1 MAC aspects

R2-2203482 Remaining MAC issues in NTNs Ericsson discussion Rel-17 NR\_NTN\_solutions-Core

##### 8.10.2.1.1 Open issues

Contributions on open issues listed in R2-2201900. For some aspects the discussion will happen in Pre117 email discussion [103]. For the others, company contributions can be submitted.

Including report of [Pre117-e][103][NTN] MAC open issues (Interdigital)

R2-2202302 Discussion on MAC open issues Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

R2-2202420 Remaining issues on HARQ process in NTN Spreadtrum Communications discussion Rel-17

R2-2202546 UL synchronization and validity timer expiry Apple discussion Rel-17 NR\_NTN\_solutions-Core

R2-2202547 UE location and TA reporting Apple discussion Rel-17 NR\_NTN\_solutions-Core

R2-2202563 UL synchronization failure in RRC\_CONNECTED Qualcomm Incorporated discussion Rel-17 NR\_NTN\_solutions-Core

R2-2202613 Considerations on MAC open issues CMCC discussion Rel-17 NR\_NTN\_solutions-Core

R2-2202972 Consideration on MAC open issues ZTE Corporation, Sanechips discussion Rel-17

R2-2202999 Discussion on MAC open issues in NTN OPPO discussion Rel-17 NR\_NTN\_solutions-Core

R2-2203151 Discussion on TA reporting ITL discussion Rel-17

R2-2203165 Discussion on open issues for MAC aspects LG Electronics Inc. discussion NR\_NTN\_solutions-Core

R2-2203256 On left open issues for MAC aspects Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_NTN\_solutions-Core

R2-2203257 Discussion on Validity timer expiry and restart Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_NTN\_solutions-Core

R2-2203298 Open issues on MAC aspects Samsung Research America discussion NR\_NTN\_solutions-Core

R2-2203423 Remaining MAC open issues in NTN InterDigital discussion Rel-17 NR\_NTN\_solutions-Core

R2-2203424 Summary of [Pre117-e][NTN][103] MAC open issues InterDigital discussion Rel-17 NR\_NTN\_solutions-Core Late

##### 8.10.2.1.2 Other RACH aspects

Contributions on other RACH issues.

R2-2202303 Discussion on remaining MAC issues Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

##### 8.10.2.1.3 Other MAC aspects

Contributions on other (non RACH) MAC issues.

R2-2202421 MAC operation about the validity timer expiry Spreadtrum Communications discussion Rel-17

R2-2202773 Remaining MAC Open Issues for NR NTN vivo discussion

R2-2203076 Discussion on Left Open Issues of Other MAC Aspects CATT discussion Rel-17 NR\_NTN\_solutions-Core

R2-2203194 Remaining MAC issues of NR NTN Xiaomi discussion Rel-17

R2-2203203 CG enhancements in NTN Sony discussion Rel-17 NR\_NTN\_solutions-Core R2-2200911

#### 8.10.2.2 RLC and PDCP aspects

R2-2203481 Remaining issues for RLC and PDCP in NTNs Ericsson discussion Rel-17 NR\_NTN\_solutions-Core

### 8.10.3 Control Plane

#### 8.10.3.1 Idle/inactive mode aspects

R2-2202394 On reporting of UE location information ZTE corporation, Sanechips discussion Rel-17 NR\_NTN\_solutions-Core Withdrawn

##### 8.10.3.1.1 Open issues

Contributions on open issues listed in R2-2201898. For some aspects the discussion will happen in Pre117 email discussion [102]. For the others, company contributions can be submitted.

Including report of [Pre117-e][102][NTN] Idle mode open issues (ZTE)

R2-2202235 WF for UE location during initial access in NTN THALES, Leonardo, Avanti, ESA, Sateliot, Omnispace, Novamint, Hispasat, Gatehouse, Hughes network systems, Inmarsat, Viasat, CTTC, Intelsat, Kepler, Ligado, Magister solutions, SES, Airbus discussion Rel-17 NR\_NTN\_solutions

R2-2202422 Discussion on the SIBX acquiring procedure Spreadtrum Communications discussion Rel-17

R2-2202423 Acquiring the ephemeris of neighbour cell Spreadtrum Communications discussion Rel-17

R2-2202466 Remaining Rel-17 NTN open issues for IDLE mode Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_NTN\_solutions-Core

R2-2202548 NTN-TN idle mode mobility Apple discussion Rel-17 NR\_NTN\_solutions-Core R2-2201179

R2-2203049 Measurements and cell reselection Samsung Research America discussion

R2-2203386 Report of [Pre117-e][102][NTN] Idle mode open issues (ZTE) ZTE corporation,Sanechips discussion Rel-17 NR\_NTN\_solutions-Core Late

##### 8.10.3.1.2 Other

Contributions on any other issues.

R2-2202566 Assistance information for IDLE mode measurements Qualcomm Incorporated discussion Rel-17 NR\_NTN\_solutions-Core

R2-2202586 Epoch time and validity time for neighbour satellite ephemeris Lenovo, Motorola Mobility discussion Rel-17

R2-2202774 Remaining issues on location-based cell reselection vivo discussion

R2-2203004 Discussion on measurement rules for cell re-selection in NTN OPPO discussion Rel-17 NR\_NTN\_solutions-Core

#### 8.10.3.2 RRC aspects

##### 8.10.3.2.1 Open issues

Contributions on open issues listed in R2-2201896. For some aspects the discussion will happen in Pre117 email discussion [101]. For the others, company contributions can be submitted.

Including report of [Pre117-e][101][NTN] RRC open issues (Ericsson))

R2-2202424 Discussion on SIB X Spreadtrum Communications discussion Rel-17

R2-2202467 Remaining Rel-17 NTN open issues for CONNECTED mode Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_NTN\_solutions-Core

R2-2202565 Open issues in CHO Qualcomm Incorporated discussion Rel-17 NR\_NTN\_solutions-Core

R2-2202587 Consideration on open issues for CHO Lenovo, Motorola Mobility discussion Rel-17

R2-2202775 Open issues on CHO for R17 NR NTN vivo discussion

R2-2202886 Remaining issues on CHO Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

R2-2203005 Discussion on the RRC open issues in NTN OPPO discussion Rel-17 NR\_NTN\_solutions-Core

R2-2203051 Remaining NTN CHO issues LG Electronics France discussion Rel-17 NR\_NTN\_solutions-Core

R2-2203067 Discussion on RRC open issues for NTN Xiaomi Communications discussion

R2-2203077 Further Discussion on the Open Issues of CHO CATT discussion Rel-17 NR\_NTN\_solutions-Core

R2-2203153 Remaining connected mode aspects for NTN Ericsson discussion

R2-2203154 [Pre117-e][NTN][101] RRC open issues Ericsson report NR\_NTN\_enh-Core Late

R2-2203236 Remaining open issues of CHO NEC Telecom MODUS Ltd. discussion

R2-2203301 Open issues on RRC aspects Samsung Research America discussion NR\_NTN\_solutions-Core

R2-2203422 Remaining RRC open issues in NTN InterDigital discussion Rel-17 NR\_NTN\_solutions-Core

##### 8.10.3.2.2 Other

Contributions on any other issues.

R2-2202455 Discussion on NR NTN measurement gaps Intel Corporation discussion Rel-17 NR\_NTN\_solutions-Core

R2-2202564 SMTC and MG configuration Qualcomm Incorporated discussion Rel-17 NR\_NTN\_solutions-Core

R2-2202588 Contents of UE assistance for measurement window and gap configuration in NTN Lenovo, Motorola Mobility discussion Rel-17

R2-2202614 Further discussion on intra-NTN mobility CMCC discussion Rel-17 NR\_NTN\_solutions-Core

R2-2202776 Discussion on the signaling design for NTN specific information vivo discussion

R2-2202840 Network-Based SMTC Configuration in NTN Google Inc. discussion

R2-2202850 Discussion on assistance information for SMTC ASUSTeK discussion Rel-17 NR\_NTN\_solutions-Core

R2-2202853 Measurement Gap Issues in NTN Google Inc. discussion

R2-2203006 Discussion on remaining open issues in connected mode OPPO discussion Rel-17 NR\_NTN\_solutions-Core

R2-2203066 Further consideration of initial access Samsung Research America discussion

R2-2203190 Location report for TA report and LCS support in connected mode Xiaomi discussion Rel-17

R2-2203191 Remaining issues relating to SIBxx and the RRC delay for RRC Release Xiaomi discussion Rel-17

### 8.10.4 UE capabilities

R2-2203485 NR NTN UE capabilities Ericsson discussion Rel-17 NR\_NTN\_solutions-Core

#### 8.10.4.1 Open issues

Contributions on open issues listed in R2-2201962. For some aspects the discussion will happen in Pre117 email discussion [104]. For the others, company contributions can be submitted.

Including report of [Pre117-e][104][NTN] UE caps open issues (Intel)

R2-2202454 Report of email discussion [Pre117-e][104][NTN] UE caps open issues (Intel) Intel Corporation discussion Rel-17 NR\_NTN\_solutions-Core Late

R2-2202725 Remaining Issues of Set2 on NR NTN UE Capabilities CMCC discussion Rel-17 NR\_NTN\_solutions-Core

#### 8.10.4.2 Other

Contributions on any other issues.

R2-2202459 Discussion on the difference between GSO and GEO Intel Corporation discussion Rel-17 NR\_NTN\_solutions-Core

R2-2202887 Discussion on capabilities for gaps and HARQ Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

## 8.11 NR positioning enhancements

(NR\_pos\_enh-Core; leading WG: RAN1; REL-17; WID: RP-210903)

Time budget: 2 TU

Tdoc Limitation: 3 tdocs

### 8.11.1 Organizational

Rapporteur input. Incoming LS etc. This AI is reserved for rapporteur and organizational inputs; documents in this AI do not count towards the tdoc limitation. For LSes that need action or have impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided. Related documents and proposed responses from companies other than the contact company should be submitted to the corresponding technical agenda item (and do count towards the tdoc limitation).

Including report of [Pre117-e][613][POS] RAN1 parameter list impact to RRC running CR (Ericsson)

Including report of [Pre117-e][614][POS] Issues requiring RAN1 input (Intel)

R2-2202164 LS on SRS for multi-RTT positioning (R4-2202680; contact: Huawei) RAN4 LS in Rel-17 To:RAN1 Cc:RAN2, RAN3

R2-2202165 Reply LS on reporting of the Tx TEG association information (R4-2202685; contact: Huawei) RAN4 LS in Rel-17 To:RAN1, RAN2 Cc:RAN3

R2-2202166 LS on DRX cycle used in PRS measurement in RRC\_INACTIVE state (R4-2202686; contact: Qualcomm) RAN4 LS in Rel-17 To:RAN2, RAN3 Cc:RAN1

R2-2202169 Reply LS on reporting and definition of DL PRS path RSRP (R4-2202780; contact: Nokia) RAN4 LS in Rel-17 To:RAN1, RAN2

R2-2202405 Introduction of B2a and B3I signal in BDS system and GNSS Positioning Integrity CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, HiSilicon, Intel Corporation, ZTE Corporation, CBN, vivo, OPPO, Lenovo, MediaTek Inc, Spreadtrum Communications, Xiaomi. CR Rel-17 36.305 16.4.0 0107 - B NR\_pos\_enh-Core

R2-2202488 Open issues list on Rel-17 positioning WI Intel Corporation discussion Rel-17 NR\_pos\_enh-Core

R2-2202489 Open issues on stage 2 running CR Intel Corporation discussion Rel-17 NR\_pos\_enh-Core

R2-2202490 Running 38.305 CR for Positioning WI on RAT dependent positioning methods Intel Corporation draftCR Rel-17 38.305 16.7.0 B NR\_pos\_enh-Core

R2-2202491 38.305 CR for Positioning WI Intel Corporation CR Rel-17 38.305 16.7.0 0086 - B NR\_pos\_enh-Core Late

R2-2202492 Report of [Pre117-e][614][POS] Issues requiring RAN1 input (Intel) Intel Corporation discussion Rel-17 NR\_pos\_enh-Core Late

R2-2202493 Draft LS on issues requiring RAN1 input Intel Corporation LS out Rel-17 NR\_pos\_enh-Core To:RAN1 Late

R2-2202605 Introduction of R17 PositioningEnh in MAC spec Huawei, HiSilicon CR Rel-17 38.321 16.7.0 1197 - B NR\_pos\_enh-Core

R2-2202606 Introduction of R17 PositioningEnh in LTE RRC spec Huawei, HiSilicon CR Rel-17 36.331 16.7.0 4762 - B NR\_pos\_enh-Core

R2-2202861 Running CR of 36.305 for GNSS Positioning Integrity InterDigital, Inc. draftCR Rel-17 36.305 16.4.0 B NR\_pos\_enh-Core

R2-2202862 Running CR of 38.305 for GNSS Positioning Integrity InterDigital, Inc. draftCR Rel-17 38.305 16.7.0 B NR\_pos\_enh-Core

R2-2203310 Running LPP CR for NR positioning enhancements Qualcomm Incorporated draftCR Rel-17 37.355 16.7.0 B NR\_pos\_enh-Core

R2-2203315 Introduction of R17 Positioning Enhancements in LPP Qualcomm Incorporated CR Rel-17 37.355 16.7.0 0332 - B NR\_pos\_enh-Core Late

R2-2203362 RAN1 parameter list impact to RRC running CR Ericsson draftCR Rel-17 38.331 16.7.0 B NR\_pos\_enh-Core Late

R2-2203363 Report on RAN1 parameter list impact to RRC running CR Ericsson discussion Rel-17 Late

R2-2203364 Introduction of Enhanced Positioning feature Ericsson CR Rel-17 38.331 16.7.0 2952 - B NR\_pos\_enh-Core

### 8.11.2 Open issues

No documents should be submitted to 8.11.2. Please submit to 8.11.2.x.

#### 8.11.2.1 Latency enhancements

Enhancements of signalling, and procedures for improving positioning latency of the Rel-16 NR positioning methods, for DL and DL+UL positioning methods.

Including report of [Pre117-e][607][POS] Open issues on positioning latency enhancements (Huawei)

R2-2202408 Discussion and TP on areaID for Latency enhancements CATT discussion Rel-17 NR\_pos\_enh-Core

R2-2202487 On Latency Reduction open issues Intel Corporation discussion Rel-17 NR\_pos\_enh-Core

R2-2202592 On remaining issues for latency improvements Apple discussion

R2-2202603 Remaining issues on latency and accuracy enhacnement Huawei, HiSilicon discussion Rel-17 NR\_pos\_enh-Core

R2-2202604 Summary of [Pre117-e][607][POS] Open issues on positioning latency enhancements (Huawei) Huawei, HiSilicon discussion Rel-17 NR\_pos\_enh-Core Late

R2-2202858 Remaining Issues on Latency Reduction InterDigital, Inc. discussion Rel-17 NR\_pos\_enh-Core

R2-2202922 MAC CE for pre-MG (de)activation request Samsung discussion Rel-17 NR\_pos\_enh-Core

R2-2202930 Remaining issue on positioning latency reduction Xiaomi discussion

R2-2203042 Way forward for preconfigured assistance data Fraunhofer IIS; Fraunhofer HHI; Ericsson; discussion

R2-2203088 Discussion on latency enhancement vivo discussion Rel-17 NR\_pos\_enh-Core

R2-2203181 Discussion on open issues of positioning latency enhancements ZTE discussion

R2-2203204 Considerations on positioning measurement report latency Sony discussion Rel-17 NR\_pos\_enh-Core

R2-2203211 Discussion of positioning latency enhancement open issues OPPO discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2203462 Timing Error Group (TEG) definition Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_pos\_enh-Core

#### 8.11.2.2 RRC\_INACTIVE

Methods, measurements, signalling and procedures to support positioning for UEs in RRC\_ INACTIVE state, for UE-based and UE-assisted positioning solutions. UL and DL+UL NR positioning methods and gNB positioning measurements for UEs in RRC\_INACTIVE are treated at lower priority.

Including report of [Pre117-e][609][POS] Open issues on positioning in RRC\_INACTIVE (InterDigital)

R2-2202338 Discussion on remaining issues for Positioning in RRC\_INACTIVE state OPPO discussion Rel-17 NR\_pos\_enh-Core

R2-2202601 Remaining Issues on RRC\_INACTIVE Positioning Huawei, HiSilicon discussion Rel-17 NR\_pos\_enh-Core

R2-2202602 Draft LS on Positioning in RRC\_INACTIVE State Huawei, HiSilicon LS out Rel-17 NR\_pos\_enh-Core To:SA2 Cc:RAN3

R2-2203089 Discussion on positioning in RRC\_INACTIVE vivo discussion Rel-17 NR\_pos\_enh-Core

R2-2203091 Consideration on the configuration of UL positioning in RRC\_INACTIVE CATT discussion Rel-17 NR\_pos\_enh-Core

R2-2203180 Discussion on UL positioning configuration in RRC\_INACTIVE ZTE discussion

R2-2203360 TP on RRC Impacts and MAC CE design Ericsson discussion Rel-17

R2-2203443 Remaining issues for positioning of UEs in RRC\_INACTIVE State Qualcomm Incorporated discussion

R2-2203444 [draft] LS on Positioning in RRC\_INACTIVE State Qualcomm Incorporated LS out Rel-17 NR\_pos\_enh R2-2200961 To:SA2 Cc:RAN3

R2-2203445 Capturing RRC impacts for RAT dependent Positioning Ericsson draftCR Rel-17 38.331 16.7.0 B NR\_pos\_enh-Core R2-2202048

#### 8.11.2.3 On-demand PRS

Specify UE-initiated and LMF-initiated on-demand transmission and reception of DL PRS for DL and DL+UL positioning for UE-based and UE-assisted positioning solutions.

Including report of [Pre117-e][608][POS] Open issues on on-demand PRS (Lenovo)

R2-2202236 Report of [Pre117-e][608][POS] Open issues on on-demand PRS Lenovo, Motorola Mobility discussion Rel-17 NR\_pos\_enh-Core Late

R2-2202337 Discussion on remaining issues for on-demand DL-PRS OPPO discussion Rel-17 NR\_pos\_enh-Core

R2-2202409 Discussion on the remaining issues of on-demand PRS CATT discussion

R2-2202859 Remaining Issues for On-demand PRS InterDigital, Inc. discussion Rel-17 NR\_pos\_enh-Core

R2-2203169 Remaining issues for the On demand DL PRS Samsung R&D Institute UK discussion

R2-2203463 On-demand PRS Open Issues Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_pos\_enh-Core

#### 8.11.2.4 GNSS positioning integrity

Signalling and procedures to support GNSS positioning integrity determination.

Including report of [Pre117-e][610][POS] Open issues on GNSS positioning integrity (ESA)

R2-2203034 UE-aided detection of threat to GNSS systems and assistance data signaling Fraunhofer IIS; Fraunhofer HHI; Ericsson; ESA discussion R2-2200955

R2-2203090 Discussion on GNSS positioning integrity vivo discussion Rel-17 NR\_pos\_enh-Core

R2-2203199 Reporting of GNSS Positioning Integrity Result Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_pos\_enh

R2-2203359 On remaining GNSS Integrity open issues Ericsson discussion Rel-17

#### 8.11.2.5 A-GNSS enhancements

Including support of BDS B2a and B3I signals and support of NavIC.

R2-2202402 Introduction of B2a and B3I signal in BDS system in A-GNSS CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, HiSilicon, Intel Corporation, ZTE Corporation, CBN, vivo, OPPO, Lenovo, MediaTek Inc, Spreadtrum Communications, Xiaomi. CR Rel-17 37.355 16.7.0 0327 - B NR\_pos\_enh-Core R2-2200298

R2-2202403 Introduction of B2a and B3I signal in BDS system in A-GNSS CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, HiSilicon, Intel Corporation, ZTE Corporation, CBN, vivo, OPPO, Lenovo, MediaTek Inc, Spreadtrum Communications, Xiaomi. CR Rel-17 36.305 16.4.0 0106 - B NR\_pos\_enh-Core R2-2109485

R2-2202404 Introduction of B2a and B3I signal in BDS system in A-GNSS CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, HiSilicon, Intel Corporation, ZTE Corporation, CBN, vivo, OPPO, Lenovo, MediaTek Inc, Spreadtrum Communications, Xiaomi. CR Rel-17 38.305 16.7.0 0084 - B NR\_pos\_enh-Core R2-2109485

R2-2202607 Draft running CR for stage2 spec for NAVIC in R17 positioning Huawei, HiSilicon draftCR Rel-17 38.305 16.7.0 B NR\_pos\_enh-Core

#### 8.11.2.6 Accuracy enhancements

Input on the accuracy enhancement objectives led by RAN1.

Including report of [Pre117-e][611][POS] Open issues on positioning accuracy enhancements (CATT)

R2-2202410 Report of [Pre117-e][611][POS] Open issues on positioning accuracy enhancements (CATT) CATT discussion Late

R2-2202593 On UE Tx TEG association for UL-TDOA via RRC Apple discussion

R2-2202860 Remaining Issues for Accuracy Enhancements InterDigital, Inc. discussion Rel-17 NR\_pos\_enh-Core

R2-2203205 Considerations on Timing Error aspects Sony discussion Rel-17 NR\_pos\_enh-Core

R2-2203361 LPP Remaining Issues on Accuracy enhancements and On-Demand PRS Ericsson discussion Rel-17

#### 8.11.2.7 UE capabilities

Including report of [Pre117-e][612][POS] Open issues on positioning UE capabilities (Intel)

R2-2202494 Report of [Pre117-e][612][POS] Open issues on positioning UE capabilities (Intel) Intel Corporation discussion Rel-17 NR\_pos\_enh-Core Late

R2-2202495 Running 331 CR for Positioning UE capabilities Intel Corporation draftCR Rel-17 38.331 16.7.0 B NR\_pos\_enh-Core Late

R2-2202496 Running 306 CR for Positioning UE capabilities Intel Corporation draftCR Rel-17 38.306 16.7.0 B NR\_pos\_enh-Core Late

### 8.11.3 Other

Any other topics on NR positioning enhancements.

## 8.12 Reduced Capability

(NR\_redcap-Core; leading WG: RAN1; REL-17; WID: RP-211574)

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

### 8.12.1 Organizational

LSs, rapporteur inputs and other organizational documents. Rapporteur inputs and other pre-assigned documents in this AI do not count towards the tdoc limitation.

R2-2202500 Running 38.306 CR for the RedCap capablities Intel Corporation draftCR Rel-17 38.306 16.7.0 B NR\_redcap

R2-2202501 Running 38.331 CR for the RedCap capablities Intel Corporation draftCR Rel-17 38.331 16.7.0 B NR\_redcap

R2-2203354 Introduction of RedCap Ericsson CR Rel-17 38.331 16.7.0 2950 - B NR\_redcap-Core Late

#### 8.12.1.1 LS in

For LSes that need action: one tdoc by contact company to address the LS and potential reply is considered.

Rapporteur input may be provided.

R2-2202134 LS reply on the coordination between gNBs supporting RedCap UEs (R3-221396; contact: Ericsson) RAN3 LS in Rel-17 To:RAN2

R2-2202162 Reply LS on use of NCD-SSB for RedCap UE (R4-2202674; contact: ZTE) RAN4 LS in Rel-17 To:RAN1 Cc:RAN2

R2-2202163 LS on RRM relaxation for Redcap (R4-2202675; contact: vivo) RAN4 LS in Rel-17 To:RAN2

R2-2202313 [Draft] Reply LS to RAN4 on RRM relaxation vivo LS out Rel-17 NR\_redcap-Core To:RAN4

#### 8.12.1.2 CRs

CR Rapporteurs to provide running CRs, potentially updated.

R2-2202314 Introduction of RedCap in TS 38.321 vivo (Rapporteur) CR Rel-17 38.321 16.7.0 1186 - B NR\_redcap-Core

R2-2203421 Introduction of RedCap in TS 38.300 Nokia, Nokia Shanghai Bell CR Rel-17 38.300 16.8.0 0421 - B NR\_redcap-Core

R2-2203473 Stage 2 Corrections for RedCap Futurewei Technologies draftCR Rel-17 38.300 16.8.0 NR\_redcap-Core

R2-2203497 Introduction of RedCap UEs Ericsson CR Rel-17 38.304 16.7.0 0234 - B NR\_redcap-Core Late

### 8.12.2 Control Plane

#### 8.12.2.1 Idle/inactive mode aspects

##### 8.12.2.1.1 Open issues

Contributions on open issues listed in R2-2201889. For some aspects the discussion will happen in Pre117 email discussion [105]. For the others, company contributions can be submitted.

R2-2202266 Details on RRM relaxation Ericsson discussion Rel-17 NR\_redcap-Core

R2-2202315 Discussion on RAN4 LS and remaining issues on RRM relaxation vivo, Guangdong Genius discussion Rel-17 NR\_redcap-Core

R2-2202996 Left open issue on SI change mechanism for eDRX OPPO discussion Rel-17 NR\_redcap-Core

##### 8.12.2.1.2 Other

Contributions on any other issues.

R2-2202347 Cell (re)selection parameters of RedCap UE Fujitsu discussion Rel-17 NR\_redcap-Core

R2-2202937 Cell selection criterion for a RedCap UE with 1 Rx branch Samsung discussion Rel-17 NR\_redcap-Core

R2-2202989 UE behavior on combineRelaxedMeasCondition2 Samsung discussion Rel-17

R2-2203350 On RedCap RRM relaxations in IDLE/INACTIVE Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_redcap-Core

R2-2203352 eDRX and system information Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_redcap-Core

#### 8.12.2.2 RRC aspects

##### 8.12.2.2.1 Open issues

Contributions on open issues listed in R2-2201887. For some aspects the discussion will happen in Pre117 email discussion [105]. For the others, company contributions can be submitted.

Including report of [Pre117-e][105][RedCap] CP open issues (Ericsson)

R2-2202316 Discussion on remaining issues on RRC aspects for RedCap vivo, Guangdong Genius discussion Rel-17 NR\_redcap-Core

R2-2202529 NCD-SSB and handover related aspects Apple discussion Rel-17 NR\_redcap-Core

R2-2202530 On the EUTRA handover to NR for RedCap UEs Apple discussion Rel-17 NR\_redcap-Core

R2-2202654 On inter-RAT handover for RedCap UEs ZTE Corporation, Sanechips discussion Rel-17 NR\_redcap-Core

R2-2202677 RRC open issues on Rel17 RedCap WI Intel Corporation discussion Rel-17 NR\_redcap

R2-2202997 Discussion on remaining RRC open issues OPPO discussion Rel-17 NR\_redcap-Core

R2-2203055 Inter-RAT mobility from LTE to NR Huawei, HiSilicon discussion Rel-17 NR\_redcap-Core

R2-2203056 Access restriction of RedCap UE Huawei, HiSilicon discussion Rel-17 NR\_redcap-Core

R2-2203140 Further discussion on NCD-SSB for RedCap UE China Telecommunications discussion Rel-17

R2-2203355 Handover from E-UTRA from legacy eNB to legacy gNB Ericsson discussion NR\_redcap-Core

R2-2203502 Report for [Pre117-e][105][RedCap] CP open issues Ericsson discussion NR\_redcap-Core Late

##### 8.12.2.2.2 Other

Contributions on any other issues.

R2-2202289 SI Request for Redcap UEs Samsung Electronics Co., Ltd discussion Rel-17 NR\_redcap-Core

R2-2202734 Discussions on Redcap-specific initial BWPs Xiaomi Communications discussion

R2-2203030 System information acquisition by RedCap UEs during handover Qualcomm Incorporated discussion Rel-17 NR\_redcap-Core Late

R2-2203351 On RRM relaxations in CONNECTED Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_redcap-Core

### 8.12.3 User Plane

#### 8.12.3.1 MAC aspects

##### 8.12.3.1.1 Open issues

Contributions on open issues listed in R2-2201891. For some aspects the discussion will happen in Pre117 email discussion [106]. For the others, company contributions can be submitted.

Including report of [Pre117-e][106][RedCap] MAC open issues (vivo)

R2-2202317 Summary of [Pre117-e][106][RedCap] MAC open issues (vivo) vivo discussion Rel-17 NR\_redcap-Core Late

R2-2203281 Early identification capability Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_redcap-Core

##### 8.12.3.1.2 Other

Contributions on any other issues.

### 8.12.4 NCD-SSB aspects

Contributions on NCD-SSB aspects, that might affect multiple specs

R2-2202318 Discussion on RAN2 impacts on NCD-SSB and separate initial BWP vivo, Guangdong Genius discussion Rel-17 NR\_redcap-Core

R2-2202653 Remaining issues on separate initial BWP and NCD-SSB for RedCap UEs ZTE Corporation, Sanechips discussion Rel-17 NR\_redcap-Core

R2-2202998 Left open issues on NCD-SSB OPPO discussion Rel-17 NR\_redcap-Core

R2-2203057 Discussion on NCD-SSB aspects for RedCap UE Huawei, HiSilicon discussion Rel-17 NR\_redcap-Core

R2-2203078 Discussion on the open issues of NCD-SSB CATT discussion Rel-17 NR\_redcap-Core

R2-2203505 Monitoring POs in connected mode when using NCD-SSB Ericsson discussion Rel-17 NR\_redcap-Core Late

R2-2203508 C-plane related open issues on NCD-SSB DENSO CORPORATION discussion Rel-17 NR\_redcap-Core

### 8.12.5 UE capabilities

#### 8.12.5.1 Open issues

Contributions on open issues listed in R2-2201893. For some aspects the discussion will happen in Pre117 email discussion [107]. For the others, company contributions can be submitted.

Including report of [Pre117-e][107][RedCap] UE caps open issues (Intel)

R2-2202497 Report of [Pre117-e][107][RedCap] UE caps open issues (Intel) Intel Corporation discussion Rel-17 NR\_redcap Late

R2-2202498 Updated Running 38.306 CR for the RedCap capablities Intel Corporation draftCR Rel-17 38.306 16.7.0 B NR\_redcap Late

R2-2202499 Updated Running 38.331 CR for the RedCap capablities Intel Corporation draftCR Rel-17 38.331 16.7.0 B NR\_redcap Late

R2-2203141 Further discussion on RRM relaxation for RedCap UE China Telecommunications discussion Rel-17 Late

R2-2203142 Further discussion on RRM relaxation for RedCap UE China Telecommunications discussion Rel-17 Late

R2-2203143 Further discussion on RRM relaxation for RedCap UE China Telecommunications discussion Rel-17

#### 8.12.5.2 Other

Contributions on any other issues.

## 8.13 SON/MDT

(NR\_ENDC\_SON\_MDT\_enh-Core; leading WG: RAN3; REL-17; WID: RP-201281)

Time budget: 1 TU

Tdoc Limitation: 4 tdocs

### 8.13.1 Organizational

Tdoc Limitation: 0

LS in. For LSes that need action or has impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided.

R2-2202116 LS on UP measurements for Successful Handover Report (R3-212935; contact: Ericsson) RAN3 LS in Rel-17 To:RAN2

R2-2202117 Reply LS on UE context keeping in the source cell (R3-212944; contact: Ericsson) RAN3 LS in Rel-17 To:RAN2

R2-2202118 LS Reply on the details of logging forms reported by the gNB-CU-CP, gNB-CU-UP and gNB-DU under measurement pollution conditions (R3-214429; contact: Ericsson) RAN3 LS in Rel-17 To:SA5, RAN2

R2-2202120 Reply LS on scenarios need to be supported for MRO in SCG Failure Report (R3-216159; contact: Samsung) RAN3 LS in Rel-17 To:RAN2

R2-2202125 Reply LS on Area scope configuration and Frequency band info in MDT configuration (R3-221178; contact: Huawei) RAN3 LS in Rel-17 To:RAN2

R2-2202133 Reply LS to SA5 on beam measurement reports (R3-221383; contact Ericsson) RAN3 LS in Rel-17 To:SA5 Cc:RAN2

R2-2202177 Reply LS on the details of logging forms reported by the gNB-CU-CP, gNB-CU-UP and gNB-DU under measurement pollution conditions (S5-213499; contact: Ericsson) SA5 LS in Rel-17 To:RAN3 Cc:RAN2

R2-2202178 Reply LS on Report Amount for M4, M5, M6, M7 measurements (S5-214523; contact: Nokia) SA5 LS in Rel-17 To:RAN3 Cc:RAN2

R2-2202179 Reply LS on the details of logging forms reported by the gNB-CU-CP, gNB-CU-UP and gNB-DU under measurement pollution conditions (S5-215493; contact: Ericsson) SA5 LS in Rel-17 To:RAN3 Cc:RAN2

R2-2202180 Reply LS on the Beam measurement reports for the MDT measurements (S5-216628; contact: Ericsson) SA5 LS in Rel-17 To:RAN3 Cc:RAN2

R2-2203029 Draft Reply LS on Area scope configuration and Frequency band info in MDT configuration Huawei, HiSilicon LS out Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core To:RAN3

R2-2203468 Reply LS on user plane measurements in successful handover report Ericsson discussion NR\_ENDC\_SON\_MDT\_enh-Core

### 8.13.2 CRs and Rapporteur Resolutions

Tdoc Limitation: 0.

CR Rapporteurs to provide running CRs, potentially updated, and Provide resolution proposals to Rapporteur Handled Open Issues (directly in the running CR). See also R2-2201991, R2-2202015, and R2-2201986.

R2-2202706 Running 38.314 CR for R17 layer 2 measurements CMCC CR Rel-17 38.314 16.4.0 0020 - B NR\_ENDC\_SON\_MDT\_enh-Core

R2-2203025 NR RRC CR for introducing R17 MDT Huawei, HiSilicon CR Rel-17 38.331 16.7.0 2922 - B NR\_ENDC\_SON\_MDT\_enh-Core

R2-2203394 Introduction of Rel-17 MDT enhancements Nokia, Nokia Shanghai Bell CR Rel-17 37.320 16.7.0 0115 - B NR\_ENDC\_SON\_MDT\_enh-Core Late

R2-2203470 Enhancement of data collection for SON Ericsson CR Rel-17 38.331 16.7.0 2865 1 B NR\_ENDC\_SON\_MDT\_enh-Core R2-2200004

### 8.13.3 SON related Open Issues

Including Pre117-e discussions to gather company input on specific Open Issues

Including company input on Open Issues

See also R2-2201991, and R2-2202015

R2-2202570 SON Enhancements for CHO Lenovo, Motorola Mobility discussion Rel-17

R2-2202571 SON Enhancements for SHR Lenovo, Motorola Mobility discussion Rel-17

R2-2203010 Open issues on SHR NEC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2203210 Discussion on SON HO left issues OPPO discussion Rel-17 NR\_pos\_enh-Core

#### 8.13.3.1 Pre-discussions

Tdoc Limitation: 0

#### 8.13.3.2 Invited Input

Company input by tdocs

R2-2202591 MRO-related remaining open issues Apple discussion

R2-2202730 Leftovers for consecutive CHO failures CMCC, CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2202731 Leftovers for SHR CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2202732 Leftovers for MRO for SN CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2202778 Discussion on SON related open issues LG Electronics discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2202801 Discussion on SON Related Open Issues CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2202802 Discussion on Open Issue in Stage-2 Running CR CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2202971 Discussion on SHR enhancements vivo discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2202973 Consideration on SON open issues ZTE Corporation, Sanechips discussion Rel-17

R2-2203014 Discussion on SHR related open issues Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2203015 Discussion on SgNB MRO related open issues Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2203395 Detailed information required for MRO for SN change failure Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2203397 SHR and RLF report generation for same handover Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2203420 HO related SON changes Qualcomm Incorporated discussion Rel-17

R2-2203464 Handover-related SON aspects Ericsson discussion NR\_ENDC\_SON\_MDT\_enh-Core

R2-2203465 On PSCell MHI and SCG MRO enhancements Ericsson discussion NR\_ENDC\_SON\_MDT\_enh-Core

### 8.13.4 MDT related Open Issues

Including Pre117-e discussions to gather company input on specific Open Issues

Including company input on Open Issues

See also R2-2201986

#### 8.13.4.1 Pre-discussions

Tdoc Limitation: 0

R2-2203026 Pre-meeting discussion report for R17 MDT Huawei discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core Late

#### 8.13.4.2 Invited Input

Company input by tdocs

R2-2202733 Leftovers for on-demand SI CMCC, Ericsson, Samsung, CATT, ZTE, Huawei discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2202803 Discussion on MDT Related Open Issues CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2202974 Consideration on MDT open issues ZTE Corporation, Sanechips discussion Rel-17

R2-2203027 Discussion on MDT related open issues Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2203329 Discussion on logged MDT open issues Ericsson discussion

R2-2203331 On Immediate MDT measurements Ericsson, CMCC discussion

R2-2203396 Early measurements logging in MDT Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

### 8.13.5 UE Capabilities

Initial discussion on Features / UE caps developed in RAN2, if any. Note that this AI is complementary to AI 8.0.2.

R2-2202804 UE Capabilities about SON and MDT Enhanced Features CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2202975 Consideration on UE capability ZTE Corporation, Sanechips discussion Rel-17

R2-2203028 Discussion on UE capabilities for R17 SON and MDT Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2203427 SON MDT UE Capabilities Qualcomm Incorporated discussion Rel-17

### 8.13.6 Others

R2-2202939 Discussion on PSCell MHI recording SHARP Corporation discussion

R2-2202940 Discussion on SHR in CHO recovery case SHARP Corporation discussion R2-2201229

## 8.14 NR QoE

(NR\_QoE-Core; leading WG: RAN3; REL-17; WID: RP-211406)

Time budget: 0.5 TU

Tdoc Limitation: 3 tdocs

### 8.14.1 General

#### 8.14.1.1 Organizational

Tdoc Limitation: 0

Planning etc

#### 8.14.1.2 LS in

Tdoc Limitation: 0

LS in. For LSes that need action or has impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided.

Open Issues, see also R2-2202043:

wait for RAN3 progresses on management-based mobility.

wait for RAN3 progresses on whether RAN visible QoE should also be paused or if it is only regular QoE reports.

wait for RAN3 and SA4 progresses on how to define the RVQoE metrics reporting in RRC.

wait for SA4 progresses on whether the application can/would take the RRC segmentation capability into account and whether this need explicit indication.

wait for RAN3 progresses on whether to need separate UE capability for slice-based QoE.

[R2-2202128](file:///C%3A%5CUsers%5Cjohan%5COneDrive%5CDokument%5C3GPP%5Ctsg_ran%5CWG2_RL2%5CTSGR2_117-e%5CDocs%5CR2-2202128.zip) LS on QoE Measurement Session Start and Measurement Session End Indication from the UE (R3-221243; contact: Ericsson) RAN3 LS in Rel-17 To:RAN2 Cc:SA5

- Apple think R3 could also have just relied on measurement reports. Ericsson think the measurement report is sent at the end of the session.

- China Unicom agree w Ericsson, think R2 can just design the signalling.

- Lenovo think the application is running otherwise th network would not configure, this is just for QoE session.

* Noted

[R2-2202137](file:///C%3A%5CUsers%5Cjohan%5COneDrive%5CDokument%5C3GPP%5Ctsg_ran%5CWG2_RL2%5CTSGR2_117-e%5CDocs%5CR2-2202137.zip) LS on RAN3 agreement for management based QoE mobility (R3-221427; contact: ZTE) RAN3 LS in Rel-17 To:RAN2

* Noted

[R2-2202140](file:///C%3A%5CUsers%5Cjohan%5COneDrive%5CDokument%5C3GPP%5Ctsg_ran%5CWG2_RL2%5CTSGR2_117-e%5CDocs%5CR2-2202140.zip) LS on Support for Configuration and Reporting of RAN Visible QoE Measurements (R3-221465; contact: Ericsson) RAN3 LS in Rel-17 To:RAN2 Cc:SA4

- Ericsson indicate that the periodicity is in the CR.

- Huawei suggest to discuss directly in CR discussions. Chair agrees. China Unicom agrees as well.

* Noted

[R2-2202138](file:///C%3A%5CUsers%5Cjohan%5COneDrive%5CDokument%5C3GPP%5Ctsg_ran%5CWG2_RL2%5CTSGR2_117-e%5CDocs%5CR2-2202138.zip) LS on Support for Configuration and Reporting of RAN Visible QoE Measurements (R3-221463; contact: Ericsson) RAN3 LS in Rel-17 To:CT1 Cc:RAN2, SA4

* Noted

R2-2202139 LS on Support for Configuration and Reporting of RAN Visible QoE Measurements (R3-221464; contact: Ericsson) RAN3 LS in Rel-17 To:SA4 Cc:RAN2

* Noted

#### 8.14.1.3 CRs and Rapporteur Resolutions

Tdoc Limitation: 0.

CR Rapporteurs to provide running CRs, potentially updated, provide resolution proposals to Rapporteur Handled Open Issues, see also R2-2202043

* [AT117-e][045][QoE] RRC CR (Ericsson)

 Scope: Review the CR provided in R2-2203428, including the proposed R2117e New resolutions to capture the impact due to LS’ins, including check of previous meeting updates (as there was no formal endorsement). IF new LSes arrive during the meeting, they can be taken into account offline by this email discussion.

 Intended outcome: ph1: Endorsable CR, Report if applicable.

 Deadline: VERY SHORT ph1 W1 Wednesday (for online endorsement W1 Thursday).

[R2-2203428](file:///C%3A%5CUsers%5Cjohan%5COneDrive%5CDokument%5C3GPP%5Ctsg_ran%5CWG2_RL2%5CTSGR2_117-e%5CDocs%5CR2-2203428.zip) Introduction of QoE measurements Ericsson CR Rel-17 38.331 16.7.0 2958 - B NR\_QoE-Core

R2-2202871 38.300 running CR for Introduction of QoE measurements in NR China Unicom, Huawei, HiSilicon draftCR Rel-17 38.300 16.8.0 B NR\_QoE-Core

R2-2202623 Running CR of UE capability for NR QoE CMCC draftCR Rel-17 38.306 16.7.0 B NR\_QoE

Chair Comment: In addition to 38306, and UE cap draft CR for 38331 is needed, to be ready by EOM and for merge into UE caps Mega CRs.

### 8.14.3 Open Issues

#### 8.14.3.1 Pre-discussions

Tdoc Limitation: 0.

Including Pre117-e discussions to gather company input on specific Open Issues see also R2-2202043

Companies to provide input into the following discussion:

[Pre117-e][008][QoE] QoE Open Issues Input (China Unicom)

Treated On-line W1 Thursday

[R2-2202878](file:///C%3A%5CUsers%5Cjohan%5COneDrive%5CDokument%5C3GPP%5Ctsg_ran%5CWG2_RL2%5CTSGR2_117-e%5CDocs%5CR2-2202878.zip) Summary of [Pre117-e][008][QoE] QoE Open Issues Input China Unicom report Rel-17 NR\_QoE-Core Late

DISCUSSION (except P8 which wasn’t treated due to lack of time)

- HW ZTE support all

P5

- QC think we need to check with SA4. Apple agrees. Samsung OPPO Intel CATT agrees

- LG think it is ok

- China Unicom wonder why we need to check with SA4, R2 can decide.

- QC think this need to be per service type. Ericsson Apple OPPO CATT also support per service type.

P6

- QC would like to postpone this.

- LG think it is ok. CU think it has been decided by R3

P7

- QC think each QoE config should be FFS. Think the per QoE config is for area scope control, which is FFS. CATT agrees.

- CU wonders how this would work.

- Apple think RAN2 need to determine if start/stop indication is needed. Think that application would need to inform about start stop otherwise there is no additional information.

- LG don’t know how this indication work. Think that QoE ID need to be explicitly indicated. One bit is not sufficient.

- Chair think indeed application need to be involved.

- Ericsson indicate that in the current CR the meas ID is sent with measurement reports etc, and it should be done the same way foir this case.

- Nokia think that stop indication is not in SA4 TS. CATT think also SA5 specifies start.

P1

- ZTE think this is not needed, would be a rare case. LG think we already agreed that report may be dropped in some cases, and think this would be rare. Think it would require to specify some internal interaction, think we don’t have enough time. Prefer to simply drop. OPPO think the QoE is associated to source cell. Apple don’t want to define special behaviour for SRB and think it is rare.

- Ericsson think this can happen more freq with RRC segmentation, can be sent after the HO, and there are other RRC messages with the same behaviour so it is not complex. CATT QC support P1. QC think there are ways for the network to avoid loss for other cases, but for HO there is no other mechanism. Huawei think it is useful.

- Chair: There is no consensus to have P1, there is indeed some support, and it seems it is not so complex to implement. Can consider in Q2.

P3

- LGE think this should be conditional mandatory, or just optional without signalling, no signalling is needed. QC agree.

- Ericsson think this info can be used to select UEs. Think the frequency of the reports is configured. Lenovo agrees with P3, and think it shouldn’t be mandatory.

P4

- QC think this involves additional memory so it should be optional. OPPO agrees with QC, and think this was the majority view.

- CMCC and Ch Unicom think this is essential for overload scenarios and need to be mandatory. Chair think that all other overload functionality is mandatory and the only reason to make it optional is if it would limit the deployment of the feature.

- LGE ZTE Lenovo support P4

* SRB4 is used to transmit RAN visible QoE measurements.
* A parameter per service type indicating whether UE supports RAN visible QoE capability.
* RAN2 assumes that No UE capability parameters of the alignment of QoE and MDT need to be introduced.
* 1-bit indication added in the MeasurementReportAppLayer message is used to indicate session start/stop for each QoE configuration, sent with Meas ID (as other reports)
* Indication of Session start/stop is configurable per QoE configuration.

We send LS, primarily to request SA4 and CT1 to take into account, and feedback if there are concerns.

* RRC segmentation capability can be optional with UE capability parameter (one extra bit).
* R2 assumes Pause and resume capability is one of basic sub-features of QoE. (This may be revisited in Q2, if UE vendors find that this requirement is a blocker for wide deployment of QoE reporting).

#### 8.14.3.2 Invited Input

Company input on the following Open Issues see also R2-2202043

- Whether and how the gNB resumes or pauses QoE reporting during HO and RRC resume.

- Whether solutions of legacy QoE mobility could be applied to RAN visible QoE and the specific aspects applied only for RAN visible QoE mobility.

* [AT117-e][046][QoE] Invited tdocs Open Issues (Ericsson)

 Scope: Consider the invited input, and tdocs provided under 8.14.3.2 excluding issues handled in R2-2202878, or in the RRC CR, or under 8.14.4 or issues where we are still waiting for input from other groups (there is overlap in some tdocs). For the invited input and non-excluded contents, determine agreeable parts, discussion points and remaining open issues (if any). Determine need for LS outs if any.

 Intended outcome: Report

 Deadline: W1 Friday (for online CB W2 Monday).

R2-2202622 Remaining open issue relating QoE CMCC discussion Rel-17 NR\_QoE

R2-2202828 Discussion on Pause/Resume QoE Reporting Mobility ZTE Corporation, Sanechips discussion Rel-17

R2-2202829 Discussion on RAN Visible QoE Mobility ZTE Corporation, Sanechips discussion Rel-17

R2-2202857 Left issues of QoE mobility Qualcomm Incorporated discussion NR\_QoE\_enh

R2-2202863 Discussion on Remaining Open Issues CATT discussion NR\_QoE\_enh-Core

R2-2202935 Support of MDT and QoE alignment Qualcomm Incorporated discussion NR\_QoE\_enh

R2-2202986 Pause and resume under mobility Samsung discussion Rel-17

R2-2202987 RAN visible QoE under mobility Samsung discussion Rel-17

R2-2203038 Remaining open issues on QoE LG Electronics Inc discussion Rel-17

R2-2203136 Discussion on pause and resume of QoE reporting during HO and RRC resume vivo discussion Rel-17 NR\_QoE-Core

R2-2203137 Discussion on RAN visible QoE mobility vivo discussion Rel-17 NR\_QoE-Core

R2-2203209 Discussion on QoE measurement collection configuration in NR OPPO discussion Rel-17 NR\_QoE-Core

R2-2203346 Discussion on open issues for QoE measurement configuration and reporting Huawei, HiSilicon discussion Rel-17 NR\_QoE-Core Late

R2-2203348 RAN visible QoE during mobility Huawei, HiSilicon discussion Rel-17 NR\_QoE-Core Late

R2-2203398 QMC/MDT alignment and paused QoE handling in HO Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_QoE-Core

R2-2203430 RAN Visible QoE measurements Ericsson discussion Rel-17 NR\_QoE-Core

R2-2203431 Handling of paused QoE and RVQoE reports during HO and RRC resume Ericsson discussion Rel-17 NR\_QoE-Core

### 8.14.4 UE capabilities

Features / UE caps developed in RAN2. Note that this AI is complementary to AI 8.0.2. Input here should not overlap with input for the previous subclasues.

Includes Company input on the following Open Issues see also R2-2202043: Whether and How AS layer obtains application capability.

* [AT117-e][047][QoE] UE capability (CMCC)

 Scope: Treat R2-2202827, R2-2202988, R2-2203347, R2-2203404, R2-2203429, determine agreeable parts and discussion points. Determine need for LS outs if any.

 Intended outcome: Report

 Deadline: W1 Friday (for online CB W2 Monday).

R2-2202827 Discussion on UE Capability for QoE ZTE Corporation, Sanechips discussion Rel-17

R2-2202988 Capabilities of AS layer and application layer Samsung discussion Rel-17

R2-2203347 AS and application layer interactions for NR QoE UE capabilities Huawei, HiSilicon discussion Rel-17 NR\_QoE-Core Late

R2-2203404 UE Capabilities for QMC Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_QoE-Core

R2-2203429 UE capabilities for QoE measurements Ericsson discussion Rel-17 NR\_QoE-Core

Not Treated

R2-2203208 Discussion on QoE measurement collection capability OPPO discussion Rel-17 NR\_QoE-Core

R2-2202906 Open issues for QoE capability Qualcomm Incorporated discussion NR\_QoE\_enh

R2-2202865 Discussion on UE capabilities for NR QoE CATT discussion NR\_QoE\_enh-Core

### 8.14.5 Other

Issues not covered elsewhere.

R2-2202551 Start/stop indication in NR QoE Apple discussion Rel-17 NR\_QoE-Core

## 8.15 NR Sidelink enhancements

(NR\_SL\_enh-Core; leading WG: RAN1; REL-17; WID: RP-202846)

Time budget: 1.5 TU

Tdoc Limitation: 3 tdocs

### 8.15.1 Organizational

Including incoming LSs, rapporteur inputs (e.g. running CR and/or open issues that were not covered by [POST] email discussion and need to be addressed), etc.

R2-2202204 Introduction of sidelink DRX capability OPPO CR Rel-17 38.331 16.7.0 2877 - B NR\_SL\_enh-Core Late

R2-2202205 Introduction of sidelink DRX capability OPPO CR Rel-17 38.306 16.7.0 0674 - B NR\_SL\_enh-Core Late

R2-2202391 Introduction of sidelink DRX capability OPPO CR Rel-17 36.331 16.7.0 4758 - B NR\_SL\_enh-Core Late

R2-2202474 Rapporteur Inputs on Stage 2 Open Issues InterDigital (Rapporteur) discussion Rel-17 NR\_SL\_enh-Core

R2-2202478 Introduction of eSL in TS.38300 InterDigital (Rapporteur) CR Rel-17 38.300 16.8.0 0405 - B NR\_SL\_enh

R2-2202712 RRC running CR for NR Sidelink enhancements Huawei, HiSilicon CR Rel-17 38.331 16.7.0 2902 - F NR\_SL\_enh-Core Late

R2-2202948 Running CR of TS 38.321 for Sidelink enhancement LG Electronics France CR Rel-17 38.321 16.7.0 1206 - F NR\_SL\_enh-Core Late

### 8.15.2 SL DRX

Including [POST116bis-e][705].

R2-2202190 Discussion on DRX left issues OPPO discussion Rel-17 NR\_SL\_enh-Core

R2-2202203 Summary of [POST116bis-e][705][V2X/SL] Open issues on SL DRX (OPPO) OPPO report Rel-17 NR\_SL\_enh-Core Late

R2-2202388 Leftover Issue for Sidelink DRX CATT discussion Rel-17 NR\_SL\_enh-Core

R2-2202430 Remaining aspects of SL DRX Ericsson discussion Rel-17 NR\_SL\_enh-Core

R2-2202452 Discussion on SL DRX remaining issues for unicast ZTE Corporation, Sanechips discussion Rel-17 NR\_SL\_enh-Core

R2-2202453 Discussion on TX profile issues for SL DRX ZTE Corporation, Sanechips discussion Rel-17 NR\_SL\_enh-Core

R2-2202475 Consideration of the Active Time for Periodic Transmissions InterDigital, Ericsson, vivo, Huawei, HiSilicon, Nokia, ASUSTek, Lenovo, Motorola Mobility, Samsung discussion Rel-17 NR\_SL\_enh-Core

R2-2202476 Resource Allocation for DRX InterDigital discussion Rel-17 NR\_SL\_enh-Core

R2-2202540 Discussion on remaining issues on SL-DRX Apple discussion Rel-17 NR\_SL\_enh-Core

R2-2202581 Remaining MAC issues for SL DRX Lenovo, Motorola Mobility discussion Rel-17

R2-2202667 On SL DRX and candidate resource selection Intel Corporation discussion Rel-17 NR\_SL\_enh-Core

R2-2202713 Remaining issue on sidelink DRX Huawei, HiSilicon discussion Rel-17 NR\_SL\_enh-Core

R2-2202764 Consideration on the different DRX status among RX UEs in SL groupcast Huawei, HiSilicon discussion Rel-17 NR\_SL\_enh-Core

R2-2202900 TP for NOTE-based approach for Q2.3.3-1b in [POST116bis-e][705] OPPO discussion Rel-17 NR\_SL\_enh-Core Late

R2-2202901 TP for normative-text-based approach for Q2.3.3-1b in [POST116bis-e][705] OPPO discussion Rel-17 NR\_SL\_enh-Core Late

R2-2202902 TP for NOTE-based approach for Q2.3.3-2b in [POST116bis-e][705] OPPO discussion Rel-17 NR\_SL\_enh-Core Late

R2-2202903 TP for normative-text-based approach for Q2.3.3-2b in [POST116bis-e][705] OPPO discussion Rel-17 NR\_SL\_enh-Core Late

R2-2202941 Discussion on remaining issues for SL DRX LG Electronics France discussion NR\_SL\_enh-Core

R2-2202984 consideration on the remaining issues for SL DRX LG Electronics France discussion Rel-17

R2-2203047 SL-DRX negotiation procedure in unicast vivo discussion Rel-17

R2-2203048 Unsolved issues on SL-DRX vivo discussion Rel-17

R2-2203082 Remaining issues for SL DRX Samsung Research America discussion

R2-2203147 Discussion on sidelink DRX open issues Xiaomi discussion

R2-2203152 Resource selection considering SL DRX ITL discussion Rel-17

R2-2203159 Summary of [POST116bis-e][707][V2X/SL] Open issues on IUC (LG) LG (Rapporteur) discussion Rel-17 NR\_SL\_enh-Core Late

R2-2203182 SL DRX CP aspects Lenovo, Motorola Mobility discussion NR\_SL\_enh-Core

R2-2203200 Handling of sidelink mode-1 grant drop due to misalignment with SL-DRX Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SL\_enh-Core

R2-2203274 Down-selection for SL DRX configuration for GC/BC with multiple QoS profiles associated with the same L2 DST ID Nokia, Nokia Shanghai Bell discussion NR\_SL\_enh-Core

### 8.15.3 Resource allocation enhancements RAN2 scope

Including [POST116bis-e][706] and [POST116bis-e][707].

R2-2202191 Discussion on power saving resource allocation enhancement OPPO discussion Rel-17 NR\_SL\_enh-Core

R2-2202192 Discussion on inter-UE coordination OPPO discussion Rel-17 NR\_SL\_enh-Core

R2-2202387 IUC Request and Response MAC CE Design CATT discussion Rel-17 NR\_SL\_enh-Core

R2-2202431 MAC CE design of inter-UE coordination Ericsson discussion Rel-17 NR\_SL\_enh-Core

R2-2202432 Remaining issues for power saving resource allocation Ericsson discussion Rel-17 NR\_SL\_enh-Core

R2-2202451 Discussion on Inter-UE coordination ZTE Corporation discussion Rel-17 NR\_SL\_enh-Core

R2-2202477 On the Allowable Cast Types for IUC InterDigital discussion Rel-17 NR\_SL\_enh-Core

R2-2202541 Discussion on Inter-UE Coordination Apple discussion Rel-17 NR\_SL\_enh-Core

R2-2202542 Discussion on power saving resource selection Apple discussion Rel-17 NR\_SL\_enh-Core

R2-2202582 Open issues on SL inter-UE coordination Lenovo, Motorola Mobility discussion Rel-17

R2-2202668 Inter-UE coordination open issues Intel Corporation discussion Rel-17 NR\_SL\_enh-Core

R2-2202823 Summary of [POST116bis-e][706][V2X/SL] Open issues on power-saving resource allocation, Phase 2 vivo (Rapporteur) discussion Late

R2-2202866 Consideration on Inter-UE coordination Huawei, HiSilicon discussion

R2-2202942 Discussion on Inter-UE Coordination LG Electronics France discussion NR\_SL\_enh-Core

R2-2203046 Latency bound and remaining PDB related to inter-UE coordination MAC CE not covered by open issue list vivo discussion Rel-17

R2-2203083 Partial-sensing/random selection based resource allocation in SL DRX Samsung Research America discussion

R2-2203084 Introduction of IUC MAC CE Samsung Research America discussion

R2-2203207 Whether UE-A in IUC can be in mode 1 or mode 2 Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SL\_enh-Core

R2-2203472 Discussion on Inter-UE Coordination Qualcomm Finland RFFE Oy discussion

## 8.16 NR Non-Public Network enhancements

(WI NG\_RAN\_PRN\_enh-Core; leading WG: RAN3; REL-17; WID: RP-202363)

Time budget: 0 TU

Tdoc Limitation: 1 tdocs

* [AT117-e][048][eNPN] Open Issues (Nokia)

 Scope: Treat tdocs on open issues: R2-2202208, R2-2202620, R2-2202832, R2-2202855, R2-2202889, R2-2202896, R2-2202898, R2-2203075, R2-2203264, R2-2203447, Also, review the CR in R2-2202636 and consider the open issues listed there, for UE capabilities.

 Intended outcome: Report

 Deadline: W1 Friday (for on-line CB W2 Monday). It is expected that this discussion continues W2 for final agreement of the CRs.

### 8.16.1 Organizational

Rapporteur input, incoming LS etc. Running CRs.

LS in

R2-2202174 Reply to LS on support of PWS over SNPN (S1-214049; contact: Nokia) SA1 LS in Rel-17 To:SA3 Cc:SA2, CT1, RAN2, RAN3, SA, CT, RAN

R2-2202175 Reply LS on limited service availability of an SNPN (S2-2109254; contact: Qualcomm) SA2 LS in Rel-17 To:CT1, RAN2 Cc:SA1

CRs

R2-2202636 Introduction of Rel-17 NPN UE capability Intel Corporation CR Rel-17 38.306 16.7.0 0684 - B NG\_RAN\_PRN\_enh-Core

R2-2202689 Introduction of Enhancements for Private Networks Qualcomm Incorporated CR Rel-17 38.304 16.7.0 0230 - B NG\_RAN\_PRN\_enh-Core

R2-2203072 Introducing NPN enhancements: Credential Holders, Onboarding, IMS emergency, and PWS support in SNPNs Nokia, Nokia Shanghai Bell CR Rel-17 38.300 16.8.0 0414 - B NG\_RAN\_PRN\_enh-Core

R2-2203073 Introducing NPN enhancements: Credential Holders, Onboarding, and IMS emergency support in SNPNs Nokia, Nokia Shanghai Bell CR Rel-17 38.331 16.7.0 2925 - B NG\_RAN\_PRN\_enh-Core

Work plan

R2-2203074 RAN2 Work Plan for Enhancement for Private Network Support for NG-RAN Nokia, China Telecom (Rapporteurs) Work Plan Rel-17 NG\_RAN\_PRN\_enh-Core

### 8.16.2 Issues and Corrections

Address Open Issues: Finalize encoding of GINs in SIB, settle max no of GINs per Cell, finalize UE capabilites.

R2-2202208 Remaining Key Issues for eNPN OPPO discussion Rel-17 NG\_RAN\_PRN\_enh-Core

R2-2202620 Discussion on open issues for NPN CMCC discussion Rel-17 NG\_RAN\_PRN\_enh

R2-2202832 Remaining issue of GIN design for eNPN China Telecom discussion Rel-17 NG\_RAN\_PRN\_enh-Core

R2-2202855 Discussion on open issues in eNPN Samsung R&D Institute India discussion Rel-17 NG\_RAN\_PRN\_enh-Core

R2-2202889 Discussion on GINs for SNPN Huawei, HiSilicon discussion Rel-17 NG\_RAN\_PRN\_enh-Core

R2-2202896 Discussion on open issues for R17 NPN vivo discussion Rel-17 NG\_RAN\_PRN\_enh-Core

R2-2202898 Consideration on the remaining eNPN issues ZTE Corporation, Sanechips discussion Rel-17 NG\_RAN\_PRN\_enh-Core

R2-2203075 Remaining open issues of eNPN Nokia, Nokia Shanghai Bell discussion Rel-17 NG\_RAN\_PRN\_enh-Core

R2-2203264 Resolving open issues for eNPN LG Electronics France discussion Rel-17

R2-2203447 Remaining details for eNPN Ericsson discussion Rel-17 NG\_RAN\_PRN\_enh-Core

## 8.17 NR feMIMO

(NR\_feMIMO-Core; leading WG: RAN1; REL-17; WID: RP-212535)

Time budget: 0.5 TU

Tdoc Limitation: 3 tdocs

### 8.17.1 General

* [AT117-e][063][feMIMO] LS out (Ericsson)

 Scope: Initial LS out, asking questions to R1 according to initial on-line discussion. Can also discuss other easily agreeable or potentially necessary questions to ask R1, if any.

 Intended outcome: Approved LS out.

 Deadline: W1 Friday

[R2-2203752](file:///C%3A%5CUsers%5Cjohan%5COneDrive%5CDokument%5C3GPP%5Ctsg_ran%5CWG2_RL2%5CTSGR2_117-e%5CDocs%5CR2-2203752.zip) DRAFT LS on further questions on feMIMO RRC parameters Ericsson

Online W1 Wed

- On sim/common TCI state update Huawei think we should not include assumptions, e.g. the list. Intel think this is based on Rel-16. Huawei would be ok to refer to Rel-16 but R17 is different. CATT think we can say that the two configurations R16 and R17 can be separate to allow different reference. OPPO think we lose the point if we don’t mention the new list. Huawei think the main point to emphasize to R1 is that ref CC/BWP is only for cells not in the CC Rel 16 list. Intel think we can come up with reasonable wording.

- Ericsson think that the term common is not clear, it could mean e.g. the joint DL UL update, we need to revise also w.r.t. that. OPPO think there are easy ways to reword to avoid confusion.

- CATT think we can ask R1 whether addPCIinfo should be under QCLinfo type 1 type 2 or if it can be under DLTCI state or joint TCI state info. Ericsson that for this case it will not be in Rel-15/16 (for mTRP). Intel think CATT question is reasonable, can there be different values for QCLinfo type1 and type 2? Ericsson think it is clear, if under QCLinfo type 1 and 2 then need to be the same. OPPO agrees with Ericsson, and think the current CR is ok. Chair: ok we discuss this in R2.

Continue offline deadline friday

* [AT117-e][009][feMIMO] RRC 1 (Ericsson)

 Scope: Take into account on-line. Make further progress based on non-resolved parts of R2-2203050 if any. Progress P10 and P14 from R2-2203719. Take into account new LS from RAN1 when/if it becomes available, to the extent reasonable. Update RRC CR. (this discussion will also continue as a post discussion for the CR). Determine agreeable parts, identify discussion points if any.

 Intended outcome: Report, revised RRC CR (CR might not be needed for CB).

 Deadline: In time for online CB W2 Wednesday

* [AT117-e][016][feMIMO] MAC (Samsung)

 Scope: Take into account on-line. Make further progress based on non-resolved parts of R2-2203709. Take into account new LS from RAN1 when/if it becomes available, to the extent reasonable. Update MAC CR. (This discussion will also continue as a post discussion for the CR). Determine agreeable parts, identify discussion points if any.

 Intended outcome: Report, revised MAC CR (CR might not be needed for CB).

 Deadline: In time for online CB W2 Wednesday

#### 8.17.1.1 Organizational

Tdoc Limitation: 0

Planning etc

#### 8.17.1.2 LS in

Tdoc Limitation: 0

LS in. For LSes that need action or has impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided.

#### 8.17.1.3 CRs and Rapporteur Resolutions

Tdoc Limitation: 0.

CR Rapporteurs to provide running CRs, potentially updated, provide resolution proposals to Rapporteur Handled Open Issues, See also R2-2202001

RRC:

- whether pathloss reference and power control parameters of PUSCH/PUCCH/SRS should be associated with Joint TCI state

- How to refer to a BWP/CC, where Joint/DL and UL TCI state pool are defined

- On SRS partial sounding, there is a parameter ‘StartRBIndex’ that is missing in ASN1. In 38.211, there is: ”k\_F∈{0,1,…,P\_F-1} is given by the higher-layer parameter StartRBIndex if configured, otherwise k\_F=0”.

- Many maxNRof values are not added in the CR(e.g. rows 24,25). Suggestion: rapporteur provides in next version towards 117

- Row 18 “PDSCH configuration for each CC/BWP. The reference CC/BWP includes the Rel-17 TCI state pool (a list of TCI states) for PDSCH” not implemented. Suggestion: rapp provides in next version towards 117

- Rows 16,17 DLorJOint-TCIState-Id-r17 not implemented in CSI-AssociatedReportConfigInfo or NZP-CSI-RS-Resource. Suggestion: rapp provides in next version towards 117

R2-2202926 Introduction of feMIMO Samsung CR Rel-17 38.321 16.7.0 1204 - B NR\_feMIMO-Core

R2-2203032 Introduction of Release-17 feMIMO Ericsson CR Rel-17 38.331 16.7.0 2923 - B NR\_feMIMO-Core

R2-2203033 FeMIMO L1 parameters with RAN2 notes Rel-17 NR Ericsson Limited other Rel-17 NR\_feMIMO-Core

R2-2203035 RRC CR rapporteur open issue document Ericsson discussion Rel-17 NR\_feMIMO-Core

### 8.17.3 Open Issues

#### 8.17.3.1 Pre-discussions

Tdoc Limitation: 0.

Pre117-e discussions to gather company input on specific Open Issues See also R2-2202001

RRC:

- pucch-PowerControlSet to be aligned with the corresponding MAC CE design, R2 action: develop common understanding on the operation.

- BFD/BFR RRC configuration is not implemented. Rows 60-62, 67. R2 action: develop common understanding on the operation.

- the detail SSB configuration of aTRP, and including whether such IE is also applicable for mTRP (4.1), why put it under SSB-MTC (4.2), wheher there is a disconnect on the application of PUCCH-SpatialRelationInfo (4.4.),

- How to indicate serving cells, which will share common TCI state i.e. share the MAC CE and DCI from one reference serving cell (this issue is also related to the configuration of beamAppTime-r17).

Companies to provide input into the following discussion:

[Pre117-e][009][feMIMO] feMIMO Open Issues Input (Ericsson)

R2-2203050 [Pre117-e][009][feMIMO] feMIMO Open Issues Input (Ericsson) Ericsson report NR\_feMIMO-Core Late

DISCUSSION

P2

- OPPO think this is cell group level, no need to FFS. Huawei agrees. Ericsson think the views in the discussion were divergent. ZTE also agrees with OPPO

P3

- Chair: Discussion offline (in one of the offlines).

P5

- Nokia think this is ASN1 detail. IEs can be moved around. OPPO wonder if this is really relevant to MTC. Ericsson think there could be confusion due to previous duplication of info for Idle and Conn.

P6

- QC and Ericsson has assumed this was actually needed. Nokia agrees, and think if we should not have it, then R1 should remove it. ZTE agrees.

- Intel understands that additionalPCI is not requested by R1. Ericsson think this is ambiguous. Intel think this is not necessary. LG agree w Intel. OPPO agree as well.

- Samsung indicates that MAC CR is already impl acc to previous RRC assumption, will this be a working assumption. Chair think unclarities and inconsistencies in CRs can be indicated in Editors Notes.

P7

- Nokia think this is not clear. Intel think RRC rapporteur proposal can be baseline, intel proposed the CHOICE, can be considered later.

- OPPO think that the ref to BWP can also be for UL TCI state. Intel agrees, we need an ID for UL as well. Ericsson think R1 has no input related to UL, so maybe we should ask this,

- Chair: Seems like we can keep RRC rapporteur proposal as a baseline.

* P1 is agreed
* Configure UE with two SR IDs, schedulingRequestID-BFR and schedulingRequestID-BFR2, which are associated in an implicit manner in field description to corresponding BFD sets(and align further when BFD set configuration finalizes). FFS whether these IDs are cell group level, cell level or BWP level.
* Add SSB transmission power to SSB-MTC-AdditionalPCI-r17. FFS further modifications based on RAN1 input.
* Configure field SSB-MTC-AdditionalPCI in ServingCellConfig.
* Ask Q to R1 in LS whether for mTRP, additionalPCI is needed for PUCCH-SpatialRelationInfo (or equivalent rephrased question).

#### 8.17.3.2 Invited tdocs

### 8.17.4 Other

Issues not covered elsewhere.

- OI RRC: FFS for sfnSchemePdsch in PDSCH-Config to be applicable for BWP-DownlinkCommon (RRC Rap: hopefully R1 can give guidence).

#### 8.17.4.1 RRC and General

Please see the RRC CR (in R2-2202000), annotated L1 parameters list (in R2-2202055), and RRC open issues list (in R2-2202001). Please focus company input on Open Issues and unresolved parts.

R2-2203719 AI Summary of 8.17.4.1 RRC and General (Intel) Intel

DISCUSSION W1 Monday

Initial discussion short due to lack of time

- Intel suggest to discuss issues 1, 2, 3 and see if we need to ask RAN1 something.

- Huawei think new can ask Issues 1 and 2 to RAN1, not sure about 3.

- Nokia think indeed we can ask RAN1 on these.

P1

- Chair wonder if we can simplify and just assume that we configure one or the other but not both.

- Nokia think we need to be able to switch smoothly between using Joint and separate.

. Apple think config change would be ok, can ask R1 on issue 2.

Issue 3

- Oppo and Samsung think we should separate lists of R16 and R17. Nokia agrees. Intel think we could ask about what scenarios are intended to work together

* By configuration “both joint TCI and separate DL/UL TCI state” is not supported.
* On Issue 2 (and 3 if question can be finally agreed) we ask RAN1

DISCUSSION W1 Wed

P2

- Samsung wonder whether we really need to indicate this, shouldn’t we indicate just UL or DL. CATT agrees. Ericsson think this is just matter of wording, we can resolve in the CR.

P8

- CATT think this is just a confirmation

- OPPO think there is lots of details, is the intention to say that in either R17 unified TCi fwk OR R16 mTRP fwk? CATT confirm that yes this is the intention.

- ZTE think we have two r16 variants single pdcch and multi pdcch, is this applicable to both? Can ask R1.

- QC also think this should be asked to RAN1

- Intel think that on a high level it is already clear that either R17 unified TCi fwk OR R16 mTRP fwk are configured, and R17 unified TCi fwk is not configured with r16 multi PDCCH. Don’t see a need to ask R1. LGE agrees.

- LGE are ok w P8

- vivo think this is just a confirmation, and think it is applicable to R16 singel and multiple pdcch and this is clear already, no need to ask R1.

- ZTE don’t understand then why we need to consider sim TCI update for R16 and R17 unified TCI state. Oppo and Intel think we already ask question applicable to this (in the draft LS).

- Ericsson think R1 may confirm this in a reply LS (reply to our previous LS), so maybe we don’t need to confirm.

- Chair: stop, no confirmation for now.

P12

- Ericsson whether there is anything to describe. If so think it should be in Stage-2.

* RAN2 agree that sfnSchemePdsch in PDSCH-Config is only applicable for BWP-DownlinkDedicated.
* RAN2 confirms that there is no impact to RRM with inter-cell mTRP.
* indicate which TCI mode (joint or separate) should currently be used in a serving cell in the ServingCellConfig. The tci-StateType-r17 parameter should be removed from the current RRC running CR.
* SI reception in inter-cell BM should be covered in TS38.300 (Samsung)

Proposals 10 and 14 in the RRC offline discussion

R2-2202669 Remaining issues on RRC parameters Intel Corporation discussion Rel-17 NR\_feMIMO-Core

Moved here

R2-2202319 Discussion on RRC aspects for feMIMO vivo discussion Rel-17 NR\_feMIMO-Core

R2-2202348 Systerm Information provisioning for inter-cell beam management Fujitsu discussion Rel-17 NR\_feMIMO-Core

R2-2202447 Discussion on FeMIMO open issues OPPO discussion Rel-17 NR\_feMIMO-Core

R2-2202927 PUCCH power control for mTRP FR1 Samsung discussion Rel-17 NR\_feMIMO-Core

R2-2203041 FeMIMO RRC impact Ericsson discussion Rel-17 NR\_feMIMO-Core

R2-2203043 Per BWP configuration of SFN scheme Ericsson discussion Rel-17 NR\_feMIMO-Core

Moved here

R2-2203102 Discussions on the remaining RRC issues of feMIMO CATT discussion Rel-17 NR\_feMIMO-Core

R2-2203103 Considerations on Inter-cell Beam Management CATT discussion Rel-17 NR\_feMIMO-Core R2-2201254

R2-2203126 Clarification on the serving cell measurement for mTRP Xiaomi Communications discussion Rel-17 NR\_feMIMO-Core R2-2201386

R2-2203263 Signaling support for UL power control for BM LG Electronics France discussion Rel-17

Moved here

R2-2203381 FeMIMO RRC issues Huawei, HiSilicon discussion Rel-17 NR\_feMIMO-Core

R2-2202231 Discussion on unified TCI framework TCL Communication Ltd. Discussion

Moved Here

Withdrawn

R2-2202230 Discussion on unified TCI framework TCL Communication Ltd. discussion Withdrawn

#### 8.17.4.2 MAC

Please check the MAC CR (in R2-2201994) for Open issues on MAC. Please focus company input on Open Issues.

R2-2203709 [Pre117-e][016][feMIMO] AI summary of 8.17.4.2 MAC Samsung

P4

- Nokia wonder if this actually works, as the BFR is considered successful even if UE doesn’t indicate candidate.

- Samsung think p14 addresses this, this point can be discussed there.

P18

- intel wonder why new MAC CE need this. Samsung think power control sets might not be the same as spatial relation, so this is a safe way, and it shortens discussion. Ericson point out that we have agreed to not use spatial relation but a new RRC config with a new index, and we need a MAC CE that works with the new Index. OPPO agrees with Ericsson. QC agree with Intel think MAC CE format can be the same, can refer to different RRC IE.

P23

- OPPO think there are additional conditions, ZTE think the P23 is general, specific details are discussed in P29. Chair: We Treat P23 and P29 together.

P25

- Huawei think we may need to somewhat modify the legacy condition as it is per cell, and now we need per TRP or similar. Apple agrees. Vivo agree.

* P1: eLCID is used for Enhanced BFR MAC CE with four octets Ci and truncated Enhanced BFR MAC CE with four octets Ci.
* P2: TRP level truncation is supported.
* P3: MAC entity may stop, ongoing Random Access procedure due to a pending SR for BFR of a BFD-RS set of SpCell, which has no valid PUCCH resources configured, if a MAC PDU is transmitted using a UL grant other than a UL grant provided by Random Access Response or a UL grant determined as specified in clause 5.1.2a for the transmission of the MSGA payload, and this PDU contains an Enhanced BFR MAC CE or a Truncated Enhanced BFR MAC CE which includes beam failure recovery information of that BFD-RS set of the SpCell.
* P4: The MAC entity shall consider the BFR(s) triggered for a BFD-RS set of a Serving Cell successfully completed (shall not continue) if a PDCCH addressed to C-RNTI indicating uplink grant for a new transmission is received for the HARQ process used for the transmission of the Enhanced BFR MAC CE or Truncated Enhanced BFR MAC CE which contains beam failure recovery information of that BFD-RS set of the Serving Cell.
* P16: Add a NOTE regarding the reference point of starting a DRX inactivity timer when PDCCH repetition is configured.
* P17: Introduce new MAC CE(s) to support PUCCH Power control set update (with power control) for FR1 cases consisting linking of PUCCH resource with one or two PUCCH-PowerControlSetInfos.
* P18: PUCCH power control for mTRP FR1 MAC CE support multiple number of linking between PUCCH Resource ID and PUCCH power control sets.
* P19: PUCCH resource group concept can be also applied to the PUCCH power control for mTRP FR1 MAC CE.
* P20: UL BWP ID which points to the BWP where UL TCI state list is configured is included in unified TCI state activation/deactivation MAC CE.
* P21: The Enhanced PHR MAC CE with two PHs of the same serving cell is introduced for both the single entry format and multiple entry format.
* P22: Both single octet bitmap (7 Ci bits and 1 R bit) and 4 octet bitmap (31 Ci bits and 1 R bit) formats are supported for the Enhanced PHR MAC CE.
* P24: No new TRP specific PHR related parameters are introduced. The legacy PHR related timers and threshold parameters are reused for the enhanced PHR reporting for the mTRP PUSCH repetition case.
* P25: The legacy PHR triggering conditions are reused for supporting enhanced PHR reporting in the mTRP PUSCH repetition case (but triggering condition assumed per TRP instead of per Cell)
* P26: Rel-17 MPE information reporting related issues would be discussed after receiving reply LS from RAN1. R2-2203269 could be the baseline of the further discussion.

Continue offline and CB next week

R2-2202288 Multi TRP Beam Failure Detection and Recovery Samsung Electronics Co., Ltd discussion Rel-17 NR\_feMIMO-Core

R2-2202320 Discussion on remaining issues on MAC aspects for feMIMO vivo discussion Rel-17 NR\_feMIMO-Core

R2-2202349 Remaining issues on beam failure with mTRP Fujitsu discussion Rel-17 NR\_feMIMO-Core

R2-2202448 MAC CE design for FeMIMO OPPO discussion Rel-17 NR\_feMIMO-Core

R2-2202557 MAC impacts of FeMIMO Apple discussion Rel-17 NR\_feMIMO-Core

R2-2202572 BFR for both SpCell and SCell in mTRP Lenovo, Motorola Mobility discussion Rel-17

R2-2202670 Remaining issues on MAC CEs Intel Corporation discussion Rel-17 NR\_feMIMO-Core

R2-2202772 MAC CE Design for Unified TCI States Activation Deactivation MediaTek Inc. discussion

R2-2202851 Discussion on Power Headroom Reporting for mTRP PUSCH repetition ASUSTeK discussion Rel-17 NR\_feMIMO-Core

R2-2202852 Discussion on MAC CE design regarding separate and joint TCI state ASUSTeK discussion Rel-17 NR\_feMIMO-Core

R2-2202928 Discussions on PHR enhancements for mTRP PUSCH repetition Samsung discussion Rel-17 NR\_feMIMO-Core

R2-2202957 Remaining issues on multi-TRP BFR Qualcomm Incorporated discussion Rel-17 NR\_feMIMO-Core

R2-2202958 Remaining issues on MAC and MIMO MAC CEs Qualcomm Incorporated discussion Rel-17 NR\_feMIMO-Core

R2-2203044 MAC CE impacts Ericsson discussion NR\_feMIMO-Core

R2-2203093 Remaining issues on MAC LG Electronics Inc. discussion NR\_feMIMO-Core

R2-2203104 Discussions on the remaining open Issues of 38.321 Running CR CATT discussion Rel-17 NR\_feMIMO-Core

R2-2203246 Consideration on Implementation of BFR for mTRP ZTE Corporation,Sanechips discussion Rel-17 NR\_feMIMO-Core

R2-2203247 Further Considerations On New PHR and PHR MAC CE ZTE Corporation,Sanechips discussion Rel-17 NR\_feMIMO-Core

R2-2203248 Consideration on the unified TCI State MAC CE for ICBM ZTE Corporation,Sanechips discussion Rel-17 NR\_feMIMO-Core

R2-2203269 PHR reporting for FeMIMO Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_feMIMO-Core

R2-2203282 Beam failure with mTRP Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_feMIMO-Core

R2-2203382 FeMIMO MAC open issues Huawei, HiSilicon discussion Rel-17 NR\_feMIMO-Core

R2-2203383 SP-SRS resource set activation by MAC CE Huawei, HiSilicon discussion Rel-17 NR\_feMIMO-Core

R2-2203426 Discussion on Multi-TRP PHR enhancements InterDigital discussion Rel-17 NR\_feMIMO-Core R2-2201168

# 8.18 RACH indication and partitioning

Time budget: Equivalent to 0.5-1 TU

Tdoc Limitation: 2 tdocs

Expected to cover WIs SDT, CovEnh, RedCap, RAN slicing. RA specific aspects from the different WI should be covered in this AI given the RA experts are all there.

### 8.18.1 Common signalling framework

Including output of [POST116bis-e][513][IIoT] CP open issues (Ericsson) – NO contributions on these issues

 Any other contributions should focus on important issues not covered by open issues email discussions.

R2-2202558 Signaling aspects of RACH partitioning Apple discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_redcap-Core, NR\_slice-Core

R2-2202693 Remaining issues for signaling design for RACH partitioning CATT discussion Rel-17 NR\_cov\_enh-Core, NR\_slice-Core, NR\_SmallData\_INACTIVE-Core, NR\_redcap-Core Withdrawn

R2-2203063 Discussion on RO sharing cases for common RACH configuration LG Electronics Inc. discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_slice-Core, NR\_redcap-Core, NR\_cov\_enh-Core

R2-2203339 Common signalling for RACH indication and partitioning Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_slice-Core, NR\_redcap-Core, NR\_cov\_enh-Core Late

R2-2203356 RSRP Thresholds for RACH Partitioning Ericsson discussion Rel-17 NR\_redcap-Core, NR\_slice-Core, NR\_cov\_enh-Core Late

R2-2203357 Report of [POST116bis-e][515][RA Part] CP open issues Ericsson report Rel-17 NR\_redcap-Core, NR\_slice-Core, NR\_cov\_enh2-Core, NR\_SmallData\_INACTIVE-Core Late

R2-2203358 Introduction of common RACH partitioning aspects in RRC Ericsson (rapporteur) CR Rel-17 38.331 16.7.0 2951 - B NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_redcap-Core, NR\_slice-Core Late

R2-2203393 Further Discussion on RACH Partitioning in RA Configuration Aspect vivo discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh, NR\_redcap-Core, NR\_slice-Core R2-2201597

R2-2203405 Slice-specific RACH prioritization in Common RACH Framework Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_slice-Core

### 8.18.2 Common aspects of RACH procedure

Including output of [POST116bis-e][514][RA Part] UP open issues (ZTE) – NO contributions on these issues

Any other contributions should focus on important issues not covered by open issues email discussions.

R2-2202694 Remaining issues for common aspects of RACH procedure CATT discussion Rel-17 NR\_cov\_enh-Core, NR\_slice-Core, NR\_SmallData\_INACTIVE-Core, NR\_redcap-Core

R2-2202976 Discussion on RACH partition UP open issues OPPO discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_redcap-Core, NR\_slice-Core

R2-2203206 RNTI collision issue for different features in NR Sony discussion Rel-17 NR\_SmallData\_INACTIVE-Core R2-2200917

R2-2203283 Common aspects for RACH partitioning Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2203307 Introduction of common RACH partitioning aspects in MAC ZTE Corporation (rapporteur) CR Rel-17 38.321 16.7.0 1214 - B NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_redcap-Core, NR\_slice-Core Late

R2-2203309 [POST116bis-e][514][RA Part] - Open issue list summary ZTE Corporation (rapporteur) report Rel-17 Late

R2-2203340 Further details of RACH procedure with RACH partitioning Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_slice-Core, NR\_redcap-Core, NR\_cov\_enh-Core Late

R2-2203459 Remaining issues for RACH partitioning InterDigital discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_redcap-Core, NR\_slice-Core

## 8.19 Coverage Enhancements

(NR\_cov\_enh-Core; leading WG: RAN1; REL-17; WID: RP-211566)

Time budget: 0.5

Tdoc Limitation: 1 tdoc

Common aspects related to RACH indication (in MSG1) / RACH partitioning shall be submitted to 8.18

### 8.19.1 Organizational

Rapporteur input, incoming LS etc.

R2-2202153 Reply LS on Maximum duration for DMRS bundling (R4-2202368; contact: Qualcomm) RAN4 LS in Rel-17 To:RAN1, RAN2

#### 8.19.1.1 LS in

For LSes that need action: one tdoc by contact company to address the LS and potential reply is considered.

Rapporteur input may be provided.

#### 8.19.1.2 CRs

CR Rapporteurs to provide running CRs, potentially updated.

R2-2202652 TS 38.321 CR for Rel-17 Coverage enhancement ZTE Corporation, Sanechips CR Rel-17 38.321 16.7.0 1199 - B NR\_cov\_enh-Core

R2-2202831 TS 38.300 CR for Rel-17 NR coverage enhancements China Telecom CR Rel-17 38.300 16.8.0 0412 - B NR\_cov\_enh-Core

R2-2203127 Introduction of NR coverage enhancements in RRC Huawei, HiSilicon CR Rel-17 38.331 16.7.0 2928 - B NR\_cov\_enh-Core

### 8.19.2 General

All aspects, including possible corrections/TPs for the running CRs.

R2-2202695 Remaining issues for Msg3 repetition CATT discussion Rel-17 NR\_cov\_enh-Core

R2-2202981 Discussion on CFRA PUSCH with Repetition vivo discussion Rel-17 NR\_cov\_enh

R2-2203007 Minor connection to the stage-2 running CR OPPO discussion Rel-17 NR\_cov\_enh-Core

R2-2203031 Discussion on Msg3 repetition for CFRA Qualcomm Incorporated discussion Rel-17 NR\_cov\_enh-Core Late

R2-2203128 On measurement gap handling for Msg3 repetitions Huawei, HiSilicon discussion Rel-17 NR\_cov\_enh-Core

R2-2203168 Further issues on msg3 repetitions Ericsson discussion Rel-17 NR\_cov\_enh

R2-2203284 BWP with only CR-RACH resources Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_cov\_enh-Core

## 8.20 Extending NR operation to 71GHz

(NR\_ext\_to\_71GHz-Core; leading WG: RAN1; REL-17; WID: RP-212637)

Time budget: 0.5

Tdoc Limitation: 2 tdocs

Contributions should illustrate the Stage-3 details of the proposals (e.g. in an Annex containing TP against the running CRs). If a contribution does not provide TP, it may be deprioritized.

Contributions should focus on remaining open issues needed to close the WI from RAN2 perspective (e.g. as discussed in [204])

### 8.20.1 Organizational

Including LSs, any rapporteur inputs and results of the (informative) running CR email discussions [218] and [219]

Including input running Stage-2 CR from the specification/WI rapporteur (which does not count against the Tdoc limits)

Including result of open issue email discussion [204].

R2-2202435 Running RRC CR for 71 GHz Ericsson CR Rel-17 38.331 16.7.0 2891 - B NR\_ext\_to\_71GHz-Core

R2-2202479 [Post116bis-e][204][71 GHz] Open issues for 71 GHz (Qualcomm) Qualcomm Incorporated discussion Rel-17 NR\_ext\_to\_71GHz-Core

R2-2202659 CR to 38306 on UE capabilities for 71G Intel Corporation draftCR Rel-17 38.306 16.7.0 B NR\_ext\_to\_71GHz-Core

R2-2202660 CR to 38331 on UE capabilities for 71G Intel Corporation draftCR Rel-17 38.331 16.7.0 B NR\_ext\_to\_71GHz-Core

R2-2202688 Introduction of Extending NR operation to 71GHz Qualcomm Incorporated CR Rel-17 38.300 16.8.0 0408 - B NR\_ext\_to\_71GHz-Core

### 8.20.2 General

Including discussion if additional differentiation between licensed operation and "no-LBT mode" is needed for any case

Including discussion on whether RAN2 should introduce new absolute values for CG/SR/DRX parameters

R2-2202433 Remaining protocol aspects Ericsson discussion Rel-17 NR\_ext\_to\_71GHz-Core

R2-2202434 Remaining RRC aspects Ericsson discussion Rel-17 NR\_ext\_to\_71GHz-Core

R2-2202710 Discussion about RAN2 impacts of Ext 52-71GHz Huawei, HiSilicon discussion Rel-17 NR\_ext\_to\_71GHz-Core

R2-2202920 Remaining issues on UAI enhancement Samsung discussion Rel-17 NR\_ext\_to\_71GHz-Core

R2-2203079 Discussion on necessary update of Rel-16 LBT procedures CATT discussion Rel-17 NR\_ext\_to\_71GHz-Core

R2-2203418 CP open issues for RRC CR Extending NR operation to 71GHz ZTE Corporation, Sanechips discussion

R2-2203419 Remaining UP issues for extending to 71GHz ZTE Corporation, Sanechips discussion

### 8.20.3 UE capabilities

This agenda item may use a summary document.

Including discussion on interaction of FR2-2 UE capabilities with upper layer features introduced by other Rel-17 WIs

Including discussion on UE capabilities for FR2-2 based on decision to go with per-band signalling

[Pre117-e][210][71 GHz] Summary of UE capabilities for 71 GHz (Intel)

Scope: summarize contributions to 71 GHz UE capabilities and provide proposals for discussion.

Intended outcome: Summary document in R2-220xxxx.

Deadline: TBD

R2-2202661 Remaining UE capability issues on NR operation for upto 71GHz Intel Corporation discussion Rel-17 NR\_ext\_to\_71GHz-Core

R2-2202711 Discussion about UE capabilities on Ext 52-71GHz Huawei, HiSilicon discussion Rel-17 NR\_ext\_to\_71GHz-Core

R2-2202921 Discussion on L2 buffer size Samsung discussion Rel-17 NR\_ext\_to\_71GHz-Core

## 8.21 TEI17

Time budget: 1.5 TU

Note that TEI17 will have low priority in 2022 Q1. Normal treatment resumed in Q2.

### 8.21.0 In-principle agreed CRs

CRs that were previsouly in-principle agreed + complementary proposals or corrections if any.

Offline

* [AT117-e][049][NR17TEI] In-principle Agreed CRs and related docs (ZTE)

 Scope: Treat R2-2202225, R2-2202395, R2-2202396, Has comments: R2-2202397, R2-2202398, R2-2202399, R2-2202400, R2-2202626, R2-2202627, R2-2202628, R2-2202629, R2-22083306, Non-IPA: R2-2202608. Check IPA CRs, and determine revisions if needed. Take into account the comments provided in R2-2202225. Determine whether the not yet agreed CR in R2-2202608 or some variant is agreeable.

 Intended outcome: Report, Agreed CRs, Endorsed NR UE cap CRs (for merge)

 Deadline: Schedule 1

PO determination RRC INACTIVE

R2-2202225 Discussion on UE capability signaling of inactiveStatePO-Determination-r17 in LTE Lenovo, Motorola Mobility discussion Rel-17 TEI17 R2-2201140

R2-2202395 Correction on PO determination in inactive state ZTE corporation, Ericsson, vivo, CMCC, China Telecom, China Unicom, Samsung, Nokia, Nokia Shanghai Bell, Sanechips CR Rel-17 36.304 16.6.0 0840 - F TEI17

R2-2202396 Correction on PO determination in inactive state ZTE corporation, Ericsson, vivo, CMCC, China Telecom, China Unicom, Samsung, Nokia, Nokia Shanghai Bell, Sanechips CR Rel-17 36.306 16.7.0 1839 - F TEI17

R2-2202397 Correction on PO determination in inactive state ZTE corporation, Ericsson, vivo, CMCC, China Telecom, China Unicom, Samsung, Nokia, Nokia Shanghai Bell, Sanechips CR Rel-17 36.331 16.7.0 4759 - F TEI17

R2-2202398 Correction on PO determination in inactive state ZTE corporation, Ericsson, vivo, CMCC, China Telecom, China Unicom, Samsung, Nokia, Nokia Shanghai Bell, Sanechips CR Rel-17 38.304 16.7.0 0228 - F TEI17

R2-2202399 Correction on PO determination in inactive state ZTE corporation, Ericsson, vivo, CMCC, China Telecom, China Unicom, Samsung, Nokia, Nokia Shanghai Bell, Sanechips CR Rel-17 38.306 16.7.0 0679 - F TEI17

R2-2202400 Correction on PO determination in inactive state ZTE corporation, Ericsson, vivo, CMCC, China Telecom, China Unicom, Samsung, Nokia, Nokia Shanghai Bell, Sanechips CR Rel-17 38.331 16.7.0 2889 - F TEI17

Chair Comment: Shouldn’t the The WI code for these CRs be: NR\_newRAT-Core, TEI17

NR HSDN

R2-2202626 Introduction of mobility-state-based cell reselection for NR HSDN [NR\_HSDN] CMCC, CATT, Ericsson, Huawei, ZTE, Nokia, OPPO, vivo CR Rel-17 38.331 16.7.0 2846 1 B TEI17 R2-2110772

R2-2202627 Introduction of mobility-state-based cell reselection for NR HSDN CMCC, CATT, Ericsson, Huawei, ZTE, Nokia, OPPO, vivo CR Rel-17 38.304 16.7.0 0223 1 B TEI17 R2-2110232

R2-2202628 Introduction of mobility-state-based cell reselection for NR HSDN CMCC, CATT, Ericsson, Huawei, ZTE, Nokia, OPPO, vivo CR Rel-17 38.306 16.7.0 0650 1 B TEI17 R2-2110234

R2-2202629 Introduction of mobility-state-based cell reselection for NR HSDN CMCC, CATT, Ericsson, Huawei, ZTE, Nokia, OPPO, vivo CR Rel-17 36.331 16.7.0 4730 1 B TEI17 R2-2110235

NR TADV

Chair Comment: The 38305 CR was agreed in-principle. The 38300 CR is new, but they should both be treated together.

R2-2203366 Addition of Timing Advance measurement reporting in NR E-CID [NRTADV] Ericsson, NTT Docomo, Polaris Wireless, Verizon, China Telecom, FirstNet, Deutsche Telekom, Intel Corporation, CATT, Nokia, Nokia Shanghai Bell, Huawei CR Rel-17 38.305 16.7.0 0082 1 B TEI17 R2-2110711

R2-2202608 Introduction of RACH triggers for T\_ADV in NR E-CID [NRTADV] Huawei, HiSilicon, Ericsson, CATT, NTT DOCOMO, Deutsche Telekom, Polaris Wireless, ZTE Corporation CR Rel-17 38.300 16.8.0 0407 - B TEI17

### 8.21.1 TEI proposals initiated by other groups

Including incoming LSes. This AI may be deprioritized at current meeting.

R2-2202126 Reply on security protection of RRCResumeRequest message (R3-221183; contact: ZTE) RAN3 LS in Rel-17 To:SA3,RAN2

Chair: This is the RAN3 reply to SA3. RAN2 already sent a reply as well. Assume there is no action and it can simply be Noted.

[000] proposed Noted

### 8.21.2 TEI proposals initiated by RAN2

Treatment of new (= not agreed) proposals will have low priority at current meeting.

Tdoc limitation: 2 tdocs, except for Operators.

CRs or detailed modifications to agreed proposals are not counted towards the limit.

Proposals related to DRX HARQ RTT timer for one-shot HARQ feedback for NR-U will be treated in a breakout sessions together with NR17 IIOT taking into account R2 116-e agreement for R2-2110948, under AI 8.5.3

SI scheduling

Treat offline

* [AT117-e][050][NR17TEI] Explicit Indication of SI Scheduling start position (Ericsson)

 Scope: Treat R2-2203365

 Intended outcome: Agreed CR.

 Deadline: W1 Friday (if possible)

R2-2203365 Explicit Indication of SI Scheduling start position [SI-SCHEDULING] Ericsson, Verizon, Softbank, Deutsche Telekom, vivo CR Rel-17 38.331 16.7.0 2953 - B TEI17

Secondary DRX - on the table

Treat on-line (if time)

R2-2202265 Secondary DRX enhancement Ericsson, Verizon, Qualcomm Inc., T-Mobile USA Inc., Deutsche Telekom discussion Rel-17 TEI17 R2-2201559

EPS Fallback - on the table

Treat on-line (if time)

R2-2202505 Discussion on EPS fallback enhancement Apple, ZTE discussion Rel-17 TEI17

R2-2202818 EPS fallback enhancements in Rel-17 Huawei, HiSilicon, CMCC, China Telecom, China Unicom, LG Uplus discussion Rel-17 TEI17

R2-2202791 Redirection enhancement on EPS Fallback vivo discussion Rel-17 TEI17 R2-2201401

R2-2202792 38331 CR for Redirection enhancement on EPS Fallback vivo CR Rel-17 38.331 16.7.0 2873 1 B TEI17 R2-2201402

R2-2202793 38306 CR for Redirection enhancement on EPS Fallback vivo CR Rel-17 38.306 16.7.0 0671 1 B TEI17 R2-2201403

SRS in dormancy - on the table

Treat on-line (if time)

R2-2202704 Periodic SRS in SCell dormant BWP Qualcomm Incorporated, ZTE Corporation, Futurewei discussion Rel-17

SDAP marker (New)

R2-2202521 SDAP end-marker in RLC UM Apple, Futurewei, Spreadtrum, FGI, Asia Pacific Telecom, T-Mobile USA discussion Rel-17 TEI17 R2-2201676

TDRA extension (New)

R2-2203250 Extension of the timeDomainAllocation for CG type 1 with typeB repetition ZTE Corporation,Huawei, China Telecom, Sanechips CR Rel-17 38.331 16.7.0 2934 - F TEI17

R2-2203251 Addition of UE capability of extension of TDRA indication for Configured UL Grant type 1 ZTE Corporation,Huawei, China Telecom, Sanechips CR Rel-17 38.306 16.7.0 0693 - F TEI17

CHO Bye message (New)

R2-2202992 Leaving indication for CHO execution Qualcomm Incorporated discussion

Remote Access (New)

R2-2202632 Discussion on remote access issue CMCC discussion Rel-17 TEI17

Measurement (New)

R2-2202436 On inter-frequency measurement configuration and reporting enhancements BT Plc., Ericsson, Vodafone, T-Mobile USA, Qualcomm discussion Rel-17

Early Measurement for EPS fallback (rejected)

R2-2202788 Early measurement for EPS Fallback vivo,CMCC, softbank, China Telecom,China Unicom discussion Rel-17 TEI17 R2-2201398

R2-2202789 38331 CR for Early measurement for EPS Fallback vivo,CMCC, softbank, China Telecom,China Unicom CR Rel-17 38.331 16.7.0 2872 1 B TEI17 R2-2201399

R2-2202790 38306 CR for Early measurement for EPS Fallback vivo,CMCC, softbank, China Telecom,China Unicom CR Rel-17 38.306 16.7.0 0670 1 B TEI17 R2-2201400

## 8.22 NR and MR-DC measurement gap enhancements

(NR\_MG\_enh-Core; leading WG: RAN4; REL-17; WID: RP-211591)

Time budget: 0.5

Tdoc Limitation: 3 tdocs

### 8.22.1 General

#### 8.22.1.1 Organizational

Tdoc Limitation: 0

Planning etc

#### 8.22.1.2 LS in

Tdoc Limitation: 0

LS in. For LSes that need action or has impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided.

R2-2202158 Further reply LS on R17 NR MG enhancements – Concurrent MG (R4-2202604; contact: MediaTek) RAN4 LS in Rel-17 To:RAN2 Cc:RAN1

* Noted

R2-2202159 LS on R17 NR MG enhancements – Pre-configured MG (R4-2202615; contact: Intel) RAN4 LS in Rel-17 To:RAN2

* Noted

R2-2202160 Reply LS on R17 NR MG enhancements – Pre-configured MG (R4-2202616; contact: CATT) RAN4 LS in Rel-17 To:RAN2

* Noted

R2-2202161 LS on R17 MG enhancement - NCSG (R4-2202626; contact: Apple) RAN4 LS in Rel-17 To:RAN2 Cc:RAN1

* Noted

#### 8.22.1.3 CRs and Rapporteur Resolutions

Tdoc Limitation: 0.

CR Rapporteurs to provide running CRs, potentially updated, Provide resolution proposals to Rapporteur Handled Open Issues. See also R2-2202054

Concurrent MG:

- C1-4: Simultaneously support of legacy gap and concurrent gap

- C1-5: Simultaneously support of per-UE gap and per-FR gap

- C1-6: Support of gap sharing for concurrent gap

* [AT117-e][065][MGE] RRC (MediaTek)

 Scope: Treat R2-2202877. Determine agreeable parts, points for discussion, open issues if needed. Converge offline if possible. Can also open for comments on R2-2202868.

 Intended outcome: Report

 Deadline: In time for on-line CB W2 Tuesday

R2-2202868 Introduction of RRC signaling for measurement gap enhancement MediaTek Inc. CR Rel-17 38.331 16.7.0 2913 - B NR\_MG\_enh-Core R2-2201903

R2-2202877 Rapporteur resolution for MGE open issues MediaTek Inc. discussion

### 8.22.3 Open Issues

#### 8.22.3.1 Pre-discussions

Tdoc Limitation: 0.

Pre117-e discussions to gather company input on specific Open Issues See also R2-2202054

Concurrent MG

C1-1: Whether to use ToAddModList and ToReleaseList structure

C1-2: In addition to the per frequency layer association, define ASN.1 for per use case (e.g. PRS, SSB, CSI-RS, EUTRA) association with concurrent gaps.

C1-3: Maximum support of concurrent gaps

C1-7: Potential Configuration restriction for associated gap ID configuration in measObjectNR

NCSG MG

N1-1: It is FFS whether to support reporting of NCSG for E-UTRA target bands

N1-4: Whether the NCSG could be configured as per FR gap

N1-5: Whether to add a new IE for NCSG gap configuration or reuse the legacy GapConfig with some extension

Companies to provide input into the following discussion:

[Pre117-e][010][MGE] MGE Open Issues Input (MediaTek)

R2-2202899 Report of [Pre117-e][010][MGE] MGE Open Issues Input (MediaTek) MediaTek Inc. discussion Late

DISCUSSION online

P567 first then P1 etc

P5

- QC think there should be a separate capability for E-UTRA target bands. MTK would be ok.

P1

- ZTE think this should be used also for gap sharing config. MTK agrees.

P2

- HW think association to use case can same some signalling. Oppo support coarse association as it reduces signalling overhead.

- and some opposition.

- Chair think it is a pure signalling optimization.

P4.1

- OPPO wonder how to capture this in the TS. MTK think this could be done, e.g. by field descr or other way.

P4.2

- ZTE wonder if R2 can decide, better to ask R4. MTK would be ok to ask R4, think it is not common use case to have same freq. HW think multiple MO are different frequencies. Nokia also agrees that this scenario is not supported by R4. MTK think R4 LS may allow it.

- CATT support this proposal.

- LG think we don’t need any restriction in RRC, can be left to smart network impl.

- Chair final comment P4.2: It seems we need no agreement. Unless a need is found, we don’t specify any RRC restriction for the case of when multiple MOs (with the same CSI-RS center frequency) are configured, e.g. to mandate that the network associates the same MG for the CSI-RS measurement in each MO.

* RAN2 confirms that reporting of NCSG for E-UTRA target bands is supported. RAN2 assumes that support for EUTRA target bands can be a separate UE cap
* RAN2 confirms that NCSG could be configured as per FR gap.
* Reuse the legacy GapConfig with some extension for NCSG gap configuration.
* For additional gap configuration in concurrent gap, use ToAddModList and ToReleaseList structure for each gap type to add or release the additional gaps, and gap sharing configuration to be consistent.
* For concurrent gap, RAN2 confirms that there is no need to support coarse granularity association (i.e. per use case such as CSI-RS, SSB measurement) since the agreed fine granularity (per frequency layer) could cover this case.
* FFS the maximum number of measurement gap ID. This could be discussed in gap coordination section.
* Baseline assumption When multiple MOs (with the same SSB frequency) are configured, the network associates the same MG for the SSB measurement in each MO. Details sorted out in CR disc

#### 8.22.3.2 Invited Input

Company input by tdocs. See also R2-2202054

##### 8.22.3.2.1 Pre-configured MG patterns

Company input on the following Open Issues

- P1-1: Discuss support of case 4 where NW signals the pre-configured gap and BWP status via RRC, then UE follows BWP status to activates/deactivates gap upon BWP switching

- P1-2: Support pre-configured MG under CA based on BWP switching on a single CC

R2-2203523 [Pre117-e][018][MGE] AI Summary of 8.22.3.2.1 Pre-configured MG patterns (Intel) Intel Corporation

DISCUSSION only P1 due to lack of time

P1

- Ericsson think less and less companies are supporting this, and this is not needed, it is redundant. ZTE think it is not clear how network will use this signalling. Huawei agrees. Samsung also think this is redundant, we should not support this without an LS.

- Oppo has no strong opinion, suggest to just follow R4. Vivo think this was agreed in R4, see no reason to remove it. Intel support, and cpl other.

- Intel think that a main argument is to sort out state confusion between the network and the UE.

* RAN2 introduces support of NW-Controlled activation/deactivation pre-configured gap

Continue offline with remaining proposals P2 ..

* [AT117-e][018][MGE] Pre-configured MG patterns (Intel)

 Scope: Based on R2-2203523, progress remaining proposals. Determine agreeable parts, points for discussion, open issues if needed. Converge as far as possible to reduce the need for on-line discussion

 Intended outcome: Report

 Deadline: In time for on-line CB W2 Tuesday

R2-2202461 Support of pre-configured MG under CA Intel Corporation discussion Rel-17 NR\_MG\_enh-Core

R2-2202460 Discussion on support of case 4 Intel Corporation discussion Rel-17 NR\_MG\_enh-Core

R2-2202322 Discussion on per-configured measurement gap vivo discussion Rel-17 NR\_MG\_enh-Core

R2-2203504 Pre-Configured gap case-4 discussion Qualcomm Incorporated discussion Rel-17 38.331 NR\_MG\_enh-Core

R2-2203448 Pre-configured measurement gaps Ericsson discussion Rel-17 NR\_MG\_enh-Core

R2-2202890 Discussion on Pre-configured MG Huawei, HiSilicon discussion Rel-17 NR\_MG\_enh-Core

R2-2202647 Remaining issues on Pre-configured MG ZTE Corporation, Sanechips discussion Rel-17 NR\_MG\_enh-Core

R2-2203037 Remaining issues on Pre-configured MG LG Electronics Inc discussion Rel-17

R2-2202513 RAN2 impact from pre-MG Apple discussion Rel-17 NR\_MG\_enh-Core

R2-2203260 Discussion on open issues for pre-configured MG Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MG\_enh-Core

R2-2202873 Discussion on open issue of pre-configured gap MediaTek Inc. discussion

R2-2202944 Discussion on remaining issues of pre-configured MG CATT discussion Rel-17 NR\_MG\_enh-Core

R2-2202977 Discussion on Pre-MG activation and deactivation Samsung discussion

R2-2203011 Discussion on the support of Pre-MG for CA Samsung R&D Institute India discussion

R2-2203060 Discussion on Pre-configured MG Xiaomi Communications discussion

##### 8.22.3.2.2 Network Controlled Small Gap

Company input on the following Open Issues

- N1-6: Introduction of signalling for enabling the derivation of SSB indexes of target cell(s) on a frequency different than serving cell frequency from serving cell timing, to increase NCSG efficiency.

- N1-7: Whether the reporting of R17 gap requirement information (e.g. needForNCSG-InfoNR) should be combined with R16 gap requirement information (i.e. NeedForGapsInfoNR) or the R17 NCSG requirement information could be reported independently.

* [AT117-e][019][MGE] Network Controlled Small Gap (Apple)

 Scope: Based on R2-2203713, determine agreeable parts, points for discussion, open issues if needed. Converge as far as possible to reduce the need for on-line discussion.

 Intended outcome: Report

 Deadline: In time for on-line CB W2 Tuesday

R2-2203713 [Pre117-e][019][MGE] AI summary of 8.22.3.2.2 Network Controlled Small Gap (Apple) Apple

R2-2202323 Discussion on NCSG vivo discussion Rel-17 NR\_MG\_enh-Core

R2-2202512 RAN2 impact from NCSG Apple discussion Rel-17 NR\_MG\_enh-Core

R2-2202648 Remaining issues on NCSG ZTE Corporation, Sanechips discussion Rel-17 NR\_MG\_enh-Core

R2-2202874 Discussion on open issue of NCSG MediaTek Inc. discussion

R2-2202891 Discussion on NCSG Huawei, HiSilicon discussion Rel-17 NR\_MG\_enh-Core

R2-2202945 Discussion on remaining issues of NCSG CATT discussion Rel-17 NR\_MG\_enh-Core

R2-2203012 On Network Controlled Small Gaps Samsung discussion

R2-2203261 Discussion on open issues for NCSG Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MG\_enh-Core

R2-2203449 Network Controlled Small Gap Ericsson discussion Rel-17 NR\_MG\_enh-Core

R2-2203503 SSB index derivation for NCSG Qualcomm Incorporated CR Rel-17 38.331 16.7.0 2964 - B NR\_MG\_enh-Core

### 8.22.4 UE capabilities

Features / UE caps developed in RAN2. Input should not overlap with input to previous subclauses. Note that this AI is complementary to AI 8.0.2.

* [AT117-e][020][MGE] UE capabilites (Intel)

 Scope: Based on R2-2203522. Determine agreeable parts, points for discussion, open issues if needed. Converge as far as possible to reduce the need for on-line discussion. Treat R2-2202462 and R2-2202463, collect comments and update accordingly, in preparation to endorse for merge revisions at EOM. (i.e. the time to make the last changes, review and endorse the draft CRs will be very short)

 Intended outcome: Report (revised draft CRs may be provided for W2 Tuesday if there is some discussion point that needs the CRs).

 Deadline: In time for on-line CB W2 Tuesday

R2-2203522 [Pre117-e][020][MGE] AI summary of 8.22.4 UE capabilities (Intel) Intel Corporation

R2-2202462 UE capability for NR and MR-DC measurement gap enhancements Intel Corporation draftCR Rel-17 38.306 16.7.0 B NR\_MG\_enh-Core

R2-2202463 UE capability for NR and MR-DC measurement gap enhancements Intel Corporation draftCR Rel-17 38.331 16.7.0 B NR\_MG\_enh-Core

R2-2202879 Discussion on UE capabilities of MGE MediaTek Inc. discussion

R2-2202324 Discussion on capability for MG enhancement vivo discussion Rel-17 NR\_MG\_enh-Core

R2-2202892 Discussion on UE capability for MGE Huawei, HiSilicon discussion Rel-17 NR\_MG\_enh-Core

R2-2203065 Discussion on UE capabilities for gap enhancement Xiaomi Communications discussion

R2-2203450 UE capabilities for MGE Ericsson discussion Rel-17 NR\_MG\_enh-Core

### 8.22.5 Other

Issues not covered elsewhere.

R2-2203262 Discussion on other open issues for MGE Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MG\_enh-Core

## 8.23 Uplink Data Compression (UDC)

(NR\_UDC\_enh-Core; leading WG: RAN2; REL-17; WID: RP-211203)

Time budget: 0

Tdoc Limitation: 1 tdocs

Finalization of CRs, resolution of FFS. Technical discussion will be mainly offline

* [AT117-e][051][UDC] Open Issues and CRs (CATT)

 Scope: Ph1 Address the UDC Open Issues aiming to close all, Collect comments on major issues and/or blocking points in the provided CRs if any. Ph2 The discussion will continue W2 aiming for CR agreement (focusing on smaller things).

 Intended outcome: Report

 Deadline: Ph1 W1 Friday (for On-line CB Monday W2).

### 8.23.1 Organizational

Rapporteur input, CRs.

R2-2203107 Introduction of the support for UDC in NR CATT, CMCC, Huawei, HiSilicon, MediaTek Inc., Ericsson, China Unicom, China Telecom, OPPO, ZTE, Samsung, Apple, Nokia, Nokia Shanghai Bell CR Rel-17 38.300 16.8.0 0415 - B NR\_UDC-Core

R2-2203108 Introduction of the support for UDC in NR CATT, CMCC, Huawei, HiSilicon, MediaTek Inc., Ericsson, China Unicom, China Telecom, OPPO, ZTE, Samsung, Apple, Nokia, Nokia Shanghai Bell CR Rel-17 38.331 16.7.0 2927 - B NR\_UDC-Core

R2-2203109 Introduction of the support for UDC in NR CATT, CMCC, Huawei, HiSilicon, MediaTek Inc., Ericsson, China Unicom, China Telecom, OPPO, ZTE, Samsung, Apple, Nokia, Nokia Shanghai Bell CR Rel-17 38.323 16.6.0 0087 - B NR\_UDC-Core

R2-2203110 Introduction of UE capabilities for NR UDC CATT, CMCC, Huawei, HiSilicon, MediaTek Inc., Ericsson, China Unicom, China Telecom, OPPO, ZTE, Samsung, Apple, Nokia, Nokia Shanghai Bell draftCR Rel-17 38.306 16.7.0 B NR\_UDC-Core

R2-2203111 Introduction of the support for UDC in NR CATT, CMCC, Huawei, HiSilicon, MediaTek Inc., Ericsson, China Unicom, China Telecom, OPPO, Samsung, Apple, Nokia, Nokia Shanghai Bell CR Rel-17 37.340 16.8.0 0298 - B NR\_UDC-Core

R2-2203112 Introduction of UE capabilities for NR UDC CATT, CMCC, Huawei, HiSilicon, MediaTek Inc., Ericsson, China Unicom, China Telecom, OPPO, ZTE, Samsung, Apple, Nokia, Nokia Shanghai Bell draftCR Rel-17 38.331 16.7.0 B NR\_UDC-Core

### 8.23.2 General

Open issues, Data rate limit capability, FFS on inter-Node Signalling

R2-2202367 Limit UL data rate for UDC in UE capability MediaTek Inc., Samsung discussion Late

R2-2202442 Consideration on NR UDC OPPO discussion Rel-17 NR\_UDC-Core

R2-2202520 UDC constraints and limitations Apple discussion Rel-17 NR\_UDC-Core

R2-2202678 Clarification on PDCP SDU for UDC continuity Samsung Electronics discussion NR\_UDC-Core

R2-2202961 Remaining issues on NR UDC Qualcomm Incorporated discussion Rel-17 NR\_UDC-Core

R2-2203023 Discussion on remaining issues for UDC Huawei, HiSilicon discussion Rel-17 NR\_UDC-Core

R2-2203106 Considerations on NR UDC open issues CATT discussion Rel-17 NR\_UDC-Core

R2-2203164 Discussion on UDC LG Electronics Inc. discussion NR\_UDC-Core

R2-2203249 Furhter Consideration on UDC in NR ZTE Corporation,Sanechips discussion Rel-17 NR\_UDC-Core

## 8.24 NR R17 Other

Time budget: 1.5 TU

Includes items and topics without specific R2 Agenda Item. Includes LS in for R17 items not in a specific R2 Agenda Item. In general incoming LSes are always treated with high priority regardless if specific AI or TU allocation exists.

### 8.24.0 In-principle agreed CRs

In-principle agreed CRs and related documents.

* [AT117-e][052][NR17] IPA CRs (Xiaomi)

 Scope: Treat R2-2202765, R2-2202766, R2-2203714, R2-2203715, R2-2203123, R2-2203124, R2-2202151, R2-2203138, R2-2203139, R2-2203322, R2-2203323. Check the CRs (incl cover sheet) determine revisions if needed. Agree CRs (submitted or revisions).

 Intended outcome: Report, Agreed CRs, Endorsed UE cap CRs (or draft CRs) (38306, 38331) for Merge.

 Deadline: Schedule 1

NR FR2 FWA Bn257 Bn258

R2-2202765 Introducing UE capability for power class 5 for FR2 FWA SoftBank, Huawei, HiSilicon, Nokia CR Rel-17 38.306 16.7.0 0687 - C NR\_FR2\_FWA\_Bn257\_Bn258-Core

R2-2202766 Introducing UE capability for power class 5 for FR2 FWA SoftBank, Huawei, HiSilicon, Nokia CR Rel-17 38.331 16.7.0 2905 - C NR\_FR2\_FWA\_Bn257\_Bn258-Core

NR RF FR1 enh - Max MIMO layers for SUL

R2-2203714 Draft CR: Remove the maximum number of MIMO layers configuration restrictions for SUL CMCC, Huawei, HiSilicon, CATT CR Rel-17 38.306 16.7.0 0532 1 C NR\_RF\_FR1\_enh

Chair comment: the title should not use the wording Draft CR.

R2-2203715 Remove the maximum number of MIMO layers configuration restrictions for SUL CMCC, Huawei, HiSilicon, CATT CR Rel-17 38.331 16.7.0 2465 1 C NR\_RF\_FR1\_enh

BCS4 BCS5

R2-2203123 Introduction of BCS4 and BCS5 Xiaomi Communications CR Rel-17 38.331 16.7.0 2871 2 B NR\_BCS4-Core R2-2201834

R2-2203124 Introduction of BCS4 and BCS5 Xiaomi Communications CR Rel-17 38.306 16.7.0 0669 2 B NR\_BCS4-Core R2-2201835

R2-2202151 Reply LS on NR CA capability for BCS5 (R4-2201295; contact: Xiaomi) RAN4 LS in Rel-17 To:RAN2

Chair Comment: I assume that this LS doesn’t imply any change to the CRs. Suggest Noted.

NR SAR PC2 Inter-band CA and SUL

R2-2203138 CR to TS 38.306 on UE capability for UE power class 2 NR inter-band CA and SUL configurations China Telecom, Huawei, HiSilicon CR Rel-17 38.306 16.7.0 0651 2 B NR\_SAR\_PC2\_interB\_SUL\_2BUL R2-2111499

R2-2203139 CR to TS 38.331 on UE capability for UE power class 2 NR inter-band CA and SUL configurations China Telecom, Huawei, HiSilicon CR Rel-17 38.331 16.7.0 2829 1 B NR\_SAR\_PC2\_interB\_SUL\_2BUL R2-2110426

DL 1024QAM

Chair Comment: the 38331 CR was previously endorsed/agreed-in-principle, the 38300 CR is new, they should be treated together

R2-2203322 Introduction of DL 1024QAM for NR Ericsson, Nokia, Nokia Shanghai Bell CR Rel-17 38.331 16.7.0 2940 - B NR\_DL1024QAM\_FR1-Core

R2-2203323 Introduction of DL 1024QAM for NR Ericsson, Nokia, Nokia Shanghai Bell CR Rel-17 38.300 16.8.0 0420 - B NR\_DL1024QAM\_FR1-Core

### 8.24.1 RAN4 led Items

e.g. TxD, TX switching, BCS4/5

LS in

R2-2202150 LS UE capability for supporting single DCI transmission schemes for multi-TRP (R4-2120652; contact: Apple) RAN4 LS in Rel-16 To:RAN1 Cc:RAN2

[000] Proposed Noted. R2 is CC’ed

R2-2202152 LS on CORESET#0 impact of CBW narrower than 40MHz of n79 (R4-2202286; contact: Samsung) RAN4 LS in Rel-17 To:RAN1 Cc:RAN2

[000] Proposed Noted. R2 is CC’ed

NR RF FR1 enh - DC location Reporting

RAN2 sent an LS out from last meeting in R2-2201978 (QC). Await R4 reply.

R2-2203134 Discussion on the DC location report for more than 2CC Huawei, HiSilicon discussion Rel-17 NR\_RF\_FR1-Core

NR RF FR1 enh - UL TX Switching

Offline, CB on-line W2 if needed

* [AT117-e][053][NR17] UL TX Switching (China Telecom)

 Scope: Treat R2-2203117, R2-2202812, R2-2202814, R2-2203114, R2-2202813, R2-2203115, R2-2203116. Determine agreeable parts. Agree/endorse CRs.

 Intended outcome: Report, Agreed CRs, Endorsed UE cap CRs (or draft CRs) (38306, 38331) for Merge.

 Deadline: EOM

R2-2203117 Discussion on remaining issues for UL Tx switching enhancement China Telecom, Huawei, HiSilicon discussion Rel-17 NR\_RF\_FR1\_enh

R2-2202812 RRC configuration for UL Tx switching enhancement Huawei, HiSilicon, China Telecom, Apple, CATT CR Rel-17 38.331 16.7.0 2909 - B NR\_RF\_FR1\_enh-Core

R2-2202814 stage 2 CR for UL Tx switching enhancement Huawei, HiSilicon, China Telecom CR Rel-17 38.300 16.8.0 0411 - F NR\_RF\_FR1\_enh-Core

R2-2203114 Running CR to TS38.306 to support Tx switching enhancements (UE capability) China Telecom, Huawei, HiSilicon, Apple, CATT draftCR Rel-17 38.306 16.7.0 B NR\_RF\_FR1\_enh

R2-2202813 UE capability reporting for UL Tx switching enhancement Huawei, HiSilicon, China Telecom, Apple, CATT draftCR Rel-17 38.331 16.7.0 NR\_RF\_FR1\_enh-Core R2-2201940

R2-2203115 Draft CR to TS 38.306 on UL-MIMO coherence capability reporting for Rel-17 2Tx-2Tx switching China Telecom, Huawei, HiSilicon draftCR Rel-17 38.306 16.7.0 F NR\_RF\_FR1\_enh

R2-2203116 Draft CR to TS 38.331 on UL-MIMO coherence capability reporting for Rel-17 2Tx-2Tx switching China Telecom, Huawei, HiSilicon draftCR Rel-17 38.331 16.7.0 F NR\_RF\_FR1\_enh

NR RRM enh - PUCCH SCell activation I

Wait for another LS from R1 (expected at end of W1). Then treat offline. If needed CB online at end of W2.

* [AT117-e][054][NR17] PUCCH SCell Activation (Huawei)

 Scope: Delay start of this discussion until R1 has provided another LS (expected end of W1), and take the R1 LS and decisions into account. Treat R2-2202815, R2-2202816, R2-2202817, R2-2202499, R2-2202450, R2-2202884, R2-2203318, R2-2202219. Determine agreeable parts, e.g. whether TS change is needed and for which release. Agree CRs if applicable and LS out.

 Intended outcome: Report, Approved LS out, Agreed CRs (if applicable)

 Deadline: EOM

R2-2202815 Summary of [AT116bis-e][033][NR17] (Huawei) Huawei, HiSilicon report Rel-17 NR\_RRM\_enh2-Core R2-2201933

Was not treated last meeting

R2-2202816 [Draft] Reply LS on beam information of PUCCH SCell in PUCCH SCell activation procedure Huawei, HiSilicon LS out Rel-17 NR\_RRM\_enh2-Core To:RAN4, RAN1

R2-2202817 Draft CR for Clarification of PUCCH group description Huawei, HiSilicon draftCR Rel-17 38.300 16.8.0 F NR\_RRM\_enh2-Core

R2-2202449 CR to Clarification of PUCCH group definition OPPO CR Rel-17 38.300 16.8.0 0404 - F NR\_RRM\_enh2-Core

R2-2202450 Discusson on concept of PUCCH group OPPO discussion Rel-17 NR\_RRM\_enh2-Core

R2-2202884 PUCCH group definition Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_RRM\_enh2-Core

R2-2203318 Clarification on PUCCH primary and secondary group definition Ericsson CR Rel-15 38.300 15.13.0 0418 - F NR\_newRAT-Core

Moved from 5.2

R2-2203319 Clarification on PUCCH primary and secondary group definition Ericsson CR Rel-16 38.300 16.8.0 0419 - A NR\_newRAT-Core

Moved from 5.2

NR RRM enh - PUCCH SCell activation II

Treat offline, conditional start: await R1 reply LS

* [AT117-e][055][NR17] PUCCH SCell Activation Invalid TA (CATT)

 Scope: Delay start of this discussion until R1 has replied to the LS in R2-2200133/R4-2120420, and take the R1 reply into account. Treat R2-2202149, R2-2203016, R2-2203017

 Intended outcome: Report, Approved LS out (if need for TS change is identified, outcome should also include CRs).

 Deadline: EOM

R2-2202149 LS on interruption for PUCCH SCell activation in invalid TA case (R4-2120420; contact: MediaTek, CATT) RAN4 LS in Rel-17 To:RAN1, RAN2

R2-2203016 Discussion on interruption for PUCCH SCell activation in invalid TA case CATT discussion Rel-17 NR\_RRM\_enh2-Core

R2-2203017 [Draft] Reply LS on interruption for PUCCH SCell activation in invalid TA case CATT LS out Rel-17 NR\_RRM\_enh2-Core To:RAN4 Cc:RAN1

**NR HST FR1**

Offline, On-line CB W2 only if needed

* [AT117-e][056][NR17] FR1 HST (CMCC)

 Scope: Treat R2-2202171, R2-2202157, R2-2202869, R2-2202870. Ph1 Determine agreeable parts and converge on discussion points if any, Ph2 agree CRs (and Reply LS only if needed).

 Intended outcome: Report, Agreed CR 38331, endorsed UE cap CRs (or draft CRs) (38306, 38331) for Merge.

 Deadline: Schedule 1

R2-2202171 LS on signaling for FR1 HST CA demodulation (R4-2202984; contact: CMCC) RAN4 LS in Rel-17 To:RAN2

R2-2202157 LS on signalling for inter-frequency measurement enhancement in connected state for FR1 HST (R4-2202591; contact: CMCC) RAN4 LS in Rel-17 To:RAN2

R2-2202869 Introduction of RRM enhancements for Rel-17 NR FR1 HST CMCC, Ericsson, Huawei, Nokia, Qualcomm CR Rel-17 38.331 16.7.0 2898 1 B NR\_HST\_FR1\_enh R2-2202630

R2-2202870 Introduction of RRM enhancements for Rel-17 NR FR1 HST CMCC, Ericsson, Huawei, Nokia, Qualcomm CR Rel-17 38.306 16.7.0 0683 1 B NR\_HST\_FR1\_enh R2-2202631

R2-2202630 Introduction of RRM enhancements for Rel-17 NR FR1 HST CMCC, Ericsson, Huawei, Nokia CR Rel-17 38.331 16.7.0 2898 - B NR\_HST\_FR1\_enh Revised

Was previously agreed-in-principle. Now revised

R2-2202631 Introduction of RRM enhancements for Rel-17 NR FR1 HST CMCC, Ericsson, Huawei, Nokia CR Rel-17 38.306 16.7.0 0683 - B NR\_HST\_FR1\_enh Revised

Was previously agreed-in-principle. Now revised

**NR HST FR2**

Offline, On-line CB W2 only if needed

* [AT117-e][057][NR17] FR2 HST (Nokia)

 Scope: Treat R2-2202167, R2-2203187, R2-2203188, R2-2202867,. Ph1 Determine agreeable parts and converge on discussion points if any, Ph2 agree CRs (and Reply LS only if needed).

 Intended outcome: Report, Agreed CR 38331, endorsed UE cap CRs (or draft CRs) (38306, 38331) for Merge.

 Deadline: Schedule 1

R2-2202167 LS on network signaling for Rel-17 NR FR2 HST RRM (R4-2202765; contact: Nokia) RAN4 LS in Rel-17 To:RAN2

R2-2203187 HST on FR2 Nokia, Nokia Shanghai Bell CR Rel-17 38.331 16.7.0 2933 - B NR\_HST\_FR2 Late

R2-2203188 HST on FR2 Nokia, Nokia Shanghai Bell CR Rel-17 38.306 16.7.0 0692 - B NR\_HST\_FR2 Late

R2-2202867 On the signaling for RRM enhancements for Rel-17 FR2 HST Huawei, HiSilicon draftCR Rel-17 38.331 16.7.0 B NR\_HST\_FR2

RF FR2 - UL Gap

Offline, On-line CB W2 only if needed

* [AT117-e][058][NR17] FR2 UL Gap (Apple)

 Scope: Treat R2-2202155, R2-2202156, R2-2202508, R2-2202918, R2-2202510, R2-2202511, R2-2202507, R2-2202509. Ph1 Determine agreeable parts and converge on discussion points if any, Ph2 agree CRs (and Reply LS only if needed).

 Intended outcome: Report, Agreed CRs, endorsed UE cap CRs (38306, 38331) for Merge.

 Deadline: Schedule 1

R2-2202155 Reply LS to RAN2 on UL gap in FR2 RF enhancement (R4-2202419; contact: Apple) RAN4 LS in Rel-17 To:RAN2

R2-2202156 LS to RAN2 on UL gap in FR2 RF enhancement (R4-2202420; contact: Apple) RAN4 LS in Rel-17 To:RAN2

R2-2202506 RAN2 impact from FR2 UL gap Apple discussion Rel-17 NR\_RF\_FR2\_req\_enh2

R2-2202918 Introduction of FR2 UL gap Apple R&D CR Rel-17 37.340 16.8.0 0295 - B NR\_RF\_FR2\_req\_enh2

R2-2202507 Introduction of FR2 UL gap Apple CR Rel-17 38.331 16.7.0 2893 - B NR\_RF\_FR2\_req\_enh2

R2-2202509 Introduction of FR2 UL gap Apple CR Rel-17 38.321 16.7.0 1191 - B NR\_RF\_FR2\_req\_enh2

R2-2202510 Introduction of FR2 UL gap UE capability Apple draftCR Rel-17 38.331 16.7.0 B NR\_RF\_FR2\_req\_enh2

R2-2202511 Introduction of FR2 UL gap UE capability Apple draftCR Rel-17 38.306 16.7.0 B NR\_RF\_FR2\_req\_enh2

RF FR2 - CA BW Classes and CBM

Offline

* [AT117-e][059][NR17] FR2 CA BW Classes and CBM (Nokia)

 Scope: Treat R2-2202377, R2-2202904, R2-2203122, R2-2203024, R2-2202905, R2-2202389, R2-2202390, R2-2202910, R2-2202911, R2-2202912, R2-2202913, R2-2203493, R2-2203494, R2-2202365, R2-2202366. Ph1 Determine agreeable parts and converge on discussion points if any, Ph2 agree CRs and Reply LS out.

 Intended outcome: Report, Agreed CRs (CRs with certain early impl. character need to be separate CRs), Approved LS out

 Deadline: Schedule 1

R2-2202377 Reply LS on release independence aspects of newly introduced FR2 CA BW Classes and CBM/IBM UE capability Nokia, Nokia Shanghai Bell LS out Rel-17 NR\_RF\_FR2\_req\_enh2-Core R2-2200843 To:RAN4

R2-2202904 Consideration on the FR2 CA bandwidth classes ZTE Corporation, Sanechips discussion Rel-17 NR\_RF\_FR2\_req\_enh2-Core

R2-2203122 Introduction of new FR2 CA bandwidth classes Xiaomi Communications discussion Rel-17 NR\_RF\_FR2\_req\_enh2-Core R2-2201385

R2-2203024 Discussion on FR2 new bandwidth class Huawei, HiSilicon discussion Rel-17 NR\_RF\_FR2\_req\_enh2-Core

R2-2202905 Consideration on the CBM/IBM reporting ZTE Corporation, Sanechips discussion Rel-17 NR\_RF\_FR2\_req\_enh2-Core

R2-2202389 Introduction of FR2 FBG2 CA BW classes Nokia, Nokia Shanghai Bell CR Rel-17 38.331 16.7.0 2867 1 B NR\_RF\_FR2\_req\_enh2-Core R2-2200839

R2-2202390 Introduction of FR2 FBG2 CA BW classes Nokia, Nokia Shanghai Bell CR Rel-17 38.306 16.7.0 0678 - B NR\_RF\_FR2\_req\_enh2-Core

R2-2202910 CR on the FR2 CA bandwidth classes-38331 ZTE Corporation, Sanechips CR Rel-17 38.331 16.7.0 2915 - B NR\_RF\_FR2\_req\_enh2-Core

R2-2202911 CR on the FR2 CA bandwidth classes-38306 ZTE Corporation, Sanechips CR Rel-17 38.306 16.7.0 0689 - B NR\_RF\_FR2\_req\_enh2-Core

R2-2202912 CR on the CBM/IBM reporting-38331 ZTE Corporation, Sanechips CR Rel-17 38.331 16.7.0 2916 - B NR\_RF\_FR2\_req\_enh2-Core

R2-2202913 CR on the CBM/IBM reporting-38306 ZTE Corporation, Sanechips CR Rel-17 38.306 16.7.0 0690 - B NR\_RF\_FR2\_req\_enh2-Core

R2-2203493 Introduction of new FR2 CA bandwidth classes Huawei, HiSilicon draftCR Rel-17 38.331 16.7.0 B NR\_RF\_FR2\_req\_enh2-Core

R2-2203494 Introduction of new FR2 CA bandwidth classes Huawei, HiSilicon draftCR Rel-17 38.306 16.7.0 B NR\_RF\_FR2\_req\_enh2-Core

R2-2202365 Introduction of CBM capability Nokia, Nokia Shanghai Bell CR Rel-17 38.331 16.7.0 2868 1 B NR\_RF\_FR2\_req\_enh2-Core R2-2200840

R2-2202366 Introduction of CBM capability Nokia, Nokia Shanghai Bell CR Rel-17 38.306 16.7.0 0668 1 B NR\_RF\_FR2\_req\_enh2-Core R2-2200841

Withdrawn

R2-2202508 Introduction of FR2 UL gap Apple CR Rel-17 38.300 16.8.0 0406 - B NR\_RF\_FR2\_req\_enh2 Withdrawn

### 8.24.2 RAN1 led Items

e.g. DSS

DSS

Offline

* [AT117-e][060][NR17] DSS (Ericsson)

 Scope: Treat R2-2202214, R2-2202215, R2-2202216. Take into account an expected RAN1 LS to resolve Open issues for CR in R2-2202216. If the expected LS arrives late, e.g. at EOM, the discussion can be continued as a Post meeting discussion.

 Intended outcome: Report, Agreed CRs

 Deadline: EOM.

R2-2202214 Plan for finalization of Rel-17 DSS in RAN2 Ericsson discussion NR\_DSS\_enh

R2-2202215 Introduction of NR dynamic spectrum sharing Ericsson CR Rel-17 38.300 16.8.0 0400 - B NR\_DSS\_enh

R2-2202216 Introduction of NR dynamic spectrum sharing Ericsson CR Rel-17 38.331 16.7.0 2878 - B NR\_DSS\_enh

### 8.24.3 Other

**n77**

Offline: Can collect one round of comments to see if there are RAN2 apsects that need to be initially considered.

* [AT117-e][061][NR17] n77 variants (Bell Mobility)

 Scope: Treat R2-2202183. Collect one round of comments, based on comments determine whether any action need to be taken by RAN2 (or whether to just wait for RAN4). IF actions are to be taken, CB online W2 Monday

 Intended outcome: Report

 Deadline: W1 Friday

R2-2202183 Discussion on devices certified for a subset of a 3GPP band Bell Mobility discussion Rel-17

MINT

Offline, CB online W2 only if needed

* [AT117-e][062][NR17] MINT (Ericsson)

 Scope: Treat R2-2202176, R2-2202226, R2-2202264, R2-2202256, R2-2202257, R2-2202258, R2-2202259, R2-2202260, R2-2202261, R2-2202262, R2-2202263. Ph1 Check the CRs, converge on discussion points if any and determine agreeable parts, Ph2 finally agree CRs.

 Intended outcome: Report, Agreed CRs, endorsed NR UE cap CRs (38306, 38331) for Merge.

 Deadline: EOM.

R2-2202176 Reply LS on LS on MINT functionality for Disaster Roaming (S3-214342; contact: LGE) SA3 LS in Rel-17 To:SA2 Cc:SA5, CT1, CT4, CT6, RAN2, SA, CT, RAN

R2-2202226 Further discussion on open issues for MINT Lenovo, Motorola Mobility discussion Rel-17 MINT

R2-2202264 Remaining issues for MINT Ericsson discussion Rel-17 TEI17

R2-2202256 Introduction of MINT Ericsson, Lenovo, Motorola Mobility CR Rel-17 36.300 16.7.0 1352 - B TEI17 R2-2201845

R2-2202257 Introduction of MINT Ericsson, Lenovo, Motorola Mobility CR Rel-17 36.304 16.6.0 0839 - B TEI17 R2-2201847

R2-2202258 Introduction of MINT Ericsson, Lenovo, Motorola Mobility CR Rel-17 36.306 16.7.0 1837 - B TEI17 R2-2201849

R2-2202259 Introduction of MINT Ericsson, Lenovo, Motorola Mobility CR Rel-17 36.331 16.7.0 4755 - B TEI17 R2-2201843

R2-2202260 Introduction of MINT Ericsson, Lenovo, Motorola Mobility CR Rel-17 38.300 16.8.0 0402 - B TEI17 R2-2201844

R2-2202261 Introduction of MINT Ericsson, Lenovo, Motorola Mobility CR Rel-17 38.304 16.7.0 0226 - B TEI17 R2-2201846

R2-2202262 Introduction of MINT Ericsson, Lenovo, Motorola Mobility CR Rel-17 38.306 16.7.0 0676 - B TEI17 R2-2201848

R2-2202263 Introduction of MINT Ericsson, Lenovo, Motorola Mobility CR Rel-17 38.331 16.7.0 2883 - B TEI17 R2-2201842

# 9 Rel-17 EUTRA Work Items

## 9.0 EUTRA Rel-17 General

Tdoc Limitation: 0 tdocs

No documents should be submitted to 9.0. Please submit to 9.0.x

### 9.0.1 L1 parameters and cross-WI RRC aspects

This agenda item may use a summary document (decision made based on submitted contributions).

Including RRC details on L1 parameters for Rel-17 WIs that require discussion in the common session or are related to multiple Rel-17 WIs.

### 9.0.2 Feature Lists and UE capabilities

This agenda item may use a summary document (decision made based on submitted contributions).

Including UE capability details based on RAN1/4 inputs that are not covered by other WIs or require discussion in the common session due to affecting multiple Rel-17 LTE WIs.

## 9.1 NB-IoT and eMTC enhancements

(NB\_IOTenh4\_LTE\_eMTC6-Core; leading WG: RAN1; REL-17; WID: RP-211340)

Time budget: 1 TU

Tdoc Limitation: 1 tdocs

### 9.1.1 Organizational

LS in

36.300 running CR (Huawei)

36.331 running CR (Qualcomm)

36.304 running CR (Nokia)

36.306 running CR (ZTE)

R2-2202124 LS on Coverage-Based Carrier Selection (R3-221162; contact: Nokia) RAN3 LS in Rel-17 To:RAN2

R2-2202427 Introduction of NB-IoT/eMTC Enhancements Qualcomm Incorporated CR Rel-17 36.331 16.7.0 4760 - B NB\_IOTenh4\_LTE\_eMTC6-Core

R2-2202743 36306 running CR for NB-IoT eMTC ZTE Corporation, Sanechips CR Rel-17 36.306 16.7.0 1841 - B NB\_IOTenh4\_LTE\_eMTC6-Core

R2-2203216 Introduction of Rel-17 enhancements for NB-IoT and eMTC Huawei, HiSilicon CR Rel-17 36.300 16.7.0 1354 - B NB\_IOTenh4\_LTE\_eMTC6-Core

R2-2203217 Introduction of Rel-17 enhancements for NB-IoT and eMTC Huawei, HiSilicon CR Rel-17 36.302 16.1.0 1211 - B NB\_IOTenh4\_LTE\_eMTC6-Core

### 9.1.2 Open Issues

Outcomes of:

[Pre117-e][301][NBIOT/eMTC R17] NB-IoT carrier selection (ZTE)

[Pre117-e][302][NBIOT/eMTC R17] Capabilities open issues (Huawei)

[Pre117-e][303][NBIOT/eMTC R17] Other open issues (Ericsson)

R2-2202739 Report of [Pre117e-301] Carrier selection open issues ZTE Corporation, Sanechips report Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core Late

R2-2202745 ASN.1 issue and RAN3 impact of carrier selection ZTE Corporation, Sanechips discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

R2-2203218 Report of [Pre117-e][302][NBIOT/eMTC R17] Capabilities open issues (Huawei) Huawei, HiSilicon report Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core Late

R2-2203384 Report on [Pre117-e][303][NBIOTeMTC R17] Other open issues (Ericsson) Ericsson report Rel-17 Late

### 9.1.3 Other

## 9.2 NB-IoT and eMTC support for NTN

(LTE\_NBIOT\_eMTC\_NTN; leading WG: RAN1; REL-17; WID: RP‑211601)

Time budget: 0.5 TU

Tdoc Limitation: 4 tdocs

RP 93e: An LS was sent to SA asking about NAS support for discontinous coverage and WUS. Understanding that RAN work on discontinous coverage shall continue for now (also WUS work if any is needed).

* [AT117-e][011][IoT-NTN] User Plane (OPPO)

 Scope: Based on R2-2203160 and related on-line discussion + based on R2-2203721 issue on cfg of event triggered TA report and issue Whether SR is triggered if no available/sufficient UL-SCH resources for the triggered TA reporting.

 - For items that are dependent on NR NTN, kick off the relevant discussion points once NR NTN decision has been taken. For items with no dependency, discussion can be kicked off immediately, and result should be ready for first CB occasion.

 - Determine agreeable parts, Aim to agree less controversial points offline (with no CB). Identify CB points. Controversial points and/or very late points (with no time for offline decision) can CB on-line.

 Intended outcome: Report

 Deadline: In time for first on-line CB W2 Tuesday, later CB TBD.

* [AT117-e][012][IoT-NTN] Control Plane (Huawei)

 Scope: Based on R2-2203221 progress P5a and P7, address whether to move t-service to other SIB, address P5 from R2-22003721, Include OI 2.11 and OI 2.12 from AI 9.2.5. based on R2-2203220 progress the details, based on R2-2203457 (Ericsson), progress the details (proponent to drive the argumentation if any). Determine agreeable parts, Aim to agree offline, if needed identify CB points.

 Intended outcome: Report.

 Deadline: In time for on-line CB W2 Tuesday

* [AT117-e][015][IoT-NTN] Miscellaneous Issues (MediaTek)

 Scope: Based on R2-2203721 (and related summarized input), Include OI 2.13 and OI 2.14 from AI 9.2.5, and progress the following:

 - P3 on cell reselection priority

 - Location Reporting in IoT-NTN, and kick this part off as soon as LS reply is received (e.g. for NB-IoT), and/or as soon as relevant progress is achieved for NR NTN (e.g. for eMTC).

 - UE report of remaining GNSS validity duration (Chair comment: this is a R1 agreement and can thus be followed, however the R1 agreed range might not be sufficient for this reporting to be useful, suggest to discuss this).

 - For Prediction of discontinus coverage: Can attempt to address the earlier defined FFS: *FFS whether additional assumptions (like averaging time) need to be clarified, e.g. to have predictable performance*.

 - For Prediction of discontinus coverage: additional new parameters, like satellite footprint reference location on ground and coverage radius (condition that they shall be defined without RAN1 involvement).

 - Determine agreeable parts, Aim to agree less controversial points offline (with no CB). Identify CB points.

 Intended outcome: Report

 Deadline: In time for first on-line CB W2 Tuesday, later CB TBD.

* [AT117-e][064][IoT-NTN] UE capabilites (Nokia)

 Scope: a) review the CR (it is new) b) based on Input to 9.2.4, address the open issues. Determine agreeable parts, identify discussion points and pave the way for efficient on-line CB. For OI4.4 focus for now on the need, rather than solutions, e.g. attempt to identify which capabilities should be indicated per deployment option, if any.

 Intended outcome: Report

 Deadline: In time for on-line CB W2 Tuesday

### 9.2.1 General

#### 9.2.1.1 Organizational

Tdoc Limitation: 0

Planning etc

#### 9.2.1.2 LS in

Tdoc Limitation: 0

LS in. For LSes that need action or has impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided.

R2-2202105 Reply LS on EPS support for IoT NTN in Rel-17 (C1-220532; contact: MediaTek) CT1 LS in Rel-17 To:SA2, RAN2, CT, RAN, SA Cc:CT4, RAN3

* Noted

R2-2202135 LS on opens issues for NB-IoT and eMTC support for NTN (R3-221406; contact: Nokia) RAN3 LS in Rel-17 To:SA2, SA3, RAN2

Nokia are ok to wait with LS out until UE cap is done

* Noted

#### 9.2.1.3 CRs and Rapporteur Resolutions

Tdoc Limitation: 0.

CR Rapporteurs to provide running CRs, potentially updated, Provide resolution proposals to Rapporteur Handled Open Issues. See also R2-2202053

Control Plane

OI 2.4 [CR rapporteur handled issue] FFS whether t-Service applies to higher priority frequencies

OI 2.5 [CR rapporteur handled issue] Change/amend text on location registration related to TAU in NTN

OI 2.10 [CR rapporteur handled issue] Signalling of Part-of ARFCN indication in MIB for NB-IoT

R2-2203219 Support of Non-Terrestrial Network in NB-IoT and eMTC Huawei CR Rel-17 36.331 16.7.0 4771 - B LTE\_NBIOT\_eMTC\_NTN

R2-2203220 OI 2.10: Signalling of part-of-ARFCN indication in MIB in NB-IOT Huawei, HiSilicon discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

DISCUSSION brief

- Ericsson wonder if not R4 need to have a look

- QC think this is a R1 agreement, think it can be added in the CR, but wonder why three bits are needed, two should be sufficient.

- Chair think we can have an Editors note to not forget about potential R4 input

* We go ahead with this, can discuss the details offline

R2-2203455 IoT NTN Stage 2 CR Ericsson, Eutelsat CR Rel-17 36.300 16.7.0 1356 - B LTE\_NBIOT\_eMTC\_NTN

R2-2203456 IoT NTN Idle mode CR Ericsson CR Rel-17 36.304 16.6.0 0843 - B LTE\_NBIOT\_eMTC\_NTN

R2-2203457 IoT NTN Idle mode Open issue resolutions Ericsson discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

### 9.2.3 Open Issues

TBD how to handle Open issues that are the same as for NR NTN

#### 9.2.3.1 Pre-discussions

Tdoc Limitation: 0.

Pre117-e discussions to gather company input on specific Open Issues See also R2-2202053

User Plane

OI 1.1a [Pre117-e-offline] Decide on a suitable name and contents for the MAC CE corresponding K\_Offset.

OI 1.1b [Pre117-e-offline] Decide on a suitable name and contents for the UE-specific TA Report MAC CE.

OI 1.2 [Pre117-e-offline]: How to extend SR-Prohibit Timer in IoT-NTN?

OI 1.3 [Pre117-e-offline]: How to extend RLC t-Reordering Timer and PDCP Discard Timer in IoT NTN?

OI 1.4 [Pre117-e-offline]: Decide whether to use LCID or eLCID for UE-specific TA Report MAC CE.

O1 1.5 [Pre117-e-offline]: Decide whether to use LCID or eLCID for MAC CE corresponding K\_Offset.

OI 1.6 [Pre117-e-offline]: Decide whether the threshold-based TA-Trigger needs to deviate from NR-NTN agreements

OI 1.7 [Pre117-e-offline]: Decide whether we need different behavior for different re-configurations e.g., Re-establishment, Handover

OI 1.8 [Pre117-e-offline]: Decide if TA reporting in connected mode is not controlled by enabling/disabling indication in SI?

OI 1.9 [Pre117-e-offline]: What's the logical channel priority of the TA report MAC CE, e.g., compared with other MAC CEs?

Control Plane

OI 2.1 [Pre117-e-offline]: Define a new barring bit for NTN UEs barring.

OI 2.6 [Pre117-e-offline] If some mechanism is needed to trigger the UE to reacquire the NTN specific SIB in RRC\_IDLE

OI 2.7 [Pre117-e-offline] If anything additional is needed on expiry of the UL synchronisation timer

OI Provision of SIBxx in dedicated signalling at HO

Discontinuous Coverage

OI 3.1 [Pre117-e-offline]: Decide on the maximum number of satellites, whose ephemeris (assistance) information will be provided.

OI 3.2 [Pre117-e-offline]: How to signal this information (new SIB for this purpose or dedicated signaling)?

OI 3.3 [Pre117-e-offline]: Decide if average ephemeris and almanac information should be used for estimating discontinuous coverage. Take into account the size and feasibilty of specifying almanac.

OI 3.4 [Pre117-e-offline]: What will be the UE behavior on receiving this ephemeris information?

Companies to provide input into the following discussions:

[Pre117-e][011][IoT-NTN] User plane Open Issues Input (OPPO)

[Pre117-e][012][IoT-NTN] Control plane Open Issues Input (Huawei)

[Pre117-e][013][IoT-NTN] Discontinous Coverage Open Issues Input (MediaTek)

R2-2203160 Summary of [Pre117-e][011][IoT-NTN] User plane Open Issues Input OPPO discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN Late

DISCUSSION not concluded due to lack of time

- Chair: Can we agree all proposals marked for agreement, is there any proposal that cannot be agreed?

- Huawei: 11a don’t see the need for a condition, can just report.

- Ericsson: P1 P2 P4 P5 has not been agreed yet for NR NTN and they may not be exactly consistent with this. Interdigital proposes that we anyway can agree to align naming and Field descriptions with NR NTN.

- QC P6 think we will run out of codes, think we can re-purpose codes instead.

- Ericsson: P3 think it is sometimes important to have small size, but can use eLCID

- Chair: Think LCID situation is different for NB-IoT and eMTC, think we don’t need identical solutions.

- P12 CMCC think threshold based will only involve TA value and not location into.

- Chair: It seems that discussion is indeed needed even for the seemingly agreeable proposals.

* Align naming and field descr with NR NTN wrt P1 P2 P4 P5.

R2-2203221 Report of [Pre117-e][012][IOT-NTN] Control Plane Open Issues (Huawei) Huawei, HiSilicon report Rel-17 LTE\_NBIOT\_eMTC\_NTN Late

DISCUSSION (not including P5a and P7)

- Intel think P1 is not sufficient, and NTN UE need to ignore the legacy bit.

- QC think that P1 can be introduced in the MIB for NB-IoT.

- CATT think P1 is not always needed.

- P5 Ericsson would like to have a guard timer, can likely use one that we already have. Huawei support. QC also support. Nokia object to P5 it is not needed.

- P4 CMCC wonder if t-service is in SIBXX, Huawei think yes, but it is up to UE to read it or not. Huawei think we maybe should move t-service to somewhere else.

- QC think P2 is not agreeable .. discussion.

- Chair: We should consider to move t-service to other SIB.

- Chair: We may CB to the FFS on guard timer (below) towards the end of the meeting

* A new bit, e.g. *cellBarred-NTN*, is introduced in SIB1 to bar NTN UEs from accessing a NTN cell. FFS whether to consider MIB instead of SIB1 for NB-IoT. NTN UE ignores the legacy bit.
* SIBXX is an essential SIB, i.e. the UE shall consider the cell barred if it is unable to acquire the SIB when scheduled.
* UE shall acquire the NTN specific SIB before accessing the cell, regardless of the state of UL sync validity timer.
* FFS if we Will have a guard timer to handle the case where the UE takes ‘forever’ reacquire the SIB. At timer expiry UE triggers RLF handling. (Note that it is expected that the timer will not expire in the normal case, and the UE can just come back acc to previous decision).
* All parameters needed to access the target cell are included in RRCReconfiguration message for handover.
* For simplicity, the whole SIBXX structure is included in RRCReconfiguration message for handover.

R2-2203521 [Pre117-e][013][IoT-NTN] Discontinous Coverage Open Issues Input MediaTek Inc.

DISCUSSION

P4

- QC wonder how this is captured in 304, think similar to PSM and can be very simple.

- ZTE think there may need to be some AS NAS interaction. Chair think we can assume same AS NAS interaction as for PSM mode. QC agrees with ZTE that this need to eb considered. Huawei think AS NAS interaction can be left for UE impl.

P2

- xiaomi think we don’t need dedicated RRC signalling. Think 4 is enough. CATT think the number can be increased to > 4. CATT think we can support more if we consider stationary cases.

- Gatehouse think we can consider encoding optimization to have > 4.

P3

- Intel wonder if this brings a TS change. E.g. do we need a validity timer?

- QC has the same question? E.g. Do we need an indication to indicate the character of the ephemeris data?

- Huawei think we don’t need timer or indication. Ericsson think we don’t need a validity timer or indication, but up to network impl. to ensure that mean parameters are signalled. Ericsson think P3 is ok.

- Gatehouse think that if UE has to guess how to do the prediction, based on mean or instantaneous there will be some error (may still work).

- Chair think the purpose of providing mean parameters is to improve the UE prediction, so in order for this proposal to bring benefit it is logical that the UE should know.

- Novamint think we can simply specify in the TS that the ephemeris for coverage prediction is mean values, and no signalled indication is needed.

- Apple think the UE may need more info in order to understand what mean is, e.g. averaging time. Chair think we can indeed think about this. ZTE agrees that avg time should be known by UE.

* RAN2 will use a new SIB to share the ephemeris information for Discontinuous Coverage with the UEs. Sharing the information using dedicated RRC signalling is FFS.
* While Out of Coverage in Discontinuous Coverage deployment (in Idle Mode or PSM mode) the UE is not required to perform any cell search and may deactivate its AS functions to optimize the power consumption. The remaining UE behaviour is left to UE implementation. FFS whether anything need to be specified for ASNAS interaction.
* For Discontinuous Coverage, ephemeris information of up to a maximum X satellites can be shared using the new SIB, where X is limited by the volume of information vs capacity of the SIB (X=4 is baseline). Increasing this maximum number by using dedicated RRC Signalling and by any further ephemeris optimization is FFS.
* RAN2 assumes that for Discontinuous Coverage, network can signal mean ephemeris parameters (for neighbours and potentially serving satellite for coverage prediction purpose), using the same (already introduced) ephemeris format. UE can always assume these are mean values and It is up to the network implementation to derive this mean value (and any trade-off between instantaneous and mean values if needed). FFS whether additional assumptions (like averaging time) need to be clarified, e.g. to have predictable performance.

#### 9.2.3.2 Invited tdoc input

Company input on the following Open Issues See also R2-2202053

User Plane

OI 1.10 [Company Tdocs Invited]: Whether SR can be triggered if there is no available or sufficient UL-SCH resources for the triggered TA reporting?

Control Plane

OI 2.2 [Company Tdocs invited]: Decide on Location Reporting by NAS and Coarse location report.

OI 2.3 [Company Tdocs invited]: Whether existing offset are sufficient to prioritize TN vs NTN frequencies

OI 2.8 [Company Tdocs invited]: Configuration of event-triggered TA report

OI 2.9 [Company Tdocs invited]: Signalling of multiple TACs per PLMN in eMTC and NB-IoT

Discontinuous Coverage

O1 3.5 [Company Tdocs Invited]: Decide on whether additional new parameters like satellite footprint reference point on ground, satellite coverage radius can be used?

R2-2203707 Summary of Invited Tdoc Input in IoT-NTN MediaTek Inc.

R2-2203721 Summary of Invited Tdoc Input in IoT-NTN MediaTek Inc.

R2-2203530 On GNSS validity duration reporting Ericsson, Nokia, Nokia Shanghai Bell, Turkcell, NEC, Qualcomm, ZTE

R2-2202352 Discussion on the additional new parameters for supporting discontinuous coverage for IoT over NTN Transsion Holdings discussion Rel-17

R2-2202414 Discussion on the remaining issue of IoT over NTN Spreadtrum Communications discussion Rel-17

R2-2202458 Discussion on additional parameters for Non continuous coverage Intel Corporation discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

R2-2202549 Location reporting in NAS Apple discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

R2-2202550 Support of discontinuous coverage Apple discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN R2-2201181

R2-2202559 Additional issues on the support of the discontinuous coverage Qualcomm Incorporated discussion Rel-17 FS\_LTE\_NBIOT\_eMTC\_NTN

R2-2202562 Signalling of multiple TACs per PLMN in eMTC and NB-IoT Qualcomm Incorporated discussion Rel-17 FS\_LTE\_NBIOT\_eMTC\_NTN

R2-2202589 Satellite assistance information and exchange for discontinuity Prediction in IoT NTN Lenovo, Motorola Mobility discussion Rel-17

R2-2202615 UP leftover issues for IoT-NTN CMCC discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

R2-2202621 Discussion on open issues for support of Non continuous coverage CMCC discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

R2-2202729 Remaining Issues of CP Impact of IoT over NTN CMCC discussion Rel-17 FS\_LTE\_NBIOT\_eMTC\_NTN

R2-2202746 Remaining issues of user plane in IoT NTN ZTE Corporation, Sanechips discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN-Core

R2-2202747 Remaining issues of control plane in IoT NTN ZTE Corporation, Sanechips discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN-Core

R2-2202748 Remaining issues of discontinuous coverage in IoT NTN ZTE Corporation, Sanechips discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN-Core

R2-2202749 Remaining issues of UE capabilities in IoT NTN ZTE Corporation, Sanechips discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN-Core

R2-2202931 Discussion on discontinuous coverage Xiaomi discussion

R2-2203000 Discussion on UP open issues in IoT NTN OPPO discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

R2-2203001 Discussion on the open issues of discontinuous coverage for IoT over NTN OPPO discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

R2-2203002 Discussion on Control Plane open issues for IoT NTN OPPO discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

R2-2203052 On remaining control plane issues for IoT-NTN Nokia Solutions & Networks (I) discussion

R2-2203080 Further Discussion on the Open Issues of IoT-NTN Control Plane CATT discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

R2-2203081 Open Issue on UP and Discontinous Coverage CATT discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

R2-2203192 Issues related to IOT NTN RRC running CR Xiaomi discussion Rel-17

R2-2203193 Remaining issues of IOT NTN RRC Xiaomi discussion Rel-17

R2-2203222 OI 2.9: Signalling of multiple TACs per PLMN in eMTC and NB-IoT Huawei, HiSilicon discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

R2-2203223 OI 3.5: Discussion on non continuous coverage Huawei, HiSilicon discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

R2-2203258 On IoT NTN open issues for Discontinuous Coverage and User plane Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

R2-2203293 (O1 3.5) Parameters for coverage gap prediction and Idle mode behaviour Interdigital, Inc. discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

R2-2203453 Control plane and discontinuous coverage aspects of IoT NTN Ericsson discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

R2-2203483 User plane aspects of NB-IoT and LTE-M in NTNs Ericsson discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

### 9.2.4 UE capabilities

Includes invited tdocs for identified Open issues

R2-2202744 draft Running CR to 36.306 for IoT-NTN UE capabilities Nokia Solutions & Networks (I) draftCR Rel-17 36.306 16.7.0 B IoT\_NTN\_enh-Core

#### 9.2.4.1 R2 Features and General

Open Issues See also R2-2202053

UE Capabilities

OI 4.1 [Company Tdocs Invited]: UE capability for supporting soft-switching procedure

OI 4.2 [Company Tdocs Invited]: UE capability for supporting PUR Timer modifications

OI 4.3 [Company Tdocs Invited]: Reuse of the existing CHO capability indication for IoT-NTN CHO

OI 4.4 [Company Tdocs Invited]: Whether Capability Indication of existing IoT-Features until Rel-16 are reused in NTN, or to what extent they need to be duplicated to allow for different Interoperability Test (IOT) Status

R2-2203224 OI 4.1 and OI 4.2: UE capabilities open issues Huawei, HiSilicon discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

R2-2203225 OI 4.4: TN – NTN differentiation Huawei, HiSilicon discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

R2-2202415 Remaining FFSs on UE Capabilities Spreadtrum Communications discussion Rel-17

R2-2202561 Open issues on UE capabilities for NB-IoT and eMTC Qualcomm Incorporated discussion Rel-17 FS\_LTE\_NBIOT\_eMTC\_NTN

R2-2202724 Remaining Issues on IoT NTN UE Capabilities CMCC discussion Rel-17 FS\_LTE\_NBIOT\_eMTC\_NTN

R2-2202742 Further analysis on remaining open issues for IoT-NTN Capabilities Nokia, Nokia Shanghai Bells discussion Rel-17

R2-2202932 Discussion on UE capabilities Xiaomi discussion

R2-2203003 Discussion on IoT NTN UE capabilities OPPO discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

R2-2203237 Remaining open issues of IoT NTN UE capabilities NEC Telecom MODUS Ltd. discussion

R2-2203454 On IoT NTN capabilities Ericsson discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

#### 9.2.4.2 R1 and R4 Features

CR Rapporteur to make initial proposals

### 9.2.5 Other

Issues not covered elsewhere. See also R2-2202053

OI 2.11 [Other] Signalling range of positionX, positionY, positionZ

OI 2.12 [Other] Signalling range and step size of velocityVX, velocityVY, velocityVZ

OI 2.13 [Other] UE location reporting in eMTC

OI 2.14 [Other] UE location reporting in NB-IoT

R2-2202560 UE state mismatch upon expiry of GNSS validity timer Qualcomm Incorporated discussion Rel-17 FS\_LTE\_NBIOT\_eMTC\_NTN

R2-2203259 On IoT NTN Other open issues Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

## 9.3 EUTRA R17 Other

Time budget: 0 TU

Tdoc Limitation: No limitation but new topics may be deprioritized depending on available time.

This agenda item may use a summary document (decision made based on submitted contributions).

Including RRC CRs based on L1 parameters received from RAN1 for all Rel-17 LTE WIs not covered by other AIs

Including final CRs for LTE TEI17 proposals that have been agreed in principle earlier.

R2-2202212 Introduction of event-based trigger for LTE MDT logging [LTE-Event-MDT] KDDI Corporation, CMCC, Telecom Italia, Samsung, Ericsson, China Unicom, Huawei, HiSilicon, Qualcomm Inc. CR Rel-17 37.320 16.7.0 0113 - B TEI17

R2-2202213 Introduction of event-based trigger for LTE MDT logging [LTE-Event-MDT] KDDI Corporation, CMCC, Telecom Italia, Samsung, Ericsson, China Unicom, Huawei, HiSilicon, Qualcomm Inc. CR Rel-17 36.331 16.7.0 4752 - B TEI17

R2-2202237 Introduction of new bands and bandwidth allocation for LTE-based 5G terrestrial broadcast Qualcomm Incorporated CR Rel-17 36.331 16.7.0 4750 1 B LTE\_terr\_bcast\_bands\_part1-Core R2-2200209

R2-2202238 Introduction of new bands and bandwidth allocation for LTE-based 5G terrestrial broadcast Qualcomm Incorporated CR Rel-17 36.306 16.7.0 1836 - B LTE\_terr\_bcast\_bands\_part1-Core

R2-2202290 On introducing height information reporting in MDT reports [LTE-Height-MDT] KDDI Corporation, Ericsson CR Rel-17 36.331 16.7.0 4756 - B TEI17 R2-2200368

R2-2202291 On introducing height information reporting in MDT reports [LTE-Height-MDT] KDDI Corporation, Ericsson CR Rel-17 37.320 16.7.0 0114 - B TEI17 R2-2200370

R2-2202292 On introducing height information reporting in MDT reports [LTE-Height-MDT] KDDI Corporation, Ericsson CR Rel-17 36.306 16.7.0 1838 - B TEI17 R2-2200371

R2-2202503 Addition of NR-U RSSI/CO measurement UE capability (TS36.331) Apple, xiaomi, vivo, Lenovo, Motorola Mobility, Ericsson, Qualcomm Incorporated CR Rel-17 36.331 16.7.0 4761 - F NR\_unlic-Core, TEI17 Withdrawn

R2-2202504 Addition of NR-U RSSI/CO measurement UE capability (TS36.306) Apple, xiaomi, vivo, Lenovo, Motorola Mobility, Ericsson, Qualcomm Incorporated CR Rel-17 36.306 16.7.0 1840 - F NR\_unlic-Core, TEI17 Withdrawn

R2-2202841 Introduction of event-based trigger for LTE MDT logging [LTE-Event-MDT] Huawei, HiSilicon, Qualcomm Inc., KDDI Corporation CR Rel-17 36.304 16.6.0 0834 1 B TEI17 R2-2110643

R2-2202842 Introduction of event-based trigger for LTE MDT logging [LTE-Event-MDT] Huawei, HiSilicon, Qualcomm Inc., KDDI Corporation CR Rel-17 36.306 16.7.0 1830 1 B TEI17 R2-2110644

R2-2203161 Addition of NR-U RSSI/CO measurement UE capability Apple, xiaomi, vivo, Lenovo, Motorola Mobility, Ericsson, Qualcomm Incorporated CR Rel-17 36.331 16.7.0 4729 3 F NR\_unlic-Core, TEI17 R2-2111319

R2-2203162 Addition of NR-U RSSI/CO measurement UE capability Apple, xiaomi, vivo CR Rel-17 36.306 16.7.0 1827 3 F NR\_unlic-Core, TEI17 R2-2111320

## 9.4 User Plane Integrity Protection support for EPC connected architectures

(UPIP\_EN-DC\_UE; leading WG: RAN3; REL-17; WID: RP‑213669)

Time budget: 0.5 TU

Tdoc Limitation: 2 tdocs

Including discussion on SA3 LS R2-2200153

Including configuration and capability aspects of allowing full rate UPIP for EN-DC UEs connected to EPC

R2-2202145 Reply LS on LTE User Plane Integrity Protection (R3-221473; contact: Vodafone) RAN3 LS in Rel-17 To:SA3, SA2 Cc:CT4, CT1, RAN2

R2-2202717 Introducing support of UP IP for EPC connected architectures using NR PDCP Huawei, HiSilicon, Vodafone, Ericsson CR Rel-17 36.331 16.7.0 4763 - B UPIP\_SEC\_LTE

R2-2202718 Introducing support of UP IP for EPC connected architectures using NR PDCP Huawei, HiSilicon, Vodafone, Ericsson CR Rel-17 38.331 16.7.0 2904 - B UPIP\_SEC\_LTE

R2-2202719 Introducing support of UP IP for EPC connected architectures using NR PDCP Huawei, HiSilicon, Vodafone, Ericsson CR Rel-17 36.300 16.7.0 1353 - B UPIP\_SEC\_LTE

R2-2202720 Introducing support of UP IP for EPC connected architectures using NR PDCP Huawei, HiSilicon, Vodafone, Ericsson CR Rel-17 37.340 16.8.0 0294 - B UPIP\_SEC\_LTE

R2-2202721 Introducing support of UP IP for EPC connected architectures using NR PDCP Huawei, HiSilicon, Vodafone, Ericsson CR Rel-17 38.323 16.6.0 0085 - B UPIP\_SEC\_LTE

R2-2202722 Discussion on LTE User Plane Integrity Protection (SA3 LS) Huawei, HiSilicon discussion Rel-17 UPIP\_SEC\_LTE

R2-2203369 draft Reply LS on LTE User Plane Integrity Protection Vodafone LS out Rel-17 To:SA3 Cc:RAN3, SA2

## 9.5 NR and EUTRA Inclusive language

Time budget: N/A

RAN coordinator for inclusive language is Gino Masini (Ericsson).

CRs were endorsed/agreed-in-principle at R2#112-e. Final approval of CRs is expected in RAN#95e, so affected RAN2 specifications rapporteurs are requested to submit the endorsed CRs (updated to latest TS versions) for approval in this meeting.

R2-2202217 Inclusive Language Review for TS 38.300 Nokia (Rapporteur) CR Rel-17 38.300 16.8.0 0401 - D TEI17

R2-2202227 Inclusive Language Review for TS 36.306 Motorola Mobility (Rapporteur) CR Rel-17 36.306 16.7.0 1835 - D TEI17

R2-2202666 Inclusive Language Review for TS 38.306 Intel Corporation CR Rel-17 38.306 16.7.0 0686 - D TEI17

R2-2202687 Inclusive language in TS38.304 Qualcomm Incorporated (Rapporteur) CR Rel-16 38.304 16.7.0 0204 1 D TEI17 R2-2102295

R2-2202933 Inclusive language review for TS 36.331 Samsung CR Rel-17 36.331 16.7.0 4767 - D TEI17 Withdrawn

R2-2202934 Inclusive language in TS36.331 Samsung (Rapporteur) CR Rel-17 36.331 16.7.0 4600 1 D TEI17 R2-2101988

R2-2203189 Inclusive Language Review for TS36.304 Nokia, Nokia Shanghai Bell CR Rel-17 36.304 16.6.0 0841 - D TEI17 Withdrawn

R2-2203228 Inclusive language in 36.304 Nokia, Nokia Shanghai Bell CR Rel-17 36.304 16.6.0 0822 2 D TEI17 R2-2101990 Late

R2-2203270 Inclusive Language Review for TS 36.300 Nokia (rapporteur) CR Rel-17 36.300 16.7.0 1333 2 D TEI17 R2-2101989

R2-2203399 Inclusive language in 37.320 Nokia (Rapporteur) CR Rel-17 37.320 16.7.0 0104 1 D TEI17 R2-2101991

R2-2203406 Inclusive language in TS 38.331 Ericsson CR Rel-17 38.331 16.7.0 2459 1 D TEI17 R2-2101987