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

Online, January, 2022

Source: RAN2 Chair (MediaTek)

Title: Chair Notes

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

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.

* [AT116bis-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] – [016]** used for Pre Discussions

* [AT116bis-e][017][NR17] UE caps main (Intel)

Scope: Progress the Draft CRs to 38306 38331 based on received feature list, for all R17 WIs, except the ones for which this is handled separately (see above). Identify questions for LS out, if any. Identify issues for online CB, if any.

Intended outcome: 1 report - if needed, 2 endorsed draft CRs

Deadline: 1 for online CB Monday W2 (if needed), 2 EOM

* [AT116bis-e][018][NR17] Gaps Coordination (Mediatek)

Scope: List the relevant gap features and potential opportunities regarding commonality, parts that need coordination (e.g. common capability/overall limitation). Collect comments, e.g. on feasibility, ambition levels, what to decide now, what to postpone etc. Consider proposals from tdocs submitted to 8.0.3.

Intended outcome: Report, ambition level up to rapporteur.

Deadline: For On-Line CB W2

* [AT116bis-e][019][MBS] Multicast Handover and related reconfigurations (Qualcomm)

Scope: Address FFSes on in which scenarios to support lossless handover and how to do that (including case of mobility to non-supporting node) and related high level implications to stage-3 if any not already covered. Determine expectations on when to use of full configuration vs delta configuration. Confirm expectations on MRB-DRB type reconfiguration. (see also P19 in R2-2200021). Can also include message sequence chart(s) for inclusion in Stage-2. Also: Collect comments on whether CHO and/or DAPS should be prevented or can be allowed for UE with Multicast / MRB configuration, and if allowed whether there are additional impacts.

Intended outcome: Report

Deadline: Online CB Friday W1

* [AT116bis-e][020][MBS] Multicast Start (LGE)

Scope: Address open issues related to Multicast start (ref green-marked Open issues R2-2200022), Group Notification - Applicability of PEI/WUS, applicability of short message. Connection establishment - Access Control and cause value

Intended outcome: Report

Deadline: Friday W1 for online CB.

* [AT116bis-e][021][MBS] MBS Interest Indication Open Issues (CMCC)

Scope: Address green-marked Open issues related to MII in R2-2200022, and related tdoc input. Address MII indication handling at handover. Collect comments, identify easy agreements and discussion points.

Intended outcome: Report

Deadline: For CB on-line Thursday W1.

* [AT116bis-e][022][MBS] Cell reselection Prioritization (CATT)

Scope: Address remaining open issues (ref green-marked Open issues R2-2200022), Whether to/how to apply target cell conditions (presence of SIBx) for prioritization, Need for additional neighbor cell info (ref provided tdocs). Which info the UE uses to determine what to prioritize: SIB info vs USD info vs MCCH info (ref provided tdocs),

Intended outcome: Report

Deadline: Friday W1 for online CB

* [AT116bis-e][023][MBS] MCCH (LGE)

Scope: Address the next level of details regarding Change Notification. Open issues on Acquisition of MCCH, and possibly related SIB handling, whether to support area based MCCH.

Intended outcome: Report

Deadline: Friday W1

* [AT116bis-e][024][MBS] RRC Miscellaneous (Huawei)

Scope: Take into account R2-2200095 (L1 parameters), R2-2200814, R2-2200815, relevant Open Issues from R2-22000022 (blue-marked and other smaller, if any). Address FFS whether some explicit indication is needed for the UE to know that an RLC entity is configured for PTM transmission. Acknowledge the way MRB bearer configuration is captured in current running CR. Progress offline as much as possible by easy agreements, Identify points for further discussion if any.

Intended outcome: Report, Endorsed/confirmed updated RRC CR.

Deadline: Friday W1 (CB online if needed).

* [AT116bis-e][025][MBS] CFR Case E (vivo)

Scope: Address support of CFR Case E (and other case of needed). Treat at least the proposals in R2-2201260. Can also take into account proposals from other papers.

Intended outcome: Report

Deadline: Thursday W1 for online CB

* [AT116bis-e][026][MBS] UE capabilities (MediaTek)

Scope: Initial discussion on MBS UE capabilities, Identify easy agreements (can be agreed offline), discussion points and points that may need LS to other working group(s). Coordination may be needed between this discussion and the main UE caps discussion.

Intended outcome: Report

Deadline: Friday W1 for parts that need concrete action at current meeting by online CB, otherwise EOM.

* [AT116bis-e][027][MBS] PDCP/RLC initial variables (xiaomi)

Scope: HFN applicability / initialization for both multicast and broadcast, how to set RLC initial values.

Intended outcome: Report

Deadline: Friday W1 (attempt offline agreement, can CB if needed W2)

* [AT116bis-e][028][MBS] MAC Open Issues (OPPO)

Scope: Address MAC related open issues, as captured in R2-2200022 and R2-2111414 (running CR). Take into account input to this meeting. Identify (easy) agreements, points for discussion etc.

Intended outcome: Report, with agreements, open issues, and other proposals

Deadline: Tue W2

* [AT116bis-e][029][QoE] RAN Visible QoE (Qualcomm)

Scope: Determine what RAN2 need to do to support RAN3 decisions in LS in R2-2200110, Take into account documents in subclause 8.14.2. and make the corresponding decisions to such level that it is possible to make corresponding Stage-3 updates.

Intended outcome: Report, with discussion and agreements

Deadline: Friday W1

* [AT116bis-e][030][QoE] Other open issues (Ericsson)

Scope: List the remaining other open issues not related to Mobility, Pause Resume, RV QoE or UE cap. Determine agreements (agreed offline), and points for online CB, if any.

Intended outcome: Report

Deadline: Friday W1 (can CB Mon W2 if needed).

* [AT116bis-e][031][QoE] UE capabilities (CMCC)

Scope: Initial discussion on proposals from documents under 8.14.4. Identify agreeable points, points for discussion, if any. Points postponed, if any. Attempt endorsement of Running CR.

Intended outcome: 1 Report 2 Endorsed running CR.

Deadline: 1 Friday W1, 2 EOM

* [AT116bis-e][032][eNPN] UE capabilities (Intel)

Scope: Initial discussion on UE caps. Identify agreements (for offline agreement), and Open issues, to be addressed at next meeting. If need is high, e.g. if LS out is needed, can also identify some point for online CB W2.

Intended outcome: Report

Deadline: EOM (or earlier for CB point if needed).

* [AT116bis-e][033][NR17] PUCCH SCell activation (Huawei)

Scope: Treat R2-2200086, R2-2201341, R2-2201502, R2-2201503, R2-2201504. Determine agreeable parts, identify parts for online CB.

Intended outcome: 1 Report, 2 Reply LS, Draft CRs if applicable.

Deadline: 1 potential CB Tuesday W2, 2 Post meeting

* [AT116bis-e][034][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 R2-2200133, R2-2200891, R2-2200892

Intended outcome: Report, Approved LS out.

Deadline: EOM

* [AT116bis-e][035][NR17] DC Location Reporting (Qualcomm)

Scope: Treat R2-2200117, R2-2201059, R2-2201436, R2-2200306. Aim to clarify what RAN2 need to do. Initial Collection of comments. Pave the way for on-line discussion on way forward.

Intended outcome: Report

Deadline: For Online CB Thu W1.

* [AT116bis-e][036][NR17] UL TX switching Enh (China Telecom)

Scope: Treat R2-2200120, R2-2201499, R2-2201500, R2-2201501, R2-2200516. R2-2200519, R2-2200517, R2-2200518, Take into account R2-2200095.

1: Determine agreeable parts, parts that need CB on-line if any 2: agree updated Running CRs that reflect agreeable parts / agreements.

Intended outcome: 1 Report, 2 endorsed running CRs

Deadline: 1 for online CB Mon W2 if CB is needed, 2 EOM

* [AT116bis-e][037][NR17] FR2 CA BW class (Nokia)

Scope: Treat R2-2200118, R2-2200839, R2-2200840, R2-2200841, R2-2200843, R2-2201385. Progress the topic, Determine agreeable parts, for agreeable parts, agree CRs, approve reply LS out if agreeable.

Intended outcome: Report, agreed in principle CRs, Approved LS out if applicable.

Deadline: EOM (or earlier if online CB is needed, can CB W2).

* [AT116bis-e][038][NR17] FR2 UL Gap (Apple)

Scope: Treat R2-2200122, R2-2201105. Aim to clarify what is needed in R2, determine agreeable parts, open points, pave the way for online disc.

Intended outcome: Report

Deadline: CB online Mon W2.

* [AT116bis-e][039][NR17] RRM enh for HST (CMCC)

Scope: Treat R2-2200123, R2-2201334, R2-2201335, R2-2201336, R2-2200864, R2-2200865. 1 Determine what RAN2 need to do / agreeable parts 2 endorse Draft CRs.

Intended outcome: Report, endorsed Draft CRs.

Deadline: EOM (assume no online CB)

* [AT116bis-e][040][NR17] BCS4/BCS5 (xiaomi)

Scope: Treat R2-2201371, R2-2201372

Intended outcome: Agreed in principle CRs.

Deadline: Friday W1

* [AT116bis-e][041][NR17] HO with PSCell (MediaTek)

Scope: Treat R2-2200124, R2-2201673 (late), make a reply LS.

Intended outcome: Approved LS out

Deadline: Friday W1

* [AT116bis-e][042][NR17] DSS (Ericsson)

Scope: Treat R2-2200294, R2-2201039, R2-2201040, R2-2201396, R2-2201618. If possible, offline only, if needed CB W2. 1 Determine Agreeable parts 2 Update Running CR(s) to reflect agreeable parts.

Intended outcome: Report, Endorsed updated CR.

Deadline: Friday W1

* [AT116bis-e][043][NR17] MINT (Ericsson)

Scope: Take into account submitted documents incl Reply LS from CT1. Update Running CR to reflect Reply LS from CT1, and other discussion if agreeable. 1 Determine agreeable parts, and points for online CB if any. 2 endorse updated CR

Intended outcome: Report, endorsed CR

Deadline: 1 Friday W1 (can CB W2 if needed), 2 EOM

* [AT116bis-e][044][NR17] RRC resume security (NTT DOCOMO)

Scope: Reply to LS in R2-2200154. Consider R2-2201506, R2-2201161, R2-2201162 (chair comment: pl consider also that R2 doesn’t need to reply to aspects typically in R3 domain).

Intended outcome: Approved LS out

Deadline: EOM

* [AT116bis-e][045][NR17] Duplicate Measurement Reply LS (Qualcomm)

Scope: Treat R2-2200135, R2-2201083, R2-2201084. Make a reply LS

Intended outcome: Approved reply LS

Deadline: Friday W1

* [AT116bis-e][046][IoT-NTN] RRC Misc (Huawei)

Scope: Review of the last update IN R2-2201451 (including Latest L1 parameters). This phase of the discussion is offline only. If issues are found, capture as editors notes (or in an annex etc).

Intended outcome: Report

Deadline: Initial review during W1.

* [AT116bis-e][047][IoT-NTN] UE capabilities (Nokia)

Scope: Take into account proposals of documents submitted under 9.2.5, find agreements if possible (can agree offline), identify open points. This discussion is offline only.

Intended outcome: Report

Deadline: EOM

Added MON JAN 17

* [AT116bis-e][048][eIAB] RLF indication (LGE)

Scope: Take online agreements into account, treat remaining relevant contents in R2-2201692. Attempt agree offline. Can also capture open points.

Intended outcome: Report, Agreements

Deadline: EOM

* [AT116bis-e][049][eIAB] BAP Routing (Qualcomm)

Scope: Continue progressing proposals from R2-2201690. Agree offline if possible

Intended outcome: Report, agreements

Deadline: For potential CB Monday W2

* [AT116bis-e][050][eIAB] MAC (Samsung)

Scope: Review and Endorse MAC running in CR R2-2201527, Treat R2-2201353, R2-2200810, R2-2201298, R2-2201427, R2-2201526. Determine agreeable parts, Capture agreements, and update CR. Agree offline if possible

Intended outcome: Report, agreements Endorsed CR

Deadline: For potential CB Monday W2 (hopefully all offline).

* [AT116bis-e][051][eIAB] UE Caps (Intel)

Scope: Attempt offline agreements of proposals in R2-2201689, can also capture open issues and FFSes.

Intended outcome: Report, agreements, open issues.

Deadline: EOM (hopefully all offline).

* [AT116bis-e][052][feMIMO] RRC progress (Ericsson)

Scope: a) Review R2-2201560, to be endorsed if possible, b) Continue R2-2200015, take agreements into account, attempt to progress further, take also into account R2-221xxxx c) Collect Questions for R1 in an LS out. Identify Open Issues.

Intended outcome: Report, with agreements, CB points

Deadline: CB points CB Mon W1, Otherwise EOM

* [AT116bis-e][053][UDC] General (CATT)

Scope: Take agreements into account, update CRs if needed. Review CRs. Can include tech proposals from tdocs below (proponents are expected to request), Can Consider the remaining proposals from R2-2200039

Intended outcome: Report, prepare for CB, Endorsable CRs

Deadline: Ready for CB Mon W2

Added TUE JAN 18

* [AT116bis-e][054][ePowSav] Subgrouping and PEI (MediaTek)

Scope: Based on online agreements, 1) Address the FFS from discussion on R2-2201675 on the interpretation PEI bits map to paging subgroups, and confirm value ranges of SubgroupNumPerPO and Nsg-UEID. 2) Discuss whether LS should be sent with specific questions to RAN1, e.g. on PEI applicability to eDRX, if so then draft agreeable LS. 3) For “PEI used in last cell” (only), attempt to find an agreeable compromise, e.g. a simple way of configurability that can let different operators choose if to use it or not. Chair: Simplicity is important.

Intended outcome: Report, LS out if applicable.

Deadline: Tue W2

* [AT116bis-e][055][ePowSav] TRS/CSI-RS for idle/inactive (CATT)

Scope: Based on on-line agreements, attempt further progress off-line

Intended outcome: Report, with Agreements (and-or Open Issues).

Deadline: Tue W2.

* [AT116bis-e][056][ePowSav] RLM/BFD relaxation (vivo)

Scope: based on on-line agreements R2-2201684, and possibly other relevant input, attempt more progress offline, e.g. for configuration part

Intended outcome: Report, with Agreements (and-or Open Issues).

Deadline: Tue W2.

* [AT116bis-e][057][ePowSav] PDCCH Skip (Samsung)

Scope: Treat R2-220200, R2-2200187, R2-2201222. Collect comments

Intended outcome: Report, with potential agreements for online CB (and-or Open Issues, can be captured offline).

Deadline: Tue W2, for online CB

* [AT116bis-e][058][ePowSav] UE capabilities (Intel)

Scope: Based on R2-2201581, attempt to agree offline proposals marked easy agreement

Intended outcome: Report, with agreements

Deadline: EOM (offline only)

* [AT116bis-e][059][feMIMO] Specific items: SI, MPE (Nokia)

Scope: Take into account R2-2201275, R2-2200569, R2-2201058, collect comments, for SI: Identify options, if possible - find agreements to converge / limit the options. For MPE progress if possible.

Intended outcome: Report

Deadline: Tue W2

* [AT116bis-e][060][feMIMO] MAC general (Samsung)

Scope:

1) Further progress based on R2-2201699, taking into account on-line discussion

- Attempt agree on points that seem easy agreeable, if any.

- Collect comments in order to find ways forward, identify open issues etc on RAN1-defined MAC CEs, and on selected basic aspects (rapporteur to select), e.g. contents of BFR MAC CE.

2) Take into account RRC agreements and some relevant input in 8.17.2 (e.g. R2-2200316) and attempt further progress on MAC CE for TCI state activation (at least identify issues).

Intended outcome: Report, with agreements if any, proposed way forwards, open issues etc.

Deadline: EOM

* [AT116bis-e][061][MGE] LS out (Apple)

Scope: For MGE WI Discuss questions for potential LS out to R4 (for any subtopic). E.g. it was proposed to ask whether to support simultaneous configuration on NCSG and legacy measurement gap, but there were a number of comments. Consider whether to merge anything with discussion under 8.0.3. Make LS out if agreeable.

Intended outcome: Report, LS out

Deadline: Tue W2 (approve offline if possible, CB online only if there is particular issue for decision).

* [AT116bis-e][062][MGE] pre-configured measurement gap (Intel)

Scope: Based on R2-2201687, attempt to agree offline “easy agreements”.

Intended outcome: Report

Deadline: EOM

Added WED JAN 19

* [AT116bis-e][063][IoT NTN] LS out on NAS supervision timers (Ericsson)

Scope: Based on on-line discussion and agreements, make a reply LS.

Intended outcome: Approved LS (if possible, offline only)

Deadline: EOM

Added Thu JAN 20

* [AT116bis-e][064][IoT-NTN] LSes out on UE providing Location Information (Ericsson)

Scope: On LS out, either one LS or two.

1) Determine whether to send LS to ask about NB-IoT providing UE location information by NAS, and if applicable ask for details, E.g. could ask SA2 and RAN3 whether this would be acceptable to meet requirements (*note: NAS reporting may need to be complemented by network signalling to forward the location to the eNB by R3 decision*), E.g. could ask SA2 and/or CT1 on feasibility.

2) Determine whether to send LS to SA3 on providing coarse location info at connection setup, and if applicable what to ask. Shall be consistent with outcome of discussion [110] unless there are strong reasons not to be consistent.

Intended outcome: Report, LS out(s)

Deadline: EOM (if possible offline only)

Added FRI JAN 21

* [AT116bis-e][068][QoE] Reply LS on QoE report handling at QoE pause (Huawei)

Scope: Send LS to inform about decision.

Intended outcome: Approved LS out

Deadline: EOM (offline only)

# Post-Meeting Email List, Main Session

Deadline for Comments: Friday Jan 28, 0800 UTC.

OPEN ISSUES:

* **Each open issue** should be associated with **suggested treatment/handling**.
  1. **Company input into Pre117-e-offline (i.e. no company tdocs)**
  2. Company tdocs invited.
  3. CR rapporteur handled issue (CR rapporteur will propose resolution as input to next meeting).
  4. Other, e.g. immature area, reference to dependency, unclear status etc.
* [Post116bis-e][036][NR17] UL TX switching Enh CRs (China Telecom)

Scope: Update CRs taking into account agreements

Intended outcome: Endorsed CRs

Deadline: Short

* [Post116bis-e][053][UDC] CRs and LS out (CATT)

Scope: Take agreements into account. Review updated CRs. Endorse if possible (technical endorsement). LS out to RAN3 according to agreement.

Intended outcome: CRs (Endorsed if possible), Approved LS out

Deadline: Short

MBS

* [Post116bis-e][071][MBS] 38304 (CATT)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][072][MBS] 38321 (OPPO)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][073][MBS] 38323 (xiaomi)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][074][MBS] 38331 (Huawei)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][075][MBS] Open Issues (Huawei)

Scope: Determine if Company input by Pre117-e discussions shall be used, and how many / which Pre-discussions shall be done. Capture Open Issues not captured in the CR email discussions and suggest how to treat. [After finalization, Merge open issues from other discussions into a WI OI list (OI for which company input is invited in some way shall be listed in the WI-list).

Intended outcome: Open Issues list, and organization of Pre117-e Company input discussions for the WI.

Deadline: Short.

* [Post116bis-e][090][MBS] LS on MBS SPS (OPPO)

Scope: Based on R2-2201944, review, determine agreeable contents if changes or additions are needed.

Intended outcome: Approved LS out

Deadline: Short.

* [Post116bis-e][093][MBS] LS on Misc Aspects (Huawei)

Scope: Based on R2-2201861, agreements and comments, determine agreeable LS out to R1.

Intended outcome: Approved LS out

Deadline: Short.

eIAB

* [Post116bis-e][076][eIAB] 38331 (Ericsson)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][077][eIAB] 38321 (Samsung)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][078][eIAB] 38340 (Huawei)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][079][eIAB] Open Issues (Qualcomm)

Scope: Determine if Company input by Pre117-e discussions shall be used, and how many / which Pre-discussions shall be done. Capture Open Issues not captured in the CR email discussions and suggest how to treat. [After finalization, Merge open issues from other discussions into a WI OI list (OI for which company input is invited in some way shall be listed in the WI-list).

Intended outcome: Open Issues list, and organization of Pre117-e Company input discussions for the WI.

Deadline: Short.

ePowSav

* [Post116bis-e][066][ePowSav] 38331 (CATT)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][065][ePowSav] 38304 (vivo)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][080][ePowSav] Open Issues (Mediatek)

Scope: Determine if Company input by Pre117-e discussions shall be used, and how many / which Pre-discussions shall be done. Capture Open Issues not captured in the CR email discussions and suggest how to treat. [After finalization, Merge open issues from other discussions into a WI OI list (OI for which company input is invited in some way shall be listed in the WI-list).

Intended outcome: Open Issues list, and organization of Pre117-e Company input discussions for the WI.

Deadline: Short.

* [Post116bis-e][091][ePowSav] LS on RLM/BFD relaxation (vivo)

Scope: Based on agreement, determine agreeable LS out to R4 (can discuss if to R1).

Intended outcome: Approved LS out

Deadline: Short.

* [Post116bis-e][092][ePowSav] LS on PDCCH skip (Samsung)

Scope: Based on agreements and comments, determine agreeable LS out to R1.

Intended outcome: Approved LS out

Deadline: Short.

QoE

* [Post116bis-e][069][QoE] RV QoE LS out (Qualcomm)

Scope: LS out to SA4 and to RAN3 on RV QoE, acc to agreements

Intended outcome: Approved LS out

Deadline: Short

* [Post116bis-e][070][QoE] LS outs (Ericsson)

Scope: LS outs to CT1 and SA4 (one LS or two), including the topics of “Mobility”, “Other Open Issues” and UE capabilities, informing about progress and asking questions as agreed. Can elaborate on questions that are not yet clear.

Intended outcome: Approved LS out.

Deadline: Short

* [Post116bis-e][081][QoE] 38331 (Ericsson)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][082][QoE] Open Issues (China Unicom)

Scope: Determine if Company input by Pre117-e discussions shall be used, and how many / which Pre-discussions shall be done. Capture Open Issues not captured in the CR email discussions and suggest how to treat. [After finalization, Merge open issues from other discussions into a WI OI list (OI for which company input is invited in some way shall be listed in the WI-list).

Intended outcome: Open Issues list, and organization of Pre117-e Company input discussions for the WI.

Deadline: Short.

feMIMO

* [Post116bis-e][083][feMIMO] 38331 and LS out (Ericsson)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat. Determine agreeable LS out to RAN1 acc to agreements from [AT116bis-e][052] and [AT116bis-e][059], relevant discussions, draft from [AT116bis-e][052]

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat. Approved LS out.

Deadline: Short

* [Post116bis-e][084][feMIMO] 38321 (Samsung)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][094][feMIMO] LS on Enhanced TCI state indication for UE-specific PDCCH MAC CE (Samsung)

Scope: Check Draft LS out in R2-2201950, revise if needed

Intended outcome: Approved LS out

Deadline: Short.

MGE

* [Post116bis-e][067][MGE] 38331 (Mediatek)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][085][MGE] Open Issues (Intel)

Scope: Determine if Company input by Pre117-e discussions shall be used, and how many / which Pre-discussions shall be done. Capture Open Issues not captured in the CR email discussions and suggest how to treat. [After finalization, Merge open issues from other discussions into a WI OI list (OI for which company input is invited in some way shall be listed in the WI-list).

Intended outcome: Open Issues list, and organization of Pre117-e Company input discussions for the WI.

Deadline: Short.

IOT NTN

* [Post116bis-e][046][IoT NTN] 36331 (Huawei)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][087][IoT NTN] 36321 (Mediatek)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][088][IoT NTN] 36304 (Ericsson)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][089][IoT NTN] Open Issues (Mediatek)

Scope: Determine if Company input by Pre117-e discussions shall be used, and how many / which Pre-discussions shall be done. Capture Open Issues not captured in the CR email discussions and suggest how to treat. [After finalization, Merge open issues from other discussions into a WI OI list (OI for which company input is invited in some way shall be listed in the WI-list).

Intended outcome: Open Issues list, and organization of Pre117-e Company input discussions for the WI.

Deadline: Short.

# 1 Opening of the meeting

**This e-Meeting**

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

- RAN2 116 bis 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 are/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 Chair of the SDO, but not to the RAN WG2 Chair.

## 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.

- [000] Chair: No comments received on the request to pay attention to announcements in AI 1, 1.1, 1.2 and 1.3

# 2 General

## 2.1 Approval of the agenda

[R2-2200000](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200000.zip) Agenda for RAN2#116bis-e Chairman agenda

* [000] Approved

## 2.2 Approval of the report of the previous meeting

[R2-2200001](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200001.zip) RAN2#116-e Meeting Report MCC report

* [000] Approved

## 2.3 Reporting from other meetings

### 2.3.1 TSG RAN 94e

## 2.4 Others

[R2-2201693](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201693.zip) RAN2 planning 2022 H1 Chairman discussion

Treated Online Monday W1

- Huawei support but think it is important to cover only necessary Open issues.

- LG think that with this process maybe we can reduce the number of input tdocs. Chair hope we can prevent tdoc numbers to raise.

- KDDI wonder if open issues will then need to be prioritized. Chair think that the proposed process is not mandatory and not for all open issues. We can also treat tdocs as normal.

* Noted

[R2-2200002](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200002.zip) RAN2 Handbook 01-22 MCC discussion Late

* [000] Noted

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.

Instruction tdoc limitations (small 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.

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

Tdoc limitations applies to all other submitted tdocs.

# 3 Incoming liaisons

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

LS in

[R2-2200111](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200111.zip) Reply LS on Guidelines on Port Allocation for New 3GPP Interfaces (R3-216233; contact: Ericsson) RAN3 LS in Rel-17 TEI17 To:CT4 Cc:RAN2, SA4, CT3, SA5, SA2, SA, CT, RAN

[R2-2200137](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200137.zip) LS response to ETSI TC LI on Location Services for Drones (RP-213674; contact: Ericsson) RAN LS in To:ETSI TC LI Cc:RAN2, SA3 LI

[R2-2200164](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200164.zip) LS on Energy Efficiency as guiding principle for new solutions (SP-211621; contact: Nokia) SA LS in To:RAN, CT, SA1, SA2, SA3, SA4, SA5, SA6, RAN1, RAN2, RAN3, RAN4, RAN5, CT1, CT3, CT4, CT6

* [000] 3 LSes Noted

LS in Rel-15 Rel-16

[R2-2200063](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200063.zip) LS on NAS procedure not subject to UAC (C1-217227; contact: Apple) CT1 LS in Rel-15 NR\_newRAT-Core To:RAN2

[R2-2200070](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200070.zip) Reply LS on RMSI reception based on non-zero search space (R1-2112765; contact:OPPO) RAN1 LS in Rel-15 NR\_newRAT-Core To:RAN2

[R2-2200079](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200079.zip) Reply LS on PDCCH Blind Detection in CA (R1-2112833; contact: Huawei) RAN1 LS in Rel-16 NR\_L1enh\_URLLC-Core To:RAN2

[R2-2200087](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200087.zip) Reply LS on initial state of elements controlled by MAC CEs (R1-2112860 RAN1 LS in Rel-15 NR\_newRAT-Core To:RAN2 Cc:RAN4

[R2-2200088](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200088.zip) Reply LS on UL skipping with LCH prioritization (R1-2112862; contact: vivo) RAN1 LS in Rel-16 NR\_IIOT-Core, NR\_L1enh\_URLLC-Core To:RAN2

[R2-2200102](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200102.zip) Reply LS to RAN2 on the misalignment in SRS configuration (R3-216009; contact: Samsung) RAN3 LS in Rel-16 NR\_pos To:RAN2 Cc:SA2

[R2-2200106](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200106.zip) Reply LS on inter-MN handover without SN change (R3-216165; contact: Huawei) RAN3 LS in Rel-15 NR\_newRAT-Core To:RAN2

[R2-2200107](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200107.zip) 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 enh2MCPTT To:SA6 Cc:RAN, RAN2

[R2-2200114](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200114.zip) Reply LS on signalling SN initiated release of SCG (R3-216236; contact: Ericsson) RAN3 LS in Rel-15 NR\_newRAT-Core To:RAN2

[R2-2200116](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200116.zip) 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

[R2-2200119](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200119.zip) LS on Signalling of PC2 V2X intra-band concurrent operation (R4-2119992; contact: Xiaomi) RAN4 LS in Rel-16 5G\_V2X\_NRSL-Core To:RAN2

[R2-2200121](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200121.zip) LS on PEMAX for NR-V2X (R4-2120047; contact: Huawei, CATT) RAN4 LS in Rel-16 5G\_V2X\_NRSL-Core To:RAN1, RAN2

[R2-2200134](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200134.zip) LS UE capability for supporting single DCI transmission schemes for multi-TRP (R4-2120652; contact: Apple) RAN4 LS in Rel-16 NR\_eMIMO-Perf To:RAN1 Cc:RAN2

[R2-2200135](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200135.zip) LS on Duplicate Measurements when SCell is a Neighbor Cell (R5-217991; contact: Qualcomm) RAN5 LS in Rel-15 5GS\_NR\_LTE-UEConTest To:RAN2

[R2-2200136](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200136.zip) LS on configuration of p-MaxEUTRA and p-NR-FR1 (R5-217995; contact: Huawei) RAN5 LS in Rel-15 NR\_newRAT-Core To:RAN1, RAN2, RAN4

[R2-2200072](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200072.zip) 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 NR\_2step\_RACH-Core, NR\_unlic-Core, NR\_IAB-Core, 5G\_V2X\_NRSL-Core, NR\_L1enh\_URLLC-Core, NR\_IIOT-Core, NR\_eMIMO-Core, NR\_UE\_pow\_sav-Core, NR\_pos-Core, NR\_Mob\_enh-Core, LTE\_NR\_DC\_CA\_enh-Core, TEI16, NR\_CLI\_RIM-Core To:RAN2 Cc:RAN4

* [000] 16 LS in’s above are POSTPONED to next meeting

# 4 EUTRA corrections Rel-15 and earlier

This Agenda item will not be treated and no input is expected.

[R2-2201532](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201532.zip) Discussion on handling QoE configuration in full configuration Google Inc. discussion Rel-15 LTE\_QMC\_Streaming-Core

* [000] Not Treated, Proponent may resubmit to next meeting.

# 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)

This Agenda item will not be treated and no input is expected.

# 6 Rel-16 NR Work Items

This Agenda item will not be treated and no input is expected.

Note: Outcome of long email discussions for AI 6xx may be submitted here. They will be postponed and need to be resubmitted to R2 117.

[R2-2200034](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200034.zip) Summary [POST116-e][710][V2X/SL] PDCP/RLC Entity Maintenance for SL-SRBs (CATT) CATT discussion 5G\_V2X\_NRSL-Core

[R2-2200035](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200035.zip) Corrections on MAC filtering issue for the first unicast PC5-S signalling CATT draftCR Rel-17 38.321 16.7.0 F 5G\_V2X\_NRSL-Core

[R2-2200036](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200036.zip) Corrections on RLC entity establishment issue for the first unicast PC5-S signalling CATT draftCR Rel-17 38.322 16.2.0 F 5G\_V2X\_NRSL-Core

[R2-2200037](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200037.zip) Corrections on PDCP entity establishment issue for the first unicast PC5-S signalling CATT draftCR Rel-17 38.323 16.6.0 F 5G\_V2X\_NRSL-Core

[R2-2200305](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200305.zip) Handling of ServingCellConfigCommon Qualcomm Incorporated CR Rel-16 38.331 16.7.0 2866 - F TEI16

[R2-2200439](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200439.zip) Draft reply LS on PEMAX for NR-V2X Qualcomm Finland RFFE Oy LS out Rel-16 5G\_V2X\_NRSL-Core To:RAN4

[R2-2201539](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201539.zip) Correction on LTE UE RLF Report China Telecommunications, CATT discussion

[R2-2201540](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201540.zip) Correction to RRC reconfiguration for IAB Google Inc. CR Rel-16 38.331 16.7.0 2874 - F NR\_IAB-Core

* [000] 8 tdocs above are Not Treated, Proponents may resubmit to next meeting.

# 7 Rel-16 EUTRA Work Items

This Agenda item will not be treated and no input is expected.

# 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.

LS on MAC CEs

[R2-2200081](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200081.zip) LS on Rel-17 MAC-CE impacts (R1-2112842; contact: Nokia)        RAN1    LS in   Rel-17  NR\_feMIMO, NR\_ext\_to\_71GHz, NR\_IIOT\_URLLC\_enh, NR\_NTN\_solutions, NR\_pos\_enh, NR\_redcap, NR\_UE\_pow\_sav\_enh, NR\_cov\_enh, NR\_IAB\_enh, NR\_SL\_enh, NR\_MBS, NR\_DSS, LTE\_NR\_DC\_enh2, LTE\_NBIOT\_eMTC\_NTN, NB\_IOTenh4\_LTE\_eMTC6, LTE\_terr\_bcast\_bands\_part1      To:RAN2 Cc:RAN4

Chair: This need to be taken into account for the WI-specific CRs, in each session.

* Noted

### 8.0.1 RRC

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

LS on L1 RRC parameters

[R2-2200095](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200095.zip) LS on updated Rel-17 LTE and NR higher-layers parameter list (R1-2112977; contact: Ericsson) RAN1 LS in Rel-17 NR\_feMIMO, NR\_ext\_to\_71GHz, NR\_IIOT\_URLLC\_enh, NR\_NTN\_solutions, NR\_pos\_enh, NR\_redcap, NR\_UE\_pow\_sav\_enh, NR\_cov\_enh, NR\_IAB\_enh, NR\_SL\_enh, NR\_MBS, NR\_DSS, LTE\_NR\_DC\_enh2, NR\_RF\_FR1\_enh, NR\_SmallData\_INACTIVE, NB\_IOTenh4\_LTE\_eMTC6, LTE\_NBIOT\_eMTC\_NTN, LTE\_terr\_bcast\_bands\_part1 To:RAN2, RAN3 Cc:RAN4

Chair: This need to be taken into account for the WI-specific CRs, in each session.

* Noted

ASN.1 review

R2-2201172 Rel-17 ASN.1 review plan Ericsson discussion Rel-17 TEI17 Late

Set Modify Release

online

[R2-2201488](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201488.zip) Set Modify Release structure Ericsson discussion

DISCUSSION

- MTK wonder if there is a need for this in R17, is any CR using it now.

- Ericsson are not sure, think maybe not right now.

- QC think we should have use cases first. Samsung agrees.

- Lenovo think we can consider during ASN.1 review, in case we find use cases.

- Oppo wonder if the intention is just to change new IEs. Ericsson confirm that this is for R17 and onwards.

* We don’t introduce any support for add modify release unless there is a use case. Can consider this during R17 ASN.1 review, in case suitable use cases emerge.

[R2-2201487](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201487.zip) Draft CR for SetModifyRelease structure (38.331) Ericsson draftCR Rel-17 38.331 16.7.0 B NR\_newRAT-Core

### 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 for which all UE caps are treated under AI 8.20.2. Specific issues may be reallocated to WI-specific AIs.

PLEASE see also instructions under AI 2.4.

R1 R4 Features UE caps

Offline + online CB if needed

* [AT116bis-e][017][NR17] UE caps main (Intel)

Scope: Progress the Draft CRs to 38306 38331 based on received feature list, for all R17 WIs, except the ones for which this is handled separately (see above). Identify questions for LS out, if any. Identify issues for online CB, if any.

Intended outcome: 1 report - if needed, 2 endorsed draft CRs

Deadline: 1 for online CB Monday W2 (if needed), 2 EOM

[R2-2200091](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200091.zip) LS on updated Rel-17 RAN1 UE features list for NR (R1-2112903; contact: NTT DOCOMO, AT&T) RAN1 LS in Rel-17 NR\_feMIMO, NR\_ext\_to\_71GHz, NR\_IIOT\_URLLC\_enh, NR\_NTN\_solutions, NR\_pos\_enh, NR\_redcap, NR\_UE\_pow\_sav\_enh, NR\_cov\_enh, NR\_IAB\_enh, NR\_SL\_enh, NR\_MBS, NR\_DSS, LTE\_NR\_DC\_enh2, NR\_DL1024QAM\_FR1, NR\_RF\_FR1\_enh, NR\_SmallData\_INACTIVE To:RAN2 Cc:RAN4

* [017] Noted

[R2-2200458](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200458.zip) Release-17 UE capabilities based on R1 and R4 feature lists (TS38.306) Intel Corporation draftCR Rel-17 38.306 16.7.0 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

[R2-2200459](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200459.zip) Release-17 UE capabilities based on R1 and R4 feature lists (TS38.331) Intel Corporation draftCR Rel-17 38.331 16.7.0 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

* [017] Both revised

R2-2201907 Release-17 UE capabilities based on R1 and R4 feature lists (TS38.306) Intel Corporation draftCR Rel-17 38.306 16.7.0 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

R2-2201908 Release-17 UE capabilities based on R1 and R4 feature lists (TS38.331) Intel Corporation draftCR Rel-17 38.331 16.7.0 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

* [017] Both Endorsed

FRx xDD differentiation

Online

[R2-2201489](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201489.zip) Allowing FRx/xDD differentiation on UE capabilities Ericsson, Samsung discussion

- Ericsson explains that there doesn't seems to be a high number of capabilities that this applies to, so impact to R17 would be small.

- Huawei can accept that this is made a principle, but think this is just R2 signalling design, no need to ask R1 and R4 to adapt.

- MTK are also OK with the principle, but agrees that LS to other groups is not needed.

- Nokia wonder whether legacy mechanism is then dropped from Rel-17. Ericsson confirms.

- vivo agrees and think LS is useful.

- QC also support this proposal. No opinion on LS to R1 etc.

- Intel support to send LS to R1 and R4 as there otherwise will be a discrepancy between feature lists and implementation.

- OPPO also think we should send an LS. It could simplify the job in other groups.

- Huawei think we didn’t send LS for the R16 update. We would keep the description on FRx and xDD in field description.

- Intel wonder if the caps for FR2-2 that are extended from legacy capabilities will be applied per band.

* From Rel-17 onwards, at least for new capabilities, if a UE capability requires at least FRx or at least xDD differentiation, it is defined with both FRx and xDD differentiation in per band signaling, i.e. no new UE capabilities will be defined in the FRX and XDD capability signaling branches.

Legacy

Not Treated at R2 116bis-e

[R2-2200307](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200307.zip) Discussion on BWP operation without bandwidth restriction Qualcomm Incorporated discussion Rel-17 TEI17

### 8.0.3 Gaps Coordination

Tdoc limitation: 1

Under this AI, there will be one offline discussion on the need for / opportunity to achieve improvement (e.g. have better TSes) by coordinating the development of gaps in Rel-17, i.e. determine to what extent to coordinate principles, solutions etc. Way forward will be discussed in a Main session CB session in W2. This AI is complementary to other AIs, and this meeting, gaps technical discussions for each WI will be handled individually under each AI.

* [AT116bis-e][018][NR17] Gaps Coordination (Mediatek)

Scope: List the relevant gap features and potential opportunities regarding commonality, parts that need coordination (e.g. common capability/overall limitation). Collect comments, e.g. on feasibility, ambition levels, what to decide now, what to postpone etc. Consider proposals from tdocs submitted to 8.0.3.

Intended outcome: Report, ambition level up to rapporteur.

Deadline: For On-Line CB W2

[R2-2201904](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201904.zip) Report of [AT116bis-e][018][NR17] Gaps Coordination (Mediatek) MediaTek Inc

DISCUSSION

P2

- vivo agrees that RAN2 need to discuss these things, different gaps have different purposes etc, R2 should have initial discussion, and then can send LS to R4. Think in P2 we need to also consider the legacy measurement gaps.

- APPLE: for 2nd and 4th subbullet R2 should ask R4.

- Huawei agrees that the last bullet is R4 expertise. ZTE agrees.

- ZTE think that for the first bullets R2 need to discuss first.

* Continue to discuss each gap feature in individual WI with the following understandings.

- Whether to support MAC CE activation/deactivation of the gap is discussed independently in each WI. There is no need to have common MAC CE framework.

- RRC configuration for gap feature could be progressed separately in each WI. However, RAN2 may use common RRC configuration structures for different gaps once the relation between each gap feature is clear.

* On gap coordination, RAN2 to attempt conclusion from R2 point of view on the following aspects (no limitation is intended).

- Could gap features be configured together? Is there any collision on procedure part when more than one is configured? (to identify the possible gap combinations)

- How many gaps could be configured / activated at the same time? IS there any R2 related limitation or does RAN2 have to consult RAN4 for this number?

- Expect to send LS to R4 after initial R2 conclusions (next meeting)

* R2 assumes that UL FR2 gap is independent from other gap features. (i.e. separate configuration for UL FR2 gap and enabling the UL FR2 gap or not does not conflict with other gap features from RAN2 perspective).
* RAN2 assumes that the detailed UE behaviour while gaps are overlapped in time domain is R4 knowledge, e.g. which use case has priority (if such is needed)

[Finished: Expect to continue this topic next meeting, address the issues agreed above]

[R2-2200221](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200221.zip) Joint discussion for measurement gaps Intel Corporation discussion Rel-17 NR\_MG\_enh-Core

[R2-2200292](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200292.zip) Discussion on gaps coordination Huawei, HiSilicon discussion Rel-17 NR\_MG\_enh-Core

[R2-2200588](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200588.zip) Discussion on Gap coordination vivo discussion Rel-17 NR\_MG\_enh-Core, LTE\_NR\_MUSIM-Core, NR\_pos\_enh-Core

[R2-2201057](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201057.zip) Commonalities with measurement gaps in Rel-17 Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MG\_enh-Core, LTE\_NR\_MUSIM-Core, NR\_NTN\_solutions-Core, NR\_RF\_FR2\_req\_enh2-Core

[R2-2201109](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201109.zip) Discussion on gap features Apple discussion NR\_MG\_enh-Core, NR\_RF\_FR2\_req\_enh2, LTE\_NR\_MUSIM-Core

[R2-2201238](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201238.zip) Discussion on gap coordination MediaTek Inc. discussion

[R2-2201565](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201565.zip) Gaps coordination Ericsson discussion Rel-17

* [018] 7 tdocs Noted

## 8.1 NR Multicast

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

Time budget: 1.5 TU (reduced)

Tdoc Limitation: 5 tdocs

Email max expectation: 4-7 threads

NOTE. For an issue that potenitally impacts > 1 AI please anyway discuss such issues in one tdoc only.

### 8.1.1 Organizational

Incomimg LSes, Rapporteur docs. Running CRs

LS in

[R2-2200066](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200066.zip) Reply LS on MCCH change notification (R1-2112646; contact: BBC) RAN1 LS in Rel-17 NR\_MBS To:RAN2

[R2-2200085](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200085.zip) LS on MTCH scheduling window (R1-2112850; contact: BBC) RAN1 LS in Rel-17 NR\_MBS To:RAN2

[R2-2200101](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200101.zip) Reply LS on MBS broadcast service continuity and MBS session identification (R3-215977; contact: Huawei) RAN3 LS in Rel-17 NR\_MBS-Core To:RAN2, SA2, SA4

[R2-2200108](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200108.zip) LS on handover from MBS supporting node to MBS non-supporting node (R3-216222; contact: Lenovo) RAN3 LS in Rel-17 NR\_MBS-Core To:RAN2

[R2-2200141](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200141.zip) Reply LS on maximum number of MBS sessions that can be associated to a PDU session (S2-2109171; contact: Ericsson) SA2 LS in Rel-17 5MBS To:CT1, SA4, SA6, RAN2 Cc:RAN3

[R2-2200142](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200142.zip) LS on MBS broadcast service continuity and MBS session identification (S2-2109187; contact: Huawei) SA2 LS in Rel-17 NR\_MBS-Core, 5MBS To:RAN2 Cc:RAN3

[R2-2200147](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200147.zip) Reply LS on Feedback on data forwarding solutions for MBS (S2-2109351; contact: Nokia) SA2 LS in Rel-17 NR\_MBS-Core To:RAN3 Cc:RAN2

* All noted

Planning

[R2-2200022](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200022.zip) NR MBS open issue list Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

* noted
* [Post116bis-e][071][MBS] 38304 (CATT)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][072][MBS] 38321 (OPPO)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][073][MBS] 38323 (xiaomi)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][074][MBS] 38331 (Huawei)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][075][MBS] Open Issues (Huawei)

Scope: Determine if Company input by Pre117-e discussions shall be used, and how many / which Pre-discussions shall be done. Capture Open Issues not captured in the CR email discussions and suggest how to treat. [After finalization, Merge open issues from other discussions into a WI OI list (OI for which company input is invited in some way shall be listed in the WI-list).

Intended outcome: Open Issues list, and organization of Pre117-e Company input discussions for the WI.

Deadline: Short.

### 8.1.2 Stage-2

This topic is deprioritized and will not be treated beyond post-capture of agreements. No input expected.

### 8.1.3 Control Plane

#### 8.1.3.1 General

Including untreated parts of R2-2111510 (from R2 116-e) that shall be resumbitted (at least the non treated proposals incl. the related discussion).

Including multicast service continuity during handover: cases for lossless/seamless handover behaviours in addition to ptp-ptp ho, if any, lossless ho during mobility between MBS supporting and non-supporting node.

Including Broadcast service continuity, e.g. MBS interest indication, network control, additional triggers, which RRC message, BWP open issues if any. Frequency prioritization Open issues as listed in 38304 running CR, e.g. relation information in USD vs SIBy, how to determine whether reselection candidate bcasts SIBx.

Multicast Handover

Offline + Online

* [AT116bis-e][019][MBS] Multicast Handover and related reconfigurations (Qualcomm)

Scope: Address FFSes on in which scenarios to support lossless handover and how to do that (including case of mobility to non-supporting node) and related high level implications to stage-3 if any not already covered. Determine expectations on when to use of full configuration vs delta configuration. Confirm expectations on MRB-DRB type reconfiguration. (see also P19 in R2-2200021). Can also include message sequence chart(s) for inclusion in Stage-2. Also: Collect comments on whether CHO and/or DAPS should be prevented or can be allowed for UE with Multicast / MRB configuration, and if allowed whether there are additional impacts.

Intended outcome: Report

Deadline: Online CB Friday W1

[R2-2201880](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201880.zip) Report of [AT116bis-e][019][MBS] Multicast Handover and related reconfigurations (QC) Qualcomm

DISCSUSION

P9

- FW think CHO is important.

P4 P6 P8

- Nokia point out that depending on doing a first reconfiguration in the source cell before a handover may not work, as often handovers are time critical.

* RAN2 assumes both source and target cells supporting PTP RLC AM as baseline for supporting Multicast loss-less HO with data forwarding between MBS supporting cells
* RAN2 agrees to support delta configuration in order to support Multicast loss-less HO with data forwarding between MBS supporting nodes.
* RAN2 agrees that for HO from MBS-supporting node to non-MBS supporting node full configuration can be avoided by  providing only DRB configuration with no MRB configuration from source to target node.
* RAN2 agrees using 2 step procedure for supporting loss-less HO from source cell not supporting MBS to target cell supporting MBS.

Step 1: perform legacy DRB based loss-less HO (with delta configuration) ,

Step 2: after HO, target cell will reconfigure UE from DRB to MRB via RRC Reconfiguration procedure.

* RAN2 will not do additional work to support CHO for UEs for which MRB is configured in R17.
* RAN2 agreess that DAPS HO is not supported for MRB and is configured as non-DAPS bearer for R17 MBS UEs.
* FFS whether same mechanisms as for PTP RLC-AM loss-less HO can be applicable in case of source cell with PTM only configuration and target cell supporting PTP only or PTM + PTP configurations. (FFS may come for free).
* RAN2 assumes for MRB to DRB switch to avoid full configuration during loss-less HO from MBS supporting node to Non-MBS supporting node and inform RAN3 accordingly.

Solution 1 is assumed feasible (from procedure point of view): While the UE is still in source cell, source cell can reconfigure UE from MRB to DRB just before HO is initiated.

Solution 2, FFS whether the reconfiguration can be done on the fly: Perform the switch from MRB to DRB during handover to support loss-less HO without full configuration.

* FFS whether to support optimization for either solution 1 or solution 2 or No optimization support to avoid full configuration during Multicast loss-less HO from MBS node to Non-MBS supporting node.

[R2-2200534](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200534.zip) NR Multicast loss-less HO enhancements with service continuity Qualcomm Inc discussion Rel-17 NR\_MBS-Core R2-2109902

[R2-2200756](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200756.zip) Service Continuity for handover from MBS Supporting Node to MBS non-Supporting Node Lenovo, Motorola Mobility discussion Rel-17

[R2-2200235](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200235.zip) Open Issues on Multicast Service Continuity CATT, CBN discussion Rel-17 NR\_MBS-Core

[R2-2200576](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200576.zip) Service continuity for multicast mode TD Tech, Chengdu TD Tech discussion Rel-17

[R2-2200641](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200641.zip) Discussion on Multicast service continuity during mobility Spreadtrum Communications discussion Rel-17

[R2-2200816](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200816.zip) MBS service continuity and notification for multicast Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

[R2-2200828](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200828.zip) Mobility and Service continuity for NR Multicast MediaTek inc. discussion Rel-17 NR\_MBS-Core R2-2109548

[R2-2200857](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200857.zip) Discussion on Mobility with Service Continuity CMCC discussion Rel-17 NR\_MBS-Core

[R2-2200978](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200978.zip) Multicast Service Continuity Aspects Ericsson discussion Rel-17 NR\_MBS-Core

[R2-2201175](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201175.zip) Multicast service continuity and discussion on RAN3 LS Intel Corporation discussion Rel-17 NR\_MBS-Core

[R2-2201256](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201256.zip) Mobility with non-supporting nodes Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MBS-Core R2-2110955

[R2-2201258](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201258.zip) Mobility for NR MBS vivo discussion Rel-17 NR\_MBS-Core

[R2-2201365](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201365.zip) Multicast Service Continuity Samsung discussion Rel-17 NR\_MBS-Core

[R2-2200539](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200539.zip) Discussion on MBS with conditional handover Futurewei discussion Rel-17 NR\_MBS-Core R2-2110908

[R2-2201412](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201412.zip) Mobility Between MBS Supporting Nodes ZTE, Sanechips discussion Rel-17 NR\_MBS-Core

[R2-2200785](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200785.zip) MBS Mobility Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MBS-Core R2-2109954

* [019] 16 tdocs are noted

Multicast start

Offline + Online

Group Notification - Applicability of PEI/WUS, applicability of short message. Connection establishment - Access Control and cause value, other aspects.

* [AT116bis-e][020][MBS] Multicast Start (LGE)

Scope: Address open issues related to Multicast start (ref green-marked Open issues R2-2200022), Group Notification - Applicability of PEI/WUS, applicability of short message. Connection establishment - Access Control and cause value

Intended outcome: Report

Deadline: Friday W1 for online CB.

[R2-2201851](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201851.zip) Report of [020] LGE

DISCUSSION

P4 P5

* Huawei think that other existing causes can also be used. QC think that whenever paging is received the mt-access may be used. Huawei think that even for paging response other causes are used by special UEs based on access ID. Such UEs shall always be prioritized.
* Vivo agrees with QC that mt-access can be used.

P1

* Qc think there still may be high access load, think a new AC is useful. IDT xiaomi Apple Spreadtrum Samsung agrees
* Nokia think we should keep it simple .. and a number of companies agree.
* Chair; No consensus to ask for a new access category.

P7

Chair: FFS how group notification works with PEI.

* + O1: Don’t configure the features together
  + O2: Add support for group notification in PEI
  + O3: Specify that UEs who expect group notification ignores PEI (and just monitor paging as usual)
* On O2 Intel think this is not only a R2 decision.
* LG think O1 doesn’t work, support O2. Huawei agrees that O1 shall be excluded, see no need to involve RAN1, or CT1, this should be a RAN controlled subgroup.
* OPPO think CT shall define CN paging subgroup
* CATT support O1 or O3, group notification is rare.
* Xiaomi think group notification shall be separate from unicast paging
* Samsung support O2.
* Nokia support O3, significant support for O3 by Tohru
* When the group paging is received in RRC\_IDLE, RRC forwards the multicast session ID to upper layer. (already captured in running CR)
* When RRC connection establishment is triggered by group paging, R2 expects that NAS sets the establishment cause to ‘mt-Access’. I.e., no MBS specific establishment cause. FFS for UEs with special access IDs whether other current establishment cause should be used.
* When RRC connection resume is triggered by the group paging, RRC sets the resume casue to ‘mt-Access’. I.e., no MBS specific resume cause. FFS for UEs with special access IDs whether other current resume cause should be used.
* Do not add further functionality to avoid that legacy UE monitors the group-only paging message.
* When UE in RRC\_IDLE simultaneously receives the group paging and CN paging, RRC forwards both the unicast paging information (UE identity and accessType, if present) and the multicast paging information (i.e. TMGI) to upper layers. (It doesn’t require any change of the current running CR.)
* When UE in RRC\_INACTIVE simultaneously receives the group paging and CN paging, RRC forwards both the unicast paging information (UE identity and accessType, if present) and the multicast paging information (i.e. TMGI) to upper layers, and transits to RRC\_IDLE.
* Specify that the UEs that expect group notification ignores PEI (and just monitor paging as usual)

[R2-2200021](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200021.zip) Untreated proposals from offline discussion: [AT116-e][051][MBS] CP continuation Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

[R2-2201292](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201292.zip) Remaining issues on group notification for multicast session LG Electronics discussion

[R2-2201382](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201382.zip) Remaining issues of the multicast notification Xiaomi Communications discussion Rel-17 NR\_MBS-Core

[R2-2200532](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200532.zip) NR MBS control signaling aspects Qualcomm Inc discussion Rel-17 NR\_MBS-Core R2-2109899

[R2-2200385](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200385.zip) Open issues multicast activation and service continuity of broadcast OPPO discussion Rel-17 NR\_MBS-Core

* [020] 5 tdocs are Noted

Multicast PTM PTP additional enhancements

[R2-2200386](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200386.zip) Discussion on PTM activation-deactivation for MBS OPPO, CMCC, ZTE, Huawei, HiSilicon, SJTU, NERCDTV, Lenovo, Motorola Mobility, Spreadtrum, TCL, Xiaomi, CATT, MediaTek, Qualcomm, Kyocera, Apple, Sharp, China Unicom, CBN, China Telecom, FGI, APT, InterDigital discussion Rel-17 NR\_MBS-Core

[R2-2200905](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200905.zip) UE based PTM to PTP switch Sony discussion Rel-17 NR\_MBS-Core

[R2-2201411](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201411.zip) UE initiated mode switch for Multicast ZTE, Sanechips, Kyocera, InterDigital, CMCC, OPPO discussion Rel-17 NR\_MBS-Core

Broadcast MBS interest Indication

* [AT116bis-e][021][MBS] MBS Interest Indication Open Issues (CMCC)

Scope: Address green-marked Open issues related to MII in R2-2200022, and related tdoc input. Address MII indication handling at handover. Collect comments, identify easy agreements and discussion points.

Intended outcome: Report

Deadline: For CB on-line Thursday W1.

CLOSED

[R2-2201832](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201832.zip) Report of [AT116bis-e][021][MBS] MBS Interest Indication Open Issues(CMCC) CMCC

DISCUSSION

- Lenovo wonder if the inter node signalling is R3 or R2. QC think it is R2 (RRC container). Huawei agrees.

P4/P5

- Lenovo indicates that issue is the first configuration, where the network may provide a configuration to the UE such that UE cannot recive Bcast, and need to wait for MII for correct configuration.

- Oppo agrees and think this is about the dedicated BWP config. Think the bit is needed.

- Huawei support to have the bit.

- Samsung think a new resume cause would be cleaner.

- QC think there are different services, one bit will not be sufficient.

- Ericsson, ZTE, MTK, Intel think this is not needed BC is anyway best effort.

- Chair: A weak majority in favour of not having any indication in MSG3/MSGA, i.e. not sufficient support (it is a perf enh).

* A new RRC message would be defined for MII reporting.
* MII reporting is enabled/disabled just by the presence of SIBx1 implicitly
* UE including mbs-Services in MII in case SIBx is scheduled by the UE’s PCell is the baseline, and it could be further revisited during SCell/non-serving cell MBS reception discussion.
* MBS Interest Indication information is exchanged between source gNB and target gNB at handover (FFS SCG change if applicable).
* RRC state transition for MII reporting is not supported.
* MII is not applied to multicast.
* No specification enhancement will be pursued for any early identification enhancement of MII before dedicated BWP configuration in Rel-17.

[R2-2200858](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200858.zip) Discussion on MII issues CMCC discussion Rel-17 NR\_MBS-Core

[R2-2200759](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200759.zip) MII and BWP related configuration Lenovo, Motorola Mobility discussion Rel-17

[R2-2200880](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200880.zip) Broadcast Service Continuity Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MBS-Core

[R2-2201176](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201176.zip) Broadcast service continuity Intel Corporation discussion Rel-17 NR\_MBS-Core

[R2-2200398](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200398.zip) Broadcast Service Continuity Samsung discussion

[R2-2200382](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200382.zip) Discussion on MBS interesting indication for delivery mode 2 OPPO discussion Rel-17 NR\_MBS-Core

[R2-2201244](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201244.zip) Remaining issues of MBS Interest Indication Kyocera discussion Rel-17

[R2-2201370](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201370.zip) Remaining issues for MII LG Electronics France discussion Rel-17

* [021] 8 tdocs are Noted

Broadcast Cell reselection Prioritization

Which info the UE uses to determine what to prioritize: SIB info vs USD info vs MCCH info, Whether there are target cell conditions (presence of SIBx) for prioritizaion, Need for additional neighbor cell info.

* [AT116bis-e][022][MBS] Cell reselection Prioritization (CATT)

Scope: Address remaining open issues (ref green-marked Open issues R2-2200022), Whether to/how to apply target cell conditions (presence of SIBx) for prioritization, Need for additional neighbor cell info (ref provided tdocs). Which info the UE uses to determine what to prioritize: SIB info vs USD info vs MCCH info (ref provided tdocs),

Intended outcome: Report

Deadline: Friday W1 for online CB

CLOSED

R2-2201837 Report of [022] CATT

DISCUSSION

P4

* It is clarified that the UE can choose whether to prioritize.

P1

* QC think that the UE is not required to read the SIBs for doing cell reselection / prioritization.
* A number of companies think = up to UE impl. Nokia point out that current 304 cases involves times up to 300s.
* There is no additional TS impact on stopping frequency prioritization.
* UE can prioritize the frequency indicated in USD when SIBy is provided in the cell but does not provide the frequency mapping for the concerned service.
* It is up to UE implementation how to use information in USD (e.g. with other explicit knowledge) to determine whether to (or how to) do the frequency prioritization for specific frequency/frequencies in USD.
* UE is not required to verify that the reselection candidate cell is providing SIBx ahead of cell reselection, this overrides earlier decisions.
* Confirm that if UE reselects based on MBS freq prioritization and the target cell doesn’t contain SIBx then the UE doesn’t consider this freq for prioritization

[R2-2200234](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200234.zip) Open Issues on Broadcast Service Continuity CATT, CBN discussion Rel-17 NR\_MBS-Core

[R2-2200540](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200540.zip) Discussion on priority reselection based on SIBx of the neighbor cells Futurewei discussion Rel-17 NR\_MBS-Core

[R2-2200980](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200980.zip) Broadcast Service Continuity Ericsson discussion

[R2-2201245](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201245.zip) Remaining issues of cell reselection procedure for MBS Kyocera discussion Rel-17 R2-2110206

[R2-2200577](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200577.zip) Service continuity for broadcast mode TD Tech, Chengdu TD Tech discussion Rel-17

* [022] 5 tdocs are Noted

MCCH

Change notification, detailed UE behaviour, Acquisition of MCCH, and possibly related SIB handling, whether to support area based MCCH.

* [AT116bis-e][023][MBS] MCCH (LGE)

Scope: Address the next level of details regarding Change Notification. Open issues on Acquisition of MCCH, and possibly related SIB handling, whether to support area based MCCH.

Intended outcome: Report

Deadline: Friday W1

CLOSED

R2-2201852 Report [023] LGE

* MCCH change notification consists of two bits as follows:

- 1st bit: indicate the MCCH change is due to the session start.

- 2nd bit: indicate the MCCH change is due to the modification of ongoing session, session stop, or the nieghbor cell list update.

* UE interested to receive or receiving a broadcast session via MRB initiates the MCCH information acquisition procedure upon entering the cell supporting a new SIB including MCCH configuration, or upon receiving the MCCH change notification (it doesn’t require any change of the current running CR.)
* If MCCH information acquisition is triggered by the first bit in the MCCH change notification, UE starts acquiring the MCCH message from the slot in which the MCCH change notification was received. (it doesn’t require any change of the current running CR.)
* If UE enters a cell supporting the new MBS SIB including MCCH configuration, UE acquires the MCCH message at the next repetition period. (it doesn’t require any change of the current running CR.)
* Do not support area specific MCCH in R17.
* No agreement to introduce the additional bit in MCCH, which indicates that the neighbour cell and serving cell support the same PTM configuration for all broadcast sessions supported by both cells.
* Do not support any specific handling for change of SIBx/scheduling of SIBx.
* Keep the assumption in the TS that UE starts acquiring the MCCH message from the slot in which the MCCH change notification was received (can revisit if we find it doesn’t work).

[R2-2201291](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201291.zip) MCCH information acquisition LG Electronics discussion

[R2-2200538](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200538.zip) Clarification on details of MCCH change notification via DCI Futurewei discussion Rel-17 NR\_MBS-Core R2-2110907

[R2-2200982](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200982.zip) Broadcast Notifications Ericsson discussion

[R2-2200817](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200817.zip) MBS service continuity for broadcast Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

* [023] 4 tdocs Noted

Misc

Provisioning of MBS by SN, other.

[R2-2200728](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200728.zip) Miscellaneous Aspects of MBS Provisioning Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MBS-Core R2-2109950

[R2-2201118](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201118.zip) Control plane aspects of MBS Apple discussion Rel-17 NR\_MBS-Core

#### 8.1.3.2 RRC 38331

Including configuration of and handling of L1.

Open issues, including those listed in the Running CR and/or Rapporteur Open issue list.

* [AT116bis-e][024][MBS] RRC Miscellaneous (Huawei)

Scope: Take into account R2-2200095 (L1 parameters), R2-2200814, R2-2200815, relevant Open Issues from R2-22000022 (blue-marked and other smaller, if any). Address FFS whether some explicit indication is needed for the UE to know that an RLC entity is configured for PTM transmission. Acknowledge the way MRB bearer configuration is captured in current running CR. Progress offline as much as possible by easy agreements, Identify points for further discussion if any.

Intended outcome: Report, Endorsed/confirmed updated RRC CR.

Deadline: Friday W1 (CB online if needed).

[R2-2201861](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201861.zip) Report of offline: [AT116bis-e][024][MBS] RRC Miscellaneous Huawei

* [024] MCCH/MTCH search space configuration is included as part of PDCCH-ConfigCommon. (Can inform RAN1 about this)
* [024] Confirm with RAN1 that the following parameters should be included in PDSCH configuration for broadcast:

- dataScramblingIdentityPDSCH

- pdsch-TimeDomainAllocationList

- rateMatchPatternToAddModList

- mcs-Table

- xOverhead

* [024] Confirm with RAN1 that only one CFR is configured for MBS broadcast reception.
* [024] FFS whether to use the following principles for MTCH window definition:

a) For G-RNTIs configured with DRX, DRX periodicity and offset are reused for MTCH scheduling window monitoring periodicity and starting of the periodicity, respectively (i.e. explicit MTCH window configuration is not used).

b) Explicit MTCH scheduling window periodicity and starting of the periodicity can be optionally configured and is applicable commonly to all G-RNTIs for which DRX is not configured.

* [024] A parameter is added in RLC-BearerConfig to indicate that an RLC bearer is used for PTM reception.
* [024] PDCP sublayer is not used for MCCH.
* [024] For broadcast MTCH, the default value of t-Reordering in PDCP configuration should be set to 0 ms and the network may optionally configure another value, as in legacy signalling (for future compatibility).
* [024] No modification of the UE actions upon going to RRC IDLE is introduced for the UE receiving MBS broadcast service at the time of state transition.
* [024] Check with RAN1 on the UE requirements with respect to simultaneous reception (in the same slot) of MCCH and MTCH and simultaneous reception of multiple MTCHs.
* [024] Check with RAN1 on the UE capabilities for simultaneous reception (in the same slot) of MBS multicast/broadcast and unicast.
* [Post116bis-e][093][MBS] LS on Misc Aspects (Huawei)

Scope: Based on R2-2201861, agreements and comments, determine agreeable LS out to R1.

Intended outcome: Approved LS out

Deadline: Short.

Running CR

[R2-2200814](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200814.zip) 38.331 running CR for NR MBS Huawei, HiSilicon draftCR Rel-17 38.331 16.7.0 NR\_MBS-Core R2-2111658

[R2-2200815](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200815.zip) Discussion on RRC Running CR update with L1 parameters Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

MIsc

[R2-2200236](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200236.zip) Open Issues on Common RRC Aspects CATT discussion Rel-17 NR\_MBS-Core

[R2-2200356](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200356.zip) Miscellaneous MBS L3 open issues Intel Corporation discussion Rel-17 NR\_MBS-Core

[R2-2200399](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200399.zip) Discussion on MBS RRC issues Samsung discussion

[R2-2200578](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200578.zip) Discussion on L3 open questions for NR MBS TD Tech, Chengdu TD Tech discussion Rel-17

[R2-2200640](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200640.zip) Discussion on Multicast activation notification Spreadtrum Communications discussion Rel-17

[R2-2200775](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200775.zip) Discussion on receiving MBS under Scell Lenovo, Motorola Mobility discussion Rel-17

[R2-2200818](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200818.zip) Discussion on RRC parameters for MCCH and MTCH Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

[R2-2201119](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201119.zip) Open issues for MBS RRC Running CR Apple discussion Rel-17 NR\_MBS-Core

[R2-2201120](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201120.zip) L1 configuration for MBS Apple discussion Rel-17 NR\_MBS-Core

[R2-2201259](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201259.zip) Discussion on MBS Open Issues for RRC CR vivo discussion Rel-17 NR\_MBS-Core

* [024] 12 tdocs noted

CFR Case E

* [AT116bis-e][025][MBS] CFR Case E (vivo)

Scope: Address support of CFR Case E (and other case of needed). Treat at least the proposals in R2-2201260. Can also take into account proposals from other papers.

Intended outcome: Report

Deadline: Thursday W1 for online CB

CLOSED

[R2-2201838](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201838.zip) Report of [AT116bis-e][025][MBS] CFR Case E (vivo) vivo

DISCUSSION

P2

- Huawei think we can go with majority view, think both should work but O1 aligns better with other decisions, BWP brings new things. Many companies now support this. Xiaomi comment that Using BWP brings the need for BWP switching. LG agrees

- QC think BWP shall be used. Nokia agrees, as all parameter for CFR would be the same as for BWP. Nokia thought BWP would be simpler.

- Huawei think that if we go with O2 we may need to discuss multiple active BWPs.

P3

- Chair: Discussed in CR discussions

* RAN2 confirms to support CFR Case E.
* It is supported by configuring a CFR for MBS broadcast, which fully contains the CORESET#0 in the frequency domain and has the same CP&SCS as the initial BWP.

[R2-2201260](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201260.zip) Supporting CFR Case E for RRC IDLE and INACTIVE UE vivo discussion Rel-17 NR\_MBS-Core

* [025] Noted

#### 8.1.3.3 UE capabilities

Initial discussion on Features / UE caps developed in RAN2, if any. Note that this AI is complementary to AI 8.0.2. This topic may be treated mainly oiffline.

* [AT116bis-e][026][MBS] UE capabilities (MediaTek)

Scope: Initial discussion on MBS UE capabilities, Identify easy agreements (can be agreed offline), discussion points and points that may need LS to other working group(s). Coordination may be needed between this discussion and the main UE caps discussion.

Intended outcome: Report

Deadline: Friday W1 for parts that need concrete action at current meeting by online CB, otherwise EOM.

[R2-2201865](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201865.zip) [AT116bis-e] [026][MBS] UE capabilities (MediaTek) MediaTek Inc.

* [026] Separate UE capabilities for MBS multicast and broadcast is used.
* [026] Define a UE capability for the number of simultaneous G-RNTIs / G-CS-RNTIs reception for multicast. UE shall inform network of this capability.
* [026] A mandatory UE capability for split-bearer configurations of multicast is adopted without capability signalling.
* [026] Reuse the current defined max RB (i.e. 16 RB per UE). Additional note shall be added to TS 38.306 to clarify the max RB is a total number for MRBs and DRBs, and the total number of RBs for split-MRB is considered as two.
* [026] An optional UE capability of *maxMRB-Add* for additional MRBs support is adopted for multicast.
* [026] A set of mandatory MBS broadcast capabilities is adopted:

  PDCP short SN;

  RLC UM with short SN

  RLC UM with long SN

  DRX with long DRX cycle

* [026] No separate UE capability is needed for the maximum number of RoHC/EHC contexts for multicast MRBs. The limitation are across all DRB/ multicast MRBs configured with RoHC/EHC for a UE.
* [026] MBS DRX with long DRX cycle is mandatory for multicast capable UEs.

[R2-2200237](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200237.zip) Discussions on NR MBS UE Capabilities CATT discussion Rel-17 NR\_MBS-Core

[R2-2200357](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200357.zip) UE capabilities for Rel-17 MBS Intel Corporation discussion Rel-17 NR\_MBS-Core

[R2-2200400](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200400.zip) UE capabilities for MBS Samsung discussion

[R2-2200531](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200531.zip) MBS UE capability for supporting MRBs Qualcomm India Pvt Ltd discussion Rel-17 NR\_MBS\_enh-Core

[R2-2200579](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200579.zip) UE capabilities for NR MBS TD Tech, Chengdu TD Tech discussion Rel-17

[R2-2200819](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200819.zip) Discussion on UE capabilities for MBS Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

[R2-2200827](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200827.zip) Discussion on UE capability for NR MBS MediaTek inc. discussion Rel-17 NR\_MBS-Core

[R2-2200874](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200874.zip) RAN2 UE Feature List for NR MBS CMCC discussion Rel-17 NR\_MBS-Core

[R2-2200906](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200906.zip) MBS BWP UE capability and MBS resources Sony discussion Rel-17 NR\_MBS-Core

[R2-2200979](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200979.zip) MBS Capabilities Ericsson discussion

[R2-2201261](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201261.zip) Discussion on UE capabilities for MBS vivo discussion Rel-17 NR\_MBS-Core

[R2-2201380](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201380.zip) Discussion on MBS support on MRDC Xiaomi Communications discussion Rel-17 NR\_MBS-Core

[R2-2201384](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201384.zip) UE capability for ROHC and EHC Xiaomi Communications discussion Rel-17 NR\_MBS-Core

* [026] 13 tdocs Noted

### 8.1.4 User Plane (MAC, PDCP)

Open issues, including those listed in the 38321 and 38323 Running CRs and/or Rapporteur Open issue list.

* [AT116bis-e][027][MBS] PDCP/RLC initial variables (xiaomi)

Scope: HFN applicability / initialization for both multicast and broadcast, how to set RLC initial values.

Intended outcome: Report

Deadline: Friday W1 (attempt offline agreement, can CB if needed W2)

[R2-2201874](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201874.zip) Report of [AT116bis-e][027][MBS] PDCP and RLC initial variables (xiaomi) Xiaomi Communications

* [027] Noted, reflected below
* [027] HFN is needed for both multicast and broadcast.
* [027] For multicast, the initial value of HFN is indicated by the gNB via RRC.
* [027] For broadcast, the initial value of HFN is selected by the UE.
* [027] If the initial value of HFN is indicated by the gNB, a reference SN corresponding to the initial value of HFN can be indicated to the UE.
* [027] For both multicast and broadcast, the initial value of the SN part of RX\_DELIV is (x – 0.5 × 2[*PDCP-SN-Size*–1]) modulo (2[*PDCP-SN-Size*]), where x is the SN of the first received PDCP Data PDU.
* [027] For both multicast and broadcast, it is up to UE implementation to set the initial value of RX\_Next\_Reassembly to a value before RX\_Next\_Highest.
* [027] For both multicast and broadcast, the initial value of RX\_Next\_Highest ~~for broadcast~~ is set to the SN of the first received UMD PDU containing an SN.
* [AT116bis-e][028][MBS] MAC Open Issues (OPPO)

Scope: Address MAC related open issues, as captured in R2-2200022 and R2-2111414 (running CR). Take into account input to this meeting. Identify (easy) agreements, points for discussion etc.

Intended outcome: Report, with agreements, open issues, and other proposals

Deadline: Tue W2

R2-2201866 [AT116bis-e][028][MBS] MAC Open Issues (OPPO) OPPO

DISCUSSION FRI Jan 21

- Chair: we run out of time to treat this, can we attempt bulk agreement of parts defined as “easy agreements”

* Nokia explains that the report hasn’t been seen and need time to check
* Chair: offline to agree agreeable parts, i.e. easy agreements, and to identify which remaning parts are important to agree, i.e can be regarded official “open issues”, Continue in same discussion.

[R2-2201943](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201943.zip) [AT116bis-e][028][MBS] MAC Open Issues (OPPO) OPPO

DISCUSSION W2

P9

- Proposal 9: (15/19)PTM retransmission, i.e. via PTM or PTP, can be changed per TB or per TB per transmission. Send LS to RAN1 for confirmation and RAN2 preference.

- OPPO think we can just wait for further input from R1.

- Chair: We Wait for R1

P7 8 10 11

- Can consider to Make these into FFSes? Can discuss in the open isseus post discussion

[028] OFFLINE

- [028] Rapporteur: Note: there is no proposals for the following issues due to no concensus or no majority view or crtical issue and the corresponding editor notes are kept in running CR.

a) DRX operation in HARQ disable case;

b) CSI/SRS reporting issue in MBS DRX opetation;

FFS points that didn’t converge (no online disc due to lack of time):

- (12/19) Per G-RNTI DRX command MAC CE is support for MBS DRX as baseline, i.e. When the UE receives a DRX command MAC CE with DCI scrambled with G-RNTI then the UE stops drx-onDurationTimerPTM and drx-InactivityTimerPTM timer for that G-RNTI.

- (11/20) Short DRX is not supported for MBS DRX.

- (14/19) If there is no real HARQ feedback transmission due to ACK in NACK only case, the UE will not start DRX RTT timer.

- (15/19)After DRX RTT timer expiries, UE will not start DRX retranmission timer if the corresponding MAC PDU is decoded successfully.

“Easy agreements” are agreed:

* If the downlink assignment is for C-RNTI, and if the previous downlink assignment indicated to the HARQ entity of the same HARQ process was eithe a downlink assignment received for the MAC entity's G-CS-RNTI or a configured downlink assignment for MBS, or

if the downlink assignment is for G-RNTI, and if the previous downlink assignment indicated to the HARQ entity of the same HARQ process was either a downlink assignment received for the MAC entity's G-CS-RNTI or other G-RNTI or C-RNTI or a configured downlink assignment for MBS or unicast,

Consider the NDI to have been toggled regardless of the value of the NDI.

* One-to-many mapping between G-CS-RNTI and MBS sessions is supported and it is assumed that this does not introduce additional specification work.
* Capature CS-RNTI usage in table for MBS in section 7.1 in MBS MAC running CR, i.e. for PTP for PTM retransmission via CS-RNTI and MBS SPS deactivationvia CS-RNTI when MBS SPS is configured.
* If MBS SPS is configured and CS-RNTI is not configured, the retransmission of SPS via PTP is not supported and MBS SPS deactivation via CS-RNTI is not supported.
* The sps-ConfigIndex should unique in UE no matter the SPS is for unicast or multicast.
* RAN2 assume no RAN2 spec impact when more than one NACK-only based feedback are available for transmission in the same PUCCH slot and UE will transform NACK-only into ACK/NACK HARQ bits.
* Remove the editor note about active time for MBS DRX
* In PTP for PTM retransmission, the UE monitors UE specific PDCCH/C-RNTI only during unicast DRX’s active time. Unicast DRX’s RTT timer can be started when PTP retransmission is expected.
* RAN2 confirm RAN1 agreement “the multicast MBS reception will impact BWP switching inactivity timer, but the broadcast MBS reception will not” and capture it in MAC CR.
* It is up to network implementation not configure the default BWP not contain the initial BWP if UE is receiving broadcast.
* Multicast MBS can be supported in MCG side in NE-DC and NR-DC scenarios, i.e., MN terminated MCG bearer kind of MRB.
* Remove the editor notes for LCID in broadcast in MAC running CR.
* Network may not ensure that all MBS sessions associated one G-RNTI are interested by UE, the proposed spec change is captured in MBS MAC running CR.

LS out

* Send LS to RAN1 to confirm the below understanding based on RAN1 agreements from RAN1#106 and 106bis. The content of the LS is the following:

Based on RAN1 agreements above, RAN2 made following understanding and confused whether multiple to one mapping between G-CS-RNTI and SPS is supported or not.

RAN2’s understanding: There will be multiple MBS SPS-config and there will also be multiple G-CS-RNTI. However, the association between G-CS-RNTI and MBS SPS-config will not be specified in RRC signalling. The DCI scrambled with G-CS-RNTI will indicated which MBS SPS-config will be activated via HARQ process id in this DCI and sps-ConfigIndex in a SPS-Config-Multicast. Then this G-CS-RNTI will be associated with the MBS SPS-config.

RAN2 can understand that one to one mapping or one to multiple mapping between G-CS-RNTI and MBS SPS config are supported as legacy today. From RAN2 point of view, multiple to one mapping between G-CS-RNTI and MBS SPS config is not supported due to the complexity. RAN2 would like to confirm with RAN1 the following question.

Q1: Whether multiple to 1 mapping between G-CS-RNTI and SPS-configure are supported or not?

[R2-2201944](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201944.zip) LS on MBS SPS RAN2 LSout

DISCUSSION

- Nokia need to check this. More questions are likely needed. Need a short Post discussion

* Email approval (post)
* [Post116bis-e][090][MBS] LS on MBS SPS (OPPO)

Scope: Based on R2-2201944, review determine agreeable contents if changes or additions are needed.

Intended outcome: Approved LS out

Deadline: Short.

[R2-2200758](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200758.zip) Discussion on initial value of HFN Lenovo, Motorola Mobility discussion Rel-17

[R2-2200825](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200825.zip) Discussion on initial HFN and PDCP state variables MediaTek inc. discussion Rel-17 NR\_MBS-Core

[R2-2201415](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201415.zip) Discussion on HFN initialization of NR MBS ZTE, Sanechips discussion Rel-17 NR\_MBS-Core

* [027] 3 docs Noted

General

[R2-2200238](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200238.zip) Consideration on UP Remaining Issues of MBS CATT discussion Rel-17 NR\_MBS-Core

[R2-2200346](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200346.zip) Discussion on user plane open issues Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

[R2-2200358](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200358.zip) Remaining issues of MBS user plane Intel Corporation discussion Rel-17 NR\_MBS-Core

[R2-2201262](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201262.zip) Remaining UP issues for Rel-17 MBS vivo discussion Rel-17 NR\_MBS-Core

[R2-2201366](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201366.zip) User Plane Aspects for MBS Samsung discussion Rel-17 NR\_MBS-Core

[R2-2200541](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200541.zip) L2 ARQ by PDCP for PTM Futurewei, Qualcomm Inc., Intel, Kyocera, NEC, Samsung, Ericsson discussion Rel-17 NR\_MBS-Core R2-2109849

* [028][027] 6 tdocs are noted

MAC

[R2-2200314](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200314.zip) Consideration on MBS power saving Shanghai Jiao Tong University discussion

[R2-2200384](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200384.zip) Discussion on open issues in MAC running CR OPPO discussion Rel-17 NR\_MBS-Core

[R2-2200533](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200533.zip) NR Multicast DRX aspects Qualcomm India Pvt Ltd discussion Rel-17 NR\_MBS-Core R2-2109901

[R2-2200735](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200735.zip) Keeping UE in the same active BWP during multicast session ASUSTeK discussion Rel-17 NR\_MBS-Core R2-2111000

[R2-2200757](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200757.zip) Remaining issues on multicast DRX Lenovo, Motorola Mobility discussion Rel-17

[R2-2200859](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200859.zip) Discussion on MAC remaining issues CMCC discussion Rel-17 NR\_MBS-Core

[R2-2200826](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200826.zip) Discussion on DRX related issues for MBS MediaTek inc. discussion Rel-17 NR\_MBS-Core

[R2-2200981](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200981.zip) Aspects on Scheduling Ericsson discussion Rel-17 NR\_MBS-Core

[R2-2201121](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201121.zip) Open issues for MAC Running CR Apple discussion Rel-17 NR\_MBS-Core

[R2-2201414](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201414.zip) DRX for NR Multicast ZTE, Sanechips discussion Rel-17 NR\_MBS-Core

[R2-2201583](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201583.zip) Discussion on MAC open issues for NR MBS LG Electronics Inc. discussion Rel-17 NR\_MBS-Core

* [028] 11 tdocs are noted

PDCP

[R2-2200383](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200383.zip) Discussion on Header Compressionfor MBS OPPO discussion Rel-17 NR\_MBS-Core

[R2-2200580](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200580.zip) Open issues for user plane for NR MBS TD Tech, Chengdu TD Tech discussion Rel-17

[R2-2200722](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200722.zip) MBS Reliability Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MBS-Core R2-2109949

[R2-2200860](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200860.zip) Discussion on PDCP remaining issues CMCC discussion Rel-17 NR\_MBS-Core

[R2-2201354](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201354.zip) MBS 38.323 remaining issue TCL Communication Ltd. discussion

[R2-2201381](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201381.zip) Remaining issues of MBS PDCP Xiaomi Communications discussion Rel-17 NR\_MBS-Core

[R2-2201383](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201383.zip) Slow-moving PDCP reception window issue Xiaomi Communications discussion Rel-17 NR\_MBS-Core

[R2-2201584](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201584.zip) Discussion on PDCP open issues for NR MBS LG Electronics Inc. discussion Rel-17 NR\_MBS-Core

[R2-2200829](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200829.zip) Remaining issues of PTP PTM switch MediaTek inc. discussion Rel-17 NR\_MBS-Core

* [027] 9 tdocs are noted

## 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

Email max expectation: 4 threads

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).

### 8.2.1 Organizational, Requirements and Scope

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

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

[R2-2200081](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200081.zip) LS on Rel-17 MAC-CE impacts (R1-2112842; contact: Nokia) RAN1 LS in Rel-17 NR\_feMIMO, NR\_ext\_to\_71GHz, NR\_IIOT\_URLLC\_enh, NR\_NTN\_solutions, NR\_pos\_enh, NR\_redcap, NR\_UE\_pow\_sav\_enh, NR\_cov\_enh, NR\_IAB\_enh, NR\_SL\_enh, NR\_MBS, NR\_DSS, LTE\_NR\_DC\_enh2, LTE\_NBIOT\_eMTC\_NTN, NB\_IOTenh4\_LTE\_eMTC6, LTE\_terr\_bcast\_bands\_part1 To:RAN2 Cc:RAN4

[R2-2200096](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200096.zip) LS on triggering signalling of temporary RS for SCell activation (R1-2112983; contact: Huawei) RAN1 LS in Rel-17 LTE\_NR\_DC\_enh2 To:RAN2 Cc:RAN4

R2-2201089 Introduction of SCG deactivation Huawei, HiSilicon draftCR Rel-17 38.331 16.7.0 LTE\_NR\_DC\_enh2-Core Late

R2-2201090 Introduction of SCG deactivation Huawei, HiSilicon draftCR Rel-17 36.331 16.7.0 LTE\_NR\_DC\_enh2-Core Late

R2-2201091 Open issues for MR DC/CA further enhancements Huawei, HiSilicon other Rel-17 LTE\_NR\_DC\_enh2-Core Late

[R2-2201397](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201397.zip) [Post116-e][213][R17 DCCA] Running MAC CR for SCG deactivation (vivo) vivo CR Rel-17 38.321 16.7.0 1182 - B LTE\_NR\_DC\_enh2-Core

[R2-2201561](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201561.zip) Running 37.340 CR for SCG deactivation ZTE Corporation draftCR Rel-17 37.340 16.8.0 B 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 Deactivation of SCG and UE behaviour in deactivated SCG

Including outcome of [Post116-e][225][R17 DCCA] Remaining details for SCG deactivation (Huawei)

including discussion on essential aspects of BFD/BFR and RRM/RLM that were not covered by the email discussion [Post116-e][225]

Including discussion on any remaining UP details of SCG deactivation (if any) that were not covered by the email discussion [Post116-e][225]

[R2-2200057](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200057.zip) [Post116-e][225][R17 DCCA] Remaining details for SCG deactivation Huawei (rapporteur) discussion Rel-17

[R2-2200308](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200308.zip) QoS flow remapping during SCG deactivation Fujitsu discussion Rel-17 LTE\_NR\_DC\_enh2-Core R2-2109708

[R2-2200380](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200380.zip) Considerations on UE measurement and reporting in deactivated SCG KDDI Corporation discussion Rel-17

[R2-2200387](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200387.zip) SCG deactivation indication when resuming from RRC\_INACTIVE due to MO data OPPO discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2200583](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200583.zip) DC power sharing for deactivated SCG Samsung Electronics Polska discussion LTE\_NR\_DC\_enh2-Core

[R2-2200601](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200601.zip) Partial MAC reset upon SCG deactivation Samsung Electronics Polska discussion LTE\_NR\_DC\_enh2-Core

[R2-2200604](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200604.zip) Discussion on UE behaviour when SCG is deactivated ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2200647](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200647.zip) Remaining issues on deactivation of SCG NTT DOCOMO INC. discussion Rel-17

[R2-2200771](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200771.zip) Discussion on SCG deactivation Lenovo, Motorola Mobility discussion Rel-17

[R2-2200881](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200881.zip) Open issues in deactivation of SCG Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201075](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201075.zip) UE behavior in deactivated SCG and SCG deactivation Qualcomm Incorporated discussion Rel-17

[R2-2201092](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201092.zip) UE requested SCG deactivation Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201248](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201248.zip) Discussion on SCG Deactivation and UE Behavior CATT discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201296](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201296.zip) CSI-RS reporting for deactivated SCG MediaTek Inc. discussion

[R2-2201318](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201318.zip) Remaining issues for UE behaviour in deactivated SCG SHARP Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core R2-2111014

[R2-2201319](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201319.zip) Remaining issues for MAC procedure in deactivated SCG SHARP Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201342](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201342.zip) Discussion on updating TCI states NTT DOCOMO, INC. discussion Rel-17

[R2-2201416](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201416.zip) Partial MAC reset upon SCG deactivation DENSO CORPORATION discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201563](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201563.zip) Deactivation of SCG and UE behaviour in deactivated SCG Ericsson discussion LTE\_NR\_DC\_enh2-Core

[R2-2201574](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201574.zip) UE Measurements in SCG Deactivation LG Electronics discussion Rel-17 LTE\_NR\_DC\_enh2-Core R2-2111017

#### 8.2.2.2 Activation of deactivated SCG

Including discussion on UP details of SCG activation, e.g. how the UL data is sent via the MCG leg for split bearers which SCG is deactivated, how UE indicates it has UL data available for SCG/split bearers, etc.

Including discussion on whether to support MAC CE-based SCG (de)activation in Rel-17

[R2-2200542](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200542.zip) Futher discussion on UE initiated SCG fast activation Futurewei discussion Rel-17 LTE\_NR\_DC\_enh2-Core R2-2110909

[R2-2200584](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200584.zip) PHR issues for SCG activation Samsung Electronics Polska discussion LTE\_NR\_DC\_enh2-Core

[R2-2200605](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200605.zip) Activation of deactivated SCG ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2200612](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200612.zip) UL data arrival and MCG link recovery NEC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2200637](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200637.zip) Discussion on activation of deactivated SCG Spreadtrum Communications discussion Rel-17

[R2-2200649](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200649.zip) UP details of deactivated SCG activation Transsion Holdings discussion Rel-17

[R2-2200772](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200772.zip) Discussion on SCG activation Lenovo, Motorola Mobility discussion Rel-17

[R2-2200882](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200882.zip) Open issues in activation of SCG Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2200895](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200895.zip) Remaining issues on SCG (de)activation CMCC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201060](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201060.zip) Activation of deactivated SCG Qualcomm Incorporated discussion Rel-17

[R2-2201093](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201093.zip) UE initiated SCG activation Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201097](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201097.zip) Reply LS on efficient activation/de-activation mechanism for one SCG (R2-2109368/R4-2115440) Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201117](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201117.zip) On the non-essentiality of MAC CE based SCG deactivation Apple discussion LTE\_NR\_DC\_enh2-Core

[R2-2201249](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201249.zip) Considerations on Activation of Deactivated SCG CATT discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201362](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201362.zip) Discussion on SCG activation and deacitvation LG Electronics Inc. discussion LTE\_NR\_DC\_enh2-Core

[R2-2201393](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201393.zip) Activation of deactivated SCG vivo discussion LTE\_NR\_DC\_enh2-Core

[R2-2201431](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201431.zip) SCG/split bearer handling upon SCG deactivation and SCell state upon SCG activation Sharp discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201538](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201538.zip) Conditional reconfiguration execution while SCG is deactivated Sharp discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201562](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201562.zip) Efficient SCG activation Ericsson discussion LTE\_NR\_DC\_enh2-Core

R2-2201592 UP details of deactivated SCG activation Transsion Holdings discussion Withdrawn

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

Including essential parts of SCG activation/deactivation that do not fit under other AIs.

Including discussion on MCG link recovery via deactivated SCG (with CR to illustrate the needed Stage-3 details)

IThis agenda item may be deprioritized in this meeting .

[R2-2200388](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200388.zip) Fast MCG recovery based on SCG deactivation OPPO discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2200896](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200896.zip) Considerations for Fast MCG link recovery with deactivated SCG CMCC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201073](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201073.zip) Other aspects of SCG activation/deactivation Qualcomm Incorporated discussion Rel-17

[R2-2201115](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201115.zip) Simple MCG recovery procedure using deactivated SCG for Rel-17 Apple discussion LTE\_NR\_DC\_enh2-Core R2-2110092

[R2-2201116](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201116.zip) CR TP for MCG recovery procedure using deactivated SCG for Rel-17 Apple discussion LTE\_NR\_DC\_enh2-Core

[R2-2201295](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201295.zip) Further discussion on TCI State indication in RRC MediaTek Inc. discussion R2-2111192

[R2-2201317](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201317.zip) Deactivation of SCG LG Electronics Finland discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201333](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201333.zip) Discussion on SCG (de)activation NTT DOCOMO, INC. discussion Rel-17

[R2-2201394](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201394.zip) Fast MCG recovery via deactivated SCG vivo discussion LTE\_NR\_DC\_enh2-Core

[R2-2201432](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201432.zip) Fast MCG link recovery via deactevated SCG Sharp discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201575](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201575.zip) Rest issues of SCG Activation LG Electronics discussion Rel-17 LTE\_NR\_DC\_enh2-Core R2-2111018

### 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 that require further interaction with RAN3

Including decision on the name of the new inter-node RRC message for CPAC

[R2-2200361](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200361.zip) Discussion on the CG-CandidateList Google Inc. discussion LTE\_NR\_DC\_enh2-Core

[R2-2200362](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200362.zip) 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

[R2-2200589](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200589.zip) Discussion on CPAC procedures from NW perspective vivo discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2200613](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200613.zip) Skip response from S-SN in SN-initiated CPC NEC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2200773](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200773.zip) Discussion on CPAC from NW perspective Lenovo, Motorola Mobility discussion Rel-17

[R2-2200923](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200923.zip) Remaining issues on CPAC procedure ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2200924](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200924.zip) Further consideration on CPAC procedure ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201000](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201000.zip) CPAC network procedures Ericsson discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201072](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201072.zip) CPAC procedures from network perspective Qualcomm Incorporated discussion Rel-17

[R2-2201081](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201081.zip) Solving open issues for Rel-17 CPAC Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201250](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201250.zip) Discussion on CPAC from NW perspective CATT discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201305](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201305.zip) CPAC procedure for SCG update Samsung R&D Institute UK discussion

#### 8.2.3.2 CPAC procedures from UE perspective

Including discussion on UE behaviour upon CPAC execution, e.g. does UE inform network of the triggering and how?

[R2-2201001](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201001.zip) UE procedures and signalling for CPAC Ericsson discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201082](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201082.zip) Clarifications to the issues found in CPAC running CRs Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201094](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201094.zip) UE behaviour upon CPAC execution Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201112](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201112.zip) Text proposal to CPAC RRC running CR Apple discussion LTE\_NR\_DC\_enh2-Core

[R2-2201251](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201251.zip) Remaining issues on CPAC from UE perspective CATT discussion Rel-17 LTE\_NR\_DC\_enh2-Core

#### 8.2.3.3 Other CPAC aspects

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

Including discussion on whether it's possible to specify CPAC failure handling in Rel-17 (with CR to illustrate the needed Stage-3 details)

Including discussion on whether it's possible to specify CPAC co-existence with CHO in Rel-17 (with CR to illustrate the needed Stage-3 details)

This agenda item may be deprioritized in this meeting .

[R2-2200341](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200341.zip) CPC-based SCG RLF handling ITRI discussion LTE\_NR\_DC\_enh2-Core R2-2110282

[R2-2200590](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200590.zip) Discussion on other aspects for CPAC vivo discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2200614](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200614.zip) Further discussion on Co-existence of CHO and CPAC NEC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2200615](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200615.zip) CPA with SN-terminated MCG bearer configuration NEC discussion Rel-17 LTE\_NR\_DC\_enh2-Core R2-2110662

[R2-2200774](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200774.zip) Miscellaneous issues on CPAC Lenovo, Motorola Mobility discussion Rel-17

[R2-2200897](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200897.zip) Combination of CPAC and CHO CMCC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2200925](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200925.zip) Discussion on coexistence of CHO and CPAC ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201074](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201074.zip) Other CPAC aspects Qualcomm Incorporated discussion Rel-17

[R2-2201210](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201210.zip) Other issues on CPAC LG Electronics discussion LTE\_NR\_DC\_enh2-Core

[R2-2201252](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201252.zip) Discussion on CPAC Failure Handling and CPAC Co-existence with CHO CATT discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201477](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201477.zip) Discussion on CPAC failure handling NTT DOCOMO INC. discussion

### 8.2.4 Temporary RS for SCell activation

Including concrete proposals (i.e. TPs) on MAC and RRC details for TRS-based SCell activation

Including discussion on what is configured in RRC and what is indicated in the MAC CE, how to handle Scell activation when some SCells are configured with TRS and others are not

[R2-2200389](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200389.zip) Discussion on TRS activation for fast SCell activation OPPO discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2200390](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200390.zip) Introduction of TRS based SCell activation-38321 OPPO CR Rel-17 38.321 16.7.0 1181 - B LTE\_NR\_DC\_enh2-Core

[R2-2200391](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200391.zip) Introduction of TRS based SCell activation-38331 OPPO draftCR Rel-17 38.331 16.7.0 B LTE\_NR\_DC\_enh2-Core

[R2-2200543](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200543.zip) Discussion on TRS for fast SCell activation Alt1 vs Alt2 Futurewei discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2200582](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200582.zip) Leftover issues for TRS based SCell activation Samsung Electronics Polska discussion LTE\_NR\_DC\_enh2-Core

[R2-2200883](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200883.zip) Temporary RS activation Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201041](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201041.zip) temporary RS for SCell activation Ericsson discussion

[R2-2201095](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201095.zip) MAC CE and RRC signalling for efficient SCell activation Huawei, HiSilicon, Samsung, vivo, LG Electronics discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201395](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201395.zip) Discussion on Temporary RS activation for fast SCell activation vivo discussion LTE\_NR\_DC\_enh2-Core

### 8.2.5 UE capabilities

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

Including discussion on RAN2 aspects of UE capabilities for SCG deactivation, CPAC and temporary RS.

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

Including discussion on condPSCellChange-r16 as the Prerequisite for R17 MN-initiated CPC, reuse of R15 RLF/BFD UE capabilities for RLF/BFD monitoring on deactivated SCG, support of RLM/BFD monitoring on deactivated SCG as the Prerequisite for Rachless SCG activation, separate capabilities for Activation/Deactivation of SCG in Resume and Reconfiguration cases, etc.

This agenda item may be deprioritized in this meeting.

[R2-2200275](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200275.zip) Discussion on remaining issues on DCCA UE capabilities Intel Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2200276](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200276.zip) Draft 331 CR for DCCA UE capabilities Intel Corporation draftCR Rel-17 38.331 16.7.0 B LTE\_NR\_DC\_enh2-Core

[R2-2200277](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200277.zip) Draft 306 CR for DCCA UE capabilities Intel Corporation draftCR Rel-17 38.306 16.7.0 B LTE\_NR\_DC\_enh2-Core

[R2-2201096](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201096.zip) UE capabilities Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2201297](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201297.zip) Discussion on CPAC Capabilities MediaTek Inc. discussion

## 8.3 Multi SIM

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

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

Email max expectation: 4 threads

Contributions should illustrate the Stage-3 details of the proposals (e.g. in an Annex containing TP against the running CRs).

### 8.3.1 Organizational, Requirements and Scope

Including LSs, any rapporteur inputs and results of running CR email discussions [233]-[236]

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

[R2-2200132](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200132.zip) Reply LS on gap handling for MUSIM (R4-2120342; contact: vivo) RAN4 LS in Rel-17 LTE\_NR\_MUSIM-Core To:RAN2 Cc:RAN

[R2-2200144](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200144.zip) LS on Paging Cause Indication for Voice Service Supported in RRC Inactive assistance information (S2-2109303; contact: Sony) SA2 LS in Rel-17 MUSIM To:RAN3 Cc:RAN2

[R2-2200652](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200652.zip) Running LTE RRC CR for MUSIM Samsung Electronics Co., Ltd draftCR Rel-17 36.331 16.7.0 B LTE\_NR\_MUSIM-Core

[R2-2200800](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200800.zip) Running NR RRC CR for MUSIM vivo draftCR Rel-17 38.331 16.7.0 LTE\_NR\_MUSIM-Core

[R2-2200801](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200801.zip) Remianing issue list vivo other Rel-17 LTE\_NR\_MUSIM-Core

[R2-2201485](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201485.zip) Running CR to 38300 for Multi-USIM devices support Ericsson draftCR Rel-17 38.300 16.8.0 B LTE\_NR\_MUSIM-Core

[R2-2201486](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201486.zip) Running CR to 36300 for Multi-USIM devices support Ericsson draftCR Rel-17 36.300 16.7.0 B LTE\_NR\_MUSIM-Core

[R2-2201490](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201490.zip) Discussion on the remaining FFS in TS 36.300 and 38.300 Ericsson, Samsung discussion

### 8.3.2 Paging collision avoidance

This agenda item may be deprioritized in this meeting.

Including discussion on RAN2 aspects of paging collision avoidance

[R2-2200414](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200414.zip) SI Change Lenovo, Motorola Mobility discussion LTE\_NR\_MUSIM-Core

[R2-2200470](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200470.zip) Remaining issues on 36.304 running CR China Telecommunications, Samsung discussion Rel-17

[R2-2200522](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200522.zip) Remaining issues of Network switching for MUSIM China Telecom discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2200571](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200571.zip) Alternative IMSI calculation for paging collision avoidance NEC discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2200802](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200802.zip) Remaining issue for EPS Paging Collision avoidance vivo discussion Rel-17 LTE\_NR\_MUSIM-Core

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

Including discussion on MUSIM gaps that are not discussed as part of the common measurement gap agenda, e.g. remaining details for periodic/aperiodic gaps, how the gaps are released (via explicit signalling as implicit release is not supported), whether UE is allowed to update UAI after cell reselection in NW B or handover in NW A,

Including Stage-3 details of "configured time" (e.g. how to configure UE to always wait for network response)

Including discussion on AS and NAS solution interactions and paging filtering

[R2-2200211](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200211.zip) Remaining issues on network switching for MUSIM Samsung Electronics Co., Ltd discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2200230](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200230.zip) Remaining Details for Periodic and Aperiodic Gaps OPPO discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2200231](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200231.zip) Remaining Details on MUSIM Assistance Information for Leaving Case OPPO discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2200359](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200359.zip) Remaining open issues on network switching for MUSIM Intel Corporation discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2200489](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200489.zip) Configuration of MUSIM Gaps Qualcomm Incorporated discussion

[R2-2200490](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200490.zip) Further details of network switching for Multi-SIM Qualcomm Incorporated discussion

[R2-2200572](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200572.zip) Remaining issues on scheduling gap for network switching NEC discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2200631](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200631.zip) UE indication on switching Spreadtrum Communications discussion Rel-17

[R2-2200632](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200632.zip) Busy indication transmission Spreadtrum Communications discussion Rel-17

[R2-2200671](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200671.zip) On remaining issues for MUSIM Gap configuration Nokia, Nokia Shanghai Bells discussion Rel-17

[R2-2200672](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200672.zip) On remaining issues for switching notification for leaving RRC connection Nokia, Nokia Shanghai Bells discussion Rel-17

[R2-2200736](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200736.zip) Interaction between NAS and AS for network switching ASUSTeK discussion Rel-17 LTE\_NR\_MUSIM-Core R2-2111001

[R2-2200737](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200737.zip) Configured time for network switching ASUSTeK discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2200754](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200754.zip) Remaining issues for switching notification and busy indication Lenovo, Motorola Mobility discussion Rel-17

[R2-2200803](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200803.zip) Remaining open issues on MUSIM Switching vivo other Rel-17 LTE\_NR\_MUSIM-Core

[R2-2200904](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200904.zip) Remaining issues for NW switching with leaving RRC\_CONNECTED Huawei, HiSilicon discussion Rel-17

[R2-2200920](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200920.zip) Remaining issues for NW switching without leaving RRC\_CONNECTED Huawei, HiSilicon discussion Rel-17

[R2-2200950](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200950.zip) Discussion on RAN4 Reply LS on MUSIM gaps Samsung R&D Institute India discussion

[R2-2201201](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201201.zip) MUSIM Signaling aspects for Scheduling gap handling Apple discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2201215](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201215.zip) Release of MUSIM Gap Sharp discussion

[R2-2201216](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201216.zip) RRC Connection release request procedure for MUSIM and power saving Sharp discussion

[R2-2201228](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201228.zip) Remain issues for network switching with leaving RRC\_CONNECTED SHARP Corporation discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2201233](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201233.zip) Further Consideration on the Scheduling Gap ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2201234](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201234.zip) Consideration on the Switching with Leaving Connected State ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2201315](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201315.zip) Signalling design on busy indication procedure DENSO CORPORATION discussion LTE\_NR\_MUSIM-Core R2-2111186

[R2-2201316](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201316.zip) Further details on network switching notification MediaTek Inc. discussion R2-2111222

[R2-2201369](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201369.zip) Remaining issues for MUSIM gap configuration LG Electronics France discussion Rel-17

[R2-2201481](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201481.zip) Remaining Issues for MUSIM Network Switching Charter Communications, Inc discussion

[R2-2201482](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201482.zip) Discussion on switchover procedure without leaving RRC\_CONNECTED state Ericsson discussion

[R2-2201483](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201483.zip) Discussion on switchover procedure for leaving RRC\_CONNECTED state Ericsson discussion

[R2-2201576](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201576.zip) Paging filtering when AS-based leaving LG Electronics discussion Rel-17 LTE\_NR\_MUSIM-Core R2-2111022

[R2-2201577](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201577.zip) Considerations on Busy Indication LG Electronics discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2201633](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201633.zip) Measurement Gaps pen issues Rakuten Mobile, Inc discussion Rel-17

### 8.3.4 Paging with service indication

This agenda item may be deprioritized in this meeting.

Including remaining details of the paging cause value support and if additional feedback to SA2/CT1 is needed (if any)

### 8.3.5 UE capabilities and other aspects

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

Including discussion on UE capabilities related to RAN2-defined features for MUSIM, e.g. capabilities for periodic/aperiodic gaps and capability bit for UE leaving RRC\_CONNECTED state.

Including discussion on any other essential aspects of MUSIM that need to be resolved during Rel-17.

If changes are proposed against the baseline endorsed in previous meeting, the proposals should illustrate the differences to the baseline illustrated in R2-2109625.

[R2-2200210](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200210.zip) UE capabilities and other essential aspects for MUSIM Samsung Electronics Co., Ltd discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2200232](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200232.zip) UE Capabilities for MUSIM OPPO discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2200360](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200360.zip) Remaining issues on UE and network capabilities for MUSIM Intel Corporation discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2200695](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200695.zip) UE capability for MUSIM gaps Qualcomm Incorporated discussion

[R2-2200804](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200804.zip) Multi-USIM related UE capabilities vivo discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2200838](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200838.zip) Further discussion on UE capabilities for MUSIM operation Nokia Italy discussion Rel-17

[R2-2200921](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200921.zip) Discussion on UE capability for MUSIM Huawei, HiSilicon discussion Rel-17 LTE\_NR\_MUSIM-Core R2-2110543

[R2-2201202](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201202.zip) MUSIM UE capability aspects Apple discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2201203](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201203.zip) Additional issues related to MUSIM - Aspects of MUSIM RRC Band Conflict, Processing Delay and Caller ID retrieval requirements Apple discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2201235](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201235.zip) Consideration on the UE Capability for the MUSIM ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2201484](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201484.zip) UE capabilities for Multi-USIM 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: 5 tdocs

Email max expectation: 4-5 threads

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 Organizational

Including work plan and any other rapporteur input.

LS in

[R2-2200065](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200065.zip) Reply LS on Inter-donor migration (R1-2108529; contact: Huawei) RAN1 LS in Rel-17 NR\_IAB\_enh-Core To:RAN3, RAN4 Cc:RAN2

[R2-2200094](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200094.zip) LS on range of power control parameters for eIAB (R1-2112973; contact: Qualcomm) RAN1 LS in Rel-17 NR\_IAB\_enh To:RAN4 Cc:RAN2

[R2-2200100](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200100.zip) LS on BAP- and RRC-related agreements from RAN3#113-e (R3-214476; contact: Ericsson) RAN3 LS in Rel-17 NR\_IAB\_enh-Core To:RAN2

[R2-2200115](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200115.zip) Reply LS on inter-donor migration (R4-2115354; contact: ZTE) RAN4 LS in Rel-17 NR\_IAB\_enh-Core To:RAN3 Cc:RAN1, RAN2

* 4 LS ins Noted

CRs

[R2-2200805](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200805.zip) Running CR to 37.340 for eIAB vivo draftCR Rel-17 37.340 16.8.0 NR\_IAB-Core

- vivo explains this is the same as endorsed last meeting (for info)

[R2-2201303](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201303.zip) Running CR of TS 38.340 for eIAB Option1 Huawei, HiSilicon discussion Rel-17 NR\_IAB\_enh-Core

[R2-2201304](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201304.zip) Running CR of TS 38.340 for eIAB Option2 Huawei, HiSilicon discussion Rel-17 NR\_IAB\_enh-Core

- Huawei indicate that there are some updates. Can be taken into account.

[R2-2201613](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201613.zip) Running CR to 38.331 on NR IAB enhancements Ericsson CR Rel-17 38.331 16.7.0 2811 - B NR\_IAB\_enh-Core R2-2111604

- Ericsson indicate this is the same as last meeting updated TS.

* [Post116bis-e][076][eIAB] 38331 (Ericsson)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][077][eIAB] 38321 (Samsung)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][078][eIAB] 38340 (Huawei)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][079][eIAB] Open Issues (Qualcomm)

Scope: Determine if Company input by Pre117-e discussions shall be used, and how many / which Pre-discussions shall be done. Capture Open Issues not captured in the CR email discussions and suggest how to treat. [After finalization, Merge open issues from other discussions into a WI OI list (OI for which company input is invited in some way shall be listed in the WI-list).

Intended outcome: Open Issues list, and organization of Pre117-e Company input discussions for the WI.

Deadline: Short.

Planning

[R2-2200194](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200194.zip) Updated Rel-17 IAB Workplan Qualcomm Incorporated, Samsung (WI rapporteurs) Work Plan Rel-17 NR\_IAB\_enh R2-2109939

[R2-2200008](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200008.zip) Remaining open issues for eIAB Qualcomm (WI Rapporteur) discussion NR\_IAB\_enh Revised

[R2-2200023](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200023.zip) Remaining open issues for eIAB Qualcomm (WI Rapporteur) discussion NR\_IAB\_enh [R2-2200008](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200008.zip)

- Chair: need to discuss open issues further next week

- QC think these OI has been covered quite well, except MAC CEs.

* 3 tdocs noted

### 8.4.2 Open Issues

#### 8.4.2.1 RLF indication

Open issues, e.g. Whether a type-2 indication by dual-connected node can be triggered when (1) the node detects BH RLF on any BH link and (2) it cannot perform re-routing for affected traffic, Whether a type-2 indication may carry info such as available BAP routing ID, Whether a type-2 indication should be (conditionally) propagated (e.g., if no alternative path is available), For transmission of type-3 indication, whether to specify a condition for the success of re-establishment, e.g., successful transmission of RRC Reestablishment Complete.

* [AT116bis-e][048][eIAB] RLF indication (LG)

Scope: Take online agreements into account, treat remaining relevant contents in R2-2201692. Attempt agree offline. Can also capture open points.

Intended outcome: Report, Agreements

Deadline: EOM

[R2-2201692](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201692.zip) Summary of 8.4.2.1 RLF indication (LGE) LGE

DISCUSSION

- Start with P1 P7

- LG indicate that also P3, P10 P12 may be agreeable,

P1

- QC don’t like this this proposal. Think more information is needed. Can alternatively make it very simple, just RLF and no additional condition or information. QC think local rerouting will be available across all DUs then it can be simple. Ericsson agrees with QC. Think type 2 is only useful when both links are down.

- NEC think there are cases when inter donor re-routing is not available. ZTE agrees with NEC, and think inter-donor re-routing is optional. Huawei agrees. Kyocera, Apple LGE support. IDT support, and think that if we don’t support this the effect is that inter donor rerouting becomes mandatory.

- Kyocera think we should consider the EN-DC case, for which MCG onlyu handles Control plane and traffic cannot be routed there. Nokia agrees EN-DC is a use case. Nokia also think the CP-UP split scenarios that has the problem that local rerouting is not possible.

- Chair think that the EN-DC and CP-UP split is similar to the case when both links goes down.

- Samsung think that loca rerouting may handle this.

- Ericsson think there may be a case for EN-DC. QC think that for EN-DC and CP-UP split

* Type-2 indication by a dual-connected node is triggered when the node detects BH RLF on a BH link and it cannot perform re-routing for any traffic, i.e. NR RLF for ENDC scenario, (FFS UP Link RLF for CPUP split scenario 1).
* For these cases, the Type-2 indication is handled in the same way as for the case when both links goes down.
* FFS whether Type-2 is propagated further (for all its cases)

[Attempt Agree further proposals offline.]

[R2-2201937](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201937.zip) [AT116bis-e][048][eIAB] RLF indication (LG) LG Electronics Inc.

[048] Comments

- [048] Chair: On*: Proposal 1b: [OPEN] partial re-routing upon BH RLF results in no triggering of type-2 indication, as per the current agreement*, it mainly confirms current situation, so

No need to capture further Open Issue or agreement.

- [048] Chair: On*: Proposal 6: [OPEN] (14 versus 1) Type-2 indication triggered by a single-connected node does not include any routing information (such as unavailable routing IDs).* It seems clear that there is not sufficient support in RAN2 to introduce such routing information, so we can confirm this.

I have converted this to an agreement.

- [048] Chair: On: *Proposal 7: [OPEN] (10 versus 5) Type-2 indication triggered by a dual-connected node does not include any routing information,   
Proposal 4: [OPEN] Further propagation of type-2 indication is NOT supported,   
Proposal 5: [OPEN] (If type-2 indication propagation is supported) The received tye-2 indication is simply forwarded to child nodes without regeneration at the forwarding node.*

*Proposal 8: [OPEN] There is NO need to specify a NOTE that reception of type-2 indication may trigger deactivation of IAB-supported in SIB, Proposal 9: [OPEN] To specify a NOTE that type-2 indication may trigger deactivation/reduction of SR and/or BSR transmissions at the receiving node*.

[048] OPEN ISSUES (for discussion in the OI discussion)

- [048] Chair Proposal: The agreed open issue on type-2 propagation elaborated into two:

1: *FFS whether Type-2 is propagated further for single connection scenarios (single connection from UP point of view).*

2: *FFS whether Type-2 is propagated further for dual connection scenarios (dual connection from UP point of view), whether routing info need to be included for the indication to be useful in such scenarios, whether the indication need to be regenerated for the indication to be useful in such scenarios. FFS what should be the meaning/semantics to the receiver of a propagated Type-2 indication in such scenario.*

- [048] Chair Proposal:

*It is FFS whether to capture in the TS in informative notes either only that actions taken by a node that receives a Type-2 indication it is up to implementation, or to also provide examples such as “reception of type-2 indication may trigger deactivation of IAB-supported in SIB”, and/or “type-2 indication may trigger deactivation/reduction of SR and/or BSR transmissions at the receiving node” [low priority, can address in Q2].*

* [048] Execution of local re-routing of all affected traffic among re-routable traffic upon BH RLF is not mandatory for a node capable of local re-routing. This can be revisited if there is a severe issue.
* [048] For a dual-connected node, e.g., configured with CP-UP split/NR-DC/EN-DC, type-2 indication is triggered when all the CG(s) providing F1-over-BAP fail.
* [048] Not sufficient support that Type-2 indication triggered by a single-connected node includes routing information (such as unavailable routing IDs).
* [048] RAN2 does not specify suspending routing data to a parent node in case of receiving type-2 indication.
* [048] No network configurability on triggering/propagation of type-2/3 indication is needed.
* [048] RAN2 to not support any other triggers for reverting actions triggered by a previous Type 2 BH RLF Indication than reception of type-3 indication
* [048] RAN2 to deprioritize discussion on the case where failure of first BH link had triggered type-2 indication (but not re-establishment) and there happens a failure on other link prior to the recovery of the first BH link, yielding re-establishment, which then triggers another type-2 indication (e.g., FFS this is a valid case whether to handle/prevent the second type-2 indication.)
* [048] Type-3 indication is triggered upon successful CHO executed during re-establishment or upon successful RRC setup complete as a result of re-establishment.
* [048] NO need to introduce a successful RRC setup complete during re-establishment as triggering condition of type-3 indication. (It is already clear in the current spec that RRC re-establishment is considered successful if RRC setup initiated during re-establishment is successful).
* [048] FFS if successful CHO executed during re-establishment should be captured as an explicit triggering condition of type-3 indication or if genetic condition “upon recovery” from BH RLF is sufficient.
* [048] No further clarification on the triggering condition of type-3 indication is needed for successful re-establishment ending with RRCReestablishemntComplete.
* [048] If further propagation of type-2 indication is supported, further propagation of type-3 indication should be supported, such that a node propagates received type-3 indication, if it previously propagated received type-2 indication.
* [048] If further propagation of type-2 indication is not supported, further propagation of type-3 indication is not supported.
* [048] If type-2 indication does not contain any routing information Type-3 indication does not include any routing information.
* [048] If type-2 indication contains routing information, Type-3 indication includes corresponding routing information, indicating recovered destinations or routing ID(s).
* [048] FFS whether to use a new name “BH RLF recovery failure indication” for type-4 indication from Rel-17, and whether it should be made applicable to Rel-16
* [048] RRC re-establishment to a different IAB-donor-CU should not be introduced as triggering condition of type-4 RLF indication.

[R2-2200196](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200196.zip) Open isuses on IAB RLF indications Qualcomm Incorporated discussion Rel-17 NR\_IAB\_enh

[R2-2200323](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200323.zip) Discussion on RLF Indications CATT discussion Rel-17 NR\_IAB\_enh-Core

[R2-2200351](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200351.zip) Open issues on IAB-node RLF indication Intel Corporation discussion Rel-17 NR\_IAB\_enh-Core

[R2-2200405](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200405.zip) Discussion on left issue of Type-2/3 RLF indication NEC discussion Rel-17 NR\_IAB\_enh-Core

[R2-2200562](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200562.zip) Control plane behavior at receiving BH RLF detection indication Fujitsu discussion Rel-17 NR\_IAB\_enh-Core

[R2-2200563](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200563.zip) A mechanism to avoid a storm of BH RLF indication Fujitsu discussion Rel-17 NR\_IAB\_enh-Core

[R2-2200564](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200564.zip) RLF indication and flow control feedback from boundary node Fujitsu discussion Rel-17 NR\_IAB\_enh-Core

[R2-2200806](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200806.zip) Remaining Issues of BH RLF vivo discussion Rel-17 NR\_IAB-Core

[R2-2200837](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200837.zip) Discussion on RLF indication enhancements CANON Research Centre France discussion Rel-17 NR\_IAB\_enh-Core R2-2110344

[R2-2201051](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201051.zip) RLF indications and re-routingenhancements Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IAB\_enh-Core

[R2-2201242](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201242.zip) Remaining issues of BH RLF Indications for eIAB Kyocera discussion Rel-17 R2-2110204

[R2-2201301](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201301.zip) RLF indication and local re-routing based on flow control Huawei, HiSilicon discussion Rel-17 NR\_IAB\_enh-Core

[R2-2201306](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201306.zip) RLF indication related issues Samsung R&D Institute UK discussion

[R2-2201349](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201349.zip) Remaining issues on RLF indication ZTE, Sanechips discussion Rel-17

[R2-2201388](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201388.zip) Open Issues for RLF indications for dual-connected IAB nodes Futurewei Technologies discussion

[R2-2201468](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201468.zip) Resolving open issues on BH RLF indications LG Electronics discussion Rel-17

[R2-2201607](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201607.zip) On Local Routing and Type 2/3 RLF Handling Ericsson discussion NR\_IAB\_enh-Core

* [048] All noted

#### 8.4.2.2 CP-UP separation

Open Issues, e.g. Whether, for IAB-MT’s RRC message that carries F1-C/F1-C-related traffic, the IAB-MT uses split SRB2 via SCG in scenario 2 if f1c-TransferPath-r17 indicates ‘SCG’ or ‘both’ regardless of the primaryPath configuration, Whether, for IAB-MT’s RRC message that contains both F1-C traffic and other information unrelated to IAB, the IAB-MT follows the configuration of F1-C transfer path (if configured) to transmit this RRC message

[R2-2201679](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201679.zip) [Pre116bis][002][eIAB] Summary of 8.4.2.2 CP-UP separation\_v00 Ericsson

DISCUSSION

- Chair asks to agree 1b. Many companies agrees.

- Fujitsu think 1a is better a dynamic change

- LG Ericsson Nokia Intel object to 1a. LG think this is not same as MCG failure, which was one single message.

- Samsung objects to 1b.

P3

- Seems low support

P4

- LG doesn't support this, think we just follow the configuration. Anything else is just a bad configuration.

* The network is allowed to configure the primaryPath to SCG for the IAB-MT
* The IAB-MT should always follow the primary path configuration for all the RRC messages, regardless of whether F1-C information or IAB-unrelated information are contained

[R2-2200324](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200324.zip) Leftovers of CP-UP Separation CATT discussion Rel-17 NR\_IAB\_enh-Core

[R2-2200565](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200565.zip) Remaining issues on CP-UP separation Fujitsu discussion Rel-17 NR\_IAB\_enh-Core

[R2-2200807](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200807.zip) Remainings issues on CP-UP separation vivo discussion Rel-17 NR\_IAB-Core

[R2-2201302](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201302.zip) F1 over NR access link Huawei, HiSilicon discussion Rel-17 NR\_IAB\_enh-Core

[R2-2201308](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201308.zip) CP-UP separation and other topology adaptation issues Samsung R&D Institute UK discussion

[R2-2201350](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201350.zip) Discussion on CP/UP spearation ZTE, Sanechips discussion Rel-17

[R2-2201428](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201428.zip) Remaining issues on CP-UP separation LG Electronics Inc. discussion Rel-17 NR\_IAB\_enh-Core

[R2-2201608](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201608.zip) Remaining Issues Related to CP/UP Separation in IAB Network Ericsson discussion NR\_IAB\_enh-Core

[R2-2201053](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201053.zip) IAB CP-UP separation remaining issues Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IAB\_enh-Core

=> Revised in R2-2201651

R2-2201651 IAB CP-UP separation remaining issues Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IAB\_enh-Core

#### 8.4.2.3 BAP routing

Open Issues, e.g. Inter-topology routing: Configurations of routing, channel mapping and header-rewriting tables, how would the topology be indicated for each of these configurations? Implicitly or explicitly? If implicitly, based on what information carried in the configuration? Inter-topology routing: Additional details of the introduced two new BAP processing steps at the boundary node: (1) determining whether descendant traffic is intra- or inter-topology traffic, and (2) execution of BAP header-rewriting.

* [AT116bis-e][049][eIAB] BAP Routing (Qualcomm)

Scope: Continue progressing proposals from R2-2201690. Agree offline if possible

Intended outcome: Report, agreements

Deadline: For potential CB Monday W2

[R2-2201669](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201669.zip) [Pre116bis][003][eIAB] Summary of 8.4.2.3 BAP routing (Qualcomm) Qualcomm

[R2-2201690](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201690.zip) [Pre116bis][003][eIAB] Summary of 8.4.2.3 BAP routing (Qualcomm) Qualcomm

DISCUSSION

P1

- Huawei think the intention is correct but the signalling cannot support additional BAP addresses. Samsung think this is a separate discussion

- Intel thik we need to consider separately partial migration and top redundancy.

P2

- LG dont understand the purpose of this proposal. Samsung think that this creates a link between topology and

P3

- Ericsson think we don’t need to assume address collisions, the probability ss very small. Huawei thikn it need to be handled anyway.

P5

- Ericsson think this goes too far.

6a

- LG think BAP address based re-routing need to be supported.

6b

- Samsung and ZTE think option 3 is preferred.

- Huawei wonder if 2 means that we need to do routing before header re-writing. QC think not.

- Ericsson wonder if not there can be a check first whether the link is available.

- support for O3 it seems (but no time).

* For each topology, the BAP address is configured to the boundary node by the CU of that topology via RRC (may need to check different scenarios).
* In the Routing configuration: A BH link and the corresponding next-hop BAP address belong to the topology of the CU that provided the configuration of that BH link and next-hop BAP address.
* FFS if The routing entry is associated by configuration with the topology the entry applies to, e.g. by an explicit indicator.
* The header rewriting configuration is provided via F1AP.
* FFS if The header rewriting configuration to include an indicator, which identifies either the egress topology, or the ingress topology, or the traffic direction (RAN2 to select one of these three options).
* For the two scenario of inter-topology routing and intra-to-inter-topology re-routing, there is only one header rewriting for a packet, where the header rewriting entry includes the BAP routing ID of the packet’s ingress topology and the BAP routing ID of the packet’s egress topology.

[MonW1:NotFinished]

[R2-2201879](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201879.zip) [AT116bis-e][049][eIAB] BAP Routing (Qualcomm) Qualcomm

Online CB DISCUSSION P6 rerouting + rewriting

- Ericsson think the prev agreements are consistent and don’t think we need to further discuss.

- Samsung think their proposal is additional to the second one, for the Upstream the new routing ID is a default routing ID.

- Chair: We can capture the Samsung proposal as an FFS, it my make sense but on the other hand seems like a configuration signalling optimization.

* Referring to previous agreement “*Will have rewriting mapping configuration(s) Old routing ID to New routing ID that limits the possible rewriting (for all cases of re-writing)*”: It is FFS whether for upstream there would be a configuration optimization such that the “New Routing ID” is the same for all entries (a.k.a. default routing ID)

[Rest to be agreed offline]

[049] DISCUSSION

- [049] Chair: On P11, we need some way to refer to home topology vs foreign topology or similar, and the proposals seems to work well in that they are well defined. Suggest to agree.

- [049] Chair: On P12, it is not easy to be perfectly future compatible so it is better to decide on a model rather than discuss long time, and indeed of course the selection of egress need to use info from the ingress, e.g. for QoS, right, so suggest to just Agree. Regarding Q on the reflector, It is also my understanding that indeed there is no support for mixed topology in R17, so then this proposal seems agreeable to everyone.

- [049] Chair: On P3. This seems like a simple principle. Even if potentially applied slightly differently for Ustream and Dstream this principle can apply. Should be agreeable with the rapporteur amendment which leaves R3 to decide the details. Suggest agree.

* [049] For inter-topology routing, the header rewriting configuration to include information that allows the boundary node to determine either the egress topology, or the ingress topology, or the traffic direction of a header-rewriting entry (selection of one of these expected). RAN3 to handle the St3-related aspects.
* [049] The BH RLC CH mapping configuration of the boundary node includes information for the boundary node to differentiate mappings based on ingress topology and egress topology.
* [049] The UL mapping configuration to include information for the boundary node to determine the egress topology of each UL mapping entry.
* [049] In configurations, the topology is referred to as “F1-terminating CU’s topology” vs. “non-F1-terminating CU’s topology”. The terms “F1-terminating CU” and “non-F1-terminating CU” to be defined in St2 spec.
* [049] Determination/execution of header rewriting is handled by the BAP TX entity.
* [049] The routing configuration to include information that allows the boundary node to determine the topology each routing entry applies to. RAN3 to decide on St3-related aspects.

[R2-2200352](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200352.zip) Open issues on BAP routing for inter-donor topology routing Intel Corporation discussion Rel-17 NR\_IAB\_enh-Core

[R2-2200195](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200195.zip) Open issues on BAP routing Qualcomm Incorporated discussion Rel-17 NR\_IAB\_enh

[R2-2200325](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200325.zip) On BAP Routing and Rerouting CATT discussion Rel-17 NR\_IAB\_enh-Core

[R2-2200566](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200566.zip) Discussion on the routing issues Fujitsu discussion Rel-17 NR\_IAB\_enh-Core

[R2-2200760](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200760.zip) Discussion on remaining issues for IAB rerouting Lenovo, Motorola Mobility discussion Rel-17

[R2-2200808](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200808.zip) Remaining Issues of Intra/Inter-Topology Routing vivo discussion Rel-17 NR\_IAB-Core

[R2-2200842](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200842.zip) Discussion on the configuration of a boundary node CANON Research Centre France discussion Rel-17 NR\_IAB\_enh-Core

[R2-2200907](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200907.zip) Introduce cost factor in local re-routing Sony discussion Rel-17 NR\_IAB\_enh-Core R2-2110348

[R2-2200918](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200918.zip) BAP Header Rewriting Configuration Sony discussion Rel-17 NR\_IAB\_enh-Core

[R2-2201052](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201052.zip) IAB inter-CU (re)routing issues Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IAB\_enh-Core

[R2-2201243](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201243.zip) Details of routing and re-routing enhancements for eIAB Kyocera discussion Rel-17

[R2-2201299](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201299.zip) Leftover issues for BAP header rewriting based (re)routing Huawei, HiSilicon discussion Rel-17 NR\_IAB\_enh-Core

[R2-2201322](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201322.zip) Discussion on the inter-CU routing Samsung Electronics France SA discussion Rel-17 NR\_IAB\_enh-Core

[R2-2201351](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201351.zip) Discussion o BAP routing and rerouting ZTE, Sanechips discussion Rel-17

[R2-2201429](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201429.zip) Open issues for BAP routing operation LG Electronics Inc. discussion Rel-17 NR\_IAB\_enh-Core

[R2-2201430](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201430.zip) Text Proposal of TS 38.340 for BAP routing operation LG Electronics Inc. discussion Rel-17 NR\_IAB\_enh-Core

[R2-2201606](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201606.zip) Boundary IAB node behaviour for partial inter-donor migration Ericsson discussion NR\_IAB\_enh-Core

* [049] 17 tdocs above are Noted

#### 8.4.2.4 Other

Any other Open issue

Prepared / buffered RRC msg

[R2-2200353](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200353.zip) intra-donor CU service interruption reduction Intel Corporation discussion Rel-17 NR\_IAB\_enh-Core

[R2-2201054](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201054.zip) PDCP aspects of a migrating node withholding a child node’s RRC reconfiguration Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IAB\_enh-Core

[R2-2201610](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201610.zip) RAN2 impact of miscellaneous features driven by RAN3 and RAN1 Ericsson discussion NR\_IAB\_enh-Core

Congestion trigger for re-routing

[R2-2201323](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201323.zip) Discussion on congestion mitigation in Rel-17 eIAB Samsung Electronics France SA discussion Rel-17 NR\_IAB\_enh-Core

[R2-2200809](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200809.zip) On Congestion Triggered Local Re-routing vivo discussion Rel-17 NR\_IAB-Core

MAC related

* [AT116bis-e][050][eIAB] MAC (Samsung)

Scope: Review and Endorse MAC running in CR R2-2201527, Treat R2-2201353, R2-2200810, R2-2201298, R2-2201427, R2-2201526. Determine agreeable parts, Capture agreements, and update CR. Agree offline if possible

Intended outcome: Report, agreements Endorsed CR

Deadline: For potential CB Monday W2 (hopefully all offline).

[R2-2201527](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201527.zip) 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 - B NR\_IAB\_enh-Core R2-2110453

- Samsung indicate that it covers all agreements up to now, but it was not endorsed.

* Endorse by email

[R2-2201850](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201850.zip) 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 2 B NR\_IAB\_enh-Core

* [050] The CR in R2-2201850 is endorsed, and shall be used as baseline for further updates.

[R2-2201876](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201876.zip) Summary of discussion [AT116bis-e][050][eIAB] MAC (Samsung) Samsung

* [050] LCP priority levels range extension is NOT pursued in this Release.
* [050] Baseline: For IAB-MTs supporting Extended BSR formats, use exclusively the Extended formats for padding BSR by fully mirroring the legacy padding BSR procedure (use the Extended equivalents of all formats therein).

FFS whether to 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.

* [050] RAN2 should focus on 2 new timing modes (Case-6 timing and Case-7 timing) for Desired guard symbols and Provided guard symbols, as well as on the Case-7 timing offset (deprioritizing work on other MAC CEs until further input from RAN1/RAN4 is received).
* [050] New MAC CEs are introduced to indicate desired/provided number of symbols for the Case-6 and Case-7 timings.
* [050] A new MAC CE is introduced to indicate the Case-7 Timing Offset.

[R2-2201353](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201353.zip) Discussion on MAC CEs for PHY layer support ZTE, Sanechips discussion Rel-17

[R2-2200810](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200810.zip) Discussion on LCP Extension vivo discussion Rel-17 NR\_IAB-Core

[R2-2201298](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201298.zip) LCG extension and R1 related MAC CE design Huawei, HiSilicon discussion Rel-17 NR\_IAB\_enh-Core

[R2-2201427](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201427.zip) Remaining issues on LCG extension LG Electronics Inc. discussion Rel-17 NR\_IAB\_enh-Core

[R2-2201526](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201526.zip) Extended BSR and padding Samsung Electronics GmbH discussion

* [050] 5 tdocs noted

### 8.4.3 UE capabilities

Initial discussion on Features / UE caps developed in RAN2, if any. Note that this AI is complementary to AI 8.0.2. This topic may be treated mainly oiffline.

* [AT116bis-e][051][eIAB] UE Caps (Intel)

Scope: Attempt offline agreements of proposals in R2-2201689, can also capture open issues and FFSes.

Intended outcome: Report, agreements, open issues.

Deadline: EOM (hopefully all offline).

[R2-2201912](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201912.zip) Summary of discussion [AT116bis-e][051][eIAB] UE Caps (Intel) Intel Corporation

- [051] Rapp Observation 1: R17 eIAB RAN1/RAN4 feature groups and UE capabilities are discussed together with mega CR in [AT116bis-e][017][NR17] UE caps main (Intel).

* [051] Confirm to define a new UE capability for LCG Extension in *MAC-ParametersCommon* as optional UE capability for IAB-MT.
* [051] Define a new UE capability (1 bit) for ‘BH RLF detection indication and BH RLF recovery indication’ as optional UE capability for IAB-MT.
* [051] Define a new UE capability ‘*f1c-OverNR-RRC*’ as optional UE capability for IAB-MT. The parent IE of this UE capability is *NRDC-Parameters* under *UE-NR-Capability*.
* [051] Define a new UE capability for BAP header rewriting based inter-donor CU routing as optional UE capability for IAB-MT.
* [051] The single UE capability is used for all UL local re-routing trigger conditions.
* [051] Define a new type of feature group for LCG extension.
* [051] Reuse ‘RLF handling’ FG for BH RLF detection and recovery indication in Rel-17 eIAB feature list section.
* [051] Define a new type of feature group for F1-C over NR RRC.
* [051] Following open issues of Rel-17 eIAB UE capability are FFS:

FFS UE capability for Rel-17 intra-donor DU local-rerouting and inter-donor DU re-routing.

FFS whether need to differentiate the capability between “inter-donor CU partial migration” and “inter-donor CU routing for topology redundancy”

FFS the feature group for BAP header rewriting based inter-donor CU routing

FFS the feature group for local rerouting

[R2-2201689](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201689.zip) Summary of 8.4.3 UE caps (Intel)

[R2-2200354](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200354.zip) UE capabilities for Rel-17 eIAB Intel Corporation draftCR Rel-17 38.306 16.7.0 NR\_IAB\_enh-Core

[R2-2200355](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200355.zip) UE capabilities for Rel-17 eIAB Intel Corporation draftCR Rel-17 38.331 16.7.0 NR\_IAB\_enh-Core

[R2-2201055](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201055.zip) IAB UE feature list Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IAB\_enh-Core

[R2-2201300](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201300.zip) UE capability issues for eIAB Huawei, HiSilicon discussion Rel-17 NR\_IAB\_enh-Core

[R2-2201352](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201352.zip) Discussion on R17 IAB-MT capabilities ZTE, Sanechips discussion Rel-17

[R2-2201609](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201609.zip) On eIAB capabilities Ericsson discussion NR\_IAB\_enh-Core

* [051] 7 tdocs above are Noted

## 8.5 NR IIoT URLLC

(NR\_IIOT\_URLLC\_enh-Core; leading WG: RAN2; REL-17; WID: RP-210854)

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

Email max expectation: threads

### 8.5.1 Organizational

Including email discussions [Post116-e][511][IIoT] MAC running CR update (Samsung) and [Post116-e][512][IIoT] Stage-2 running CR update (Nokia)

[R2-2200024](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200024.zip) MAC Running CR for Rel-17 IIoT/URLLC Samsung draftCR Rel-17 38.321 16.7.0 B NR\_IIOT\_URLLC\_enh

[R2-2200052](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200052.zip) Stage-2 Running CR for Rel-17 IIoT/URLLC Nokia, Nokia Shanghai Bell CR Rel-17 38.300 16.8.0 0392 - B NR\_IIOT\_URLLC\_enh R2-2110441

[R2-2200080](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200080.zip) LS on propagation delay compensation (R1-2112834; contact: Huawei) RAN1 LS in Rel-17 NR\_IIOT\_URLLC\_enh To:RAN2, RAN4

[R2-2200951](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200951.zip) RRC running CR for IIoT Ericsson draftCR Rel-16 38.331 16.7.0 NR\_IIOT\_URLLC\_enh

[R2-2200992](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200992.zip) UE capabilities for Rel-17 IIoT / URLLC Intel Corporation discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

R2-2201131 RAN1 feature impact on MAC in Rel-17 IIoT/URLLC Apple discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core Late

R2-2201132 Text proposals to MAC running CR for Rel-17 IIoT/URLLC Apple discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core Late

[R2-2201373](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201373.zip) MAC impact of RAN1 Rel-17 HARQ deferral Xiaomi Communications discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

### 8.5.2 Enhancements for support of time synchronization

RAN1 progress if any should be taken into account. \

[R2-2200060](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200060.zip) RE: LS on Time Synchronization IEEE 1588 WG LS in To:RAN, SA Cc:RAN2

[R2-2200182](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200182.zip) Signalling for Support of Propagation Delay Compensation Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IIOT\_URLLC\_enh

[R2-2200320](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200320.zip) RTT-based PDC and TA-based PDC CATT discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200477](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200477.zip) Discussion about propagation delay compensation for accurate time synchronization Huawei, HiSilicon discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200611](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200611.zip) Discussion on propagation delay compensation for TSN NTT DOCOMO INC. discussion Rel-17

[R2-2200678](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200678.zip) Discussion on RTT-based PDC ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd discussion NR\_IIOT\_URLLC\_enh-Core

[R2-2200761](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200761.zip) Signaling procedure of RTT based propagation delay compensation Lenovo, Motorola Mobility discussion Rel-17

[R2-2200872](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200872.zip) Discussion on RTT-based PDC Enhancement CMCC discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200926](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200926.zip) Remaining issues on time synchronization enhancement OPPO discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200952](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200952.zip) Propagation delay compensation enhancements Ericsson discussion

[R2-2200991](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200991.zip) Remaining issues of timing synchronization Intel Corporation discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2201016](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201016.zip) Propagation Delay Compensation for TSN Qualcomm Incorporated discussion Rel-17

[R2-2201263](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201263.zip) Discussion on propagation delay compensation vivo discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2201367](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201367.zip) Issues on PDC Samsung discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

### 8.5.3 Uplink enhancements for URLLC in unlicensed controlled environments

Remaining open issues.

[R2-2200183](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200183.zip) Remaining Issues on Configured Grant for URLLC in Unlicensed Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IIOT\_URLLC\_enh

[R2-2200321](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200321.zip) Leftovers of UCE CATT discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200478](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200478.zip) Remaining issues about uplink enhancements for URLLC in UCE Huawei, HiSilicon discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200927](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200927.zip) Remaining issues on URLLC over NRU OPPO discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200953](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200953.zip) Remaining issues in UL CG enhancements Ericsson discussion

[R2-2201018](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201018.zip) CG Harmonization for Unlicensed Controlled Environment Qualcomm Incorporated discussion Rel-17

[R2-2201226](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201226.zip) Further Consideration on the Intra-UE multiplexing in UCE ZTE Corporation,Sanechips discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2201264](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201264.zip) Remaining Issues for UCE vivo discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2201285](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201285.zip) Remaining issues for IIoT in UCE III discussion NR\_IIOT\_URLLC\_enh-Core

[R2-2201368](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201368.zip) Remaining Issues on CG Enhancement and Intra-UE Prioritization Samsung discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2201374](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201374.zip) UE processing time restriction on the retransmission grant selection Xiaomi Communications discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2201460](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201460.zip) Remaining issues for UCE MediaTek Inc. discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core R2-2110754

### 8.5.4 RAN enhancements based on new QoS

Contributions should aim to bring new issues not covered in email discussions already and should be clearly separated in the document from issues covered in the email discussion.

Including email discussion [Post116-e][513][IIoT] QoS survival time (Apple)

RAN enhancements based on new QoS related parameters taken into account SA2 progress

[R2-2200003](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200003.zip) Report of [Post116-e][513][IIoT] QoS Survival Time (Apple) Apple discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200184](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200184.zip) Some open issues for Survival Time Support Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IIOT\_URLLC\_enh

[R2-2200309](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200309.zip) Analysis on HARQ-NACK solution Fujitsu discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core R2-2109710

[R2-2200310](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200310.zip) Survival Time Mode and Measurement Gap Fujitsu discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200311](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200311.zip) L1/L2 configuration adaptation Fujitsu discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core R2-2109709

[R2-2200322](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200322.zip) HARQ NACK solution: leftover issues and TP CATT discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200369](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200369.zip) Additional aspects on resource in Survival Time III discussion Rel-17 NR\_IIOT\_URLLC\_enh

[R2-2200479](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200479.zip) Discussion about UE behaviors for Survival Time state operation Huawei, HiSilicon discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200704](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200704.zip) N and combined Tx-side timer for IIoT QoS ZTE, Sanechips, China Southern Power Grid Co., Ltd, TCL Communication Ltd., vivo discussion NR\_IIOT\_URLLC\_enh-Core R2-2110108

[R2-2200708](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200708.zip) Remaining issues on the support of survival time Lenovo, Motorola Mobility discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200873](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200873.zip) Remaining Issues on HARQ-NACK Solution CMCC discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200928](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200928.zip) Remaining issues on survival time OPPO discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2200954](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200954.zip) Remaining details on survival time enhancement Ericsson discussion

[R2-2200990](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200990.zip) Survival time handling Intel Corporation discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2201019](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201019.zip) RAN Enhancement to support Survival Time Qualcomm Incorporated discussion Rel-17

[R2-2201133](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201133.zip) Remaining QoS solution aspects Apple discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2201173](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201173.zip) Remaining issues on the support of survival time InterDigital discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2201265](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201265.zip) Discussion on HARQ NACK solution vivo discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2201375](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201375.zip) Remaining issues of survival time requirements Xiaomi Communications discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core

[R2-2201520](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201520.zip) CG status and PDCP Duplication status LG Electronics discussion NR\_IIOT\_URLLC\_enh-Core

[R2-2201521](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201521.zip) Remaining issues on QoS support LG Electronics discussion NR\_IIOT\_URLLC\_enh-Core

[R2-2201522](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201522.zip) Selective RLC activation for PDCP duplication in ST state LG Electronics discussion NR\_IIOT\_URLLC\_enh-Core

[R2-2201530](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201530.zip) Finalising Survival Time related enhancements Samsung Electronics GmbH discussion

[R2-2201622](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201622.zip) Considerations on UE Survival Time support Sequans Communications discussion Rel-17 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: 4 tdocs

Email max expectation: 2 threads

### 8.6.1 Organizational

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)

[R2-2200025](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200025.zip) Introduction of SDT Nokia, Nokia Shanghai Bell CR Rel-17 38.300 16.8.0 0357 - B NR\_SmallData\_INACTIVE-Core R2-2110808

[R2-2200031](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200031.zip) Running MAC CR for small data Huawei, HiSilicon draftCR Rel-17 38.321 16.7.0 B NR\_SmallData\_INACTIVE-Core

[R2-2200032](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200032.zip) Summary of [Post116-e][507][SDT] MAC running CR update (Huawei) Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200050](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200050.zip) RRC Running CR for SDT ZTE Corporation (rapporteur) discussion Rel-17 38.331 NR\_SmallData\_INACTIVE-Core

[R2-2200073](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200073.zip) Reply LS on the physical layer aspects of small data transmission (R1-2112782; contact: ZTE) RAN1 LS in Rel-17 NR\_SmallData\_INACTIVE-Core To:RAN2

[R2-2200502](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200502.zip) UE capabilities for Rel-17 SDT WI Intel Corporation discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200503](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200503.zip) UE capabilities for Rel-17 SDT WI Intel Corporation draftCR Rel-17 38.306 16.7.0 NR\_SmallData\_INACTIVE-Core

[R2-2200504](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200504.zip) UE capabilities for Rel-17 SDT WI Intel Corporation draftCR Rel-17 38.331 16.7.0 NR\_SmallData\_INACTIVE-Core

[R2-2201027](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201027.zip) Updated RRC running CR for SDT ZTE corporation (rapporteur) draftCR Rel-17 38.331 16.7.0 B NR\_SmallData\_INACTIVE

[R2-2201357](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201357.zip) Discussion on MAC running CR LG Electronics Inc. discussion NR\_SmallData\_INACTIVE-Core

### 8.6.2 User plane common aspects

Overall user plane procedure for SDT (including details of ROHC continuity, BSR/PHR configuration, LCH restrictions, handling of TAT and CG-TAT) )

LG is expected to submit a paper on the proposals not treated from last meeting. Companies are discouraged from submitting documents on those issues again unless their opinon has changed. Focus on new critical open issues

[R2-2200203](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200203.zip) User Plane Aspects of RACH and CG based SDT Samsung Electronics Co., Ltd discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2200336 Consideration on UP remaining issues CATT discussion Rel-17 NR\_SmallData\_INACTIVE-Core Late

[R2-2200435](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200435.zip) Remaining issues of user plane common aspects Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200573](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200573.zip) Remaining user plane aspects of SDT NEC discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200643](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200643.zip) Discussion on user plane issues of SDT OPPO discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200726](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200726.zip) Remaining issues on UP aspects of SDT Qualcomm Incorporated discussion Rel-17 NR\_SmallData\_INACTIVE-Core R2-2110752

[R2-2200863](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200863.zip) Data volume calculation for SDT CMCC discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200985](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200985.zip) Common aspects for SDT Ericsson discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201024](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201024.zip) Remaining UP issues for SDT InterDigital discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201028](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201028.zip) User plane common aspects of SDT ZTE corporation, Sanechips discussion

[R2-2201124](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201124.zip) User plane aspects of SDT Apple discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201321](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201321.zip) Remaining UP issues in SDT LG Electronics Inc. discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201438](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201438.zip) Remaining Issues on Subsequent UL transmission during SDT vivo discussion Rel-17 NR\_SmallData\_INACTIVE-Core Late

[R2-2201439](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201439.zip) Remaining Issues on Subsequent UL transmission during SDT vivo discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201570](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201570.zip) Consideration on UP remaining issues CATT discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201586](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201586.zip) UP aspects for SDT Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SmallData\_INACTIVE-Core

### 8.6.3 Control plane common aspects

Including output of [Post116-e][510][SDT] CCCH and DCCH (Nokia). Only co-sourced CRs and papers are encouraged for this topic.

Other critical CP open issues

[R2-2200026](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200026.zip) Report of [Post116-e][510][SDT] CCCH and DCCH (Nokia) Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200201](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200201.zip) Paging Monitoring during SDT procedure Samsung Electronics Co., Ltd discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200202](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200202.zip) RNA update and SI request handling during SDT procedure Samsung Electronics Co., Ltd discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200312](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200312.zip) Handling of SDTF detection timer Fujitsu discussion Rel-17 NR\_SmallData\_INACTIVE-Core R2-2109712

[R2-2200313](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200313.zip) RAN paging reception and response during SDT Fujitsu discussion Rel-17 NR\_SmallData\_INACTIVE-Core R2-2109713

R2-2200337 Consideration on some CP issues CATT discussion Rel-17 NR\_SmallData\_INACTIVE-Core Late

[R2-2200505](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200505.zip) Control Plane leftover issues on SDT procedure Intel Corporation discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200574](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200574.zip) Remaining control plane aspects of SDT NEC discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200644](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200644.zip) Discussion on control plane issues of SDT OPPO discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200663](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200663.zip) Emergency call in the middle of SDT operation InterDigital, Europe, Ltd. Rakuten Mobile Inc. discussion Rel-17

[R2-2200696](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200696.zip) Handling of SDT failure timer InterDigital, Europe, Ltd. discussion Rel-17

[R2-2200727](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200727.zip) Remaining issues on CP aspects of SDT Qualcomm Incorporated discussion Rel-17 NR\_SmallData\_INACTIVE-Core R2-2110753

[R2-2200811](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200811.zip) Control plane common aspects for SDT Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200919](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200919.zip) Subsequent SDT failure detection timer Sony discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200986](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200986.zip) CP aspects for SDT Ericsson discussion

[R2-2201029](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201029.zip) CP open issues for SDT ZTE corporation, Sanechips discussion

[R2-2201125](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201125.zip) Control plane aspects of SDT Apple discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201126](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201126.zip) Power Saving for SDT Apple discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201174](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201174.zip) DCCH-based indication of non-SDT data arrival Intel Corporation, ZTE Corporation, Sanechips, Samsung, Xiaomi, MediaTek, Radisys and Reliance JIO, Qualcomm, CMCC, OPPO, Lenovo, Sony, Apple discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201217](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201217.zip) RNA Update during SDT Sharp discussion

[R2-2201358](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201358.zip) Remaining issues on Control Plane Aspects for SDT LG Electronics Inc. discussion NR\_SmallData\_INACTIVE-Core

[R2-2201376](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201376.zip) Clarification on the area configured for ROHC continuity Xiaomi Communications discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201377](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201377.zip) Paging reception during SDT Xiaomi Communications discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201378](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201378.zip) RACH failure in subsequent data transmission phase Xiaomi Communications discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201440](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201440.zip) Remaining Issues on RRC-Controlled SDT procedure vivo discussion Rel-17 NR\_SmallData\_INACTIVE-Core R2-2109439

[R2-2201441](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201441.zip) Further Consideration on the Handling of non-SDT Data Arrival vivo discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201495](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201495.zip) SDT control plane aspects Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SmallData\_INACTIVE

[R2-2201496](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201496.zip) RRC procedure for SDT Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SmallData\_INACTIVE

[R2-2201535](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201535.zip) Remaining issues for non-SDT data arrival China Telecommunications discussion

[R2-2201571](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201571.zip) Consideration on some CP issues CATT discussion Rel-17 NR\_SmallData\_INACTIVE-Core

### 8.6.4 Aspects specific to RACH based schemes

Contribution on this topic should be submitted on the RACH partitioning/configuration AI, unless something specific to Small data needs to be discussed.

R2-2200338 Anchor relocation during SDT CATT discussion Rel-17 NR\_SmallData\_INACTIVE-Core Late

[R2-2200506](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200506.zip) RACH leftover issues on RA-SDT procedure Intel Corporation discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200638](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200638.zip) Discussion on RACH-based SDT Spreadtrum Communications discussion Rel-17

[R2-2200645](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200645.zip) Discussion on swiching from RA-SDT to non-SDT OPPO discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200729](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200729.zip) Remaining issues on RACH based SDT Qualcomm Incorporated discussion Rel-17 NR\_SmallData\_INACTIVE-Core R2-2110760

[R2-2200738](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200738.zip) Discussion on triggering legacy RA for RA-SDT ASUSTeK discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200779](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200779.zip) Analysis on open issue of RA based SDT Lenovo, Motorola Mobility discussion Rel-17

[R2-2200983](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200983.zip) RACH based small data transmission Ericsson discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201355](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201355.zip) Switching cases of SDT and non-SDT LG Electronics Inc. discussion NR\_SmallData\_INACTIVE-Core

[R2-2201356](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201356.zip) Discussion on Carrier selection for SDT LG Electronics Inc. discussion NR\_SmallData\_INACTIVE-Core

[R2-2201572](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201572.zip) Anchor relocation during SDT CATT discussion Rel-17 NR\_SmallData\_INACTIVE-Core

### 8.6.5 Aspects specific to CG based schemes

Including outcome of [Post116-e][509][SDT] CG open issues (Huawei)

Contributions should aim to bring new issues not covered in email discussions already and should be clearly separated in the document from issues covered in the email discussion.

[R2-2200033](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200033.zip) Summary of [Post116-e][509][SDT] CG open issues (Huawei) Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200204](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200204.zip) CG-SDT-TAT expiry handing during the CG-SDT procedure Samsung Electronics Co., Ltd discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2200339 Consideration on CG-SDT CATT discussion Rel-17 NR\_SmallData\_INACTIVE-Core Late

[R2-2200436](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200436.zip) Remaining issues of CG-SDT Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200437](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200437.zip) Further discussion on TA issues for CG-SDT Huawei, HiSilicon, ZTE corporation discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200507](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200507.zip) CG-SDT leftover issues Intel Corporation discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200646](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200646.zip) Discussion on open issues of CG-SDT OPPO discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200717](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200717.zip) Remaining issues on CG-based Small data transmission Lenovo, Motorola Mobility discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200734](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200734.zip) Remaining issues on CG based SDT Qualcomm Incorporated discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200739](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200739.zip) Discussion on CS-RNTI configuration for CG-SDT ASUSTeK discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2200984](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200984.zip) Details of CG based SDT Ericsson discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201023](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201023.zip) Remaining issues for CG-based SDT InterDigital discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201030](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201030.zip) Aspects specific to CG-SDT ZTE corporation, Sanechips discussion

[R2-2201338](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201338.zip) Aspects specific to CG-SDT Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201379](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201379.zip) Clarification on the RSRP-based TA validation Xiaomi Communications discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201442](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201442.zip) Supporting Small Data Transmission via CG PUSCH vivo discussion Rel-17 NR\_SmallData\_INACTIVE-Core Late

[R2-2201537](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201537.zip) Remaining issues on CG based SDT China Telecommunications discussion

[R2-2201573](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201573.zip) Consideration on CG-SDT CATT discussion Rel-17 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: 6 tdocs

Email max expectation: 7 threads

### 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.

[R2-2200038](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200038.zip) Work planning for R17 SL relay OPPO, CMCC Work Plan Rel-17 NR\_SL\_relay-Core

[R2-2200062](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200062.zip) LS on the indication of discovery message and PC5-S signalling to ProSe layer (C1-217167; contact: CATT) CT1 LS in Rel-17 5G\_ProSe To:RAN2 Cc:SA2

[R2-2200165](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200165.zip) Indication of Discovery Message and PC5-S Signalling to ProSe Layer CATT discussion Rel-17 NR\_SL\_relay-Core

[R2-2200178](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200178.zip) Initial consideration on UE capability of sidelink relay Qualcomm Incorporated discussion NR\_SL\_relay-Core

[R2-2200364](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200364.zip) Running CR for TS 38.351 OPPO draft TS Rel-17 38.351 0.2.0 NR\_SL\_relay-Core

[R2-2200365](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200365.zip) Remaining open issues for R17 SL relay OPPO discussion Rel-17 NR\_SL\_relay-Core

[R2-2200366](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200366.zip) Discussion on C1-217167 OPPO discussion Rel-17 NR\_SL\_relay-Core

[R2-2200658](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200658.zip) Running CR of 38.322 for SL Relay Samsung draftCR Rel-17 38.322 16.2.0 B NR\_SL\_relay-Core

[R2-2200659](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200659.zip) Running CR of 38.323 for SL Relay Samsung draftCR Rel-17 38.323 16.6.0 B NR\_SL\_relay-Core

[R2-2200789](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200789.zip) Stage 2 Running CR on Introduction of R17 SL Relay MediaTek Inc. draftCR Rel-17 38.300 16.8.0 B NR\_SL\_relay-Core

[R2-2200944](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200944.zip) Stage 2 corrections for SL Relay Nokia, Nokia Shanghai Bell, Ericsson draftCR Rel-17 38.300 16.8.0 NR\_SL\_relay-Core

[R2-2200945](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200945.zip) RRC corrections for SL Relay Nokia, Nokia Shanghai Bell, Ericsson draftCR Rel-17 38.331 16.7.0 NR\_SL\_relay-Core

[R2-2201160](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201160.zip) Running CR of 38.304 for SL relay Ericsson draftCR Rel-17 38.304 16.7.0 B NR\_SL\_relay-Core

[R2-2201507](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201507.zip) RRC running CR for SL relay Huawei, HiSilicon draftCR Rel-17 38.331 16.7.0 B NR\_SL\_relay-Core R2-2111490

[R2-2201508](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201508.zip) Stage3 open issues in RRC running CR Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

### 8.7.2 L2 relay specific topics

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. This agenda item will utilise a summary document.

[R2-2200166](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200166.zip) Control Plane Procedures of L2 Relay CATT discussion Rel-17 NR\_SL\_relay-Core

[R2-2200172](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200172.zip) Remaining issues on RRC connection management of L2 U2N relay Qualcomm Incorporated discussion NR\_SL\_relay-Core

[R2-2200173](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200173.zip) Remaining issues on paging and SIB forwarding in L2 U2N relay Qualcomm Incorporated discussion NR\_SL\_relay-Core

[R2-2200226](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200226.zip) Leftover issues of Control plane procedures for L2 U2N relaying Intel Corporation discussion Rel-17 NR\_SL\_relay-Core

[R2-2200367](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200367.zip) Remaining WA for R17 SL Relay OPPO, Qualcomm Incorporated, Samsung, Intel Corporation, Apple, Huawei, HiSilicon, MediaTek Inc., Xiaomi, Nokia, Nokia Shanghai Bell, Ericsson discussion Rel-17 NR\_SL\_relay-Core

[R2-2200372](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200372.zip) Left Issues on Control Plane Aspects for L2 Relay OPPO discussion Rel-17 NR\_SL\_relay-Core

[R2-2200410](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200410.zip) Monitoring Paging by a U2N Relay Lenovo, Motorola Mobility discussion NR\_SL\_relay-Core

[R2-2200412](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200412.zip) SI acquisition by a remote UE Lenovo, Motorola Mobility discussion NR\_SL\_relay-Core

[R2-2200471](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200471.zip) Open issues on L2 Control Plane Procedures vivo discussion

[R2-2200512](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200512.zip) Discussion on RRC reestablishment related parameters for L2 sidelink relay China Telecom discussion Rel-17 NR\_SL\_relay-Core

[R2-2200551](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200551.zip) Remaining issues for Control plane MediaTek Inc. discussion Rel-17

[R2-2200552](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200552.zip) RAN sharing MediaTek Inc., CATT, OPPO, Qualcomm Incorporated, ZTE, Huawei, HiSilicon, Apple, InterDigital discussion Rel-17

[R2-2200625](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200625.zip) Left issues on control plane procedures for L2 U2N relay Spreadtrum Communications discussion Rel-17

[R2-2200653](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200653.zip) Remaining issues for paging and SI delivery Samsung discussion Rel-17 NR\_SL\_relay-Core

[R2-2200740](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200740.zip) Discussion on sidelink RLC bearer management for L2 U2N relay ASUSTeK discussion Rel-17 38.331 NR\_SL\_relay-Core

[R2-2200741](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200741.zip) Discussion on missing procedural text for applying C-RNTI of Remote UE ASUSTeK discussion Rel-17 38.331 NR\_SL\_relay-Core

[R2-2200742](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200742.zip) Discussion on missing procedural text for Relay UE to apply SL-RLC0 configuration ASUSTeK discussion Rel-17 38.331 NR\_SL\_relay-Core

[R2-2200743](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200743.zip) Reflecting Stage 2 agreement on sidelink resource allocation mode for U2N relay ASUSTeK discussion Rel-17 38.331 NR\_SL\_relay-Core

[R2-2200776](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200776.zip) Considerations on CP issues Lenovo, Motorola Mobility discussion Rel-17

[R2-2200784](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200784.zip) Further Issues on Paging in NR Sidelink Relay Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SL\_relay-Core

[R2-2200794](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200794.zip) Discussion on establishment cause of relay UE Xiaomi, Lenovo, Motorola Mobility, Apple discussion

[R2-2200795](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200795.zip) Discussion on connection control Xiaomi discussion

[R2-2200796](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200796.zip) Discusson on SI delivery Xiaomi discussion

[R2-2200855](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200855.zip) Control plane procedure CMCC discussion Rel-17 NR\_SL\_relay-Core

[R2-2200908](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200908.zip) Area specific SI issue in L2 relay Sony discussion Rel-17 NR\_SL\_relay-Core

[R2-2200946](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200946.zip) Discussion on RAN sharing with L2 U2N relays Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SL\_relay-Core

[R2-2201136](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201136.zip) Discussion on remaining issues on control plane procedures Apple discussion Rel-17 NR\_SL\_relay-Core

[R2-2201144](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201144.zip) Remaining Aspects of Paging and System Information for L2 UE to NW Relays InterDigital discussion Rel-17 FS\_NR\_SL\_relay

[R2-2201145](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201145.zip) Open Issues on Connection Establishment for UE to NW Relays InterDigital discussion Rel-17 FS\_NR\_SL\_relay

[R2-2201146](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201146.zip) IDLE/INACTIVE Remote UE Behaviour during Remote and Relay UE Mobility InterDigital discussion Rel-17 FS\_NR\_SL\_relay

[R2-2201158](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201158.zip) Remaining issues on control plane for L2 sidelink relay Ericsson discussion Rel-17 NR\_SL\_relay-Core

[R2-2201218](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201218.zip) Consideration on the remain issues for control plane procedures LG Electronics France discussion Rel-17

[R2-2201294](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201294.zip) Access control support for U2N relaying Intel Corporation discussion Rel-17 NR\_SL\_relay-Core

[R2-2201345](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201345.zip) Consideration on the control plane procedure of SL relay ZTE, Sanechips discussion Rel-17

R2-2201407 Summary of AI 8.7.2.1 on CP procedure OPPO discussion Rel-17 NR\_SL\_relay-Core Late

[R2-2201509](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201509.zip) SI forwarding and paging for L2 sidelink relay Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

[R2-2201510](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201510.zip) RRC connection management for L2 sidelink relay Huawei, HiSilicon 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 outcome of [Post116-e][604][Relay] Remaining issues on service continuity (Xiaomi)

[R2-2200009](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200009.zip) Summary of [Post116-e][604][Relay] Remaining issues on service continuity (Xiaomi) Xiaomi discussion

[R2-2200167](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200167.zip) Leftover Issues on Service Continuity for L2 U2N Relay CATT discussion Rel-17 NR\_SL\_relay-Core

[R2-2200174](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200174.zip) Remaining issues on service continuity of L2 U2N relay Qualcomm Incorporated discussion NR\_SL\_relay-Core

[R2-2200227](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200227.zip) Remaining issues for service continuity in L2 U2N relaying Intel Corporation discussion Rel-17 NR\_SL\_relay-Core

[R2-2200333](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200333.zip) Remaining issues for service continuity MediaTek Inc. discussion Rel-17

[R2-2200402](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200402.zip) Further discussions on open issues of path switch NEC Corporation discussion Rel-17

[R2-2200472](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200472.zip) Remaining issues on service continuity in L2 U2N relay vivo discussion

[R2-2200488](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200488.zip) Discussion on remaining issue of service continuity OPPO discussion Rel-17 NR\_SL\_relay-Core

[R2-2200513](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200513.zip) Discussion on service continuity for L2 UE-to-Network relay China Telecom discussion Rel-17 NR\_SL\_relay-Core

[R2-2200654](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200654.zip) Open issues for service continuity Samsung discussion Rel-17 NR\_SL\_relay-Core

[R2-2200744](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200744.zip) Local remote UE ID allocation for direct to indirect path switching ASUSTeK discussion Rel-17 NR\_SL\_relay-Core

[R2-2200745](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200745.zip) Multiple PDU sessions handling during direct to indirect path switching ASUSTeK discussion Rel-17 NR\_SL\_relay-Core

[R2-2200777](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200777.zip) Path switching in L2 U2N relay case Lenovo, Motorola Mobility discussion Rel-17

[R2-2200793](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200793.zip) Discussion on service continuity Xiaomi discussion

[R2-2200909](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200909.zip) Service continuity open issues in L2 NR sidelink relay Sony discussion Rel-17 NR\_SL\_relay-Core

[R2-2201056](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201056.zip) Remaining issues for Service Continuity in L2 relay Kyocera discussion

[R2-2201137](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201137.zip) Discussion on remaining issues on service continuity Apple discussion Rel-17 NR\_SL\_relay-Core

[R2-2201147](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201147.zip) Remaining Issues on Service Continuity for L2 UE to NW Relays InterDigital discussion Rel-17 FS\_NR\_SL\_relay

[R2-2201159](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201159.zip) Remaining Issues on Service Continuity for L2 Sidelink relay Ericsson discussion Rel-17 NR\_SL\_relay-Core

[R2-2201246](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201246.zip) Remaining issues on direct-to-indirect path switching Sharp discussion

[R2-2201346](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201346.zip) Discussion on remaining issues on service continuity ZTE, Sanechips discussion Rel-17

[R2-2201444](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201444.zip) Service continuity in direct-to-indirect path switch LG Electronics France discussion Rel-17

[R2-2201462](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201462.zip) Support of idle mode mobility for remote-UE in SL UE-to-Nwk relay Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SL\_relay-Core R2-2110767

[R2-2201511](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201511.zip) Remaining issues on service continuity for L2 UE to NW Relay Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

#### 8.7.2.3 Adaptation layer design

Including bearer mapping, remote UE identification, security aspects if any. This agenda item will utilise a summary document.

[R2-2200168](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200168.zip) Leftover Issues on Adaptation Layer Design for L2 U2N Relay CATT discussion Rel-17 NR\_SL\_relay-Core

[R2-2200175](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200175.zip) Remaining issues on adaptation layer of L2 U2N relay Qualcomm Incorporated discussion NR\_SL\_relay-Core

[R2-2200228](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200228.zip) Open aspects of adaptation layer design for L2 U2N relaying Intel Corporation discussion Rel-17 NR\_SL\_relay-Core

[R2-2200335](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200335.zip) Remaining issues for Adaptation layer design MediaTek Inc. discussion Rel-17

[R2-2200363](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200363.zip) Left issues for adaptation layer OPPO discussion Rel-17 NR\_SL\_relay-Core

[R2-2200473](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200473.zip) Adaptation Layer for Uu and PC5 vivo discussion

[R2-2200556](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200556.zip) SRAP layer open issues for L2 U2N relay Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

[R2-2200567](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200567.zip) Remaining issues related to SRAP Fujitsu discussion Rel-17 NR\_SL\_relay-Core

[R2-2200655](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200655.zip) Flow control for L2 U2N Relay Samsung, Philips discussion Rel-17 NR\_SL\_relay-Core R2-2110451

[R2-2200856](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200856.zip) Leftover issues on adaption layer design CMCC discussion Rel-17 NR\_SL\_relay-Core

[R2-2200937](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200937.zip) Remaining issues of the adaptation layer Ericsson discussion Rel-17 NR\_SL\_relay-Core

R2-2200943 summary of AI 8.7.2.3 on the adaptation layer Ericsson discussion Rel-17 NR\_SL\_relay-Core Late

[R2-2201347](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201347.zip) Discussion on adaptation layer design ZTE, Sanechips discussion Rel-17

[R2-2201465](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201465.zip) Remote ID for the adaptation layer Nokia, Nokia Shanghai Bell discussion NR\_SL\_relay-Core

[R2-2201492](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201492.zip) Remote UE local ID in PC5 Adaptation Layer Header Beijing Xiaomi Mobile Software discussion Rel-17

[R2-2201533](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201533.zip) Finalizing design of Adapt layer Samsung Electronics GmbH discussion

#### 8.7.2.4 QoS

Mechanisms for E2E QoS management. This AI will not be treated online. Critical issues, if any, may be handled by email. This agenda item will utilise a summary document.

[R2-2200169](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200169.zip) Leftover Issues on QoS Management for L2 U2N Relay CATT discussion Rel-17 NR\_SL\_relay-Core

[R2-2200334](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200334.zip) Remaining issues for QoS MediaTek Inc. discussion Rel-17

[R2-2200413](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200413.zip) Considerations on voice and video support for Relays Philips International B.V., MediaTek, Vivo, FirstNet, KPN, TNO, Kyocera discussion Rel-17 NR\_SL\_relay-Core R2-2109822

[R2-2200474](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200474.zip) Left issues on E2E QoS management vivo discussion

[R2-2200656](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200656.zip) QoS handling for SL discovery Samsung discussion Rel-17 NR\_SL\_relay-Core

[R2-2200936](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200936.zip) Aspects for QoS management with SL relay Ericsson discussion Rel-17 NR\_SL\_relay-Core

[R2-2200995](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200995.zip) Remaining Issues in QoS for L2 Sidelink Relay Fraunhofer IIS, Fraunhofer HHI discussion Rel-17

[R2-2201148](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201148.zip) Discussion on QoS for L2 UE to NW Relays InterDigital, Philips, Apple discussion Rel-17 FS\_NR\_SL\_relay

R2-2201199 Remaining issues on QoS Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core Withdrawn

[R2-2201348](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201348.zip) Discussion on QoS of SL relay ZTE, Sanechips discussion Rel-17

### 8.7.3 L2/L3 common topics

For any remaining stage 3 issues related to discovery and (re)selection. No documents should be submitted to 8.7.3. Please submit to 8.7.3.x.

#### 8.7.3.1 Discovery

Including 5G ProSe Direct Discovery for the non-relaying case. Re-using LTE discovery as baseline. This agenda item may utilise a summary document (decision to be made based on submitted tdocs).

[R2-2200170](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200170.zip) Leftover Issues for Sidelink Discovery CATT discussion Rel-17 NR\_SL\_relay-Core

[R2-2200176](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200176.zip) Remaining issues on discovery Qualcomm Incorporated discussion NR\_SL\_relay-Core

[R2-2200229](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200229.zip) Discovery open aspects for U2N relaying Intel Corporation discussion Rel-17 NR\_SL\_relay-Core

[R2-2200411](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200411.zip) Relay Discovery in L2 and L3 relay case Lenovo, Motorola Mobility discussion NR\_SL\_relay-Core

[R2-2200475](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200475.zip) Remaining Issues of Discovery Message Transmission vivo discussion

[R2-2200486](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200486.zip) Discussion on remaining issue of sidelink discovery OPPO discussion Rel-17 NR\_SL\_relay-Core

[R2-2200514](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200514.zip) Discussion on SL discovery remaining issues China Telecom discussion Rel-17 NR\_SL\_relay-Core

[R2-2200657](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200657.zip) PDCP and RLC aspects for SL discovery Samsung discussion Rel-17 NR\_SL\_relay-Core

[R2-2200934](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200934.zip) Left issues for SL discovery Ericsson discussion Rel-17 NR\_SL\_relay-Core

[R2-2201138](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201138.zip) Discussion on remaining issues on relay discovery Apple discussion Rel-17 NR\_SL\_relay-Core

[R2-2201149](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201149.zip) Using Shared and Dedicated Resource Pools for Discovery InterDigital discussion Rel-17 FS\_NR\_SL\_relay

[R2-2201343](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201343.zip) Further discussion on Relay discovery ZTE, Sanechips discussion Rel-17

[R2-2201491](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201491.zip) Tx Resource Pools for Discovery Beijing Xiaomi Mobile Software discussion Rel-17

[R2-2201512](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201512.zip) Remaining issues on relay discovery Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

#### 8.7.3.2 Relay re selection

Re-using LTE re/selection as baseline. This agenda item may utilise a summary document (decision to be made based on submitted tdocs).

[R2-2200171](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200171.zip) Leftover Issues for Relay Reselection CATT discussion Rel-17 NR\_SL\_relay-Core

[R2-2200177](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200177.zip) Remaining issues on relay (re)selection Qualcomm Incorporated discussion NR\_SL\_relay-Core

[R2-2200422](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200422.zip) U2N Relay UE operation Threshold Conditions: Impact of UE Mobility Philips International B.V., FirstNet, MediaTek, Lenovo, Motorola Mobility discussion Rel-17 NR\_SL\_relay-Core R2-2109823

[R2-2200476](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200476.zip) Remaining issues on Relay (re)selection vivo discussion

[R2-2200487](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200487.zip) Discussion on remaining issues of NR sidelink relay (re)selection OPPO discussion Rel-17 NR\_SL\_relay-Core

[R2-2200626](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200626.zip) Left issues on NotificationMessageSidelink message Spreadtrum Communications discussion Rel-17

[R2-2200778](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200778.zip) Relay (re)selection for L2 and L3 relay Lenovo, Motorola Mobility discussion Rel-17

[R2-2200935](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200935.zip) Aspects for SL relay selection and reselection Ericsson discussion Rel-17 NR\_SL\_relay-Core

[R2-2201198](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201198.zip) Discussion on relay reselection aspects Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

[R2-2201344](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201344.zip) Further discussion on Relay selection ZTE, Sanechips discussion Rel-17

## 8.8 RAN slicing

(NR\_Slice -Core; leading WG: RAN2; REL-17; WID: RP-212534)

Time budget: 0.5 TU

Tdoc Limitation: 3 tdocs

Email max expectation: 2 threads

Contributions should illustrate the Stage-3 details of the proposals (e.g. in an Annex containing TP against the running CRs).

### 8.8.1 Organizational

Including LSs, any rapporteur inputs and results of running CR email discussions [243]-[245]

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

[R2-2200055](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200055.zip) List of open issues for RAN slicing WI CMCC discussion Rel-17 NR\_slice-Core

R2-2200844 Open issues list for RAN Slicing CMCC discussion Rel-17 FS\_NR\_slice Withdrawn

[R2-2200972](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200972.zip) Report of [Post116-e][243][Slicing] Running NR RRC CR for RAN slicing (Huawei) Huawei discussion Rel-17 NR\_slice-Core

[R2-2200973](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200973.zip) Running NR RRC CR for RAN slicing Huawei, HiSilicon draftCR Rel-17 38.331 16.7.0 B NR\_slice-Core

R2-2201406 Discussion on Slice Aware UL BSR RadiSys, Reliance JIO discussion Rel-17 NR\_slice-Core Late

[R2-2201536](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201536.zip) 38.321 running CR for RAN Slicing OPPO draftCR Rel-17 38.321 16.7.0 B NR\_slice-Core

### 8.8.2 Cell reselection

Including discussion on finalization of the "slice group" for cell reselection, in which SIB the slicing information for reselection is broadcast and how the serving cell priority is handled in reselection process

Including discussion on whether additional mechanisms beyond solution 4 are needed

Including discussion on how to resolve slice groups at TA boundaries e.g. if the TAs support different slice groups, what are the RAN2 impacts?

Including outcome of [Post116-e][242][Slicing] Slice-based cell re-selection algorithm (Ericsson)

[R2-2200043](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200043.zip) [Post116-e][242][Slicing] Slice-based cell re-selection algorithm Ericsson discussion

[R2-2200044](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200044.zip) Running 38.304 CR for RAN slicing Ericsson draftCR Rel-17 38.304 16.7.0 B NR\_slice-Core

[R2-2200179](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200179.zip) Remaining issues on slice specific cell reselection Qualcomm Incorporated discussion NR\_SL\_relay-Core

[R2-2200406](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200406.zip) Optimizations for signalling Slice Information Lenovo, Motorola Mobility discussion NR\_slice-Core

[R2-2200407](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200407.zip) RAN Slicing CR to 38.304 Lenovo, Motorola Mobility CR Rel-17 38.304 16.7.0 0225 - B NR\_slice-Core

[R2-2200408](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200408.zip) Triggers for initiating RAN slicing based cell reselections Lenovo, Motorola Mobility discussion NR\_slice-Core

[R2-2200409](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200409.zip) Principles of Slice based reselection Lenovo, Motorola Mobility discussion NR\_slice-Core

[R2-2200416](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200416.zip) Discussion on Slice based Cell Reselection CATT discussion Rel-17 NR\_slice-Core

[R2-2200417](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200417.zip) Analysis on issues of slice groups at TA boundaries CATT discussion Rel-17 NR\_slice-Core

[R2-2200510](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200510.zip) Further considerations of slice based cell reselection Intel Corporation discussion Rel-17 NR\_slice-Core

[R2-2200636](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200636.zip) Consideration on slice based cell reselection Spreadtrum Communications discussion Rel-17

[R2-2200845](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200845.zip) Discussion on open issues for slice based cell reselection CMCC discussion Rel-17 FS\_NR\_slice

[R2-2200929](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200929.zip) Consideration on slice-specific cell reselection OPPO discussion Rel-17 NR\_slice-Core

[R2-2200947](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200947.zip) Considerations on slice groups Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_slice-Core

[R2-2200948](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200948.zip) Text Proposals for the draft 38.304 PCR Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_slice-Core

[R2-2200949](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200949.zip) Cell reselection delay for option B and option C Samsung R&D Institute India discussion

[R2-2200974](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200974.zip) Discussion on slice based cell reselection under network control Huawei, HiSilicon discussion Rel-17 NR\_slice-Core

[R2-2201005](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201005.zip) Leftover issues in slice based cell reselection ZTE corporation, Sanechips discussion Rel-17 NR\_slice-Core

[R2-2201110](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201110.zip) Text proposal for slice based cell reselection under NW control Apple discussion

[R2-2201169](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201169.zip) On slice-based cell re-selection TP for 38.304 Ericsson discussion Rel-17 NR\_slice-Core

[R2-2201190](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201190.zip) Slice-Info provision NEC Telecom MODUS Ltd. discussion

[R2-2201192](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201192.zip) Slice-based cell re-selection TP for solution 4C NEC Telecom MODUS Ltd. discussion

[R2-2201200](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201200.zip) Slice information provided by RRCRelease Sharp discussion Rel-17 R2-2110912

[R2-2201208](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201208.zip) Discussion on signalling slice information LG Electronics UK discussion Rel-17

[R2-2201209](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201209.zip) Discussion on slice based cell reselection LG Electronics UK discussion Rel-17

[R2-2201389](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201389.zip) A couple of FFS for Cell Reselection Kyocera discussion R2-2110274

[R2-2201410](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201410.zip) Resolving the common issues in slice based cell reselection Beijing Xiaomi Software Tech discussion Rel-17

[R2-2201418](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201418.zip) TP for system information and slice based reselection priority handling ZTE corporation, Sanechips discussion Rel-17 NR\_slice-Core

[R2-2201422](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201422.zip) On selection of Solution 4 Option A, B and C Samsung R&D Institute UK discussion

[R2-2201443](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201443.zip) Remaining Issues on Slice Information Samsung R&D Institute UK discussion

### 8.8.3 RACH

Including discussion on RAN slicing-specific RACH prioritization impacts 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.

This agenda item may be deprioritized in this meeting.

[R2-2200180](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200180.zip) Remaining issues on slice specific RACH Qualcomm Incorporated discussion NR\_SL\_relay-Core

[R2-2200846](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200846.zip) Discussion on open issues for slice based RACH configuration CMCC discussion Rel-17 FS\_NR\_slice

[R2-2200930](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200930.zip) Consideration on slice-specific RACH OPPO discussion Rel-17 NR\_slice-Core

[R2-2200975](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200975.zip) Discussion on slice based RACH configuration Huawei, HiSilicon discussion Rel-17 NR\_slice-Core

[R2-2201050](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201050.zip) Detailed RRC signalling for RACH prioritization configuration Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_slice-Core

[R2-2201111](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201111.zip) Slice based RACH configuration Apple discussion

[R2-2201170](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201170.zip) RACH for RAN slicing enhancement Ericsson discussion Rel-17 NR\_slice-Core

[R2-2201409](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201409.zip) Considerations on remaining issues for slice based RACH Beijing Xiaomi Software Tech discussion Rel-17

[R2-2201417](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201417.zip) Further consideration on slice specific RACH ZTE corporation, Sanechips discussion Rel-17 NR\_slice-Core

[R2-2201475](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201475.zip) Remaining issues on slice based RACH prioritization LG Electronics Inc. discussion Rel-17 NR\_slice-Core

### 8.8.4 UE capabilities

This agenda item may use a summary document.

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.

[R2-2200181](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200181.zip) Further discussion on UE capability related to RAN slicing enhancement Qualcomm Incorporated discussion NR\_SL\_relay-Core

[R2-2200418](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200418.zip) Analysis on UE capability for RAN slicing enhancement CATT discussion Rel-17 NR\_slice-Core

[R2-2200511](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200511.zip) UE capability for Slicing enhancement Intel Corporation discussion Rel-17 NR\_slice-Core

[R2-2200697](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200697.zip) Considerations on UE capability for RAN slicing Beijing Xiaomi Software Tech discussion Rel-17

[R2-2200847](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200847.zip) Discussion on UE capability for RAN slicing enhancement CMCC discussion Rel-17 FS\_NR\_slice

[R2-2200931](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200931.zip) Consideration on UE capability for Slicing OPPO discussion Rel-17 NR\_slice-Core

[R2-2200976](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200976.zip) Discussion on UE capabilities for RAN slicing Huawei, HiSilicon discussion Rel-17 NR\_slice-Core

[R2-2201171](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201171.zip) UE Capabilities for Slice- based Cell re-selection 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: 4 tdocs

Email max expectation: 4 threads

RP 93e: PEI: Support PDCCH-based PEI as the only option.

### 8.9.1 Organizational

E.g. Rapporteur input. Incoming LS. Running CRs etc

LS in

[R2-2200130](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200130.zip) LS on further agreements on RLM and BFD relaxation for UE Power Saving enhancements (R4-2120314; contact: vivo, MediaTek) RAN4 LS in Rel-17 NR\_UE\_pow\_sav\_enh-Core To:RAN2 Cc:RAN1

- take into account

- xiaomi woder about R16 low mobility criterion, is the purpose to use for connected mode? What is the relationship between R16 and R17 criteria. Vivo think it is just a criterion and can be used for multiple purpose, vivo think that multiple criteria handling can be left to R4.

- MTK think all the detailed how’s are handled in R4 ..

* Noted

CRs

[R2-2200591](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200591.zip) 38.304 Running CR for ePowSav vivo draftCR Rel-17 38.304 16.7.0 NR\_UE\_pow\_sav\_enh-Core

- vivo has updated the CR to follow R1 PEI agreements.

- Chair: Review offline

[R2-2201157](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201157.zip) 38.300 running CR for introduction of UE power saving enhancements Huawei, HiSilicon draftCR Rel-17 38.300 16.8.0 NR\_UE\_pow\_sav\_enh-Core R2-2111491

- only update the baseline TS version.

- Chair: Ask that the rapporteur provides an updated CR to next meeting reflecting the changes from R2 116bis-e. .

* This version is the basis for further update

[R2-2201268](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201268.zip) Update of 38.331 running CR for ePowSav with RAN1#107-e inputs CATT draftCR Rel-17 38.331 16.7.0 B NR\_UE\_pow\_sav\_enh-Core R2-2111657

- Catt: takes into account R1 agreements

- Chair: review offline

* [Post116bis-e][066][ePowSav] 38331 (CATT)

Scope: CR review etc. Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][065][ePowSav] 38304 (vivo)

Scope: CR review etc. Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][080][ePowSav] Open Issues (Mediatek)

Scope: Determine if Company input by Pre117-e discussions shall be used, and how many / which Pre-discussions shall be done. Capture Open Issues not captured in the CR email discussions and suggest how to treat. [After finalization, Merge open issues from other discussions into a WI OI list (OI for which company input is invited in some way shall be listed in the WI-list).

Intended outcome: Open Issues list, and organization of Pre117-e Company input discussions for the WI.

Deadline: Short.

Other

R2-2201476 [Draft] LS on network control over the use of PEI Futurewei Technologies LS out Rel-17 NR\_UE\_pow\_sav\_enh-Core To:SA2 Cc:RAN3 Late

### 8.9.2 Open Issues

#### 8.9.2.1 Paging Sub-grouping and Paging Early Indication

Focus on open issues, e.g. TBD marks in Running CR 38304 (R2-2111664). Issues with inter-group consenquences has priority, e.g. with consequences for R3, SA2 etc.

* [AT116bis-e][054][ePowSav] Subgrouping and PEI (MediaTek)

Scope: Based on online agreements, 1) Address the FFS from discussion on R2-2201675 on the interpretation PEI bits map to paging subgroups, and confirm value ranges of SubgroupNumPerPO and Nsg-UEID. 2) Discuss whether LS should be sent with specific questions to RAN1, e.g. on PEI applicability to eDRX, if so then draft agreeable LS. 3) For “PEI used in last cell” (only), attempt to find an agreeable compromise, e.g. a simple way of configurability that can let different operators choose if to use it or not. Chair: Simplicity is important.

Intended outcome: Report, LS out if applicable.

Deadline: Tue W2

[R2-2201675](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201675.zip) [Pre116bis][005][ePowSav] Summary of 8.9.2.1 Paging Sub-grouping and Paging Early Indication (MediaTek) MediaTek

DISCUSSION

P1

- Intel wonder if PEI can be used without CN or UEID subgrouping. Huawei think such case doesn't exist. Intel and IDT agrees

- CATT think such case exists, PEI can support in the bitmap indication without subgroup. Can be useful. Vivo and QC agrees

- ZTE agrees with P1, think that this is discussed in RAN1 right now,

- Apple

P5

- Nokia think that the UE\_ID doesn’t need to be different to formula for DRX. Samsung think the UE\_ID need to be different.

- Xiaomi think R1 hasn't discussed PEI for e-DRX. Apple agrees and think the offset may need to be clarified for this case.

-

P2

- Chair think this shall be concluded offline

P6

- Huawei think we need to support RAN sharing, at least for one CN.

- Chair think that if this is supported by multiple CN then it just need to be consistent.

- Vodafone indicate that this has been discussed and agreed in SA2 TS 23.501. xiaomi agrees. IDT think then no impact to RAN

P7

- Ericsson think the last cell thing is simple and should be supported. VDF agrees and think that with RRC inactive the CN doesn’t have any mobility history. IDT sequans agrees w Ericsson and VDF.

- Oppo think that supporting PEI for mobile UEs is simple, don’t see any concers.

- MTK think the problem is not just complexity. Thikn indeed that very high load reduces the efficiency of PEI.

- vivo think PEI is only useful for low load / sparse traffic anyway, but think the last used cell is not needed.

- Sony think the most important thing is the false alarm, but that need to be handled anyway. Many UE are mobile so mobility shall be supported.

- Huawei think it is important to have the PEI also for mobile.

- Chair: No consensus

P9

- VDF wonder if this doesn't need to be done in NAS signalling.

- CATT disagree, optimization. ZTE Nokia vivo oppo …agrees

- FW explains that the intention is to reduce delay for some UEs, dep on service.

P10-P12

- Chair: We don’t discuss assistance info (not at this meeting).

* RAN configuration (of subgrouping) includes the two parameters Nsg-UEID (number of UEID-based subgroups) and *subgroupsNumPerPO* (total number of subgroups in a PO):

- If only CN-assigned subgrouping is used, *subgroupsNumPerPO* is present (the value then equals to the number of CN-assigned subgroups), and Nsg-UEID is absent.

- If only UEID-based subgrouping is used, *subgroupsNumPerPO* and Nsg-UEID are present, and Nsg-UEID has the same value as *subgroupsNumPerPO*.

- If both subgrouping methods are used, both *subgroupsNumPerPO* and Nsg-UEID are present, and 0 < Nsg-UEID < *subgroupsNumPerPO*.

* RAN2 aims to Support PEI and subgrouping with eDRX. FFS the impact.
* RAN2 assumes that there is no particular impact to Uu signalling to support RAN sharing. It is further assumed that Core Networks must have consistent policy if subgrouping is used by multiple Core Networks.
* 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.
* RAN2 assumes that PEI monitoring can not be specifically enabled/disabled for individual UEs.

Further continuation offline.

[R2-2201916](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201916.zip) Summary of [AT116bis-e][054][ePowSav] Subgrouping and PEI MediaTek Inc.

DISCSUSION

P2

- CATT has concerns on the number 1.

- MTK think we should support CN based only with a single subgroup

- A lot of support for number 1.

* PEI subgroup indices are allocated to CN-assigned subgroups first. The 1st bit in the PEI bitmap corresponds to the CN-assigned subgroup #1, 2nd bit in the bitmap corresponds to the CN-assigned subgroup #2, and so on. After CN-assigned subgroups, the subsequent bits, if any, correspond to the UEID-based subgroup #1, #2, and so on.
* Both *subgroupNumPerPO* and Nsg-UEID range from 1 to 8.
* If network supports PEI but not subgrouping, the whole *SubgroupConfig-r17* is absent. The parameter *subgroupsNumPerPO* is mandatory present if *subgroupConfig-r17* is configured.
* UE is configured to monitor PEI, either only in the last used cell or any other cells (after cell reselection). FFS how the configuration is provided in [SI, RRCRelease, or NAS message].
* If a cell supports both UE identity based and CN assigned subgrouping, for UEID based paging subgrouping, UE belongs to k-th paging subgroup, where

- k = [floor (UE Identity/(N\*Ns)) mod Nsg-UEID] + Nsg-CN,

- N is the number of Paging frames,

- Ns is the number of POs per paging frame,

- Nsg-UEID is the number of UEID-based paging subgroups, and

- Nsg-CN is the number of CN assigned paging subgroups (= subgroupNumPerPO - Nsg-UEID).

[R2-2200197](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200197.zip) UE Identity based Paging Subgrouping Aspects Samsung Electronics Co., Ltd discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2200198](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200198.zip) UE Identity for paging subgrouping with eDRX Samsung Electronics Co., Ltd discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2200199](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200199.zip) Simultaneous support of UE Identity based and CN assigned Paging Subgrouping Samsung Electronics Co., Ltd discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2200239](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200239.zip) Discussion on paging subgrouping OPPO discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2200315](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200315.zip) Open Issues for PEI and UE Paging Subgrouping MediaTek Inc. discussion

[R2-2200455](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200455.zip) Remaining open issues on subgrouping Intel Corporation discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2200464](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200464.zip) Discussing on Paging Sub-grouping and Paging Early Indication Beijing Xiaomi Mobile Softwar discussion

[R2-2200592](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200592.zip) Discussion on remaining issues on PEI and sub-grouping vivo discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2200898](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200898.zip) Considerations on remaining issues for paging subgrouping CMCC discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2200899](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200899.zip) Further considerations on UE assistance information CMCC discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2200910](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200910.zip) Discussion on paging subgrouping enhancements for idle/inactive-mode UE power saving Sony discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201102](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201102.zip) On some remaining issues in 38.304 running CR for ePowSav Futurewei Technologies discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201153](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201153.zip) Remaining issues on CN controlled subgrouping Huawei, HiSilicon,CMCC discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201155](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201155.zip) PEI configuration and monitoring Huawei, HiSilicon discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201219](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201219.zip) Further Consideration on Paging Subgrouping ZTE Corporation,Sanechips discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201221](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201221.zip) Consideration on the UE capability for Paging Enhancement ZTE Corporation,Sanechips discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201269](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201269.zip) Consideration on Paging Sub-grouping CATT discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201289](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201289.zip) Discussion on coexistence of paging subgroup and multicast paging LG Electronics discussion

[R2-2201290](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201290.zip) Remaining issues on paging subgrouping LG Electronics discussion

[R2-2201332](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201332.zip) PEI monitoring area DENSO CORPORATION discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201339](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201339.zip) Remaining details on subgrouping Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201463](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201463.zip) On network control over the use of PEI Futurewei Technologies discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201541](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201541.zip) On the co-existence of UE-ID and CN assigned subgroups Interdigital, Inc. discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201542](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201542.zip) UE assistance for CN assigned subgroups Interdigital, Inc. discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201555](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201555.zip) PEI in last used cell Ericsson other Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201557](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201557.zip) Paging Early Indication and Subgroups Ericsson other Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201543](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201543.zip) Subgroup determination Interdigital, Inc. discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

* [054] 27 tdocs are Noted

#### 8.9.2.2 TRS/CSI-RS for idle/inactive

Note that for most open issues we have been waiting for RAN1 input. There will be an activity to take RAN1 progress into account, even without tdocs input.

[R2-2201677](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201677.zip) Summary of 8.9.2.2 TRS/CSI-RS for idle/inactive (CATT) CATT

* The number of bits N in the bitmap used for L1 availability indication is derived implicitly from the number of different values of *indBitID*. There is no need for an explicit parameter.
* RAN2 confirm TRS/CSI-RS can be applied to eDRX UEs.
* Confirm that there will be no particular mechanism for availability indication based on SIB (beyond the presence of the RS configuration)

Can attempt more progress offline,

* [AT116bis-e][055][ePowSav] TRS/CSI-RS for idle/inactive (CATT)

Scope: Based on on-line agreements, attempt further progress off-line

Intended outcome: Report, with Agreements (and-or Open Issues).

Deadline: Tue W2.

[R2-2201918](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201918.zip) Report of [AT116bis-e][055][ePowSav] TRS/CSI-RS for idle/inactive CATT

ONLINE

P7

- Apple think it may not be avoidable, but we can ask. MTK also think situation may not change, but ok to ask.

- Ericsson think this is a waste of time. R1 knows this.

P1

- Ericsson: Shall be available by default, as soon as configuration is present. Chair has some sympathy, as this is how it would work if we didnt have any availability indication.

* 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”.
* R2 doesn't send an LS to R1 on SIB segmentation

[055] OFFLINE

* [055] Indicating the TRS/CSI-RS availability in Idle/Inactive when releasing the UE to Idle/Inactive in the *RRCRelease* message is not pursued.
* [055] RAN2 follows RAN1 agreement that if TRS resource is configured in SIB, L1 based availability indication is always enabled based on that configuration.
* [055] RAN2 waits for RAN1 to finalize the contents of SIB-X before finalizing aspects on SIB-X sizing, segmentation etc

[R2-2200240](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200240.zip) Discussion on TRS/CSI-RS applicability for eDRX UEs OPPO discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2200466](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200466.zip) Discussion on TRS CSI-RS for RRC-IDLE and RRC-INACTIVE State UE Beijing Xiaomi Mobile Softwar discussion

[R2-2200593](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200593.zip) Discussion on TRS CSI-RS in idle inactive mode vivo discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201204](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201204.zip) R17 NR UE Power Save SIB-X sizing aspects Apple discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201220](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201220.zip) Further Consideration on TRS for Idle and Inactive UE ZTE Corporation,Sanechips discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201240](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201240.zip) Discussion on TRS/CSI-RS and eDRX Sharp discussion

[R2-2201270](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201270.zip) TRS/CSI-RS for idle/inactive: leftover issues CATT discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201307](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201307.zip) Discussion on TRS/CSI-RS for idle/inactive LG Electronics Finland discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201497](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201497.zip) Potential TRS/CSI-RS occasion(s) Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201556](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201556.zip) TRS exposure Ericsson other Rel-17 NR\_UE\_pow\_sav\_enh-Core

* 10 tdocs are Noted

#### 8.9.2.3 RLM/BFD relaxation

[R2-2201684](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201684.zip) Summary of 8.9.2.3 RLM BFD relaxation vivo

DISCUSSION

- OPPO think we don’t know yet what is the relation between configure/enable / disable etc. OPPO think that the configuration could be per UE but enable disable per CG

- CATT understand that 2b includes UE autonomous enable disable. Vivo agrees.

* BFD relaxation is enable/disable per serving cell (i.e. separately between Pcell/PScell and Scell). FFS on stage-3 details.
* RLM relaxation is enable/disable per-CG (i.e. separately between Pcell and PScell). FFS on stage-3 details, FFS if enable/disable is by the UE or by the network.
* Parameters of SSearchDeltaP and TSearchDeltaP for low mobility criterion is configured in dedicated signaling. FFS on stage-3 details (i.e. value range of parameters, in which IE).

OFFLINE: can attempt more progress, e.g. for configuration part

* [AT116bis-e][056][ePowSav] RLM/BFD relaxation (vivo)

Scope: based on on-line agreements R2-2201684, and possibly other relevant input, attempt more progress offline, e.g. for configuration part

Intended outcome: Report, with Agreements (and-or Open Issues).

Deadline: Tue W2.

[R2-2201941](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201941.zip) Summary of [AT116bis-e][056][ePowSav] RLM/BFD relaxation (vivo) vivo

ONLINE

- Confirm easy agreements offline

P14

- Where to capture relaxation criteria,

- Ericsson think thei was R2 for previous release. Vivo agree. Apple agree asa well.

- QC and Intel think RAN4 has already captured this.

* RAN2 assumes that the criteria for RLM/BFD relaxation will be captured in RAN2 TS, can ask R4
* RAN2 to send an LS to RAN4 for RLM/BFD relaxation including the below aspects:

RAN2 conclusions on RLM/BFD relaxation

Specification split on RLM/BFD relaxation

[056] OFFLINE

* [056] RLM relaxation and BFD relaxation are enabled/disabled separately.
* [056] Postpone the discussion on the granularity for RLM/BFD relaxation enable/disable (e.g. per-UE/CG/Serving cell) to wait for RAN4 conclusions on the configuration of criteria.
* [056] RAN2 assume the criteria configuration for RLM relaxation and BFD relaxation are configured separately. FFS Which criteria configuration(s) could be configured separately (e.g. serving cell quality). RAN2 can come back on this based on RAN4 conclusion.
* [056] Postpone the discussion on how to provide the criteria configuration for RLM relaxation and BFD relaxation for low mobility criterion to wait for progress from RAN4.
* [056] Postpone the discussion on how to provide the criteria configuration for RLM relaxation and BFD relaxation for serving cell quality criterion to wait for progress from RAN4.
* [056] Postpone the discussion on how to evaluate the low mobility criterion for RLM/BFD relaxation to wait for progress from RAN4.
* [056] Postpone the discussion on how to evaluate the serving cell quality criterion for RLM/BFD relaxation to wait for progress from RAN4.
* [056] BWP switch doesn’t impact evaluation of BFD relaxation or ongoing relaxation of BFD measurement.
* [056] if UE report on fulfillment or not (entry/exit) to network for RLM/BFD relaxation is agreeable, UAI is used to provide the report.
* [056] RAN2 assumes the configurations for RLM/BFD relaxation should be captured in RAN2 specification, while the relaxation requirements/approaches should be captured in RAN4 specification.
* [Post116bis-e][091][ePowSav] LS on RLM/BFD relaxation (vivo)

Scope: Based on agreement, determine agreeable LS out to R4 (can discuss if to R1).

Intended outcome: Approved LS out

Deadline: Short.

[R2-2200186](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200186.zip) Issues on RLM-BFD relaxations Qualcomm Incorporated discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2200241](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200241.zip) Discussion on RAN2’s impact of RLM/BFD relaxation OPPO discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2200381](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200381.zip) Discussion on RLM\_BFD measurement relaxation NEC Europe Ltd discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2200451](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200451.zip) Further considerations for RLM/BFD relaxation Intel Corporation discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2200465](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200465.zip) Discussion on RLM\_BFD measurement relaxation Beijing Xiaomi Mobile Softwar discussion

[R2-2200594](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200594.zip) Discussion on configurations of RLM/BFD relaxation for power saving vivo discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201156](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201156.zip) Discussion on RLM/BFD relaxation and DCI-based power saving adaptation Huawei, HiSilicon discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201271](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201271.zip) Consideration on RLM and BFD relaxation CATT discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201544](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201544.zip) RLM/BFD Relaxation Reporting Interdigital, Inc. discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201578](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201578.zip) Discussion on RLM/BFD Relaxation LG Electronics Finland discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201614](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201614.zip) On RLM/BFD relaxation Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

* 11 tdocs Noted

#### 8.9.2.4 Other

* [AT116bis-e][057][ePowSav] PDCCH Skip (Samsung)

Scope: Treat R2-220200, R2-2200187, R2-2201222. Collect comments

Intended outcome: Report, with potential agreements for online CB (and-or Open Issues, can be captured offline).

Deadline: Tue W2, for online CB

[R2-2201915](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201915.zip) Summary of [AT116bis-e][057][ePowSav] PDCCH Skip (Samsung) Samsung

DISCUSSION

P1 P2 P3

- Xiaomi think R1 will decide this.

- Chair think R2 can discuss MAC related impacts, Samsung and Huawei and lots of others agree

P5

- Ericsson don't want to rule out that PDCCH skip is only for active time. Vivo agrees, and think we can ask R1 to make the decisions.

- Nokia think that for 1, 2, 3 we can just ask R1 to take them into account.

- Huawei think we should ask where to capture this.

- QC think we should ask if skipping has impact on CSI or SRS transmission.

- Sequans agree with Nokia and Ericsson.

- OPPO think we should ask whether P2 is applicable (it contains an if).

* From RAN2 point of view, UE ignores PDCCH skipping while the SR is pending.
* From RAN2 point of view, if PDCCH skipping is applied to RNTI(s) monitored during RAR/MsgB window, the UE ignores PDCCH skipping during the RAR/MsgB window.
* From RAN2 point of view, UE ignores PDCCH skipping while contention resolution timer is running.
* If DCP can not be monitored due to PDCCH skipping, FFS whether to a) reuse the *ps-Wakeup* or b) PHY indicate DCP as 1 to MAC. No specification change is expected for either a) and b).
* Send LS to RAN1

include agreed proposals 1, 2, 3

ask RAN1 to take agreed proposals into account

ask RAN1 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, in case UE cannot monitor DCP due to PDCCH skipping.

**Take comments above into account.**

* [Post116bis-e][092][ePowSav] LS on PDCCH skip (Samsung)

Scope: Based on agreements and comments, determine agreeable LS out to R1.

Intended outcome: Approved LS out

Deadline: Short.

PDCCH skip etc

[R2-2200200](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200200.zip) PDCCH Skipping in RRC\_CONNECTED Samsung Electronics Co., Ltd discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2200187](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200187.zip) Enhancements for adaptive PDCCH monitoring Qualcomm Incorporated discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201222](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201222.zip) Initial Discussion on DCI based Power Saving ZTE Corporation,Sanechips discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

* [057] 3 tdocs noted

Further Enhancements

[R2-2200188](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200188.zip) Subgrouping among paging occasions Qualcomm Incorporated discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

### 8.9.3 UE Capabilities

For the progress of RAN2 developed capabilities, there will be an initial offline effort, scope to take current agreements into account for Running CRs, and determine whether any additional RAN2 capability is needed. Feautre lists of other groups are taken into account under AI 8.0.2

* [AT116bis-e][058][ePowSav] UE capabilities (Intel)

Scope: Based on R2-2201581, attempt to agree offline proposals marked easy agreement

Intended outcome: Report, with agreements

Deadline: EOM (offline only)

[R2-2201910](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201910.zip) Report of [AT116bis-e][058][ePowSav] UE capabilities Intel Corporation

* [058] Paging enhancement capability(-ies) (e.g. PEI capability, UEID based subgrouping capability or the combined capability of PEI and UEID based subgrouping) are ‘optional with capability signalling’ as gNB needs to know the paging enhancement capability(-ies) to page the UE
* [058] Paging enhancement capability(-ies) can be included into the UERadioPagingInfo IE in the UECapabilityInformation message as agreed in RAN2#116 (i.e. Introduce a UERadioPagingInfo IE in the UECapabilityInformation message in NR in Rel-17)
* [058] gNB interprets UE’s reported *UECapabilityInformation*, copies the *UERadioPagingInfo* IE out and includes it as a container *UE-RadioPagingInfo* IE in the *UERadioPagingInformation* inter-node message to AMF
* [058] Separate indications for UE capability of CN based subgrouping and UEID based subgrouping (confirms earlier assumption)
* [058] UE’s capability of supporting the UE ID based subgrouping is reported to RAN by AS UE capability signalling while UE’s capability of supporting the CN-assigned subgrouping is reported to CN by NAS signalling. (confirms earlier assumption).
* [058] Postpone the discussion of UE AS capabilities for RLM/BFD relaxation to next meeting.
* [058] For UE capabilities of PDCCH monitoring adaptation, implement it as part of the UE capability rapporteur mega CRs from the R1 feature list

[R2-2201681](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201681.zip) Summary of AI 8.9.3: UE capabilities Intel

- Chair: Treat easy agreements offline, for discussion items online (Tue W2).

[R2-2200242](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200242.zip) Discussion on UE capabilities OPPO discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2200452](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200452.zip) UE capability for Rel-17 UE power saving Intel Corporation discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2200453](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200453.zip) Draft running CR to 38331 on UE capabilities for Rel-17 UE power saving Intel Corporation draftCR Rel-17 38.331 16.7.0 B NR\_UE\_pow\_sav\_enh-Core

[R2-2200454](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200454.zip) Draft running CR to 38306 on UE capabilities for Rel-17 UE power saving Intel Corporation draftCR Rel-17 38.306 16.7.0 B NR\_UE\_pow\_sav\_enh-Core

[R2-2200463](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200463.zip) Discussing on UE capability for Paging enhancement Beijing Xiaomi Mobile Softwar discussion

[R2-2200595](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200595.zip) Discussion on capabilities for ePowSav vivo discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201154](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201154.zip) UE capability design for paging subgrouping Huawei, HiSilicon discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201205](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201205.zip) R17 NR UE Power Save UE capability aspects Apple discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

[R2-2201340](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201340.zip) RAN2 impact on connected mode power saving Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

* 10 tdocs noted

## 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 + 1 for UE caps

Email max expectation: 5 threads

### 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.

8.10.2 User Plane

[R2-2200071](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200071.zip) Reply LS on UE TA reporting (R1-2112766; contact: Ericsson) RAN1 LS in Rel-17 NR\_NTN\_solutions To:RAN2

[R2-2200104](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200104.zip) Reply LS on UE Location Aspects in NTN (R3-216067; contact: Ericsson) RAN3 LS in Rel-17 NR\_NTN\_solutions To:SA2, RAN2 Cc:CT1

[R2-2200128](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200128.zip) Reply LS on Multiple SMTCs for NR NTN (R4-2120308; contact: Qualcomm) RAN4 LS in Rel-17 NR\_NTN\_solutions-Core To:RAN2

[R2-2200129](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200129.zip) LS on NR NTN Neighbor Cell and Satellite Information (R4-2120309; contact: Qualcomm) RAN4 LS in Rel-17 NR\_NTN\_solutions-Core To:RAN2 Cc:RAN1

[R2-2200145](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200145.zip) LS on TAC reporting in ULI and support of SAs and FAs for NR Satellite Access (S2-2109337; contact: Qualcomm) SA2 LS in Rel-17 5GSAT\_ARCH To:CT1, RAN2, RAN3

[R2-2200148](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200148.zip) Reply LS on NTN specific User Consent (S3-214349; contact: Qualcomm) SA3 LS in Rel-17 NR\_NTN\_solutions-Core To:RAN2 Cc:RAN3, SA2

[R2-2200149](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200149.zip) Reply LS on UE location aspects in NTN (S3-214360; contact: CATT) SA3 LS in Rel-17 NR\_NTN\_solutions-Core, 5GSAT\_ARCH To:RAN2 Cc:RAN1, RAN3, SA2, SA3-LI, CT1

[R2-2200150](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200150.zip) Reply LS on UE location aspects in NTN (S3-214394; contact: Xiaomi) SA3 LS in Rel-17 NR\_NTN\_solutions-Core, 5GSAT\_ARCH To:RAN2 Cc:CT1, SA2, SA3-LI, RAN3

[R2-2200449](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200449.zip) [Draft] Reply LS on Multiple SMTCs for NR NTN Qualcomm Incorporated LS out Rel-17 NR\_NTN\_solutions-Core To:RAN4

[R2-2200450](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200450.zip) [Draft] Reply LS on NR NTN Neighbor Cell and Satellite Information Qualcomm Incorporated LS out Rel-17 NR\_NTN\_solutions-Core To:RAN4 Cc:RAN1

[R2-2200886](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200886.zip) Updated NR-NTN-solutions work plan THALES Work Plan Rel-17

[R2-2200887](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200887.zip) NR-NTN Stg2 running CR THALES draftCR Rel-17 38.300 16.8.0 NR\_NTN\_solutions

R2-2201002 Stage-3 running 304 CR for NTN ZTE corporation, Sanechips discussion Rel-17 38.304 NR\_NTN\_solutions-Core Withdrawn

[R2-2201006](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201006.zip) Stage-3 running 304 CR for NTN ZTE corporation, Sanechips draftCR Rel-17 38.304 16.7.0 B NR\_NTN\_solutions-Core

[R2-2201166](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201166.zip) MAC open issues in NTN - RAN2#116bis-e InterDigital discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2201167](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201167.zip) Stage 3 NTN running CR for 38.321 - RAN2#116bis-e InterDigital draftCR Rel-17 38.321 16.7.0 NR\_NTN\_solutions-Core R2-2111615

[R2-2201405](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201405.zip) DRAFT Reply LS on TAC reporting in ULI and support of SAs and FAs for NR Satellite Access China Telecommunications LS out Rel-17 To:SA2, RAN3, CT1

[R2-2201433](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201433.zip) Stage-3 running RRC CR for NTN Rel-17 Ericsson draftCR Rel-16 38.331 16.7.0 B NR\_NTN\_enh-Core

#### 8.10.2.1 RACH aspects

Focus on TA reporting aspects

[R2-2200214](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200214.zip) Discussion on remaining issues on TA reporting Intel Corporation discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200243](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200243.zip) Discussion on RACH and TA report in NTN OPPO discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200270](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200270.zip) Remaining issues related to TA report Xiaomi discussion Rel-17

[R2-2200347](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200347.zip) Remaining issues about RACH and TA reporting Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200377](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200377.zip) Discussion on UE specific TA reporting vivo discussion

[R2-2200520](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200520.zip) Consideration of TA report remaining issues of NTN China Telecom discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200627](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200627.zip) TA report procedure Spreadtrum Communications discussion Rel-17

[R2-2200688](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200688.zip) The Left Issues on UE-specific TA information reporting in NTN CATT discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200746](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200746.zip) Discussion on TA report during RA procedure ASUSTeK discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200747](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200747.zip) Discussion on issue of restarting contention resolution timer ASUSTeK discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200764](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200764.zip) Further discussion on TA reporting in NTN Lenovo, Motorola Mobility discussion Rel-17

[R2-2200876](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200876.zip) Considerations on RACH aspects CMCC discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2201007](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201007.zip) Discussion on RACH open issues and TA reporting aspects Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2201034](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201034.zip) Further considerations on TA reporting Samsung Research America discussion NR\_NTN\_solutions-Core

[R2-2201164](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201164.zip) UE-specific TA reporting and other RACH aspects InterDigital discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2201193](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201193.zip) Remaining issues on TA Report NEC Telecom MODUS Ltd. discussion

[R2-2201324](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201324.zip) Consideration on remaining issues of RACH aspects ZTE Corporation, Sanechips discussion Rel-17

[R2-2201363](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201363.zip) Discussion on RACH and TA report aspects LG Electronics Inc. discussion NR\_NTN\_solutions-Core

[R2-2201630](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201630.zip) Reporting information about UE specific TA pre-compensation in NTNs Ericsson discussion

#### 8.10.2.2 Other MAC aspects

Focus on remaining aspects of timers, HARQ, and LCP including CG/SPS aspects

[R2-2200244](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200244.zip) Remaining issues on other MAC aspects in NTN OPPO discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200271](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200271.zip) Remaining issues related to HARQ retransmission state Xiaomi discussion Rel-17

[R2-2200348](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200348.zip) Remaining issues about other MAC aspects Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200444](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200444.zip) HARQ process for SPS and CG Qualcomm Incorporated discussion Rel-17 NR\_NTN\_solutions-Core R2-2109968

[R2-2200618](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200618.zip) Remaining issues on disabling uplink HARQ retransmission MediaTek Inc. discussion

[R2-2200619](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200619.zip) Round trip delay offset for configured grant timer MediaTek Inc. discussion

[R2-2200628](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200628.zip) Discussion on HARQ and LCP remaining issues Spreadtrum Communications discussion Rel-17

[R2-2200689](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200689.zip) Left Issues on DL/UL HARQ Aspects CATT discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200787](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200787.zip) Remaining issues on HARQ related timer handling for NR NTN vivo discussion

[R2-2200788](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200788.zip) Remaining issues on LCP aspects vivo discussion

[R2-2200870](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200870.zip) Further Considerations on CG/SPS for NR NTN CMCC discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200911](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200911.zip) CG enhancements in NTN Sony discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2201008](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201008.zip) Discussion on left issues on MAC aspects Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2201163](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201163.zip) Remaining MAC open issues in NTN InterDigital discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2201325](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201325.zip) Consideration on remaining issues of other MAC aspects ZTE Corporation, Sanechips discussion Rel-17

[R2-2201364](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201364.zip) Discussion on other MAC aspects LG Electronics Inc. discussion NR\_NTN\_solutions-Core

[R2-2201480](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201480.zip) HARQ State A/B for CG/SPS aspects ITL discussion

[R2-2201629](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201629.zip) On configured scheduling, DRX, LCP, HARQ and SR/BSR in NTNs Ericsson discussion

#### 8.10.2.3 RLC and PDCP aspects

This sub-AI will not be treated at R2-116bis-e. No contributions are expected

[R2-2201194](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201194.zip) RLC t-Reassembly timer NEC Telecom MODUS Ltd. discussion R2-2110766

### 8.10.3 Control Plane

#### 8.10.3.1 General aspects

Including Earth fixed/moving beams related issues, TAC update / reporting and LCS aspects (i.e. UE location information reporting)

[R2-2200212](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200212.zip) Discussion on location reporting Intel Corporation discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200245](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200245.zip) Discussion on UE location information reporting OPPO discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200289](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200289.zip) Discussion on UE location reporting Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200445](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200445.zip) Discussion on coarse UE location report Qualcomm Incorporated discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200629](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200629.zip) Discussion on TAC update and LCS in NTN Spreadtrum Communications discussion Rel-17

[R2-2200715](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200715.zip) Discussion on UE location reporting in NTN Xiaomi discussion

[R2-2200748](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200748.zip) Discussion on event triggered based UE location report ASUSTeK discussion Rel-17 NR\_NTN\_solutions-Core R2-2111007

[R2-2200765](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200765.zip) Remaining CHO issues in RRC running CR Lenovo, Motorola Mobility discussion Rel-17

[R2-2200869](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200869.zip) Views on UE Location Information Reporting in NTN CMCC discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200879](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200879.zip) UE location during initial access THALES discussion Rel-17

[R2-2200912](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200912.zip) Event triggered location reporting in NTN Sony discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200960](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200960.zip) Reporting virtual location identifier for AMF/PLMN selection and location verification in NTN Fraunhofer IIS; Fraunhofer HHI; Thales discussion

[R2-2200987](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200987.zip) On reporting of UE location information ZTE corporation, Sanechips discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2201080](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201080.zip) On LCS and TAC handling in Rel-17 NTN Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2201178](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201178.zip) On UE location reporting in NTN Apple discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2201404](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201404.zip) Discussion of reply LS on TAC reporting in NTN China Telecom discussion

[R2-2201408](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201408.zip) Discussion on left issues on UE location report CATT discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2201445](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201445.zip) General aspects for NTN Ericsson discussion NR\_NTN\_enh-Core

[R2-2201447](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201447.zip) Remaining issues on TAC selection and reporting in NTN Samsung R&D Institute UK discussion

[R2-2201579](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201579.zip) UE location reporting in initial access Samsung Research America discussion

#### 8.10.3.2 Idle/Inactive mode

Focus on system information aspects

[R2-2200215](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200215.zip) Discussion on TN prioritization over NTN for idle mode Intel Corporation discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200216](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200216.zip) Discussion on enhancements to cell reselection Intel Corporation discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200246](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200246.zip) Discussion on NTN specific system information OPPO discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200290](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200290.zip) Discussion on idle mode aspects Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200342](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200342.zip) System information to assist cell reselection ITRI discussion NR\_NTN\_solutions-Core

[R2-2200378](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200378.zip) Remaining issues on idle/inactive mode mobility vivo discussion

[R2-2200446](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200446.zip) Cell type indication Qualcomm Incorporated discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200447](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200447.zip) IDLE mode measurements Qualcomm Incorporated discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200621](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200621.zip) Idle mode mobility for NTN-TN scenarios MediaTek Inc. discussion R2-2105253

[R2-2200630](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200630.zip) Acquiring the ephemeris of neighbour cell Spreadtrum Communications discussion Rel-17

[R2-2200650](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200650.zip) Discussion on NTN Idle mode measurement and cell reselection Transsion Holdings discussion Rel-17

[R2-2200665](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200665.zip) Remaining idle mode issues in NTN LG Electronics Inc. discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200690](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200690.zip) Further Discussion on the Leftover Issues of IDLE/INACTIVE CATT discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200716](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200716.zip) Discussion on RRC idle mode issues Xiaomi discussion

[R2-2200766](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200766.zip) Ephemeris provision in system information for NTN Lenovo, Motorola Mobility discussion Rel-17

[R2-2200767](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200767.zip) Further discussion on idle mode mobility in NTN Lenovo, Motorola Mobility discussion Rel-17

[R2-2200877](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200877.zip) Further Considerations on Cell Re-selection CMCC discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200933](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200933.zip) SMTC Adjustment for Idle and Inactive UEs in NTN Google Inc. discussion

[R2-2201003](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201003.zip) System information for NTN and idle mode mobility for intra-NTN and TN-NTN case ZTE corporation, Sanechips discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2201079](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201079.zip) On IDLE mode aspects in Rel-17 NTN Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2201139](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201139.zip) On Defining a New NTN-Specific SIB MediaTek Inc. discussion

[R2-2201165](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201165.zip) Location-assisted cell reselection InterDigital discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2201179](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201179.zip) NTN-TN idle mode mobility Apple discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2201180](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201180.zip) NTN Ephemeris definition and signaling Apple discussion Rel-17 NR\_NTN\_solutions-Core R2-2110043

[R2-2201195](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201195.zip) Location-assisted cell reselection NEC Telecom MODUS Ltd. discussion

[R2-2201196](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201196.zip) NTN to TN mobility in Idle or Inactive mode NEC Telecom MODUS Ltd. discussion

[R2-2201446](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201446.zip) Idle mode aspects for NTN Ericsson discussion NR\_NTN\_enh-Core

[R2-2201580](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201580.zip) Measurements and cell reselection Samsung Research America discussion

[R2-2201615](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201615.zip) Discussion on system information enhancement for NR NTN Turkcell, BT Plc, Deutsche Telekom, Aselsan discussion Rel-17

#### 8.10.3.3 Connected mode

This sub-AI will not be treated at R2-116bis-e. No contributions are expected

[R2-2200247](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200247.zip) Discussion on NTN UE capabilities OPPO discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200666](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200666.zip) Connected mode remaining issues in NTN LG Electronics Inc. discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200913](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200913.zip) SMTC enhancement in NTN Sony discussion Rel-17 NR\_NTN\_solutions-Core R2-2108067

[R2-2201004](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201004.zip) Leftover issues in CHO and measurements ZTE corporation, Sanechips discussion Rel-17 NR\_NTN\_solutions-Core

### 8.10.4 UE capabilities

Including Features / UE caps developed in RAN2. Note that this AI is complementary to AI 8.0.2. NOTE please don’t input on aspects treated in the email discussion.

Including outcome of:

{Post116-e][111][NTN] UE capabilities (Intel)

[R2-2200040](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200040.zip) Report of email discussion [Post116-e][111][NTN] UE capabilities (Intel) Intel Corporation discussion NR\_NTN\_solutions-Core

[R2-2200041](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200041.zip) Draft 331 CR for NR NTN UE capabilities Intel Corporation draftCR Rel-17 38.331 16.7.0 B NR\_NTN\_solutions-Core

[R2-2200042](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200042.zip) Draft 306 CR for NR NTN UE capabilities Intel Corporation draftCR Rel-17 38.306 16.7.0 B NR\_NTN\_solutions-Core

[R2-2200213](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200213.zip) Discussion on remaining issues on NR NTN UE capabilities Intel Corporation discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200291](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200291.zip) Discussion on UE capabilities Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200376](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200376.zip) Remaining issues on UE capability for Rel-17 NTN vivo discussion

[R2-2200448](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200448.zip) Discussion on UE capabilities Qualcomm Incorporated discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2200620](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200620.zip) On UE Capabilities in NR-NTN MediaTek Inc. discussion

[R2-2201545](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201545.zip) L2 buffer calculation and QoS requirement Interdigital, Inc. discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2201632](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201632.zip) NR NTN UE capabilities Ericsson discussion

## 8.11 NR positioning enhancements

(NR\_pos\_enh-Core; leading WG: RAN1; REL-17; WID: RP-210903)

Time budget: 2 TU

Tdoc Limitation: 7 tdocs

Email max expectation: 7 threads

### 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.

[R2-2200074](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200074.zip) LS on latency improvement for PRS measurement with MG (R1-2112784; contact: Huawei) RAN1 LS in Rel-17 NR\_pos\_enh To:RAN2, RAN3

[R2-2200082](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200082.zip) LS on TRP beam/antenna information (R1-2112844; contact: Ericsson) RAN1 LS in Rel-17 NR\_pos\_enh To:RAN2, RAN3

[R2-2200083](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200083.zip) LS on configuration and transmission of SRS for positioning in RRC\_INACTIVE state (R1-2112846; contact: Intel) RAN1 LS in Rel-17 NR\_pos\_enh-Core To:RAN2

[R2-2200089](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200089.zip) LS on PRS processing window (R1-2112881; contact: Huawei) RAN1 LS in Rel-17 NR\_pos\_enh To:RAN2, RAN3

[R2-2200092](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200092.zip) LS on the reporting of the Tx TEG association information (R1-2112968; contact: CATT) RAN1 LS in Rel-17 NR\_pos\_enh-Core To:RAN2, RAN4 Cc:RAN3

[R2-2200113](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200113.zip) Reply LS on location estimates in local co-ordinates (R3-216235; contact: Huawei) RAN3 LS in Rel-17 5G\_eLCS\_ph2 To:RAN1, SA2 Cc:RAN2

[R2-2200139](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200139.zip) Reply LS on Response LS on Positioning Reference Units (PRUs) for enhancing positioning performance (S2-2109104; contact: Huawei) SA2 LS in Rel-17 NR\_pos\_enh-Core To:RAN2 Cc:RAN1, RAN3

[R2-2200140](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200140.zip) Response LS on Positioning Reference Units (PRUs) for enhancing positioning performance (S2-2109105; contact: CATT) SA2 LS in Rel-17 5G\_eLCS\_ph2 To:RAN1, RAN2 Cc:RAN3

[R2-2200282](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200282.zip) 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

[R2-2200284](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200284.zip) Rel-17 positioning capabilities Intel Corporation discussion Rel-17 NR\_pos\_enh-Core

[R2-2200285](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200285.zip) Open issue lists on Rel-17 positioning WI Intel Corporation discussion Rel-17 NR\_pos\_enh-Core

[R2-2200302](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200302.zip) [Draft]Reply LS on the Response LS on Positioning Reference Units (PRUs) for enhancing positioning performance CATT LS out Rel-17 NR\_pos\_enh-Core To:SA2 Cc:RAN1, RAN3

[R2-2200431](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200431.zip) Draft running CR for MAC spec in R17 positioning Huawei, HiSilicon draftCR Rel-17 38.321 16.7.0 B NR\_pos\_enh-Core

[R2-2200432](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200432.zip) Draft running CR for LTE RRC spec for GNSS integrity in R17 positioning Huawei, HiSilicon draftCR Rel-17 36.331 16.7.0 B NR\_pos\_enh-Core

[R2-2200433](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200433.zip) 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

[R2-2200523](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200523.zip) [Draft] Response LS on the latency improvement for PRS measurement with MG ZTE LS out To:RAN1 Cc:RAN3

[R2-2200524](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200524.zip) [Draft] Response LS on the PRS processing window ZTE LS out To:RAN1 Cc:RAN3

[R2-2200525](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200525.zip) [Draft] Response LS on the reporting of the Tx TEG association information ZTE LS out To:RAN1 Cc:RAN3,RAN4

[R2-2200526](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200526.zip) [Draft] Response LS on the TRP beam antenna information ZTE LS out To:RAN1 Cc:RAN3

[R2-2200527](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200527.zip) Discussion on signalling support of RAN1 agreements ZTE discussion

[R2-2200959](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200959.zip) Running LPP CR for NR positioning enhancements Qualcomm Incorporated draftCR Rel-17 37.355 16.7.0 B NR\_pos\_enh

[R2-2200961](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200961.zip) [draft] LS on Positioning in RRC\_INACTIVE State Qualcomm Incorporated LS out Rel-17 NR\_pos\_enh To:SA2 Cc:RAN3

[R2-2201066](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201066.zip) Beam/antenna information for DL AOD in NR positioning Ericsson discussion Rel-17

[R2-2201390](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201390.zip) Running CR of 36.305 for GNSS Positioning Integrity InterDigital, Inc. draftCR Rel-17 36.305 16.4.0 B NR\_pos\_enh-Core

[R2-2201391](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201391.zip) Running CR of 38.305 for GNSS Positioning Integrity InterDigital, Inc. draftCR Rel-17 38.305 16.7.0 B NR\_pos\_enh-Core

### 8.11.2 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 scheduled location time, preconfigured assistance data, UE capability storage, measurement gap and PRS priority; any other topics will be treated at lower priority. This agenda item will utilise a summary document.

[R2-2200256](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200256.zip) Discussion on positioning latency reduction ZTE discussion

[R2-2200278](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200278.zip) Leftover issues on Latency reduction Intel Corporation discussion Rel-17 NR\_pos\_enh-Core

[R2-2200279](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200279.zip) RAN1 issues on Latency reduction Intel Corporation discussion Rel-17 NR\_pos\_enh-Core

[R2-2200304](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200304.zip) Discussion on latency reduction enhancement CATT discussion Rel-17 NR\_pos\_enh-Core

[R2-2200326](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200326.zip) Discussion on latency enhancement vivo discussion Rel-17 NR\_pos\_enh-Core

[R2-2200428](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200428.zip) Discussion on PRS preconfiguration Huawei, HiSilicon discussion Rel-17 NR\_pos\_enh-Core

[R2-2200430](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200430.zip) Discussion on MG/PPW enhancement for positioning Huawei, HiSilicon discussion Rel-17 NR\_pos\_enh-Core

[R2-2200559](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200559.zip) Further consideration of positioning latency enhancements OPPO discussion Rel-17 NR\_pos\_enh-Core

[R2-2200709](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200709.zip) Positioning enhancement on latency reduction. Xiaomi discussion

[R2-2200730](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200730.zip) Discussion on the response time Samsung discussion Rel-17 NR\_pos\_enh-Core

[R2-2200914](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200914.zip) Considerations on positioning latency Sony discussion Rel-17 NR\_pos\_enh-Core

[R2-2200958](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200958.zip) Providing a list of AD for reducing signalling load and latency Fraunhofer IIS; Fraunhofer HHI; Ericsson; Lenovo; Vivo discussion

[R2-2200962](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200962.zip) Remaining Issues on Scheduling Location in Advance Qualcomm Incorporated discussion

[R2-2200988](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200988.zip) On Positioning Latency Reduction Enhancements Lenovo, Motorola Mobility discussion Rel-17

[R2-2201069](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201069.zip) Discussion On RRC and MAC Impacts, TP on RRC Impacts Ericsson discussion Rel-17

[R2-2201184](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201184.zip) Discussion on Enhancements for Latency Reduction InterDigital, Inc. discussion Rel-17 NR\_pos\_enh-Core

[R2-2201185](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201185.zip) Discussion on Measurement Gap and PRS Priority Enhancements InterDigital, Inc. discussion Rel-17 NR\_pos\_enh-Core

[R2-2201309](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201309.zip) Simulation study for multiple QoS class handling for latency reduction Samsung R&D Institute UK discussion

[R2-2201311](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201311.zip) Handling of multiple QoS for latency reduction Samsung R&D Institute UK discussion R2-2111083

[R2-2201312](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201312.zip) Latency reduction via new measurement gap activation Samsung R&D Institute UK discussion

### 8.11.3 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. This agenda item will utilise a summary document.

[R2-2200257](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200257.zip) Discussion on positioning in RRC INACTIVE state ZTE discussion

[R2-2200280](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200280.zip) Support of UL&UL+DL positioning in RRC\_INACTIVE Intel Corporation discussion Rel-17 NR\_pos\_enh-Core

[R2-2200295](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200295.zip) Impact on SA2 with DL NR positioning in RRC\_INACTIVE CATT, Ericsson discussion Rel-17 NR\_pos\_enh-Core

[R2-2200296](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200296.zip) Discussion on UL NR Positioning in RRC\_INACTIVE state CATT discussion Rel-17 NR\_pos\_enh-Core

[R2-2200327](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200327.zip) Discussion on positioning in RRC\_INACTIVE vivo discussion Rel-17 NR\_pos\_enh-Core

[R2-2200424](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200424.zip) Way-forward for RRC\_INACTIVE positioning Huawei, CATT, China Unicom, CMCC, Fraunhofer, Futurewei, HiSilicon, Intel Corporation, Spreadtrum Communications, OPPO, VIVO, Xiaomi, ZTE Corporation discussion Rel-17 NR\_pos\_enh-Core

[R2-2200425](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200425.zip) Remaining issues on RRC\_INACTIVE DL Postioning Huawei, HiSilicon discussion Rel-17 NR\_pos\_enh-Core

[R2-2200710](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200710.zip) Discussion on positioning for UE in RRC Inactive Xiaomi discussion

[R2-2200731](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200731.zip) Discussion on the measurement reporting in RRC\_INACTIVE Samsung discussion Rel-17 NR\_pos\_enh-Core

[R2-2200781](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200781.zip) Discussion on Positioning in RRC\_INACTIVE state OPPO discussion Rel-17 NR\_pos\_enh-Core

[R2-2200957](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200957.zip) Remaining Details for RRC\_INACTIVE Positioning in Uplink Fraunhofer IIS; Fraunhofer HHI discussion Rel-17 R2-2110249

[R2-2200963](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200963.zip) Remaining issues for positioning of UEs in RRC\_INACTIVE State Qualcomm Incorporated discussion

[R2-2200989](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200989.zip) Remaining aspects on RRC\_INACTIVE Positioning Lenovo, Motorola Mobility discussion Rel-17

[R2-2201065](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201065.zip) Discussion on RRC Inactive mode Positioning Ericsson discussion Rel-17

R2-2201068 Summary of AI 8.11.3 RRC\_INACTIVE Ericsson discussion Rel-17 Late

[R2-2201186](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201186.zip) Discussion on Positioning in RRC INACTIVE state InterDigital, Inc. discussion Rel-17 NR\_pos\_enh-Core

[R2-2201528](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201528.zip) Positioning in RRC\_INACTIVE Nokia Germany discussion Rel-17

### 8.11.4 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 outcome of [Post116-e][601][POS] Network control and UE request for on-demand PRS parameters (Ericsson)

[R2-2200047](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200047.zip) Report on Procedures and signalling for on-demand PRS Ericsson discussion

[R2-2200258](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200258.zip) Discussion on on-demand PRS ZTE discussion

[R2-2200281](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200281.zip) Support of On-Demand PRS request Intel Corporation discussion Rel-17 NR\_pos\_enh-Core

[R2-2200303](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200303.zip) Discussion on on-demand PRS CATT discussion Rel-17 NR\_pos\_enh-Core

[R2-2200328](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200328.zip) Discussion on on-demand PRS vivo discussion Rel-17 NR\_pos\_enh-Core

[R2-2200426](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200426.zip) Discussion on on-demand PRS Huawei, HiSilicon discussion Rel-17 NR\_pos\_enh-Core

[R2-2200711](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200711.zip) Positioning enhancement about on-demand DL PRS Xiaomi discussion

[R2-2200780](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200780.zip) Discussion on on-demand DL-PRS OPPO discussion Rel-17 NR\_pos\_enh-Core

[R2-2200915](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200915.zip) Considerations on positioning PRS On-demand and two stage beam sweeping Sony discussion Rel-17 NR\_pos\_enh-Core

[R2-2200956](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200956.zip) On-demand PRS Fraunhofer IIS, Fraunhofer HHI discussion Rel-17 R2-2110247 Withdrawn

[R2-2200964](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200964.zip) Remaining issues for on-demand DL-PRS Qualcomm Incorporated discussion

[R2-2200993](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200993.zip) Remaining issues on On-Demand DL-PRS Lenovo, Motorola Mobility discussion Rel-17

[R2-2201067](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201067.zip) Remaining issues on On-demand PRS Ericsson discussion Rel-17

[R2-2201103](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201103.zip) On the need for additional On-Demand PRS enhancements Apple discussion NR\_pos\_enh-Core

[R2-2201187](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201187.zip) Discussion on On-demand PRS InterDigital, Inc. discussion Rel-17 NR\_pos\_enh-Core

[R2-2201257](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201257.zip) Network Control Mechanisms for On-demand PRS Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_pos\_enh-Core

[R2-2201267](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201267.zip) On the on-demand PRS Stage 2 Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_pos\_enh-Core

[R2-2201273](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201273.zip) Pre-configured and Pre-defined PRS Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_pos\_enh-Core

[R2-2201313](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201313.zip) On-demand PRS request and configuration Samsung R&D Institute UK discussion

[R2-2201627](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201627.zip) On-demand PRS Fraunhofer IIS, Fraunhofer HHI discussion Rel-17 R2-2110247

### 8.11.5 GNSS positioning integrity

Signalling, and procedures to support GNSS positioning integrity determination.

Including outcome of [Post116-e][602][POS] Stage 2 baseline for integrity assistance data (Swift)

[R2-2200012](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200012.zip) [Post116-e][602][POS] Stage 2 baseline for integrity assistance data (Swift) Swift discussion 36.305

[R2-2200013](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200013.zip) Running CR on 36.305 for Stage 2 integrity assistance data Swift draftCR Rel-17 36.305 16.4.0 B NR\_pos\_enh-Core

[R2-2200014](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200014.zip) Running CR on 38.305 for Stage 2 integrity assistance data Swift draftCR Rel-17 38.305 16.7.0 B NR\_pos\_enh-Core

[R2-2200185](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200185.zip) Signalling for GNSS Positioning Integrity Framework Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_pos\_enh

[R2-2200259](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200259.zip) Discussion on positioning integrity ZTE discussion

[R2-2200329](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200329.zip) Discussion on GNSS positioning integrity vivo discussion Rel-17 NR\_pos\_enh-Core

[R2-2200427](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200427.zip) Remaining issues on positioning integrity Huawei, HiSilicon discussion Rel-17 NR\_pos\_enh-Core

[R2-2200955](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200955.zip) UE-aided detection of threat to GNSS systems and assistance data signaling Fraunhofer IIS; Fraunhofer HHI; Ericsson; ESA discussion R2-2110246

[R2-2201063](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201063.zip) On GNSS Integrity Ericsson discussion Rel-17

[R2-2201188](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201188.zip) Discussion on GNSS Positioning Integrity InterDigital, Inc. discussion Rel-17 NR\_pos\_enh-Core

[R2-2201214](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201214.zip) Stage 3 Proposals on GNSS Positioning Integrity Swift Navigation, Mitsubishi Electric Corporation, Ericsson discussion Rel-17

[R2-2201314](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201314.zip) Consideration on the signalling design for Positioning Integrity for UE-based method Samsung R&D Institute UK discussion

### 8.11.6 A-GNSS enhancements

Including support of BDS B2a and B3I signals and support of NavIC. This agenda item will not be treated online. Critical issues, if any, may be handled by email.

[R2-2200298](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200298.zip) Introduction of B2a and B3I signal in BDS system in A-GNSS CATT, CAICT draftCR Rel-17 37.355 16.7.0 B NR\_pos\_enh-Core

[R2-2201070](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201070.zip) Impacts of NavIC in NR RRC Ericsson discussion Rel-17

### 8.11.7 Accuracy enhancements

Input on the accuracy enhancement objectives led by RAN1. This agenda item will not be treated online. Critical issues, if any, may be handled by email.

[R2-2200283](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200283.zip) Support of PRU Intel Corporation discussion Rel-17 NR\_pos\_enh-Core

[R2-2200297](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200297.zip) Discussion on additional TRP beam/antenna information CATT discussion Rel-17 NR\_pos\_enh-Core

[R2-2200299](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200299.zip) Discussion on stage-2 impact of mitigating UE and TRP RxTx timing delays CATT discussion Rel-17 NR\_pos\_enh-Core

[R2-2200300](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200300.zip) Discussion on LPP and RRC signaling impact of mitigating UE and TRP RxTx timing delays CATT discussion Rel-17 NR\_pos\_enh-Core

[R2-2200301](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200301.zip) [Draft]Reply LS on the reporting of the Tx TEG association information CATT LS out Rel-17 NR\_pos\_enh-Core To:RAN1, RAN3 Cc:RAN4

[R2-2200330](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200330.zip) Discussion on accuracy enhancements vivo discussion Rel-17 NR\_pos\_enh-Core

[R2-2200429](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200429.zip) Discussion on accuracy enhancement Huawei, HiSilicon discussion Rel-17 NR\_pos\_enh-Core

[R2-2200712](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200712.zip) Discussion on positioning reference unit Xiaomi discussion

[R2-2200916](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200916.zip) Considerations on Timing Error aspects Sony discussion Rel-17 NR\_pos\_enh-Core

[R2-2200994](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200994.zip) Support of Positioning Reference Units Lenovo, Motorola Mobility discussion Rel-17

[R2-2201062](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201062.zip) LPP Positioning enhancements on timing errors , DL-AoD and LoS/NLoS/multipath Ericsson discussion Rel-17

[R2-2201064](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201064.zip) On the Positioning Reference Units aspects Ericsson discussion Rel-17

[R2-2201087](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201087.zip) Way forward on PRUs for Rel-17 MediaTek Inc., Apple discussion Rel-17 NR\_pos\_enh-Core

[R2-2201104](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201104.zip) Signalling impacts of RAN1 agreements on accuracy enhancements Apple discussion NR\_pos\_enh-Core

[R2-2201189](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201189.zip) Discussion on Accuracy Enhancements InterDigital, Inc. discussion Rel-17 NR\_pos\_enh-Core

[R2-2201191](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201191.zip) Discussion on supporting Positioning Reference Units InterDigital, Inc. discussion Rel-17 NR\_pos\_enh-Core

[R2-2201360](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201360.zip) Discussion on accuracy improvement for UE-assisted DL-AOD positioning vivo discussion Rel-17 NR\_pos\_enh-Core

### 8.11.8 Other

Input on other WI objectives. This agenda item will not be treated online. Critical issues, if any, may be handled by email.

[R2-2200331](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200331.zip) Discussion on positioning reference unit vivo discussion Rel-17 NR\_pos\_enh-Core

R2-2200438 Summary of email discussion for PRU Huawei, HiSilicon discussion Rel-17 NR\_pos\_enh-Core Late

[R2-2200965](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200965.zip) On PRU support in Release-17 Qualcomm Incorporated discussion

## 8.12 Reduced Capability

(NR\_redcap-Core; leading WG: RAN1; REL-17; WID: RP-211574)

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

Email max expectation: 4 threads

### 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.

[R2-2200068](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200068.zip) Reply LS on capability related RAN2 agreements for RedCap (R1-2112754; contact: Ericsson) RAN1 LS in Rel-17 NR\_redcap-Core To:RAN2 Cc:RAN4

[R2-2200075](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200075.zip) LS on use of NCD-SSB or CSI-RS in DL BWPs for RedCap UE (R1-2112802; contact: Ericsson) RAN1 LS in Rel-17 NR\_redcap-Core To:RAN2, RAN4

[R2-2200131](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200131.zip) Reply LS on use of NCD-SSB for RedCap UE (R4-2120327; contact: ZTE) RAN4 LS in Rel-17 NR\_redcap-Core To:RAN1 Cc:RAN2

[R2-2201531](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201531.zip) Running 38300 CR for RedCap Nokia, Nokia Shanghai Bell draftCR Rel-17 38.300 16.8.0 NR\_redcap-Core

[R2-2201549](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201549.zip) Running CR for the RedCap WI Ericsson draftCR Rel-17 38.304 16.7.0 B NR\_redcap-Core

[R2-2201564](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201564.zip) Running RRC CR for the RedCap WI Ericsson draftCR Rel-16 38.331 16.7.0 B NR\_redcap-Core

### 8.12.2 Framework for reduced capabilities

No contribution is expected to this agenda item but directly to the sub-agenda items.

#### 8.12.2.1 Definition of RedCap UE type and reduced capabilities

Including discussion on possible "fallback operation"

[R2-2200189](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200189.zip) Support for fallback operation by RedCap UEs Qualcomm Incorporated discussion Rel-17 NR\_redcap-Core

[R2-2200248](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200248.zip) Discussion on RedCap UE's fallback operation OPPO discussion Rel-17 NR\_redcap-Core

[R2-2200286](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200286.zip) Open issues on RedCap capabilities Intel Corporation discussion Rel-17 NR\_redcap

[R2-2200350](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200350.zip) Discussion on allowing RedCap UEs to be served as normal UEs NEC Corporation discussion

[R2-2200553](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200553.zip) Definition and reduced capabilities for RedCap UE Huawei, HiSilicon discussion Rel-17 NR\_redcap-Core

[R2-2200596](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200596.zip) Discussion on UE type and reduced capabilities for RedCap UEs vivo, Guangdong Genius discussion Rel-17 NR\_redcap-Core

[R2-2200685](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200685.zip) Discussion on supporting fallback operation for Redcap UEs CATT discussion Rel-17 NR\_redcap-Core

[R2-2200798](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200798.zip) RedCap UE access in legacy gNB Ericsson discussion Rel-17 NR\_redcap-Core

[R2-2201114](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201114.zip) Optional support of more than 8 DRB for RedCap Apple, Facebook Inc discussion NR\_redcap-Core R2-2110093

[R2-2201206](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201206.zip) Discussion on fallback operation of RedCap UEs LG Electronics UK discussion Rel-17

[R2-2201231](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201231.zip) Support for fallback operation by RedCap UEs Sierra Wireless. S.A. discussion

[R2-2201434](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201434.zip) RedCap cell selection and cell reselection BT Plc, Nokia, Nokia Shanghai Bell, Turkcell, Deutsche Telekom, Orange, Telecom Italia S.p.A. discussion Rel-17

#### 8.12.2.2 Identification, access and camping restrictions

Focus on system information aspects (common aspects related to RACH partitioning shall be submitted to 8.18)

Also including discussion on "NCD-SSB"

[R2-2200190](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200190.zip) Discussions on RedCap-specific BWPs Qualcomm Incorporated discussion Rel-17 NR\_redcap-Core

[R2-2200208](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200208.zip) Cell barring aspects Samsung Electronics Co., Ltd discussion Rel-17 NR\_redcap-Core

[R2-2200249](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200249.zip) Discussion on RedCap UE's identification and camping restrictions OPPO discussion Rel-17 NR\_redcap-Core

[R2-2200287](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200287.zip) Open issues on Early identification, camping restrictions and NCD-SSB Intel Corporation discussion Rel-17 NR\_redcap

[R2-2200332](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200332.zip) Cell (re)selection details for RedCap UEs Samsung Electronics discussion Rel-17 NR\_redcap-Core

[R2-2200343](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200343.zip) System Information and supporting for RedCap UEs KDDI Corporation discussion Rel-17 R2-2111150

[R2-2200401](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200401.zip) BWP configuration for RedCap UE DENSO CORPORATION discussion Rel-17 NR\_redcap-Core

[R2-2200468](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200468.zip) Discussion on UE access restrictions for Redcap devices Beijing Xiaomi Mobile Softwar discussion

[R2-2200469](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200469.zip) Discussion on early Identification for Redcap devices Beijing Xiaomi Mobile Softwar discussion

[R2-2200554](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200554.zip) Identification and access restriction of RedCap UE, and NCD-SSB related issues Huawei, HiSilicon discussion Rel-17 NR\_redcap-Core

[R2-2200568](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200568.zip) Camping restrictions of RedCap UE Fujitsu discussion Rel-17 NR\_redcap-Core

[R2-2200597](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200597.zip) Remaining issues on NCD SSB, identification and access for RedCap vivo, Guangdong Genius discussion Rel-17 NR\_redcap-Core

[R2-2200608](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200608.zip) Discussion on separate initial BWP and NCD-SSB for RedCap UE ZTE Corporation, Sanechips discussion Rel-17 NR\_redcap-Core

[R2-2200609](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200609.zip) On Access and Camping Restrictions ZTE Corporation, Sanechips discussion Rel-17 NR\_redcap-Core

[R2-2200616](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200616.zip) Further considerations on access restrictions NEC discussion Rel-17 NR\_redcap-Core

[R2-2200639](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200639.zip) Discussion on the open issues of identification and access restrictions for RedCap UE Spreadtrum Communications discussion Rel-17

[R2-2200686](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200686.zip) Discussion on the remaining issues of early identification and IFRI CATT discussion Rel-17 NR\_redcap-Core

[R2-2200725](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200725.zip) Corrections for cellBarred in MIB handling for RedCap UE InterDigital, Europe, Ltd. discussion Rel-17

[R2-2200797](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200797.zip) Early indication & access restriction for RedCap UEs Ericsson discussion Rel-17 NR\_redcap-Core

[R2-2200830](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200830.zip) Using NCD-SSB or CSI-RS in DL BWPs for RedCap UEs Ericsson discussion Rel-17 NR\_redcap-Core

[R2-2200831](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200831.zip) [DRAFT] Reply LS on the use of NCD-SSB or CSI-RS in DL BWPs for RedCap UEs Ericsson LS out Rel-17 NR\_redcap-Core To:RAN1 Cc:RAN4

[R2-2200836](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200836.zip) NR-REDCAP access restriction/allowance indication to ease mobility THALES discussion

[R2-2200861](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200861.zip) Discussion on access restrictions and early identification CMCC discussion Rel-17 NR\_redcap-Core

[R2-2200862](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200862.zip) Discussion on use of NCD-SSB or CSI-RS in DL BWPs for RedCap UE CMCC discussion Rel-17 NR\_redcap-Core

[R2-2201113](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201113.zip) RedCap UE power-saving aspects at cell re-selection Apple discussion NR\_redcap-Core

[R2-2201207](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201207.zip) Discussion on identification and access restrictions for RedCap UEs LG Electronics UK discussion Rel-17

[R2-2201232](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201232.zip) Early identification and camping restrictions for RedCap UE Sierra Wireless. S.A. discussion

[R2-2201237](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201237.zip) Neighbour cell information and cell (re)selection for RedCap UE DENSO CORPORATION discussion Rel-17 NR\_redcap-Core R2-2109646

[R2-2201435](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201435.zip) Support and network behaviour for RedCap early indication messages BT Plc, Deutsche Telekom AG, Telecom Italia S.p.A., TurkCell, CMCC, NTT DOCOMO INC., Orange, Vodafone discussion Revised

[R2-2201461](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201461.zip) Aspects related to use of NCD-SSB MediaTek Inc. discussion Rel-17 NR\_redcap-Core

[R2-2201587](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201587.zip) Further details of identification, access, and camping restrictions Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_redcap-Core

[R2-2201623](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201623.zip) Support and network behaviour for RedCap early indication messages BT Plc, Deutsche Telekom AG, Telecom Italia S.p.A., TurkCell, CMCC, NTT DOCOMO INC., Orange, Vodafone, KDDI discussion Rel-17 [R2-2201435](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201435.zip)

### 8.12.3 UE power saving and battery lifetime enhancement

No contribution is expected to this agenda item but directly to the sub-agenda items.

#### 8.12.3.1 eDRX cycles

Extended DRX enhancements for RRC Inactive and Idle.

This sub-AI will not be treated at R2-116bis-e. No contributions are expected

#### 8.12.3.2 RRM relaxations

Measurement-based stationarity criterion and related not-at-cell-edge criterion, for RRC Inactive, Idle and Connected.

Main focus on the "FFS: whether UE Assistance Information or legacy measurement reporting framework should be used by UE to report its relaxation status" (with the intention to close the discussion and not come back to this in February meeting)

[R2-2200191](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200191.zip) Remaining issues on RRM relaxation Qualcomm Incorporated discussion Rel-17 NR\_redcap-Core

[R2-2200250](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200250.zip) Discussion on RRM relax OPPO discussion Rel-17 NR\_redcap-Core

[R2-2200288](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200288.zip) Open issues on RRM measurement relaxation Intel Corporation discussion Rel-17 NR\_redcap

[R2-2200467](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200467.zip) Discussion on RRM measurement relaxation for redcap Beijing Xiaomi Mobile Softwar discussion

[R2-2200549](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200549.zip) RRM measurement relaxation in RedCap Samsung discussion Rel-17

[R2-2200555](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200555.zip) RRM measurement relaxation for RedCap UE Huawei, HiSilicon discussion Rel-17 NR\_redcap-Core

[R2-2200598](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200598.zip) RRM relaxation for neighboring cell vivo, Guangdong Genius discussion Rel-17 NR\_redcap-Core

[R2-2200610](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200610.zip) Further discussion on RRM relaxation for RedCap UE ZTE Corporation, Sanechips discussion Rel-17 NR\_redcap-Core

[R2-2200667](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200667.zip) Remaining issues in RRM relaxation LG Electronics Inc. discussion Rel-17 NR\_redcap-Core

[R2-2200687](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200687.zip) Further Discussion on RRM Relaxations CATT discussion Rel-17 NR\_redcap-Core

[R2-2201088](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201088.zip) On the need for a separate reference Srxlev value for evaluating R17 stationary criterion for RRM relaxation Futurewei Technologies discussion Rel-17 NR\_redcap-Core

[R2-2201101](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201101.zip) On a timing issue when both R16 low mobility and R17 stationary criteria are configured for a UE Futurewei Technologies discussion Rel-17 NR\_redcap-Core

[R2-2201239](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201239.zip) RRM relaxation in RRC\_CONNECTED for RedCap UEs Sharp discussion R2-2110287

[R2-2201337](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201337.zip) Open issues on RRM relaxations DENSO CORPORATION discussion Rel-17 NR\_redcap-Core

[R2-2201493](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201493.zip) On RRM relaxations for REDCAP Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_redcap-Core

[R2-2201494](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201494.zip) On RRM relaxations in CONNECTED Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_redcap-Core

[R2-2201558](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201558.zip) Details on RRM relaxation Ericsson other Rel-17 NR\_redcap-Core

## 8.13 SON/MDT

(NR\_ENDC\_SON\_MDT\_enh-Core; leading WG: RAN3; REL-17; WID: RP-201281)

Time budget: 1 TU

Tdoc Limitation: 6 tdocs

Email max expectation: 6 threads

### 8.13.1 Organizational

Including outcome of [Post116-e][887][SON/MDT] Running 38.331 for introducing R17 SON (Ericsson)

Including outcome of [Post116-e][889][SON/MDT] Running 38.331 for introducing R17 MDT (Huawei)

Including outcome of [Post116-e][879][SON/MDT] Running R17 38.314 (CMCC)

Including outcome of [Post116-e][897][SON/MDT] Running R17 37.320 (CMCC, Nokia)

[R2-2200010](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200010.zip) Running 38.331 for introducing R17 MDT Huawei, HiSilicon draftCR Rel-17 38.331 16.7.0 B NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200053](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200053.zip) Running CR for TS 38.314 CMCC draftCR Rel-17 38.314 16.4.0 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200054](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200054.zip) Report of [Post116-e][879][SON/MDT] Running R17 38.314 CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200056](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200056.zip) 37.320 Running CR for R17 MDT in NR and E-UTRAN CMCC draftCR Rel-17 37.320 16.7.0 B NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200097](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200097.zip) LS on UP measurements for Successful Handover Report (R3-212935; contact: Ericsson) RAN3 LS in Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core To:RAN2

[R2-2200098](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200098.zip) Reply LS on UE context keeping in the source cell (R3-212944; contact: Ericsson) RAN3 LS in Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core To:RAN2

[R2-2200099](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200099.zip) 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 NR\_ENDC\_SON\_MDT\_enh-Core To:SA5, RAN2

[R2-2200103](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200103.zip) LS on NR-U channel information and procedures (R3-216042; contact: Samsung) RAN3 LS in Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core To:RAN1, RAN2

[R2-2200105](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200105.zip) Reply LS on scenarios need to be supported for MRO in SCG Failure Report (R3-216159; contact: Samsung) RAN3 LS in Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core To:RAN2

[R2-2200156](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200156.zip) 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 NR\_ENDC\_SON\_MDT\_enh-Core To:RAN3 Cc:RAN2

[R2-2200157](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200157.zip) Reply LS on Report Amount for M4, M5, M6, M7 measurements (S5-214523; contact: Nokia) SA5 LS in Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core To:RAN3 Cc:RAN2

[R2-2200158](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200158.zip) 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 e\_5GMDT To:RAN3 Cc:RAN2

[R2-2200163](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200163.zip) Reply LS on the Beam measurement reports for the MDT measurements (S5-216628; contact: Ericsson) SA5 LS in Rel-17 e\_5GMDT To:RAN3 Cc:RAN2

[R2-2200664](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200664.zip) [Draft] Reply LS on NR-U channel information and procedures Samsung LS out Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core To:RAN3 Cc:RAN1

[R2-2201611](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201611.zip) LS Reply on user plane masurements for successful handover report Ericsson discussion NR\_ENDC\_SON\_MDT\_enh-Core

### 8.13.2 SON

#### 8.13.2.1 Handover related SON aspects

[R2-2200005](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200005.zip) Report of [Post116-e][887.5][SONMDT] Leftover issues on SON (Ericsson) Ericsson discussion

[R2-2200392](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200392.zip) Further Discussion on Handover Related SON Aspects CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200560](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200560.zip) Further consideration of SON of HO related aspects OPPO discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200561](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200561.zip) Further consideration on successful handover report OPPO discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200575](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200575.zip) Remaining issues on SHR NEC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200668](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200668.zip) SON Enhancements for CHO Optimization Samsung discussion NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200669](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200669.zip) SON Enhancements for Successful HO Report Samsung discussion NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200752](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200752.zip) SON Enhancements for CHO Lenovo, Motorola Mobility discussion Rel-17

[R2-2200753](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200753.zip) SON Enhancements for SHR Lenovo, Motorola Mobility discussion Rel-17

[R2-2200901](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200901.zip) On measurements of CHO candidate cells CMCC, Ericsson, Huawei, Nokia, ZTE discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200902](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200902.zip) Remaining issues on SON Enhancement for CHO CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200903](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200903.zip) Further Discussion on Successful Handover Report CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200966](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200966.zip) Discussion on handover related SON aspects Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2201035](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201035.zip) HO related SON changes Qualcomm Incorporated discussion Rel-17

[R2-2201036](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201036.zip) Open Issues in Successful Handover Report Qualcomm Incorporated discussion Rel-17

[R2-2201211](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201211.zip) Remaining CHO related issues on SON LG Electronics discussion NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2201212](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201212.zip) Remaining SHR related issues on SON LG Electronics discussion NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2201229](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201229.zip) Successful HO report in CHO recovery case SHARP Corporation discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2201230](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201230.zip) Discussion on successful HO report in DC case SHARP Corporation discussion NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2201326](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201326.zip) Further consideration on SHR enhancements ZTE Corporation, Sanechips discussion Rel-17

[R2-2201423](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201423.zip) Discussion on SHR enhancements vivo discussion Rel-17

[R2-2201612](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201612.zip) Handover-related SON aspects Ericsson discussion NR\_ENDC\_SON\_MDT\_enh-Core

#### 8.13.2.2 2-step RA related SON aspects

Including outcome of [Post116-e][887.5][SON/MDT] Leftover issues on SON (Ericsson )

[R2-2200393](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200393.zip) The left issues on 2-step RA Report CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200670](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200670.zip) 2-step Random Access Optimization Samsung discussion NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200900](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200900.zip) Remaining issues for 2-step RA CMCC,ZTE discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200967](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200967.zip) Discussion on 2 step RA related SON aspects Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2201327](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201327.zip) Remaining issues on RA-report enhancements ZTE Corporation, Sanechips discussion Rel-17

[R2-2201604](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201604.zip) 2-Step RA information for SON purposes Ericsson discussion NR\_ENDC\_SON\_MDT\_enh-Core

#### 8.13.2.3 Other WID related SON features

[R2-2200394](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200394.zip) Specification Impact of SgNB RACH Report on TS38.331 and TS36.331 CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200395](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200395.zip) Open Issues of PSCell MHI Enhancement CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200679](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200679.zip) SON Enhancements: Others Samsung discussion NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200968](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200968.zip) Discussion on UE capabilities for R17 SON and MDT Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2201037](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201037.zip) Open Issues in Other SON Topics Qualcomm Incorporated discussion Rel-17

[R2-2201043](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201043.zip) Mobility History Information storing Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2201044](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201044.zip) Discussion on other SON features Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2201045](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201045.zip) Reporting Enhancements for SON in unlicensed Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2201213](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201213.zip) Remaining issues on SCG related MRO LG Electronics discussion NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2201328](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201328.zip) Consideration on SN MHI enhancements ZTE Corporation, Sanechips discussion Rel-17

[R2-2201329](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201329.zip) Clarification on failureType of SCG failure information ZTE Corporation, Sanechips, CMCC discussion Rel-17

[R2-2201605](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201605.zip) On Other WID related SON features Ericsson discussion NR\_ENDC\_SON\_MDT\_enh-Core

### 8.13.3 MDT

#### 8.13.3.1 Immediate MDT enhancements

[R2-2200396](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200396.zip) The Corrections on Immediate MDT Enhancements CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200890](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200890.zip) On Immediate MDT Enhancements Ericsson discussion NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200969](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200969.zip) Discussion on immediate MDT enhancements Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2201330](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201330.zip) Consideration on miscellaneous on IMM MDT ZTE Corporation, Sanechips discussion Rel-17

#### 8.13.3.2 Logged MDT enhancements

[R2-2200397](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200397.zip) Discussion on Logged MDT Enhancement CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200648](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200648.zip) Discussion on multiple CEF reports Samsung Electronics Co., Ltd discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200680](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200680.zip) SI Request Optimization Samsung discussion NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200889](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200889.zip) On logged MDT related enhancements Ericsson discussion NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200970](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200970.zip) Discussion on logged MDT enhancements Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2201038](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201038.zip) Logged measurement Enhancements Qualcomm Incorporated discussion Rel-17

[R2-2201042](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201042.zip) Remaining Stage 2 open issues Nokia, Nokia Shanghai Bell, CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2201331](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201331.zip) Remaining issues on logged MDT enhancements ZTE Corporation, Sanechips discussion Rel-17

### 8.13.4 L2 Measurements

[R2-2200004](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200004.zip) Running 38.331 for introducing R17 SON Ericsson CR Rel-17 38.331 16.7.0 2865 - B NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200888](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200888.zip) On layer-2 measurements Ericsson discussion NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2200971](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200971.zip) Discussion on L2M Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

## 8.14 NR QoE

(NR\_QoE-Core; leading WG: RAN3; REL-17; WID: RP-211406)

Time budget: 0.5 TU

Tdoc Limitation: 3 tdocs

Email max expectation: 3-4 threads

Focus on adressing open issues

### 8.14.1 Organizational

LS in. Rapporteur input. Running CRs.

LS in

[R2-2200152](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200152.zip) Reply LS on QoE report handling at QoE pause (S3-214458; contact: Lenovo) SA3 LS in Rel-17 NR\_QoE-Core To:RAN2 Cc:SA4, SA5

[R2-2200162](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200162.zip) LS Reply on QoE report handling at QoE pause (S5-216417; contact: Ericsson) SA5 LS in Rel-17 eQoE To:SA4 Cc:RAN2, SA3

[R2-2200109](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200109.zip) LS on the support of including slice ID in the QoE reporting container (R3-216225; contact: Huawei) RAN3 LS in Rel-17 NR\_QoE-Core To:SA4 Cc:RAN2

[R2-2200160](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200160.zip) LS on the mapping between service types and slice at application (S5-216414; contact: Ericsson) SA5 LS in Rel-17 eQoE To:RAN3 Cc:SA4, RAN2, SA2, CT1

[R2-2200161](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200161.zip) LS on QoE configuration and reporting related issues (S5-216415; contact: Ericsson) SA5 LS in Rel-17 eQoE To:RAN3 Cc:SA4, RAN2

* ALL 5 noted

CRs

[R2-2200996](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200996.zip) Running RRC CR for QoE measurements Ericsson draftCR Rel-17 38.331 16.7.0 B NR\_QoE-Core

- Change of TS version and update of need codes, now need S

* Baseline for further update
* [Post116bis-e][081][QoE] 38331 (Ericsson)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][082][QoE] Open Issues (China Unicom)

Scope: Determine if Company input by Pre117-e discussions shall be used, and how many / which Pre-discussions shall be done. Capture Open Issues not captured in the CR email discussions and suggest how to treat. [After finalization, Merge open issues from other discussions into a WI OI list (OI for which company input is invited in some way shall be listed in the WI-list).

Intended outcome: Open Issues list, and organization of Pre117-e Company input discussions for the WI.

Deadline: Short.

### 8.14.2 RAN Visible QoE

Offline Only

* [AT116bis-e][029][QoE] RAN Visible QoE (Qualcomm)

Scope: Determine what RAN2 need to do to support RAN3 decisions in LS in R2-2200110, Take into account documents in subclause 8.14.2. and make the corresponding decisions to such level that it is possible to make corresponding Stage-3 updates.

Intended outcome: Report, with discussion and agreements

Deadline: Friday W1

[R2-2201878](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201878.zip) RAN visible QoE Qualcomm Inc.

DISCUSSION Online Only on P7 P8

- Ericsson would like to remove 1b and 3. Think for 3, 10ms would be a reasonable assumption, that could be acceptable.

- China Unicom also think 1b is not clear, and 3 10ms is acceptable

- Nokia think that all of this is just assumptions, RAN3 will have progressed on this and RAN2 should wait. Would be fine to skip the LS for now.

- CU confirms that RAN3 will not do this at this meeting, so better that RAN2 makes these assumptions and send LS.

- Nokia wonder how the configuration will be provided to RAN node. Nokia are worried about the responsibility split. Chair agrees that RAN2 is not responsible for this. Responsibility should be split R3 SA4 somehow.

* On RVQoE metrics reporting, RAN2 arrived at the following possible assumptions as starting points.

Assumption 1a: RAN2 specifies the maximum number of buffer level entries (ASN.1 value) for each buffer level metric report in one reporting message.

Assumption 1c: It is UE implementation on which buffer level entries should be reported for each buffer level metric report when the received number of buffer level entries exceeds the maximum number.

Assumption 2a: The parameter “t” is not reported for each buffer level entry.

Assumption 2b: It is expected that application layer does not send parameter “t” to AS layer.

Assumption 3: Taking the granularity 10ms for level value as baseline, i.e. integer value 1 correspnds to 10ms, value 2 corresponds to 20ms, and so on.

Assumption 4a: Taking the maximum value of 5min as baseline for level value range.

Assumption 4b: UE sets the value to 5min if the received level value is more than 5min.

Assumption 5: Taking the maximum value 30 seconds as baseline for playout delay for media startup value range.

Assumption 6: Taking the granularity 1ms as baseline for playout delay, i.e. integer value 1 correspnds to 1ms, value 2 corresponds to 2ms, and so on.

* Send LS to SA4 and to RAN3 about the above assumptions, and also indicate that RAN2 doesn't consider itself as the main responsible group for definition of RV QoE metrics, so the decision whether to use these assumptions is in the hands of the receiving group(s). Can also include other agreements on RV QoE

OFFLINE AGREEMENTS [029]

* [029] RVQoE configuration can share the same measConfigAppLayerId and service type RRC IEs with legacy QoE configuration.
* [029] Modification of RVQoE configuration can be supported from RRC layer point of view, it can be revisited if any problem according to further stage 3.
* [029] RAN2 confirm it is feasible that NG-RAN can release a list of RAN visible QoE configurations while not releasing the corresponding legacy QoE configuration and if the corresponding legacy QoE configuration is released, the RAN visible QoE configuration is released as well.
* [029] RVQoE measurements can be included into *MeasurementReportAppLayer* message.
* [029] MeasConfigAppLayerId can be used to identify both of associated legacy QoE report and RVQoE report, and it is irrespective whether RVQoE should be reported independently or together with legacy QoE.
* [029] Multiple RVQoE reports can be included in one *MeasurementReportAppLayer* message, and can be revisited according to legact QoE reporting progress.

[029] Chair Comment: The above agreements uses somewhat incorrectly the word “legacy” to denote the non-RAN-Visible QoE (in this release). Note that the word legacy is forbidden in TSes.

[R2-2200110](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200110.zip) RAN3 agreements on RAN visible QoE (R3-216227; contact: Qualcomm) RAN3 LS in Rel-17 NR\_QoE-Core To:RAN2

[R2-2200268](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200268.zip) Discussion on RAN Visible QoE ZTE Corporation, Sanechips discussion Rel-17

[R2-2200546](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200546.zip) RAN visible QoE configuration and report Samsung discussion Rel-17

[R2-2200558](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200558.zip) Discussion on RAN visible QoE configuration OPPO discussion Rel-17 NR\_QoE-Core

[R2-2200705](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200705.zip) Support of RAN visible QoE and per-slice QoE Qualcomm Incorporated discussion

[R2-2200822](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200822.zip) RAN visible QoE Huawei, HiSilicon discussion Rel-17 NR\_QoE-Core

[R2-2200854](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200854.zip) Discussion on Ran visiable QoE CMCC discussion Rel-17 NR\_QoE

[R2-2200998](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200998.zip) RAN Visible QoE measurements Ericsson discussion Rel-17 NR\_QoE-Core

[R2-2201047](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201047.zip) RAN visible QoE Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_QoE-Core

[R2-2201419](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201419.zip) Discussion on NR RAN-visible QoE CATT discussion NR\_QoE-Core

[R2-2201594](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201594.zip) Discussion on RAN visible QoE measurement in Rel-17 China Unicom discussion NR\_QoE-Core

[R2-2201596](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201596.zip) Discussion on RAN Visible QoE vivo discussion Rel-17 NR\_QoE-Core

[R2-2201626](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201626.zip) Discussion on RV QoE LG Electronics discussion Rel-17 NR\_QoE-Core

* [029] 13 tdocs above are Noted
* [Post116bis-e][069][QoE] RV QoE LS out (Qualcomm)

Scope: LS out to SA4 and to RAN3 on RV QoE, acc to agreements

Intended outcome: Approved LS out

Deadline: Short

### 8.14.3 Open Issues

Open issues on QoE configuration, reporting, start stopincluding Pause Resume, mobility etc.

Including outcome of [Post116-e][080][eQoE] Mobility (Ericsson)

Mobility

Online

[R2-2200011](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200011.zip) Summary of e-mail discussion [080] Mobility Ericsson discussion Revised

[R2-2200059](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200059.zip) Summary of e-mail discussion [080] Mobility Ericsson discussion [R2-2200011](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200011.zip) Late

[R2-2201839](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201839.zip) Summary of e-mail discussion [080] Mobility Ericsson discussion [R2-2200011](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200011.zip) Late

DISCUSSION

P1

- LGE support P1 but think it need to be clarified, bec this is only for the fallback.

P4

- ZTE wonder if this is necessary. Prefer to just drop it. Nokia also think this is not so important. Lenovo agrees. Apple and Oppo as well

- QC support this case, but need to consider what layer shall retransmit.

- LG think this can also happen to RRM report but no handling there.

- Ericsson think there is segmentation etc.

- Also have a number of supporters

- Chair: no consensus

* Upper layers are informed of the release of the application layer measurements at RRCSetup (can be done if RRC setup is provided as a response to RRCresumerequest or RRC reestablishmentrequest).
* At Resume with delta configuration the network indicates possible differences to the QoE configurations.
* At mobility with fullConfig, upper layers are informed of the release of the application layer measurements if no measConfigAppLayerId is indicated by the network.
* Except for restarts transmission of QoE reports after handover, The TP in the Annex of R2-2200011 is included in the running CR for QoE measurements.

[R2-2200851](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200851.zip) Remaining open issues on QoE measurement and mobility CMCC discussion Rel-17 NR\_QoE

- Already covered

* Noted

[R2-2201183](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201183.zip) Supporting session continuity for NR QoE Apple discussion Rel-17 NR\_QoE-Core R2-2110073

- Need to wait for SA4 input

* Noted

Pause Resume

Online first

[R2-2201593](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201593.zip) Discussion on pause and resume in NR QoE in Rel-17 China Unicom, CMCC, ZTE, CATT, Nokia, Nokia Shanghai Bell discussion NR\_QoE-Core

DISCUSSION

- Apple think this was a bit over-engineered in the first place, would be fine with Option 3, dropping. If stored, think we don’t need to specify details, just mem size.

- Apple think P3 and P4 are inconsistent.

- QC cannot accept a AS only solution, think SA4 didn't say it was infeasible. Think that for XR we would drop most of the data at pause. Could maybe store 20min of data in AS for XR.

- vivo agree with QC.

- Huawei think AL solution is feasible acc to LSes. AS solution has some benefit, that oterh groups doennt need to be involved.

- LGE support P1, think that if application is terminated during pause the reports will be dropped, which is a benefir of AS layer storing.

- Chair P1 seems agreeable. QC cannot accept this. QC propose instead that Application layer storage could be optional, and if not supported then reports would be dropped during pause. CU think R2 alone cannot decide on the application layer storage.

P3

- Huawei wonder if we need to specify the details. Maybe should specify if UE shall discard old or new reports. LGE think old reports should be discarded. Apple think this should be transparent container, so just leave to UE impl. QC agree to leave to UE impl

P5

- Ericsson think resume indication is not needed explicitly, can be implicit.

- Chair: this is a signalling detail, discuss for CR

* AS layer is responsible for storing QoE reports when the UE receives QoE pause indication at RAN overload (overrides earlier decisions)
* There is no need for interaction between AS and Application for Pause Resume (overrides earlier decisions)
* The minimal memory size of QoE paused measurements report is 64KB
* At RAN overload scenarios, when the memory reserved for the QoE paused measurements becomes full, the UE is allowed to discard extra QoE paused measurements report. The action of how UE AS layer discards extra QoE paused measurements report is based on UE implementation.
* When the UE receives QoE resume indication after RAN overload, AS layer should send the stored QoE paused measurements report to the RAN.

[LS out (offline, Huawei)]

* [AT116bis-e][068][QoE] Reply LS on QoE report handling at QoE pause (Huawei)

Scope: Send LS to inform about decision.

Intended outcome: Approved LS out

Deadline: EOM (offline only)

[R2-2201862](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201862.zip) Further reply on QoE report handling at QoE pause RAN2 LS out Rel-17 NR\_QoE-Core To:SA4 Cc:SA3, SA5

* [068] Ls out is approved

[R2-2200823](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200823.zip) [DRAFT] Further reply on QoE report handling at QoE pause Huawei, HiSilicon LS out Rel-17 NR\_QoE-Core To:SA4 Cc:SA3, SA5

[R2-2200999](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200999.zip) Pause and resume of QoE measurement reporting Ericsson discussion Rel-17 NR\_QoE-Core

[R2-2201293](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201293.zip) QoE pause and resume LG Electronics discussion

[R2-2201595](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201595.zip) Discussion on Pause and Resume vivo discussion Rel-17 NR\_QoE-Core

[R2-2200548](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200548.zip) Remaining QoE issues Samsung discussion Rel-17

* 5 tdocs noted

R2-2200266 Discussion on NR QoE Pause Resume Reporting ZTE Corporation, Sanechips discussion Rel-17 Withdrawn

Other Open Issues

Offline first

* [AT116bis-e][030][QoE] Other open issues (Ericsson)

Scope: List the remaining other open issues not related to Mobility, Pause Resume, RV QoE or UE cap. Determine agreements (agreed offline), and points for online CB, if any.

Intended outcome: Report

Deadline: Friday W1 (can CB Mon W2 if needed).

[R2-2201926](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201926.zip) Report [030] Ericsson

AGREE proposals offline, except P6 that need online discussion

DISCUSSION online

P6

- Lenovo wonder why AS layer shall inform this?

- LG wonder if the application can control the size of container. If the only desicion is whether to discard or not, then no need to inform. Need to check if this is feasible. QC agrees. Apple agrees. Samsung agrees that we expect different application behaviour. Ericsson are OK to ask SA4, but think the network can also set the configruation acc to the UE capability.

- Apple think that if the size cannot be taken into account by higher layers, why support segmentation at all.

- LG think this depends on UE cap. Chair think this also depend on network capabiliy, according to earlier discussions.

* Send LS to SA4 to explain that with RRC segmentation the max container size (for the report container) can be different and can change by AS reconfigurations. Ask whether the application can/would take this into account and whether this need explicit indication.

[Anyway need LS to SA4 and CT1 with agreements, include in same LS or there can be two LSes (Post dicussion).]

Offline Agreements [030]

* [030] Mulitple QoE reports can be sent in one MeasurementReportAppLayer message.
* [030] There can be both multiple QoE reports with different measConfigAppLayerId and multiple QoE reports with the same measConfigAppLayerId in the MeasurementReportAppLayer message.
* [030] The maximum size of the QoE configuration container is specified as a maximum size 8000 (Bytes) of the OCTET STRING in ASN.1.
* [030] No max size of the OCTET STRING for the QoE report container is specified in ASN.1.
* [030] Send a reply LS to SA4 with the RAN2 agreements related to RRC segmentations and container size limitations.
* [030] Inform CT1 that the service type does not need to be forwarded to the application layer at release.
* [030] Inform CT1 that the QoE configurations can be configured as a list in NR and ask them to take this into account when specifying the AT-command.
* [030] Inform CT1 that all QoE configurations may need to be released without any measConfigAppLayerId being indicated from the AS-layer and ask them to take this into account when specifying the AT-command.
* [030] Send an LS to CT1 and inform them of the RAN2 agreements with impact on AT-commands.

[R2-2200997](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200997.zip) Configuration and reporting of QoE measurements Ericsson discussion Rel-17 NR\_QoE-Core

[R2-2200267](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200267.zip) Discussion on QoE configuration ZTE Corporation, Sanechips discussion Rel-17

[R2-2200340](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200340.zip) Discussion on the partial QoE reporting at RAN overload ITRI discussion NR\_QoE-Core R2-2110281

[R2-2200557](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200557.zip) Discussion on QoE measurement collection configuration in NR OPPO discussion Rel-17 NR\_QoE-Core

[R2-2200684](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200684.zip) Leftover issues of QoE configuration, reporting, pause, resume and mobility Qualcomm Incorporated discussion

[R2-2200820](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200820.zip) Discussion on QoE open issues Huawei, HiSilicon discussion Rel-17 NR\_QoE-Core

[R2-2200824](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200824.zip) Draft reply LS on QoE configuration and reporting related issues Huawei, HiSilicon LS out Rel-17 NR\_QoE-Core To:SA4, SA5, CT1 Cc:RAN3

[R2-2201046](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201046.zip) Discussion on open issues for QoE Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_QoE-Core

[R2-2201421](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201421.zip) Discussion on the remaining open issues CATT discussion NR\_QoE-Core

* [030] 9 tdocs above are Noted
* [Post116bis-e][070][QoE] LS outs (Ericsson)

Scope: LS outs to CT1 and SA4 (one LS or two), including the topics of “Mobility”, “Other Open Issues”. and UE capabilities, informing about progress and asking questions as agreed. Can elaborate on questions that are not yet clear.

Intended outcome: Approved LS out.

Deadline: Short

### 8.14.4 UE capabilities

Initial discussion on UE caps.

* [AT116bis-e][031][QoE] UE capabilities (CMCC)

Scope: Initial discussion on proposals from documents under 8.14.4. Identify agreeable points, points for discussion, if any. Points postponed, if any. Attempt endorsement of Running CR.

Intended outcome: 1 Report 2 Endorsed running CR.

Deadline: 1 Friday W1, 2 EOM

[R2-2201855](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201855.zip) Report for [AT116bis-e][031][QoE] UE capabilities (CMCC) CMCC

* Noted and taken into account, see below

ONLINE DISCUSSION

Nokia comments that we may need to ask other group about how AS and higher layer capabilities are coordinated.

- Nokia, Lenovo, Huawei think there need to be no exchange between layers of UE capabilities.

- Chair think that we don't do ASNAS cap coordination bec we can pre-set this. AS NAS are just two pieces of the same protocol stack. Is the “application” part of the same protocol stack? Can the application e.g. be replaced by the user?

- Rap proposes to agree online Max no of sim configurations. Proposed: Mandatory to support 16 QoE configs.

- Chair: No objections.

* Can continue offline to see if there could be some question to SA4 regarding how to know capabilities of the application (system wide). *(Chair: included in the post discussion on LS out [070])*.
* For QoE capable UE, Mandatory to support 16 QoE configs (signalling limitation), include this info in LS out to SA4.

Offline agreements [031]

* [031] Introduce QoE UE capability parameters for each service type i.e., streaming, MTSI and VR.
* [031] Introduce UE capability parameter(s) for RAN visible QoE.
* [031] Introduce a new sub-section in TS 38.306 to capture QoE related capabilities.
* [031] Agree that no differentiation for FDD/TDD or FR1/FR2 is needed for QoE related capabilities.

UE capability FFSes [031]

* [031] FFS on whether the Pause and resume capability is one of basic sub-features.
* [031] FFS on which of the following option to choose for RVQoE capability,

Option 1: One parameter indicating whether UE supports RVQoE.

Option 2: Separate parameters indicating whether UE supports RVQoE for each service type.

* [031] FFS on RRC segmentation capability for QoE report, and the following three directions are considered:

Option 1: Conditional mandatory without UE capability parameter (no extra bit)

Option 2: Optional without UE capability parameter (no extra bit)

Option 3: Optional with UE capability parameter (one extra bit)

[R2-2200853](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200853.zip) Running CR of UE capability for NR QoE CMCC, China Unicom draftCR Rel-17 38.306 16.7.0 B NR\_QoE

[R2-2200547](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200547.zip) RRC segmentation for QoE reports Samsung discussion Rel-17

[R2-2200707](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200707.zip) UE capability for QoE Qualcomm Incorporated discussion

[R2-2200821](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200821.zip) Discussion on UE capabilities for NR QoE Huawei, HiSilicon discussion Rel-17 NR\_QoE-Core

[R2-2200852](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200852.zip) Discussion on UE capability for NR QoE CMCC, China Unicom discussion Rel-17 NR\_QoE

[R2-2201048](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201048.zip) UE capabilities for QoE Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_QoE-Core

[R2-2201420](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201420.zip) Discussion on UE capabilities for NR QoE CATT discussion NR\_QoE-Core

* [031] 7 tdocs above are Noted

## 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

Email max expectation: 6 threads

### 8.15.1 Organizational

Including incoming LSs, rapporteur inputs, etc.

[R2-2200265](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200265.zip) Running CR of TS 38.304 for eSL ZTE Corporation, Sanechips draftCR Rel-17 38.304 16.7.0 NR\_SL\_enh-Core

[R2-2200482](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200482.zip) RRC running CR for NR Sidelink enhancements Huawei, HiSilicon draftCR Rel-17 38.331 16.7.0 F NR\_SL\_enh-Core

[R2-2200550](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200550.zip) Running CR of TS 38.321 for Sidelink enhancement LG Electronics France draftCR Rel-17 38.321 16.7.0 NR\_SL\_enh-Core

### 8.15.2 SL DRX

Including [Post116-e][715], [Post116-e][716], [Post116-e][718], etc.

[R2-2200007](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200007.zip) Summary of [POST116-e][718][V2X SL] SL DRX configuration (Ericsson) Ericsson discussion

[R2-2200045](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200045.zip) Summary of [POST116-e][715][V2X/SL] RRC open issues Huawei, HiSilicon (Rapporteur) discussion

[R2-2200051](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200051.zip) Summary of [POST116-e][716][SL] MAC open issues LG Electronics Inc. (Rapporteur) discussion

[R2-2200264](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200264.zip) Discussion on remaining issues of SL DRX ZTE Corporation, Sanechips discussion Rel-17 NR\_SL\_enh-Core

[R2-2200318](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200318.zip) Leftover Issues for Sidelink Unicast DRX CATT discussion Rel-17 NR\_SL\_enh-Core

[R2-2200319](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200319.zip) Leftover issues for Sidelink GCBC DRX CATT discussion Rel-17 NR\_SL\_enh-Core

[R2-2200344](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200344.zip) Further discussions on leftover issues of sidelink DRX configuration NEC Corporation discussion

[R2-2200345](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200345.zip) Further discussions on sidelink MAC open issues NEC Corporation discussion

[R2-2200373](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200373.zip) Discussion on DRX left issues OPPO discussion Rel-17 NR\_SL\_enh-Core

[R2-2200374](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200374.zip) Discussion on DRX left issues from [716] [718] OPPO discussion Rel-17 NR\_SL\_enh-Core

[R2-2200415](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200415.zip) SL DRX CP aspects Lenovo, Motorola Mobility discussion NR\_SL\_enh-Core Revised

[R2-2200483](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200483.zip) Remaining issues for sidelink DRX Huawei, HiSilicon discussion Rel-17 NR\_SL\_enh-Core

[R2-2200484](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200484.zip) Remaining issues of SL communication impact on Uu DRX Huawei, HiSilicon discussion Rel-17 NR\_SL\_enh-Core

[R2-2200528](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200528.zip) Leftover aspects on SL DRX Intel Corporation discussion Rel-17 NR\_SL\_enh-Core

[R2-2200530](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200530.zip) On SL DRX and candidate resource selection Intel Corporation discussion Rel-17 NR\_SL\_enh-Core

[R2-2200535](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200535.zip) Discussion on remaining issues for SL DRX LG Electronics France discussion Rel-17 NR\_SL\_enh-Core

R2-2200536 Consideration on sidelink DRX for unicast LG Electronics France discussion Rel-17 NR\_SL\_enh-Core Withdrawn

[R2-2200544](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200544.zip) Consideration on sidelink DRX for unicast LG Electronics France discussion Rel-17

[R2-2200545](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200545.zip) Discussion on resource (re-)selection in SL DRX SHARP Corporation discussion NR\_SL\_enh-Core

[R2-2200749](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200749.zip) Discussion on remaining issues regarding Sidelink DRX ASUSTeK discussion Rel-17 NR\_SL\_enh-Core

[R2-2200762](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200762.zip) Remaining MAC issues for SL DRX Lenovo, Motorola Mobility discussion Rel-17

[R2-2200786](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200786.zip) NR Sidelink Synchronization Reference Search Optimization at UE for Power Saving Nokia, Nokia Shanghai Bell discussion NR\_SL\_enh-Core

[R2-2200790](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200790.zip) Discussion on Uu impact Xiaomi discussion

[R2-2200791](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200791.zip) Discussion on Sidelink DRX open issues Xiaomi discussion

[R2-2200893](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200893.zip) RRC remaining issues on SL DRX vivo discussion Rel-17

[R2-2200894](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200894.zip) MAC remaining issues on SL DRX vivo discussion Rel-17

[R2-2200938](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200938.zip) Remaining aspects of SL DRX Ericsson discussion Rel-17 NR\_SL\_enh-Core

[R2-2201061](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201061.zip) Discussion on remaining issues of SL DRX timers ZTE Corporation, Sanechips discussion Rel-17 NR\_SL\_enh-Core

[R2-2201135](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201135.zip) Discussion on remaining issues on SL-DRX Apple discussion Rel-17 NR\_SL\_enh-Core

[R2-2201150](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201150.zip) Resource Selection Considering DRX InterDigital discussion Rel-17 NR\_SL\_enh-Core

[R2-2201151](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201151.zip) Consideration of the Active Time for Periodic Transmissions InterDigital, Ericsson, ZTE, AsusTek, Huawei, HiSilicon, Lenovo, Motorola Mobility, Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SL\_enh-Core

[R2-2201152](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201152.zip) Remaining Aspects on SL DRX InterDigital discussion Rel-17 NR\_SL\_enh-Core

[R2-2201458](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201458.zip) SL data transmission considering SL DRX active time Nokia, Nokia Shanghai Bell discussion NR\_SL\_enh-Core R2-2110747

[R2-2201478](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201478.zip) Resource selection considering SL DRX ITL discussion

[R2-2201523](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201523.zip) SL DRX CP aspects Lenovo, Motorola Mobility discussion NR\_SL\_enh-Core [R2-2200415](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200415.zip)

[R2-2201582](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201582.zip) UE report on SL DRX for Uu DRX alignment Samsung Research America discussion

[R2-2201585](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201585.zip) Remaining details for GC/BC Samsung Research America discussion

[R2-2201624](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201624.zip) Discussion on Remaining Design Aspects for SL DRX Qualcomm Finland RFFE Oy discussion

### 8.15.3 Resource allocation enhancements RAN2 scope

Including RAN2 discussion scope on random selection, partial sensing and inter-UE coordination. This agenda item may utilize a summary document (TBD).

[R2-2200263](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200263.zip) Discussion on inter-UE coordination ZTE Corporation, Sanechips discussion Rel-17 NR\_SL\_enh-Core

[R2-2200317](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200317.zip) Consideration on Resource Allocation Enhancements CATT discussion Rel-17 NR\_SL\_enh-Core

[R2-2200349](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200349.zip) Discussion on candidate resource selection with DRX and inter-UE coordination NEC Corporation discussion

[R2-2200375](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200375.zip) Discussion on resource allocation enhancement OPPO discussion Rel-17 NR\_SL\_enh-Core

[R2-2200379](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200379.zip) RAN2 aspects on resource allocation enhancements for Rel-17 eSL vivo discussion

[R2-2200485](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200485.zip) Consideration on resource allocation enhancement Huawei, HiSilicon discussion Rel-17 NR\_SL\_enh-Core

[R2-2200529](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200529.zip) On resource allocation and inter-UE coordination Intel Corporation discussion Rel-17 NR\_SL\_enh-Core

[R2-2200537](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200537.zip) Discussion on Inter-UE Coondination MAC CE LG Electronics France discussion Rel-17 NR\_SL\_enh-Core

[R2-2200642](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200642.zip) Discussion on resource allocation enhancement for NR sidelink Spreadtrum Communications discussion Rel-17

[R2-2200750](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200750.zip) Discussion on inter-UE coordination ASUSTeK discussion Rel-17 NR\_SL\_enh-Core

[R2-2200763](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200763.zip) RAN2 impacts on SL Resource allocation enhancements Lenovo, Motorola Mobility discussion Rel-17

[R2-2200792](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200792.zip) Discussion on inter-UE coordination impact in RAN2 Xiaomi discussion

[R2-2200799](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200799.zip) On Signalling for Inter UE Coordination Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SL\_enh-Core

[R2-2200939](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200939.zip) MAC CE design of inter-UE coordination Ericsson discussion Rel-17 NR\_SL\_enh-Core

[R2-2201134](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201134.zip) Discussion on Inter-UE Coordination Apple discussion Rel-17 NR\_SL\_enh-Core

[R2-2201457](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201457.zip) Power Reduction for Sidelink Mode 2 Resource Allocation Fraunhofer IIS, Fraunhofer HHI discussion Rel-17

[R2-2201459](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201459.zip) Inter-UE Coordination for Sidelink Mode 2 Resource Allocation Fraunhofer IIS, Fraunhofer HHI discussion Rel-17

[R2-2201479](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201479.zip) Interaction between partial sensing and DRX Ericsson discussion Rel-17 NR\_SL\_enh-Core

[R2-2201591](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201591.zip) Resource allocation enhancements Samsung Research America discussion

[R2-2201625](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201625.zip) 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: 0.5 TU

Tdoc Limitation: 1 tdocs

Email max expectation: 1 threads

NOTE at current meeting, only UE capabilites are expected to be treated. Remaining issue(s) wil be treated at R2 117 (this WI will have an AI at next meeting regardless current TU allocation).

### 8.16.1 Organizational

Rapporteur input, incoming LS etc. Running CRs.

[R2-2200138](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200138.zip) Reply to LS on support of PWS over SNPN (S1-214049; contact: Nokia) SA1 LS in Rel-17 FS\_eNPN To:SA3 Cc:SA2, CT1, RAN2, RAN3, SA, CT, RAN

[R2-2200143](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200143.zip) Reply LS on limited service availability of an SNPN (S2-2109254; contact: Qualcomm) SA2 LS in Rel-17 eNPN To:CT1, RAN2 Cc:SA1

[R2-2200491](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200491.zip) Draft CR for Enhancements for Private Networks Qualcomm Incorporated draftCR Rel-16 38.304 16.7.0 NG\_RAN\_PRN\_enh-Core

### 8.16.2 Issues and Corrections

Including Issues and Corrections if any to support SNPN with subscription or credentials by a separate entity, support UE onboarding and provisioning for NPN and support of IMS voice and emergency services for SNPN.

Not to be treated. No input is expected.

[R2-2201470](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201470.zip) Details of SIBxy LG Electronics discussion Rel-17

### 8.16.3 UE capabilities

This topic is expected to be treated offline only.

* [AT116bis-e][032][eNPN] UE capabilities (Intel)

Scope: Initial discussion on UE caps. Identify agreements (for offline agreement), and Open issues, to be addressed at next meeting. If need is high, e.g. if LS out is needed, can also identify some point for online CB W2.

Intended outcome: Report

Deadline: EOM (or earlier for CB point if needed).

[R2-2201909](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201909.zip) Report of Offline on Rel-17 NPN UE capability for Rel-17 NPN Intel

* [032] Noted, reflected below
* [032] No UE AS capability signalling is needed for CH and onboarding.
* [032] No CH and onboarding AS capabilities without capability signalling needs to be specified in TS38.306
* [032] There is no need to specify UE AS capability signalling for CGI reporting for CH and onboarding
* [032] No UE AS capability signalling is needed for IMS emergency services.
* [032] The existing conditional mandatory without capability signalling for IMS emergency call can be reused for IMS emergency call for UE in SNPN access mode. Add the following to the existing capability: “It is mandatory to support IMS emergency call over SNPN for UEs that are IMS voice capable over SNPNs”

[R2-2200233](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200233.zip) UE Capabilities for eNPN OPPO discussion Rel-17 NG\_RAN\_PRN\_enh-Core

[R2-2200293](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200293.zip) Discussion on UE capability for eNPN Huawei, HiSilicon discussion Rel-17 NG\_RAN\_PRN\_enh-Core

[R2-2200508](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200508.zip) UE capability for Rel-17 NPN Intel Corporation, Nokia, Nokia Shanghai Bell discussion Rel-17 NG\_RAN\_PRN\_enh-Core

[R2-2200509](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200509.zip) UE capability for Rel-17 NPN Intel Corporation, Nokia, Nokia Shanghai Bell draftCR Rel-17 38.306 16.7.0 NG\_RAN\_PRN\_enh-Core

[R2-2200521](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200521.zip) Discussion of UE capability of eNPN China Telecom discussion Rel-17 NG\_RAN\_PRN\_enh-Core

[R2-2200849](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200849.zip) Discussion on UE capability for NPN CMCC discussion Rel-17 NG\_RAN\_PRN\_enh

[R2-2201236](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201236.zip) Consideration on the eNPN UE Capability ZTE Corporation, Sanechips discussion Rel-17 NG\_RAN\_PRN\_enh-Core

[R2-2201266](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201266.zip) Discussion on UE capabilities for R17 NPN vivo discussion Rel-17 NG\_RAN\_PRN\_enh-Core

[R2-2201469](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201469.zip) UE capabilities LG Electronics discussion Rel-17

[R2-2201524](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201524.zip) Discussion on UE capabilities relating to Rel17 eNPN features Samsung R&D Institute India discussion Rel-17 NG\_RAN\_PRN\_enh-Core

[R2-2201566](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201566.zip) UE capabilities for eNPN Ericsson discussion Rel-17 NG\_RAN\_PRN\_enh-Core

* [032] 11 tdocs noted

## 8.17 NR feMIMO

(NR\_feMIMO-Core; leading WG: RAN1; REL-17; WID: RP-212535)

Time budget: 0.5 TU

Tdoc Limitation: 3 tdocs

Email max expectation: 3 threads

### 8.17.1 Organizational

Rapporteur input, incoming LS etc.

LS in

[R2-2200067](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200067.zip) Follow-up reply LS on inter-cell beam management and multi-TRP in Rel-17 (R1-2112707; contact: Huawei) RAN1 LS in Rel-17 NR\_feMIMO-Core To:RAN2 Cc:RAN4

* Noted

[R2-2200069](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200069.zip) LS on L1-RSRP measurement behaviour when SSBs associated with different PCIs overlap (R1-2112762; contact: vivo) RAN1 LS in Rel-17 NR\_feMIMO-Core To:RAN4 Cc:RAN2

* Noted

[R2-2200077](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200077.zip) LS on BFR for CORESET with two activated TCI states (R1-2112829; ZTE) RAN1 LS in Rel-17 NR\_feMIMO-Core To:RAN4 Cc:RAN2

- ZTE explains that we need to wait for further input from R4

* Noted

[R2-2200112](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200112.zip) Reply LS on TCI State Update for L1/L2-Centric Inter-Cell Mobility to RAN3 (R3-216234; contact: ZTE) RAN3 LS in Rel-17 NR\_feMIMO-Core To:RAN1, RAN2, RAN Cc:RAN4

* Noted

CRs

[R2-2200660](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200660.zip) MAC Running CR for Rel-17 feMIMO Samsung draftCR Rel-16 38.321 16.7.0 NR\_feMIMO-Core

- no change to changes just update TS version

* Use as baseline
* [Post116bis-e][083][feMIMO] 38331 and LS out (Ericsson)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat. Determine agreeable LS out to RAN1 acc to agreements from [AT116bis-e][052] and [AT116bis-e][059], relevant discussions, draft from [AT116bis-e][052]

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat. Approved LS out.

Deadline: Short.

* [Post116bis-e][084][feMIMO] 38321 (Samsung)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

### 8.17.2 General and RRC

High level impacts and high level design for inter-cell beam mgmt. Impacts of mTRP. RRC impacts of feMIMO.

Including [Post116-e][086][feMIMO] RRC (Ericsson) which includes e.g. the related modelling for ICBM TCI state handling and UL power control, and includes parameter designs where RAN1 has indicated upto RAN2, which all have high priority.

Including RRC impacts of all L1 parameters.

* [AT116bis-e][052][feMIMO] RRC progress (Ericsson)

Scope: a) Review R2-2201560, to be endorsed if possible, b) Continue R2-2200015, take agreements into account, attempt to progress further, take also into account R2-221xxxx c) Collect Questions for R1 in an LS out. Identify Open Issues.

Intended outcome: Report, with agreements, CB points

Deadline: CB points CB Mon W1, Otherwise EOM

[R2-2201560](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201560.zip) Running RRC CR for FeMIMO Rel-17 Ericsson draftCR Rel-17 38.331 16.7.0 NR\_feMIMO-Core Late

- has implemented all L1 parameter, except the one under discussion and with FFSes from R1.

* Review offline

[R2-2200015](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200015.zip) Report of [Post116-e][086][feMIMO] RRC (Ericsson) Ericsson report

DISCUSSION

- Ericsson explains that P1, 2, 4, 6, 8, 11 are implemented in the CR below (also 10 but need checking)

P3

- LG think the reference is used for intra cell, so no issue with inter-cell, we can accept R1 proposal on using references. Nokia wonder if this would be the same or different. Ericsson think this can be discussed offline

- Nokia think that additional parameters in BWP config increases interruption at change.

P4

- Ericsson think this could be in the serving cell list.

- Apple proposes cell group config, many companies agree. LGE think we can instead have restrictions. Should be per BWP.

- Intel think it should be per CC per SCS. Need to be consistent w TCI state update

P5

- Ericsson think different handling is needed for CSS and USS, if not visible in the structure, RAN1 would need to capture this in their TS.

- Intel think we should wait as R1 is still discussions, not in list of parameters.

- Xiaomi think we could ask clarification from R1.

- LG and SS think R1 has decided we don’t need to ask.

P6

- Intel wonder if this is based on L1 parameters list.

P2+P8

- Nokia wonder if the list in UL BWP is directly under the BWP IE. Ericssson confirms. MTK agrees

- ZTE think we should have a single list. Think that we may need to discuss BWP presence in MAC CE and what that BWP means. Nokia agrees with ZTE and think we should rather have simple MAC CEs. Both work. Vivo agrees with common list.

* RAN2 to conclude ““Joint DL/UL TCI” means that there is one TCI state ID for each codepoint, while “separate DL/UL TCI” means that there is one or two TCI state IDs for each codepoint.”
* P3: Can consider the R1 proposal with TCI state references, not ask q acc to P3, progress this offline.
* IT shall be possible to configure the parameter BeamAppTime differnet for different SCS
* FFS if parameter BeamAppTime is under the cell group config.
* Implement acc to RAN1 decisions wrt TCI state for PDCCH, applyunifiedtcistate applied to CORESET, introduce editor’s note about the potential issue (maybe something need to be captured in RRC, or in L1 TS, or need to move the IE).
* P6: Clarify which parameter is intended, resolve naming confusion, miáy be agreeable
* RAN2 assumes that unified TCI state related parameters for DL and Joint is implemented iin IE PDSCH-Config.
* RAN2 assumes UL TCI state is in UL BWP-Dedicated IE

[Mon Not Finished]

[R2-2201921](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201921.zip) Report [052] Ericsson

DISCUSSION

P3

- OPPO disagrees, Intel as well.

- Ericsson think the majority want to keep it in the PSCHConfig, and think the impact is less if keeping it here.

- Chair: confusion with a number of q for clarification.

P4 P5

P6

- OPPO wonder whatr are the assumptions in general for SRS resource set. Maybe should Ask.

P12 P13

- Oppo wonder what is the plan for the other parameters. Ericsson think that most are already captured in the running CR, which should be reviewed.

- Ericsson think there is more in the LS.

P8

- Oppo wonder how this shall work. Shall we have both or one. Ericsson think both, will be a network selection whether configured per Ul BWP or per TCI state. Intel has the same question, think R2 shall decide. Ericsson think then there is different understanding.

* RAN2 agrees on Separate TCI state lists for joint/DL and UL in PDSCHConfig and UL BWP, respectively, and separate Id pools.
* RAN2 continues discussing MAC CE design for joint and separate TCI state operation as well as the UL/DL BWP association
* FFS if R2 need to select or whether both is applicable: The PO set(P0, alpha, closed loop index) is encoded in both UL TCI state as well in BWP-UL-Dedicated (that is outside of UL TCI state) and different values are enabled for each UL channel PUSCH, PUCCH, SRS. UE receives the UL pc configuration in either UL TCI states or in BWP UL-dedicated. Can maybe ask R1.
* FFS if pathlossRS is configured in UL TCI state which are configured in BWP-UL-Dedicated
* add a new IE for power control for mTRP FR1 operation and consult on the number of power control sets to be configured.
* Add second sri-PUSCH-MappingToAddModList, and select two SRI-PUSCH-PowerControl from two sri-PUSCH-MappingToAddModList
* RAN2 will ask in the LS that whether the per CORESET indications of followunifiedTCIstate of PDSCH is according to RAN1 intention and whether any limitation or condition needs to specified. FFS on exact question formulation as well as if broader question on functionality is added. Work on the FFS when formulating the questions in a draftLS.
* RAN2 will ask in the LS that about implementation suggestion for ApplyTCI-State-r17-DLList. Starting point:“RAN2 notes there is discrepancy with the description and comment related to ApplyTCI-State-r17-DLList. RAN2 has baseline implementation for this functionality where 1 bit “followunifiedTCIstateof PDSCH” is added in “AssociatedReportConfigInfo” where QCL for an aperiodic resource is currently configured. RAN2 would like to ask whether this implementation is according to intended functionality or whether this indication should be placed per NZP-CSI-RS resource. Note that it will be RAN2 signaling design whether supporting this functionality is 1 bit indication per field X, or by maintaining lists of field X.”
* A parameter “followUnifiedTCIstate-r17” is added to SRSResourceSet IE and RAN2 asks RAN1 whether the stated restrictions are enough and whether those should be placed in TS 38.331 or these will be specified by RAN1. FFS if the parameter can be later replaced by other ASN1 ways to indicate the same or exact parameter name. Can also ask more generally intention about SRS resource set
* Ask RAN1 about further input on how the 2 CBSR and RI restrictions are suppose to be config ured. FFS on exact question formulation that can be worked with the draftLS
* Ask RAN1 whether the parameter startPosition should be there in resourceMapping also Rel-17 as it is there in Rel15 and Rel 16.

[R2-2200016](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200016.zip) Running RRC CR for FeMIMO Rel-17 Ericsson draftCR Rel-17 38.331 16.7.0 B NR\_feMIMO-Core

[R2-2201581](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201581.zip) FeMIMO General and RRC impact Ericsson discussion NR\_feMIMO-Core

[R2-2200224](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200224.zip) RRC parameters for feMIMO Intel Corporation discussion Rel-17 NR\_feMIMO-Core

[R2-2200700](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200700.zip) Configuration and procedures for ICBM and mTRP Qualcomm Incorporated discussion

[R2-2201098](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201098.zip) Inter-cell BM and inter-cell mTRP Huawei, HiSilicon discussion Rel-17 NR\_feMIMO-Core

[R2-2201099](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201099.zip) FeMIMO RRC Discussion Huawei, HiSilicon discussion Rel-17 NR\_feMIMO-Core

[R2-2200260](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200260.zip) Implementation of MIMO RRC parameters OPPO discussion Rel-17

[R2-2201466](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201466.zip) TCI state configuration for inter-cell BM LG Electronics discussion Rel-17

[R2-2200599](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200599.zip) Discussion on RRC aspects for feMIMO vivo discussion Rel-17 NR\_feMIMO-Core

[R2-2201253](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201253.zip) Discussion on the unified TCI framework CATT discussion Rel-17 NR\_feMIMO-Core

[R2-2201467](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201467.zip) Power control and miscellaneous parameters for inter-cell BM LG Electronics discussion Rel-17

Common list or not

[R2-2201223](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201223.zip) Considerations on Implementation Of Unified TCI Framework in RRC ZTE Corporation,Sanechips discussion Rel-17 NR\_feMIMO-Core

[R2-2201122](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201122.zip) RRC impact of FeMIMO Apple discussion Rel-17 NR\_feMIMO-Core

[R2-2200661](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200661.zip) RRC impacts for feMIMO Samsung discussion NR\_feMIMO-Core

[R2-2200316](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200316.zip) Unified TCI Framework Operation from RAN2 Perspectives MediaTek Inc. discussion

* [052] 15 tdocs are Noted
* [AT116bis-e][059][feMIMO] Specific items: SI, MPE (Nokia)

Scope: Take into account R2-2201275, R2-2200569, R2-2201058, collect comments, for SI: Identify options, if possible - find agreements to converge / limit the options. For MPE progress if possible.

Intended outcome: Report

Deadline: Tue W2

[R2-2201719](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201719.zip) Report of [AT116bis-e][059][feMIMO] Specific items: SI, MPE (Nokia) Nokia

Chair: ON MPE, The Following was discussed, initial discussions, somewhat immature no Decisions for now. Can maybe attempt to formulate Open Issue:

*- Proposal 2: Create PHR MAC CE (new MAC CE with eLCID) with MPE information, which contains at least MPE-field (including P-bit as in legacy) and SSBRI/CRI-field for the MPE information. Reserve (as baseline) 1 octet for the SSBRI/CRI in MAC CE.*

*- Proposal 3: Create a single new MAC CE for mTRP PHR, which contains information for both TRPs and indicates which TRP ID is used (FFS how this is indicated). FFS whether additional PHR triggering conditions are defined for mTRP.*

*- Proposal 5: FFS how to define PHR MAC CE for the case of mTRP PHR with MPE reporting (if RAN1 indicates it is allowed).*

DISCUSSION

P0

- OPPO think that for C the parameter is not needed, should ask if needed.

P1

- Intel want to ensure that the config is in UL BWP. Samsung agrees.

- Ericsson wonder if this is inconsistent with RRC running CR.

P2P3P5

- Ericsson think that in the legacy there is a threshold, and it should work the same for this MAC CE. Nokia has the same understanding, no intention to change this.

- Nokia think we don’t try to change legacy formats bec it is cleaner with new.

- Oppo wonder whether the intention is that new MAC CE replaces the old MAC CE or is in addition to the old. Nokia think the new PHR replaces the old one.

- Intel agrees that the format is related to triggering. Prefer new MAC CE format.

- Intel think that TRP ID is replaced by BFD-RS set ID by R1.

- Attempt to phrase Open issues to guide discussion next meeting.

P4

- OPPO think we can remove the FFS, can be up to network.

**MPE:**

* Request the following further information from RAN1: A) How many resources (i.e. SSBRI/CRI ) can be configured in mpe-ResourcePool, and whether the resources are per BWP? B) For mTRP, does UE indicate CORESET pool ID, SRS resource set ID or something else in the mTRP PHR? C) Is the PCMax,f,c needed, and if yes is it included per indicated SSBRI/CRI value, or is it cell-specific?

**SI:**

* Allow NW to update UE SI information either via dedicated configuration, or via switching UE to pTRP for SI reception. FFS if these require specification modifications and whether there are critical issues with the mechanisms.

SI

[R2-2201275](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201275.zip) Considerations on SI aspects of inter-cell beam management NTT DOCOMO, INC. discussion Rel-17

[R2-2200569](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200569.zip) Systerm Information provisioning for inter-cell beam management Fujitsu discussion Rel-17 NR\_feMIMO-Core

PHR / MPE

[R2-2201058](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201058.zip) Discussion on MPE and mTRP Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_feMIMO-Core

* [059] 3 tdocs above are Noted

Measurements

[R2-2201386](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201386.zip) Clarification on the serving cell measurement for mTRP Xiaomi Communications discussion Rel-17 NR\_feMIMO-Core

Misc

[R2-2201254](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201254.zip) Considerations on Inter-cell Beam Management CATT discussion Rel-17 NR\_feMIMO-Core

[R2-2200635](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200635.zip) Discussion on inter-cell beam management Spreadtrum Communications discussion Rel-17

### 8.17.3 Other

Other RAN2 impacts, BFD/BFR. MAC.

[R2-2201694](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201694.zip) Summary of 8.17.3 Other Samsung

[R2-2201699](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201699.zip) Summary of 8.17.3 Other Samsung

* When “beam failure is detected on both TRPs” of SCell, TRP specific BFR for both the failed TRPs remains as pending. TRP specific BFR cancellation procedure is applied for each TRP independently.
* Triggered BFRs for a BFD-RS set of a SpCell shall be cancelled when a MAC PDU is transmitted and this PDU includes enhanced BFR MAC CE (or Truncated enhanced BFR MAC CE, if supported) which contains beam failure recovery information (i.e. candidate beam available or not, candidate beam if available) of that BFD-RS set of the SpCell.

Meaning of “Beam failure detection on both TRPs” of Serving Cell

DISCUSSION

- QC prefer O1, because O2 where UE triggers actions while a procedure is ongoing is redundant. O1 is more efficient. ZTE LG agrees

- Nokia think that the issue with O1 is that the network may not get the first MAC CE and may not respond. O2 is more robust. But need to send candidate beam info in the MAC CE in O2 also for 1st TRP. Xiaomi agree with Nokia.

- QC think BFR counter will be increased if the response is not received, in any case.

- vivo agrees that O1 is more efficient but O2 is more reliable, think reliability is more important. Prefer O2.

- Apple support O2.

* Beam failure is detected on both TRPs” means that BFR is triggered for a TRP of the serving cell while the BFR for another TRP of same serving cell is not successfully completed

PUCCH-SR Resource/SR Configuration

DISCUSSION

- ZTE prefer O1, the network can be aware of which one has failed. Intel also prefer O1, as it would also be simple.

- QC prefer O2, one SR config is enough. One D-SR is sufficient. Think there is a complexity issue on how to use the two SRs in O1. QC think that if we choose O1 we need to specify how to use the two.

* One SR configuration is associated with one PUCCH-SR resource. Up to two SR configurations are signaled for multi TRP BFR i.e. up to two *schedulingRequestId* for multi TRP BFR are included in *MAC-CellGroupConfig*.

New BFR MAC CE Format Aspects

DISCUSSION Options 1, 2, 3 and 4.

- Nokia would prefer to not use the index of RS ID, as it would limit the number of candidates indicated. ZTE agrees

- Apple think Option 2 brings overhead unnecessarily, as the size cannot be optimized for configurations that doesn't need to large size. ZTE think O2 can be enhanced.

- Samsung think O1 and O2 has more overhead and are not aligned with previous agreement to include TRP Set ID in MAC CE.

* Offline

DISCUSSION P13 P15

- Nokia think this depends on the enhanced MAC CE format. P13 in general should be obvious

- Chair: Difficult to discuss now.

- Chair: We can consider how to adapt to min grant sizes on a more detailed level instead, once the contents is clearer. The option of truncation is indeed on the table if needed.

Way forward

DISCUSSION

- Chair: The following was not treated: SR Cancellation Aspects, RA Cancellation Aspects, Handling overlapping between PUCCH resources, “Enhanced TCI state indication for UE-specific PDCCH MAC CE”, PDCCH repetition impacts, “Enhanced PUCCH spatial relation activation/deactivation MAC CE for mTRP”, “Two PUCCH power control parameter set activation/deactivation MAC CE”, “Enhanced PUSCH Pathloss Reference RS Update MAC CE”, “Enhanced PHR MAC CE for mTRP PUSCH repetition”

- Nokia wonder if we treat MPE parts offline as well. Apple think we need info from R1 or R4 in order to progress.

* Continue agree offline, easy agreements only.
* [AT116bis-e][060][feMIMO] MAC general (Samsung)

Scope:

1) Further progress based on R2-2201699, taking into account on-line discussion etc.

- Attempt agree on points that seem easy agreeable, if any.

- Collect comments in order to find ways forward, identify open issues etc on RAN1-defined MAC CEs, and on selected basic aspects (rapporteur to select), e.g. contents of BFR MAC CE.

2) Take into account RRC agreements and some relevant input in 8.17.2 (e.g. R2-2200316) and attempt further progress on MAC CE for TCI state activation (at least identify issues).

Intended outcome: Report, with agreements if any, proposed way forwards, open issues etc.

Deadline: EOM

- Can be agreed offline. Maybe need time to check.

[R2-2201949](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201949.zip) Summary of [AT116bis-e][060][feMIMO] MAC general (Samsung) Samsung

* [060] “Enhanced TCI state indication for UE-specific PDCCH MAC CE” can be applied for simultaneously activating two TCI states for a set of serving cells defined by legacy R16 parameters *simultaneousTCI-UpdateList1* and *simultaneousTCI-UpdateList2*.
* [060] Send LS to RAN1 to ask whether the “Enhanced TCI state indication for UE specific PDCCH MAC CE” can be applied to CORESET zero or not.
* [060] “Enhanced TCI state indication for UE specific PDCCH MAC CE” is not applicable to any of the configured CORESETs in a BWP if the CORESETs are configured with different *CORESETPoolindex* values in the BWP.
* [060] “Enhanced TCI state indication for UE specific PDCCH MAC CE” is applied only if *sfnSchemePdcch* is configured.
* [060] If the PDCCH reception includes two PDCCH candidates from corresponding search space sets, start or restart *drx-InactivityTimer* for this DRX group in the first symbol after the end of the PDCCH candidate that ends later in time. FFS how to capture this agreement in the TS 38.321 whether adding it as a NOTE or adding it in the normative text.
* [060] FFS whether to clarify the Active Time when the PDCCH repletion is configured.
* [060] Introduce the new PUCCH spatial relation activation/deactivation MAC CE for mTRP PUCCH repetition i.e. activating two spatial relation info’s (for FR2) for a group of PUCCH resources in a CC.
* [060] Introduce the new MAC CE(s) to support PUCCH Power control set update (with power control) for FR1 cases. FFS, detail MAC CE design based on new RRC IE for FR1-dedicated power control set.
* [060] To revise the legacy PUSCH Pathloss Reference RS Update MAC CE with additional field(s) to differentiate the TRP for mTRP PUSCH repetition, replace the Reserve bit (‘R’) to a TRP index field (‘T’) so that the MAC CE can indicate which TRP the PUSCH pathloss reference RS update can apply for.
* [060] For the enhancement BFR MAC CE design, it is FFS with:

• Two sets of serving cell bitmap (Option 2)

• A bitmap in addition to serving cell bitmap (Option 3)

* [060] FFS whether to support TRP level truncation.
* [060] MAC entity may stop, ongoing Random Access procedure due to a pending SR for BFR of a BFD-RS set of an SCell, 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 SCell.
* [060] FFS, 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
* [060] When the MAC entity has pending SR for beam failure recovery of a BFD-RS set and the MAC entity has one or more PUCCH resources overlapping with PUCCH resource for beam failure recovery of that BFD-RS set for the SR transmission occasion, the MAC entity considers only the PUCCH resource for beam failure recovery of that BFD-RS set as valid.

[R2-2201950](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201950.zip) **[**DRAFT] LS on Enhanced TCI state indication for UE-specific PDCCH MAC CE Samsung LS out

- Chair: This LS is very simple but was provided very late:

* [060] Email approval.
* [Post116bis-e][094][feMIMO] LS on Enhanced TCI state indication for UE-specific PDCCH MAC CE (Samsung)

Scope: Check Draft LS out in R2-2201950, revise if needed

Intended outcome: Approved LS out

Deadline: Short.

[R2-2200205](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200205.zip) Multi TRP Beam Failure Detection and Recovery Samsung Electronics Co., Ltd discussion Rel-17 NR\_feMIMO-Core

[R2-2200403](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200403.zip) Further discussions on BFD and BFR of mTRP NEC Corporation discussion Rel-17

[R2-2200404](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200404.zip) Further discussions on BFD and BFR of Unified TCI state and CA NEC Corporation discussion Rel-17

[R2-2200570](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200570.zip) RAN2 impacts of beam failure detection and recovery Fujitsu discussion Rel-17 NR\_feMIMO-Core

[R2-2200600](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200600.zip) Discussion on BFD/BFR for mTRP vivo discussion Rel-17 NR\_feMIMO-Core Late

[R2-2200755](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200755.zip) BFR for both SpCell and SCell in mTRP Lenovo, Motorola Mobility discussion Rel-17

[R2-2200719](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200719.zip) Remaining issues on multi-TRP BFR Qualcomm Incorporated discussion Rel-17 NR\_feMIMO-Core

[R2-2200783](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200783.zip) open issues on TRP-specific BFR OPPO discussion Rel-17 NR\_feMIMO-Core

[R2-2201224](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201224.zip) Consideration on Implementation of BFR For mTRP ZTE Corporation,Sanechips discussion Rel-17 NR\_feMIMO-Core

[R2-2201359](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201359.zip) Remaining issues on BFD/BFR for mTRP LG Electronics Inc. discussion NR\_feMIMO-Core

[R2-2201387](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201387.zip) Remaining issues of mTRP BFR Xiaomi Communications discussion Rel-17 NR\_feMIMO-Core

[R2-2201464](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201464.zip) RAN2 aspects for BFR, BFD and RLM for mTRP operation Ericsson discussion NR\_feMIMO-Core

[R2-2201588](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201588.zip) Beam failure with mTRP Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_feMIMO-Core

[R2-2200225](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200225.zip) Remaining issues on HST-SFN PDCCH Intel Corporation discussion Rel-17 NR\_feMIMO-Core

[R2-2200721](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200721.zip) PDCCH repetition impact on MAC and MIMO MAC CEs Qualcomm Incorporated discussion Rel-17 NR\_feMIMO-Core

[R2-2200751](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200751.zip) Discussion on Power Headroom Reporting for mTRP PUSCH repetition ASUSTeK discussion Rel-17 NR\_feMIMO-Core

[R2-2200662](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200662.zip) MAC CE impacts for feMIMO Samsung discussion NR\_feMIMO-Core

[R2-2200782](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200782.zip) Discussion on MAC CEs for FeMIMO OPPO discussion Rel-17 NR\_feMIMO-Core

[R2-2201100](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201100.zip) FeMIMO MAC Discussion Huawei, HiSilicon discussion Rel-17 NR\_feMIMO-Core

[R2-2201123](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201123.zip) MAC impact of FeMIMO Apple discussion Rel-17 NR\_feMIMO-Core

[R2-2201168](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201168.zip) Discussion on Multi-TRP PHR enhancements InterDigital discussion Rel-17 NR\_feMIMO-Core

[R2-2201225](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201225.zip) Initial Discussion on new PHR and new PHR MAC CE ZTE Corporation,Sanechips discussion Rel-17 NR\_feMIMO-Core

[R2-2201255](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201255.zip) Remaining MAC Aspects for M-TRP CATT discussion Rel-17 NR\_feMIMO-Core

[R2-2201529](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201529.zip) MAC CE impacts Ericsson discussion NR\_feMIMO-Core

* 24 tdocs noted

## 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 [Post116-e][514][RACH partitioning] Signaling design (Ericsson) and any other input for RRC signalling (focus company tdocs on issues that are not addressed in [514] email)

[R2-2200019](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200019.zip) Running CR to 38.331 on RA Partitioning Ericsson draftCR Rel-17 38.331 16.7.0 B NR\_redcap-Core, NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_slice-Core

[R2-2200020](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200020.zip) [Post116-e][514][RACH partitioning] Signaling design (Ericsson) Email discussion Rapporteur (Ericsson) discussion Rel-17 NR\_redcap-Core, NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_slice-Core

[R2-2200261](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200261.zip) RRC aspects of RACH partition OPPO discussion Rel-17

[R2-2200419](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200419.zip) Discussion on signaling design for RACH partitioning CATT discussion Rel-17 NR\_cov\_enh-Core, NR\_slice-Core, NR\_SmallData\_INACTIVE-Core, NR\_redcap-Core

[R2-2200456](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200456.zip) Signalling design of RACH partitioning for multiple feature combinations Intel Corporation discussion Rel-17 NR\_cov\_enh-Core, NR\_redcap-Core, NR\_UE\_pow\_sav\_enh-Core, NR\_slice-Core

[R2-2200701](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200701.zip) Consideration on the common signalling framework for RACH partitioning Beijing Xiaomi Software Tech discussion

[R2-2200812](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200812.zip) 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

[R2-2201049](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201049.zip) Features Combination signalling Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_redcap-Core, NR\_slice-Core

[R2-2201127](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201127.zip) Signaling aspects of RACH partitioning Apple discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_redcap-Core

[R2-2201128](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201128.zip) MAC aspects of RACH partitioning Apple discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_redcap-Core

[R2-2201473](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201473.zip) Discussion on signalling aspects on common RACH framework LG Electronics Inc. discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_slice-Core, NR\_redcap-Core, NR\_cov\_enh-Core

[R2-2201597](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201597.zip) Discussion on RACH Partitioning in RA Configuration Aspect vivo discussion Rel-17 R2-2109442 Late

### 8.18.2 Common aspects of RACH procedure

Including output of [Post116-e][515][RACH partitioning] MAC Procedure aspects (ZTE) and any other inputs not treated in 515, including RACH procedure and input for handling of the common MAC aspects including handling of RACH initiation, retransmissions etc

[R2-2200049](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200049.zip) [Post116-e][515][RACH partitioning] MAC Procedure aspects (ZTE) email discussion Rapporteur (ZTE Corporation) discussion Revised

[R2-2200193](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200193.zip) Selection and fallback between RACH partitions Qualcomm Incorporated discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_redcap-Core, NR\_slice-Core

[R2-2200262](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200262.zip) MAC aspects of RACH partition OPPO discussion Rel-17

[R2-2200420](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200420.zip) Discussion on MAC procedure for RACH partitioning CATT discussion Rel-17 NR\_cov\_enh-Core, NR\_slice-Core, NR\_SmallData\_INACTIVE-Core, NR\_redcap-Core

[R2-2200457](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200457.zip) RACH resource/configuration selection and fallback mechanism Intel Corporation discussion Rel-17 NR\_cov\_enh-Core, NR\_redcap-Core, NR\_UE\_pow\_sav\_enh-Core, NR\_slice-Core

[R2-2200617](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200617.zip) Remaining issues for MAC procedure in RACH partition NEC discussion Rel-17 NR\_redcap-Core, NR\_cov\_enh-Core, NR\_SmallData\_INACTIVE-Core, NR\_slice-Core

[R2-2200703](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200703.zip) Considerations on the common aspects of RACH procedure Beijing Xiaomi Software Tech discussion

[R2-2200813](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200813.zip) MAC aspects for RACH partitioning Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_slice-Core, NR\_redcap-Core, NR\_cov\_enh-Core

[R2-2200848](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200848.zip) Discussion on RACH indication and partitioning CMCC discussion Rel-17

[R2-2200917](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200917.zip) RNTI collision issue for different features in NR Sony discussion Rel-17 NR\_redcap-Core, NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_slice-Core

[R2-2201025](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201025.zip) RACH indication and partitioning InterDigital discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_redcap-Core, NR\_slice-Core

[R2-2201026](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201026.zip) Updated - [Post116-e][515][RACH partitioning] MAC Procedure aspects (ZTE) email discussion Rapporteur (ZTE Corporation) discussion [R2-2200049](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200049.zip)

[R2-2201031](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201031.zip) MAC procedure aspects of RACH partitioning ZTE corporation, Sanechips discussion

[R2-2201474](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201474.zip) Further discussion on common RA procedure LG Electronics Inc. discussion Rel-17 NR\_SmallData\_INACTIVE-Core, NR\_slice-Core, NR\_redcap-Core, NR\_cov\_enh-Core

[R2-2201589](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201589.zip) Selection of RACH partition Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SmallData\_INACTIVE-Core

[R2-2201628](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201628.zip) Discussion on RACH Partitioning in RA Procedure Aspect vivo discussion Rel-17 R2-2110927 Late

## 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.

[R2-2200206](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200206.zip) Preamble and RACH resource configuration Samsung Electronics Co., Ltd discussion Rel-17 NR\_cov\_enh-Core, NR\_SmallData\_INACTIVE-Core, NR\_slice-Core

[R2-2200515](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200515.zip) Running 38300 CR for NR coverage enhancements China Telecom draftCR Rel-17 38.300 16.8.0 B NR\_cov\_enh-Core

[R2-2200602](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200602.zip) Running 38321 CR for NR coverage enhancements ZTE Corporation draftCR Rel-17 38.321 16.7.0 B NR\_cov\_enh-Core

[R2-2201553](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201553.zip) RACH partitioning for Rel-17 features Ericsson other Rel-17

[R2-2201616](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201616.zip) RRC running CR for CE Huawei, HiSilicon draftCR Rel-17 38.331 16.7.0 B NR\_cov\_enh-Core

### 8.19.2 General

RAN2 impact tech proposals.

[R2-2200192](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200192.zip) Issues on coverage enhancements Qualcomm Incorporated discussion Rel-17 NR\_cov\_enh-Core

[R2-2200207](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200207.zip) RA Procedure Aspects Samsung Electronics Co., Ltd discussion Rel-17 NR\_cov\_enh-Core, NR\_SmallData\_INACTIVE-Core, NR\_slice-Core

[R2-2200251](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200251.zip) Discussion on CE’s impact on UL carrier selection OPPO discussion Rel-17 NR\_cov\_enh-Core

[R2-2200269](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200269.zip) Considerations on requesting Msg3 repetition NEC Corporation discussion Rel-17 NR\_cov\_enh-Core

[R2-2200272](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200272.zip) Remaining issues related to coverage enhancement Xiaomi discussion Rel-17

[R2-2200421](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200421.zip) Consideration on RAN2 impacts of Msg3 repetition CATT discussion Rel-17 NR\_cov\_enh-Core

[R2-2200603](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200603.zip) Remaining issues on Msg3 repetition in CE ZTE Corporation, Sanechips discussion Rel-17 NR\_cov\_enh-Core

[R2-2201177](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201177.zip) Further Discussion on RAN2 Impacts of Msg3 Repetition vivo discussion Rel-17 NR\_cov\_enh

[R2-2201426](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201426.zip) Remaining issues for supporting Msg3 repetition LG Electronics Inc. discussion Rel-17 NR\_cov\_enh-Core

[R2-2201554](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201554.zip) RNTI collision problem for Rel-17 features Ericsson other Rel-17

[R2-2201590](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201590.zip) RAN2 aspects for Coverage Enhancement Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_cov\_enh-Core

[R2-2201598](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201598.zip) On Type A PUSCH repetitions for Msg3 Ericsson discussion Rel-17 NR\_cov\_enh

[R2-2201617](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201617.zip) Remaining issues on RAN2 support of Msg3 PUSCH repetition Huawei, HiSilicon 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

Note: RAN2 is to prioritize protocol support of RAN1 design and not on optimizations on items not discussed in RAN1

[R2-2201032](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201032.zip) Consideration on LBT impact ZTE corporation, Sanechips discussion

[R2-2201033](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201033.zip) Consideration on RRC and MAC running CR ZTE corporation, Sanechips discussion

### 8.20.1 Organizational

Including LSs, any rapporteur inputs and results of running CR email discussions [217] and [218]

Including input running Stage-2 CR from the specification rapporteur (which does not count against the Tdoc limits)

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

[R2-2200017](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200017.zip) Running CR to 38306 for NR operation for up to 71G Intel Corporation draftCR Rel-17 38.306 16.7.0 B NR\_ext\_to\_71GHz-Core

[R2-2200018](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200018.zip) Running CR to 38331 on UE capability for 71G Intel Corporation draftCR Rel-17 38.331 16.7.0 B NR\_ext\_to\_71GHz-Core

[R2-2200076](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200076.zip) LS on initial access for 60 GHz (R1-2112805; contact: Intel) RAN1 LS in Rel-17 NR\_ext\_to\_71GHz To:RAN2

[R2-2200078](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200078.zip) LS on RA-RNTI and MSGB-RNTI for 480 and 960 kHz (R1-2112832; contact: Intel) RAN1 LS in Rel-17 NR\_ext\_to\_71GHz To:RAN2

[R2-2200718](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200718.zip) List of issues for completion of FR2-2 Work (Rapporteur Input) Qualcomm Incorporated discussion

[R2-2200720](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200720.zip) Running Stage-2 CR for Extending NR operation to 71GHz Qualcomm Incorporated draftCR Rel-17 38.300 16.8.0 B NR\_ext\_to\_71GHz-Core

[R2-2200940](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200940.zip) Open issue list of RRC CR for 71 GHz Ericsson (rapporteur) discussion Rel-17 NR\_ext\_to\_71GHz-Core

### 8.20.2 General

Including discussion on UP aspects based on RAN1 progress (e.g. RLC RTT, RACH, L2 buffer sizes)

Including discussion on latest L1 parameters from RAN1 that were not yet accounted for in the running CR discussions

Including discussion on RRC and MAC impacts not yet covered in the running CR discussions

Including further discussion on UE capability aspects based on latest information from RAN1/4 and previous RAN2 meeting (e.g. FR2-1/2 differentiation, whether to use per-band signalling for FR2-2-specific capabilities, whether L2 buffer requires additional capabilities etc.)

Including discussion on whether any existing features require modifications due to FR2-2 (e.g. IDC, LBT)

[R2-2200006](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200006.zip) Extending NR operation to 71 GHz Ericsson draftCR Rel-17 38.331 16.7.0 NR\_ext\_to\_71GHz

[R2-2200274](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200274.zip) Consideration on support of directional LBT Xiaomi discussion Rel-17

[R2-2200460](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200460.zip) Remaining UE capability issues on NR operation for upto 71GHz Intel Corporation discussion Rel-17 NR\_ext\_to\_71GHz-Core

[R2-2200461](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200461.zip) UP and CP impact on NR operation for upto 71GHz Intel Corporation discussion Rel-17 NR\_ext\_to\_71GHz-Core

[R2-2200480](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200480.zip) Discussion about RAN2 impacts of Ext 52-71GHz Huawei, HiSilicon discussion Rel-17 NR\_ext\_to\_71GHz-Core

[R2-2200481](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200481.zip) Discussion about UE capabilities of Ext 52-71GHz Huawei, HiSilicon discussion Rel-17 NR\_ext\_to\_71GHz-Core

[R2-2200706](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200706.zip) Discussion on potential LBT impacts Lenovo, Motorola Mobility discussion Rel-17 NR\_ext\_to\_71GHz-Core

[R2-2200732](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200732.zip) Discussion on L2 buffer size Samsung discussion Rel-17 NR\_ext\_to\_71GHz-Core

[R2-2200733](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200733.zip) Discussion on UAI enhancement for operation in FR2-2 Samsung discussion Rel-17 NR\_ext\_to\_71GHz-Core

[R2-2200884](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200884.zip) Initial access aspects Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ext\_to\_71GHz-Core

[R2-2200885](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200885.zip) RA-RNTI Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ext\_to\_71GHz-Core

[R2-2200941](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200941.zip) Remaining protocol aspects Ericsson discussion Rel-17 NR\_ext\_to\_71GHz-Core

[R2-2200942](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200942.zip) Remaining RRC aspects Ericsson discussion Rel-17 NR\_ext\_to\_71GHz-Core

[R2-2201014](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201014.zip) Impacts of directional LBT on MAC procedure OPPO discussion Rel-17

[R2-2201015](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201015.zip) On the issues of RA-RNTI and Initial Access OPPO discussion Rel-17

[R2-2201284](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201284.zip) Remaining issues for Ext 71GHz vivo Mobile Com. (Chongqing) discussion Rel-17 NR\_ext\_to\_71GHz-Core

[R2-2201424](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201424.zip) Discussion on RAN1 LS and L2 buffer size LG Electronics Inc. discussion Rel-17 NR\_ext\_to\_71GHz-Core

[R2-2201425](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201425.zip) Discussion on LBT impact based on RAN1 conclusions LG Electronics Inc. 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.

### 8.21.1 TEI proposals initiated by other groups

Including incoming LSes. This AI may be deprioritized at current meeting.

[R2-2200434](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200434.zip) Introduction of RACH triggers for T\_ADV in NR E-CID [NRTADV] Huawei, HiSilicon, Ericsson, CATT, NTT DOCOMO, Deutsche Telecom, Polaris Wireless, ZTE Corporation CR Rel-17 38.300 16.8.0 0399 - B TEI17

* [000] Postponed

### 8.21.2 TEI proposals initiated by RAN2

Tdoc Limitation: No input on new (= not agreed to be progressed) proposals is expected at current meeting, Exception: The long email discussion after last meeting will be treated. Including outcome of [Post116-e][087][TEI17] Explicit SI start position for SI Scheduling (Ericsson)

SI Scheduling

Treat Online W2

[R2-2200046](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200046.zip) Report on Explicit SI start position for SI Scheduling Ericsson discussion

Observation 1 DSS based deployment can exist for many years to come. Hence, basic functionality such as broadcast of SIBs/posSIBs are supported in such deployment.

Observation 2 Majority view is that the problem can occur also for non-DSS deployments.

Observation 3 Removing 80ms offset based solution is not relevant if solution d is adopted.

Based on the discussion in the previous sections we propose the following:

Proposal 1 RAN2 to agree on solution “d”.

Proposal 2 RAN2 to agree on solution “e” for NR SIBs introduced from Rel-17; i.e only consider non-positioning SIBs from Rel-17.

DISCUSSION

- Chair: There seems to be support for the understanding that DSS deployments and POS SI are two problematic cases.

P1 P2

- Huawei think solution d is touching Rel-16 and can thus not be accepted. Huawei think dedicated SI can resolve these issues.

- Oppo agrees and think if we need to choose then d is preferred.

- Mediatek think that d is proposed as a R17 CR, and think that there is no BC issue. Deployments that can currently not schedule POS SIBs can update and make this possible for R17 UEs and updated R16 UEs if any.

- Ericsson think that d should be regarded a correction, and is backwards compatible. Think it is a low hanging fruit. The correction is to make SIB bcast of POS info possible in all scenarios.

- Ericsson point out that e is for DSS deployments.

- Apple think d is a correction to an error to solution from R16, support d. Solution e different not sure it is needed

- QC are ok with touching POS SI, but UEs may implement the old behaviour which could cause issues. Need to make sure that the old behaviour is strongly discouraged. Think it would be safer to modify R16 TS with a CR. Lenovo Apple agrees.

- Huawei think d is NBC. MTK think that a legacy R16 UE, if the network uses offset with non-80ms period, such UE cannot receive such POS SIB (which was intended from beginning). Such UE if SI cannot be acquired will acquire such info by LPP.

- Verizon confirms that there is no backwards compatibility issue on UE level.

- vivo support solution e, think it is flexible. Wonder whether R16 UEs will be triggered to get info by LPP by the described scenario.

- QC wonder if degradation is always graceful. Could dep. on Impl.

- Ericsson think both e and d are needed, think that for POS it need to be fixed, otherwise there will be impact to intended characteristics for Positioning.

- OPPO think R16 d can be acceptable, but doesn't see the need for e

- Chair: should assume that d may involve R16 CR.

- Chair. After Soh: Sustained objections for both proposals on the table. Ask Operators for guidance.

- Softbank think DSS will be used for long period, and e is very important.

* Support Solution e (for all SIBs for R17 and onwards)

[Chair: We treat CR at next meeting]

[R2-2201071](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201071.zip) Explicit Indication of SI Scheduling start position Ericsson, Verizon, Softbank, Deutsche Telekom CR Rel-17 38.331 16.7.0 2869 - B TEI17

[R2-2201085](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201085.zip) System information scheduling enhancements for Rel-17 MediaTek Inc. discussion Rel-17 TEI17

[R2-2201086](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201086.zip) Updating 80ms hardcoded offset with shortest configured SI-Periodicity offset for positioning SI Scheduling MediaTek Inc., Ericsson, Verizon, Softbank, Apple, Deutsche Telekom CR Rel-17 38.331 16.7.0 2870 - B TEI17

[R2-2201392](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201392.zip) Discussion on SI Scheduling vivo discussion TEI17

**PO Alignment**

[R2-2201140](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201140.zip) Discussion on UE capability signaling of inactiveStatePO-Determination-r17 in LTE Lenovo, Motorola Mobility discussion Rel-17 TEI17

* [000] postponed

Not Treated

[R2-2201498](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201498.zip) EPS fallback enhancements in Rel-17 Huawei, HiSilicon, CMCC, China Telecom, China Unicom, LG Uplus discussion Rel-17 TEI17

[R2-2200423](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200423.zip) EPS Fallback Lenovo, Motorola Mobility discussion Rel-17 TEI17

[R2-2201320](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201320.zip) Discussion on EPS fallback enhancement Apple discussion Rel-17 TEI17

[R2-2201401](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201401.zip) Redirection enhancement on EPS Fallback vivo discussion Rel-17 TEI17

[R2-2201402](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201402.zip) 38331 CR for Redirection enhancement on EPS Fallback vivo CR Rel-17 38.331 16.7.0 2873 - B TEI17

[R2-2201403](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201403.zip) 38306 CR for Redirection enhancement on EPS Fallback vivo CR Rel-17 38.306 16.7.0 0671 - B TEI17

[R2-2201398](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201398.zip) Early measurement for EPS Fallback vivo,CMCC, softback, China Telecom,China Unicom, Vodafone, Ericsson discussion Rel-17 TEI17

[R2-2201399](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201399.zip) 38331 CR for Early measurement for EPS Fallback vivo,CMCC, softback, China Telecom,China Unicom, Vodafone CR Rel-17 38.331 16.7.0 2872 - B TEI17

[R2-2201400](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201400.zip) 38306 CR for Early measurement for EPS Fallback vivo,CMCC, softback, China Telecom,China Unicom, Vodafone CR Rel-17 38.306 16.7.0 0670 - B TEI17

[R2-2201472](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201472.zip) Configuration of chronological order for performing inter-frequency measurements BT Plc., Ericsson, Vodafone, T-Mobile USA, Qualcomm discussion Rel-17

[R2-2201559](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201559.zip) Secondary DRX enhancement Ericsson, Verizon, Qualcomm Inc, T-Mobile USA Inc., Deutsche Telekom other Rel-17 TEI17

[R2-2200723](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200723.zip) Discussion on Secondary DRX Enhancement LG Electronics Deutschland discussion Rel-17 TEI17

[R2-2201130](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201130.zip) SDAP end-marker in RLC UM Apple, Futurewei, Spreadtrum, FGI, Asia Pacific Telecom discussion Rel-17 TEI17

[R2-2201518](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201518.zip) DRX HARQ RTT timer for one-shot HARQ feedback LG Electronics discussion NR\_unlic-Core

[R2-2201519](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201519.zip) CR for DRX HARQ RTT Timer for one-shot HARQ-ACK LG Electronics CR Rel-17 38.321 16.7.0 1183 - F NR\_unlic-Core

## 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

Includes: Pre-configured MG pattern(s) (fast MG configuration) - protocol impacts of the mechanisms of activation/deactivation of MG following a DCI or timer based BWP switch, e.g., per BWP MG configuration based on RAN4 input,

Multiple concurrent and independent MG patterns [RAN4, RAN2]. Specification of protocol impacts for multiple concurrent and independent MG patterns based on RAN4 input

Network Controlled Small Gap (NCSG) specification - Procedures and signaling for NCSG patterns.

### 8.22.1 Organizational

Rapporteur Input

LS in

[R2-2200125](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200125.zip) LS on R17 NR MG enhancements – Pre-configured MG (R4-2120302; contact: CATT, Intel) RAN4 LS in Rel-17 NR\_MG\_enh-Core To:RAN2

* Noted

[R2-2200126](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200126.zip) LS on multiple concurrent MGs (R4-2120304; contact: Huawei) RAN4 LS in Rel-17 NR\_MG\_enh-Core To:RAN2

* Noted

[R2-2200127](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200127.zip) LS on NCSG (R4-2120306; contact: Apple) RAN4 LS in Rel-17 NR\_MG\_enh-Core To:RAN2 Cc:RAN1

- R4 asks for feedback on support for DC

* Noted

General

[R2-2201241](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201241.zip) Progress on MG enhancement WI MediaTek Inc., Intel discussion

DISUCSSION

- Chair: P1 offline on Open issues.

* From RRC signaling design, RAN2 aim to support joint working among Pre-MG, concurrent gaps, and NCSG
* For all the 3 objectives in MG enh. WI, RAN2 prioritize the design in NR SA.
* [Post116bis-e][067][MGE] 38331 (Mediatek)

Scope: CR review etc. Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][085][MGE] Open Issues (Intel)

Scope: Determine if Company input by Pre117-e discussions shall be used, and how many / which Pre-discussions shall be done. Capture Open Issues not captured in the CR email discussions and suggest how to treat. [After finalization, Merge open issues from other discussions into a WI OI list (OI for which company input is invited in some way shall be listed in the WI-list).

Intended outcome: Open Issues list, and organization of Pre117-e Company input discussions for the WI.

Deadline: Short.

Misc

[R2-2200835](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200835.zip) RRC signaling of measurement gap enhancements Huawei, HiSilicon draftCR Rel-17 38.331 16.7.0 NR\_MG\_enh-Core

* [AT116bis-e][061][MGE] LS out (Apple)

Scope: For MGE WI Discuss questions for potential LS out to R4 (for any subtopic). E.g. it was proposed to ask whether to support simultaneous configuration on NCSG and legacy measurement gap, but there were a number of comments. Consider whether to merge anything with discussion under 8.0.3. Make LS out if agreeable.

Intended outcome: Report, LS out

Deadline: Tue W2 (approve offline if possible, CB online only if there is particular issue for decision).

[R2-2201934](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201934.zip) Summary of [AT116bis-e][061][MGE] LS out (Apple) Apple

* [061] Capture the following things in the reply LS to RAN4.

1) RAN2 decides to prioritize NR SA for NCSG

2) Ask RAN4 whether to support simultaneous configurations on the following combinations?

A NCSG FR1 gap + NCSG FR2 gap

B Legacy FR1 gap + NCSG FR2 gap

C Legacy FR2 gap + NCSG FR1 gap

D One legacy perUE gap + one NCSG perUE gap

E One legacy perUE gap + NCSG FR1 gap

F One legacy perUE gap + NCSG FR2 gap

[R2-2201935](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201935.zip) Reply LS to RAN4 on NCSG RAN2 LS out

* [061] LS out is approved

### 8.22.2 Pre-configured MG patterns

[R2-2201687](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201687.zip) Summary of 8.22.2 MGE: pre-configured measurement gap Intel

* “Easy” agreements offline, discussion points for online CB (if possible)
* [AT116bis-e][062][MGE] pre-configured measurement gap (Intel)

Scope: Based on R2-2201687, attempt to agree offline “easy agreements”.

Intended outcome: Report

Deadline: EOM

[R2-2201925](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201925.zip) [AT116bis-e][062][MGE] pre-configured measurement gap (Intel) Intel Corporation

DISCUSSION

P1 P2 P3

- Nokia think P3 should be clarified to be for this WI. Sony agrees.

* Add 1 bit indication in *gapConfig* to indicate pre-configured measurement gap.
* In case of simultaneous support of legacy gap and pre-configured gap, it is agreed to support option 2: combine concurrent gap to indicate pre-configured gap if both are enabled.
* RAN2 confirms that MAC-CE based activation/deactivation for pre-configured MG is NOT supported for MGE WI.

[R2-2200219](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200219.zip) Stage 3 detail for pre-configured gap Intel Corporation discussion Rel-17 NR\_MG\_enh-Core

[R2-2200222](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200222.zip) Draft running CR to 38331 for pre-configured measurement gap to support case 5 Intel Corporation draftCR Rel-17 38.331 16.7.0 B NR\_MG\_enh-Core

[R2-2200223](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200223.zip) Draft running CR to 38331 for pre-configured measurement gap to support case 4 and 5 Intel Corporation draftCR Rel-17 38.331 16.7.0 B NR\_MG\_enh-Core

[R2-2200492](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200492.zip) Discussion on Pre-configured MG OPPO discussion Rel-17 NR\_MG\_enh-Core

[R2-2200499](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200499.zip) Discussion on Pre-Configured MG CATT discussion Rel-17 NR\_MG\_enh-Core

[R2-2200585](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200585.zip) Discussion on per-configured measurement gap vivo discussion Rel-17 NR\_MG\_enh-Core

[R2-2200606](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200606.zip) Discussion on Pre-Configured MG ZTE Corporation, Sanechips discussion Rel-17 NR\_MG\_enh-Core

[R2-2200832](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200832.zip) Discussion on Pre-configured MG Huawei, HiSilicon discussion Rel-17 NR\_MG\_enh-Core

[R2-2201011](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201011.zip) Discussion on support of Pre-Configured Measurement Gap Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MG\_enh-Core

[R2-2201247](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201247.zip) Discussion on pre-configured MG MediaTek Inc. discussion

[R2-2201272](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201272.zip) Discussion on Pre-configured MG Xiaomi Communications discussion

[R2-2201287](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201287.zip) Pre-configured measurement gap LG Electronics discussion

[R2-2201288](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201288.zip) Draft LS on NW-Controlled activationdeactivation of pre-configured MG LG Electronics LS out To:RAN4

[R2-2201567](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201567.zip) Pre-configured measurement gaps Ericsson discussion Rel-17 NR\_MG\_enh-Core

[R2-2201107](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201107.zip) RAN2 impact from Rel-17 Pre-MG Apple discussion NR\_MG\_enh-Core

[R2-2200497](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200497.zip) Preconfigured measurement gap patterns Samsung discussion

* 16 tdocs are noted

### 8.22.3 Multiple concurrent and independent MG patterns

[R2-2201672](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201672.zip) [Pre116bis][012][MGE] Summary of 8.22.3 Multiple concurrent and independent MG patterns (MediaTek) MediaTek Inc.

DISCUSSION

P5

- Huawei think we don’t need to consider MR-DC and not consider 2G.

- LG are ok to be future proofness, but think ASN.1 extendibility is sufficient

P4

- Samsung wonder if this is really useful?

- MTK think this is useful e.g. as prep for MR-DC. Huawei and Intel think this was requested by R4. Nokia support

- Apple think R4 only mentions PRS

- Add FFS to understand what R4 requires.

P2P3

- Samsung think Alt-1 is better wrt overhead. Strongly prefer.

* Introduce multiple gap configuration in IE *MeasGapConfig* (i.e. by configuring multiple *GapConfig*).

FFS Whether to use *ToAddModList* and *ToReleaseList* structure

FFS to add gap ID in *GapConfig*

* FFS if In addition to the per frequency layer association in P3, define ASN.1 for per use case (e.g. PRS, SSB, CSI-RS, EUTRA) association with concurrent gaps.
* RAN2 don’t supports concurrent gap association to 3G/2G from signalling perspective, but the signalling shall be extendable if this need to be introduced.
* For association between concurrent MG and measured frequencies: Indicate the associated gaps (via “gap ID”) in MO; (for PRS measurement, indicating in the association in MG configuration).

[R2-2200220](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200220.zip) Stage 3 detail for concurrent gap Intel Corporation discussion Rel-17 NR\_MG\_enh-Core

[R2-2200462](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200462.zip) Draft running CR to 38331 for concurrent measurement gap Intel Corporation draftCR Rel-17 38.331 16.7.0 B NR\_MG\_enh-Core

[R2-2200493](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200493.zip) Discussion on Concurrent MG OPPO discussion Rel-17 NR\_MG\_enh-Core

[R2-2200500](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200500.zip) Discussion on Concurrent MG CATT discussion Rel-17 NR\_MG\_enh-Core

[R2-2200586](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200586.zip) Discussion on multiple concurrent and independent MG patterns vivo discussion Rel-17 NR\_MG\_enh-Core

[R2-2200607](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200607.zip) Association configuration of concurrent measurement gap ZTE Corporation, Sanechips discussion Rel-17 NR\_MG\_enh-Core

[R2-2200833](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200833.zip) Discussion on Concurrent MG Huawei, HiSilicon discussion Rel-17 NR\_MG\_enh-Core

[R2-2201012](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201012.zip) Discussion on support of Concurrent Measurement Gap Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MG\_enh-Core

[R2-2201274](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201274.zip) Discussion on Concurrent MG Xiaomi Communications discussion

[R2-2201283](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201283.zip) Discussion on concurrent gap MediaTek Inc. discussion

[R2-2201286](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201286.zip) Concurrent measurement gap LG Electronics discussion

[R2-2201568](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201568.zip) Concurrent measurement gaps Ericsson discussion Rel-17 NR\_MG\_enh-Core

[R2-2201108](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201108.zip) Discussion on Rel-17 concurrent gap Apple discussion NR\_MG\_enh-Core

[R2-2200496](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200496.zip) Discussion on concurrent MG patterns Samsung discussion

[R2-2201310](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201310.zip) Inter-node signalling design on multiple concurrent gaps for MR-DC DENSO CORPORATION discussion NR\_MG\_enh-Core

### 8.22.4 Network Controlled Small Gap

[R2-2201678](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201678.zip) Summary of AI 8.22.4 Network Controlled Small Gap (Apple) Apple

DISCUSSION

- Chair: We ait for RAN4 conclusion on per BC indication for per FR NCSG

P8

- CATT think it need to be clarified whether Per UE or Per FR applies

- vivo wonder whether we should ask wider on simultaneous gaps, e.g. in the 8.0-discussion.

- Apple point out that there is no question on legacy gaps in the 8.0 discussion.

- OPPO think we can just wait for input.

P5

- QC think per-FR is not needed. Apple think there is no problem to support.

P6

- Intel think P6 is ok, it is aligned with LS in.

- Huawei think we should wait.

P2

- Samsung thin the first part is ok. QC agrees, and think we shouldn't support interRAT, a number of companies agrees with this point.

- HW support P2.

- Chair: For NCSG, On the proposal to ask RAN4 whether to support simultaneous configuration on NCSG and legacy measurement gap, there were a number of comments.

* Can work offline on LS out.
* Re-use the Rel-16 NeedForGap reporting like procedure for NCSG reporting:

- UE indicates capability on NCSG support in UE capability reporting (FFS on UE capability reporting details).

- NW configures the NCSG reporting in *RRCReconfiguration* and *RRCResume* message.

- UE reports the NCSG capabilities in *RRCReconfigurationComplete* and *RRCResumeComplete* messages.

* Agree that NCSG can be configured as per UE, (per FR1 and per FR2 patterns is FFS).
* FFS if NCSG patterns corresponding to legacy patterns #0 and #1 are mandatorily supported if UE supports NCSG. And to further discuss UE capability between reporting an indicator of NCSG feature support and reporting supported NCSG patterns
* Detailed design Same as Rel-16 NeedForGap, support NCSG reporting for both intra-frequency and inter-frequency. FFS Inter RAT

[R2-2200494](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200494.zip) Discussion on NCSG OPPO discussion Rel-17 NR\_MG\_enh-Core

[R2-2200501](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200501.zip) MGDiscussion on NCSG CATT discussion Rel-17 NR\_MG\_enh-Core

[R2-2200587](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200587.zip) Discussion on NCSG vivo discussion Rel-17 NR\_MG\_enh-Core

[R2-2200834](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200834.zip) Discussion on NCSG Huawei, HiSilicon discussion Rel-17 NR\_MG\_enh-Core

[R2-2201013](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201013.zip) Discussion on support of Network Controlled Small Gaps (NCSG) Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MG\_enh-Core

[R2-2201106](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201106.zip) RAN2 impact from Rel-17 NCSG Apple, MediaTek Inc. discussion NR\_MG\_enh-Core

[R2-2201569](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201569.zip) Network Controlled Small Gap Ericsson discussion Rel-17 NR\_MG\_enh-Core

[R2-2200498](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200498.zip) On Network Controlled Small Gaps Samsung discussion

## 8.23 Uplink Data Compression (UDC)

(NR\_UDC\_enh-Core; leading WG: RAN2; REL-17; WID: RP-211203)

Time budget: 0.5

Tdoc Limitation: 1 tdocs

### 8.23.1 Organizational

Rapporteur input etc.

Planning

[R2-2201276](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201276.zip) Work plan for NR UDC CATT Work Plan Rel-17 NR\_UDC-Core R2-2111066

* Noted

CRs

[R2-2201277](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201277.zip) Introduction of the support for UDC in NR CATT, CMCC, Huawei, HiSilicon, MediaTek, Ericsson, China Unicom, China Telecom, OPPO, ZTE, Samsung draftCR Rel-17 38.300 16.8.0 B NR\_UDC-Core

[R2-2201278](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201278.zip) Introduction of the support for UDC in NR CATT, CMCC, Huawei, HiSilicon, MediaTek, Ericsson, China Unicom, China Telecom, OPPO, ZTE, Samsung draftCR Rel-17 38.331 16.7.0 B NR\_UDC-Core

[R2-2201279](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201279.zip) Introduction of the support for UDC in NR CATT, CMCC, Huawei, HiSilicon, MediaTek, Ericsson, China Unicom, China Telecom, OPPO, ZTE, Samsung draftCR Rel-17 38.323 16.6.0 B NR\_UDC-Core

[R2-2201280](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201280.zip) Introduction of the support for UDC in NR CATT, CMCC, Huawei, HiSilicon, MediaTek, Ericsson, China Unicom, China Telecom, OPPO, ZTE, Samsung draftCR Rel-17 38.306 16.7.0 B NR\_UDC-Core

[R2-2201281](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201281.zip) Introduction of the support for UDC in NR CATT, CMCC, Huawei, HiSilicon, MediaTek, Ericsson, China Unicom, China Telecom, OPPO, Samsung draftCR Rel-17 37.340 16.8.0 B NR\_UDC-Core

- Lenovo think the contents of this CR is dependent on P6.

DISCUSSION online

- CATT explains that these CRs are proposals input to this meeting. Implements easy agreements from the email discussion.

- Chair think companies may not have seen the CRs, will not

* Can Use these CRs as a baseline for further work (except 37340 CR which may not be needed dependent on further agreements)

### 8.23.2 General

Including outcome of [Post116-e][088][UDC] UDC initial discussion (CATT).

Treat Online first

[R2-2200039](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200039.zip) Report of [Post116-e][088][UDC] UDC initial discussion (CATT)? CATT discussion Rel-17 NR\_UDC-Core

DISCUSSION

First set of proposals

- CATT explains that the CRs are based only on the first set of proposals and may be agreeable,

P2-2

- ZTE support to extend max number of DRBs, think XR may drive the number of DRBs. Huawei also support to extend think there are use cases uploading, voNR, and gaming at the same time.

- LGE think 2 is ok, think the processing overhead wil be large wioth mode DRBs, MTK agrees with 2.

P6

- CATT indicates that it was discussed whether the WID covers anything beyond NR, and there is a guideline to follow LTE.

- Ericsson think this should be as LTE, think there could be loss of data. Think furthermore we may need UE cap for data rate. Should follow LTE. LG agrees with Ericsson. Huawei think NR-DC can be considered.

- Apple think MR DC is a very common scenario so it should be supported. ZTE think it should be supported. MTK think split bearer is often used for reliability rather than high tput, so think split bearer can be supported.

- Chair think that the only way split bearer could be support would be to leave all responsibility to handle potential data loss to gNB.

- Chair: significant support, but there is also some opposition. Right now no consensus, can consider further.

P4

- Chair wonder if this is for handover. CATT think yes. CATT think that without this the database used for compression is cleared.

- Samsung think we need to clarify what this is. If keys are not changed this can be supported implicitly by PDCP data recovery. However with procedures that involve PDCP reestablishment there will be reset.

- LG think that there is not so much gain, only compression of one packet. CATT thikn it impacts several packets. LG think the impact to the network is high. Ericsson agrees with LG.

- Oppo think this should be supported. Apple think the impact to support it is low as the model is the same as for other cases. CMCC supports

- Chair: Significant support, arguments that impact is low reusing same functionality as other funcitons. But also some Opposition. Right now no consensus, can consider further.

* The parts without TBD in Table 1 are assumed to directly follow LTE UDC mechanism.
* UDC is not applied to the SDAP header and SDAP control PDU.
* The UDC header is located after SDAP header in the UDC PDU format.
* UDC is not applied to DAPS in NR.
* NR UDC is not applied to sidelink DRBs.
* With Figure 4.2.2-1, there is no need to further clarify UDC decompression being performed after PDCP re-ordering in the specification.
* UE shall support number of UDC DRBs: 2.
* Continue by email, can include tech proposals from tdocs below (proponents are expected to request), continue on the non-agreed parts, review CRs.
* [AT116bis-e][053][UDC] General (CATT)

Scope: Take agreements into account, update CRs if needed. Review CRs. Can include tech proposals from tdocs below (proponents are expected to request), Can Consider the remaining proposals from R2-2200039

Intended outcome: Report, prepare for CB, Endorsable CRs

Deadline: Ready for CB Mon W2

[R2-2201914](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201914.zip) Report of [AT116bis-e][053][UDC] General (CATT) CATT

DISCUSSION

- Ericsson think the WI scope is for NR SA only. Anything beyond that requires Plenary. decision. LGE agrees.

P2

- Ericsson think that possibly a more sophisticated coordination is needed, i.e. that SN informs MN also about the Used UE capability, thus there should be an FFS. Chair think the current proposal is that the MN just decides.

- Apple think this is in the scope and in the email discussion almost everyone agreed.

P3

- QC think that PDCP reordering timer expiry is common in NR, and NR UDC may then be worse then LTE UDC.

UE Cap

- Chair wonder why we still need the FFS. CATT explains that there were discussions on data rate limitation. Apple support data rate limitation handling,

- Huawei think that UE can choose to not compress so the UE can choose, thus no need to have a UE capability. Several companies have this view.

- LGE think UDC will not be used for high data rate scenario. Chair think everyone agrees with this.

P4

- Nokia, Ericsson, think we are extending the scope of the WI by sending LS to R3. Chair think this is just alignment work, and in fact R3 should do this, in order to not have an inconsistent system.

P6

- UDC continuity

- Samsung think this should be done only at PDCP data recovery without key change, sop resume should be excluded. LG agrees with Samsung.

- Need to be clarified, significant confusion.

- Chair: It should be possible to adopt the same as for ROHC. For ROHC it is possible to continue when UE changes cell but gNB anyway can know the context, e.g. same gNB.

P2 and P5 are about DC

- Additional Stage-3 impacts:

- Network coordination to coordinate UE caps for P2

- Some companies have concerns about data loss and handling of that. Chair think data loss if need to be addressed by UDC functionality could be big impact. CATT explains that the proposal is to not take into account data loss. Ericsson are not sure, haven’t looked into data loss aspect. Chair think gNB is in control and it could work with the understanding that the gNB need to handle potential data loss (i.e. not use UDC for such cases or tolerate UDC hiccup), e.g. if gNB decides to use procedures in a way that may bring data loss.

- Samsung are not sure when data loss would happen, for split bearer both legs would have RLC-AM and data loss should not happen. For other cases e.g. due to feedback Control PDU then data loss can happen also for single bearer.

- ZTE think we can support MCG bearer only as a compromise.

- CATT confirms that no impact is foreseen for LTE TS

- CMCC explains that DC scenarios are important, support P2 and P5.

- LG think DC is introduced for high tput scenario. Chair think this was already discussed and the target would be when DC is used for robustness.

- Ericsson asks about R3 impact. Huawei think that for P2 and P5 there is no impact to R3. CATT explains that UE cap coord for SN terminated bearer is by RRC.

- Chair: It seems there is no reason to believe there are issues with data loss for split bearer, it seems there are no tangible technical concerns.

- AS CMCC request this Chair proposes: Assume that P2 and P5 can be supported, CRs for review to next meeting anyway. If issues are found R2 can revert this assumption (at next meeting), it is easier to remove things from CRs than to add.

[Change the UE cap FFS into: FFS whether UE data rate limitation with UDC need to be provided as a UE capability.] Chair: The FFS for the UE cap agreement above is removed, and the below is agreed instead.

* FFS whether UE data rate limitation with UDC need to be supported with a UE capability.
* UDC continuity can be configured for the same cases as ROHC continuity
* Assume that P2 and P5 can be supported, CRs for review to next meeting anyway. If issues are found R2 can revert this assumption (at next meeting).

P2: UDC is supported for non-split bearer type in NR-DC. It is supported that MN sends to SN the maximum number of UDC DRBs that can be configured by SN. FFS if any other coordination is needed.

P5: Support NR UDC for MR-DC and split bearer type, with the following restrictions

- Only include NR-DC, NGEN-DC, and NE-DC (i.e., EN-DC is not supported)

- No enhancements supported for potential data loss for split bearer case.

* Send an LS to RAN3 to inform of NR UDC potential impact to CU-CP/UP splitting scenario. R2 understands that decisions as well as the required specification work are up to RAN3.
* Update CRs taking into acct all agreements, review in an offline discussion, tech. endorse if possible.
* [Post116bis-e][053][UDC] CRs and LS out (CATT)

Scope: Take agreements into account. Review updated CRs. Endorse if possible (technical endorsement). LS out to RAN3 according to agreement.

Intended outcome: CRs (Endorsed if possible), Approved LS out

Deadline: Short

[R2-2200977](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200977.zip) Discussion on UDC support in NR Huawei, HiSilicon discussion Rel-17 NR\_UDC-Core

[R2-2200495](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200495.zip) Limit UL data rate for UDC in UE capability MediaTek Inc. discussion

[R2-2200581](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200581.zip) Issue on UDC continuation Samsung Electronics Polska discussion NR\_UDC-Core

[R2-2200724](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200724.zip) Remaining issues on NR UDC Qualcomm Incorporated discussion Rel-17 NR\_UDC-Core

[R2-2200932](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200932.zip) Consideration on NR UDC OPPO discussion Rel-17 NR\_UDC-Core

[R2-2201129](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201129.zip) Open topics on UDC functionality Apple discussion Rel-17 NR\_UDC-Core

[R2-2201227](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201227.zip) Furhter Consideration on UDC in NR ZTE Corporation,Sanechips discussion Rel-17 NR\_UDC-Core

[R2-2201282](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201282.zip) Clarifications on NR UDC applicable scenarios CATT, CMCC discussion Rel-17 NR\_UDC-Core

[R2-2201361](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201361.zip) Discussion on remaining issues for UDC LG Electronics discussion

=> Revised in R2-2201650

R2-2201650 Discussion on remaining issues for UDC LG Electronics, Ericsson discussion

## 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.

### 8.24.1 RAN4 led Items

e.g. TxD, TX switching, BCS4/5

PUCCH SCell activation I

offline + online

* [AT116bis-e][033][NR17] PUCCH SCell activation (Huawei)

Scope: Treat R2-2200086, R2-2201341, R2-2201502, R2-2201503, R2-2201504. Determine agreeable parts, identify parts for online CB.

Intended outcome: 1 Report, 2 Reply LS, Draft CRs if applicable.

Deadline: 1 potential CB Tuesday W2, 2 Post meeting

[R2-2201853](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201853.zip) Summary of [AT116bis-e][033][NR17] (Huawei) Huawei

DISCUSSION

* Oppo think that the concept of PUCCH group is confusing
* QC think that this can be easily introduced and a new cap is needed, but prefer to have the UE cap should be from R16. Nokia agrees as there is no functionality change.
* Apple agree that the wording can be improved but agree with the intent. Think R17 is best. Don’t understand why cond mandatory.
* Ericsson support, can accept both R16 R17
* Chair: RAN2 can agree to introduce the UE capability but the details need to be further discussed
* The details of what the existing RRC signalling support to be further clarified offline, continue in current discussion

[R2-2201933](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201933.zip) Summary of [AT116bis-e][033][NR17] (Huawei) Huawei

- Chair: not treated due to lack of time. To not waste this effort please resubmit this report to RAN2#117-e, and we treat it then.

* Postponed

[R2-2200086](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200086.zip) Reply LS on beam information of PUCCH SCell in PUCCH SCell activation procedure (R1-2112858; contact: Huawei) RAN1 LS in Rel-17 NR\_RRM\_enh2-Core To:RAN4 Cc:RAN2

[R2-2201341](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201341.zip) PUCCH SCell activation Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_RRM\_enh2-Core

[R2-2201502](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201502.zip) Further discussion on beam information of PUCCH SCell in PUCCH SCell activation (RAN1 LS) Huawei, HiSilicon discussion Rel-17 NR\_RRM\_enh2-Core

[R2-2201503](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201503.zip) Draft LS Reply on beam information of PUCCH SCell in PUCCH SCell activation procedure Huawei, HiSilicon LS out Rel-17 NR\_RRM\_enh2-Core To:RAN1, RAN4

[R2-2201504](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201504.zip) Draft CR to TS38.321 for Beam information reporting via MAC CE for PUCCH SCell activation Huawei, HiSilicon draftCR Rel-17 38.321 16.7.0 NR\_RRM\_enh2-Core

[R2-2201505](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201505.zip) Draft CR to TS38.331 for Beam information reporting via MAC CE for PUCCH SCell activation Huawei, HiSilicon draftCR Rel-17 38.331 16.7.0 NR\_RRM\_enh2-Core

* [033] 6 tdocs are noted

PUCCH SCell activation II

Offline, Conditional start

* [AT116bis-e][034][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 R2-2200133, R2-2200891, R2-2200892

Intended outcome: Report, Approved LS out.

Deadline: EOM

CANCELLED

[R2-2200133](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200133.zip) LS on interruption for PUCCH SCell activation in invalid TA case (R4-2120420; contact: MediaTek, CATT) RAN4 LS in Rel-17 NR\_RRM\_enh2-Core To:RAN1, RAN2

* Postponed

[R2-2200891](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200891.zip) Discussion on interruption for PUCCH SCell activation in invalid TA case CATT discussion Rel-17 NR\_RRM\_enh2-Core

[R2-2200892](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200892.zip) [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

DC location reporting

offline + online

* [AT116bis-e][035][NR17] DC Location Reporting (Qualcomm)

Scope: Treat R2-2200117, R2-2201059, R2-2201436, R2-2200306. Aim to clarify what RAN2 need to do. Initial Collection of comments. Pave the way for on-line discussion on way forward. Ph2 LS out

Intended outcome: Ph1 Report, Ph2 Approved LS out (offline approval)

Deadline: Ph1 For Online CB Thu W1, Ph2 Ready Tue W2

[R2-2201836](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201836.zip) Summary for email discussion [AT116bis-e][035][NR17] DC Location Reporting Qualcomm Inc.

DISCUSSION

P1

- QC indicates that this is about provision of info to calculate the DC location. Oppo agree with QC, and then the UE and network can derive the DC location the same way

P2

- Oppo wonder about I1, why is it there. QC agrees it can probably be removed.

P3

- Intel still wonder if we need to discss default DC location. QC think that default DC location is handled by P1, and offset may provide the dynamic adjustment. Huawei agrees with QC.

* For default DC location derivation, the UE signals:

1. the choice of frequency component, among {Activated CC, Configured CC, Activated BWP, Configured BWP}.

2. the choice of UL and/or DL for frequency component, among {UL, DL, Edge most frequencies among any DL and UL}

* The network specifies the radio resource configuration (including BWP / CC activation state) for which the UE is requested to report the offset to default DC location. FFS how the radio resource configuration is specified.
* Introduce a new release-17 network request for the extended DC location reporting for more than 2 UL CCs.
* Upon a new release-17 network request, the UE reports the extended DC location reporting for more than 2 UL CCs, i.e. the release-17 network request does not trigger the reporting of *reportUplinkTxDirectCurrent* and *reportUplinkTxDirectCurrentTwoCarrier-r16*.

LS to RAN4:

* RAN2 to ask RAN4 to clarify the meaning of the following statement in the LS R2-2200117/R4-2119965.

“UE declares the default UL DC location per band configuration as capability.”

In particular for the text “*per band configuration*”, RAN2 indicates that there are three interpretations among companies in RAN2.

Interpretation a: Per band per band combination

Interpretation b: Per intra-band UL CA component per band combination

(to be verified offline)

* RAN2 to ask RAN4 to clarify how two DC locations should be reported for dual PA.

[Continue offline with the LS in the same discussion]

[R2-2201931](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201931.zip) [DRAFT] Reply LS on DC location for >2CC Qualcomm Inc. LS out

* [035] LS is approved, final version in R2-2201978

[R2-2200117](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200117.zip) LS on DC location for >2CC (R4-2119965; contact: Qualcomm) RAN4 LS in Rel-17 NR\_RF\_FR2\_req\_enh2-Core To:RAN2

[R2-2201059](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201059.zip) DC location for >2UL CCs Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_RF\_FR2\_req\_enh2-Core

[R2-2201436](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201436.zip) Discussion on the DC location report for more than 2CC Huawei, HiSilicon discussion Rel-17 NR\_RF\_FR1-Core

[R2-2200306](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200306.zip) DC location reporting for more than 2 CCs Qualcomm Incorporated discussion Rel-17 NR\_RF\_FR2\_req\_enh2-Core

* [035] 4 tdocs noted

UL TX Switching

Offline, can do online CB Mon W2 if needed

* [AT116bis-e][036][NR17] UL TX switching Enh (China Telecom)

Scope: Treat R2-2200120, R2-2201499, R2-2201500, R2-2201501, R2-2200516. R2-2200519, R2-2200517, R2-2200518, Take into account R2-2200095.

1: Determine agreeable parts, parts that need CB on-line if any 2: agree updated Running CRs that reflect agreeable parts / agreements.

Intended outcome: 1 Report, 2 endorsed running CRs

Deadline: 1 for online CB Mon W2 if CB is needed, 2 EOM

[R2-2201871](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201871.zip) Summary of [AT116bis-e][036][NR17] UL TX switching Enh China Telecom

DISCUSSION

- Yellow-marked proposals are agreed

Ph2-P1

- Ph2-P1 is agreed

Ph2-P2

- Ericsson think most of the comments was about waiting for R1. Wonder whether we should just wait.

- Ph2-P2, we wait for R1, don’t agree to the baseline for now.

* To configure 2Tx-2Tx switching, the new RRC parameter of 2Tx-2Tx switching mode agreed by RAN1 is included in *CellGroupConfig*, and the existing *UplinkTxSwitching* can be reused without change.
* For UL Tx switching between 1 carrier in band A and 2 carriers in band B, 3 uplinks are configured in legacy way, i.e. one uplink band (Band A) is configured with 1 *UplinkConfig*, and the other band (Band B) is configured with 2 *UplinkConfig*.
* For UL Tx switching between 1 carrier in band A and 2 carriers in band B, the field *uplinkTxSwitchingPeriodLocation* is reused to configure period location. The configuration to the 2 uplinks in band B (i.e. the band capable of 2Tx) should be aligned.
* For UL Tx switching between 1 carrier in band A and 2 carriers in band B, the field *uplinkTxSwitchingCarrier* is reused. The configuration to the 2 uplinks in band B (i.e. the band capable of 2Tx) should be *carrier2*.
* The new RRC parameter *uplinkTxSwitchingdualULTxState* should be included in *CellGroupConfig* to configure the state of Tx chains for UL-CA option2 in case of 2Tx-2Tx switching.
* Taking the endorsed Rel-16 CRs R2-2110483 and R2-2110484 as baseline for the Rel-17 UL Tx switching coherence capability discussion. We can revisit it if further information is received from RAN1.
* The Rel-16 per-BC UL MIMO coherent capability introduced for 1Tx-2Tx switching between 2 uplinks applies to Rel-17 UL Tx switching between 2 bands with 3 uplinks.
* Add a new per-band per BC UE capability in *BandCombination-UplinkTxSwitch* to indicate UL MIMO coherent capability specific for 2Tx-2Tx switching.
* Regarding whether switching option can be reported differently for 1T2T and 2T2T, RAN2 waits for RAN1 conclusion.
* RAN2 confirm the following clarification on the configuration of *uplinkTxSwitchingCarrier* for UL Tx switching. The detail wording of field description can be further discussed in CR drafting.

- 1Tx-2Tx with 2 uplinks or 3 uplinks, band A (capable of 1T, 1 CC) will be configured as *carrier1*, band B (capable of 2T, 1CC or 2CC) will be configured as *carrier 2*.

- 2Tx-2Tx with 2 uplinks or 3 uplinks, band A (capable of 2T, 1 CC) will be configured as *carrier1*, band B (capable of 2T, 1CC or 2CC) will be configured as *carrier 2*.

* Regarding UL MIMO coherence capability reporting for Rel-17 2Tx-2Tx switching, RAN2 wits for RAN1

[POST meeting email discussion for the CRs]

* [Post116bis-e][036][NR17] UL TX switching Enh CRs (China Telecom)

Scope: Update CRs taking into account agreements

Intended outcome: Endorsed CRs

Deadline: Short

[R2-2200516](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200516.zip) Running CR to TS 38.306 to support Tx switching enhancements China Telecom, Huawei, HiSilicon, Apple, CATT draftCR Rel-17 38.306 16.7.0 B NR\_RF\_FR1\_enh R2-2110424

[R2-2201501](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201501.zip) Running CR to TS38.331 to support Tx switching enhancements Huawei, HiSilicon, China Telecom, Apple, CATT draftCR Rel-17 38.331 16.7.0 B NR\_RF\_FR1\_enh R2-2109225

* [036] Both Revised, email approval

[R2-2200120](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200120.zip) LS on UL-MIMO coherence for Rel-17 Tx switching (R4-2120039; contact: China Telecom) RAN4 LS in Rel-17 NR\_RF\_FR1\_enh-Core To:RAN2 Cc:RAN1

[R2-2201499](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201499.zip) Remaining issues to support R17 UL Tx switching enhancement Huawei, HiSilicon, China Telecom, CATT discussion Rel-17 NR\_RF\_FR1\_enh

[R2-2201500](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201500.zip) RRC configuration to support R17 UL Tx switching enhancements Huawei, HiSilicon, China Telecom, CATT draftCR Rel-17 38.331 16.7.0 NR\_RF\_FR1\_enh

[R2-2200519](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200519.zip) Discussion on UL MIMO coherence for UL Tx switching China Telecom, Huawei, HiSilicon discussion Rel-17 NR\_RF\_FR1\_enh

[R2-2200517](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200517.zip) Draft CR to TS 38.306 on UE capability for UL-MIMO coherence for Rel-17 Tx switching China Telecom, Huawei, HiSilicon draftCR Rel-17 38.306 16.7.0 F NR\_RF\_FR1\_enh

[R2-2200518](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200518.zip) Draft CR to TS 38.331 on UE capability for UL-MIMO coherence for Rel-17 Tx switching China Telecom, Huawei, HiSilicon draftCR Rel-17 38.331 16.7.0 F NR\_RF\_FR1\_enh

* [036] 6 tdocs Noted

FR2 CA BW class

Offline only (if possible)

* [AT116bis-e][037][NR17] FR2 CA BW class (Nokia)

Scope: Treat R2-2200118, R2-2200839, R2-2200840, R2-2200841, R2-2200843, R2-2201385. Progress the topic, Determine agreeable parts, for agreeable parts, agree CRs, approve reply LS out if agreeable.

Intended outcome: Report, agreed in principle CRs, Approved LS out if applicable.

Deadline: EOM (or earlier if online CB is needed, can CB W2).

[R2-2201928](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201928.zip) Offline 037 on FR2 CA BW class Nokia

* [037] Noted, reflected below
* [037] Continue discussion for solution options for introducing the extended bandwidth class for FR2 CA bandwidth class in FBG2 (early implementation target as Rel-15)
* [037] FFS if RAN2 aims to harmonize solution to also include  “dual bandwidth class across FBG” which is under discussion in RAN4
* [037] Introduce CBM-only capability from Rel-17 (allowing early implementation from Rel-16) and dummify CBM enumeration from Rel-16 capability
* [037] FFS if IBM/CBM capability apply to DL and/or UL

[R2-2200118](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200118.zip) LS on release independence aspects of newly introduced FR2 CA BW Classes and CBM/IBM UE capability “both” (R4-2119966; contact: Nokia) RAN4 LS in Rel-17 NR\_RF\_FR2\_req\_enh2-Core To:RAN2

[R2-2200843](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200843.zip) Reply LS on release independence aspects of newly introduced FR2 CA BW Classes and CBM/IBM UE capability Nokia Italy LS out Rel-17 NR\_RF\_FR2\_req\_enh2-Core To:RAN4

[R2-2201385](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201385.zip) Introduction of new FR2 CA bandwidth classes Xiaomi Communications discussion Rel-17 NR\_RF\_FR2\_req\_enh2-Core

* [037] 3 tdocs are noted

[R2-2200839](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200839.zip) Introduction of FR2 FBG2 CA BW classes Nokia Italy CR Rel-17 38.331 16.7.0 2867 - B NR\_RF\_FR2\_req\_enh2-Core

[R2-2200840](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200840.zip) Introduction of CBM/IBM UE capability “both” Nokia Italy CR Rel-17 38.331 16.7.0 2868 - B NR\_RF\_FR2\_req\_enh2-Core

[R2-2200841](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200841.zip) Introduction of CBM/IBM UE capability “both” Nokia Italy CR Rel-17 38.306 16.7.0 0668 - B NR\_RF\_FR2\_req\_enh2-Core

FR2 UL Gap

Offline + online

* [AT116bis-e][038][NR17] FR2 UL Gap (Apple)

Scope: Treat R2-2200122, R2-2201105. Aim to clarify what is needed in R2, determine agreeable parts, open points, pave the way for online disc.

Intended outcome: Report

Deadline: CB online Mon W2.

CLOSED

[R2-2201913](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201913.zip) Summary of [AT116bis-e][038][NR17] FR2 UL Gap (Apple) Apple

DISCUSSION

- OPPO wonder whether we really should agree to P5, 6, 7. R4 hasn't agreed the scenario yet. Chair wonder if conditional agreement would be ok

4a

- Ericsson agree with Apple and would like to follow the legacy procedure Alt2

[All proposals except 4a are agreed]

* In SA deployment:

- For timing reference in synchronous FR2 CA configuration, the SFN and subframe of any FR2 serving cell can be used in the gap calculation.

- For timing reference in asynchronous FR2 CA configuration, the SFN and subframe of the serving cell on FR2 frequency indicated by the *refFR2ServCellAsyncCA* (FFS on the field name) is used in the gap calculation.

* The following responsible network entity on FR2 UL gap configuration in different deployment scenario are agreed:

- EN-DC: SN

- NE-DC: MN

* For EN-DC/NE-DC, there is no need to coordinate FR2 UL gap configuration between MN and SN.
* In EN-DC and NE-DC, use FR2 serving cell inside the CG with FR2 band as timing reference for the SFN and subframe calculation in FR2 UL gap calculation.
* For NR-NR DC without FR2-FR2 BC considered, the responsible network entity on FR2 UL gap configuration is MN.
* For NR-NR DC without FR2-FR2 BC considered, FFS on the details on MN-SN coordination.

The Following three points are agreed under condition that R4 would agree to such scenario (otherwise they are N/A):

* 1: For NR-NR DC with FR2-FR2 BC considered (if RAN4 agrees to support), MN is responsible for FR2 UL gap configuration.
* 2: In NR-NR DC with FR2-FR2 BC considered, agree that MN informs SN about the FR2 UL gap pattern configured.
* 3: In NR-DC with FR2-FR2 BC considered, *refServCellIndicator* is used to indicate the timing reference serving cell:

- For FR2 UL gapconfiguration with synchronous CA, for the UE in NR-DC with FR-FR2 band combination configured, the SFN and subframe of the serving cell indicated by the *refServCellIndicator* is used in the gap calculation.

- For FR2 UL gap configuration with asynchronous CA, for the UE in NR-DC with FR2-FR2 band combination configured, the SFN and subframe of the serving cell indicated by the *refServCellIndicator and refFR2ServCellAsyncCA* is used in the gap calculation.

* RAN2 to support that UE explicitly indicates the need of FR2 UL gap activation/deactivation using UAI message.
* From RAN2 perspective, MAC CE based FR2 UL gap activation/deactivation is not supported.
* UE supporting FR2 UL gap should also support R16 MPE reporting.
* Wait for RAN4 on the detailed UE capability reporting.

[4a, Alt2 is agreed]

* For NR-NR DC without FR2-FR2 BC, for timing reference for the SFN and subframe calculation in FR2 UL gap calculation: Follow legacy FR2 gap that the timing reference of FR2 UL gap can be PCell, PSCell or MCG FR2 serving cell, as indicated by *refServCellIndicator.* In asynchronous FR2 CA, *refFR2ServCellAsyncCA* is together used in the gap calculation.
* CRs to be provided for next meeting (Apple)

[R2-2200122](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200122.zip) LS on UL gap in FR2 RF enhancement (R4-2120058; contact: Apple) RAN4 LS in Rel-17 NR\_RF\_FR2\_req\_enh2-Core To:RAN2

[R2-2201105](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201105.zip) RAN2 impact from UL gap in FR2 RF enhancement Apple discussion NR\_RF\_FR2\_req\_enh2

* [038] 2 tdocs noted

HST

Offline only

* [AT116bis-e][039][NR17] RRM enh for HST (CMCC)

Scope: Treat R2-2200123, R2-2201334, R2-2201335, R2-2201336, R2-2200864, R2-2200865. 1 Determine what RAN2 need to do / agreeable parts 2 endorse Draft CRs.

Intended outcome: Report, endorsed Draft CRs.

Deadline: EOM (assume no online CB)

[R2-2201857](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201857.zip) [AT116bis-e][039][NR17] RRM enh for HST (CMCC) CMCC

* [039] Noted, reflected below
* [039] Clarify that highSpeedMeasFlag-r16 is not applicable to SCell.
* [039] Reuse *highSpeedMeasFlag-r16* to apply CA measurement enhancement for SpCell, and a new IE *highSpeedMeasCA-Scell-r17* is introduced in *HighSpeedConfig* to apply CA measurement for SCell.
* [039] Introduce UE capability measurementEnhancementCA-r17 to indicate support of enhanced RRM requirements for CA, which should be also applicable for DC case.
* [039] Introduce an optional capability without RRC signalling reporting for High speed inter-frequency IDLE/INACTIVE measurements.

[R2-2201858](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201858.zip) Introduction of RRM enhancements for Rel-17 NR FR1 HST CMCC, Ericsson, Huawei, Nokia draftCR Rel-17 38.331 16.7.0 B NR\_HST\_FR1\_enh

* [039] Endorsed

[R2-2201859](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201859.zip) Introduction of RRM enhancements for Rel-17 NR FR1 HST CMCC, Ericsson, Huawei, Nokia draftCR Rel-17 38.306 16.7.0 B NR\_HST\_FR1\_enh

* [039] Endorsed

[R2-2200123](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200123.zip) LS on signalling for RRM enhancements for Rel-17 NR FR1 HST (R4-2120286; contact: CMCC) RAN4 LS in Rel-17 NR\_HST\_FR1\_enh To:RAN2

[R2-2201334](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201334.zip) Discussion on the signaling for RRM enhancement for Rel-17 HST Huawei, HiSilicon discussion

[R2-2201335](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201335.zip) On the signaling for RRM enhancements for Rel-17 HST Huawei, HiSilicon draftCR Rel-17 38.331 16.7.0 B NR\_HST\_FR1\_enh

[R2-2201336](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201336.zip) On the UE capabilities for RRM enhancements for Rel-17 HST Huawei, HiSilicon draftCR Rel-17 38.306 16.7.0 B NR\_HST\_FR1\_enh

[R2-2200864](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200864.zip) Introduction of RRM enhancements for Rel-17 NR FR1 HST CMCC, Ericsson draftCR Rel-17 38.331 16.7.0 B NR\_HST\_FR1\_enh

[R2-2200865](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200865.zip) Introduction of RRM enhancements for Rel-17 NR FR1 HST CMCC, Ericsson draftCR Rel-17 38.306 16.7.0 B NR\_HST\_FR1\_enh

* [039] 6 tdocs Noted

**BCS4/BCS5**

Offline only

* [AT116bis-e][040][NR17] BCS4/BCS5 (xiaomi)

Scope: Treat R2-2201371, R2-2201372

Intended outcome: Agreed in principle CRs.

Deadline: Friday W1

[R2-2201911](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201911.zip) Report of [AT116bis-e][040][NR17] BCS4 and BCS5 (xiaomi) Xiaomi Communication

* [040] Noted, taken into account in the CRs.

[R2-2201371](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201371.zip) Introduction of BCS4 and BCS5 Xiaomi Communications, Samsung, Nokia, Nokia Shanghai Bell, Qualcomm Incorporated, OPPO, Huawei, HiSilicon, ZTE Corporation, Sanechips CR Rel-17 38.331 16.7.0 2871 - B NR\_BCS4-Core

[R2-2201372](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201372.zip) Introduction of BCS4 and BCS5 Xiaomi Communications, Samsung, Nokia, Nokia Shanghai Bell, Qualcomm Incorporated, OPPO, Huawei, HiSilicon, ZTE Corporation, Sanechips CR Rel-17 38.306 16.7.0 0669 - B NR\_BCS4-Core

* [040] both revised

[R2-2201834](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201834.zip) Introduction of BCS4 and BCS5 Xiaomi Communications, Samsung, Nokia, Nokia Shanghai Bell, Qualcomm Incorporated, OPPO, Huawei, HiSilicon, ZTE Corporation, Sanechips CR Rel-17 38.331 16.7.0 2871 1 B NR\_BCS4-Core

R2-2201835 Introduction of BCS4 and BCS5 Xiaomi Communications, Samsung, Nokia, Nokia Shanghai Bell, Qualcomm Incorporated, OPPO, Huawei, HiSilicon, ZTE Corporation, Sanechips CR Rel-17 38.306 16.7.0 0669 1 B NR\_BCS4-Core

* [040] both agreed-in-principle

HO with PSCell

Offline only

* [AT116bis-e][041][NR17] HO with PSCell (MediaTek)

Scope: Treat R2-2200124, R2-2201673 (late), make a reply LS.

Intended outcome: Approved LS out

Deadline: Friday W1

[R2-2201901](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201901.zip) Summary of [AT116bis-e][041][NR17] HO with PSCell (MediaTek)

* [041] Noted, taken into account see below.

[R2-2200124](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200124.zip) LS on HO with PSCell from NR SA to EN-DC (R4-2120298; contact: MediaTek) RAN4 LS in Rel-17 NR\_RRM\_enh2-Core To:RAN2

* [041] Noted

[R2-2201673](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201673.zip) Draft Reply LS on HO with PSCell from NR SA to EN-DC MediaTek Inc.

* [041] LS out is approved, final version in R2-2201902

### 8.24.2 RAN1 led Items

e.g. DSS

* [AT116bis-e][042][NR17] DSS (Ericsson)

Scope: Treat R2-2200294, R2-2201039, R2-2201040, R2-2201396, R2-2201618. If possible, offline only, if needed CB W2. 1 Determine Agreeable parts 2 Update Running CR(s) to reflect agreeable parts.

Intended outcome: Report, Endorsed updated CR.

Deadline: Friday W1

[R2-2201698](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201698.zip) Summary of [AT116bis-e][042][NR17] DSS (Ericsson) Ericsson

[042] DISCUSSION

- [042] Rapporteur: The discussion also leads to the below conclusions. They don’t have big impacts on the specs and rapporteur does not think it is worthwhile to turn them into agreements and would like companies to take these into account in the future work.

- [042] Conclusion 1 It is up-to RAN1 to decide the need to clarify *enableDefaultBeamForCCS* in the RRC spec; an EN is added in the RRC running CR.

- [042] Conclusion 2 There is no need to capture *r16monitoringCapability* restriction in the RRC spec.

- [042] Conclusion 3 Wait for further RAN1 inputs (if any) on if/how to capture search space linkage in the RRC spec.

- [042] Conclusion 4 No consensus to introduce RA procedure enhancement and wait for further RAN1 inputs (if any).

* [042] Noted, taken into account
* [042] SCell scheduling SpCell is configured by configuring the field ‘*schedulingCellInfo*’ in *CrossCarrierSchedulingConfig* for SpCell as ‘*other*’.
* [042] *carrierIndicatorSize-r16* is configured only in the scheduling SCell for the SpCell but not in the SpCell

[R2-2200294](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200294.zip) DSS and RA Procedure Samsung Electronics Co., Ltd discussion Rel-17 LTE\_NR\_DC\_enh2

[R2-2201040](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201040.zip) RAN2 impact in DSS WI Ericsson discussion NR\_DSS\_enh

[R2-2201396](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201396.zip) Discussion on Cross-Carrier Scheduling from sSCell to P(S)Cell vivo discussion NR\_DSS\_enh

[R2-2201618](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201618.zip) Remaining issues on cross-carrier scheduling from SCell to P(S)Cell Huawei, HiSilicon discussion Rel-17 NR\_DSS-Core

* [042] 4 tdocs noted

[R2-2201039](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201039.zip) RRC running CR for DSS Ericsson draftCR Rel-16 38.331 16.7.0 NR\_DSS\_enh

* [042] revised

[R2-2201946](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201946.zip) RRC running CR for DSS Ericsson draftCR Rel-16 38.331 16.7.0 NR\_DSS\_enh

* [042] endorsed

### 8.24.3 Other

MINT

Offline

* [AT116bis-e][043][NR17] MINT (Ericsson)

Scope: Take into account submitted documents incl Reply LS from CT1. Update Running CR to reflect Reply LS from CT1, and other discussion if agreeable. 1 Determine agreeable parts, and points for online CB if any. 2 endorse updated CR

Intended outcome: Report, endorsed CR

Deadline: 1 Friday W1 (can CB W2 if needed), 2 EOM

[R2-2201840](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201840.zip) Report [AT116bis-e][043][NR17] MINT (Ericsson) Ericsson

* [043] Noted, taken into account see below
* [043] The value noDisasterRoaming is added to ApplicableDisasterInfo. This can be revisited based on RAN2's conclusion on RAN sharing scenarios.
* [043] There is no consensus that RAN2 can assume that MINT is supported by PNI-NPNs. RAN2 sends an LS to CT1 (SA1 in CC) asking for clarification on whether PNI-NPN is supported.
* T[043] he LS to CT1 (SA1 in CC) is approved in R2-2201841.
* [043] The alternative wording for the field description of applicableDisasterInfoList is used as baseline. Further polishing to be done in CR-drafting phase.
* [043] RAN2 waits for CT1's input on the "one bit indicator".
* [043] Keep in RRC that the UE shall forward the applicable disaster PLMNs upon reception of the new SIB.
* [043] For NR, RAN2 confirms that a new SIB is used for providing the disaster roaming information.
* [043] For LTE, a new SIB is used for providing the disaster roaming information.
* [043] Alternative 2 (i.e., the alternative already in the running CR) for signaling the common and specific PLMNs with disaster condition is adopted.
* [043] RAN2 assumes that the current cell suitability conditions apply for MINT.
* [043] The text proposals for 38.304 and 36.304 for functional split between NAS and AS above are adopted.
* [043] The text proposal for 38.304 for handling of Access Identity 3 and cell reserved for operator use above is adopted with a modification to avoid confusion whether MINT is supported for SNPN.
* [043] It is TBD if and how the corresponding section in the 36.304 is updated.
* [043] Support of MINT is specified under “Optional features without UE radio access capability parameters”.

The text proposal above for 38.300 is adopted, but with these modifications:

•             Reference to the new SIB should be added in 7.3.1.

•             In 16.5.x we can add that the access attempts of disaster roaming UEs are based on new Access Identity 3 and that disaster roaming service is provided only for the area that covers the area with disaster condition.

•             TBD if a better name than "Minimization of Service Interruption" is to be used.

* [043] The text proposal for 36.300 is adopted, but with these modifications:

•             Reference to the new SIB should be added in 7.4.

•             In 23.x we can add that the access attempts of disaster roaming UEs are based on new Access Identity 3 and that disaster roaming service is provided only for the area that covers the area with disaster condition.

•             TBD if a better name than "Minimization of Service Interruption" is to be used.

* [043] RAN2 to align the terminology with CT1 terminology for MINT.

[R2-2200061](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200061.zip) Response to reply LS on UAC enhancements and system information extensions for minimization of service interruption (C1-217156; contact: Nokia) CT1 LS in Rel-17 MINT To:RAN2

* [043] Noted, RAN2 expects no further impact due to CT1's answer to Q1 in C1-217156

[R2-2200151](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200151.zip) Reply LS on LS on MINT functionality for Disaster Roaming (S3-214416; contact: LGE) SA3 LS in Rel-17 MINT To:SA2 Cc:SA5, CT1, CT4, CT6, RAN2, SA, CT, RAN

[R2-2201471](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201471.zip) Resolving open isseus for supporting disaster roaming LG Electronics discussion Rel-17

[R2-2201141](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201141.zip) Further discussion on support of MINT feature in AS Lenovo, Motorola Mobility discussion Rel-17 MINT

[R2-2201552](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201552.zip) Remaining issues for MINT Ericsson other Rel-17

* [043] 4 tdocs above are Noted

[R2-2201841](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201841.zip) Reply LS on UAC enhancements and system information extensions for minimization of service interruption RAN2 LS out

* [043] LS out is approved

[R2-2201842](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201842.zip) Introduction of MINT Ericsson, Lonovo, Motorola Mobility draftCR Rel-17 38.331 16.7.0 B TEI17

[R2-2201843](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201843.zip) Introduction of MINT Ericsson, Lonovo, Motorola Mobility draftCR Rel-17 36.331 16.7.0 B TEI17

[R2-2201844](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201844.zip) Introduction of MINT Ericsson, Lonovo, Motorola Mobility draftCR Rel-17 38.300 16.8.0 B TEI17

[R2-2201845](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201845.zip) Introduction of MINT Ericsson, Lonovo, Motorola Mobility draftCR Rel-17 36.300 16.7.0 B TEI17

[R2-2201846](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201846.zip) Introduction of MINT Ericsson, Lonovo, Motorola Mobility draftCR Rel-17 38.304 16.7.0 B TEI17

[R2-2201847](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201847.zip) Introduction of MINT Ericsson, Lonovo, Motorola Mobility draftCR Rel-17 36.304 16.7.0 B TEI17

[R2-2201848](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201848.zip) Introduction of MINT Ericsson, Lonovo, Motorola Mobility draftCR Rel-17 38.306 16.7.0 B TEI17

[R2-2201849](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201849.zip) Introduction of MINT Ericsson, Lonovo, Motorola Mobility draftCR Rel-17 36.306 16.7.0 B TEI17

* [043] All 8 CRs are endorsed

CRs

[R2-2201437](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201437.zip) Introduction of MINT for LTE Huawei, HiSilicon CR Rel-17 36.331 16.7.0 4751 - B MINT

[R2-2201142](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201142.zip) Introduction of MINT feature in TS 38.306 Lenovo, Motorola Mobility draftCR Rel-17 38.306 16.7.0 B MINT

[R2-2201143](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201143.zip) Introduction of MINT feature in TS 36.306 Lenovo, Motorola Mobility draftCR Rel-17 36.306 16.7.0 B MINT

[R2-2201550](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201550.zip) Introduction of MINT Ericsson draftCR Rel-17 38.331 16.7.0 B TEI17

[R2-2201551](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201551.zip) Introduction of MINT Ericsson draftCR Rel-17 36.331 16.7.0 B TEI17

RRC Resume Security

Offline only

* [AT116bis-e][044][NR17] RRC resume security (NTT DOCOMO)

Scope: Reply to LS in R2-2200154. Consider R2-2201506, R2-2201161, R2-2201162 (chair comment: pl consider also that R2 doesn’t need to reply to aspects typically in R3 domain).

Intended outcome: Approved LS out

Deadline: EOM

[R2-2201863](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201863.zip) Summary of [AT116bis-e][044][NR17] RRC resume security (NTT DOCOMO) NTT DOCOMO, Inc.

* [044] Noted, reflected below
* [044] Leave the question to RAN3 and reply that if the UE context is deleted, the RRC setup can be performed at the serving gNB and RAN2 sees no extra work to handle this case.
* [044] RAN2 to reply that there is no additional RAN2 spec impact foreseen even if this feature could be activated or deactivated in gNBs dynamically if we assume proper network behaviour, e.g. the last serving gNB validates the resumeMAC-I/shortResumeMAC-I according to whether the feature was activated or not when UE went to RRC\_INACTIVE.
* [044] Reply that RAN2 does not expect any impact on cell selection/reselection mechanism brought by this feature.
* [044] Do not mention “no showstopper” in the reply LS.

[R2-2201864](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201864.zip) Reply LS on security protection of RRCResumeRequest message Ericsson LS out Rel-17 FS\_5GFBS To:SA3, RAN3

* [044] LS out is approved

[R2-2200154](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200154.zip) LS Reply on security protection of RRCResumeRequest message (S3-214539; contact: NTT DOCOMO) SA3 LS in Rel-17 FS\_5GFBS To:RAN2, RAN3

[R2-2201506](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201506.zip) Security protection on RRCResumeRequest message (SA3 LS) Huawei, HiSilicon discussion Rel-17 FS\_5GFBS

[R2-2201161](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201161.zip) Clarifications on security protection of RRCResumeRequest message Ericsson discussion Rel-17 FS\_5GFBS

[R2-2201162](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201162.zip) [Draft] Reply LS on security protection of RRCResumeRequest message Ericsson LS out Rel-17 FS\_5GFBS To:SA3, RAN3

* [044] 4 tdocs above are noted

Duplicate Measurement

Offline only

* [AT116bis-e][045][NR17] Duplicate Measurement Reply LS (Qualcomm)

Scope: Treat R2-2200135, R2-2201083, R2-2201084. Make a reply LS

Intended outcome: Approved reply LS

Deadline: Friday W1

CLOSED

Online CB: Rapporteur reports vocally that companies are split

- Uniform UE behaviour vs. Accept two UE behaviours.

- Propose to agree to the replies in R2-2201083.

- Rapporteur further reports that there are UE in Feld that only reports in one of the fields, i.e. different to replies in R2.2201083, think that behaviour of UEs in field should be accepted.

* Accept behaviours by UEs in the field

[R2-2200135](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200135.zip) LS on Duplicate Measurements when SCell is a Neighbor Cell (R5-217991; contact: Qualcomm) RAN5 LS in Rel-15 5GS\_NR\_LTE-UEConTest To:RAN2

[R2-2201084](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2201084.zip) On duplicated measurement results when SCell is a neighbour Nokia, Nokia Shanghai Bell discussion Rel-17

* [045] 2 tdocs are noted

[R2-2201083](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201083.zip) Response LS on duplicated measurements for SCell Nokia, Nokia Shanghai Bell LS out Rel-17 To:RAN5

* Add to the LS “It was brought up in RAN2 discussions there are UEs in the field that only report in one of the fields”.
* LS should be Rel-15
* With these changes the LS out is approved, final version in R2-2201924.

EVEX

[R2-2200155](file:///D:/Documents/3GPP/tsg_ran/WG2/RAN2/2201_R2_116bis-e/Docs/R2-2200155.zip) Reply LS to CT3 Questions and Feedback on EVEX (S4-211647; contact: Qualcomm) SA4 LS in Rel-17 EVEX To:CT3 Cc:SA2, SA3, SA6, RAN2

* [000] Noted (no action)

# 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

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.

This Agenda item will not be treated and no input is expected.

### 9.0.2 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.

This Agenda item will not be treated and no input is expected.

[R2-2200090](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200090.zip) LS on updated Rel-17 RAN1 UE features list for LTE (R1-2112901; contact: NTT DOCOMO, AT&T) RAN1 LS in Rel-17 NB\_IOTenh4\_LTE\_eMTC6, LTE\_NBIOT\_eMTC\_NTN, LTE\_terr\_bcast\_bands\_part1, NR\_SL\_enh To:RAN2 Cc:RAN4

## 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: 3 tdocs

Email max expectation: 4 threads

### 9.1.1 Organizational

Including outcome of [Post116-e][306][NBIOT/eMTC R17] 36.300 running CR (Huawei)

Including outcome of [Post116-e][307][NBIOT/eMTC R17] 36.331 running CR (Qualcomm)

Including outcome of [Post116-e][308][NBIOT/eMTC R17] 36.304 running CR (Nokia)

Including outcome of [Post116-e][309][NBIOT/eMTC R17] 36.306 running CR (ZTE)

[R2-2200027](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200027.zip) [Running CR] Introduction of NB-IoT/eMTC Enhancements Qualcomm Incorporated draftCR Rel-17 36.331 16.7.0 B NB\_IOTenh4\_LTE\_eMTC6-Core R2-2110692

[R2-2200029](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200029.zip) Running CR: Introduction of additional enhancements for NB-IoT and eMTC ZTE Corporation, Sanechips draftCR Rel-17 36.306 16.7.0 B NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2200048](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200048.zip) Running CR: Introduction of Rel-17 enhancements for NB-IoT and eMTC Huawei draftCR Rel-17 36.300 16.7.0 B NB\_IOTenh4\_LTE\_eMTC6-Core R2-2110477

[R2-2200058](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200058.zip) [Running CR] Introduction of NB-IoT/eMTC Enhancements Nokia draftCR Rel-17 36.304 16.6.0 B NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2200093](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200093.zip) LS on channel quality reporting for NB-IoT (R1-2112971; contact: Huawei) RAN1 LS in Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core To:RAN2, RAN4

### 9.1.2 NB-IoT neighbor cell measurements and corresponding measurement triggering before RLF

Including outcome of [Post116-e][310][NBIOT/eMTC R17] RLF measurements (Qualcomm)

Contributions invited on open issues not covered by email discussion

[R2-2200028](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200028.zip) Report of [Post116-e][310][NBIOT/eMTC] RLF measurements Qualcomm Incorporated report Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2200675](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200675.zip) On remaining issues for connected mode measurements for RLF Nokia, Nokia Shanghai Bells discussion Rel-17

[R2-2200681](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200681.zip) Remaining FFSs on connected mode measurement ZTE Corporation, Sanechips discussion NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2201020](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201020.zip) Consideration on open issues for neighbour cell measurement in RRC connected state Qualcomm Incorporated discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2201077](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201077.zip) Discussion on connected mode measurement in NB-IoT Ericsson discussion Rel-17

R2-2201534 Support of Early rLF THALES discussion Late

### 9.1.3 NB-IoT carrier selection based on the coverage level, and associated carrier specific configuration

Including outcome of [Post116-e][311][NBIOT/eMTC R17] NB-IoT carrier selection (ZTE)

Contributions invited on open issues not covered by email discussion

[R2-2200030](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200030.zip) Report of [Post116-e][311] NB-IoT carrier selection ZTE Corporation, Sanechips discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2200633](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200633.zip) The remaining issues on enhanced paging carrier selection Spreadtrum Communications discussion Rel-17

[R2-2200676](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200676.zip) Further details on coverage level based paging carrier selection Nokia, Nokia Shanghai Bells discussion Rel-17

[R2-2200682](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200682.zip) Remaining FFSs on CEL-based paging carrier selection ZTE Corporation, Sanechips discussion NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2200866](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200866.zip) Discussion on the issue for Random Access on multicarrier for NB-IoT CMCC discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2200867](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200867.zip) Solution for random access issue on multiCarrier in NB-IoT CMCC draftCR Rel-17 36.331 16.7.0 B NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2200868](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200868.zip) Solution for random access issue on multiCarrier in NB-IoT CMCC draftCR Rel-17 36.321 16.6.0 B NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2200922](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200922.zip) Discussion on details of paging carrier selection MediaTek Inc. discussion NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2201021](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201021.zip) Paging carrier selection with hysteresis Qualcomm Incorporated discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2201022](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201022.zip) Signalling for coverage-based paging carrier selection Qualcomm Incorporated discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2201076](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201076.zip) Remaining issues of carrier selection Ericsson discussion Rel-17

### 9.1.4 Other

Includes WI objectives led by other WGs.

[R2-2200677](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200677.zip) On thje open issues for 16QAM for NB-IoT Nokia, Nokia Shanghai Bells discussion Rel-17

[R2-2200683](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200683.zip) Remaining FFSs on 16QAM for NB-IoT and 1736bits TBS for eMTC ZTE Corporation, Sanechips discussion NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2201078](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201078.zip) Support of 16-QAM for unicast in UL and DL in NB-IoT Ericsson discussion Rel-17

[R2-2201448](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201448.zip) Introduction of Rel-17 enhancements for NB-IoT and eMTC Huawei, HiSilicon draftCR Rel-17 36.302 16.1.0 B NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2201449](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201449.zip) CQI reporting for 16QAM DL Huawei, HiSilicon discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2201450](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201450.zip) UE capabilities and FDD/TDD, EPC/5GC differentiation Huawei, HiSilicon discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

## 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: 3 tdocs (+1 for 9.2.5)

Email max expectation: 3 threads

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).

### 9.2.1 Organizational

Rapporteur Input, incoming LSes

On specific request, we will reply to the following LS (it was already replied from NR NTN session for NR). LS contact company is asked to organize such reply. If desired, companies may submit one more tdoc beyond limit for information, for the purpose to help facilitating the reply: R2-2109307 LS on extended NAS supervision timers at satellite access (C1-215074; contact: Ericsson) CT1 LS in Rel-17 5GSAT\_ARCH-CT To:RAN2 Cc:RAN2

LS in

[R2-2200064](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200064.zip) Reply LS on EPS support for IoT NTN in Rel-17 (C1-217258; contact: MediaTek) CT1 LS in Rel-17 LTE\_NBIOT\_eMTC\_NTN, IoT\_SAT\_ARCH\_EPS To:SA2, RAN2, CT, RAN, SA Cc:CT4, RAN3

* Noted

[R2-2200084](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200084.zip) LS on GNSS Validity duration for IoT NTN (R1-2112848; contact: MediaTek) RAN1 LS in Rel-17 LTE\_NBIOT\_eMTC\_NTN To:RAN2

- OPPO wonder what R1 means by UE go to Idle. Does it mean that UE goes autonomously to Idle?

* Noted

[R2-2200146](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200146.zip) Reply LS on EPS support for IoT NTN in Rel-17 (S2-2109344; contact: MediaTek) SA2 LS in Rel-17 LTE\_NBIOT\_eMTC\_NTN, IoT\_SAT\_ARCH\_EPS To:RAN, CT, CT1, SA, RAN2 Cc:RAN3, CT3, CT4

* Noted

CRs

Note that RRC CR has been updated with latest L1 parameters

* [AT116bis-e][046][IoT-NTN] RRC Misc (Huawei)

Scope: Review of the last update IN R2-2201451 (including Latest L1 parameters). This phase of the discussion is offline only. If issues are found, capture as editors notes (or in an annex etc).

Intended outcome: Report

Deadline: Initial review during W1.

[R2-2201860](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201860.zip) Report of [046][IoT-NTN] RRC Misc Huawei

* [046] Keep the current representation of positionX, Y and Z parameters and add an Editor’s note to check the exact signalling
* [046] Keep the current representation of velocityX, Y and Z parameters and add an Editor’s note to check with RAN1.
* [046] Change the description of the actual value of parameter semiMajorAxis to: 6500000 + IE value \* (43000000 – 6500000) \* 2-33
* [046] For all ephemeris parameters, simplify the representation of the formulas.
* [046] TA common parameters, UL synchronisation validity duration and ephemeris epoch time are signalled in the NTN specific SIB (SIBXX).
* [046] K\_offset and K\_mac parameters are signalled in the NTN specific SIB (SIBXX).
* [046] UL (N)PRACH, (N)PUSCH and PUCCH transmission segment duration parameters are signalled in SIB2. (N)PUSCH and PUCCH transmission segment duration parameters are also signalled in dedicated signaling.
* [046] Configuration of UL transmission segment for PUSCH for sub-PRB allocation is only signalled in dedicated signalling.
* [046] In NB-IoT, the list of TACs broadcast in the cell is per PLMN.
* [046] The maximum number of TACs that can be broadcast in a cell in IOT NTN is 12, the same as NR NTN.
* [046] ta-Report-r17 is signaled in radioResourceConfigCommon.

[R2-2201451](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201451.zip) Running CR - Support of Non-Terrestrial Network in NB-IoT and eMTC Huawei draftCR Rel-17 36.331 16.7.0 B LTE\_NBIOT\_eMTC\_NTN R2-2111436

* [Post116bis-e][046][IoT NTN] 36331 (Huawei)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][087][IoT NTN] 36321 (Mediatek)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][088][IoT NTN] 36304 (Ericsson)

Scope: Updated running CR taking into account agreements of R2-116bis-e. Best effort review. Endorsement if possible. Capture TS related Open Issues, not captured elsewhere and suggest how to treat.

Intended outcome: Updated Running CR, reviewed, baseline for next meeting. TS related Open issue with suggestion how to treat.

Deadline: Short.

* [Post116bis-e][089][IoT NTN] Open Issues (Mediatek)

Scope: Determine if Company input by Pre117-e discussions shall be used, and how many / which Pre-discussions shall be done. Capture Open Issues not captured in the CR email discussions and suggest how to treat. [After finalization, Merge open issues from other discussions into a WI OI list (OI for which company input is invited in some way shall be listed in the WI-list).

Intended outcome: Open Issues list, and organization of Pre117-e Company input discussions for the WI.

Deadline: Short.

Extended NAS supervision timers

Online first – Shall we reply with numbers or without numbers?

[R2-2201602](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201602.zip) Discussion on IoT NTN reply LS to CT1 on extended NAS supervision timers Ericsson discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2201603](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201603.zip) Draft reply LS to CT1 on IoT NTN extended NAS supervision timers Ericsson LS out Rel-17 LTE\_NBIOT\_eMTC\_NTN, 5GSAT\_ARCH-CT To:CT1 Cc:RAN3, SA2

[R2-2201619](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201619.zip) Discussion on reply on extended NAS supervision timers for IoT NTN Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

Propose to follor NR NTN GNSS fix time

[R2-2201452](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201452.zip) Extended NAS timers for IOT NTN Huawei, HiSilicon discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

Moved here

DISCUSSION

- ZTE think some factors are missed in the calculations. Think new values should be provided to CT1. Maybe Nokia way could be ok.

- QC think Nokia approach is ok. CT1 should be aware already, and CT1 should decide if to adjust.

- CMCC think the RTT time is small in comparison, but we could mention that timers do not need to be extended for discount cov.

- xiaomi support sending numbers since the delay is different.

* We reply in the way Nokia propose above, offline
* [AT116bis-e][063][IoT NTN] LS out on NAS supervision timers (Ericsson)

Scope: Based on on-line discussion and agreements, make a reply LS.

Intended outcome: Approved LS (if possible, offline only)

Deadline: EOM

[R2-2201951](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201951.zip) Reply LS on IoT NTN extended NAS supervision timers at satellite access RAN2 LS out

* [063] LS out is approved

### 9.2.2 Support of Non continuous coverage

Open Issues: which IEs to reuse, how to transfer the IEs to the UEs, whether any other aspects need to be specified.

[R2-2201688](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201688.zip) [Pre116bis][014][IOT-NTN] Summary of 9.2.2 Support of Non continuous coverage (MediaTek) MediaTek Inc

- QC think we need additional parameters.

- ZTE agrees with QC

- Ericsson agrees, and think we can have quite simple means.

- Intel, Novamint, agrees.

- Gatehouse think we should use avg ephemeris (can use the exact same format as for the instantaneous params) + an almanc, and later add TLE. Novamint agrees with this. Eutelsat agrees as well

- xiaomi think thei is just for Idle mode power saving and accuracy doesn't need to be high.

- Apple think it is not realistic to discuss new parameters, to short time.

* The contents of the ephemeris / assistance info for non-continuous coverage:

Confirm that we Reuse the satellite ephemeris orbital parameters, already agreed for UL pre-compensation, for multiple satellites (Ref L1 params from R1).

* FFS on the maximum number of satellites, whose ephemeris information will be provided.
* FFS whether avg ephemeris (using same format as instant) + alamanc can be used (Gatehouse Proposal)
* FFS how to signal this (new SIB for this particular purpose, dedicated signalling).
* FFS if to introduce additional new parameters like satellite footprint reference point on ground, satellite coverage radius etc.

[R2-2200217](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200217.zip) Discussion on remaining issues on Non continuous coverage Intel Corporation discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2200252](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200252.zip) Discussion on the support of discontinuous coverage for IoT over NTN OPPO discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2200440](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200440.zip) Details on the support of the discontinuous coverage Qualcomm Incorporated discussion Rel-17 FS\_LTE\_NBIOT\_eMTC\_NTN

[R2-2200623](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200623.zip) On Discontinuous coverage in IoT-NTN MediaTek Inc. discussion

[R2-2200634](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200634.zip) Discussion on the remaining issue of non-continuous coverage Spreadtrum Communications discussion Rel-17

[R2-2200651](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200651.zip) Discussion on the support of discontinuous coverage for IoT over NTN Transsion Holdings discussion Rel-17

[R2-2200691](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200691.zip) Discussion on supporting non-continuous coverage CATT discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2200694](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200694.zip) Remaining FFSs on discontinuous coverage in IoT NTN ZTE Corporation, Sanechips discussion FS\_LTE\_NBIOT\_eMTC\_NTN

[R2-2200713](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200713.zip) Discussion on discontinuous coverage Xiaomi discussion

[R2-2200768](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200768.zip) Prediction of coverage discontinuity for IoT NTN Lenovo, Motorola Mobility discussion Rel-17

[R2-2200769](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200769.zip) Enhancement for idle UE power saving in discontinuous coverage Lenovo, Motorola Mobility discussion Rel-17

[R2-2200850](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200850.zip) Discussion on open issues for support of Non continuous coverage CMCC discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2201009](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201009.zip) Discussion on remaining aspects of discontinuous coverage in IoT NTN Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2201017](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201017.zip) On satellite ephemeris information types for discontinuous coverage in IoT-NTN Sateliot, Gatehouse discussion

[R2-2201181](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201181.zip) Support of discontinuos coverage Apple discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN R2-2110071

[R2-2201453](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201453.zip) Discussion on non continuous coverage Huawei, HiSilicon discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2201546](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201546.zip) Support of Discontinuous Coverage for IoT-NTN Interdigital, Inc. discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2201599](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201599.zip) Discontinuous coverage in IoT NTN Ericsson discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2201620](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201620.zip) Support for Discontinuous Coverage NB IoT NTN Rakuten Mobile, Inc discussion Rel-17

* [014] 19 tdocs Noted

### 9.2.3 User Plane Impact

Expect to converge on UP agreements based on NR NTN progress. Expect to address Open Issues.

[R2-2201655](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201655.zip) [Pre116bis][015][IOT-NTN] Summary of 9.2.3 User Plane Impact (OPPO) OPPO discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN-Core

DISCUSSION

P4

- OPPO indicate that none of the options has been agreed for NR NTN

P8

- Chair think we could assume to just report TA.

- Nokia think R1 has already sent LS to R2 that UE can report location. Thinks this saves signalling. Ericsson agrees.

- Chair: suggest wait. The n on-support of security for CIOT CP solution is in general an issue for direct reporting for NB-ioT.

P5

- Ericsson wonder what happens at handover.

- Oppo clarifies that this proposal if for the initial configuration.

- ZTE think HO is not applicable for CP solution. No reconfiguration.

P1

- OPPO think we don’t need to add these values GEO and MEO. O1 decreases the latency for RACH.

- ZTE think we may then need some explicit indication. OPPO think UE can use ephemeris info.

* Do not mandate Msg3 or Msg5 to include TA report MAC CE, and whether it can be included depends on the TB size of Msg3 or Msg5.
* Reuse NR NTN’s TA reporting trigger event in IoT NTN, i.e., a TA offset threshold between current TA and the last successfully reported TA is used for event-triggered TA reporting. FFS for location used for TA reporting purpose.
* Introduce a new MAC CE for provision of UE specific K\_offset and the size is fixed to 1 byte. FFS on the MAC CE’s name.
* (Following NR NTN) Neither of the following options are supported “TA information requested by network”, “Periodical reporting of TA information”
* (Following NR NTN) Upon reception of configuration or reconfiguration of TA reporting trigger event, if UE has not reported TA before, the UE triggers a TA reporting. FFS whether we need different behaviour for different re-configurations e.g. Handover.
* On the RAR window’s start offset for the case of NB-IoT 41ms offset: The RA window start offset defined as sum (current offset, UE-eNB RTT) is applied to the case of NB-IoT 41ms offset.

Can discuss how to / if to capture remaning things as FFSes.

The following proposals were not decided on, due to lack of time for discussion. Note for some of these, it may be possible to follow NR NTN.

*- Proposal 6 (to discuss) TA reporting in connected mode is not controlled by enabling/disabling indication in SI.*

*- Proposal 7 (to discuss) SR can be triggered if there is no available or sufficient UL-SCH resources for the triggered TA reporting.*

*- Proposal 8 (to discuss) RAN2 to decide whether to support UE reporting location information for TA reporting purpose in IoT NTN, FFS as a whole or separately for NB-IoT NTN and eMTC NTN.*

*- Proposal 9 (to discuss) RAN2 to discuss logical channel priority of the TA report MAC CE among the following options:*

*a. Option 1: Lower than “C-RNTI MAC CE or data from UL-CCCH” and higher than BSR*

*b. Option 2: For NB-IoT NTN, lower than DPR and higher than “data from any Logical Channel, except data from UL-CCCH”; for eMTC NTN, lower than BSR and higher than “data from any Logical Channel, except data from UL-CCCH”*

*- Proposal 10 (to discuss) On the LCID for the TA report MAC CE, RAN2 to do down-selection between the following options:*

*a. Option 1: use a reserved LCID*

*b. Option 2: repurpose a used LCID*

*- Proposal 12 (to discuss) On the LCID for the UE specific K\_offset MAC CE, RAN2 to do down-selection between the following options:*

*a. Option 1: use a reserved LCID*

*b. Option 2: repurpose an existing LCID*

*- Proposal 13 (to discuss) sr-ProhibitTimer is extended by adding an offset to the legacy value. FFS whether the offset is fixed or configurable.*

[R2-2200253](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200253.zip) Discussion on UP impact for IoT over NTN OPPO discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2200692](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200692.zip) Discussion on TA information reporting for IoT NTN CATT discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2200698](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200698.zip) Remaining FFSs on UP in IoT NTN ZTE Corporation, Sanechips discussion FS\_LTE\_NBIOT\_eMTC\_NTN

[R2-2200878](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200878.zip) Remaining issues on UP aspects for IoT-NTN CMCC discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2201010](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201010.zip) On User Plane left issues for IoT NTN Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2201454](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201454.zip) User plane for IOT NTN Huawei, HiSilicon discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2201631](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201631.zip) User plane aspects of NB-IoT and LTE-M in NTNs Ericsson discussion

* [015] 7 tdocs are noted

### 9.2.4 Control Plane Impact

Expect to converge on CP agreements based on NR NTN progress. Expect to address open issues, e.g. as indicated in the RRC Running CR: TAC removal in SIB, NB-IOT: whether TAC list is per PLMN or shared between PLMN, Trigger(s) for reading NTN SIB, Handling of UL Synchronisation validity timer / timer expiry, Need for a mechanism to prevent legacy / non-NTN capable UE to access a NTN cell, Location reporting via RRC, Handling of GNSS fix validity.

RRC signalling details to be addressed offline.

[R2-2201660](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201660.zip) [Pre116bis][016][IOT-NTN] Summary of 9.2.4 Control Plane Impact (Huawei) Huawei

DISCUSSION

P1

- QC are ok to do nothing, but not ok to say that we leave this to implementation.

- ZTE are not clear what it means leave to UE implementation. Huawei think that if there is no notification then if the UE is mobile he has to check. Nokia agrees with Huawei,

- CMCC think this has negative impact on stationary UEs, think we can mention in the TS that Mobile UEs should check.

- xiaomi think network should send notification, and UE can decide if to follow it or not.

P2

- Ericsson think that barring works fine, and think it should be introduced from start. IDT think barring bit is safe. QC agrees, think that new bands have overlapping freq. Lenovo as well.

- Intel think we don’t need a new barring bit, as we anyway have the reserved for op use bit. Nokia agrees. Huawei and ZTE point out that this is for a differnet prupose.

- Apple question the need for barring.

P3

- OPPO think we can rely on recovery cases, we don’t need RLF, similar to UL synch loss. Xiaomi think it is similar to TAT expiry. No need for RLF. ZTE agrees and think that in any case UE need to reaquire SIB, think we should avoid “fake RLF”.

- Chair wonder what really is the simplest

- Hauwei think this is not supposed to happen.

- ZTE and Huawei think that the network doesn't know.

- xiaomi comment that TAT timer expiry is only to consider the UL resource released

- Oppo think that on 3, the UE can also get the info just before the timer expiry

P5a

- Ericsson think this is rare and 5a is ok. Xiaomi thikn UE shall go to IDLE.

- OPPO think this is contradicting Idle mode decision by R1. MTK are also confused. Nokia think the UE shall go to Idle as GNSS doesn't work in connected.

- Huawei explains that RLF timer for NB-IoT is normally around 60s. Huawei think that data is lost if going to IDLE.

- QC think that if we just trigger going to Idle is very simple as when going to connected the UE anyway need to ensure GNSS is valid.

- Chair: Quite a lot of support for 5a.

- 3 companies cannot accept 5a.

- Chair: We then let the UE go to IDLE. As usual for Idle, NAS need to handle the reconnection, if UE need to be connected again, expect no NAS impact

- ZTE are not ok with going to IDLE autonomously, and not ok to report the timer to the network.

P6

- Huawei don't want P6.

P7

- Chair think eMTC and NB-IoT has somewhat different situation.

- Ericsson think that at least coarse location info is needed also for NB-IoT CP solution. SA3 lawful intercept need to know the country at least.

- OPPO think that SA3 has expressed concerns on coarse location into without security

- VDF think that coarse location info can be reported by NAS for NB-IoT.

- Apple think the location can be acquired in connected mode.

- Chair: Assume that if we follow SA3 and don’t allow even coarse location info reporting unprotected, then the eNB initial selection of core network node will not be able to use location info. For usage of location info for other purposes during connected, location info may be sent protected.

* It is up to the UE implementation whether or when to check SIB1 for TAC removal (for R17). Mobile UEs may need to check. No additional mechanism is needed. Can capture in a NOTE in Stage-2.
* We will have the barring bit to prevent terrestrial UEs to use NTN. FFS if we define a new barring bit for NTN UEs barring.
* When SI used for UL synch (pre-compensation) is no longer valid, the UE autonomously tunes away and re-aquires the required SI, and then comes back. FFS whether anything additional is needed.
* UE acquires the NTN specific SIB before accessing the cell.
* UE need to have a valid GNSS fix before going to connected. RAN2 assumes that the UE may need to re-aquire the GNSS fix right before establishing the connection (regardless if previously valid or not), if needed to avoid interruption during the connection.
* When the GNSS fix becomes outdated in RRC\_CONNECTED mode, the UE goes to IDLE mode.

On Location Information Reporting:

* Assume that eMTC can follow whatever is agreed for NR NTN

*Chair comment: detailed impacts were not discussed.*

* For NB-IoT, assume that the location info need to be protected, also coarse location info, as has been stated by SA3. FFS if location can be reported by NAS, can ask CT1/SA2. Can also ask SA3 to confirm their view on coarse location information. Keep R3/SA2 informed.
* [AT116bis-e][064][IoT-NTN] LSes out on UE providing Location Information (Ericsson)

Scope: On LS out, either one LS or two.

1) Determine whether to send LS to ask about NB-IoT providing UE location information by NAS, and if applicable ask for details, E.g. could ask SA2 and RAN3 whether this would be acceptable to meet requirements (*note: NAS reporting may need to be complemented by network signalling to forward the location to the eNB by R3 decision*), E.g. could ask SA2 and/or CT1 on feasibility.

2) Determine whether to send LS to SA3 on providing coarse location info at connection setup, and if applicable what to ask. Shall be consistent with outcome of discussion [110] unless there are strong reasons not to be consistent.

Intended outcome: Report, LS out(s)

Deadline: EOM (if possible offline only)

[R2-2201952](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201952.zip) LS on UE providing Location Information for NB-IoT RAN2 LS out

DISCUSSION

- Action should be to the different groups not to RAN2

- QC suggest to add the word kindly in the action.

* Need revision, the revised LS out is approved in R2-2201957

[R2-2201953](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201953.zip) LS on security concerns for UE providing Location Information for NB-IoT RAN2 LS out

- Same editorial comments as above.

* Need revision, the revised LS out is approved in R2-2201958

[R2-2201455](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201455.zip) Control plane for IOT NTN Huawei, HiSilicon discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2200218](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200218.zip) Discussion on new barring bit Intel Corporation discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2200254](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200254.zip) Discussion on CP impact for IoT over NTN OPPO discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2200273](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200273.zip) RAN2 aspects of UL sync validity timer and GNSS position validity Xiaomi discussion Rel-17

[R2-2200441](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200441.zip) UL synchronization validity timer in RRC\_CONNECTED Qualcomm Incorporated discussion Rel-17 FS\_LTE\_NBIOT\_eMTC\_NTN R2-2109966

[R2-2200442](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200442.zip) Discussion on the GNSS validity duration Qualcomm Incorporated discussion Rel-17 FS\_LTE\_NBIOT\_eMTC\_NTN

[R2-2200622](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200622.zip) On GNSS Validity Duration in IoT-NTN MediaTek Inc. discussion

[R2-2200624](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200624.zip) Validity Timer Expiry and Synchronization Loss in IoT-NTN MediaTek Inc. discussion

[R2-2200673](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200673.zip) Further discussion on remaining control plane issues for IoT-NTN control plane Nokia, Nokia Shanghai Bells discussion Rel-17

[R2-2200693](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200693.zip) Discussion on the open issues of CP impact CATT discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2200699](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200699.zip) Remaining FFSs on CP in IoT NTN ZTE Corporation, Sanechips discussion FS\_LTE\_NBIOT\_eMTC\_NTN

[R2-2200714](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200714.zip) Discussion on RRC idle mode issues for IoT NTN Xiaomi discussion

[R2-2200770](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200770.zip) Serving and neighboring ephemeris in system information for IoT NTN Lenovo, Motorola Mobility discussion Rel-17

[R2-2200871](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200871.zip) Remaining Issues of CP Impact of IoT over NTN CMCC discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2201182](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201182.zip) Provision of ephemeris Apple discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN R2-2110072

[R2-2201197](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201197.zip) Soft TAC update NEC Telecom MODUS Ltd. discussion

[R2-2201547](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201547.zip) Location Reporting in RRC\_CONNECTED Interdigital, Inc. discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2201548](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201548.zip) TAC validity timer Interdigital, Inc. discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2201600](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201600.zip) Control plane aspects of IoT NTN Ericsson discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

* [016] 19 tdocs above are Noted

### 9.2.5 UE Capabilities

For an initial discussion of UE capabilities, there may be an offline effort,

* [AT116bis-e][047][IoT-NTN] UE capabilities (Nokia)

Scope: Take into account proposals of documents submitted under 9.2.5, find agreements if possible (can agree offline), identify open points. This discussion is offline only.

Intended outcome: Report

Deadline: EOM

* [047] IoT-NTN support is indicated by single per UE capability indication. This capability indication comprises of all RAN1 features needed for IoT-NTN and the following control plane and user plane functionalities of RAN2.

- TA Pre-compensation, RAR Window adjustments and MAC contention resolution Timer adjustments.

- Timer adjustments for PDCP/RLC/MAC for NTN operation.

- Acquisition of new SIB for IoT-NTN access

- GNSS Support.

* [047] FFS whether Support for soft TA switching procedure is optional for IoT-NTN UE.
* [047] FFS whether Support for PUR Timer modifications is optional for IoT-NTN UE that supports PUR for terrestrial case.
* [047] TA Reporting is optional for IoT-NTN UE with separate capability indication from UE
* [047] Capability bit signalling is not needed for support of cell reselection based on timer functionality. UE not having this capability will follow legacy cell reselection behaviour.
* [047] FFS if the Existing CHO capability indication can be reused for IoT-NTN CHO (FFS if it can be applied to terrestrial case).
* [047] FFS 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 Interop Test (IOT) Status.

[R2-2200255](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200255.zip) Discussion on IoT NTN UE capabilities OPPO discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2200443](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200443.zip) Discussion on UE capabilities Qualcomm Incorporated discussion Rel-17 FS\_LTE\_NBIOT\_eMTC\_NTN

[R2-2200674](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200674.zip) Analysis on IoT-NTN UE capability requirements Nokia, Nokia Shanghai Bells discussion Rel-17

[R2-2200702](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200702.zip) Consideration on UE capability report for IoT NTN ZTE Corporation, Sanechips discussion FS\_LTE\_NBIOT\_eMTC\_NTN

[R2-2200875](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200875.zip) RAN2 UE Feature List for IoT NTN CMCC discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2201456](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201456.zip) Discussion on UE capability Huawei, HiSilicon discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

[R2-2201601](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201601.zip) IoT NTN capabilities Ericsson discussion Rel-17 LTE\_NBIOT\_eMTC\_NTN

* [047] 7 tdocs noted

## 9.3 EUTRA R17 Other

Time budget: 0 TU

Tdoc Limitation: No limitation but the AI may be entirely deprioritized depending on available time.

Email max expectation: 2 threads

This agenda item may be deprioritized in this meeting.

For TEI17, ONLY incoming LSes and tdocs related to replying to the LSs.

[R2-2200153](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200153.zip) LS on LTE User Plane Integrity Protection (S3-214462; contact: Vodafone) SA3 LS in Rel-17 UPIP\_SEC\_LTE To:RAN2, RAN3 Cc:SA, RAN

[R2-2200209](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200209.zip) Introduction of new bands and bandwidth allocation for LTE-based 5G terrestrial broadcast Qualcomm Incorporated CR Rel-17 36.331 16.7.0 4750 - B LTE\_terr\_bcast\_bands\_part1-Core

[R2-2200368](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200368.zip) On introducing height information reporting in MDT reports KDDI Corporation, Ericsson draftCR Rel-17 36.331 16.7.0 B TEI17

[R2-2200370](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200370.zip) On introducing height information reporting in MDT reports KDDI Corporation, Ericsson draftCR Rel-17 37.320 16.7.0 B TEI17

[R2-2200371](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200371.zip) On introducing height information reporting in MDT reports KDDI Corporation, Ericsson draftCR Rel-17 36.306 16.7.0 TEI17

[R2-2201513](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201513.zip) Draft CR to TS 36.331 to support UP IP for EPC connected architectures using NR PDCP Huawei, HiSilicon, Vodafone draftCR Rel-17 36.331 16.7.0 UPIP\_SEC\_LTE

[R2-2201514](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201514.zip) Draft CR to TS 38.331 to support UP IP for EPC connected architectures using NR PDCP Huawei, HiSilicon, Vodafone draftCR Rel-17 38.331 16.7.0 UPIP\_SEC\_LTE

[R2-2201515](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201515.zip) Draft CR to TS 36.300 to support UP IP for EPC connected architectures using NR PDCP Huawei, HiSilicon, Vodafone draftCR Rel-17 36.300 16.7.0 UPIP\_SEC\_LTE

[R2-2201516](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201516.zip) Draft CR to TS 37.340 to support UP IP for EPC connected architectures using NR PDCP Huawei, HiSilicon, Vodafone draftCR Rel-17 37.340 16.8.0 UPIP\_SEC\_LTE

[R2-2201517](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201517.zip) Draft CR to TS 38.323 to support UP IP for EPC connected architectures using NR PDCP Huawei, HiSilicon, Vodafone draftCR Rel-17 38.323 16.6.0 UPIP\_SEC\_LTE

[R2-2201525](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201525.zip) Discussion on LTE User Plane Integrity Protection (SA3 LS) Huawei, HiSilicon discussion Rel-17 UPIP\_SEC\_LTE

[R2-2201621](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2201621.zip) Proposal to respond to SA3 LS S3-214462 ([R2-2200153](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200153.zip)) on LTE User Plane Integrity Protection VODAFONE Group Plc discussion Rel-17

## 9.4 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 is expected when R17 TSes are to be created and at that point CRs need to be updated towards latest TS version and submitted again.

Including any updates to the RAN2-endorsed inclusive language CRs ( e.g. for inter-group consistency, inter-group review etc)

This Agenda item will not be treated and no input is expected.

[R2-2200159](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116bis-e\Docs\R2-2200159.zip) Reply LS on Inclusive language for ANR (S5-216197; contact: Huawei) SA5 LS in Rel-17 TEI17 To:RAN2 Cc:RAN3, RAN, SA