3GPP TSG-RAN WG2 Meeting #118-e R2-22xxxxx

Online, 9-20 May 2022

Source: Session Chair (MediaTek)

Title: Report of session on positioning and sidelink relay

# Status of At-Meeting Email Discussions

This subclause is not an Agenda Item. It contains a running summary of the email discussions assigned to take place during the meeting weeks. This section will be moved to an appendix in the final version of the report.

* [AT118-e][600][POS][Relay] Organisational Nathan – Positioning/Relay (MediaTek)

 Scope: Organisational discussions and announcements, as needed throughout the meeting weeks.

 Intended outcome: Well-informed participants

 Deadline: Friday 2022-05-20 1000 UTC

Relay rapporteur CRs:

* [AT118-e][611][Relay] 38331 relay CR (Huawei)

 Scope: Update the rapporteur CR (R2-2205986), incorporating decisions of this meeting. Phase 1 attempts to resolve the main technical issues; phase 2 produces an initial draft of the decisions (expectation is that review of this CR may be extended to post-meeting).

 Intended outcome: CR agreeable as a baseline for final review, in R2-2206231

 Deadline: Phase 1 Friday 2022-05-13 1800 UTC, Phase 2 Wednesday 2022-05-18 0400 UTC

* [AT118-e][612][Relay] 38300 relay CR (MediaTek)

 Scope: Update the rapporteur CR (R2-2204584), incorporating decisions of this meeting and taking into account related proposals in the related tdocs: R2-2204991, R2-2204795, R2-2204990, R2-2205432, R2-2205781.

 Intended outcome: Agreed CR (without CB if possible) in R2-2206232

 Deadline: Wednesday 2022-05-18 0400 UTC

* [AT118-e][613][Relay] 38304 relay CR (Ericsson)

 Scope: Develop a rapporteur CR, incorporating decisions of this meeting and taking into account related proposals in the related tdocs: R2-2205905, R2-2204992.

 Intended outcome: Agreed CR (without CB if possible) in R2-2206233

 Deadline: Wednesday 2022-05-18 0400 UTC

* [AT118-e][614][Relay] 38306 relay CR (Qualcomm)

 Scope: Update the rapporteur CR (R2-2205880), incorporating decisions of this meeting and taking into account related proposals in the related tdocs: R2-2204637, R2-2204638, R2-2204770, R2-2205988.

 Intended outcome: Agreed CR (without CB if possible) in R2-2206234

 Deadline: Phase 1 to agree on proposals: Friday 2022-05-13 1800 UTC; Phase 2 to agree CR Wednesday 2022-05-18 0400 UTC

* [AT118-e][615][Relay] 38321 relay CR (Apple)

 Scope: Update the rapporteur CR (R2-2205648), incorporating decisions of this meeting and taking into account related proposals in the related tdocs: R2-2204766, R2-2204767, R2-2204768, R2-2204769, R2-2205114, R2-2205610, R2-2204773, R2-2204993 (handling of R2-2205610 and R2-2204768 to be confirmed online Monday 2022-05-09).

 Intended outcome: Agreeable CR in R2-2206235

 Deadline: Wednesday 2022-05-18 0400 UTC

* [AT118-e][616][Relay] 38322 and 38323 relay CRs (Samsung)

 Scope: Update the rapporteur CRs (R2-2205607 and R2-2205608), incorporating decisions of this meeting and taking into account related proposals in the related tdocs: R2-2205963, R2-2205611.

 Intended outcome: Agreed CRs (without CB if possible) in R2-2206236 (38.322) and R2-2206237 (38.323)

 Deadline: Wednesday 2022-05-18 0400 UTC

* [AT118-e][617][Relay] 38351 relay CR (OPPO)

 Scope: Update the rapporteur CR (R2-2204632), incorporating decisions of this meeting and taking into account related proposals in the related tdocs: R2-2204796, R2-2204797, R2-2205133, R2-2205431.

 Intended outcome: Agreed CR (without CB if possible) in R2-2206238

 Deadline: Wednesday 2022-05-18 0400 UTC

Relay other discussions:

* [AT118-e][618][Relay] 37985 relay TP (ZTE)

 Scope: Evaluate the TP in R2-2204800 and produce an endorsable version.

 Intended outcome: Endorsed TP in R2-2206239 and approved LS to RAN1 in R2-2206240 (without CBs)

 Deadline: Wednesday 2022-05-18 0400 UTC

* [AT118-e][619][Relay] LS on SDU type in PDCP (ZTE)

 Scope: Discuss the LS in R2-2204447 and related contributions (R2-2204633, R2-2204771, R2-2204772, R2-2204798, R2-2204799). Phase 1 should determine a way forward and a recommendation to be taken into account in the PDCP rapporteur CR; Phase 2 is to draft and approve the LS.

 Intended outcome: Approved LS (without CB) in R2-2206241

 Deadline: Phase 1 Friday 2022-05-13 1800 UTC, Phase 2 Wednesday 2022-05-18 0400 UTC

* [AT118-e][620][Relay] System information issues (Qualcomm)

 Scope: Discuss the system information proposals from agenda item 6.7.2.1 (R2-2204585, R2-2204586, R2-2204674, R2-2204886, R2-2205064, R2-2205065, R2-2205319, R2-2205609) and determine handling of the technical issues.

 Intended outcome: Report to Monday CB session in R2-2206242

 Deadline: Friday 2022-05-13 1800 UTC

* [AT118-e][621][Relay] Initial comments on discovery and (re)selection (vivo)

 Scope: Collect company views on the issues raised in R2-2206056.

 Intended outcome: Report to Wednesday session in R2-2206243

 Deadline: Tuesday 2022-05-10 1800 UTC

Positioning rapporteur CRs:

* [AT118-e][622][POS] 38305 positioning CR (Intel)

 Scope: Review and update the rapporteur CR (R2-2204931), also taking into account proposals in the stage 2 related tdocs: R2-2205655, R2-2204690, R2-2205017, R2-2205488, R2-2205805, stage 2 proposals from AI 6.11.2.1. Also check the CR in R2-2204689 to 36.305. Discussion should coordinate with the handling of agenda item summaries.

 Intended outcome: Agreed CRs to 38.305 in R2-2206244 and 36.305 in R2-2206245 (without CBs if possible)

 Deadline: Tuesday 2022-05-17 1800 UTC

* [AT118-e][623][POS] 38331 positioning CR (Ericsson)

 Scope: Review and update the rapporteur CR (R2-2205859), taking into account decisions of this meeting. Discussion should coordinate with the handling of agenda item summaries.

 Intended outcome: Agreeable CR in R2-2206246

 Deadline: Tuesday 2022-05-17 1800 UTC

* [AT118-e][624][POS] 37355 positioning CR (Qualcomm)

 Scope: Review and update the rapporteur CR (R2-2205829), taking into account decisions of this meeting. Discussion should coordinate with the handling of agenda item summaries.

 Intended outcome: Agreeable CR in R2-2206247

 Deadline: Tuesday 2022-05-17 1800 UTC

* [AT118-e][625][POS] 38321 positioning CR (Huawei)

 Scope: Develop a rapporteur CR, taking into account decisions of this meeting. Discussion should coordinate with the handling of agenda item summaries.

 Intended outcome: Agreeable CR in R2-2206248

 Deadline: Tuesday 2022-05-17 1800 UTC

Positioning other discussions:

* [AT118-e][626][POS] LS on TEG framework (CATT)

 Scope: Handle the LS in R2-2204478, determine a way forward, and draft a reply.

 Intended outcome: Approved LS (without CB if possible) in R2-2206249

 Deadline: Friday 2022-05-13 1800 UTC

* [AT118-e][627][POS] Positioning UE capabilities (Intel)

 Scope: Discuss proposals on UE capabilities, taking into account the related tdocs: R2-2204933, R2-2205009, R2-2206330.

 Intended outcome: Endorsed TPs to some or all of 37.355, 38.331, 38.306, 38.822 (without CBs if possible)

 Deadline: Tuesday 2022-05-17 1800 UTC

* [AT118-e][628][TEI17] NMEA GGA string for HA-GNSS reporting (Ericsson)

 Scope: Discuss the contribution in R2-2205845 and determine if a CR is agreeable.

 Intended outcome: Agreed CR (without CB if possible) in R2-2206250

 Deadline: Tuesday 2022-05-17 1800 UTC

* [AT118-e][629][POS] Rel-16 positioning CRs (Ericsson)

 Scope: Discuss the following contributions under agenda item 5.3 and determine handling: R2-2204694, R2-2204695, R2-2205801, R2-2205802, R2-2205803.

 Intended outcome: Agreed CRs (without CB)

 Deadline: Tuesday 2022-05-17 1800 UTC

* [AT118-e][630][POS] LS on DL-AoD signalling load (Ericsson)

 Scope: Discuss the concern on signalling load raised in R2-2204491 and draft a reply.

 Intended outcome: Approved LS (without CB if possible) in R2-2206251

 Deadline: Tuesday 2022-05-17 1800 UTC

* [AT118-e][631][POS] Remaining PropDisc LPP RIL items (Qualcomm)

 Scope: Check company views and discuss the RIL items marked for discussion and not covered by contributions:

* H004: Expected AoA/AoD per TRP or per resource
* N013: Uncertainty mandatory or optional for expected AoA/AoD
* H059: DL-PRS ID in the TEG timestamp
* H024, H032, H033, H046: BIT STRING for UE-based assistance data per method

 Intended outcome: Report to Monday (week 2) session in R2-2206252

 Deadline: Friday 2022-05-13 1800 UTC

* [AT118-e][632][Relay] Cell change for remote UE (InterDigital)

 Scope: Discuss P10a and P10b from R2-2206339 and attempt to reach an agreeable conclusion.

 Intended outcome: Report to Monday week 2 session in R2-2206253

 Deadline: Friday 2022-05-13 1800 UTC

* [AT118-e][633][Relay] Remaining ASN.1 review issues (Huawei)

 Scope: Discuss the remaining issues from R2-2206077, prioritising the high and medium priority issues.

 Intended outcome: Report to Monday week 2 session in R2-2206254

 Deadline: Friday 2022-05-13 1800 UTC

* [AT118-e][634][POS] Measurement gap RRC aspects (Huawei)

 Scope: Conclude on remaining RRC issues on measurement gaps, taking into account P4-P7 in the summary R2-2206340 as well as the related tdocs R2-2204543, R2-2205267, R2-2205291, and R2-2205726. Related MAC issues can be considered in the MAC CR discussion.

 Intended outcome: Report to Monday week 2 session in R2-2206255

 Deadline: Friday 2022-05-13 1800 UTC

* [AT118-e][635][POS] Cross-group alignment for PPW (Qualcomm)

 Scope: Check P11 from R2-2206147 and determine whether to align the PPW/MG procedures.

 Intended outcome: Report to Wednesday CB session in R2-2206256

 Deadline: Tuesday 2022-05-17 1800 UTC

* [AT118-e][636][POS] Proposals for discussion from RRC\_INACTIVE summary (vivo)

 Scope: Discuss P1/P2b/P4a/P5a/P5b from R2-2206052 and attempt to conclude. P2b should be checked for compatibility with SDT.

 Intended outcome: Report to Monday week 2 session in R2-2206257

 Deadline: Friday 2022-05-13 1800 UTC

* [AT118-e][637][POS] Proposals for discussion on on-demand PRS (Huawei)

 Scope: Discuss P1/P2/P3 from R2-2206058.

 Intended outcome: Report to CB session in R2-2206258

 Deadline: Tuesday 2022-05-17 1800 UTC

* [AT118-e][638][POS] Tx TEG and LOS/NLOS aspects (CATT)

 Scope: Discuss P1a-P1e and P3a/P3b of R2-2206333.

 Intended outcome: Report to CB session in R2-2206259

 Deadline: Tuesday 2022-05-17 1800 UTC

* [AT118-e][639][POS] Collection of views on integrity proposals (Ericsson)

 Scope: Take comments on the proposals from R2-2206092, focussing on which topics are critical to treat.

 Intended outcome: Report to Monday week 2 session in R2-2206260

 Deadline: Friday 2022-05-13 1800 UTC

* [AT118-e][640][Relay] Cast type for discovery (OPPO)

 Scope: Discuss the options on groupcast and unicast for discovery (P6 of R2-2206243) and determine whether spec impact and/or an LS to SA2 is needed.

 Intended outcome: Report to Monday week 2 session

 Deadline: Friday 2022-05-13 1800 UTC

# 4 EUTRA Rel-16 and earlier

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

## 4.4 Positioning corrections Rel-16 and earlier

(LTE\_NavIC-Core, LTE TEI16 Positioning), REL-15 and Earlier WIs are in scope but not listed explicitly (long list).

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

# 5 NR Rel-15 and Rel-16

Essential corrections only.

Tdoc Limitation: 18 tdocs in total for all sub agenda items.

## 5.3 NR Positioning Support

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

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

(NR TEI16 Positioning)

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

Tdoc Limitation: See tdoc limitation for Agenda Item 5

### 5.3.1 General and Stage 2 corrections

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

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

[R2-2204694](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C38.305_CR0088_%28Rel-16%29_R2-2204694.docx) Correction on the description of deferred MT-LR CATT CR Rel-16 38.305 16.7.0 0088 - F NR\_pos-Core

[R2-2204695](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C38.305_CR0089_%28Rel-17%29_R2-2204695.docx) Correction on the description of deferred MT-LR CATT CR Rel-17 38.305 17.0.0 0089 - A NR\_pos-Core

### 5.3.2 RRC corrections

Including impact to 36.331, 38.331, and 38.306.

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

### 5.3.3 LPP corrections

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

[R2-2205801](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205801%20Motivation%20LPP%20Segmentation.docx) Motivation to clarify LPP segmentation purpose Ericsson discussion

[R2-2205802](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205802%20SegCRCatF.docx) Clarification on LPP segmentation Ericsson CR Rel-16 37.355 16.8.0 0334 1 F NR\_pos-Core R2-2203368

[R2-2205803](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205803%20SegCRCatA.docx) Clarification on LPP segmentation Ericsson CR Rel-17 37.355 17.0.0 0346 - A NR\_pos-Core

* [AT118-e][629][POS] Rel-16 positioning CRs (Ericsson)

 Scope: Discuss the following contributions under agenda item 5.3 and determine handling: R2-2204694, R2-2204695, R2-2205801, R2-2205802, R2-2205803.

 Intended outcome: Agreed CRs (without CB)

 Deadline: Tuesday 2022-05-17 1800 UTC

### 5.3.4 MAC corrections

# 6 NR Rel-17

## 6.7 NR Sidelink relay

(NR\_SL\_Relay-Core; leading WG: RAN2; REL-17; WID: RP-212601)

WI has been declared 100% complete

Tdoc Limitation: 8 tdocs

### 6.7.1 Organizational

Incoming LSs, TS updates, rapporteur inputs. This AI is reserved for rapporteur and organizational inputs. For LSes that need action or have impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided. Related documents and proposed responses from companies other than the contact company should be submitted to the corresponding technical agenda item.

Incoming LSs other than R2-2204447, with “take into account” actions only

[R2-2204436](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CDocs%5CR2-2204436.zip) LS reply on support of RAN sharing and discovery signalling (S2-2201296; contact: Huawei) SA2 LS in Rel-17 To:RAN2 Cc:CT1

[R2-2204440](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CDocs%5CR2-2204440.zip) Reply LS on discovery and data associated to different L2 IDs (S2-2201298; contact: vivo) SA2 LS in Rel-17 To:RAN2 Cc:CT1

LS on SDU type and related documents

[R2-2204447](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204447_C1-221835.docx) LS on the SDU type used over user plane for NR PC5 reference point (C1-221835; contact: ZTE) CT1 LS in Rel-17 To:RAN2 Cc:SA2

[R2-2204633](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204633%20-%20Discussion%20on%20CT1%20LS%20on%20SDU%20type%20%28C1-221835%29.docx) Discussion on CT1 LS on SDU type (C1-221835) OPPO discussion Rel-17 NR\_SL\_relay-Core

[R2-2204771](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204771.docx) Issues on the SDU Type Used over User Plane for NR PC5 Reference Point CATT discussion Rel-17 NR\_SL\_relay-Core

[R2-2204772](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204772.docx) Correciton on PDCP for SL relay CATT draftCR Rel-17 38.323 17.0.0 F NR\_SL\_relay-Core

[R2-2204798](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204798%20Discussion%20on%20the%20SDU%20type%20used%20over%20user%20plane%20for%20NR%20PC5%20reference%20point.doc) Discussion on the SDU type used over user plane for NR PC5 reference point ZTE, Sanechips discussion Rel-17 NR\_SL\_relay-Core

[R2-2204799](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204799%20Draft%20reply%20LS%20on%20SDU%20type%20used%20over%20user%20plane%20for%20NR%20PC5%20reference%20point.docx) Draft reply LS on SDU type used over user plane for NR PC5 reference point ZTE, Sanechips LS out Rel-17 NR\_SL\_relay-Core, NR\_SL\_enh To:CT1 Cc:SA2

* [AT118-e][619][Relay] LS on SDU type in PDCP (ZTE)

 Scope: Discuss the LS in R2-2204447 and related contributions (R2-2204633, R2-2204771, R2-2204772, R2-2204798, R2-2204799). Phase 1 should determine a way forward and a recommendation to be taken into account in the PDCP rapporteur CR; Phase 2 is to draft and approve the LS.

 Intended outcome: Approved LS (without CB) in R2-2206241

 Deadline: Phase 1 Friday 2022-05-13 1800 UTC, Phase 2 Wednesday 2022-05-18 0400 UTC

Rapporteur CRs

[R2-2204584](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204584%20%2038300-%20Correction%20%20for%20SL%20Relay.docx) 38.300 CR Correction for SL Relay MediaTek Inc. CR Rel-17 38.300 17.0.0 0440 - F NR\_SL\_relay-Core

[R2-2204632](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C38351_CR0001_%28Rel-17%29_R2-2204632%20-%20Correction%20on%20SRAP%20for%20L2%20U2N%20Relay_V4.3.docx) Correction on SRAP for L2 U2N Relay OPPO CR Rel-17 38.351 17.0.0 0001 - F NR\_SL\_relay-Core

[R2-2205607](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205607%2038.322%20CR0048%20Correction%20on%20RLC%20for%20SL%20Relay.docx) Correction on RLC for SL relay Samsung CR Rel-17 38.322 17.0.0 0048 - F NR\_SL\_relay-Core

[R2-2205608](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205608%2038.323%20CR0093%20Correciton%20on%20PDCP%20for%20SL%20relay.docx) Correction on PDCP for SL relay Samsung CR Rel-17 38.323 17.0.0 0093 - F NR\_SL\_relay-Core

[R2-2205648](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205648_38321_CR1277_%28Rel-17%29_MAC-%20Correction%20for%20SL%20Relay_v2.docx) Correction for sidelink relay in MAC Apple CR Rel-17 38.321 17.0.0 1277 - F NR\_SL\_relay-Core Late

[R2-2205880](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C38.306_CR0728%28Rel-17%29_R2-2205880%20-%2038.306%20CR%20for%20sidelink%20relay%20capabilities.docx) 38.306 CR for sidelink relay UE capabilities Qualcomm Incorporated CR Rel-17 38.306 17.0.0 0728 - F NR\_SL\_relay-Core

[R2-2205986](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205986_38331_%20CR%233145_%20Rel-17_Miscellaneous%20corrections%20for%20NR%20SL%20Relay.docx) Miscellaneous RRC CR for SL relay Huawei, HiSilicon CR Rel-17 38.331 17.0.0 3145 - F NR\_SL\_relay-Core Late

* [AT118-e][611][Relay] 38331 relay CR (Huawei)

 Scope: Update the rapporteur CR (R2-2205986), incorporating decisions of this meeting. Phase 1 attempts to resolve the main technical issues; phase 2 produces an initial draft of the decisions (expectation is that review of this CR may be extended to post-meeting).

 Intended outcome: CR agreeable as a baseline for final review, in R2-2206231

 Deadline: Phase 1 Friday 2022-05-13 1800 UTC, Phase 2 Wednesday 2022-05-18 0400 UTC

* [AT118-e][612][Relay] 38300 relay CR (MediaTek)

 Scope: Update the rapporteur CR (R2-2204584), incorporating decisions of this meeting and taking into account related proposals in the related tdocs: R2-2204991, R2-2204795, R2-2204990, R2-2205432, R2-2205781.

 Intended outcome: Agreed CR (without CB if possible) in R2-2206232

 Deadline: Wednesday 2022-05-18 0400 UTC

* [AT118-e][613][Relay] 38304 relay CR (Ericsson)

 Scope: Develop a rapporteur CR, incorporating decisions of this meeting and taking into account related proposals in the related tdocs: R2-2205905, R2-2204992.

 Intended outcome: Agreed CR (without CB if possible) in R2-2206233

 Deadline: Wednesday 2022-05-18 0400 UTC

* [AT118-e][614][Relay] 38306 relay CR (Qualcomm)

 Scope: Update the rapporteur CR (R2-2205880), incorporating decisions of this meeting and taking into account related proposals in the related tdocs: R2-2204637, R2-2204638, R2-2204770, R2-2205988.

 Intended outcome: Agreed CR (without CB if possible) in R2-2206234

 Deadline: Phase 1 to agree on proposals: Friday 2022-05-13 1800 UTC; Phase 2 to agree CR Wednesday 2022-05-18 0400 UTC

* [AT118-e][615][Relay] 38321 relay CR (Apple)

 Scope: Update the rapporteur CR (R2-2205648), incorporating decisions of this meeting and taking into account related proposals in the related tdocs: R2-2204766, R2-2204767, R2-2204768, R2-2204769, R2-2205114, R2-2205610, R2-2204773, R2-2204993 (handling of R2-2205610 and R2-2204768 to be confirmed online Monday 2022-05-09).

 Intended outcome: Agreeable CR in R2-2206235

 Deadline: Wednesday 2022-05-18 0400 UTC

* [AT118-e][616][Relay] 38322 and 38323 relay CRs (Samsung)

 Scope: Update the rapporteur CRs (R2-2205607 and R2-2205608), incorporating decisions of this meeting and taking into account related proposals in the related tdocs: R2-2205963, R2-2205611.

 Intended outcome: Agreed CRs (without CB if possible) in R2-2206236 (38.322) and R2-2206237 (38.323)

 Deadline: Wednesday 2022-05-18 0400 UTC

* [AT118-e][617][Relay] 38351 relay CR (OPPO)

 Scope: Update the rapporteur CR (R2-2204632), incorporating decisions of this meeting and taking into account related proposals in the related tdocs: R2-2204796, R2-2204797, R2-2205133, R2-2205431.

 Intended outcome: Agreed CR (without CB if possible) in R2-2206238

 Deadline: Wednesday 2022-05-18 0400 UTC

### 6.7.2 Essential corrections

No documents should be submitted to 6.7.2. Please submit to 6.7.2.x.

#### 6.7.2.1 Control plane procedures

Including connection management, SI delivery, paging, access control for remote UE.

Summary document

[R2-2206339](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2206339%20Report%20of%20%5BPre118-e%5D%5B608%5D%5BRelay%5D%20Summary%20of%20AI%206.7.2.1%20on%20control%20plane%20%28Lenovo%29.docx) Summary of [Pre118-e][608][Relay] Summary of AI 6.7.2.1 on CP (Lenovo) Lenovo discussion Rel-17 NR\_SL\_relay-Core

[Easy] Proposal 1: MIB is not required by a U2N Remote UE.

Proposal 1a: Discuss if Proposal 1 needs to be reflected in the RRC specification.

[Easy] Proposal 3: A Remote UE indicates its interests for any SIBs (not SI-messages) to Relay UE via RemoteUEInformationSidelink” and ASN.1 changes are made accordingly to enable this.

[Easy] Proposal 5: No specification changes are required to implement that “upon PC5 RRC connection release, relay UE initiates transmission of the SidelinkUEInformationNR message to release the corresponding sl-PagingIdentity-RemoteUE”.

Discussion:

P1a:

OPPO think we should avoid spec impact where possible, and a NOTE is enough. Apple agree. Samsung think some clarification is needed; no strong view on normative text or a NOTE.

CATT think the NOTE from Samsung’s contribution is OK. Huawei clarify that the current CR already has some clarification that the remote UE is not required to read the MIB; they are OK with Samsung’s proposal for the PC5-RRC part.

vivo think there may be no need for an additional NOTE. MediaTek agree.

P3:

Ericsson think we need to clarify the signalling, and in connected mode on Uu we specified particular SIBs that could be requested; they think it would be simpler to keep the request as per SI message. Chair understands we have inconsistency in the message today between SIs and SIBs. vivo and Apple have the same understanding.

MediaTek indicate that we could align the code points in sl-Requested-SI-List to the SIBs from the SIB-TypeInfo fields.

vivo think aligning on per-SIB is a good clarification. Huawei indicate that the current rapporteur CR is aligned to per-SIB.

Proposal 10a: The remote UE shall stop T301, T300, T302, T319 and T390, if running, upon cell change due to reception of reconfigurationWithSync or cell (re)-selection of the relay UE.

Proposal 10b: RAN2 to discuss whether remote UE judges “cell change” when the received SIB1 includes a different cell.

Discussion:

CATT doubt the necessity of these proposals; they think the timer expiry can handle these situations and they see this as an optimisation, but they can accept if there is a majority view. Ericsson agree.

vivo think the proposals are a bit confusing: P10a says the remote UE shall stop the timer, and P10b defines the “cell change”. So they think we should settle the definition of cell change before agreeing on P10a.

Lenovo understand that the point of P10b is how the remote UE recognises that the relay UE is served by a new cell: from a notification message by the relay UE or from SIB1, and the proposal is to align on SIB1. They think the UE will receive the notification message first, and the updated SIB1 comes later, and they think this creates an ambiguity period.

OPPO have some concern about P10a because of the phrase “upon cell change”; they think the triggering condition should be something that happens to the remote UE, not the relay UE, so they would like to reword P10a to say “upon cell change of relay UE”. ZTE have a similar concern, and also think that for the idle/inactive remote UE, the cell change can be regarded as cell reselection and the stop condition for the timers would then already be covered.

LG think in P10a, the timers can stop based on the cause value in the notification message from relay UE, and on P10b they have a similar concern to Lenovo that there is an ambiguity period between the notification message and SIB1.

InterDigital are OK with P10a, and think the relay can handle the ambiguity in P10b; so they think we may not need spec impact for the remote UE’s behaviour, considering that the notification message can signal the cell change.

* [AT118-e][632][Relay] Cell change for remote UE (InterDigital)

 Scope: Discuss P10a and P10b from R2-2206339 and attempt to reach an agreeable conclusion.

 Intended outcome: Report to Monday week 2 session in R2-2206253

 Deadline: Friday 2022-05-13 1800 UTC

Proposal 4: RAN2 discuss if any immediate decisions are required to accommodate positioning SIB requests in Rel. 17 or later (to ensure forward compatibility)

Agreements:

[Easy] Proposal 1: MIB is not required by a U2N Remote UE.

Capture a NOTE in 38.331 for Proposal 1 (details to be resolved in RRC CR discussion).

[Easy] Proposal 3: A Remote UE indicates its interests for any SIBs (not SI-messages) to Relay UE via RemoteUEInformationSidelink” and ASN.1 changes are made accordingly to enable this.

[Easy] Proposal 5: No specification changes are required to implement that “upon PC5 RRC connection release, relay UE initiates transmission of the SidelinkUEInformationNR message to release the corresponding sl-PagingIdentity-RemoteUE”.

System information issues (handled in email)

[R2-2204585](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204585%20General%20SIB%20forwarding%20for%20Remote%20UE.docx) General SIB forwarding for Remote UE [M119][H629] MediaTek Inc. discussion Rel-17 NR\_SL\_relay-Core

[R2-2204586](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204586%20Positioning%20SIB%20forwarding%20for%20Remote%20UE.docx) Positioning SIB forwarding for Remote UE [M119][H629] MediaTek Inc. discussion Rel-17 NR\_SL\_relay-Core

[R2-2204674](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204674%20%5BE083%5D%5BH593%5D%20Two%20copies%20of%20a%20same%20SIB%20and%20related%20remote%20UE%20behaviour.docx) [E083][H593] Two copies of a same SIB and related remote UE behaviour vivo discussion

[R2-2204886](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CDraft_R2-2204886.doc) Discussion on SI forwarding NEC Corporation discussion Rel-17 NR\_SL\_relay-Core

[R2-2205064](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205064%20Discussion%20on%20remote%20UE%27s%20SIB%28s%29%20acquisition%20and%20paging%20monitoring.docx) Discussion on remote UE’s SIB(s) acquisition and paging monitoring ZTE, Sanechips discussion Rel-17 NR\_SL\_relay-Core

[R2-2205065](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205065%20Correction%20on%20remote%20UE%C3%AD) Correction on remote UE’s SIB(s) acquisition and paging monitoring ZTE, Sanechips CR Rel-17 38.331 17.0.0 3037 - F NR\_SL\_relay-Core

[R2-2205319](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205319.doc) Discussion on how to support posSIB(s) forwarding Xiaomi discussion

[R2-2205609](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205609%20Clarification%20of%20SI%20acquisition.doc) Clarification of SI acquisition for RRC\_IDLE/RRC\_INACTIVE Remote UE (RIL#: E084, H593) Samsung discussion Rel-17 NR\_SL\_relay-Core

* [AT118-e][620][Relay] System information issues (Qualcomm)

 Scope: Discuss the system information proposals from agenda item 6.7.2.1 (R2-2204585, R2-2204586, R2-2204674, R2-2204886, R2-2205064, R2-2205065, R2-2205319, R2-2205609) and determine handling of the technical issues.

 Intended outcome: Report to Monday CB session in R2-2206242

 Deadline: Friday 2022-05-13 1800 UTC

Documents without identified RIL (no ASN.1 impact)

[R2-2204550](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204550.doc) Discussion on paging information management for a remote UE SHARP Corporation discussion NR\_SL\_relay-Core

[R2-2204551](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204551.doc) Discussion on cell change of remote UE due to relay UE's cell change SHARP Corporation discussion NR\_SL\_relay-Core

[R2-2204676](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204676%20OOC.docx) OOC concept for remote UE vivo discussion

[R2-2205113](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205113-Cause%20value%20for%20Relay%20UE%20%2838.331%20running%20CR%29.docx) Cause value for Relay UE (38.331 running CR) LG Electronics France CR Rel-17 38.331 17.0.0 3051 - F NR\_SL\_relay-Core

[R2-2205115](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205115-remaining%20issues%20for%20control%20plane%20procedure%20for%20relay%20operation.docx) remaining issues for control plane procedure for relay operation LG Electronics France discussion Rel-17

[R2-2205131](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205131%20Connection%20establishment%20and%20resume%20failure%20occurrence%20to%20a%20L2%20U2N%20Remote%20UE.docx) Connection establishment and resume failure occurrence to a L2 U2N Remote UE ASUSTeK CR Rel-17 38.331 17.0.0 3052 - F NR\_SL\_relay-Core

[R2-2205132](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205132%20Associating%20two%20sidelink%20RLC%20bearer%20configurations%20for%20bi-directional%20sidelink%20RLC%20bearer%20to%20support%20L2%20U2N%20Relay.docx) Associating two sidelink RLC bearer configurations for bi-directional sidelink RLC bearer to support L2 U2N Relay ASUSTeK CR Rel-17 38.331 17.0.0 3053 - F NR\_SL\_relay-Core

[R2-2205856](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205856%20Correction%20for%20RRC%20reestablishment.docx) Correction for RRC Reestablishment in Sidelink relay Nokia, Nokia Shanghai Bell draftCR Rel-17 38.331 17.0.0 F NR\_SL\_relay\_enh-Core

[R2-2205991](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205991%20Clarification%20on%20relay%20and%20remote%20UE%20behavior%20during%20failure%20handling.docx) Clarification on relay and remote UE behavior during failure handling Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

RILs where some discussion is needed

R2-2205496 is on N111

[R2-2204764](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204764.docx) [C121] Necessity of Releasing the Paging Request of Remote UE via SidelinkUEInformationNR CATT discussion Rel-17 NR\_SL\_relay-Core

[R2-2204959](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204959%20%5BB104%5D%20TP%20on%20stop%20condition%20of%20T300%20v1.0.doc) [B104] TP on stop condition of T300 Lenovo discussion Rel-17

[R2-2204960](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204960%20%5BB105%5D%20TP%20on%20setup%20request%20procedure%20v1.0.doc) [B105] TP on setup request procedure Lenovo discussion Rel-17

[R2-2204961](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204961%20%5BB106%5D%20TP%20on%20re-establishment%20procedure%20v1.0.doc) [B106] TP on re-establishment procedure Lenovo discussion Rel-17

[R2-2205496](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205496%20Correction%20for%20setting%20cause%20value%20for%20sidelink%20relay.docx) Correction on cause value in sidelink relay Nokia, Nokia Shanghai Bell draftCR Rel-17 38.331 17.0.0 NR\_SL\_relay-Core

[R2-2206042](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2206042%20-%20Discussion%20on%20%5BO090%5D.docx) Discussion on [O090] OPPO discussion Rel-17 NR\_SL\_relay-Core

MAC related

R2-2204766 Discussion on the LCIDs of SL-SCH for Uu Logical Channels of Remote UE CATT discussion Rel-17 NR\_SL\_relay-Core

Stage 2 related

[R2-2204991](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204991-38300_Correction%20to%20support%20L3%20U2N%20Relay.docx) Correction to support L3 U2N Relay OPPO draftCR Rel-17 38.300 17.0.0 NR\_SL\_relay-Core

38.304 related

[R2-2205905](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205905%20%28R17%20SL%20Relay%20WI_A6721_Paging_Corrections_in_304%29.docx) Draft CR on Corrections on Paging Reception by the Relay UE InterDigital draftCR Rel-17 38.304 17.0.0 NR\_SL\_relay-Core

Rapporteur’s proposed treatment appears agreeable

[R2-2204634](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C38331_draftCR_%28Rel-17%29_R2-2204634%20-%20%5BO006%2C%20O007%2C%20O008%2C%20O010%2C%20O011%2C%20O054%2C%20O900%5D.docx) Correction on [O006, O007, O008, O010, O011, O054, O900] OPPO draftCR Rel-17 38.331 17.0.0 F NR\_SL\_relay-Core

[R2-2204765](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204765.docx) [C122]Conditions of RemoteUEInformationSidelink Transmission CATT discussion Rel-17 NR\_SL\_relay-Core

[R2-2204989](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204989-Discussion%20on%20inter%20layer%20interaction%20for%20NR%20sidelink%20relay.docx) Discussion on inter layer interaction for NR sidelink relay OPPO discussion Rel-17 NR\_SL\_relay-Core

[R2-2205321](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205321.doc) [X208] Discussion on remote UE’s on-demand SI in CONNECTED Xiaomi discussion

[R2-2205695](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205695%20%5BB100%5D%20SL%20Timers%20Broadcast%20in%20SIB1.docx) [B100] SL Timer Broadcast in SIB1 Lenovo discussion NR\_SL\_relay-Core Revised

[R2-2205699](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205699%20%5BB212%5D%20RRC%20Connected%20Remote%20UE%20cannot%20acquire%20SIB1.docx) [B212] RRC Connected Remote UE cannot acquire SIB1 Lenovo discussion NR\_SL\_relay-Core R2-2205695

[R2-2205906](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205906%20%28R17%20SL%20Relay%20WI_A6721_RIL_U455.docx) [U455] Draft CR on Corrections to Paging DRX Cycle InterDigital draftCR Rel-17 38.331 17.0.0 NR\_SL\_relay-Core

[R2-2205907](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205907%20%28R17%20SL%20Relay%20WI_A6721_RIL_U456_U473.docx) [U456][U473] Draft CR on Corrections to Trigger Conditions of RemoteUEInformationSidelink InterDigital draftCR Rel-17 38.331 17.0.0 NR\_SL\_relay-Core

[R2-2205908](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205908%20%28R17%20SL%20Relay%20WI_A6721_RIL_U465.docx) [U465] Draft CR on Corrections to Relay UE Uu SI Request InterDigital draftCR Rel-17 38.331 17.0.0 NR\_SL\_relay-Core

[R2-2205909](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205909%20%28R17%20SL%20Relay%20WI_A6721_RIL_U482.docx) [U482] Draft CR on Corrections to NotificationMessageSidelink InterDigital draftCR Rel-17 38.331 17.0.0 NR\_SL\_relay-Core

#### 6.7.2.2 Service continuity

Service continuity between Uu and relay paths, limited to intra-gNB cases.

Summary document

[R2-2206053](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2206053.docx) Summary of 6.7.2.2 service continuity (Xiaomi) Xiaomi discussion Rel-17 NR\_SL\_relay-Core

Proposal 1: Change 4 and 5 in [1], [4], [5], [8] are critical changes.

Proposal 2: [2], [3], [6], [7], [9] are non-critical changes.

[1] R2-2204635 Correction on [O009, o017, O020, O022-O025] OPPO

[2] R2-2204795 Miscellaneous corrections for NR SL Relay in 38.300 ZTE, Sanechips

[3] R2-2204990 Correction to support IDLE INACTIVE relay UE OPPO

[4] R2-2205093 38.331 CR for SL relay events Samsung

[5] R2-2205320 [X200] Discussion on path swith failure upon target relay UE Pcell change Xiaomi

[6] R2-2205339 Service continuity open issues in L2 NR sidelink relay Sony

[7] R2-2205375 On the entry and leave conditions for path switch in SL relay Nokia, Nokia Shanghai Bell

[8] R2-2205633 Discussion on how remote UE gets its local ID in direct-to-indirect path switch when target relay UE is in IDLE/INACTIVE state Apple

[9] R2-2205987 Clarification on Uu threshold handling when configured with measurements of L2 U2N Relay Ues Huawei, HiSilicon CR

Discussion:

OPPO point out that R2-2204635 changes 4 and 5 are covered in [Pre118-e][602].

Flagged in summary as containing critical changes

[R2-2205093](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205093%2038.331%20CR%20for%20SL%20relay%20events.docx) 38.331 CR for SL relay events Samsung CR Rel-17 38.331 17.0.0 3047 - F NR\_SL\_relay-Core

- Add procedure of serving L2 U2N Relay UE to be applicable for event X2 in 5.5.4.1.

- Add procedure to exclude allowed-list and excluded-list of event X2 in 5.5.4.1.

- Add procedure of L2 U2N Relay UE detected on the associated frequency to be applicable for event Y2 in 5.5.4.1.

Discussion:

Samsung indicate the first two changes need to be agreed, and the third is already in the RRC CR.

Agreements:

- Add procedure of serving L2 U2N Relay UE to be applicable for event X2 in 5.5.4.1.

- Add procedure to exclude allowed-list and excluded-list of event X2 in 5.5.4.1.

[R2-2205633](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205633%20-%20Discussion%20on%20how%20remote%20UE%20gets%20its%20local%20ID%20in%20direct-to-indirect%20path%20switch.doc) Discussion on how remote UE gets its local ID in direct-to-indirect path switch when target relay UE is in IDLE/INACTIVE state Apple discussion Rel-17 NR\_SL\_relay-Core

Proposal 1: On how remote UE obtains its local ID when the target relay UE is IDLE/INACTIVE state, RAN2 is suggested to down-select between below Alt-1 and Alt-2:

• Alt-1: In a RRCReconfiguration message after relay UE enters CONNECTED state

o Main benefit is to simplify gNB operation on allocating / recycling local IDs which are not to be used if target relay UE fails to enter CONNECTED state

• Alt-2: In path switch command towards remote UE

o Main benefit is no latency for UL data transmission after path switch (i.e., remote UE UL data can be sent as early as the first RRCReconfigurationComplete message in step 4)

Discussion:

OPPO understand we intended alternative 2 based on the current procedures, and we rely on the network to align the procedures between remote and relay UEs. ASUSTeK and Nokia agree with OPPO.

Apple think the majority view on the reflector was for alternative 2, and we may capture a NOTE about the expected gNB alignment.

Huawei indicate the CR already implements alternative 2; they think the network is usually expected to provide aligned configurations and a NOTE may not be necessary. Apple think the IDs are provided at separate times so the NOTE may be helpful.

Ericsson agree with Huawei and think the NOTE is not needed. They think we should not specify gNB behaviour.

ZTE wonder if the local ID request IE could be absent in SUI of relay UE, so that the gNB is not required to allocate the remote local ID for the relay UE.

Agreement:

Proposal 1 (modified): Remote UE obtains its local ID when the target relay UE is IDLE/INACTIVE state in path switch command towards remote UE.

The gNB is expected to align the remote UE’s local ID between the remote and relay UEs.

Covered in [AT118-e][602]

[R2-2205320](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205320.doc) [X200] Discussion on path swith failure upon target relay UE Pcell change Xiaomi discussion

[R2-2205339](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205339.doc) Service continuity open issues in L2 NR sidelink relay Sony discussion Rel-17 NR\_SL\_relay-Core

[R2-2204635](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C38331_draftCR_%28Rel-17%29_R2-2204635%20-%20%5BO009%2C%20O017%2C%20O020%2C%20O022-O025%5D.docx) Correction on [O009, o017, O020, O022-O025] OPPO draftCR Rel-17 38.331 17.0.0 F NR\_SL\_relay-Core

Stage 2 related

[R2-2204795](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204795%20Miscellaneous%20corrections%20for%20NR%20SL%20Relay%20in%2038.300.doc) Miscellaneous corrections for NR SL Relay in 38.300 ZTE, Sanechips CR Rel-17 38.300 17.0.0 0445 - F NR\_SL\_relay-Core

[R2-2204990](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204990-38300_Correction%20to%20support%20IDLE%20INACTIVE%20relay%20UE.docx) Correction to support IDLE INACTIVE relay UE OPPO draftCR Rel-17 38.300 17.0.0 NR\_SL\_relay-Core

Documents without identified RIL (no ASN.1 impact)

[R2-2205375](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205375%20On%20the%20entry%20and%20exit%20conditions%20for%20path%20switch%20in%20SL%20relay.docx) On the entry and leave conditions for path switch in SL relay Nokia, Nokia Shanghai Bell draftCR Rel-17 38.331 17.0.0 C NR\_SL\_relay-Core

[R2-2205987](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205987_38331_CR%233146_Rel-17_Clarification%20on%20Uu%20threshold%20handling%20when%20configured%20with%20measurements%20of%20L2%20U2N%20Relay%20UEs.docx) Clarification on Uu threshold handling when configured with measurements of L2 U2N Relay Ues Huawei, HiSilicon CR Rel-17 38.331 17.0.0 3146 - F NR\_SL\_relay-Core

#### 6.7.2.3 Adaptation layer design

Including bearer mapping, remote UE identification, security aspects if any.

[R2-2204796](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204796%20Correction%20on%20BEARER%20ID%20determination.doc) Correction on BEARER ID determination ZTE, Sanechips CR Rel-17 38.351 17.0.0 0002 - F NR\_SL\_relay-Core

[R2-2204797](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204797%20Corrections%20on%20the%20DL%20bearer%20mapping.docx) Correction on the DL bearer mapping ZTE, Sanechips CR Rel-17 38.351 17.0.0 0003 - F NR\_SL\_relay-Core

[R2-2205133](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205133%20Corrections%20on%20SRAP%20PDU%20handling%20and%20ID%20field%20determination.docx) Corrections on SRAP PDU handling and ID field determination ASUSTeK CR Rel-17 38.351 17.0.0 0004 - F NR\_SL\_relay-Core

[R2-2205431](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205431%20Correction%20on%20the%20handling%20of%20unknown%2C%20unforeseen%2C%20and%20erroneous%20protocol%20data%20and%20other%20miscellaneous%20in%20SRAP.docx) Correction on the handling of unknown, unforeseen, and erroneous protocol data and other miscellaneous in SRAP Huawei, HiSilicon CR Rel-17 38.351 17.0.0 0005 - F NR\_SL\_relay-Core

#### 6.7.2.4 QoS

Mechanisms for E2E QoS management.

[R2-2204993](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204993-38321_Correction%20for%20sequential%20rule%20of%20destination%20index.doc) Correction for sequential rule of destination index OPPO draftCR Rel-17 38.321 17.0.0 NR\_SL\_relay-Core

#### 6.7.2.5 Discovery and re/selection

Including 5G ProSe Direct Discovery for the non-relaying case. Re-using LTE discovery and re/selection as baseline.

Summary document

[R2-2206056](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2206056_Summary%20of%20AI%206.7.2.5%20on%20Discovery%20and%20%28re%29selection-v03_Rapp.docx) Summary of AI 6.7.2.5 on Discovery and (re)selection vivo discussion Rel-17 NR\_SL\_relay-Core

[to be agreed]

Proposal 1-1: RAN2 to agree UL/SL prioritization rules in MAC specification should also consider SL discovery transmissions.

Proposal 1-4: RAN2 to agree that resource pool selection procedure for discovery should be specified in MAC specification and this procedure is applicable to both single MAC PDU case and multiple MAC PDU case.

Discussion:

OPPO have some concern on P1-1; they agree with the intention but think the CR needs some tuning.

Apple think we should modify P1-1 to say the rules “apply to” discovery transmissions.

Agreements:

Proposal 1-1 (modified): RAN2 to agree UL/SL prioritization rules in MAC specification also apply to SL discovery transmissions.

Proposal 1-4: RAN2 to agree that resource pool selection procedure for discovery should be specified in MAC specification and this procedure is applicable to both single MAC PDU case and multiple MAC PDU case.

Detailed implementation of these agreements can be discussed in the MAC CR discussion.

[to be discussed]

Proposal 1-2: If Proposal 1-1 is agreed, further discuss whether the TP in R2-2205610 is agreeable.

Proposal 1-3: The TP in R2-2204769 (TS 38.321) to add definition of LCID for discovery is to be discussed.

Proposal 2-1: RAN2 to discuss whether the relay (re)selection procedure should be updated with adding cell (re)selection in the procedure text, and if yes, adopt the TP in R2-2204587 as baseline.

Proposal 2-2: RAN2 to discuss whether UE shall only monitor dedicated discovery RX pool(s) when performing discovery reception operation if the UE is (pre-)configured with dedicated discovery RX pool(s), and if yes, adopt the TP on [O058] in R2-2204636 as baseline.

Proposal 2-3: If Proposal 1-4 is agreed, RAN2 to further discuss whether the TP in R2-2204768 is agreeable, or we introduce a dedicated sub-clause for TX pool selection.

Proposal 2-4: RAN2 to discuss whether the Uu threshold conditions are also used to control whether a UE shall MONITOR discovery messages for relay operation, and if yes, to further discuss whether the TP in R2-2205345 is agreeable.

Proposal 2-5: RAN2 to discuss whether groupcast can be used for discovery transmission, and if no, adopt the TP in R2-2205963 as baseline.

Proposal 2-6: RAN2 to discuss whether SL CG is supported for 1) non-relay discovery message transmission and 2) relay discovery message transmission by relay/remote UE before remote UE connection with relay UE, and if both no, adopt the TP in R2-2205356 as baseline.

Proposal 2-7: RAN2 to discuss whether CBR should be measured for discovery in dedicated and/or shared pool, and if yes, adopt the TP in R2-2204564 as baseline.

[others]

Proposal 3: R2-2204992 (TS 38.304), R2-2205114(TS 38.321), and TP of P3 in R2-2205345(TS 38.331), can be handled by related CR rapporteur.

Proposal 4: R2-2205357 (TS 38.331) is an optimization and is de-prioritized.

Proposal 5: R2-2204636 (except [O058]), R2-2205063 are to be discussed in [Pre118-e][602].

* [AT118-e][621][Relay] Initial comments on discovery and (re)selection (vivo)

 Scope: Collect company views on the issues raised in R2-2206056.

 Intended outcome: Report to Wednesday session in R2-2206243

 Deadline: Tuesday 2022-05-10 1800 UTC

R2-2206243 Initial comments on discovery and (re)selection of AI 6.7.2.5 vivo discussion

[Easy]

[unanimous]Proposal 1a: RAN2 to confirm SL CG type-1 (if configured) can be used for Non-relay discovery transmission.

[unanimous]Proposal 1b: RAN2 to confirm SL CG type-1 (if configured) can be used for Relay discovery transmission in the following cases:

- By remote UE before connecting with relay UE

- By relay UE before or after connecting with remote UE

[Unanimous] Proposal 7: RAN2 confirms that CBR measurement is supported for NR SL discovery transmission.

Discussion:

ZTE think the intention of P1b is for L2 remote/relay UE and we could specify this; in previous meetings we had the agreement that L2 remote UE cannot be configured with CG type 1 if relay connection has been set up.

Ericsson have some concern about P1a and think it could be used by the remote UE when connected to a relay UE but for non-relay discovery. vivo indicate that there is no remote/relay concept for the non-relay discovery case, and any non-relay activity should be on a different unicast link.

OPPO agree with ZTE’s intention and wonder if we should clarify the case of L3 relay in P1b as well.

MediaTek understand that in stage 2 there was a proposal to limit the L3 relay operation to mode 2 only, and if we take this agreement allowing CG type 1 for L3 relay we should update the stage 2.

Apple wonder if there would be impact to the MAC spec; they think a NOTE could be added to clarify the applicability of the CG type 1.

Huawei think we would need to add information to the UAI for the UE to be able to request the CG for discovery, but this could be done at a subsequent meeting.

Ericsson are not sure of Huawei’s suggestion since the use of CG is anyway up to gNB implementation.

Agreements:

Proposal 1a (modified): RAN2 to confirm SL CG type-1 (if configured) can be used for Non-relay discovery transmission. This does not affect existing agreements restricting CG type 1 on the relay link.

Proposal 1b (modified): RAN2 to confirm SL CG type-1 (if configured) can be used for Relay discovery transmission in the following cases:

- By remote UE before connecting with relay UE (including L2 remote/relay UE)

- By relay UE before or after connecting with remote UE

- Confirm that SL CG type-1 can always be used for L3 remote/relay UE if the gNB configures it

A NOTE can be added to the MAC spec to indicate P1a/P1b, subject to checking in the MAC CR discussion.

[Unanimous] Proposal 7: RAN2 confirms that CBR measurement is supported for NR SL discovery transmission.

[10/13] Proposal 5: TP in R2-2205345 is not agreed. (i.e. Uu threshold conditions are not used to control whether a UE shall MONITOR discovery messages for relay operation)

[11/13] Proposal 10: TP in R2-2205345 is not agreed. (i.e. cell definition for remote UE is already clear)

Discussion:

Xiaomi think if we do not take P5, the discovery procedure is partly broken; in the model B scenario, it could be impossible to send the response message because the UE monitors but cannot transmit, and in the model A procedure it may not be clear if the communication link can be established (the UE may receive the message and establish the link because there is no threshold check, but then be unable to act as a relay).

InterDigital think these corner cases exist, but P5 is similar to legacy procedures in LTE where the thresholds were only used for transmission to allow the eNB to control interference, and they would prefer to follow this.

Qualcomm think only the Uu link quality thresholds are considered for discovery, and monitoring would be based on the reselection thresholds. They agree with InterDigital about staying with the legacy behaviour.

vivo think the monitoring could be left to UE implementation.

Xiaomi emphasise that the transmission of sidelink communication could be inhibited, and the UE implementation could trigger interactions with upper layers that then could not be carried out.

Agreements:

[10/13] Proposal 5: TP in R2-2205345 is not agreed. (i.e. Uu threshold conditions are not used to control whether a UE shall MONITOR discovery messages for relay operation)

[11/13] Proposal 10: TP in R2-2205345 is not agreed. (i.e. cell definition for remote UE is already clear)

[For discussion]

[6/13] Proposal 2: The TP in R2-2204587 is not agreed (i.e. current NOTE-3 already correctly captures the agreement for cell/relay (re)selection).

Discussion:

vivo indicate that companies expressed concerns that the TP would add a new condition to trigger cell reselection, but some companies felt that another change in the same spirit could be considered.

MediaTek think the formulation of the proposal is a little strange, and maybe we could confirm the issue and leave open the topic for future discussion.

Xiaomi do not see that there is a need to clarify beyond the existing NOTE 3. vivo report that the six companies listed as supporting the proposal felt the NOTE was already clear.

[9/13] Proposal 3: RAN2 to agree that the UE should only monitor dedicated resource pool(s) for discovery once configured by network or pre-configuration. The dedicated pool should be a superset to cover all possible discovery transmission in different dedicated/shared pools, which can be left to gNB implementation.

[10/10] Proposal 4: If Proposal 3 is agreed, the TP on [O058] in R2-2204636 is agreed.

Discussion:

Ericsson think there may be other UEs using shared resource pool and we should not restrict UE monitoring behaviour unnecessarily (similar to the threshold discussion above). Xiaomi and InterDigital agree.

InterDigital think the argument for the proposal was that the UE would need to monitor fewer pools, but if we constrain the configuration as suggested, the monitoring at the UE is just as bad as if we did not have the proposal.

Nokia, Lenovo, NEC, and Kyocera agree with Ericsson.

vivo indicate that the current RRC spec says the UE should only monitor the dedicated pool; if we want to avoid constraining the UE’s monitoring behaviour, we should update this requirement as well.

Apple recall that the reason to introduce the dedicated pool was to allow power saving, and if we do not have something like this proposal, it is not clear what the benefit of the dedicated pool is.

vivo clarify that in the normal configuration procedure, the UE only monitors the dedicated pool, but in preconfiguration the RRC says the UE monitors the dedicated or shared pool.

ZTE agree with Ericsson and think it is difficult in inter-PLMN scenarios to ensure a unified dedicated resource pool configuration.

Xiaomi think the offline discussion talked originally about whether to prioritise the dedicated pools.

OPPO supported monitoring only the dedicated resource pool, but they hear more voices now for leaving it open; they wonder if we could agree that the UE monitors the dedicated pool if configured, and the shared pool if configured.

Ericsson think we could leave it to UE implementation.

vivo think if we do not have P3, the RRC spec needs to be updated, because we currently have an if/else indicating which pools to monitor. InterDigital and CATT have the same understanding. OPPO think this could be addressed in the CR discussion. Xiaomi think a NOTE might be enough.

[For discussion] Proposal 6: RAN2 to send an LS to SA2 to check whether discovery message can be transmitted in groupcast [8/13] and/or unicast [7/13] manner.

Discussion:

OPPO see that some companies have this concern, and think the two directions are to maintain the AS layer spec as it is and add the cast type indicator in SA2, or keep the SA2 spec as it is and have some further investigation of the AS specs. Their view is that restricting discovery to broadcast may be infeasible and offline discussion may be helpful.

MediaTek think the discovery message is mainly transmitted by broadcast or groupcast, but if there is already a unicast link with a peer UE there should be no need to re-discover; so they do not see the use case for unicast.

Qualcomm agree with MediaTek about the unicast point and think discovery with a pre-existing unicast link was not previously discussed. They think there are related issues that would need to be discussed, e.g. with the PDCP format.

Qualcomm do not see the benefit of using unicast or groupcast when HARQ feedback is disabled.

OPPO indicate that unicast discovery is for the response message in model B.

Qualcomm think the cast type indication has to come from upper layers, and if it is missing in SA2 specs the functionality will not work without it.

[For discussion] Proposal 8a: When UE is configured to transmit discovery, CBR measurements can be performed in dedicated discovery pool or shared pool, based on which pool the UE selects to transmit discovery.

[For discussion] Proposal 8b: When UE is configured to transmit discovery, in addition to dedicated discovery pool or shared pool, CBR measurements can also be performed in other pools (e.g. tx-PoolMeasToAddModList, sl-TxPoolExceptional) as legacy behaviour in sidelink communication.

Discussion:

OPPO agree with the intention, but wonder in P8b if it just confirms legacy behaviour. vivo clarify that a spec change is needed; the current spec says if the UE is configured to transmit communication, it is expected to perform CBR in the legacy pools, but the spec does not say something similar for discovery.

[For discussion] Proposal 9: TP of opt1 in R2-2204564 can be revised to minimize the spec change to reflect the CBR measurement on discovery, or we leave it to RRC CR offline discussion.

Agreements:

Proposal 2 (modified): The TP in R2-2204587 is not agreed (other clarifications of the interaction between cell and relay (re)selection can be considered in future).

The UE is expected to monitor the dedicated discovery pool if configured (as currently specified in RRC); we do not specify that the UE monitors only the dedicated discovery pool after it is configured. Details to be resolved in the RRC CR discussion, i.e. whether something needs to be captured.

Proposal 8a: When UE is configured to transmit discovery, CBR measurements can be performed in dedicated discovery pool or shared pool, based on which pool the UE selects to transmit discovery.

Proposal 8b: When UE is configured to transmit discovery, in addition to dedicated discovery pool or shared pool, CBR measurements can also be performed in other pools (e.g. tx-PoolMeasToAddModList, sl-TxPoolExceptional) as legacy behaviour in sidelink communication.

Implementation of P8a/P8b can be handled in RRC CR discussion.

* [AT118-e][640][Relay] Cast type for discovery (OPPO)

 Scope: Discuss the options on groupcast and unicast for discovery (P6 of R2-2206243) and determine whether spec impact and/or an LS to SA2 is needed.

 Intended outcome: Report to Monday week 2 session

 Deadline: Friday 2022-05-13 1800 UTC

RILs where some discussion is needed

[R2-2204564](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204564%20%5BV353%5D%5BZ652%5D%20Discussion%20and%20corrections%20on%20CBR%20measurements%20for%20NR%20SL%20discovery.docx) [V353][Z652] Discussion and corrections on CBR measurements for NR SL discovery vivo discussion

[R2-2204587](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204587%20Relay%20selection%20Requirement%20conflict.docx) Relay selection requirement conflict [M112][v208] MediaTek Inc. discussion Rel-17 NR\_SL\_relay-Core

[R2-2204636](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C38331_draftCR_%28Rel-17%29_R2-2204636%20-%20%5BO042%2C%20O047-O049%2C%20O058-O060%5D.docx) Correction on [O042, O047-O049, O058-O060] OPPO draftCR Rel-17 38.331 17.0.0 F NR\_SL\_relay-Core

[R2-2204675](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204675%20%5BV410%5D%5BO058%5D%20Dedicated%20pool%20for%20discovery%20reception.docx) [V410][O058] Dedicated pool for discovery reception vivo discussion

MAC related

R2-2204767 Discussion on Resource Pool Selection for Discovery Message CATT discussion Rel-17 NR\_SL\_relay-Core

[R2-2204768](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204768.docx) Correlation on Resource Pool Selection for Discovery Message CATT draftCR Rel-17 38.321 17.0.0 F NR\_SL\_relay-Core

[R2-2204769](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204769.docx) Introduction of LCID for discovery message CATT draftCR Rel-17 38.321 17.0.0 F NR\_SL\_relay-Core

[R2-2205114](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205114-Reduction%20of%20some%20parts%20of%20selection%20of%20logical%20channels%20in%20SL%20Relay%20%20%2838.321%20running%20CR%29.docx) Reduction of some parts of selection of logical channels in SL Relay (38.321 running CR) LG Electronics France CR Rel-17 38.321 17.0.0 1254 - F NR\_SL\_relay-Core

[R2-2205356](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205356%20Discussion%20on%20MAC%20functionality%20for%20discovery.docx) Discussion on MAC functionality for discovery Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

[R2-2205610](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205610%20Correction%20on%20SL%20discovery%20and%20UL%20prioritization.doc) Correction on SL discovery and UL prioritization Samsung discussion Rel-17 NR\_SL\_relay-Core

38.304 related

[R2-2204992](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204992-38304_Correction%20to%20support%20non-relay%20discovery.docx) Correction to support non-relay discovery OPPO draftCR Rel-17 38.304 17.0.0 NR\_SL\_relay-Core

Documents without identified RIL (no ASN.1 impact)

[R2-2205063](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205063%20Corrections%20on%20the%20Sidelink%20discovery%20transmission.docx) Correction on the Sidelink discovery transmission ZTE, Sanechips CR Rel-17 38.331 17.0.0 3036 - F NR\_SL\_relay-Core

[R2-2205345](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205345.docx) Sidelink discovery operation - monitoring and transmission Beijing Xiaomi Mobile Software draftCR Rel-17 38.331 17.0.0 F NR\_SL\_relay-Core

Documents without identified RIL (ASN.1 impact)

[R2-2205357](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205357%20Assisting%20L2%20Remote%20UE%20to%20correctly%20evaluate%20threshold%20condition.docx) Assisting L2 Remote UE to correctly evaluate threshold condition Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

RLC related

[R2-2205963](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C38.322_draftCR%28Rel-17%29_R2-2205963%20-%2038.322%20CR%20for%20removing%20groupcast%20transmission%20mode%20for%20sidelink%20discovery.docx) Correction on Groupcast transmission mode support for sidelink discovery Qualcomm Incorporated draftCR Rel-17 38.322 17.0.0 C NR\_SL\_relay-Core

#### 6.7.2.6 UE capabilities

[R2-2204637](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C38331_draftCR_%28Rel-17%29_R2-2204637%20-%20Correction%20on%20UE%20capability%20for%20discovery%20BC%20list%20%2838.331%29.docx) Correction on UE capability for discovery BC list (38.331) OPPO draftCR Rel-17 38.331 17.0.0 B NR\_SL\_relay-Core

[R2-2204638](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C38306_draftCR_%28Rel-17%29_R2-2204638%20-%20Correction%20on%20UE%20capability%20for%20discovery%20BC%20list%20%2838.306%29.docx) Correction on UE capability for discovery BC list (38.306) OPPO draftCR Rel-17 38.306 17.0.0 B NR\_SL\_relay-Core

[R2-2204770](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204770.docx) Further discussion on UE capability CATT discussion Rel-17 NR\_SL\_relay-Core

[R2-2205988](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205988%20Clarification%20on%20supported%20BC%20of%20Uu%20and%20sidelink%20discovery.docx) Clarification on supported BC of Uu and sidelink discovery Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

#### 6.7.2.7 ASN.1 issues

Any contributions related only to the details of relay-specific ASN.1 in 38.331.

Output of pre-meeting RRC CR discussion [602]

[R2-2206077](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CDocs%5CR2-2206077.zip) Draft CR for SL relay class1/2 RIL issues (Output of Pre118-e #602) Huawei, HiSilicon draftCR Rel-17 38.331 17.0.0 NR\_SL\_relay-Core

[R2-2206078](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2206078%20Report%20of%20Pre-118-e%20%23602.docx) Report of Pre118-e #602 Huawei, HiSilicon report Rel-17 NR\_SL\_relay-Core

Higher priority issues (class 2)

Issue 4: PC5 RLC bearer and SRAP configuration for remote UE’s SRB1 transmission at PC5 hop

Proposal 1: Regarding the configuration used for SRB1 transmission/reception at PC5 hop, RAN2 to agree:

– All SRB1 messages are allowed to use default SL-RLC1, i.e. remove the dedicated configuration of PC5 RLC from RRCReestablishment message;

– Discuss whether to remove the dedicated configuration of PC5 RLC from RRCSetup message;

– Define default configuration of SRAP used for reception of RRCResume/RRCReestablishment at PC5 hop, in order to establish SRAP entity and pass the messages to RRC layer.

Discussion:

Ericsson think since RRCSetup is not integrity protected, a dedicated configuration may not be a good idea.

Qualcomm understand that the RRCSetup is similar to what we have on Uu and it does not make sense to remove the configuration for RLC for SRB1. For RRCReestablishment they think it should be removed. Qualcomm think there may be a concern in RAN3 about providing the SL-RLC configuration across F1 interface.

Apple have the same view as Qualcomm; they think we had a previous agreement to include the dedicated configuration, and this is analogous to configuring Uu SRB1. They do think it should be removed from RRCReestablishment, not due to security but because it can be multiplexed with the RRCReconfiguration.

Samsung have the same concern as Ericsson. Chair wonders why it is a different issue from Uu SRB1; Samsung understand that the message carries more of the remote UE’s dedicated configuration.

Intel agree on Uu we have the SRB1 configuration, but think we should check the security concern and essentiality of the configuration offline.

Ericsson indicate we currently allow providing any configuration in RRCSetup, not just SRB1.

Issue 17: Missing information of PCI and ARFCN-DL for key derivation during RRC resume/reestablishment procedure

Proposal 2: PCI and ARFCN-DL should be provided to remote UE to derive KgNB before remote UE receiving RRCResume/RRCReestablishment message. FFS using PC5 RRC or the RRC container in discovery message.

Discussion:

Intel wonder if we have a solution for the target cell ID that is required for the short MAC-I. Huawei indicate that the NCGI is available in the discovery message. Ericsson have the same understanding but want to double-check.

Huawei think SIB1 should be available before RRCReestablishment.

Issue 18: To enable allowlist for Event X1

Proposal 3: RAN2 to agree adding useAllowedCellList in event X1.

Issue 20. Confirm the LCIDs of SL\_RLC1, SL\_RLC0, SL SRB4 are 56, 57, 58.

Proposal 4: RAN2 to confirm the LCIDs of SL\_RLC1, SL\_RLC0, SL SRB4 are 56, 57, 58.

Agreements:

Proposal 1 (modified): Regarding the configuration used for SRB1 transmission/reception at PC5 hop, RAN2 to agree:

– All SRB1 messages are allowed to use default SL-RLC1, i.e. remove the dedicated configuration of PC5 RLC from RRCReestablishment message;

– Discuss offline in [AT118-e][633] whether to remove the dedicated configuration of PC5 RLC from RRCSetup message;

– Define default configuration of SRAP used for reception of RRCResume/RRCReestablishment at PC5 hop, in order to establish SRAP entity and pass the messages to RRC layer.

Proposal 2 (modified): PCI and ARFCN-DL should be provided to remote UE to derive KgNB before remote UE receiving RRCResume/RRCReestablishment message. Discuss offline in [AT118-e][633] whether to use PC5-RRC or the RRC container in discovery message; the availability of target cell ID can also be checked if an issue is found.

Proposal 3: RAN2 to agree adding useAllowedCellList in event X1.

Proposal 4: RAN2 to confirm the LCIDs of SL\_RLC1, SL\_RLC0, SL SRB4 are 56, 57, 58.

Medium priority issues (may have asn.1 impact)

Issue 6: How to determine serving cell change of target relay UE before path switch

Proposal 5: RAN2 to down select among the solutions for remote UE determining target relay UE’s serving cell change:

– Based on measurement report;

– Based on cell ID indicated in both of path switch command and discovery message, i.e. NCGI is to be added to path switch command.

– Keep the current description, i.e. left to UE implementation.

Lower priority issues (class 1)

Issue 2: Whether the concept of PCell/current cell is applicable to L2 remote UE

Proposal 6: RAN2 to agree keeping the concept of PCell/current cell for remote UE.

Issue 3: Discuss whether L2 relay can be configured with HO without DRB and/or SRB2

Proposal 7: RAN2 to confirm L2 relay cannot be configured with HO without DRB and/or SRB2 (Same requirement as legacy UE).

Issue 16: Clarify whether CHO can be configured to relay UE

Proposal 8: RAN2 to confirm CHO cannot be configured to L2 U2N Relay UE.

Issue 11: Clarification on the term of “no suitable cell” for OoC case during AS criteria checking, e.g. no serving cell, out of coverage on the frequency used for SL communication, no acceptable cell, no cell to camp on

Proposal 9: RAN2 to discuss to replace “no suitable cell” with which one from “no acceptable cell” or “no serving cell” or “no cell to camp on”.

Issue 5: Clarify the meaning and differentiation of the following term: capable of/acting as/is a L2 U2N Relay UE or Remote UE

Proposal 10: Update the RRC specification as following:

– For the procedural text only applicable to UEs acting as U2N remote UE or U2N relay UE, use “UE is acting as U2N remote/relay UE”

– For the procedural text common for UEs acting as U2N remote/relay UE and UEs to be acting as U2N remote/relay UE, use “UE capable of U2N remote/relay UE operation”

Issue 9: Regarding measurement reporting on candidate relay, clarify if the strongest relay is among the ones met upper layer criteria.

Proposal 11: RAN2 to confirm the remote UE only reports the relay UEs met both of upper layer criteria and AS layer criteria in the measurement results.

Issue 15: Whether to specify remote UE behaviour of re-establish PC5 RLC channel of SRB1 during RRC reestablishment

Proposal 12: RAN2 to discuss whether to specify remote UE behaviour of re-establish PC5 RLC channel of SRB1 during RRC reestablishment.

* [AT118-e][633][Relay] Remaining ASN.1 review issues (Huawei)

 Scope: Discuss the remaining issues from R2-2206077, prioritising the high and medium priority issues.

 Intended outcome: Report to Monday week 2 session in R2-2206254

 Deadline: Friday 2022-05-13 1800 UTC

RILs where some discussion is needed

[R2-2204958](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204958%20%5BB103%5D%20TP%20for%20initiation%20condition%20of%20notification%20message%20v1.0.doc) [B103] TP for initiation condition of notification message Lenovo discussion Rel-17

[R2-2205634](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205634%20-%20Discussion%20on%20whether%20UE%20dedicated%20PC5%20configuration%20can%20be%20configured%20in%20RRCReestablishment%20message%20%28RIL%20A308%2C%20A906%29.doc) Discussion on whether UE dedicated PC5 configuration can be configured in RRCReestablishment message (RIL A308, A906) Apple discussion Rel-17 NR\_SL\_relay-Core

[R2-2205635](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205635%20-%20Discussion%20on%20definition%20of%20U2N%20remote%20UE%20%28RIL%20A304%2C%20A305%2C%20A307%2C%20A311%29.doc) Discussion on definition of U2N remote UE (RIL A304, A305, A307, A311) Apple discussion Rel-17 NR\_SL\_relay-Core

[R2-2205685](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205685%20%5BB207%5D%5BB208%5D%20Correction%20in%20NR%20sidelink%20U2N%20Remote%20UE%20operation.docx) [B207][B208] Correction in NR sidelink U2N Remote UE operation Lenovo Mobile Com. Technology CR Rel-17 38.331 17.0.0 3112 - F NR\_SL\_relay-Core

[R2-2205774](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205774-%20%5BE082%5D%20Correction%20on%20receiving%20short%20message%20by%20remote%20UE.docx) [E082] Correction on receiving short message by remote UE Ericsson draftCR Rel-17 38.331 17.0.0 F NR\_SL\_relay-Core

[R2-2205775](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205775-%20%5BE084%5D%5BE085%5D%20Correction%20on%20on-demand%20SIB%20for%20SL%20relay.docx) [E084][E085] Correction on on-demand SIB for SL relay Ericsson draftCR Rel-17 38.331 17.0.0 F NR\_SL\_relay-Core

[R2-2205826](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205826-SL-Setup_Reest.docx) [M116, A906, I012, I046] SL information in RRC Setup and Reestablishment messages Intel Corporation discussion Rel-17 NR\_SL\_relay-Core Late

RILs marked PropReject with ongoing discussion in pre-meeting [602]

R2-2205066 appears to be on Z618

R2-2205228 is included for E044 only (others are PropAgree)

[R2-2204678](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204678%20%5BV207%5D%5BV208%5D%20L2%20U2N%20Remote%20UE%20RRC%20re-establishment%20procedure.docx) [V207][V208] L2 U2N Remote UE RRC re-establishment procedure vivo discussion

[R2-2204680](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204680%20%5BZ684%5D%20Max%20destination%20index%20and%20resource%20allocation%20impact.docx) [Z684] Max destination index and resource allocation impact vivo discussion

[R2-2205066](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205066%20Correction%20on%20PC5%20RLC%20channel%20configuration.docx) Correction on PC5 RLC channel configuration ZTE, Sanechips CR Rel-17 38.331 17.0.0 3038 - F NR\_SL\_relay-Core

[R2-2205092](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205092%2038.331%20CR%20for%20allow%20and%20exclude%20list%20on%20eventX1%28RIL%23%20S776%29.docx) 38.331 CR for allow and exclude list on eventX1 (RIL#:S776) Samsung CR Rel-17 38.331 17.0.0 3046 - F NR\_SL\_relay-Core

[R2-2205228](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205228%20-%2038331%20correction%20on%20RIL%20issues%20%28E041%2C%20E043%2C%20E044%20and%20E045%29.docx) Correction on RIL issues (E041, E043, E044 and E045) Ericsson draftCR Rel-17 38.331 17.0.0 F NR\_SL\_relay-Core

[R2-2205645](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205645%20Discussion%20on%20SIB%20configuraiton%20for%20relay%20support.doc) [A903] Discussion on SIB12 configuration for relay support Apple discussion Rel-17 NR\_SL\_relay-Core

[R2-2205776](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205776-%20%5BE086%5D%20Correction%20on%20cell%20barring%20for%20SL%20relay.docx) [E086] Correction on cell barring for SL relay Ericsson draftCR Rel-17 38.331 17.0.0 F NR\_SL\_relay-Core

[R2-2205780](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205780-%20%5BE104%5D%5BE112%5D%20Correction%20on%20handling%20on%20timer%20T420.docx) [E104][E112] Correction on handling on timer T420 Ericsson draftCR Rel-17 38.331 17.0.0 F NR\_SL\_relay-Core

RILs discussed in pre-meeting [608]

[R2-2204679](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204679_%5Bv213%5D%20Discussion%20on%20timers%20related%20issues.docx) [V213] Discussion on timers related issues vivo discussion

RILs discussed in pre-meeting [610]

[R2-2205962](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C38.331_draftCR%28Rel-17%29_R2-2205962%20-%2038.331%20RILQ539%20correction%20for%20removal%20of%20unicast%20and%20groupcast%20transmission%20mode%20for%20sidelink%20discovery.docx) RIL#Q539 - Correction on Groupcast and unicast transmission modes support for sidelink discovery Qualcomm Incorporated draftCR Rel-17 38.331 17.0.0 C NR\_SL\_relay-Core

New RILs since v192

[R2-2204962](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204962%20%5BB107%5D%20TP%20on%20unsuitale%20relay%20during%20re-establishment%20v1.0.doc) [B107] TP on unsuitable relay during re-establishment Lenovo discussion Rel-17

Rapporteur handling appears agreeable

[R2-2204677](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204677%20%5BV202%5D%5BV205%5D%20PC5%20RRC%20connection%20establishment%20and%20release%20trigger.docx) [V202][V205] PC5 RRC connection establishment and release trigger vivo discussion

[R2-2204994](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204994-38331_Correction%20on%20the%20definition%20of%20suitable%20relay%20UE.docx) Correction on the definition of suitable relay UE OPPO draftCR Rel-17 38.331 17.0.0 NR\_SL\_relay-Core

[R2-2205186](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205186%20-%2038331%20correction%20on%20RIL%20E132.docx) Correction on RIL issue E132 Ericsson draftCR Rel-17 38.331 17.0.0 NR\_SL\_relay-Core

[R2-2205646](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205646%20Discussion%20on%20relay%20UE%20notificaiton%20upon%20Uu%20RLF%20.doc) [A309] Discussion on relay UE notification upon Uu RLF Apple discussion Rel-17 NR\_SL\_relay-Core

[R2-2205690](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205690%20%5BB209%5D%5BB10%5D%5BB211%5D%20Various%20corrections%20for%20Paging%20monitoring%20and%20SI%20Acquisition.docx) [B209][B10][B211] Various corrections for Paging monitoring and System Information acquisition Lenovo CR Rel-17 38.331 17.0.0 3113 - F NR\_SL\_relay-Core

[R2-2205773](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205773-%20%5BE080%5D%20Correction%20on%20UE%20states%20and%20state%20transitions%20for%20SL%20relay.docx) [E080] Correction on UE states and state transitions for SL relay Ericsson draftCR Rel-17 38.331 17.0.0 F NR\_SL\_relay-Core

[R2-2205777](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205777-%20%5BE087%5D%20Correction%20on%20paging%20reception%20by%20the%20remote%20UE.docx) [E087] Correction on paging reception by the remote UE Ericsson draftCR Rel-17 38.331 17.0.0 F NR\_SL\_relay-Core

[R2-2205778](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205778-%20%5BE090%5D%20Correction%20on%20reconfigurationWithSync%20handling%20during%20path%20switch.docx) [E090] Correction on reconfigurationWithSync handling during path switch Ericsson draftCR Rel-17 38.331 17.0.0 F NR\_SL\_relay-Core

[R2-2205779](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205779-%20%5BE093%5D%20Correction%20on%20new%20UE%20timers%20for%20remote%20UE.docx) [E093] Correction on new UE timers for remote UE Ericsson draftCR Rel-17 38.331 17.0.0 F NR\_SL\_relay-Core

Added in skeleton v4

[R2-2206072](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2206072%20%5BH810%5D%5BM106%5D%5BO075%5D%5BO076%5D%5BB207%5D%5BB208%5D%20On%20term%20of%20OoC%2C%20suitable%20cell%2C%20serving%20cell.docx) [H810][M106][O075][O076][B207][B208] On term of OoC, suitable cell, serving cell Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

[R2-2206073](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2206073%20%5BH808%5D%5BX200%5D%20Identification%20of%20target%20Relay%20UE%E2%80%98s%20serving%20cell%20change.docx) [H808][X200] Identification of target Relay UE‘s serving cell change Huawei, HiSilicon CR Rel-17 38.331 17.0.0 3158 - F NR\_SL\_relay-Core

[R2-2206074](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2206074%20%5BH811%5D%5BN005%5DChange%20SetupRelease%20to%20optional%20for%20L2%20remote%20configuration%20in%20RRCSetup%2CResume%2CReestablishment.docx) [H811][N005]Change SetupRelease to optional for L2 remote configuration in RRCSetup/Resume/Reestablishment Huawei, HiSilicon CR Rel-17 38.331 17.0.0 3159 - F NR\_SL\_relay-Core

[R2-2206075](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2206075%20%5BH812%5D%5BO94%5D%5BI012%5D%20SRB1%20SRAP%20configuration%20and%20defaut%20RLC%20configuration%20at%20PC5%20hop.docx) [H812][O94][I012] SRB1 SRAP configuration and defaut RLC configuration at PC5 hop Huawei, HiSilicon CR Rel-17 38.331 17.0.0 3160 - F NR\_SL\_relay-Core

[R2-2206076](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2206076%20%5BH809%5D%5BA304%20A305%20A307%5D%20Clarification%20on%20the%20meaning%20of%20capable%20of%2C%20acting%20as%2C%20is%20L2%20U2N%20remote%20or%20relay%20UE.docx) [H809][A304, A305, A307, A311] Clarification on the meaning of acting as/capable of/is a relay UE/remote UE Huawei, HiSilicon CR Rel-17 38.331 17.0.0 3171 - F NR\_SL\_relay-Core

Withdrawn/Not available

R2-2205187 Correction on RIL issues (E041, E043, E044 and E045) Ericsson discussion Rel-17 38.331 NR\_SL\_relay-Core Withdrawn

### 6.7.3 Other

Any other topics on NR sidelink relay.

MAC related

R2-2204773 Miscellaneous Corrections on SL Relay CATT draftCR Rel-17 38.321 17.0.0 F NR\_SL\_relay-Core

TR 37.985 related

[R2-2204800](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204800%20TP%20to%20introduce%20Rel-17%20sidelink%20relay%20and%20discovery%20for%20TR%2037.985.docx) TP to introduce Rel-17 sidelink relay and discovery in TR 37.985 ZTE, Sanechips draftCR Rel-17 37.985 17.1.1 NR\_SL\_relay-Core

Discussion:

CATT point out the TR is not in the relay WID. vivo understand there was a similar issue with MUSIM.

Chair will consult with the RAN2 secretary on procedure for this TR.

* [AT118-e][618][Relay] 37985 relay TP (ZTE)

 Scope: Evaluate the TP in R2-2204800 and produce an endorsable version.

 Intended outcome: Endorsed TP in R2-2206239 and approved LS to RAN1 in R2-2206240 (without CBs)

 Deadline: Wednesday 2022-05-18 0400 UTC

Stage 2 related

[R2-2205432](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205432%20Corrections%20on%20stage2%20specification%20for%20sidelink%20relay.docx) Corrections on stage2 specification for sidelink relay Huawei, HiSilicon CR Rel-17 38.300 17.0.0 0459 - F NR\_SL\_relay-Core

[R2-2205781](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205781-%20Misc%20correction%20on%2038.300%20for%20SL%20relay.docx) Misc correction on 38.300 for SL relay Ericsson draftCR Rel-17 38.300 17.0.0 F NR\_SL\_relay-Core

PDCP related

[R2-2205611](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205611%20Support%20of%20non-IP%20PDU%20type%20in%20PDCP%20protocol.doc) Support of non-IP PDU type in PDCP protocol Samsung discussion Rel-17 NR\_SL\_relay-Core

Other

[R2-2205989](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205989_36331_CR%234814_Rel-17_Clarification%20on%20NR%20sidelink%20relay%20related%20configuration.docx) Clarification on NR sidelink relay related configuration Huawei, HiSilicon CR Rel-17 36.331 17.0.0 4814 - F NR\_SL\_relay-Core

* Postponed (can be seen as a TEI17 CR in future)

Discussion:

Chair indicates the LTE RRC spec is not in the Rel-17 relay WID. Ericsson and CATT have the same understanding.

Huawei indicate this is a clarification, and the LTE RRC only refers to an RRC container without clarifying what can be included.

OPPO think it is not a critical issue.

## 6.11 NR positioning enhancements

(NR\_pos\_enh-Core; leading WG: RAN1; REL-17; WID: RP-210903)

WI has been declared 100% complete.

### 6.11.1 Organizational

Rapporteur input. Incoming LS etc. This AI is reserved for rapporteur and organizational inputs. For LSes that need action or have impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided. Related documents and proposed responses from companies other than the contact company should be submitted to the corresponding technical agenda item.

Incoming LSs with RAN2 in Cc:

[R2-2204477](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204477_R4-2206980.docx) LS on lower Rx beam sweeping factor for latency improvement (R4-2206980; contact: Intel) RAN4 LS in Rel-17 To:RAN1 Cc:RAN2

Incoming LSs with RAN2 in To: and “take into account” action

[R2-2204420](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204420_R1-2202849.docx) Reply LS on positioning issues needing further input (R1-2202849; contact: CATT) RAN1 LS in Rel-17 To:RAN2 Cc:RAN3

[R2-2204424](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204424_R1-2202912.docx) Reply LS on Positioning Reference Units (PRUs) for enhancing positioning performance (R1-2202912; contact: CATT) RAN1 LS in Rel-17 To:RAN2 Cc:RAN3, SA2

[R2-2204425](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204425_R1-2202922.docx) LS on multiple measurement instances (R1-2202922; contact: CATT) RAN1 LS in Rel-17 To:RAN2, RAN3

[R2-2204441](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CDocs%5CR2-2204441.zip) Response LS on determination of location estimates in local co-ordinates (S2-2201545; contact: Ericsson) SA2 LS in Rel-17 To:RAN2 Cc:RAN1, RAN3

[R2-2204464](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204464_R1-2202847.docx) LS on frequency information of SRS for positioning resources (R1-2202847; contact: CATT) RAN1 LS in Rel-17 To:RAN2, RAN3

[R2-2204508](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204508_R4-2207088.docx) Reply LS on latency improvement for PRS measurement with MG (R4-2207088; contact: Huawei) RAN4 LS in Rel-17 To:RAN2, RAN1 Cc:RAN3

[R2-2204521](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CDocs%5CR2-2204521.zip) Reply LS on Positioning in RRC\_INACTIVE State (S2-2203250; contact: Huawei) SA2 LS in Rel-17 To:RAN2 Cc:RAN3

Incoming LSs with RAN2 in To: and other action

[R2-2204478](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204478_R4-2206998.docx) LS on the UE/TRP TEG framework (R4-2206998; contact: CATT) RAN4 LS in Rel-17 To:RAN1, RAN2

* [AT118-e][626][POS] LS on TEG framework (CATT)

 Scope: Handle the LS in R2-2204478, determine a way forward, and draft a reply.

 Intended outcome: Approved LS (without CB if possible) in R2-2206249

 Deadline: Friday 2022-05-13 1800 UTC

[R2-2204491](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204491_R3-222721.docx) Questions concerning the implementation of RAN1 agreements in NRPPa (R3-222721; contact: Ericsson) RAN3 LS in Rel-17 To:RAN1, RAN2 Cc:RAN4

* [AT118-e][630][POS] LS on DL-AoD signalling load (Ericsson)

 Scope: Discuss the concern on signalling load raised in R2-2204491 and draft a reply.

 Intended outcome: Approved LS (without CB if possible) in R2-2206251

 Deadline: Tuesday 2022-05-17 1800 UTC

[R2-2206150](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2206150_Response%20LS%20from%20RTCM%20on%20GNSS%20integrity_2.docx) Response LS to RTCM SC134 on GNSS integrity (RTCM; contact: ESA) RTCM LS in Rel-17 NR\_pos\_enh-Core To:RAN2

Draft replies

[R2-2204684](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204684%20%5BDraft%5D%20Reply%20LS%20on%20the%20response%20of%20the%20positioning%20issues%20from%20RAN1%28R1-2202849%3B%20contact%20CATT%29.docx) [Draft] Reply LS on the response of the positioning issues from RAN1(R1-2202849; contact: CATT) CATT LS out Rel-17 To:RAN1 Cc:RAN3

[R2-2204685](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204685%20Reply%20LS%20on%20the%20reply%20LS%20on%20Positioning%20Reference%20Units%20%28PRUs%29%20for%20enhancing%20positioning%20performance%20%28R1-2202912%20%20contact%20CATT%29.docx) Reply LS on the reply LS on Positioning Reference Units (PRUs) for enhancing positioning performance (R1-2202912; contact: CATT) CATT LS out Rel-17 To:RAN1 Cc:RAN3, SA2

[R2-2204686](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204686%20Reply%20LS%20on%20multiple%20measurement%20instances%20%28R1-2202922%3B%20contact%20CATT%29.docx) Reply LS on multiple measurement instances (R1-2202922; contact: CATT) CATT LS out Rel-17 To:RAN1 Cc:RAN3

[R2-2204688](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204688%20Reply%20LS%20on%20UETRP%20TEG%20framework%20issues%20%28R4-2206998%3B%20contact%20CATT%29.docx) Reply LS on the UE/TRP TEG framework (R4-2206998; contact: CATT) CATT LS out Rel-17 To:RAN4 Cc:RAN1,RAN3

Rapporteur work plan

[R2-2204934](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204934%20Known%20corrections%26issues%20for%20Rel-17%20positioning%20WI.docx) Known corrections/issues for the correction phase on Rel-17 positioning WI Intel Corporation discussion Rel-17 NR\_pos\_enh-Core

Stage 2

[R2-2204930](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204930_Open%20issues%20on%20TS38.305%20.docx) Open issues on TS38.305 Intel Corporation discussion Rel-17 NR\_pos\_enh-Core

[R2-2204931](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204931-38.305%20CR%20for%20Positioning%20WI.docx) 38.305 CR for Positioning WI Intel Corporation draftCR Rel-17 38.305 17.0.0 F NR\_pos\_enh-Core

[R2-2204995](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204995%20Correction%20on%20stage-2%20for%20path%20RSRP.docx) Corrections on stage 2 for path RSRP Huawei, HiSilicon CR Rel-17 38.305 17.0.0 0092 - F NR\_pos\_enh-Core

38.331

[R2-2205859](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205859%20Positioning%20RRCCR.docx) Correction based upon Positioning RILs Ericsson CR Rel-17 38.331 17.0.0 3121 - F NR\_pos\_enh-Core Late

37.355

[R2-2205828](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205828_%28Summary%20of%20LPP%20Updates%29.docx) Summary of LPP Updates and Open Issues Qualcomm Incorporated discussion

[R2-2205829](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205829_%28draft%20CR%2037355%20LPP%20Updates%29.docx) LPP Updates Qualcomm Incorporated draftCR Rel-17 37.355 17.0.0 F NR\_pos\_enh-Core

* [AT118-e][622][POS] 38305 positioning CR (Intel)

 Scope: Review and update the rapporteur CR (R2-2204931), also taking into account proposals in the stage 2 related tdocs: R2-2205655, R2-2204690, R2-2205017, R2-2205488, R2-2205805, stage 2 proposals from AI 6.11.2.1. Also check the CR in R2-2204689 to 36.305. Discussion should coordinate with the handling of agenda item summaries.

 Intended outcome: Agreed CRs to 38.305 in R2-2206244 and 36.305 in R2-2206245 (without CBs if possible)

 Deadline: Tuesday 2022-05-17 1800 UTC

* [AT118-e][623][POS] 38331 positioning CR (Ericsson)

 Scope: Review and update the rapporteur CR (R2-2205859), taking into account decisions of this meeting. Discussion should coordinate with the handling of agenda item summaries.

 Intended outcome: Agreeable CR in R2-2206246

 Deadline: Tuesday 2022-05-17 1800 UTC

* [AT118-e][624][POS] 37355 positioning CR (Qualcomm)

 Scope: Review and update the rapporteur CR (R2-2205829), taking into account decisions of this meeting. Discussion should coordinate with the handling of agenda item summaries.

 Intended outcome: Agreeable CR in R2-2206247

 Deadline: Tuesday 2022-05-17 1800 UTC

* [AT118-e][625][POS] 38321 positioning CR (Huawei)

 Scope: Develop a rapporteur CR, taking into account decisions of this meeting. Discussion should coordinate with the handling of agenda item summaries.

 Intended outcome: Agreeable CR in R2-2206248

 Deadline: Tuesday 2022-05-17 1800 UTC

Withdrawn/Not available

R2-2204687 Reply LS on frequency information of SRS for positioning resources (R1-2202847; contact: CATT) CATT LS out Rel-17 To:RAN1 Cc:RAN3 Late

=> Withdrawn

### 6.11.2 Essential corrections

No documents should be submitted to 6.11.2. Please submit to 6.11.2.x.

#### 6.11.2.1 Latency enhancements

Enhancements of signalling, and procedures for improving positioning latency of the Rel-16 NR positioning methods, for DL and DL+UL positioning methods.

Summary document

[R2-2206147](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2206147%20Summary%20of%20AI%206.11.2.1%20on%20latency.docx) Summary of AI 6.11.2.1 on latency ZTE Corporation discussion Rel-17 NR\_pos\_enh-Core

* Revised in R2-2206340

[R2-2206340](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2206340%20Summary%20of%20AI%206.11.2.1%20on%20latency.docx) Summary of AI 6.11.2.1 on latency ZTE, Sanechips discussion Rel-17 NR\_pos\_enh-Core

ASN.1 issues:

Proposal 14: Support to delete the area-id-r17 in current LPP spec. FFS whether the associated cell list is valid.

Discussion:

Qualcomm think the deletion is OK but are not sure what the FFS means. They also wonder in P16, what we would broadcast if we delete the area ID. They understand the area ID is just an index into the list of cells and can be handled by implementation without signalling it.

Huawei understand that we do not need the area ID but we do need the cell list; Apple agree. Huawei think there are some issues in the CR for P16, including handling of the posSIB content in the RRC CR when it should be in LPP.

Ericsson understand that the network should be allowed to broadcast cell lists for multiple areas and some form of ID is needed for this.

Intel wonder if the intention is to use the cell list to let the UE know if the preconfigured AD should be stored, or to indicate “if you are in this area then use this AD”. They note that we have a requirement for the UE to be able to obtain SFN from some cell in the AD for DL-TDOA, and there should now be a similar requirement that the UE can only use the preconfigured AD if it can acquire the SFN from some cell in the validity list. So they wonder if the serving cell must always be included in the list to guarantee availability of the SFN.

Huawei understand that when the UE moves to a certain area, if it has stored AD with associated cell IDs valid in that area, it will check if the current cell is in the associated cell list; if so, it can use the AD. So they think the SFN issue mentioned by Intel is not related to the preconfigured AD.

OPPO think we should keep the cell list.

Apple have the same understanding as Huawei about how the preconfigured AD work.

Fraunhofer think the area ID could be used to request AD for a specific area, and the cell list could be optional with the area ID used as a shorthand if the cell list has already been provided.

Nokia think tracking the cell lists without an explicit ID may be an implementation problem on the network side.

Fraunhofer think the area ID can be OPTIONAL but do not see value in deleting it. Chair asks what the use case is if the UE cannot request an area; Fraunhofer think that if AD are broadcasted for multiple areas (i.e. P16), the ID can distinguish instances, and it can avoid repeating a cell list.

Nokia think the deletion is not due to a critical problem but is more of a signalling optimisation.

Huawei do not understand Nokia’s concern with the management of AD on the network side. Intel agree with Huawei, and think we agreed last meeting to the list-based approach and the area ID is superfluous.

Proposal 15: Support UE to request pre-configured assistance data associated with area validity in each positioning method AD request.

Discussion:

Chair wonders if this is really a correction. Qualcomm indicate that if the network provides AD for multiple areas, the UE eventually has to request new AD, and it can only use the legacy format. On Fraunhofer’s concern about the area ID, Qualcomm are not sure how the UE would know which area to request for.

Ericsson support the proposal and think it can be LMF implementation to select the area.

Intel are not against the proposal but would like to understand how/if the UE determines which area it wants AD for, and how the LMF can determine if it should trust the UE decision.

Nokia view this proposal as new functionality; they think if area-based AD are available at the UE for the current cell, the UE will use that AD, and otherwise it issues the legacy request.

Apple think Ericsson’s description is OK, but the proposal as written with the inclusion of an area ID would be new functionality.

Huawei agree with Qualcomm about the symmetry between request and response in LPP, but would like to understand the relation of the request with the current PCell; they understand that the current PCell is already a kind of area indicator that the network can use to guide the selection of AD. So they think a boolean value would be sufficient.

vivo see this as an optimisation and think the LMF can provide the preconfiguration to the UE based on capability without the need for an explicit request.

ZTE agree with Huawei’s comment that a boolean value would be sufficient.

Intel agree with Nokia and think we should not introduce new functionality.

Qualcomm think there is some confusion: The input contributions included a proposal with an included number of areas (similar to the proposal for a boolean indication), and also a proposal that the UE requests a specific area. For the latter, they do not see how the UE knows which area ID to request. They do not see this as an optimisation because we always have request/provide symmetry.

Ericsson can accept the boolean indicator. OPPO and Apple think boolean is enough.

CATT doubt if the UE can get the area ID for the request.

Proposal 16: Support to introduce a new posSIB to include the area validity of pre-configured AD.

Discussion:

Ericsson think this would be aligned with how LPP is designed and the new AD need to be reflected in a posSIB so it can be provided via broadcast.

Nokia think the proposal makes some sense but was not brought during the main part of the WI, and they are hesitant to add last-minute functionality.

Huawei think another solution would be to add the cell list to the DL-PRS assistance data, which is already broadcasted.

Qualcomm think the proposal from Huawei to include the area ID in the DL-PRS AD is not necessary because it suggests that each cell broadcasts AD, which would then be available to the UE anyhow from reading the broadcast. They also see impact to RRC and NRPPa that would require further changes.

Ericsson think the change is minor compared to the number of SIBs already added.

CATT think the proposal is not necessary.

Fraunhofer would prefer to have the broadcast available.

On Qualcomm’s concern, Ericsson do not see that the broadcast AD can provide area-associated AD.

Ericsson think the UE can avoid the latency/power cost of reading the posSIB. Fraunhofer and vivo have a similar understanding.

Agreements:

Proposal 14 (modified): Deletion of the area-id-r17 in current LPP spec to be checked in LPP CR discussion (not related to broadcast).

Proposal 15 (modified): Support UE to request pre-configured assistance data associated with area validity in each positioning method AD request. The indicator is a boolean flag but not an explicit area ID.

Important procedure issues:

Measurement gaps in MAC:

Proposal 1: RAN2 to agree the change in 38.321 draft CR R2-2204700 and R2-2205656 for pre-configured MG MAC CE activation/deactivation request/command design.

Proposal 8: RAN2 to agree the change in draft CR R2-2205309 for capturing the cancellation procedure of UL MAC CE for pre-configured MG in 38.321.

* P1 and P8 to be checked in MAC CR discussion [AT118-e][625].

Measurement gaps in RRC:

Proposal 4: RAN2 to agree that UE considers the activated preconfigured measurement gaps to be in deactivated state when HO happens, and takes R2-2205048 TP of 38.331, section 5.3.5.5.2 as baseline.

Proposal 5: RAN2 to discuss that after a positoning measurment gap is deactivated due to handover, RRC triggers the lower layer to send another request for MG activation. If agreed, adopt CR of R2-2205048, section 5.5.6.2 part as baseline.

Proposal 6: For pre-configured MG, the UL MAC CE deactivation procedure triggered by upper layer should be captured in 38.331, specifically in:

Option 1: section 5.5.6.2, i.e., the initiation of Location Measurement Indication procedure.

FFS: whether R2-2205000 can be supported

Option 2: a new section, e.g, section 5.5.2.x parallel to the measurement gap configuration procedure.

FFS: whether corresponding changes in R2-2205310 can be supported

Proposal 7: For pre-configured MG, the UL MAC CE cancellation procedure triggered by upper layer should be captured in 38.331, specifically in:

Option 1: section 5.5.6.2, i.e., the initiation of Location Measurement Indication procedure.

FFS: whether R2-2204703 can be supported

Option 2: a new section, e.g, section 5.5.2.x parallel to the measurement gap configuration procedure.

FFS: whether corresponding changes in R2-2205310 can be supported

PPW:

Proposal 10: RAN2 to agree the change in 38.321 draft CR R2-2204742 to delete ‘consists of a single octet’, clarify the UE behaviour when PPW is activated should follow the clause 5.24, and modify the numEntry field. Huawei understand the proposal is correct because there can be 4 PPWs activated at the same time; Qualcomm understand that the MAC CE can only activate/deactivate one at a time.

* To be checked in the MAC discussion (confirm consistency with RAN1 parameter list).

Discussion:

Qualcomm think the PPW is not fully aligned with RAN1 and the single octet size may be correct. In general they see mismatches between RAN1/RRC/MAC.

Proposal 11: Support to adopt the same procedure for pre-configured PPW and pre-configured MG. The RAN2 changes including:

• Introduce a new UL MAC CE for PPW activation/deactivation request;

• Add UE capabilities for UL/DL MAC-CE based PPW activation.

The RAN3 changes including:

• Include the UE DL-PRS processing capability outside measurement gaps in the NRPPa MEASUREMENT PRECONFIGURATION REQUIRED message.

• Include information on what has been preconfigured in the target device (MGs and/or PPW) in the NRPPa MEASUREMENT PRECONFIGURATION CONFIRM message.

• Enable the NRPPa MEASUREMENT ACTIVATION message to activate/deactivate preconfigured PRS processing windows.

If agreed, adopt TPs of 38.305, 38.321, 38.331, 37.355 in R2-2205764 as baseline. Send LS to RAN1 and RAN3 for confirmation.

Discussion:

Ericsson think RAN1 did not ask for this. Qualcomm understand that RAN2 were asked to design the procedure and we need this functionality.

Proposal 12: Regarding UE capability of PPW, UE only needs to report whether PPW is supported or not to LMF.

* Any related concern can be raised in the capability discussion [AT118-e][627].

Discussion:

Qualcomm understand that there are additional PPW capabilities in the RAN1 agreements (both in RRC and LPP).

ZTE think P12 can be discussed together with P11. Ericsson agree. Intel think we should follow the RAN1 feature list.

* [AT118-e][635][POS] Cross-group alignment for PPW (Qualcomm)

 Scope: Check P11 from R2-2206147 and determine whether to align the PPW/MG procedures.

 Intended outcome: Report to Wednesday CB session in R2-2206256

 Deadline: Tuesday 2022-05-17 1800 UTC

Other optimization/stage-2 changes:

Proposal 2: Support to use a RRC signalling to indicate UE which protocol layer is used for transmitting measurement gap request (RRC or MAC).

Proposal 3: RAN2 to discuss UL MAC CE for pre-configured measurement gap has the provision to include BSR.

Proposal 9: RAN2 to agree the changes in 38.305 draft CR R2-2205810 on pre-configured PPW and MG.

Proposal 13: Support UE to deactivate PPW via UL RRC message, i.e., in UEPositioningAssistanceInfo.

* [AT118-e][634][POS] Measurement gap RRC aspects (Huawei)

 Scope: Conclude on remaining RRC issues on measurement gaps, taking into account P4-P7 in the summary R2-2206340 as well as the related tdocs R2-2204543, R2-2205267, R2-2205291, and R2-2205726. Related MAC issues can be considered in the MAC CR discussion.

 Intended outcome: Report to Monday week 2 session in R2-2206255

 Deadline: Friday 2022-05-13 1800 UTC

The following documents will not be individually treated

[R2-2204699](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204699%20Discussion%20on%20the%20positioning%20MG%20activation%20deactivation%20MAC%20CE.docx) Discussion on the positioning MG activation deactivation MAC CE CATT discussion Rel-17 NR\_pos\_enh-Core

[R2-2204700](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C38.321_CR1229_%28Rel-17%29_R2-2204700.docx) Correction on the positioning MG activation deactivation MAC CE CATT CR Rel-17 38.321 17.0.0 1229 - F NR\_pos\_enh-Core

[R2-2204701](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204701%20Discussion%20on%20the%20cancel%20conditions%20of%20the%20triggered%20UL%20positioning%20MG%20activation%20deactivation%20MAC%20CE.docx) Discussion on the cancel conditions of the triggered UL positioning MG activation/deactivation MAC CE CATT discussion Rel-17 NR\_pos\_enh-Core

[R2-2204702](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C38.321_CR1230_%28Rel-17%29_R2-2204702.docx) Correction on the cancel conditions of the triggered UL positioning MG activation/deactivation MAC CE CATT CR Rel-17 38.321 17.0.0 1230 - F NR\_pos\_enh-Core

[R2-2204703](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C38.331_CR2996_%28Rel-17%29_R2-2204703.docx) Correction on the cancel conditions of the triggered UL positioning MG activation/deactivation MAC CE CATT CR Rel-17 38.331 17.0.0 2996 - F NR\_pos\_enh-Core

[R2-2204742](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C38.321_CR1228_%28Rel-17%29_R2-2204742.docx) Corrections on the TS38.321 CATT CR Rel-17 38.321 17.0.0 1228 - F NR\_pos\_enh-Core

[R2-2204996](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204996%20Corrections%20on%20MAC%20CE%20for%20Preconfigured%20Positioning%20MG.docx) Corrections on MAC CE for Positioning Measurement Gap Huawei, HiSilicon CR Rel-17 38.321 17.0.0 1244 - F NR\_pos\_enh-Core

[R2-2205309](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205309%20Correction%20on%20pre-configured%20MG%20procedure%20in%2038.321.docx) Correction on pre-configured MG procedure in 38.321 ZTE, Sanechips CR Rel-17 38.321 17.0.0 1271 - F NR\_pos\_enh-Core

[R2-2205311](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205311%20Discussion%20on%20the%20pre-configured%20MG%20signaling.docx) Discussion on the pre-configured MG signaling ZTE, Sanechips discussion Rel-17 NR\_pos\_enh-Core

[R2-2205579](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205579%20Discussion%20on%20the%20handling%20of%20pre-MG%20for%20positioning.docx) Discussion on the handling of pre-MG for positioning vivo discussion Rel-17 NR\_pos\_enh-Core

[R2-2205656](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C38321_CR1278_%28Rel-17%29_R2-2205656-Pos-meas-Gap-CE-v0.docx) Definition of positioning measurement gap activation/deactivation MAC CE Apple CR Rel-17 38.321 17.0.0 1278 - F NR\_pos\_enh-Core

[R2-2205764](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205764_%28Issues%20with%20PPW%29.docx) Issues with PRS Processing Window Procedures Qualcomm Incorporated discussion

[R2-2205766](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205766_%28Area%20ID%29.docx) Assistance Data Request for Multiple Area IDs Qualcomm Incorporated discussion

[R2-2205804](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205804%20areaID.docx) Text Proposal to address UE request of Area Info and Broadcast of Area Ericsson, Fraunhofer IIS, Fraunhofer HHI, Lenovo, Motorola Mobility discussion Rel-17

* Revised in R2-2206331

[R2-2206331](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2206331_areaIDPosSIB.docx) Text Proposal to address UE request of Area Info and Broadcast of Area Ericsson, Fraunhofer IIS, Fraunhofer HHI, Lenovo, Motorola Mobility discussion Rel-17

[R2-2205808](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205808%20activate%20PPW.docx) Correction to activate pre-configured PPW Signaling Ericsson CR Rel-17 38.305 17.0.0 0097 - F NR\_pos\_enh-Core

[R2-2205809](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205809%20Correction%20MACCE.docx) Correction of PPW Activation/Deactivation Command MAC CE size description Ericsson CR Rel-17 38.321 17.0.0 1285 - F NR\_pos\_enh-Core

[R2-2205810](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205810%20Clarification%20on%20PPW%20and%20MG%20.docx) Clarification on PPW and MG configuration to the same UE and miscellaneous corrections Ericsson CR Rel-17 38.305 17.0.0 0098 - F NR\_pos\_enh-Core

[R2-2205812](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205812%20UL%20MAC%20CE%20Design.docx) UL MAC CE for preconfigured MG Ericsson discussion Rel-17

[R2-2205814](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205814%20PPW%20ConfigRelease.docx) On PPW Configuration Release assistance info Ericsson discussion Rel-17

Withdrawn/Not available

R2-2204704 Corrections on the TS38.305 CATT CR Rel-17 38.305 17.0.0 0090 - F NR\_pos\_enh-Core Late

* Withdrawn

#### 6.11.2.2 RRC\_INACTIVE

Methods, measurements, signalling and procedures to support positioning for UEs in RRC\_ INACTIVE state, for UE-based and UE-assisted positioning solutions. UL and DL+UL NR positioning methods and gNB positioning measurements for UEs in RRC\_INACTIVE are treated at lower priority.

Chair’s note: Companies’ attention is drawn to email discussion [AT118-e][501], where the discussion of document R2-2205824 for RRC RIL I512 is handled. The proposal is to change the ASN.1 structure around the positioning-related field srs-PosRRC-InactiveConfig-r17. It is assumed that the conclusion will be captured by the positioning RRC rapporteur.

Summary document

[R2-2206052](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2206052%20Summary%20of%20AI%206.11.2.2%20on%20RRC_INACTIVE.docx) Summary of AI 6.11.2.2 on RRC\_INACTIVE vivo discussion Rel-17 NR\_pos\_enh-Core

Easy agreement

Proposal 2a: Agree on R2-2205012 as a baseline to remove the detailed pathloss derivation and beam consolidation procedure, and only add the reference to 38.133 and 38.331.

Proposal 3: Agree on R2-2205368 to update the maintenance of the uplink time alignment procedure, with revised punctuation.

Proposal 4a: Agree on R2-2205580 to remove the description of the UE behavior when performing connection resumption in a different cell than the cell where srs-PosRRC-InactiveConfig was configured.

Proposal 4b: Agree on R2-2205580 to add the description of the UE behavior upon cell reselection, i.e., to instruct MAC to stop the srs-TimeAlignmentTimer.

Discussion:

Xiaomi have a concern on P4a; they think it implies that the UE will not release the SRS configuration, and they think we should explicitly specify the UE behaviour for the case of resuming in the same cell.

Intel understand that the intention is that the UE should delete the SRS configuration on resume, but not on reselect. So they understand that we should remove the configuration deletion from the reselection case but not from the resume procedure.

Huawei think P4a is reasonable, because when the UE reselects a cell, it cannot do positioning with the previous SRS configuration, and when it resumes with the other cell it should discard the procedure.

Agreements:

Proposal 2a (modified): Agree on the changes in R2-2205012 as a baseline to remove the detailed pathloss derivation and beam consolidation procedure, and only add the reference to 38.133 and 38.331.

Proposal 3 (modified): Agree on the changes R2-2205368 to update the maintenance of the uplink time alignment procedure, with revised punctuation.

Proposal 4b (modified): Agree on the changes in R2-2205580 to add the description of the UE behavior upon cell reselection, i.e., to instruct MAC to stop the srs-TimeAlignmentTimer.

Changes to be captured by rapporteurs.

For further discussion

[Chair’s note: P2b is cross-WI with SDT. If the proposal is agreeable from positioning point of view, changes are to be handled by the RRC rapporteur, subject to companies checking to confirm compatibility with SDT. Any concern should be raised in email discussion [AT118-e][623].]

Proposal 1: Discuss whether to follow the SDT mechanism to keep the positioning SRS configuration for RRC\_INACTIVE when the inactivePosSRS-TimeAlignmentTimer expires to support delta configuration. If yes, agree on R2-2204693.

Proposal 2b: Discuss whether to add a new clause for pathloss derivation for posSRS transmission and CG-SDT in RRC\_INACTIVE to RRC spec. If yes, agree on R2-2205013 as a baseline.

Proposal 4c: Discuss whether to move the procedure of posSRS handling upon cell reselection in section 5.7.15 to section 5.3.13.6 and remove section 5.7.15. If yes, agree on R2-2204999 as a baseline.

Note: Proposal 4c shall be skipped if it is handled by the RRC rapporteur.

Proposal 5a: If RAN2 would reply to the LS to SA2 on positioning in RRC\_INACTIVE, add the suggestion of deleting the pre-condition “when the UE is in RRC INACTIVE state”.

Proposal 5b: Discuss whether to add a new nr-UL-RequestAssistanceData IE in the RequestAssistanceData to support UE initiated SRS configuration request for UL only positioning.

Discussion:

Ericsson confirm that P4c is handled in the RRC CR.

* [AT118-e][636][POS] Proposals for discussion from RRC\_INACTIVE summary (vivo)

 Scope: Discuss P1/P2b/P4a/P5a/P5b from R2-2206052 and attempt to conclude. P2b should be checked for compatibility with SDT.

 Intended outcome: Report to Monday week 2 session in R2-2206257

 Deadline: Friday 2022-05-13 1800 UTC

The following documents will not be individually treated

[R2-2204691](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204691%20Further%20consideration%20on%20Periodic%20and%20Triggered%205GC-MT-LR.docx) Further consideration on Periodic and Triggered 5GC-MT-LR Procedure in RRC INACTIVE state CATT discussion

[R2-2204692](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204692%20%5BDraft%5D%20Reply%20LS%20on%20Positioning%20in%20RRC_INACTIVE.DOCX) [Draft] Rely LS on Positioning in RRC\_INACTIVE CATT LS out Rel-17 To:SA2 Cc:RAN3

[R2-2204693](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204693%20Consideration%20on%20positioning%20SRS%20configuration.docx) Consideration on positioning SRS configuration for RRC\_INACTIVE CATT discussion

[R2-2205012](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205012%20Correction%20to%20beam%20consolidation%20for%20posSRS%20in%20RRC_INACTIVE.docx) Correction to beam consolidation for posSRS in RRC\_INACTIVE Huawei, HiSilicon CR Rel-17 38.321 17.0.0 1245 - F NR\_pos\_enh-Core

[R2-2205013](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205013%20%5BH572%5D%20Correction%20for%20beam%20consolidation%20for%20TA%20validation%20in%20RRC_INACTIVE.docx) [H572] Correction for beam consolidation for TA validation in RRC\_INACTIVE Huawei, HiSilicon CR Rel-17 38.331 17.0.0 3030 - F NR\_pos\_enh-Core

[R2-2205368](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205368%20Corrections%20on%20Maintenance%20of%20Uplink%20Time%20Alignment.doc) Corrections on Maintenance of Uplink Time Alignment Xiaomi discussion

[R2-2205580](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205580%20Discussion%20on%20remaining%20issue%20about%20positioning%20in%20RRC_INACTIVE.docx) Discussion on the remaining issue about positioning in RRC\_INACTIVE vivo discussion Rel-17 NR\_pos\_enh-Core

#### 6.11.2.3 On-demand PRS

Specify UE-initiated and LMF-initiated on-demand transmission and reception of DL PRS for DL and DL+UL positioning for UE-based and UE-assisted positioning solutions.

Summary document

[R2-2206058](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2206058%20%5BPre118-e%5D%5B605%5D%5BPOS%5D%20Summary%20of%20AI%206.11.2.3%20on%20on-demand%20PRS%20%28Huawei%29_final.docx) [Pre118-e][605][POS] Summary of AI 6.11.2.3 on on-demand PRS (Huawei) Huawei, HiSilicon discussion Rel-17 NR\_pos\_enh-Core

Proposal1: [H011] TRP configuration should also be provided in on-demand PRS configuration for index-based on-demand PRS request.

Discussion:

CATT prefer not to provide the TRP configuration, because the PRS configuration will be eventually provided to the UE in the response message along with the SSB information. They also think we could provide the whole configuration, as defined in Rel-16, to the UE directly.

Qualcomm do not fully understand the proposal: The TRP configuration includes positioning-method-dependent information, while the request is generic to the PRS assistance data.

Nokia agree with Qualcomm and do not see the justification for the change; they understand that what we provide now is the actual attributes of the PRS.

Huawei indicate that in the current response, the LMF can only provide an index to the PRS configuration, but the current PRS configuration is incomplete without the TRP configuration. With the proposal, the index can indicate to the UE the complete configuration.

vivo understand that P1 is related to Alt 2 in P3; if we agree on Alt 2, then P1 is not necessary. Huawei think there is no relation because the current configuration is incomplete.

Proposal2: [H057] For UE-initiated on-demand PRS request by explicit parameter, allow the network to provide a list of parameters to the UE that the UE should only request within the scope of the list, when such configuration is provided.

Proposal3: RAN2 to discuss and fix the mismatch issue of on-demand PRS between RAN2 and RAN3, the following alternatives can be considered:

- Alt 1: The pre-defined PRS configuration from LMF to UE includes a list of complete PRS configurations (maintaining the status quo), then the following changes are essential:

o In step 0, the possible On-Demand PRS configuration from gNB to LMF shall include a list of complete PRS configurations, each associated with a PRS configuration ID;

o In step 3, the PRS CONFIGURATION REQUEST from LMF to gNB shall include PRS configuration ID;

o In step 6, the on-demand PRS response from LMF to UE shall include the PRS configuration ID that is successfully activated.

- Alt 2: The pre-defined PRS configuration from LMF to UE only includes a list of allowed values for the parameters that can be requested by the UE.

* [AT118-e][637][POS] Proposals for discussion on on-demand PRS (Huawei)

 Scope: Discuss P1/P2/P3 from R2-2206058.

 Intended outcome: Report to CB session in R2-2206258

 Deadline: Tuesday 2022-05-17 1800 UTC

[Stage 2, not freeze-critical]

Proposal4: Add a note for explaining measurements that is needed for the assistance of LMF/UE-initiated on-demand PRS request.

 NOTE 3: In case of LMF-initiated On-Demand PRS or UE-initiated On-Demand PRS, the LMF may obtain measurements from the UE using some existing positioning methods to assist step 3 e.g., the LMF may obtain SSB/CSI-RS RSRP measurements (NR-ECID) or DL-PRS RSRP measurements (DL-AoD).

[Already covered in LPP CR]

Proposal5: [C012] Remove the definition of the nr-On-Demand-DL-PRS-Configurations-Selected-IndexList-r17 within each DL and multi-RTT positioning method, and make it as a common IE, which is referred by DL and multi-RTT positioning method.

The following documents will not be individually treated

[R2-2205007](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205007%20%5BH011%5D%20TRP%20config%20for%20on-demand%20PRS.docx) [H011] TRP config for on-demand PRS Huawei, HiSilicon CR Rel-17 37.355 17.0.0 0342 - F NR\_pos\_enh-Core

[R2-2205011](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205011%20%5BH057%5D%20Discussion%20on%20UE-initiated%20on-demand%20PRS.docx) [H057] Discussion on UE-initiated on-demand PRS Huawei, HiSilicon discussion Rel-17 NR\_pos\_enh-Core

[R2-2205581](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205581%20Mismatch%20between%20the%20on-demand%20PRS%20procedure%20of%20RAN2%20and%20RAN3.docx) Discussion on the mismatch between the on-demand PRS procedure of RAN2 and RAN3 vivo discussion Rel-17 NR\_pos\_enh-Core

[R2-2205805](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205805%20ODPRS.docx) On UE measurements to allow On-Demand PRS Ericsson, Nokia, Fraunhofer IIS, Fraunhofer HHI, Lenovo, Motorola Mobility CR Rel-17 38.305 17.0.0 0095 - F NR\_pos\_enh-Core

#### 6.11.2.4 GNSS positioning integrity

Signalling and procedures to support GNSS positioning integrity determination.

Summary document

[R2-2206092](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2206092%20-%20Summary%20AI%20GNSS%20Integrity.docx) Summary of GNSS Positioning Integrity AI 6.11.2.4 Ericsson discussion Rel-17 NR\_pos\_enh-Core

* [AT118-e][639][POS] Collection of views on integrity proposals (Ericsson)

 Scope: Take comments on the proposals from R2-2206092, focussing on which topics are critical to treat.

 Intended outcome: Report to Monday week 2 session in R2-2206260

 Deadline: Friday 2022-05-13 1800 UTC

The following documents will not be individually treated

[R2-2204997](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204997%20Draft%20LS%20to%20SA1%20and%20SA2%20on%20GNSS%20integrity.docx) Draft LS to SA1/SA2 on GNSS integrity Huawei, HiSilicon LS out Rel-17 NR\_pos\_enh-Core To:RAN1

[R2-2205017](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205017%20Correction%20to%20stage2%20on%20service%20level%20support%20for%20GNSS%20integrity.docx) Correction to stage2 on service level support for GNSS integrity Huawei, HiSilicon CR Rel-17 38.305 17.0.0 0093 - F NR\_pos\_enh-Core

[R2-2205488](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205488_%286.11.2.4%29%20CR_38305_Corrections%20on%20Positioning%20Integrity%20parameter%20table.docx) Corrections on Positioning Integrity parameter table Samsung R&D Institute UK draftCR Rel-17 38.305 17.0.0 NR\_pos\_enh-Core

[R2-2205815](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205815%20integrity.docx) Remaining issues for integrity Ericsson discussion Rel-17

[R2-2206037](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C37.355_CR0348_%28Rel-17%29_R2-2206037.docx) [C002] Correction on the Note of the Protection Level (PL) CATT CR Rel-17 37.355 17.0.0 0348 - F NR\_pos\_enh-Core

=> Revised in R2-2206067

[R2-2206067](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C37.355_CR0348r1_%28Rel-17%29_R2-2206067.docx) [C002] Correction on the Note of the Protection Level (PL) CATT CR Rel-17 37.355 17.0.0 0348 1 F NR\_pos\_enh-Core

#### 6.11.2.5 A-GNSS enhancements

Including support of BDS B2a and B3I signals and support of NavIC.

[R2-2204689](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C36.305_CR0108_%28Rel-17%29_R2-2204689.docx) Correction on the reference file of BDS Signal B3I CATT, CAICT CR Rel-17 36.305 17.0.0 0108 - F NR\_pos\_enh-Core

[R2-2204690](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C38.305_CR0087_%28Rel-17%29_R2-2204690.docx) Correction on the reference file of BDS Signal B3I CATT, CAICT CR Rel-17 38.305 17.0.0 0087 - F NR\_pos\_enh-Core

#### 6.11.2.6 Accuracy enhancements

Input on the accuracy enhancement objectives led by RAN1.

Summary document

[R2-2206083](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2206083%20%5BPre118-e%5D%5B607%5D%5BPOS%5D%20Summary%20of%20AI%206.11.2.6%20on%20accuracy%20%28CATT%29.docx) [Pre118-e][607][POS] Summary of AI 6.11.2.6 on accuracy (CATT) CATT discussion Rel-17

* Revised in R2-2206333

[R2-2206333](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2206333%20%5BPre118-e%5D%5B607%5D%5BPOS%5D%20Summary%20of%20AI%206.11.2.6%20on%20accuracy%20%28CATT%29.docx) [Pre118-e][607][POS] Summary of AI 6.11.2.6 on accuracy (CATT) CATT discussion Rel-17

Potentially easy to agree

beam antenna information for UE-based DL-AoD:

Proposal 2a: RAN2 to agree merge the CR [R2-2204987] and parts of CR [R2-2205008] to the LPP CR, i.e., add the reference TRP which shall be absent in case that the nr-TRP-BeamAntennaAngles is present, and update the power granularity of the relative power of the DL-PRS resource to align with RAN1 agreement.

Proposal 2b: RAN2 to agree the CR [R2-2205008] to clarify that the relative power value is absent for the first element in the beamPowerList.

Additional Measurement for DL-AoD:

Proposal 2d: RAN2 to agree the CR [R2-2205016] to update the measurement report information for DL-AoD according to LS R2-2204420 (issue 6), i.e., for Rel-17 DL-AoD, the first RSRP measurement is mandatory, while the additional RSRP measurements and all the RSRPP measurements are optional.

Measurement report:

Proposal 4b: RAN2 to agree the updates on measurement instances by LPP rapporteur and wait for the value of maximum number of measurement instances in a report from RAN1 later.

Proposal 4a: RAN2 to agree to reply an LS to RAN4 to notice that RAN2 wait for further notice of RxTEG exact values from RAN4.

Discussion:

Qualcomm think R2-2204987 is not clear (regarding P2a) and the current running CR is in line with the RAN1 guidance; they are also not sure which parts of R2-2205008 should be implemented, but in any case aligning with RAN1 should not require an explicit agreement.

CATT indicate that R2-2204987 is covered by the current LPP CR, albeit not with identical implementation. Regarding R2-2205008, they think the relevant changes are also captured in LPP. So they understand that P2a is no longer needed. They also think P2d is captured in LPP.

Ericsson think E603 and E604 are relevant to the combination of the TRP ID and the rotation angles; they think it has been implemented incorrectly in LPP.

Qualcomm are not sure P2b is a good idea; they understand that we provide a list of elements, and the first element is the reference, by definition 0dB power. The proposal here is to signal not the first one but only the relative ones, and they think this introduces 24 optionality bits to save a 6-bit field. Ericsson and CATT agree with Qualcomm. Huawei think we can discuss signalling overhead in the LPP CR.

Agreements:

Proposal 2d (modified): RAN2 to agree the contents of the CR [R2-2205016] to update the measurement report information for DL-AoD according to LS R2-2204420 (issue 6), i.e., for Rel-17 DL-AoD, the first RSRP measurement is mandatory, while the additional RSRP measurements and all the RSRPP measurements are optional.

Proposal 4b: RAN2 to agree the updates on measurement instances by LPP rapporteur and wait for the value of maximum number of measurement instances in a report from RAN1 later.

Need further discussion:

TxTEG report in RRC and LPP

TxTEG report mechanism in RRC aspect:

Proposal 1a: RAN2 to agree configuring event triggered reporting for UL-TDOA to enable reporting of the association between UE TxTEG ID and SRSp resources when a change in the association is identified.

Proposal 1b: RAN2 to agree update the asn.1 of UE-TxTEG-RequestUL-TDOA-Config-r17 in RRC as event triggered reporting as below:

EventTriggerConfig-r17::= SEQUENCE {

 reportInterval-r7 ENUMERATED {ms120, ms240, ms480, ms640, ms1024, ms2048, ms5120, ms10240}

 reportAmount-r17 ENUMERATED {1, infinity},

 ...

}

 UE-TxTEG-RequestUL-TDOA-Config-r17 ::= CHOICE {

 oneShot-r17 NULL,

 periodicReporting-r17 ENUMERATED {ms120, ms240, ms480, ms640, ms1024, ms2048, ms5120, ms10240}

}

TxTEG report of asn.1 issues in RRC and LPP:

Proposal 1c: RAN2 to agree the max numbers of TEG-IDs in one RRC message and maxTxTEG-Sets-r17 in LPP message is 64. And send the agreement to RAN1 and RAN4 for confirmation.

Proposal 1d: RAN2 to agree the asn.1 update in LPP on UE TxTEG:

- Delete the condition in nr-SRS-TxTEG-Set-r17

- Change the structure of NR-UE-RxTx-TEG-Info-r17 from choice to sequence

- Delete the FFSs in NR-UE-RxTx-TEG-Info-r17

Failure report mechanism Tx/Rx TEG in RRC and LPP:

Proposal 1e: RAN2 to discuss whether the failure report mechanism Tx/Rx TEG in RRC and LPP is essential correction and discuss the CR[R2-2205806] in detail via offline.

* [AT118-e][638][POS] Tx TEG and LOS/NLOS aspects (CATT)

 Scope: Discuss P1a-P1e and P3a/P3b of R2-2206333.

 Intended outcome: Report to CB session in R2-2206259

 Deadline: Tuesday 2022-05-17 1800 UTC

DL-AoD related enhancement

Adjacent beam assistance data for UE-assisted DL-AoD:

Proposal 2c: RAN2 to further discuss the CR [R2-2205005] with consideration on RAN1’s agreement that the PRS subset and PRS boresight can be configured at the same time for UE-assisted DL-AoD.

Discussion:

Qualcomm think nothing is needed. The RAN1 conclusion is already in the CR.

LOS/NLOS related enhancement

Proposal 3a: RAN2 to discuss if the los/nlos indicator is designed as choice of per TRP or per resource in measurement report.

NR-DL-TDOA-MeasElement-r16 ::= SEQUENCE {

nr-LOS-NLOS-Indicator-r17 CHOICE {

 perTRP LOS-NLOS-Indicator-r17,

 perResource LOS-NLOS-Indicator-r17

 } OPTIONAL,

 nr-los-nlos-Indicator-r17 LOS-NLOS-Indicator-r17 OPTIONAL,

Proposal 3b: RAN2 to further discuss if the corrections in R2-2205004 and R2-2205307 are essential corrections via offline.

Measurement report

Proposal 4c: RAN2 to further discuss if the CR [R2-2205003] is an essential correction via offline.

Discussion:

Huawei think the change is essential.

Can be discussed in LPP offline.

Align the stage 2 specification to introduce the NRPPa enhancement

Proposal 5a: RAN2 to further discuss on how to capture the R17 NRPPa related positioning enhancement via offline, based on the CR in R2-2204697 and R2-2205807.

Proposal 5b: RAN2 to further discuss whether to send LS on the stage-2 update to RAN3 for confirmation, and the LS in R2-2204698 can be taken as baseline if needed.

* Postponed (stage 2)

PRU

Proposal 6a: RAN2 to discuss if there is no further specification enhancement on PRU in RAN2, postpone the PRU to later release, and send a reply LS to RAN1.

Discussion:

Ericsson do not think we need to do anything with P6a.

Intel think we can discuss the stage 2 handling in the 38.305 CR discussion, and RAN1 already indicated they will not do anything, so we do not need to send anything to them.

The following documents will not be individually treated

[R2-2204696](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204696-Discussion%20on%20R17%20positioning%20enhancement%20impacts%20on%20stage-2%20specification.docx) Discussion on R17 positioning enhancement impacts on stage-2 specification CATT discussion Rel-17 NR\_pos\_enh-Core

[R2-2204697](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C38.305_CR0091_%28Rel-17%29_R2-2204697.docx) Introduction of R17 NRPPa related positioning enhancement to TS38.305 CATT CR Rel-17 38.305 17.0.0 0091 - F NR\_pos\_enh-Core

[R2-2204698](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204698%20%5BDraft%5D%20LS%20to%20RAN3%20on%20introduction%20of%20R17%20NRPPa%20related%20positioning%20enhancement%20to%20TS38.305.docx) [Draft] LS to RAN3 on introduction of R17 NRPPa related positioning enhancement to TS38.305 CATT LS out Rel-17 To:RAN3

[R2-2204705](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204705%20Discussion%20on%20the%20LS%20on%20the%20framework%20of%20UETRP%20Rx%20TEG.DOCX) Discussion on the LS on the framework of UE/TRP Rx TEG CATT discussion Rel-17

[R2-2204706](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204706%20Discussion%20on%20the%20left%20issues%20on%20UE%20TxTEG%20report%20in%20RRC%20and%20LPP%20protocols.DOCX) Discussion on the left issues on UE TxTEG report in RRC and LPP protocols CATT discussion

[R2-2204707](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C38.331_CR2994_%28Rel-17%29_R2-2204707.docx) [C243] Correction on the UE TxTEG report in TS 38.331 CATT CR Rel-17 38.331 17.0.0 2994 - F NR\_pos\_enh-Core

[R2-2204708](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C37.355_CR0335_%28Rel-17%29_R2-2204708.docx) [C013][C014][C015][C016][C017]Corrections on the UE TxTEG report in TS 37.355 CATT CR Rel-17 37.355 17.0.0 0335 - F NR\_pos\_enh-Core

[R2-2204987](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C37.355_CR0336_%28Rel-17%29_R2-2204987.docx) [C011] Correction on the beam antenna information for DL-AoD CATT CR Rel-17 37.355 17.0.0 0336 - F NR\_pos\_enh-Core

[R2-2204988](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C37.355_CR0337_%28Rel-17%29_R2-2204988.docx) [C012] Correction on the selected on-demand PRS configuration for hybrid positioning CATT CR Rel-17 37.355 17.0.0 0337 - F NR\_pos\_enh-Core

[R2-2205003](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205003%20%5BH028%5D%20Correction%20to%20measurement%20with%20multiple%20TEGs.docx) [H028] Correction to measurement with multiple TEGs Huawei, HiSilicon CR Rel-17 37.355 17.0.0 0338 - F NR\_pos\_enh-Core

[R2-2205004](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205004%20%5BH026%5D%5BH027%5D%5BH029%5D%5BH030%5D%20Correction%20to%20LOS-NLOS%20indication.docx) [H026][H027][H029][H030] Correction to LOS-NLOS indication Huawei, HiSilicon CR Rel-17 37.355 17.0.0 0339 - F NR\_pos\_enh-Core

[R2-2205005](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205005%20%5BH006%5D%5BH040%5D%20Correction%20to%20adjacent%20beam%20assistance%20data.docx) [H006][H040] Correction to adjacent beam assistance data Huawei, HiSilicon CR Rel-17 37.355 17.0.0 0340 - F NR\_pos\_enh-Core

[R2-2205008](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205008%20%5BH013%5D%20Correction%20to%20TRP%20beam%20antenna%20info.docx) [H013] Correction to TRP beam antenna info Huawei, HiSilicon CR Rel-17 37.355 17.0.0 0343 - F NR\_pos\_enh-Core

[R2-2205016](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205016%20%5BH060%5D%20Correction%20on%20DL-AoD%20additional%20measurement.docx) [H060] Correction on DL-AoD additional measurement Huawei, HiSilicon CR Rel-17 38.331 17.0.0 3033 - F NR\_pos\_enh-Core

[R2-2205307](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205307%20%5BH026%5D%5BH029%5D%5BZ004%5DDiscussion%20on%20LOS%20NLOS%20indicator%20in%20LPP%20spec.docx) [H026][H029][Z004]Discussion on LOS NLOS indicator in LPP spec ZTE, Sanechips CR Rel-17 37.355 17.0.0 0344 - F NR\_pos\_enh-Core

=> Revised in R2-2206051

[R2-2206051](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2206051%20%5BH026%5D%5BH029%5D%5BZ004%5DDiscussion%20on%20LOS%20NLOS%20indicator%20in%20LPP%20spec.docx) [H026][H029][Z004]Discussion on LOS NLOS indicator in LPP spec ZTE, Sanechips CR Rel-17 37.355 17.0.0 0344 1 F NR\_pos\_enh-Core

[R2-2205308](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205308%20%5BZ003%5D%5BH025%5DSignaling%20of%20measurement%20instances.docx) [Z003][H025]Signaling of measurement instances ZTE, Sanechips CR Rel-17 37.355 17.0.0 0345 - F NR\_pos\_enh-Core

[R2-2205369](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205369%20Discussion%20on%20the%20Periodic%20Tx%20TEG%20reporting%20and%20preconfigured%20MG.doc) Discussion on the Periodic Tx TEG reporting and preconfigured MG Xiaomi discussion

[R2-2205370](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205370%20Remaining%20issues%20on%20positioning%20reference%20unit.doc) Remaining issues on positioning reference unit Xiaomi discussion

[R2-2205582](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205582%20Discussion%20on%20remaining%20issue%20about%20accuracy%20enhancements.docx) Discussion on remaining issue about accuracy enhancements vivo discussion Rel-17 NR\_pos\_enh-Core

[R2-2205654](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205654-positioning-periodic-tx-teg-v0.docx) On periodic UE Tx TEG reporting Apple discussion Rel-17 NR\_pos\_enh-Core

[R2-2205730](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205730%20%28R17%20NR%20POS%20WI%20A61126_AccEnh%29.doc) Discussion on UE TX TEG association reporting InterDigital, Inc. discussion Rel-17

[R2-2205806](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205806%20Failure%20Report%20for%20TEG.docx) Remaining Issues on TEG reporting; failure Handling Ericsson discussion Rel-17

[R2-2205807](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205807%20TableUpdate.docx) Update of signalling in stage 2 to align with NRPPa Ericsson CR Rel-17 38.305 17.0.0 0096 - B NR\_pos\_enh-Core

#### 6.11.2.7 UE capabilities

[R2-2204933](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204933_Positioning%20UE%20capabilities.docx) Positioning UE capabilities Intel Corporation discussion Rel-17 NR\_pos\_enh-Core

[R2-2205009](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205009%20%5BH022%5D%20Summary%20of%20R2-agreed%20Capabilities%20for%20R17%20POSenh.docx) [H022] Summary of R2-agreed capabilities for R17 POSenh Huawei, HiSilicon CR Rel-17 38.822 16.3.0 0010 - B NR\_pos\_enh-Core

[R2-2206330](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2206330%20PPW%20Capability.docx) On Resolving PPW Capability discrepancy Ericsson discussion

* [AT118-e][627][POS] Positioning UE capabilities (Intel)

 Scope: Discuss proposals on UE capabilities, taking into account the related tdocs: R2-2204933, R2-2205009, R2-2206330.

 Intended outcome: Endorsed TPs to some or all of 37.355, 38.331, 38.306, 38.822 (without CBs if possible)

 Deadline: Tuesday 2022-05-17 1800 UTC

#### 6.11.2.8 LPP ASN.1 issues

Any contributions related only to the details of ASN.1 in 37.355. CRs should not be submitted to this agenda item except by the specification rapporteur.

ASN.1 review process documents

[R2-2205843](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CDocs%5CR2-2205843.zip) Rel-17 LPP RIL Qualcomm Incorporated discussion

* Revised in R2-2206326

[R2-2206326](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CDocs%5CR2-2206326.zip) Rel-17 LPP RIL Qualcomm Incorporated discussion

[R2-2205844](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CDocs%5CR2-2205844.zip) Rel-17 LPP ASN1 Review File Qualcomm Incorporated discussion

* Revised in R2-2206327

[R2-2206327](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CDocs%5CR2-2206327.zip) Rel-17 LPP ASN1 Review File Qualcomm Incorporated discussion

[R2-2205846](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205846_%28draft%20CR%2037355%20Editorial%20Issues%29.docx) Editorial Corrections Qualcomm Incorporated draftCR Rel-17 37.355 17.0.0 F NR\_pos\_enh-Core

R2-2205847 LPP Updates and ASN.1 Corrections Qualcomm Incorporated CR Rel-17 37.355 17.0.0 0347 - F NR\_pos\_enh-Core Late

[R2-2206328](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2206328_%28draft%20CR%2037355%20LPP%20Updates%29.docx) LPP Updates and ASN.1 Review Qualcomm Incorporated draftCR Rel-17 37.355 17.0.0 F NR\_pos\_enh-Core

* [AT118-e][631][POS] Remaining PropDisc LPP RIL items (Qualcomm)

 Scope: Check company views and discuss the RIL items marked for discussion and not covered by contributions:

* H004: Expected AoA/AoD per TRP or per resource
* N013: Uncertainty mandatory or optional for expected AoA/AoD
* H059: DL-PRS ID in the TEG timestamp
* H024, H032, H033, H046: BIT STRING for UE-based assistance data per method

 Intended outcome: Report to Monday (week 2) session in R2-2206252

 Deadline: Friday 2022-05-13 1800 UTC

Proposals on RIL issues

[R2-2204932](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204932_I004%20Validity%20area%20for%20preconfigured%20AD.docx) I004 Validity area for preconfigured AD Intel Corporation discussion Rel-17 NR\_pos\_enh-Core

[R2-2205010](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205010%20%5BH042%5D%5BH004%5D%5BH012%5D%5BH025%5D%20Draft%20LS%20to%20R1%20for%20remaining%20issues.docx) [H042][H004][H012][H025] Draft LS to R1 for remaining issues Huawei, HiSilicon LS out Rel-17 NR\_pos\_enh-Core To:SA1, SA2

[R2-2205430](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205430.docx) Discussion of the need of the area ID for the pre-configured assistance data OPPO discussion Rel-17 NR\_pos\_enh-Core

[R2-2205583](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205583%20%5BV003%5D%20Discussion%20on%20the%20format%20of%20pre-configuration.docx) [V003] Discussion on the format of pre-configuration vivo discussion Rel-17 NR\_pos\_enh-Core

[R2-2205584](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205584%20%5BV004%5D%5BV006%5DDiscussion%20on%20LPP%20ASN.1%20issues.docx) [V004][V006]Discussion on LPP ASN.1 issues vivo discussion Rel-17 NR\_pos\_enh-Core

[R2-2205813](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205813%20LPP%20RIL%20E603-E604.docx) LPP RIL E603 and 604 on associated TRP Ericsson discussion Rel-17 37.355 Late

#### 6.11.2.9 Positioning RRC ASN.1 issues

Any contributions related only to the details of positioning-specific ASN.1 in 38.331.

ASN.1 review process documents

[R2-2205857](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CDocs%5CR2-2205857.zip) RRC Positioning RIL Summary Ericsson discussion Rel-17 Late

Measurement gap issues

[R2-2205000](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205000%20%5BH566%5D%5BH567%5D%20Correction%20for%20Location%20Measurement%20Indication.docx) [H566][H567] Correction for Location Measurement Indication Huawei, HiSilicon CR Rel-17 38.331 17.0.0 3027 - F NR\_pos\_enh-Core

[R2-2205048](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205048%20%5BS854%5D%5BS855%5D%5BS856%5D%20Handling%20pre-MG%20for%20POS%20upon%20HO.docx) [S854][S855][S856] Handling preconfigured gaps for POS upon a handover Samsung discussion Rel-17 NR\_pos\_enh-Core

[R2-2205310](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205310%20Correction%20on%20pre-configured%20MG%20procedure%20in%2038.331.docx) Correction on pre-configured MG procedure in 38.331 ZTE, Sanechips CR Rel-17 38.331 17.0.0 3066 - F NR\_pos\_enh-Core

RILs marked as ToDisc

[R2-2204999](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204999%20%5BH570%5D%20Correction%20for%20cell%20reselection%20for%20SRS%20in%20RRC_INACTIVE.docx) [H570] Correction for cell reselection for SRS in RRC\_INACTIVE Huawei, HiSilicon CR Rel-17 38.331 17.0.0 3026 - F NR\_pos\_enh-Core

[R2-2205811](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205811%20RIL%20E064%20TEG%20Reporting.docx) [RILE064] Moving TEG Reporting Configuration from SRS-Config to RRCReconfig Ericsson CR Rel-17 38.331 17.0.0 3118 - F NR\_pos\_enh-Core

[R2-2205816](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205816%20E060.docx) [RIL E060] On removal of Editors' Note for SRS Inactive mode procedure during RRC Resume Ericsson discussion Rel-17 38.331 Late

[R2-2205817](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205817%20RILE061.docx) [RIL E060] Editors Note Discussion on RRC Procedure Structure on section Ericsson discussion Late

Documents on other RIL issues

[R2-2204998](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2204998%20%5BH568%5D%20Correction%20for%20periodic%20TEG%20reporting.docx) [H568] Correction for periodic TEG reporting Huawei, HiSilicon CR Rel-17 38.331 17.0.0 3025 - F NR\_pos\_enh-Core

[R2-2205001](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205001%20%5BH563%5D%20Correction%20for%20reception%20of%20RRCRelease%20by%20the%20UE.docx) [H563]Correction for reception of RRCRelease by the UE Huawei, HiSilicon CR Rel-17 38.331 17.0.0 3028 - F NR\_pos\_enh-Core

[R2-2205049](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205049%20%5BS851%5D%5BS852%5D%5BS853%5D%20Type%20and%20prioirty%20configuration%20of%20PPW.docx) [S851][S852][S853] Type and priority configuration of PPW Samsung discussion Rel-17 NR\_pos\_enh-Core

[R2-2205498](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205498_%286.11.2.9%29%20%5BE066%5D%20Correction%20on%20structure%20of%20UEPositioningAssistInfo%20message%20contents%20for%20reducing%20unnecessary%20data%20transmission.docx) [E066] Correction on structure of UEPositioningAssistInfo message contents for reducing unnecessary data transmission Samsung R&D Institute UK discussion

[R2-2205585](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205585%20Discussion%20on%20positioning%20RRC%20ASN.1%20issues.docx) Discussion on positioning RRC ASN.1 issues vivo discussion Rel-17 NR\_pos\_enh-Core

### 6.11.3 Other

Any other topics on NR positioning enhancements.

[R2-2205006](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205006%20%5BH056%5D%20Correction%20to%20need%20code%20in%20posSIB_R17.docx) [H056] Correction to need code in posSIB\_R17 Huawei, HiSilicon CR Rel-17 37.355 17.0.0 0341 - F NR\_pos\_enh-Core

[R2-2205655](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5C38305_CR0094_%28Rel-17%29_R2-2205655-Pos-stage-2-UL-UE-TEG-v0.docx) Stage-2 positioning corrections Apple CR Rel-17 38.305 17.0.0 0094 - F NR\_pos\_enh-Core

## 6.21 TEI17

Time budget: 2 TU

### 6.21.2 TEI proposals initiated by RAN2

Proposals that has not yet been agreed.

Tdoc limitation: 2 tdocs, except for Operators.

[R2-2205845](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2205845%20Remaining%20details%20for%20high-precision%20GNSS%20reporting.docx) Remaining details for high-precision GNSS reporting ESA, Ericsson, Deutsche Telekom, T-Mobile USA, Swift Navigation, Hexagon discussion Rel-17 37.355

* Revised in R2-2206329

[R2-2206329](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202205%20-%20RAN2_118-e%2C%20Online%5CExtracts%5CR2-2206329%20Remaining%20details%20for%20high-precision%20GNSS%20reporting.docx) Remaining details for high-precision GNSS reporting ESA, Ericsson, Deutsche Telekom, T-Mobile USA, Swift Navigation, Hexagon, MediaTek Inc., u-blox discussion Rel-17 37.355

* [AT118-e][628][TEI17] NMEA GGA string for HA-GNSS reporting (Ericsson)

 Scope: Discuss the contribution in R2-2205845 and determine if a CR is agreeable.

 Intended outcome: Agreed CR (without CB if possible) in R2-2206250

 Deadline: Tuesday 2022-05-17 1800 UTC