3GPP TSG-RAN WG2 Meeting #117-e R2-22xxxxx

Online, 21 February-3 March 2022

Source: Session Chair (MediaTek)

Title: Report from 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.

* [AT117-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: Thursday 2022-03-03 1000 UTC

Positioning running CRs:

* [AT117-e][601][POS] BDS running CRs (CATT)

Scope: Review the following CRs, collect comments, and update if necessary:

* R2-2202402 (BDS introduction to 37.355)
* R2-2202403 (BDS introduction to 36.305)
* R2-2202404 (BDS introduction to 38.305)

Intended outcome: Endorsable CRs

Deadline: Friday 2022-02-25 1000 UTC

* [AT117-e][602][POS] NavIC running CRs (Ericsson/Huawei)

Scope: Review the following CRs, collect comments, and update if necessary:

* R2-2202607 (NavIC introduction to 38.305)
* R2-2203710 (NavIC introduction to 38.331)

Intended outcome: Endorsable CRs

Deadline: Friday 2022-02-25 1000 UTC

* [AT117-e][603][POS] Integrity stage 2 CRs (InterDigital)

Scope: Review and update the following CRs:

* R2-2202861 (integrity introduction to 36.305)
* R2-2202862 (integrity introduction to 38.305)

Intended outcome: Endorsable CRs

Deadline: Friday 2022-02-25 1000 UTC

* [AT117-e][604][POS] RAT-dependent positioning running CR to 38.305 (Intel)

Scope: Review and update the CR in R2-2202490.

Intended outcome: Endorsable CR

Deadline: Friday 2022-02-25 1000 UTC

* [AT117-e][605][POS] Capability running CRs (Intel)

Scope: Review and update the following CRs:

* R2-2202495 (capability running CR to 38.331)
* R2-2202496 (capability running CR to 38.306)

Intended outcome: Endorsable CRs

Deadline: Friday 2022-02-25 1000 UTC

* [AT117-e][606][POS] LPP running CR (Qualcomm)

Scope: Review and update the CR in R2-2203310.

Intended outcome: Endorsable CR

Deadline: Friday 2022-02-25 1000 UTC

* [AT117-e][607][POS] Positioning running CR to 38.331 (Ericsson)

Scope: Review and update the CR in R2-2203364.

Intended outcome: Endorsable CR

Deadline: Friday 2022-02-25 1000 UTC

* [AT117-e][608][POS] Positioning running CR to 38.321 (Huawei)

Scope: Review and update the CR in R2-2202605.

Intended outcome: Endorsable CR

Deadline: Friday 2022-02-25 1000 UTC

* [AT117-e][609][POS] Positioning running CR to 36.331 (Huawei)

Scope: Review and update the CR in R2-2202606.

Intended outcome: Endorsable CR

Deadline: Friday 2022-02-25 1000 UTC

Relay running CRs:

* [AT117-e][610][Relay] Relay running CR to 38.300 (MediaTek)

Scope: Review and update the CR in R2-2202343.

Intended outcome: Agreeable CR

Deadline: Tuesday 2022-03-01 1200 UTC

* [AT117-e][611][Relay] Relay running CR to 38.304 (Ericsson)

Scope: Review and update the CR in R2-2203324.

Intended outcome: Agreeable CR

Deadline: Tuesday 2022-03-01 1200 UTC

* [AT117-e][612][Relay] Relay running CR to 38.306 (Qualcomm)

Scope: Review and update the CR in R2-2203519.

Intended outcome: Agreeable CR

Deadline: Tuesday 2022-03-01 1200 UTC

* [AT117-e][613][Relay] Relay running CR to 38.321 (Apple)

Scope: Review and update the CR in R2-2202543.

Intended outcome: Agreeable CR

Deadline: Tuesday 2022-03-01 1200 UTC

* [AT117-e][614][Relay] Relay running CRs to 38.322/38.323 (Samsung)

Scope: Review and update the CRs in R2-2202950 and R2-2202951.

Intended outcome: Agreeable CR

Deadline: Tuesday 2022-03-01 1200 UTC

* [AT117-e][615][Relay] Relay running CR to 38.331 (Huawei)

Scope: Review and update the CR in R2-2202819.

Intended outcome: Agreeable CR

Deadline: Tuesday 2022-03-01 1200 UTC

* [AT117-e][616][Relay] Relay running CR to 38.351 (OPPO)

Scope: Review and update the CR in R2-2202276.

Intended outcome: Agreeable CR

Deadline: Tuesday 2022-03-01 1200 UTC

Other discussions:

* [AT117-e][617][POS] LS to RAN1 on positioning issues needing further input (Intel)

Scope: Draft an LS to RAN1 based on the outcome of [Pre117-e][614], taking into account other issues identified in the pre-meeting discussions where guidance from RAN1 is needed.

Intended outcome: Approvable LS

Deadline: Wednesday 2022-02-23 0200 UTC

* [AT117-e][618][POS] Beam and antenna information for DL-AoD accuracy enhancements (CATT)

Scope: Treat P10/P11/P12/P13/P15 of R2-2202410 and attempt to converge.

Intended outcome: Report to Monday online session

Deadline: Friday 2022-02-25 1000 UTC

* [AT117-e][619][Relay] Flow control and pre-emptive BSR mechanisms (Samsung)

Scope: Discuss P1-P3 of R2-2202955 and determine if agreeable mechanisms can be developed. The features can be considered independently of each other.

Intended outcome: Endorsable TPs to affected specifications

Deadline: Thursday 2022-02-24 1200 UTC

* [AT117-e][620][Relay] Reply LS to RAN3 on mapping configuration (Samsung)

Scope: Draft a reply to the LS in R2-2202136.

Intended outcome: Approved LS (preferably without CB)

Deadline: Thursday 2022-02-24 1200 UTC

* [AT117-e][621][Relay] Additional issues on service continuity (OPPO)

Scope: Filter the issues raised in company tdocs under agenda item 8.7.2.2, determine if any critical issues need resolution, and attempt to converge on any critical issues.

Intended outcome: Report to Friday online session

Deadline: Thursday 2022-02-24 1200 UTC

* [AT117-e][622][Relay] Remaining issues on discovery and (re)selection (ZTE)

Scope:

* Discuss the “for discussion” proposals from R2-2202378 and attempt to converge.
* Filter the issues raised in company tdocs under agenda item 8.7.2.5, determine if any critical issues need resolution, and attempt to converge on any critical issues.

Intended outcome: Report to Friday online session

Deadline: Thursday 2022-02-24 1200 UTC

* [AT117-e][623][POS] Early discussion of integrity issues (ESA)

Scope: Discuss the need for signalling cross-covariance terms in the integrity assistance data, and identify if there are other critical issues that need treatment outside the running CR discussions.

Intended outcome: Report to Wednesday online session

Deadline: Wednesday 2022-02-23 0200 UTC

* [AT117-e][624][POS] Agenda item 5.5 (pending rapporteur confirmation)

Scope: Treat documents R2-2202597, R2-2202598, and R2-2202599 and conclude on the CRs.

Intended outcome: Agreed CRs (without CB)

Deadline: Wednesday 2022-03-02 1000 UTC

* [AT117-e][625][POS] Agenda item 6.3.2 (CATT)

Scope: Treat documents R2-2202407 and R2-2202596 and conclude on the CRs.

Intended outcome: Agreed CRs (without CB)

Deadline: Wednesday 2022-03-02 1000 UTC

* [AT117-e][626][POS] Agenda item 6.3.3 (Ericsson)

Scope: Treat documents R2-2202224, R2-2203275, R2-2203277, R2-2203531, and R2-2203368 and conclude on the CRs.

Intended outcome: Agreed CRs (without CB)

Deadline: Wednesday 2022-03-02 1000 UTC

# 4 EUTRA corrections Rel-15 and earlier

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

## 4.4 Positioning corrections Rel-15 and earlier

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

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

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

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

Tdoc limitation: AI5 + AI6: 14

## 5.5 Positioning corrections

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

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

[R2-2202597](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202597%20Corection%20on%20the%20object%20indentifier%20of%20LPP%20ASN.1%20for%20R15.doc) Corretion on the object identifier of LPP ASN.1 for R15 Huawei, HiSilicon CR Rel-15 37.355 15.2.0 0328 - F NR\_newRAT-Core

[R2-2202598](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202598%20Corection%20on%20the%20object%20indentifier%20of%20LPP%20ASN.1%20for%20R16.doc) Corretion on the object identifier of LPP ASN.1 for R16 Huawei, HiSilicon CR Rel-16 37.355 16.7.0 0329 - A NR\_newRAT-Core

[R2-2202599](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202599%20Discussion%20on%20the%20object%20identifier%20for%20LPP%20ASN1.docx) Discussion on the object identifier of LPP ASN.1 Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

# 6 Rel-16 NR Work Items

Essential corrections only.

Tdoc Limitation: See common tdoc limitation with AI 5

## 6.3 NR Positioning Support

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

(NR TEI16 Positioning)

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

Tdoc Limitation: See tdoc limitation for Agenda Item 6

### 6.3.1 General and Stage 2 corrections

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

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

[R2-2202119](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Docs\R2-2202119.zip) Reply LS to RAN2 on the misalignment in SRS configuration (R3-216009; contact: Samsung) RAN3 LS in Rel-16 To:RAN2 Cc:SA2

[R2-2202406](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\38305_CR0085_(Rel-16)_R2-2202406.docx) Miscellaneous corrections in TS 38.305 CATT CR Rel-16 38.305 16.7.0 0085 - F NR\_pos-Core

### 6.3.2 RRC corrections

Including impact to 36.331, 38.331, and 38.306.

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

[R2-2202407](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\38331_CR2890_(Rel-16)_R2-2202407.docx) Corrections on the description of maxNrofSRS-PosResources-1-r16 CATT CR Rel-16 38.331 16.7.0 2890 - F NR\_pos-Core

[R2-2202596](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202596%20Correction%20on%20srs-PosResourceIdList%20in%20RRC.doc) Correction on srs-PosResourceIdList in RRC Huawei, HiSilicon CR Rel-16 38.331 16.7.0 2897 - F NR\_pos-Core

### 6.3.3 LPP corrections

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

[R2-2202224](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\37355_CR0326_(Rel-16)_R2-2202224%20Missing%20need%20code.docx) Addition of missing need code for the BDS TGD2 parameter Lenovo, Motorola Mobility CR Rel-16 37.355 16.7.0 0326 - F TEI16

[R2-2203275](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203275_(CR%2037355%20Reference%20TRP).docx) Correction of reference TRP for DL-AoD and Multi-RTT measurement report Qualcomm Incorporated CR Rel-16 37.355 16.7.0 0330 - F NR\_pos-Core

[R2-2203277](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203277_(CR%2037355%20DL%20PRS%20Resources%20per%20PFL).docx) Correction to NR-DL-PRS-ResourcesCapability field description Qualcomm Incorporated CR Rel-16 37.355 16.7.0 0331 - F NR\_pos-Core

[R2-2203367](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203367%20LPP%20CR%20GAD.docx) Introducing new high accuracy GAD shape with scalable uncertainty Ericsson, T-Mobile USA CR Rel-16 37.355 16.7.0 0333 - B TEI16

* Revised in R2-2203531

[R2-2203531](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203531%20LPP%20CR.docx) Introducing new high accuracy GAD shape with scalable uncertainty Ericsson, T-Mobile USA, Qualcomm Incorporated CR Rel-16 37.355 16.7.0 0333 1 F TEI16

[R2-2203368](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203368%20LPP%20CR%20Segmentation.docx) Clarification on LPP segmentation Ericsson CR Rel-16 37.355 16.7.0 0334 - F NR\_pos-Core

### 6.3.4 MAC corrections

# 7 Rel-16 EUTRA Work Items

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

## 7.5 LTE Positioning

(NavIC, LTE TEI16 Positioning)

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

# 8 Rel-17 NR Work Items

## 8.7 NR Sidelink relay

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

Time budget: 2 TU

Tdoc Limitation: 3 tdocs

### 8.7.1 Organizational

Incoming LSs, TS updates, rapporteur inputs. This AI is reserved for rapporteur and organizational inputs. Documents in this AI do not count towards the tdoc limitation. For LSes that need action or have impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided. Related documents and proposed responses from companies other than the contact company should be submitted to the corresponding technical agenda item (and do count towards the tdoc limitation).

Incoming LSs and related documents

[R2-2202127](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202127_R3-221202.docx) Reply LS for authorization information for 5G ProSe Layer-3 Remote UE (R3-221202; contact: CATT) RAN3 LS in Rel-17 To:SA2, RAN2

[R2-2202136](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202136_R3-221411.doc) LS on mapping configuration of sidelink relay (R3-221411; contact: Samsung) RAN3 LS in Rel-17 To:RAN2

[R2-2202952](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202952%20Discussion%20on%20R3%20LS%20on%20mapping%20configuration.doc) Discussion on RAN3 LS on mapping configuration of sidelink relay Samsung discussion Rel-17 NR\_SL\_relay-Core

Work plan and open issues

[R2-2202201](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202201%20-%20Work%20planning%20for%20R17%20SL%20relay.docx) Work planning for R17 SL relay OPPO, CMCC Work Plan Rel-17 NR\_SL\_relay-Core

[R2-2202202](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202202%20-%20Remaining%20open%20issues%20for%20R17%20SL%20relay.docx) Remaining open issues for R17 SL relay OPPO discussion Rel-17 NR\_SL\_relay-Core

Running CRs and related documents

[R2-2202343](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202343%20Stage%202%20CR%20on%20Introduction%20of%20SL%20Relay.docx) Stage 2 CR on Introduction of R17 SL Relay MediaTek Inc. CR Rel-17 38.300 16.8.0 0403 - B NR\_SL\_relay-Core

[R2-2203324](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\38.304_CR0232(Rel-17)_R2-2203324-%2038.304%20CR%20for%20SL%20relay.docx) 38.304 CR for SL relay Ericsson CR Rel-17 38.304 16.7.0 0232 - B NR\_SL\_relay-Core

[R2-2203325](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203325-%20Way%20forward%20on%20open%20issues%20in%2038.304%20for%20SL%20relay.docx) Way forward on open issues in 38.304 for SL relay Ericsson discussion Rel-17 NR\_SL\_relay-Core

[R2-2202543](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202543_MAC%20CR%20for%2038.321%20SL%20Relay_clean.doc) Introduction of Sidelink Relay Apple CR Rel-17 38.321 16.7.0 1194 - B NR\_SL\_relay-Core

[R2-2202544](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202544%20Discussion%20on%20MAC%20CR.doc) Discussion on remaining issues of MAC CR Apple discussion Rel-17 NR\_SL\_relay-Core

[R2-2202950](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202950-CR%230046%20Introduction%20of%20SL%20Relay%20in%2038.322.docx) Introduction of SL Relay in 38.322 Samsung CR Rel-17 38.322 16.2.0 0046 - B NR\_SL\_relay-Core

[R2-2202951](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202951-CR%230086%20Introduction%20of%20SL%20Relay%20in%2038.323.docx) Introduction of SL Relay in 38.323 Samsung CR Rel-17 38.323 16.6.0 0086 - B NR\_SL\_relay-Core

[R2-2202819](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202819_38331_CR%232910_Rel-17_Introduction%20of%20SL%20relay.docx) Introduction of SL relay Huawei, HiSilicon CR Rel-17 38.331 16.7.0 2910 - B NR\_SL\_relay-Core

[R2-2202820](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202820%20Stage3%20open%20issues%20handling%20for%20SL%20relay%20RRC%20CR.docx) Stage3 open issues handling for RRC CR Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

[R2-2202276](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Docs\R2-2202276.zip) Running CR for TS 38.351 OPPO draft TS Rel-17 38.351 0.4.0 NR\_SL\_relay-Core

[R2-2203519](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\38.306_CR0696(Rel-17)_R2-2203519%20-%2038.306%20CR%20for%20sidelink%20relay%20capabilities.docx) Draft 38.306 CR for sidelink relay UE capabilities CR Rel-17 38.306 16.7.0 0696 - B NR\_SL\_relay-Core

Withdrawn/Not available

R2-2202781 Stage 2 Running CR on Introduction of R17 SL Relay MediaTek Inc. CR Rel-17 38.300 16.8.0 0410 - B NR\_SL\_relay-Core Withdrawn

### 8.7.2 Open issues

No documents should be submitted to 8.7.2. Please submit to 8.7.2.x.

#### 8.7.2.1 Control plane procedures

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

Including report of [Pre117-e][605][Relay] Open issues on relay control plane procedures (Huawei).

Email discussion report

[R2-2202822](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202822%20Report%20of%20%5bPre117-e%5d%5b605%5d%5bRelay%5d%20Open%20issues%20on%20relay%20control%20plane%20procedures%20(Huawei).docx) Summary of [Pre117-e][605][Relay] Open issues on relay control plane procedures Huawei, HiSilicon report Rel-17 NR\_SL\_relay-Core Late

Agenda item summary

R2-2203591 Summary of [Pre117-e][609][Relay] Summary of AI 8.7.2.1 Control plane procedures (InterDigital) InterDigital discussion Rel-17 NR\_SL\_relay-Core

The following documents will not be individually treated

[R2-2202184](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202184%20-%20Remaining%20issues%20on%20control%20plane%20procedure%20of%20L2%20U2N%20relay.doc) Remaining issues on control plane procedure of L2 U2N relay Qualcomm Incorporated discussion NR\_SL\_relay-Core

[R2-2202340](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202340%20Left%20issue%20of%20control%20plane%20procedure.docx) Left issue on NR sidelink relay control plane procedure OPPO discussion Rel-17 NR\_SL\_relay-Core

[R2-2202344](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202344.doc) Discussion on notification of cell reselection and HO of a relay UE SHARP Corporation discussion NR\_SL\_relay-Core

[R2-2202345](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202345.doc) Discussion on SRAP config SHARP Corporation discussion NR\_SL\_relay-Core

[R2-2202357](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202357.docx) Indication to Upper Layer to Trigger Service Request of L2 Relay CATT discussion Rel-17 NR\_SL\_relay-Core

[R2-2202358](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202358.docx) Impacts on RAN of AN Release of Relay UE CATT discussion Rel-17 NR\_SL\_relay-Core

[R2-2202379](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202379%20Further%20discussion%20on%20RRC%20connection%20establishment%20of%20remote%20UE.doc) Further discussion on RRC connection establishment of remote UE ZTE, Sanechips discussion Rel-17

[R2-2202411](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202411.doc) Remaining open issues on control plane procedures for L2 U2N relay Spreadtrum Communications discussion Rel-17

[R2-2202471](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202471%20(R17%20SL%20Relay%20SI_AI8721%20CapturingSIAgreements).doc) On Capturing the Agreements Related to SI in the RRC CR InterDigital discussion Rel-17 NR\_SL\_relay-Core

[R2-2202472](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202472%20(R17%20SL%20Relay%20SI_AI8721%20CauseValue).doc) Cause Value Setting for Connection Establishment for UE to NW Relays InterDigital discussion Rel-17 NR\_SL\_relay-Core

[R2-2202473](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202473%20(R17%20SL%20Relay%20SI_AI8721%20HandlingNotificationMessageSidelink).doc) Handling the Sidelink Notification Message InterDigital discussion Rel-17 NR\_SL\_relay-Core

[R2-2202567](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202567.docx) Further Discussion on L2 CP Issue O6.03 vivo discussion

[R2-2202569](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202569.doc) Draft reply LS on establishment/resume cause value on L2 SL Relay vivo LS out To:CT1 Cc:SA2, RAN3

[R2-2202847](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202847%20Reflecting%20agreement%20on%20sidelink%20resource%20allocation%20mode%20configuration%20for%20L2%20U2N%20remote%20UE%20in%20RRC%20running%20CR.docx) Reflecting agreement on sidelink resource allocation mode configuration for L2 U2N remote UE in RRC running CR ASUSTeK discussion Rel-17 38.331 NR\_SL\_relay-Core

[R2-2202953](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202953%20Open%20issue%20on%20SI%20request%20over%20PC5.doc) Open issue on SI request over PC5 Samsung discussion Rel-17 NR\_SL\_relay-Core

[R2-2203135](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203135%20CauseCode.docx) Considerations on cause codes Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SL\_relay\_enh-Core

[R2-2203148](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203148%20Relay%20Connection%20control.doc) Discussion on connection control open issues Xiaomi discussion

[R2-2203178](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203178%20Remaining%20issues%20on%20CP.doc) Remaining issues on CP Lenovo, Motorola Mobility discussion NR\_SL\_relay-Core

[R2-2203272](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203272%20Support%20of%20idle%20mode%20relay%20UE%20during%20path%20switch.docx) Support of relay UE in RRC\_IDLE/INACTIVE state during direct to indirect path switching Nokia, Nokia Shanghai Bell discussion NR\_SL\_relay\_enh-Core Late

[R2-2203306](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203306_SL%20Relay%20access%20cause%20value_Intel.docx) Setting cause value for Relay UE access Intel Corporation discussion Rel-17 NR\_SL\_relay-Core

[R2-2203308](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203308%20Paging%20impact%20on%20connection%20setup%20latency%20for%20SL%20Relay.docx) Discussion on added latency for paging forwarding Nokia, Nokia Shanghai Bell discussion NR\_SL\_relay-Core

[R2-2203326](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203326-%20Remaining%20issues%20on%20control%20plane%20for%20L2%20sidelink%20relay.docx) Remaining issues on control plane for L2 sidelink relay Ericsson discussion Rel-17 NR\_SL\_relay-Core

#### 8.7.2.2 Service continuity

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

Including report of [Pre117-e][603][Relay] Open issues on relay service continuity (CATT)

Email discussion report

[R2-2202356](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202356.docx) Report of [Pre117-e][603][Relay] Open Issues on Relay Service Continuity (CATT) CATT report Rel-17 NR\_SL\_relay-Core Late

Other documents

[R2-2202185](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202185%20-%20Remaining%20issues%20on%20service%20continuity%20of%20L2%20U2N%20relay.doc) Remaining issues on service continuity of L2 U2N relay Qualcomm Incorporated discussion NR\_SL\_relay-Core

[R2-2202341](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202341%20Left%20issue%20of%20service%20continuity.docx) Left issue on NR sidelink relay service continuity OPPO discussion Rel-17 NR\_SL\_relay-Core

[R2-2202380](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202380%20Remaining%20issues%20on%20service%20continuity.doc) Remaining issues on service continuity ZTE, Sanechips discussion Rel-17

[R2-2202545](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202545%20Discussion%20on%20direct%20to%20indirect%20path%20switch.doc) Discussion on remaining issues for direct-to-indirect path switch Apple discussion Rel-17 NR\_SL\_relay-Core

[R2-2202584](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202584%20Path%20switching%20in%20L2%20U2N%20relay%20v1.0.doc) Path switching in L2 U2N relay case Lenovo, Motorola Mobility discussion Rel-17

[R2-2202738](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202738_RRC%20corrections%20on%20path%20switch.docx) RRC corrections on path switch NEC Corporation discussion Rel-17 NR\_SL\_relay\_enh-Core

[R2-2202821](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202821%20Stage%203%20issue%20on%20NCGI%20reporting%20in%20measurement%20result.docx) Stage3 issue on NCGI reporting in measurement result Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

[R2-2202848](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202848%20Potential%20issues%20on%20multiple%20PDU%20sessions%20handling%20during%20U2N%20direct%20to%20indirect%20path%20switching.docx) Potential issues on multiple PDU sessions handling during U2N direct to indirect path switching ASUSTeK discussion Rel-17 NR\_SL\_relay-Core

[R2-2203202](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203202.doc) Service continuity open issues in L2 NR sidelink relay Sony discussion Rel-17 NR\_SL\_relay-Core

#### 8.7.2.3 Adaptation layer design

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

Including report of [Pre117-e][604][Relay] Open issues on relay adaptation layer (OPPO)

Email discussion report

[R2-2202200](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202200%20-%20Summary%20of%20open%20issue%20for%20SRAP_Phase-2.docx) Summary of [Pre117-e][604][Relay] Open issues on relay adaptation layer (OPPO) OPPO report Rel-17 NR\_SL\_relay-Core Late

Other documents

[R2-2202392](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202392%20Discussion%20on%20SRAP%20for%20L2%20U2N%20relay.DOCX) Discussion on SRAP for L2 U2N relay Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

[R2-2202429](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202429%20-%20Remaining%20issues%20of%20the%20adaptation%20layer.docx) Remaining issues of the adaptation layer Ericsson discussion Rel-17 NR\_SL\_relay-Core

[R2-2202675](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202675%20-%20Remaining%20issues%20on%20adaptation%20layer.doc) Remaining issue on sidelink adaptation layer Qualcomm Incorporated discussion NR\_SL\_relay-Core

[R2-2202897](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202897%20Discussion%20on%20UE's%20L2%20ID.docx) Discussion on UE's L2 ID Sharp discussion

[R2-2203172](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203172%20SRAP%20-%20miscellaneous%20issues%20v2.doc) SRAP - miscellaneous issues Samsung Electronics GmbH discussion

Withdrawn/Not available

R2-2202854 SRAP header format design CMCC discussion Rel-17 NR\_SL\_relay-Core Withdrawn

#### 8.7.2.4 QoS

Mechanisms for E2E QoS management.

Including report of [Pre117-e][602][Relay] Open issues on relay QoS (Samsung)

Email discussion report

[R2-2202955](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202955%20Summary%20of%20Open%20issues%20on%20relay%20QoS.doc) Summary of [Pre117-e][602][Relay] Open issues on relay QoS (Samsung) Samsung discussion Rel-17 NR\_SL\_relay-Core Late

Other documents

[R2-2202339](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202339%20Left%20issues%20in%20QoS%20for%20layer%202%20relay.docx) Left issue on QoS for layer 2 relay OPPO discussion Rel-17 NR\_SL\_relay-Core

[R2-2202381](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202381%20Miscellaneous%20issues%20on%20bearer%20mapping%20and%20QoS.doc) Miscellaneous issues on bearer mapping and QoS ZTE, Sanechips discussion Rel-17

[R2-2202428](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202428%20-%20Aspects%20for%20QoS%20management%20with%20SL%20relay.docx) Aspects for QoS management with SL relay Ericsson discussion Rel-17 NR\_SL\_relay-Core

[R2-2202954](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202954%20Open%20issue%20on%20new%20code-point%20for%20ARP%20in%20PDCP%20SDU%20type.doc) Open issue on new code-point for address resolution protocol (ARP) in PDCP SDU type Samsung discussion Rel-17 NR\_SL\_relay-Core

#### 8.7.2.5 Discovery and re/selection

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

Including report of [Pre117-e][601][Relay] Discovery and relay re/selection (ZTE)

Email discussion report

[R2-2202378](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202378%20Summary%20of%20%5bPre117-e%5d%5b601%5d%5bRelay%5d%20Discovery%20and%20relay%20re-selection_final.doc) Summary of [Pre117-e][601][Relay] Discovery and relay re-selection (ZTE) ZTE, Sanechips discussion Rel-17 Late

Other documents

[R2-2202186](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202186%20-%20Remaining%20issues%20on%20discovery%20and%20relay%20(re)selection.doc) Remaining issues on discovery and relay (re)selection Qualcomm Incorporated discussion NR\_SL\_relay-Core

[R2-2202412](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202412.doc) Remaining issues on NotificationMessageSidelink message Spreadtrum Communications discussion Rel-17

[R2-2202568](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202568.docx) Remaining issues on Discovery and Relay (re)selection vivo discussion

[R2-2202585](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202585%20Discovery%20and%20Relay%20(re)selection%20in%20L2%20and%20L3%20relay%20case%20v1.0.doc) Discovery and Relay (re)selection in L2 and L3 relay case Lenovo, Motorola Mobility discussion Rel-17

[R2-2202849](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202849%20Issues%20on%20priority%20between%20PC5%20signalling%20and%20SL%20discovery.docx) Issues on priority between PC5 signalling and SL discovery ASUSTeK discussion Rel-17 38.321 NR\_SL\_relay-Core

[R2-2203233](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203233%20Discussion%20on%20relay%20re-selection%20and%20discovery.docx) Discussion on relay re-selection and discovery Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

[R2-2203506](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203506.docx) Sidelink discovery support as indicated within SIB12 Beijing Xiaomi Mobile Software discussion Rel-17

#### 8.7.2.6 UE capabilities

Including report of [Pre117-e][606][Relay] Open issues on relay UE capabilities (Qualcomm)

Email discussion report

[R2-2202676](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202676%20-%20Summary%20report%20of%20open%20issues%20on%20relay%20UE%20capabilities%20(Qualcomm).doc) Summary report of offline606 - Open issues on relay UE capabilities (Qualcomm) Qualcomm Incorporated discussion NR\_SL\_relay-Core Late

Other documents

[R2-2202359](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202359.docx) Further Discussion on UE Capability CATT discussion Rel-17 NR\_SL\_relay-Core

### 8.7.3 Other

Any other topics on NR sidelink relay.

## 8.11 NR positioning enhancements

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

Time budget: 2 TU

Tdoc Limitation: 3 tdocs

### 8.11.1 Organizational

Rapporteur input. Incoming LS etc. This AI is reserved for rapporteur and organizational inputs; documents in this AI do not count towards the tdoc limitation. For LSes that need action or have impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided. Related documents and proposed responses from companies other than the contact company should be submitted to the corresponding technical agenda item (and do count towards the tdoc limitation).

Including report of [Pre117-e][613][POS] RAN1 parameter list impact to RRC running CR (Ericsson)

Including report of [Pre117-e][614][POS] Issues requiring RAN1 input (Intel)

Incoming LSs

[R2-2202164](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202164_R4-2202680.doc) LS on SRS for multi-RTT positioning (R4-2202680; contact: Huawei) RAN4 LS in Rel-17 To:RAN1 Cc:RAN2, RAN3

[R2-2202165](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202165_R4-2202685.doc) Reply LS on reporting of the Tx TEG association information (R4-2202685; contact: Huawei) RAN4 LS in Rel-17 To:RAN1, RAN2 Cc:RAN3

[R2-2202166](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202166_R4-2202686.doc) LS on DRX cycle used in PRS measurement in RRC\_INACTIVE state (R4-2202686; contact: Qualcomm) RAN4 LS in Rel-17 To:RAN2, RAN3 Cc:RAN1

[R2-2202169](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202169_R4-2202780.docx) Reply LS on reporting and definition of DL PRS path RSRP (R4-2202780; contact: Nokia) RAN4 LS in Rel-17 To:RAN1, RAN2

Open issues list

[R2-2202488](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202488%20Open%20issues%20list%20on%20Rel-17%20positioning%20WI_v04.docx) Open issues list on Rel-17 positioning WI Intel Corporation discussion Rel-17 NR\_pos\_enh-Core

Email discussion reports and related documents

[R2-2202492](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202492_Report%20of%20Pre117-614-P2-v00.docx) Report of [Pre117-e][614][POS] Issues requiring RAN1 input (Intel) Intel Corporation discussion Rel-17 NR\_pos\_enh-Core Late

[R2-2202493](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202493%20Draft%20LS%20on%20issues%20requiring%20RAN1%20input%20v03.docx) Draft LS on issues requiring RAN1 input Intel Corporation LS out Rel-17 NR\_pos\_enh-Core To:RAN1 Late

[R2-2203363](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203363%20Comments.docx) Report on RAN1 parameter list impact to RRC running CR Ericsson discussion Rel-17 Late

Running CRs and related documents

[R2-2202489](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202489_Open%20issues%20on%20stage%202%20running%20CR.docx) Open issues on stage 2 running CR Intel Corporation discussion Rel-17 NR\_pos\_enh-Core

[R2-2202490](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202490-Running%2038.305%20v02.docx) Running 38.305 CR for Positioning WI on RAT dependent positioning methods Intel Corporation draftCR Rel-17 38.305 16.7.0 B NR\_pos\_enh-Core

[R2-2202861](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202861%20(Running%20CR%20of%2036_305%20GNSS%20Pos%20Integrity).docx) Running CR of 36.305 for GNSS Positioning Integrity InterDigital, Inc. draftCR Rel-17 36.305 16.4.0 B NR\_pos\_enh-Core

[R2-2202862](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202862%20(Running%20CR%20of%2038_305%20GNSS%20Pos%20Integrity).docx) Running CR of 38.305 for GNSS Positioning Integrity InterDigital, Inc. draftCR Rel-17 38.305 16.7.0 B NR\_pos\_enh-Core

[R2-2203310](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203310_(37355%20running%20CR)_v5.docx) Running LPP CR for NR positioning enhancements Qualcomm Incorporated draftCR Rel-17 37.355 16.7.0 B NR\_pos\_enh-Core

R2-2203362 RAN1 parameter list impact to RRC running CR Ericsson draftCR Rel-17 38.331 16.7.0 B NR\_pos\_enh-Core Late

Merged CRs

[R2-2202405](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\36%20305_CR0107_(Rel-17)_R2-2202405%7f.docx) Introduction of B2a and B3I signal in BDS system and GNSS Positioning Integrity CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, HiSilicon, Intel Corporation, ZTE Corporation, CBN, vivo, OPPO, Lenovo, MediaTek Inc, Spreadtrum Communications, Xiaomi. CR Rel-17 36.305 16.4.0 0107 - B NR\_pos\_enh-Core

R2-2202491 38.305 CR for Positioning WI Intel Corporation CR Rel-17 38.305 16.7.0 0086 - B NR\_pos\_enh-Core Late

R2-2203315 Introduction of R17 Positioning Enhancements in LPP Qualcomm Incorporated CR Rel-17 37.355 16.7.0 0332 - B NR\_pos\_enh-Core Late

[R2-2203364](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203364%20RRC%20For%20Merged%20CR.docx) Introduction of Enhanced Positioning feature Ericsson CR Rel-17 38.331 16.7.0 2952 - B NR\_pos\_enh-Core

[R2-2202605](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202605%20Introduction%20of%20R17%20PositioningEnh%20for%20MAC%20spec.docx) Introduction of R17 PositioningEnh in MAC spec Huawei, HiSilicon CR Rel-17 38.321 16.7.0 1197 - B NR\_pos\_enh-Core

[R2-2202606](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202606%20Introduction%20of%20R17%20PositioningEnh%20in%20LTE%20RRC%20spec.docx) Introduction of R17 PositioningEnh in LTE RRC spec Huawei, HiSilicon CR Rel-17 36.331 16.7.0 4762 - B NR\_pos\_enh-Core

### 8.11.2 Open issues

No documents should be submitted to 8.11.2. Please submit to 8.11.2.x.

#### 8.11.2.1 Latency enhancements

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

Including report of [Pre117-e][607][POS] Open issues on positioning latency enhancements (Huawei)

Email report

[R2-2202604](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202604%20%5bPre117-e%5d%5b607%5d%5bPOS%5d%20Open%20issues%20on%20positioning%20latency%20enhancements%20(Huawei).docx) Summary of [Pre117-e][607][POS] Open issues on positioning latency enhancements (Huawei) Huawei, HiSilicon discussion Rel-17 NR\_pos\_enh-Core Late

Agenda item summary

R2-2203592 (Summary of AI 8.11.2.1) Apple discussion

The following documents will not be individually treated

[R2-2202408](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202408%20Discussion%20and%20TP%20on%20areaID%20for%20Latency%20enhancements.docx) Discussion and TP on areaID for Latency enhancements CATT discussion Rel-17 NR\_pos\_enh-Core

[R2-2202487](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202487.docx) On Latency Reduction open issues Intel Corporation discussion Rel-17 NR\_pos\_enh-Core

[R2-2202592](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202592-positioning-latency-v0.docx) On remaining issues for latency improvements Apple discussion

[R2-2202603](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202603%20Remaining%20issues%20on%20latency%20and%20accuracy%20enhacnement.docx) Remaining issues on latency and accuracy enhacnement Huawei, HiSilicon discussion Rel-17 NR\_pos\_enh-Core

[R2-2202858](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202858%20(R17%20NR%20POS%20WI_AI81121_Latency).doc) Remaining Issues on Latency Reduction InterDigital, Inc. discussion Rel-17 NR\_pos\_enh-Core

[R2-2202922](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202922%20MAC%20CE%20for%20pre-MG%20(de)activation%20request.docx) MAC CE for pre-MG (de)activation request Samsung discussion Rel-17 NR\_pos\_enh-Core

[R2-2202930](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202930%20Remaining%20issue%20on%20positioning%20latency%20reduction.doc) Remaining issue on positioning latency reduction Xiaomi discussion

[R2-2203042](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203042_MultiplePreconfiguredAssistanceData.docx) Way forward for preconfigured assistance data Fraunhofer IIS; Fraunhofer HHI; Ericsson; discussion

[R2-2203088](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203088%20Discussion%20on%20Latency%20enhancements.docx) Discussion on latency enhancement vivo discussion Rel-17 NR\_pos\_enh-Core

[R2-2203181](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203181%20Discussion%20on%20open%20issues%20of%20positioning%20latency%20enhancements.docx) Discussion on open issues of positioning latency enhancements ZTE discussion

[R2-2203204](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203204_Pos_latency.docx) Considerations on positioning measurement report latency Sony discussion Rel-17 NR\_pos\_enh-Core

[R2-2203211](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203211%20Discussion%20of%20positioning%20latency%20enhancement%20open%20issues.docx) Discussion of positioning latency enhancement open issues OPPO discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2203360](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203360%20RRC%20and%20MAC%20CE%20design.docx) TP on RRC Impacts and MAC CE design Ericsson discussion Rel-17

#### 8.11.2.2 RRC\_INACTIVE

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

Including report of [Pre117-e][609][POS] Open issues on positioning in RRC\_INACTIVE (InterDigital)

Email report

[R2-2203524](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203524_Pre117%20POS%20609_Open%20issues%20on%20positioning%20in%20RRC_INACTIVE%20(InterDigital)_Report.docx) Email discussion Report on [Pre117-e][609][POS] Open issues on positioning in RRC\_INACTIVE (InterDigital) InterDigital, Inc. discussion Rel-17 NR\_pos\_enh-Core

Other documents

[R2-2202338](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202338-%20Discussion%20on%20remaining%20issues%20for%20Positioning%20in%20RRC_INACTIVE%20state.docx) Discussion on remaining issues for Positioning in RRC\_INACTIVE state OPPO discussion Rel-17 NR\_pos\_enh-Core

[R2-2202601](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202601%20Remaining%20Issues%20on%20RRC_INACTIVE%20Positioning.docx) Remaining Issues on RRC\_INACTIVE Positioning Huawei, HiSilicon discussion Rel-17 NR\_pos\_enh-Core

[R2-2202602](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202602%20Draft%20LS%20to%20SA2%20on%20RRC_INACTIVE%20Positioning.docx) Draft LS on Positioning in RRC\_INACTIVE State Huawei, HiSilicon LS out Rel-17 NR\_pos\_enh-Core To:SA2 Cc:RAN3

[R2-2203089](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203089%20Discussion%20on%20positioning%20in%20RRC_INACTIVE.docx) Discussion on positioning in RRC\_INACTIVE vivo discussion Rel-17 NR\_pos\_enh-Core

[R2-2203091](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203091%20Consideration%20on%20the%20Configuration%20of%20UL%20positioning%20in%20RRC_INACTIVE.docx) Consideration on the configuration of UL positioning in RRC\_INACTIVE CATT discussion Rel-17 NR\_pos\_enh-Core

[R2-2203180](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203180%20Discussion%20on%20UL%20positioning%20configuration%20in%20RRC_INACTIVE.docx) Discussion on UL positioning configuration in RRC\_INACTIVE ZTE discussion

[R2-2203443](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203443_(Positioning%20in%20RRC_INACTIVE).docx) Remaining issues for positioning of UEs in RRC\_INACTIVE State Qualcomm Incorporated discussion

[R2-2203444](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203444_(LS%20to%20SA2%20on%20RRC_INACTIVE).docx) [draft] LS on Positioning in RRC\_INACTIVE State Qualcomm Incorporated LS out Rel-17 NR\_pos\_enh R2-2200961 To:SA2 Cc:RAN3

[R2-2203445](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203445%20RAT-D%20CR.docx) Capturing RRC impacts for RAT dependent Positioning Ericsson draftCR Rel-17 38.331 16.7.0 B NR\_pos\_enh-Core R2-2202048

#### 8.11.2.3 On-demand PRS

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

Including report of [Pre117-e][608][POS] Open issues on on-demand PRS (Lenovo)

Email report

[R2-2202236](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202236_%5bPre117-e%5d%5b608%5d%5bPOS%5d%20Open%20issues%20on%20on-demand%20PRS%20(Lenovo)_v16_Summary.docx) Report of [Pre117-e][608][POS] Open issues on on-demand PRS Lenovo, Motorola Mobility discussion Rel-17 NR\_pos\_enh-Core Late

Other documents

[R2-2202337](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202337%20-%20Discussion%20on%20remaining%20issues%20for%20on-demand%20DL-PRS.doc) Discussion on remaining issues for on-demand DL-PRS OPPO discussion Rel-17 NR\_pos\_enh-Core

[R2-2202409](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202409%20Discussion%20on%20the%20remaining%20issues%20of%20on-demand%20PRS.docx) Discussion on the remaining issues of on-demand PRS CATT discussion

[R2-2202859](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202859%20(R17%20NR%20POS%20WI_AI81123_OnDemandPRS).doc) Remaining Issues for On-demand PRS InterDigital, Inc. discussion Rel-17 NR\_pos\_enh-Core

[R2-2203169](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203169%20(8.11.2.3)_Remaining%20issue%20for%20on-demand%20DL%20PRS.docx) Remaining issues for the On demand DL PRS Samsung R&D Institute UK discussion

[R2-2203463](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203463%20On-demand%20PRS%20Open%20Issues_clean.docx) On-demand PRS Open Issues Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_pos\_enh-Core

#### 8.11.2.4 GNSS positioning integrity

Signalling and procedures to support GNSS positioning integrity determination.

Including report of [Pre117-e][610][POS] Open issues on GNSS positioning integrity (ESA)

Email report

[R2-2203525](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203525%20Summary%20of%20%5bPre117-e%5d%5b610%5d%5bPOS%5d%20Open%20issues%20GNSS%20integrity%20(ESA).docx) [Pre117-e][610][POS] Open issues on GNSS positioning integrity (ESA) ESA discussion Rel-17 NR\_pos\_enh-Core

Other documents

[R2-2203034](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203034_UE_Integrity_Fraunhofer_Ericsson_ESA.docx) UE-aided detection of threat to GNSS systems and assistance data signaling Fraunhofer IIS; Fraunhofer HHI; Ericsson; ESA discussion R2-2200955

[R2-2203090](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203090%20Discussion%20on%20GNSS%20positioning%20integrity.docx) Discussion on GNSS positioning integrity vivo discussion Rel-17 NR\_pos\_enh-Core

[R2-2203199](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203199%20-%20Reporting%20of%20GNSS%20Positioning%20Integrity%20Result.docx) Reporting of GNSS Positioning Integrity Result Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_pos\_enh

[R2-2203359](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203359%20GNSS%20integrity%20open%20issues.docx) On remaining GNSS Integrity open issues Ericsson discussion Rel-17

#### 8.11.2.5 A-GNSS enhancements

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

Running CRs

[R2-2202402](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\37.355_CR0327_(Rel-17)_R2-2202402.docx) Introduction of B2a and B3I signal in BDS system in A-GNSS CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, HiSilicon, Intel Corporation, ZTE Corporation, CBN, vivo, OPPO, Lenovo, MediaTek Inc, Spreadtrum Communications, Xiaomi. CR Rel-17 37.355 16.7.0 0327 - B NR\_pos\_enh-Core R2-2200298

[R2-2202403](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\36.305_CR0106_(Rel-17)_R2-2202403.docx) Introduction of B2a and B3I signal in BDS system in A-GNSS CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, HiSilicon, Intel Corporation, ZTE Corporation, CBN, vivo, OPPO, Lenovo, MediaTek Inc, Spreadtrum Communications, Xiaomi. CR Rel-17 36.305 16.4.0 0106 - B NR\_pos\_enh-Core R2-2109485

[R2-2202404](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\38.305_CR0084_(Rel-17)_R2-2202404%7f.docx) Introduction of B2a and B3I signal in BDS system in A-GNSS CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, HiSilicon, Intel Corporation, ZTE Corporation, CBN, vivo, OPPO, Lenovo, MediaTek Inc, Spreadtrum Communications, Xiaomi. CR Rel-17 38.305 16.7.0 0084 - B NR\_pos\_enh-Core R2-2109485

[R2-2202607](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202607%20Draft%20running%20CR%20for%20stage2%20spec%20for%20NAVIC%20in%20R17%20positioning.docx) Draft running CR for stage2 spec for NAVIC in R17 positioning Huawei, HiSilicon draftCR Rel-17 38.305 16.7.0 B NR\_pos\_enh-Core

R2-2203710 Introduction of NavIC for broadcast support Ericsson draftCR Rel-17 38.331 16.7.0 B NR\_pos\_enh-Core

#### 8.11.2.6 Accuracy enhancements

Input on the accuracy enhancement objectives led by RAN1.

Including report of [Pre117-e][611][POS] Open issues on positioning accuracy enhancements (CATT)

Email report

[R2-2202410](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202410%20Report%20of%20%5bPre117-e%5d%5b611%5d%5bPOS%5d%20Open%20issues%20on%20positioning%20accuracy%20enhancements%20(CATT).docx) Report of [Pre117-e][611][POS] Open issues on positioning accuracy enhancements (CATT) CATT discussion Late

Other documents

[R2-2202593](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202593-UE-TX-TEG-RRC-v0.docx) On UE Tx TEG association for UL-TDOA via RRC Apple discussion

[R2-2202860](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2202860%20(R17%20NR%20POS%20WI%20AI81126_AccEnh).doc) Remaining Issues for Accuracy Enhancements InterDigital, Inc. discussion Rel-17 NR\_pos\_enh-Core

[R2-2203205](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203205_Pos_TEG.docx) Considerations on Timing Error aspects Sony discussion Rel-17 NR\_pos\_enh-Core

[R2-2203361](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203361%20LPP%20Accuracy%20enhancements%20and%20On-Demand%20PRS.docx) LPP Remaining Issues on Accuracy enhancements and On-Demand PRS Ericsson discussion Rel-17

[R2-2203462](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202202-03%20-%20RAN2_117-e,%20Online\Extracts\R2-2203462%20TEG%20definitions.docx) Timing Error Group (TEG) definition Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_pos\_enh-Core

#### 8.11.2.7 UE capabilities

Including report of [Pre117-e][612][POS] Open issues on positioning UE capabilities (Intel)

Email report

R2-2202494 Report of [Pre117-e][612][POS] Open issues on positioning UE capabilities (Intel) Intel Corporation discussion Rel-17 NR\_pos\_enh-Core Late

Running CRs

R2-2202495 Running 331 CR for Positioning UE capabilities Intel Corporation draftCR Rel-17 38.331 16.7.0 B NR\_pos\_enh-Core Late

R2-2202496 Running 306 CR for Positioning UE capabilities Intel Corporation draftCR Rel-17 38.306 16.7.0 B NR\_pos\_enh-Core Late

### 8.11.3 Other

Any other topics on NR positioning enhancements.