3GPP TSG-RAN WG2 Meeting #120 R2-22xxxxx

Toulouse, France, November, 2022

Source: Session Chair (MediaTek)

Title: Report from session on positioning and sidelink relay

# 4 EUTRA Rel-16 and earlier

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

## 4.3 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: 10 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)

### 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.

Incoming LS

[R2-2211150](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211150_R1-2210618.docx) LS on DL PRS search window (R1-2210618; contact: Qualcomm) RAN1 LS in Rel-16 NR\_pos-Core To:RAN2

AI summary

[R2-2213116](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2213116_(Summary%20of%20AI%205.3.1%20(Stage%202)%20and%205.3.3%20(LPP))_v2.docx) Summary of Rel-15 and Rel-16 NR Positioning Support AIs 5.3.1 and 5.3.3 Qualcomm Incorporated discussion Rel-16 NR\_pos-Core

Yaw angle/APC

[R2-2212544](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212544%20-%20SSR%20Yaw%20and%20APC%20(Swift).docx) Discussion and TP on Yaw Angle and Antenna Phase Center corrections for SSR assistance data Swift Navigation, Mitsubishi Electric Corporation, Ericsson discussion Rel-16 NR\_pos-Core

[R2-2212516](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212516_36305_(CR0111)_R16.docx) Update Stage 2 SSR Phase Bias description to include yaw Swift Navigation, Mitsubishi Electric Corporation, Ericsson CR Rel-16 36.305 16.4.0 0111 - F NR\_pos-Core

[R2-2212518](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212518_36305_(CR0112)_R17.docx) Update Stage 2 SSR Phase Bias description to include yaw Swift Navigation, Mitsubishi Electric Corporation, Ericsson CR Rel-17 36.305 17.2.0 0112 - A NR\_pos-Core

[R2-2212535](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212535_38305_(CR0113)_R16.docx) Update Stage 2 SSR Phase Bias description to include yaw Swift Navigation, Mitsubishi Electric Corporation, Ericsson CR Rel-16 38.305 16.8.0 0113 - F NR\_pos-Core

[R2-2212536](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212536_38305_(CR0114)_R17.docx) Update Stage 2 SSR Phase Bias description to include yaw Swift Navigation, Mitsubishi Electric Corporation, Ericsson CR Rel-17 38.305 17.2.0 0114 - A NR\_pos-Core

### 5.3.2 RRC corrections

Including impact to 36.331, 38.331, and 38.306.

[R2-2211258](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211258%20Correction%20to%20on-demand%20SI%20request%20for%20posSIB.docx) Correction to on-demand SI request for posSIB Huawei, HiSilicon CR Rel-16 38.331 16.10.0 3573 - F NR\_pos-Core

### 5.3.3 LPP corrections

[R2-2211420](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\37355_CR0388_(Rel-16)_R2-2211420.docx) Corrections of LPP capabilities on DL-RPS CATT CR Rel-16 37.355 16.8.0 0388 - F NR\_pos-Core

[R2-2211421](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\37355_CR0389_(Rel-17)_R2-2211421.docx) Corrections of LPP capabilities on DL-RPS CATT CR Rel-17 37.355 17.2.0 0389 - A NR\_pos-Core

[R2-2212229](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212229_(CR%2037355_Rel16_PRS-SearchWindow).docx) Correction to DL-PRS Search Window calculation Qualcomm Incorporated CR Rel-16 37.355 16.8.0 0391 - F NR\_pos-Core

[R2-2212231](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212231_(CR%2037355_Rel17_PRS-SearchWindow).docx) Correction to DL-PRS Search Window calculation Qualcomm Incorporated CR Rel-17 37.355 17.2.0 0392 - A NR\_pos-Core

[R2-2212347](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212347%20BeamInfo.docx) Correction of NR DL-PRS BeamInfo attribute associated-DL-PRS-ID field description Ericsson CR Rel-16 37.355 16.8.0 0393 - F NR\_pos-Core

[R2-2212348](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212348%20BeamInfo.docx) Correction of NR DL-PRS BeamInfo attribute associated-DL-PRS-ID field description Ericsson CR Rel-17 37.355 17.2.0 0394 - A NR\_pos-Core

[R2-2212349](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212349%20Orbit.docx) Adding missing and correcting GNSS Types in GNSS-SSR-OrbitCorrections Ericsson, u-blox, Swift Navigation CR Rel-16 37.355 16.8.0 0395 - F NR\_pos-Core

[R2-2212350](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212350%20Orbit.docx) Adding missing and correcting GNSS Types in GNSS-SSR-OrbitCorrections Ericsson, u-blox, Swift Navigation CR Rel-17 37.355 17.2.0 0396 - A NR\_pos-Core

[R2-2212351](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212351%20IOD.docx) Clarifying the meaning of GNSS IOD SSR to avoid different interpretations Ericsson, u-blox, Swift Navigation CR Rel-16 37.355 16.8.0 0397 - F NR\_pos-Core

[R2-2212352](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212352%20IOD.docx) Clarifying the meaning of GNSS IOD SSR to avoid different interpretations Ericsson, u-blox, Swift Navigation CR Rel-17 37.355 17.2.0 0398 - A NR\_pos-Core

[R2-2212353](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212353%20URA.docx) Correcting field description and definition of GNSS-SSR-URA Ericsson, u-blox, Swift Navigation CR Rel-16 37.355 16.8.0 0399 - F NR\_pos-Core

[R2-2212354](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212354%20URA.docx) Correcting field description and definition of GNSS-SSR-URA Ericsson, u-blox, Swift Navigation CR Rel-17 37.355 17.2.0 0400 - A NR\_pos-Core

[R2-2212507](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212507_37355_(CR0401)_R16.docx) Addition of missing yaw angle and rate in SSR Phase Bias message (TS 37.355) Swift Navigation, Mitsubishi Electric Corporation, Ericsson CR Rel-16 37.355 16.8.0 0401 - F NR\_pos-Core

[R2-2212511](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212511_37355_(CR0402)_R17.docx) Addition of missing yaw angle and rate in SSR Phase Bias message (TS 37.355) Swift Navigation, Mitsubishi Electric Corporation, Ericsson CR Rel-17 37.355 17.2.0 0402 - A NR\_pos-Core

### 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)

Tdoc Limitation: 3 tdocs

### 6.7.0 In-principle agreed CRs

CRs AIP from RAN2#119bis-e.

[R2-2211211](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\38351_CR0012r1_(Rel-17)_R2-2211211%20-%20Correction%20for%20L2%20U2N%20Relay.docx) Correction for L2 U2N Relay OPPO CR Rel-17 38.351 17.2.0 0012 1 F NR\_SL\_relay-Core R2-2210972

[R2-2211747](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\38331_CR3549r2_(Rel-17)_R2-2211747_Misc%20RRC%20CR%20for%20SL%20relay.docx) Misc RRC CR for SL relay Huawei, HiSilicon CR Rel-17 38.331 17.2.0 3549 2 F NR\_SL\_relay-Core R2-2210902

[R2-2212202](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\38322_R2-2212202_CR0050_Correction%20on%20RLC%20for%20SL%20relay.docx) RLC correction for SL relay Samsung CR Rel-17 38.322 17.1.0 0050 1 F NR\_SL\_relay-Core R2-2210915

[R2-2212203](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\38323_R2-2212203_CR0104_Correction%20on%20PDCP%20for%20SL%20relay.docx) PDCP correction for SL relay Samsung CR Rel-17 38.323 17.2.0 0104 1 F NR\_SL\_relay-Core R2-2210916

[R2-2212433](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\38.304_CR0288(Rel-17)_R2-2212433-%20Correction%20on%2038.304%20for%20SL%20relay.docx) Correction on 38.304 for SL relay Ericsson, Nokia, Nokia Shanghai Bell CR Rel-17 38.304 17.2.0 0288 2 F NR\_SL\_relay-Core R2-2210970

### 6.7.1 General and stage 2 corrections

Incoming LSs, etc., and any stage 2 corrections (impact to 38.300).

LS already treated at RAN2#119bis-e

[R2-2211102](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Docs\R2-2211102.zip) LS on setting RRC establishment cause value when relay UE has its own service (C1-225453; contact: vivo) CT1 LS in Rel-17 5G\_ProSe To:RAN2 Cc:SA2

* Withdrawn

Incoming LSs

[R2-2211128](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211128_S2-2209277.doc) Reply LS on Cast Type for Discovery message (S2-2209277; contact: Qualcomm) SA2 LS in Rel-17 5G\_ProSe, NR\_SL\_relay-Core To:RAN2 Cc:CT1

[R2-2211142](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211142_R1-2210494.docx) Reply LS on TP to TR 37.985 (R1-2210494; contact: Huawei) RAN1 LS in Rel-17 NR\_SL\_relay-Core To:RAN2

[R2-2211147](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211147_R1-2210585.docx) Reply LS on resource pool index in DCI Format 3\_0 (R1-2210585; contact: vivo) RAN1 LS in Rel-17 NR\_SL\_relay-Core To:RAN2

[R2-2211141](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211141_R1-2210492.docx) Reply LS to RAN2 on Per-FS L1 feature for NR sidelink discovery BC-list (R1-2210492; contact: OPPO) RAN1 LS in Rel-17 NR\_SL\_enh-Core, NR\_SL\_relay-Core To:RAN2

Cast type for discovery message (related to R2-2211128)

[R2-2212135](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\38321_CR1484_(Rel-17)_R2-2212135%20-%20Correction%20the%20cast%20type%20for%20discovery%20message%20in%20AS%20layer.docx) Correction the cast type for discovery message in AS layer CATT CR Rel-17 38.321 17.2.0 1484 - F NR\_SL\_relay\_enh-Core

[R2-2212514](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212514%20-%20NR%20SL%20Discovery%20casttype.doc) SL discovery casttype clarification Qualcomm Incorporated discussion Rel-17 NR\_SL\_relay-Core

TP to TR 37.985 (related to R2-2211142)

[R2-2211748](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211748%20Discussion%20on%20TP%20to%20TR%2037.985%20(RAN1%20reply%20LS%20R1-2210494).docx) Discussion on TP to TR 37.985 (RAN1 reply LS R1-2210494) Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

Resource pool index (related to R2-2211147)

[R2-2211669](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211669%20Further%20discussion%20on%20RAN1%20reply%20LS%20in%20R1-2210585%20on%20resource%20pool%20index%20in%20DCI%20Format%203_0.docx) Further discussion on RAN1 reply LS in R1-2210585 on resource pool index in DCI Format 3\_0 vivo discussion

[R2-2211670](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211670%20Correction%20on%20dedicated%20mode-1%20discovery%20transmission%20pool%20in%20TS%2038.306.docx) Correction on dedicated mode-1 discovery transmission pool in TS 38.306 vivo CR Rel-17 38.306 17.2.0 0833 - F NR\_SL\_relay-Core

[R2-2211671](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211671%20Correction%20on%20dedicated%20mode-1%20discovery%20transmission%20pool%20in%20TS%2038.331.docx) Correction on dedicated mode-1 discovery transmission pool in TS 38.331 vivo CR Rel-17 38.331 17.2.0 3629 - F NR\_SL\_relay-Core

Discovery capability (related to R2-2211141)

[R2-2211212](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211212%20-%20Discussion%20on%20R1-2210492.docx) Discussion on R1-2210492 OPPO discussion Rel-17 NR\_SL\_enh-Core, NR\_SL\_relay\_enh-Core

[R2-2211213](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\38306_CR0824_(Rel-17)_R2-2211213%20-%20Correction%20for%20NR%20SL%20discovery%20capability_V03.docx) Correction for NR SL discovery capability OPPO, Intel CR Rel-17 38.306 17.2.0 0824 - F NR\_SL\_enh-Core, NR\_SL\_relay\_enh-Core

[R2-2211214](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\38331_CR3571_(Rel-17)_R2-2211214%20-%20Correction%20for%20NR%20SL%20discovery%20capability_V02.docx) Correction for NR SL discovery capability OPPO, Intel CR Rel-17 38.331 17.2.0 3571 - F NR\_SL\_enh-Core, NR\_SL\_relay\_enh-Core

CR to 37.340

[R2-2211672](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\37340_CR0351_(Rel-17)_R2-2211672_Correction%20to%20TS%2037.340%20on%20Sidelink%20based%20U2N%20Relay.docx) Correction to TS 37.340 on Sidelink based U2N Relay vivo CR Rel-17 37.340 17.2.0 0351 - F NR\_SL\_relay-Core

CRs to 38.300

[R2-2211806](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211806%20Corrections%20on%20SRAP%20bearer%20mapping.docx) Corrections on SRAP bearer mapping ASUSTeK CR Rel-17 38.300 17.2.0 0580 - F NR\_SL\_relay-Core

[R2-2211900](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211900%20Corrections%20to%20TS%2038.300%20for%20SL%20relay.docx) Corrections to TS 38.300 for SL relay ZTE, Sanechips, Apple CR Rel-17 38.300 17.2.0 0582 - F NR\_SL\_relay-Core

[R2-2212067](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212067-%20CR0584%20Corrections%20for%20sideling%20relay%20in%20stage%202%20specification%20v2.0.docx) Corrections for sideling relay in stage 2 specification Lenovo Information Technology CR Rel-17 38.300 17.2.0 0584 - F NR\_SL\_relay-Core

Rapporteur CR

[R2-2211749](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\38331_CR3638_(Rel-17)_R2-2211749_RRC%20corrections%20for%20SL%20relay.docx) RRC corrections for SL relay Huawei, HiSilicon CR Rel-17 38.331 17.2.0 3638 - F NR\_SL\_relay-Core

### 6.7.2 Control plane corrections

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

AI summary

[R2-2213117](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2213117%20%5bPre120%5d%5b402%5d%5bRelay%5d%20Summary%20of%20agenda%20item%206.7.2.docx) [Pre120][402][Relay] Summary of agenda item 6.7.2 on relay control plane (Huawei) Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

The following documents will not be individually treated

[R2-2211210](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211210%20-%20Discussion%20on%20left%20issues%20for%20CP.docx) Discussion on left issues for CP OPPO discussion Rel-17 NR\_SL\_relay-Core

[R2-2211296](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211296.doc) Discussion on the AS layer condition for a remote UE SHARP Corporation discussion NR\_SL\_relay-Core

[R2-2211606](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211606%20Discussion%20on%20the%20support%20of%20discovery%20RP%20scheduling.doc) Discussion on the support of discovery RP scheduling Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

[R2-2211673](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211673_Discussion%20on%20a%20questionable%20change%20in%20IPA%20CR%20R2-2210902.docx) Discussion on a questionable change in IPA CR R2-2210902 vivo discussion

[R2-2211674](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\38331_CR3630_(Rel-17)_R2-2211674_Correction%20to%20RLC%20handling%20upon%20reception%20of%20RRCRelease%20message%20with%20suspendConfig.docx) Correction to RLC handling upon reception of RRCRelease message with suspendConfig vivo CR Rel-17 38.331 17.2.0 3630 - F NR\_SL\_relay-Core

[R2-2211750](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211750%20Remaining%20CP%20corrections%20for%20SL%20relay.docx) Remaining CP correction for sidelink relay Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

[R2-2211872](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211872.docx) Correction on handover notification forwarding Xiaomi CR Rel-17 38.331 17.2.0 3653 - F NR\_SL\_relay-Core

[R2-2211873](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211873.docx) Correction on remote UE's resource allocation Xiaomi, Ericsson CR Rel-17 38.331 17.2.0 3654 - F NR\_SL\_relay-Core

[R2-2211898](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\38331_CR3724_(Rel-17)_R2-2211898%20Correction%20on%20sync%20reference%20resource%20selection%20for%20remote%20UE.docx) Correction on sync reference resource selection for remote UE ZTE, Sanechips CR Rel-17 38.331 17.2.0 3724 - F NR\_SL\_relay-Core

[R2-2211899](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211899%20Correction%20on%20cast%20type%20for%20discovery%20message.docx) Corrections on cast type for SL discovery ZTE, Sanechips discussion Rel-17 NR\_SL\_relay-Core

[R2-2211949](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211949%20Miscellaneous%20corrections%20on%20TS%2038.331%20for%20NR%20sidelink%20relay.docx) Miscellaneous corrections on TS 38.331 for NR sidelink relay Xiaomi CR Rel-17 38.331 17.2.0 3661 - F NR\_SL\_relay-Core

[R2-2212066](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212066%20-%20CR3670%20Corrections%20for%20sideling%20relay%20in%20TS38.331%20v2.0.docx) Corrections for sideling relay in TS38.331 Lenovo Information Technology CR Rel-17 38.331 17.2.0 3670 - F NR\_SL\_relay-Core

[R2-2212136](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\38331_CR3675_(Rel-17)_R2-2212136%20-%20Miscellaneous%20corrections%20on%20TS%2038.331%20for%20NR%20Sidelink%20Relay.docx) Miscellaneous corrections on TS 38.331 for NR Sidelink Relay CATT CR Rel-17 38.331 17.2.0 3675 - F NR\_SL\_relay\_enh-Core

[R2-2212204](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\38331_R2-2212204_draftCR_Correction%20on%20RRC%20for%20SL%20relay.docx) Correction on RRC for SL relay Samsung draftCR Rel-17 38.331 17.2.0 F NR\_SL\_relay-Core

[R2-2212252](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212252%20SLRP-Clarification.docx) RSRP measurement issue Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SL\_relay-Core Late

[R2-2212399](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212399%20On%20Mapping%20Resource%20Pool%20Index%20in%20DCI%20format%203_0.docx) On Mapping Resource Pool Index in DCI format 3\_0 Nokia, Nokia Shanghai Bell discussion NR\_SL\_relay-Core

[R2-2212434](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\38.331_CR3701(Rel-17)_R2-2212434-%20Clarification%20on%20capability%20filter%20for%20sidelink%20relay.docx) Clarification on capability filter for sidelink relay Ericsson CR Rel-17 38.331 17.2.0 3701 - F NR\_SL\_relay-Core

[R2-2212658](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212658%20Correction%20on%20full%20configuration%20for%20remote%20UE.DOC) Correction on full configuration for remote UE Sharp discussion

[R2-2212666](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212666%20Correction%20on%20full%20configuration%20for%20remote%20UE%20in%2038.331.doc) Correction on full configuration for remote UE in 38.331 Sharp draftCR Rel-17 38.331 17.2.0 NR\_SL\_relay-Core

[R2-2212694](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212694-38331_draftCR_Correction%20for%20handling%20dedicated%20discovery%20resource%20pool%20for%20U2N%20Relay.docx) Correction for handling dedicated discovery resource pool for U2N Relay LG Electronics France draftCR Rel-17 38.331 17.2.0 F NR\_SL\_relay-Core

### 6.7.3 User plane corrections

Including SRAP aspects and QoS.

Cast type for discovery message (related to R2-2211128)

[R2-2211397](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\38321_1459_(Rel-17)_R2-2211397_Correction%20on%20cast%20type%20setting%20of%20discovery%20message_cl.docx) Correction on cast type setting of discovery message OPPO CR Rel-17 38.321 17.2.0 1459 - F NR\_SL\_relay-Core

[R2-2211701](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211701%20Discussion%20on%20SA2%20reply%20LS%20on%20cast%20type%20for%20SL%20discovery.doc) Discussion on SA2 Reply LS on cast type for discovery message Apple discussion NR\_SL\_relay-Core

[R2-2211702](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211702%20corrections%20on%20MAC%20for%20SL%20discovery%20cast%20type.docx) Correction on the cast type in SL discovery transmission and reception Apple CR Rel-17 38.321 17.2.0 1470 - F NR\_SL\_relay-Core

CRs to 38.321

[R2-2211398](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\38321_1460_(Rel-17)_R2-2211398_Correction%20on%20exceptional%20resource%20pool%20usage%20for%20discovery%20message%20transmission_cl.docx) Correction on exceptional resource pool usage for discovery message transmission OPPO CR Rel-17 38.321 17.2.0 1460 - F NR\_SL\_relay-Core

[R2-2211605](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211605%20Clarification%20on%20MAC%20filtering%20for%20discovery%20message.docx) Clarification on MAC filtering for discovery message Huawei, HiSilicon discussion Rel-17 NR\_SL\_relay-Core

CR to 38.322

[R2-2211703](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211703%20Misc%20corrections%20on%20RLC%20for%20SL%20Relay.docx) Miscellaneous Correction on the RLC for U2N relay-specific operations Apple CR Rel-17 38.322 17.1.0 0051 - F NR\_SL\_relay-Core

CR to 38.351

[R2-2212137](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\38351_CR0013_(Rel-17)_R2-2212137%20-%20Correction%20on%20SRAP%20for%20sidelink%20relay.docx) Correction on SRAP for sidelink relay CATT CR Rel-17 38.351 17.2.0 0013 - F NR\_SL\_relay\_enh-Core

DRX alignment

[R2-2211503](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211503%20-%20Alignment%20between%20remote%20UE%20paging%20DRX%20and%20relay%20UE%20Uu%20DRX.docx) Alignment between remote UE paging DRX and relay UE Uu DRX Ericsson discussion Rel-17 NR\_SL\_relay-Core R2-2209860

[R2-2211504](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211504%20-%20Corrections%20to%2038321%20CR1417%20on%20alignment%20between%20remote%20UE%20paging%20DRX%20and%20relay%20UE%20Uu%20DRX.docx) Corrections to 38.321 on alignment between remote UE paging DRX and relay UE Uu DRX Ericsson CR Rel-17 38.321 17.2.0 1417 1 F NR\_SL\_relay-Core R2-2209861

## 6.11 NR positioning enhancements

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

Tdoc Limitation: 4 tdocs

### 6.11.0 In-principle agreed CRs

CRs AIP from RAN2#119bis-e.

[R2-2211255](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211255%20Correction%20to%20MAC%20spec%20for%20Positioning%20enhancement_final.docx) Correction to MAC spec for Positioning enhancement Huawei, HiSilicon CR Rel-17 38.321 17.2.0 1408 2 F NR\_pos\_enh-Core R2-2210894

[R2-2211256](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211256%20Correction%20to%20UE%20capability%20for%20DL-AoD_v00.docx) Correction to UE capability for DL-AoD Huawei, HiSilicon CR Rel-17 37.355 17.2.0 0379 2 F NR\_pos\_enh-Core R2-2210975

[R2-2212232](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212232_(CR%2037355-h20)_v02.docx) Various LPP Corrections Qualcomm Incorporated (Rapporteur) CR Rel-17 37.355 17.2.0 0386 1 F NR\_pos\_enh-Core R2-2210904

[R2-2212482](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212482%20IPACap.docx) Correcting PRS capability information reported to gNB Ericsson, Nokia, Nokia Shanghai Bell, Lenovo CR Rel-17 38.306 17.2.0 0815 2 F NR\_pos\_enh-Core R2-2210907

[R2-2212484](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212484%20RRCIPA.docx) Miscellaneous correction for Positioning Ericsson CR Rel-17 38.331 17.2.0 3534 4 F NR\_pos\_enh-Core R2-2210983

Withdrawn/Not available

R2-2212363 Correcting PRS capability information reported to gNB Ericsson, Nokia, Nokia Shanghai Bell, Lenovo CR Rel-17 38.306 17.2.0 0836 - F NR\_pos\_enh-Core Withdrawn

R2-2212364 Miscellaneous correction for Positioning Ericsson CR Rel-17 38.331 17.2.0 3690 - F NR\_pos\_enh-Core Withdrawn

### 6.11.1 General and stage 2 corrections

Incoming LSs, etc., and any stage 2 corrections (impact to 36.305 or 38.305). Stage 2 corrections without functional impact will be treated at lower priority or not at all.

LSs already treated in RAN2#119bis-e

[R2-2211112](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211112_R3-225268.docx) LS on SRS-PosRRC-InactiveConfig configuration signalling (R3-225268; contact: Intel) RAN3 LS in Rel-17 NR\_pos\_enh-Core To:RAN2

* Withdrawn

[R2-2211117](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211117_R4-2214493.docx) Reply LS on the UE/TRP TEG framework (R4-2214493; contact: CATT) RAN4 LS in Rel-17 NR\_pos\_enh-Core To:RAN1, RAN2, RAN3

* Withdrawn

Incoming LSs

[R2-2211137](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211137_S2-2209966.docx) LS on GNSS integrity requirement provisioning (S2-2209966; contact: Huawei) SA2 LS in Rel-17 5G\_eLCS\_ph2 To:RAN2 Cc:SA1

[R2-2211143](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211143_R1-2210528.docx) Reply LS on support of positioning in FR2-2 (R1-2210528; contact: Samsung) RAN1 LS in Rel-17 NR\_pos\_enh, NR\_ext\_to\_71GHz To:RAN2 Cc:RAN4

GNSS integrity (related to R2-2211137)

[R2-2211422](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211422%20Discussion%20on%20the%20LS%20on%20GNSS%20integrity%20requirement%20provisioning.docx) Discussion on the LS on GNSS integrity requirement provisioning CATT discussion Rel-17 NR\_pos\_enh-Core

[R2-2211837](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211837%20Draft%20reply%20LS%20on%20GNSS%20integrity%20requirement%20provision.docx) Draft reply LS on GNSS integrity requirement provision OPPO LS out Rel-17 NR\_pos\_enh-Core To:SA2 Cc:SA1

[R2-2212233](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212233_(integrity%20SA2%20LS).docx) GNSS Integrity Requirement Provisioning Qualcomm Incorporated discussion

[R2-2212922](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212922_Draft%20Reply%20LS%20on%20GNSS%20integrity%20requirement%20provisioning.docx) Draft Reply LS on GNSS integrity requirement provisioning vivo LS out Rel-17 NR\_pos\_enh-Core To:SA2 Cc:SA1

[R2-2212959](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212959%20Draft%20reply%20LS%20on%20GNSS%20integrity%20requirement%20provisioning_v01.docx) Draft Reply LS on GNSS integrity requirement provisioning Huawei LS out Rel-17 NR\_pos\_enh-Core To:SA2

CRs to 38.305

[R2-2211424](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\38305_CR0111_(Rel-17)_R2-2211424.docx) Corrections on TS38.305 CATT CR Rel-17 38.305 17.2.0 0111 - F NR\_pos\_enh-Core

[R2-2212356](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212356%20Stage2.docx) Miscelenous corrections for stage2 Ericsson CR Rel-17 38.305 17.2.0 0112 - F NR\_pos\_enh-Core

[R2-2212686](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212686%20Discussion%20on%20gNB's%20support%20of%20UL%20MAC%20CE%20for%20pre-configured%20MG.docx) Discussion on gNB's support of UL MAC CE for pre-configured MG ZTE Corporation discussion Rel-17 NR\_pos\_enh-Core

[R2-2212687](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212687%20Correction%20on%20the%20gNB's%20behaviour%20for%20pre-configured%20MG.docx) Correction on the gNB's behaviour for pre-configured MG ZTE Corporation CR Rel-17 38.305 17.2.0 0115 - F NR\_pos\_enh-Core

[R2-2212688](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212688%20Correction%20on%20assistance%20data%20instances%20in%2038.305.docx) Correction on assistance data instances in 38.305 ZTE Corporation CR Rel-17 38.305 17.2.0 0116 - F NR\_pos\_enh-Core

[R2-2212929](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212929%20CR%20for%20miscellaneous%20corrections.docx) CR for miscellaneous corrections vivo draftCR Rel-17 38.305 17.2.0 F NR\_pos\_enh-Core

### 6.11.2 RRC corrections

Corrections to 38.331, except for UE capability issues which are handled under the UE capability agenda item.

CRs to 38.331

[R2-2211423](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\38331_CR3597_(Rel-17)_R2-2211423.docx) Corrections on derivation of pathloss reference for TA validation of SRS CATT CR Rel-17 38.331 17.2.0 3597 - F NR\_pos\_enh-Core

[R2-2211543](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\38331_CR3612_(Rel-17)_R2-2211543%20Positioning%20corrections.docx) Miscellaneous corrections to NR positioning enhancements Lenovo CR Rel-17 38.331 17.2.0 3612 - F NR\_pos\_enh-Core

Optionality of MG activation/deactivation UL MAC CE

[R2-2212355](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212355%20MACDisc.docx) Discussion on NW configuration for UL MAC CE Ericsson discussion Rel-17 NR\_pos\_enh-Core

[R2-2211261](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211261%20Correction%20to%20pre-configured%20MG%20request.docx) Correction to pre-configured MG request Huawei, HiSilicon CR Rel-17 38.331 17.2.0 3574 - F NR\_pos\_enh-Core

[R2-2212073](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212073%20Discussion%20on%20the%20preconfigured%20MG%20activation%20and%20deactivation%20request.doc) Discussion on the preconfigured MG activation and deactivation request Xiaomi discussion

[R2-2212365](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212365%20RRCPositioning.docx) Miscellaneous correction for Positioning Ericsson CR Rel-17 38.331 17.2.0 3691 - F NR\_pos\_enh-Core

### 6.11.3 LPP corrections

Corrections to 37.355.

CRs to 37.355

[R2-2211259](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211259%20Remaining%20issues%20on%20PRS%20validity%20area.doc) Remaining issues on PRS validity area Huawei, HiSilicon discussion Rel-17 37.355 NR\_pos\_enh-Core

[R2-2211262](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211262%20Correction%20to%20UE%20capability%20for%20UE-based%20positioning.docx) Correction to UE capability for UE-based positioning Huawei, HiSilicon CR Rel-17 37.355 17.2.0 0387 - F NR\_pos\_enh-Core

[R2-2211544](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\37355_CR0390_(Rel-17)_R2-2211544%20Corrections%20LPP%20caps.docx) Miscellaneous corrections to LPP capabilities Lenovo CR Rel-17 37.355 17.2.0 0390 - F NR\_pos\_enh-Core

[R2-2212234](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212234_(CR%2037355_PPW_Capability).docx) Correction to DL-PRS Processing Capability outside MG Qualcomm Incorporated draftCR Rel-17 37.355 17.2.0 F NR\_pos\_enh-Core

Integrity parameters

[R2-2212892](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212892%20integrity.docx) Integrity measurements definition and missing integrity requirements Ericsson discussion Rel-17

### 6.11.4 MAC corrections

Corrections to 38.321.

PPW configuration

[R2-2211545](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211545_Discussion%20PPW%20configuration.doc) Discussion on the configuration of PPWs Lenovo discussion Rel-17 NR\_pos\_enh-Core

Optionality of MG activation/deactivation MAC CE (related to RRC discussion)

[R2-2211260](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211260%20Correction%20to%20MAC%20spec%20for%20pre-configured%20MG%20request.docx) Correction to MAC spec for pre-configured MG request Huawei, HiSilicon CR Rel-17 38.321 17.2.0 1450 - F NR\_pos\_enh-Core

[R2-2212357](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212357%20MACCR.docx) Positioning Measurement Gap Activation/Deactivation Request MAC CE based upon Network Configuration Ericsson CR Rel-17 38.321 17.2.0 1489 - F NR\_pos\_enh-Core

### 6.11.5 UE capabilities

Including impact to 38.306 and any UE-capability-specific impact to 38.331.

[R2-2211546](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\38306_CRxxxx_(Rel-17)_R2-2211546%20Corrections%20PRS%20processing%20window%20caps.docx) Corrections to PRS processing window capability descriptions Lenovo draftCR Rel-17 38.306 17.2.0 F NR\_pos\_enh-Core

[R2-2212646](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212646%20draftCR_clarification%20on%20the%20support%20of%20DL-PRS%20Rx%20with%20higher%20SCS%20in%20FR2-2.docx) Clarification on the support of DL-PRS reception with 480/960 kHz SCS in FR2-2 Samsung draftCR Rel-17 38.306 17.2.0 NR\_pos\_enh-Core

[R2-2211506](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211506%20-%20Corrections%20to%2038306%20CR0830%20for%2071GHz.docx) Correction to 38.306 for 71 GHz Ericsson CR Rel-17 38.306 17.2.0 0830 - F NR\_ext\_to\_71GHz-Core

# 8 Rel-18

## 8.2 Expanded and improved NR positioning

(FS\_NR\_pos\_enh2; leading WG: RAN1; REL-18; WID: RP-221814)

Time budget: 2 TU

Tdoc Limitation: 4 tdocs

### 8.2.1 Organizational

Including incoming LSs and rapporteur inputs.

Open issue list

[R2-2211223](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211223%20Open%20Issue%20List%20of%20Study%20Item%20on%20Expanded%20and%20Improved%20NR%20Positioning.docx) Open Issue List of Study Item on Expanded and Improved NR Positioning CATT discussion Rel-18 FS\_NR\_pos\_enh2

Incoming LSs

[R2-2211130](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211130_S2-2209590.docx) LS Out on Positioning Reference Units (S2-2209590; contact: CATT) SA2 LS in Rel-18 FS\_eLCS\_Ph3 To:RAN1 Cc:RAN2, RAN3

[R2-2211131](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211131_S2-2209591.docx) LS on LPHAP information delivery to RAN (S2-2209591; contact: Huawei) SA2 LS in Rel-18 FS\_eLCS\_Ph3 To:RAN1, RAN2 Cc:RAN3

[R2-2211139](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211139_S2-2209961.docx) LS on RAN dependency for Ranging/Sidelink Positioning (S2-2209961; contact: Xiaomi) SA2 LS in Rel-18 FS\_Ranging\_SL To:RAN1, RAN2, RAN3

[R2-2211145](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211145_R1-2210567.docx) Reply LS on Terminology Alignment for Ranging/Sidelink Positioning (R1-2210567; contact: Xiaomi) RAN1 LS in Rel-18 FS\_Ranging\_SL To:SA2 Cc:RAN2, RAN3

PRUs (related to R2-2211130)

[R2-2211222](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211222%20Discussion%20on%20the%20PRU%20LS%20from%20SA2.docx) Discussion on the PRU LS from SA2 CATT discussion Rel-18 FS\_NR\_pos\_enh2

LPHAP (related to R2-2211131)

[R2-2211253](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211253%20Draft%20reply%20to%20SA2%20LS%20on%20LPHAP%20indication_final.doc) Discusison on the reply to SA2 LS on LPHAP Huawei, HiSilicon discussion Rel-18 FS\_NR\_pos\_enh2

Sidelink positioning (related to R2-2211139)

[R2-2211758](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211758%20Discussion%20on%20reply%20LS%20on%20RAN%20dependency%20for%20Ranging%20Sidelink%20Positioning.doc) Discussion on reply LS on RAN dependency for Ranging Sidelink Positioning OPPO discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2212179](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212179%20%5bdraft%5d%20Response%20LS%20to%20SA2%20on%20the%20Ranging%20and%20Sidelink%20positioning.docx) [Draft] Response LS to SA2 on the Ranging and Sidelink positioning Spreadtrum Communications LS out Rel-18 FS\_NR\_pos\_enh2 To:SA WG2 Cc:RAN WG1, RAN WG3

[R2-2212809](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212809%20Discussion%20on%20LS%20from%20SA2%20on%20RAN%20dependency.doc) Discussion on LS from SA2 on RAN dependency Xiaomi discussion Rel-18

[R2-2212810](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212810%20Draft%20Reply%20LS%20on%20RAN%20dependency%20for%20Ranging%20&%20Sidelink%20Positioning.docx) Draft Reply LS on RAN dependency for Ranging & Sidelink Positioning Xiaomi LS out Rel-18 To:SA2 Cc:RAN1, RAN3

[R2-2212856](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212856_(Reply%20LS%20on%20RAN%20dependency%20for%20Ranging-Sidelink%20Positioning).docx) RAN dependency for Ranging/Sidelink Positioning Qualcomm Incorporated discussion

TP to TR 38.859

[R2-2211224](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211224%20Text%20Proposals%20of%20TR%2038.859%20for%20Expanded%20and%20Improved%20NR%20Positioning.docx) Text Proposals of TR 38.859 for Expanded and Improved NR Positioning CATT discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2211225](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211225%20draft%20LS%20to%20capture%20Text%20Proposal%20for%20TR%2038.859.doc) draft LS to capture Text Proposal for TR 38.859 CATT LS out Rel-18 FS\_NR\_pos\_enh2 To:RAN 1 Cc:RAN3

### 8.2.2 Sidelink positioning

Study of positioning architecture and signalling procedures (e.g. configuration, measurement reporting, etc) to enable sidelink positioning covering both UE based and network based positioning. Considering relative positioning, ranging and absolute positioning.

AI summary

R2-2213118 Summary of agenda item 8.2.2 on sidelink positioning (CATT) CATT discussion Rel-18 FS\_NR\_pos\_enh2

The following documents will not be individually treated

[R2-2211226](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211226%20Discussion%20on%20SL%20Positioning.docx) Discussion on SL Positioning CATT discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2211230](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211230%20Discussion%20on%20sidelink%20positioning.docx) Discussion on sidelink positioning vivo discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2211252](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211252%20Discussion%20on%20sidelink%20positioning_final.docx) Discussion on Sidelink Positioning Huawei, HiSilicon discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2211462](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211462.docx) Support of sidelink positioning Intel Corporation discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2211661](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211661.docx) Server UE functions MediaTek Inc. discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2211688](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211688-SL-POS-v0.docx) SLPP/RSPP protocol design Apple discussion FS\_NR\_pos\_enh2

[R2-2211839](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211839%20Further%20discussion%20on%20sidelink%20positioning.docx) Further discussion on sidelink positioning OPPO discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2211917](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211917_SL_Pos.docx) Considerations on sidelink positioning Sony discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2212082](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212082_Sidelink-Fraunhofer.docx) Considerations for UE Positioning using Sidelink Fraunhofer IIS, Fraunhofer HHI discussion

[R2-2212096](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212096_SLPos_Solutions.docx) On SL Positioning Protocol and Architecture Lenovo discussion Rel-18

[R2-2212109](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212109.docx) Discussion of session-based and session-less sidelink positioning Nokia Germany discussion Rel-18

[R2-2212112](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212112.docx) Protocol and coverage aspects of sidelink positioning Nokia Germany discussion

[R2-2212169](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212169%20Discussion%20on%20potential%20solutions%20for%20SL%20positioning.docx) Discussion on potential solutions for SL positioning Spreadtrum Communications discussion Rel-18

[R2-2212359](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212359%20SL.docx) NW Assisted Ranging and Protocol Name and terminologies Ericsson discussion Rel-18

[R2-2212470](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212470%20Study%20of%20signalling%20procedures%20and%20design%20considerations%20for%20sidelink%20positioning.docx) Study of signalling procedures and design considerations for sidelink positioning LG Electronics Deutschland discussion Rel-18

[R2-2212506](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212506%20(R18%20NR%20POS%20SI%20A822_SLPos).doc) Discussion on Sidelink Positioning InterDigital Communications discussion Rel-18

[R2-2212554](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212554.docx) Signaling procedures to enable sidelink positioning Sharp discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2212647](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212647%20Discussion%20on%20SL-PRS%20resource%20allocation.docx) Discussion on SL-PRS resource allocation schemes Samsung discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2212685](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212685%20Discussion%20on%20sidelink%20positioning.docx) Discussion on sidelink positioning ZTE Corporation discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2212710](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212710%20Considerations%20on%20Sidelink%20positioning.doc) Considerations on Sidelink positioning CMCC discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2212811](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212811%20Discussion%20on%20SL%20positioning.doc) Discussion on SL positioning Xiaomi discussion Rel-18

[R2-2212857](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212857_(Sidelink%20Positioning).docx) Study of Sidelink Positioning Architecture, Signaling and Procedures Qualcomm Incorporated discussion

[R2-2212883](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212883%20(8.2.2)%20Discussion%20on%20SL-POS%20protocol%20architecture%20design.doc) Discussion on SL-POS protocol architecture design Samsung Electronics Romania discussion

[R2-2212941](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212941_Protocol%20considerations%20for%20sidelink%20positioning_clean.docx) Protocol considerations for sidelink positioning Philips International B.V. discussion Rel-18 38.859 FS\_NR\_pos\_enh2 Late

### 8.2.3 RAT-dependent integrity

Study methodologies, procedures, signalling, etc for determination of positioning integrity for both UE-based and UE-assisted positioning. Focus on reuse of concepts and principles being developed for RAT-Independent GNSS positioning integrity, where possible. Identification of error sources may require input from RAN1.

AI summary

R2-2213119 [Pre120][404][POS] Summary of agenda item 8.2.3 on RAT-dependent integrity InterDigital Communications discussion Rel-18

The following documents will not be individually treated

[R2-2211227](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211227%20Discussion%20on%20RAT%20dependent%20integrity.docx) Discussion on RAT dependent integrity CATT discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2211231](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211231%20Discussion%20on%20RAT-dependent%20positioning%20integrity.docx) Discussion on RAT-dependent integrity vivo discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2211251](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211251%20Discussion%20on%20RAT-dependent%20integrity_final.docx) Discussion on RAT-dependent Integrity Huawei, HiSilicon discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2211463](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211463%20_support%20of%20RAT%20dependent%20integrity.docx) Integrity for RAT dependent positioning methods Intel Corporation discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2211838](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211838%20Consideration%20on%20RAT-dependent%20integrity.docx) Consideration on RAT-dependent integrity OPPO discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2211918](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211918_Integrity.docx) Considerations on some aspects for integrity of RAT dependent positioning Sony discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2212050](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212050%20%20Discussion%20on%20RAT-dependent%20integrity.doc) Discussion on RAT-dependent integrity Lenovo discussion Rel-18

[R2-2212074](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212074%20Discussion%20on%20RAT-dependent%20positioning%20integrity.doc) Discussion on RAT-dependent positioning integrity Xiaomi discussion

[R2-2212170](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212170%20Discussion%20on%20solutions%20for%20integrity%20of%20RAT-dependent%20positioning%20techniques.docx) Discussion on solutions for integrity of RAT-dependent positioning techniques Spreadtrum Communications discussion Rel-18

[R2-2212242](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212242_(integrity).docx) Integrity of NR Positioning Technologies Qualcomm Incorporated discussion

[R2-2212358](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212358%20Integrity.docx) Text proposal and Signaling for Integrity Computation at LMF Ericsson discussion Rel-18

[R2-2212505](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212505%20DNU%20Integrity%20Alert.docx) Use of DNU flag for RAT-dependent positioning integrity Nokia, Nokia Shanghai Bell discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2212509](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212509%20(R18%20NR%20POS%20SI%20A823_Integrity).doc) Discussion on RAT-dependent Integrity InterDigital Communications discussion Rel-18

R2-2212564 Discussion on RAT dependent integrity BUPT discussion Late

[R2-2212625](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212625.docx) Discussion on the integrity issues CMCC discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2212684](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212684%20Discussion%20on%20RAT-dependent%20methods%20positioning%20integrity.docx) Discussion on RAT-dependent methods positioning integrity ZTE Corporation discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2212884](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212884%20(8.2.3)%20Discussion%20on%20RAT-dependent%20integrity.doc) Discussion on RAT-dependent integrity Samsung Electronics Romania discussion

Withdrawn/Not available

R2-2212361 Text proposal and Signaling for Integrity Computation at LMF Ericsson discussion Rel-18 Withdrawn

### 8.2.4 LPHAP

Study the requirements on LPHAP as developed by SA1 and evaluate whether existing RAN functionality can support these power consumption and positioning requirements. Based on the evaluation, and, if found beneficial, study potential enhancements to help address any limitations.

AI summary

R2-2213120 Summary of AI 8.2.4 for LPHAP Huawei, HiSilicon discussion Rel-18 FS\_NR\_pos\_enh2

The following documents will not be individually treated

[R2-2211228](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211228%20Discussion%20on%20LPHAP.docx) Discussion on LPHAP CATT discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2211232](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211232%20Discussion%20on%20LPHAP.docx) Discussion on LPHAP vivo discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2211250](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211250%20Discussion%20on%20LPHAP_final.docx) Discussion on LPHAP Huawei, HiSilicon, CATT, China Unicom, Nokia, Spreadtrum discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2211464](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211464_support%20of%20LPHAP.docx) Support of LPHAP Intel Corporation discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2211840](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211840%20Further%20consideration%20on%20LPHAP.docx) Further consideration on LPHAP OPPO discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2211919](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211919_LPHAP.docx) Considerations on some aspects for LPHAP Sony discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2212051](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212051%20Discussion%20on%20low%20power%20high%20accuracy%20positioning.doc) Discussion on low power high accuracy positioning Lenovo discussion Rel-18

[R2-2212072](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212072_SRS_Configuration_Fraunhofer.docx) SRS Configuration for supporting LPHAP Fraunhofer IIS, Fraunhofer HHI discussion

[R2-2212075](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212075%20Discussion%20on%20LPHA%20positioning.doc) Discussion on LPHA positioning Xiaomi discussion

[R2-2212180](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212180%20Discussion%20on%20LPHAP.docx) Discussion on LPHAP Spreadtrum Communications discussion Rel-18

[R2-2212230](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212230.docx) DL Positioning measurement report THALES discussion

[R2-2212243](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212243_(LPHAP).docx) Enhancements to Positioning in RRC\_INACTIVE State for LPHAP Qualcomm Incorporated discussion

[R2-2212360](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212360%20LPHAP.docx) UL SRS Inactive mode complexities and Sequence ID Management and Simulations Recommendations Ericsson discussion Rel-18

[R2-2212510](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212510%20DRX-related%20enhancement%20for%20LPHAP.docx) DRX related enhancement for LPHAP Nokia, Nokia Shanghai Bell discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2212512](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212512%20(R18%20NR%20POS%20SI%20A824_LPHAP).doc) Discussion on LPHAP InterDigital Communications discussion Rel-18

[R2-2212648](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212648%20Discussion%20on%20the%20alignment%20between%20DRX%20and%20PRS%20configuration.docx) Discussion on the alignment between PRS and DRX Samsung discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2212683](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212683%20Discussion%20on%20LPHAP.docx) Discussion on LPHAP ZTE Corporation discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2212711](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212711%20Further%20considerations on LPHAP.doc) Further considerations on LPHAP CMCC discussion Rel-18 FS\_NR\_pos\_enh2

### 8.2.5 RedCap positioning

Based on RAN1 evaluation, assess the necessity of enhancements, and, if needed, identify enhancements to help address limitations associated with RedCap UEs.

[R2-2211465](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211465%20_RedCap%20positioning.docx) Support of RedCap Intel Corporation discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2212228](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212228%20RedCap%20positioning%20requirements%20for%20Public%20Safety%20Personal%20Protection%20Equipment%20(PPE).docx) RedCap positioning requirements for Public Safety Personal Protection Equipment (PPE FirstNet, AT&T, UK Home Office, Erillisverkot, MINISTERE DE L’INTERIEUR, SyncTechno Inc., Softil, Nkom discussion

[R2-2211229](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211229-Discussion%20on%20RedCap%20Positioning.docx) Discussion on RedCap Positioning CATT discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2211233](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211233%20Discussion%20on%20RedCap%20positioning.docx) Discussion on RedCap positioning vivo discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2211270](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211270%20Discussion%20on%20REDCAP%20Positioning.docx) Discussion on RedCap Positioning Huawei, HiSilicon discussion

[R2-2212052](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212052%20Discussion%20on%20RedCap%20Positioning.doc) Discussion on RedCap positioning Lenovo discussion Rel-18

[R2-2212076](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212076%20Discussion%20on%20RedCap%20UE%20positioning.doc) Discussion on RedCap UE positioning Xiaomi discussion

[R2-2212362](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212362%20RedCap.docx) Positioning for RedCap UEs including Bluetooth and Text Proposal Ericsson discussion Rel-18

[R2-2212515](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212515%20(R18%20NR%20POS%20SI%20A825_RedCap).docx) Discussion on positioning for RedCap UE InterDigital Communications discussion Rel-18

[R2-2212682](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212682%20Discussion%20on%20RedCap%20positioning.docx) Discussion on RedCap positioning ZTE Corporation discussion Rel-18 FS\_NR\_pos\_enh2

## 8.9 Enhanced NR Sidelink Relay

(NR\_SL\_relay\_enh-Core; leading WG: RAN2; REL-18; WID: RP-221262)

Time budget: 1.5 TU

Tdoc Limitation: 4 tdocs

### 8.9.1 Organizational

Including incoming LSs and rapporteur inputs.

[R2-2211120](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211120_S2-2207518.docx) LS on ProSe Authorization information related to UE-to-UE Relay operation to NG-RAN (S2-2207518; contact: LGE) SA2 LS in Rel-18 FS\_5G\_ProSe\_Ph2, NR\_SL\_relay\_enh To:RAN2, RAN3

### 8.9.2 UE-to-UE relay

Single-hop Layer-2 and Layer-3 UE-to-UE relay for unicast. Focus for this meeting is on the common L2/L3 parts: relay discovery and (re)selection. Tdocs on other aspects of the objective may be submitted but will not be treated at this meeting.

AI summary

R2-2213121 Summary of agenda item 8.9.2 on UE-to-UE relay vivo discussion

The following documents will not be individually treated

[R2-2211279](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211279%20Disussion%20on%20U2U%20relay%20discovery%20and%20(re)selection.docx) Discussion on U2U Relay Discovery and (Re)selection CATT discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211400](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211400%20Discussion%20on%20NR%20sidelink%20UE%20to%20UE%20relay_cl.docx) Discussion on NR sidelink UE to UE relay OPPO discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211401](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211401_U2U_Relaying_Discovery_Reselection_Intel.docx) Discovery and reselection with UE-to-UE relaying Intel Corporation discussion Rel-18 NR\_SL\_relay-Core

[R2-2211534](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211534_Remaining_Issues_Relay_reSelection_and_Discovery.docx) Remaining Issues on Relay (re)Selection and Discovery Ericsson España S.A. discussion Rel-18

[R2-2211630](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211630%20(R18%20SL%20Relay%20WI_AI892%20RelayDiscoverySelection).doc) Discovery and Relay Selection for UE-to-UE Relays InterDigital discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211675](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211675_Discussion%20on%20the%20common%20L2%20L3%20parts%20for%20U2U%20relaying.docx) Discussion on the common L2 L3 parts for U2U relaying vivo discussion

[R2-2211697](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211697%20Discussion%20on%20U2U%20relay.doc) Discussion on UE-to-UE Relay Apple discussion NR\_SL\_relay\_enh-Core

[R2-2211753](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211753%20Discussion%20on%20UE-to-UE%20relay.doc) Discussion on UE-to-UE relay Huawei, HiSilicon discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211781](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211781+Discussion%20on%20U2U%20relay.doc) Discussion on U2U relay China Telecom discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211785](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211785-U2U%20Relay%20open%20issues%20and%20coexistence%20with%20U2N%20Relay.docx) U2U Relay open issues and coexistence with U2N Relay Qualcomm Incorporated discussion NR\_SL\_relay\_enh-Core

[R2-2211816](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211816%20Discussion%20on%20U2U%20relay%20communication.docx) Discussion on U2U relay communication ZTE, Sanechips discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211821](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211821_UE%20to%20UE%20relay%20discovery%20and%20(re)selection.docx) UE to UE relay discovery and (re)selection NEC Corporation discussion NR\_SL\_relay\_enh-Core

[R2-2211849](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211849%20Relay%20selection%20and%20reselection%20triggers-v2.doc) Relay selection and reselection triggers Fujitsu discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211933](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211933.doc) UE-to-UE relay (re)selection Sony discussion Rel-18 NR\_SL\_relay\_enh

[R2-2212025](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212025%20Discussion%20on%20L2%20UE-to-UE%20relay%20v2.0.docx) Discussion on L2 UE-to-UE relay Lenovo discussion Rel-18

[R2-2212159](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212159.doc) Remaining issues on relay discovery and (re)selection for U2U relay Spreadtrum Communications discussion Rel-18

[R2-2212207](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212207%20Discussion%20on%20integrated%20U2U%20relay%20discovery.doc) Discussion on integrated U2U relay discovery Samsung discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2212275](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212275_SL%20Relay%20Discovery%20and%20(Re-)Selection.docx) SL UE-to-UE Relay Discovery and (Re-)Selection Fraunhofer IIS, Fraunhofer HHI discussion Rel-18 NR\_SL\_relay\_enh

[R2-2212301](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212301_U2U_relay.docx) Considerations for U2U L2 relay operations Kyocera discussion

[R2-2212320](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212320%20Relay%20(re)selection%20for%20UE-to-UE%20relay.docx) Relay discovery and (re)selection for UE-to-UE relay MediaTek Inc. discussion Rel-18

[R2-2212321](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212321%20Connection%20management%20and%20procedures%20for%20L2%20UE-to-UE%20relay.docx) Connection management and procedures for L2 UE-to-UE relay MediaTek Inc. discussion Rel-18

[R2-2212404](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212404%20Further%20considerations%20on%20U2U%20relay.docx) Considerations on U2U relay (re)selection Nokia, Nokia Shanghai Bell discussion Rel-18

[R2-2212508](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212508%20Further%20U2U%20relay%20discovery%20reselection.docx) Further discussion on U2U relay discovery and relay selection Beijing Xiaomi Mobile Software discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2212519](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212519-Relay%20(re-)selection%20and%20discovery%20for%20UE-to-UE%20relay.docx) Relay (re-)selection and discovery for UE-to-UE relay LG Electronics France discussion Rel-18

[R2-2212561](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212561_U2U_relay_reselection.doc) UE-to-UE relay (re)selection Sharp discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2212610](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212610_AS%20condition%20for%20relay%20discovery%20message%20transmission.doc) AS condition for relay discovery message transmission Samsung discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2212697](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212697%20Discussion%20on%20U2U%20relay.docx) Discussion on U2U relay CMCC discussion Rel-18 NR\_SL\_relay\_enh

Withdrawn/Not available

R2-2211830 Relay selection and reselection triggers Fujitsu discussion Rel-18 NR\_SL\_relay\_enh-Core Withdrawn

### 8.9.3 Service continuity enhancements for L2 UE-to-network relay

Inter-gNB direct/indirect path switching; intra-gNB indirect/indirect path switching; and inter-gNB indirect/indirect path switching, to be supported by reuse of solutions for the other scenarios.

[R2-2211786](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211786-Open%20issue%20on%20service%20continuity%20for%20UE-to-Network%20relay.docx) Open issue on service continuity for UE-to-Network relay Qualcomm Incorporated discussion NR\_SL\_relay\_enh-Core

[R2-2212698](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212698%20Discussion%20on%20service%20continuity.docx) Discussion on service continuity CMCC discussion Rel-18 NR\_SL\_relay\_enh

[R2-2211280](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211280%20Consideration%20on%20Service%20Continuity%20Enhancements%20for%20L2%20U2N%20Relay.docx) Consideration on Service Continuity Enhancements for L2 U2N Relay CATT discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211399](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211399%20Discussion%20on%20further%20enhancement%20of%20service%20continuity_cl.docx) Discussion on further enhancement of service continuity OPPO discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211402](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211402%20-%20Service%20continuity%20enhancements%20for%20L2%20U2N%20relaying.docx) Service continuity enhancements for L2 U2N relay Intel Corporation discussion Rel-18 NR\_SL\_relay-Core

[R2-2211413](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211413_Considerations%20on%20Service%20Continuity%20Enhancement.docx) Considerations on Service Continuity Enhancement NEC Corporation discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211535](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211535_Further_Aspects_Inter_gNB_Service_Continuity.docx) Further Aspects on Inter-gNB Service Continuity Ericsson España S.A. discussion Rel-18

[R2-2211607](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211607%20%20Discussion%20on%20service%20continuity.docx) Discussion on Service Continuity Huawei, HiSilicon discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211631](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211631%20(R18%20SL%20Relay%20WI_AI893%20Service%20Continuity).doc) Open Issues on Service Continuity InterDigital discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211676](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211676_Remaining%20issues%20on%20service%20continuity%20enhancement%20for%20L2%20U2N%20relay.docx) Remaining issues on service continuity enhancement for L2 U2N relay vivo discussion

[R2-2211698](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211698%20Discussion%20on%20service%20continuity%20enhancement%20of%20L2%20U2N%20relay.doc) Discussion on Service continuity enhancement of L2 U2N relay Apple discussion NR\_SL\_relay\_enh-Core

[R2-2211782](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211782_Considerations%20on%20service%20continuity%20enhancements.docx) Considerations on service continuity enhancements China Telecom discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211786](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211786-Open%20issue%20on%20service%20continuity%20for%20UE-to-Network%20relay.docx) Open issue on service continuity for UE-to-Network relay Qualcomm Incorporated discussion NR\_SL\_relay\_enh-Core

[R2-2211875](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211875.docx) Discussion on service continuity enhancement Xiaomi discussion

[R2-2211897](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211897%20Service%20continuity%20for%20L2%20U2N%20relay.doc) Service continuity enhancement for L2 U2N relay ZTE, Sanechips discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211934](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211934.doc) Service continuity enhancements for UE sidelink relay Sony discussion Rel-18 NR\_SL\_relay\_enh

[R2-2212026](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212026%20Service%20continuity%20in%20L2%20U2N%20relay%20case%20v2.0.docx) Service continuity enhancements for L2 U2N relay Lenovo discussion Rel-18

[R2-2212155](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212155%20Service%20continuity%20enhancements%20support%20for%20L2%20U2N%20relay.doc) Service continuity enhancements support for L2 U2N relay Spreadtrum Communications discussion Rel-18

[R2-2212253](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212253%20U2N%20relay%20inter%20gNB%20path%20switch%20issues.docx) Discussion on service continuity issues for Inter-gNB path switching of L2 U2N relay Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2212254](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212254%20RSRP%20issue.docx) SL-RSRP and SD-RSRP measurement issues Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2212276](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212276%20U2N%20Relay%20UE%20operation%20Threshold%20Conditions%20-%20Impact%20of%20UE%20Mobility%20-%20Toulouse.doc) U2N Relay UE operation Threshold Conditions: Impact of UE Mobility Philips International B.V., FirstNet, ASUSTek, NEC, MediaTek, Lenovo discussion Rel-18 NR\_SL\_relay\_enh-Core R2-2208158

[R2-2212307](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212307_U2N_path_switch.doc) L2 U2N inter-gNB service continuity Kyocera discussion

[R2-2212322](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212322%20Inter-gNB%20path%20switch%20to%20Relay%20UE%20in%20RRC_Idle,%20RRC_Inactive.docx) Inter-gNB path switch to Relay UE in RRC\_Idle, RRC\_Inactive MediaTek Inc. discussion Rel-18

[R2-2212410](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212410%20(R18%20SL%20Relay%20WI_AI893%20Lossless%20Service%20Continuity).doc) Lossless path switching from indirect to indirect/direct InterDigital, Inc. discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2212520](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212520-Service%20continuity%20enhancements%20for%20L2%20U2N%20relay.docx) Service continuity enhancements for L2 U2N relay LG Electronics France discussion Rel-18

[R2-2212570](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212570-Discussion%20on%20remaining%20issues%20for%20i2i%20path%20switch.doc) Discussion on remaining issues for i2i path switch Sharp discussion Rel-18 NR\_SL\_relay\_enh-Core

Withdrawn/Not available

R2-2211632 Lossless path switching from indirect to indirect/direct InterDigital discussion Rel-18 NR\_SL\_relay\_enh-Core Withdrawn

### 8.9.4 Multi-path relaying

Study the benefit and potential solutions for multi-path support to enhance reliability and throughput. Includes the cases where a UE is connected to the same gNB using one direct path and one indirect path via 1) Layer-2 UE-to-Network relay, or 2) via another UE (where the UE-UE inter-connection is assumed to be ideal).

PCell location

[R2-2211208](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211208%20-%20Discussion%20on%20PCell%20location%20for%20Multi-path%20Relay_V2.docx) Discussion on PCell location for Multi-path Relay OPPO, ZTE, Huawei, HiSilicon, MediaTek discussion Rel-18 NR\_SL\_relay\_enh-Core

AI summary

R2-2212964 Summary of agenda item 8.9.4 on multi-path relaying (Apple) Apple discussion Rel-18 NR\_SL\_relay\_enh-Core

=> Withdrawn

[R2-2213122](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2213122%20summary%20of%20AI%208.9.4%20Multi-path%20relay_v3.docx) Summary of agenda item 8.9.4 on multi-path relaying (Apple) Apple discussion Rel-18 NR\_SL\_relay\_enh-Core

The following documents will not be individually treated

[R2-2211207](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211207%20-%20Discussion%20on%20multi-path%20Relay_V1.docx) Discussion on multi-path SL relay OPPO discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211281](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211281%20Discussion%20on%20Multi-path%20for%20Scenario1.docx) Discussion on Multi-path for Scenario 1 CATT discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211282](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211282%20Leftover%20issues%20on%20Multi-path%20scenario2.docx) Leftover issues on Multi-path scenario 2 CATT discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211403](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211403_Path%20management%20for%20Multi-path%20Relaying_Intel.docx) Path management for Multi-path Relaying Intel Corporation discussion Rel-18 NR\_SL\_relay-Core

[R2-2211414](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211414_Considerations%20on%20Multipath%20of%20Sidelink%20Relay.docx) Considerations on Multipath of Sidelink Relay NEC Corporation discussion NR\_SL\_relay\_enh-Core

[R2-2211536](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211536_Remaining_Issues_Multipath_Relays_Scenario1_Scenario2.docx) Remaining Issues on Multipath Relays for Scenario-1 and Scenario-2 Ericsson España S.A. discussion Rel-18

[R2-2211537](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211537_PCell_SRB_Handling_Multipath_Relays_Scenario1_Scenario2.docx) PCell and SRB Handling for Multipath Relays in Scenario-1, Scenario-2 Ericsson España S.A. discussion Rel-18

[R2-2211633](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211633%20(R18%20SL%20Relay%20WI_AI894%20MultipathAspects).doc) Design Aspects for Multi-path InterDigital discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211677](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211677_%20Remaining%20Control%20Plane%20Issues%20for%20Multi-path%20Scenario%201&2.docx) Remaining Control Plane Issues for Multi-path Scenario 1&2 vivo discussion

[R2-2211678](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211678_%20Supporting%20Cases%20and%20Detailed%20Procedures%20for%20Multi-path%20Scenario-1%20and%20Scenario-2.docx) Supporting Cases and Detailed Procedures for Multi-path Scenario-1 and Scenario-2 vivo discussion

[R2-2211699](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211699%20Discussion%20on%20multi-path%20support.doc) Discussion on multi-path relaying support Apple discussion NR\_SL\_relay\_enh-Core

[R2-2211752](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211752%20Discussion%20on%20multi-path%20operation.docx) Discussion on multi-path operation Huawei, HiSilicon discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211783](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211783%20Discussion%20on%20multi-path%20relaying.docx) Discussion on multi-path relaying China Telecom discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211787](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211787%20Multi-path%20relaying%20for%20NR%20sidelink%20relay%20enhancements.doc) Multi-path relaying for NR sidelink relay enhancements LG Electronics France discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211788](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211788-Further%20discussion%20on%20multi-path%20relay%20for%20Scenario%201%20and%20Scenario%202.docx) Further discussion on multi-path relay for Scenario 1 and Scenario 2 Qualcomm Incorporated discussion NR\_SL\_relay\_enh-Core

[R2-2211814](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211814%20Discussion%20on%20the%20remaining%20issues%20of%20multi-path%20relaying.docx) Discussion on the remaining issues of multi-path relaying ZTE, Sanechips discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211815](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211815%20Further%20discussion%20on%20the%20UE%20aggregation.docx) Further discussion on the UE aggregation ZTE, Sanechips discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211874](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211874.docx) Discussion on multi-path Xiaomi discussion

[R2-2211935](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211935.doc) Multi-path relaying discussion Sony discussion Rel-18 NR\_SL\_relay\_enh

[R2-2212027](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212027%20Second%20path%20addition%20and%20failure%20recovery%20for%20Scenario1%20v2.0.docx) Second path addition and failure recovery for Scenario1 Lenovo discussion Rel-18

[R2-2212156](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212156%20Discussion%20on%20multi-path%20relaying.doc) Discussion on multi-path relaying Spreadtrum Communications discussion Rel-18

[R2-2212323](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212323%20MP%20modelling%20v01.docx) MP modelling MediaTek Inc. discussion Rel-18

[R2-2212562](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212562_C-plane_aspects_of_multi-path.doc) C-plane aspects of multi-path Sharp discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2212563](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212563_discussion_on_scenario2_of_multi-path_relaying.doc) Discussion on scenario 2 of multi-path relaying Sharp discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2212699](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212699%20Control%20plane%20issues%20in%20multi-path.docx) Control plane issues in multi-path CMCC discussion Rel-18 NR\_SL\_relay\_enh

[R2-2212700](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212700%20Protocol%20stack%20for%20multi-path.docx) Protocol stack for multi-path CMCC discussion Rel-18 NR\_SL\_relay\_enh

[R2-2212722](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212722%20Multipath%20relay.docx) Support of multipath relay Nokia Korea discussion

[R2-2212737](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212737_Control%20Plane%20aspects%20for%20multi-path%20Relaying_Intel.docx) Control plane aspects for multi-path relaying Intel Corporation discussion Rel-18 NR\_SL\_relay-Core

[R2-2212813](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212813_SLRelay_S1&2_v1.doc) Discussion on common features for scenario 1&2 in sidelink relay enhancement Samsung discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2212814](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212814_SLRelay_S2_v1.doc) Discussion on specific issues for scenario 2 Samsung discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2212866](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212866%20Discussion%20on%20Multi-path%20relaying.docx) Discussion on Multi-path relaying Lenovo discussion NR\_SL\_relay\_enh-Core

### 8.9.5 DRX

Study the gains and, if needed, specify signalling between gNB and relay UE in sidelink mode 2 to assist the determination of the sidelink DRX configuration used for remote UE. This agenda item will be handled at lower priority.

[R2-2212274](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212274_Motivation%20for%20SL%20U2N%20Relay%20DRX%20coordination.docx) Motivation for SL U2N Relay DRX coordination Fraunhofer IIS, Fraunhofer HHI discussion Rel-18 NR\_SL\_relay\_enh

[R2-2211700](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211700%20Discussion%20on%20SL-DRX%20for%20L2%20relay.doc) Discussion on SL DRX for L2 Relay Apple discussion NR\_SL\_relay\_enh-Core R2-2209774

[R2-2211754](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211754%20On%20sidelink%20DRX%20for%20L2%20U2N%20relay.doc) On sidelink DRX for L2 U2N relay Huawei, HiSilicon discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2211789](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211789-SL%20DRX%20for%20L2%20U2N%20relay.docx) SL DRX for L2 U2N Relay Qualcomm Incorporated discussion NR\_SL\_relay\_enh-Core

[R2-2211876](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211876.docx) Discussion on SL DRX in U2N relay Xiaomi discussion

[R2-2211936](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2211936%20Relay_DRX.docx) Discussions on Sidelink Relay DRX Sony discussion Rel-18 NR\_SL\_relay\_enh

## 8.19 R18 Other

Misc Impacts from Other RAN WGs and TSGs (incl MC Enhancements). LS ins for Rel-18 topics that has no RAN WI.

Time budget: 0.5 TU

Tdoc Limitation: -

[R2-2212244](C:\\Users\\mtk16923\\Documents\\3GPP Meetings\\202211 - RAN2_120, Toulouse\\Extracts\\R2-2212244_(SL Relay).docx" \o "C:\Users\mtk16923\Documents\3GPP Meetings\202211 - RAN2_120, Toulouse\Extracts\R2-2212244_(SL Relay).docx) On Positioning Support for L2 UE-to-Network Remote UEs Qualcomm Incorporated discussion R2-2210367

[R2-2212372](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202211%20-%20RAN2_120,%20Toulouse\Extracts\R2-2212372%20RelayPos.docx) Relay based Positioning Procedure Ericsson discussion Rel-17