3GPP TSG-RAN WG2 Meeting #125bis R2-24xxxxx

Changsha, China, April 15th – 19th, 2024

Source: Session Chair (MediaTek)

Title: Report from session on positioning and sidelink relay

# At-meeting email/offline discussions

This subclause is not an agenda item. It documents the email and offline discussions scheduled during the meeting week. It will be moved to an Annex in the final version of the report.

* [AT125bis][401][POS] PRU terminology in LPP (CATT)

 Scope: Evaluate company views on the use of “PRU” terminology in 37.355, including how much detail to capture on the related agreements. Candidates for terminology to be drawn from company contributions.

 Discuss also P3 of R2-2402257.

 Intended outcome: Report to Thursday CB session in R2-2403796

 Deadline: Wednesday 2024-04-17 2000 CST

* [AT125bis][402][Relay] Remaining Rel-18 relay RRC issues (Huawei)

 Scope: F2F offline to check P5/P6 of R2-2402682 and the remaining RIL issues, prioritizing items with ASN.1 impact. Other RRC proposals can be treated on a time-available basis.

 Intended outcome: Report to Thursday CB session in R2-2403802

 Schedule: Wednesday 0800-0900 CST in Brk3

 Deadline: Thursday 2024-04-18 1000 CST

* [AT125bis][403][Relay] UE capability for simultaneous transmission on split bearer (Qualcomm)

 Scope: Allow companies to check the proposed agreements and determine if network guidance is needed:

* Introduce new UE capability to indicate whether UE supports UL transmission via direct path and DL reception via either direct path or indirect path for split SRB.
* Introduce new UE capability to indicate whether UE supports UL transmission via both direct path and indirect path for the split DRB.

 Intended outcome: Report to Thursday CB session in R2-2403803

 Deadline: Thursday 2024-04-18 1000 CST

* [AT125bis][404][POS] CRs on SBAS-ID (Ericsson))

 Scope: Revise the CRs in R2-2403559 / R2-2403528 / R2-2403527 to clarify the reason for change.

 Intended outcome: Agreeable CRs (with CB) in R2-2403804 / R2-2403805 / R2-2403806

 Deadline: Thursday 2024-04-18 1000 CST

* [AT125bis][405][POS] LS to RAN1 on bandwidth aggregation (ZTE)

 Scope: Draft an LS to RAN1 in reply to R2-2402108 asking for clarification of the provided number of combinations, and other aspects necessary for our design of the related MAC CE. To be coordinated with online MAC discussion.

 Intended outcome: Approvable LS (with CB) in R2-2403807

 Deadline: Thursday 2024-04-18 1000 CST

* [AT125bis][406][POS] Remaining LPP ASN.1 proposals (CATT)

 Scope: F2F offline to briefly check the proposed ASN.1 changes to LPP and determine if some of them are essential and agreeable.

 Intended outcome: Report to Thursday CB session in R2-2403808; additional TP allocated during the discussion to be provided in R2-2403812

 Schedule: 1000-1100 Wednesday 2024-04-17 in Brk3

 Deadline: Thursday 2024-04-18 1000 CST

* [AT125bis][407][POS] LS to SA2/CT4 on application layer ID (Huawei)

 Scope: Draft an LS to SA2/CT4/CT1 informing them of our agreement on including the ALID in the SLPP header and asking them to take it into account.

 Intended outcome: Approved LS (without CB if possible) in R2-2403809

 Deadline: Thursday 2024-04-18 1000 CST

* [AT125bis][408][POS] LS to RAN1 on SLPP agreements (Intel)

 Scope: Draft an LS notifying RAN1 of our agreements on SLPP and flagging where we depart from the RAN1 parameter list.

 Intended outcome: Approved LS (without CB if possible) in R2-2403810

 Deadline: Thursday 2024-04-18 2000 CST

* [AT125bis][409][POS] Remaining SLPP issues (Intel)

 Scope: F2F offline to discuss remaining open issues on SLPP

 Intended outcome: Report to Thursday CB session in R2-2403811

 Schedule: Wednesday 2024-04-17 1730-1830 in Brk2

 Deadline: Thursday 2024-04-18 1000 CST

* [AT125bis][410][POS] Sub 1s periodicity CR (Ericsson)

 Scope: Revise the CR in R2-2403793 to introduce the capabilities as per-positioning-mode.

 Intended outcome: Agreeable CR (with CB) in R2-2403973

 Deadline: Thursday 2024-04-18 1000 CST

# 4 EUTRA Rel-17 and earlier

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

## 4.4 Positioning corrections Rel-16 and earlier

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

This Agenda Item will be handled by email.

Tdoc Limitation: 1 tdocs

# 5 NR Rel-15 and Rel-16

Essential corrections only.

Tdoc Limitation: 3 tdocs in total for all sub agenda items NOTE: some agenda items have additional Tdoc limits.

In case a correction need to be reflected in both NR TS and LTE TS, the corrections should be submitted under one single AI (so the NR and LTE correction can be treatee together), the sub-Ais below this

## 5.3 NR Positioning Support

(NR\_newRAT-Core; leading WG: RAN1; REL-15; started: Mar. 17; closed: Jun. 19: WID: [RP-191971](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_85/Docs/RP-191971.zip))

(NR\_pos-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Jun 20; WID: [RP-200218](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_87e/Docs/RP-200218.zip)).

(NR TEI16 Positioning)

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.

Tdoc Limitation: 1 tdocs

R2-2402455 Correction to on-demand SIB request in RRC\_CONNECTED for RTK Huawei, HiSilicon CR Rel-16 38.331 16.16.0 4658 - F NR\_pos-Core

* Revised in R2-2403700

[R2-2403700](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403700%20Correction%20to%20on-demand%20SIB%20request.docx) Correction to on-demand SIB request for RTK Huawei, HiSilicon, Ericsson CR Rel-16 38.331 16.16.0 4658 1 F NR\_pos-Core, TEI16

* Not pursued

Discussion:

Lenovo think periodic AD can be supported in LPP and is not needed in RRC as well.

vivo think the solution is not complete because the gNB cannot proactively request the AD from the LMF, which would be needed for it to meet the periodic request. They also agree with Lenovo that having the periodic request in LPP is enough.

Qualcomm agree with vivo: The LMF provides the SIBs according to the agreed scheduling information with non-UE-associated signalling. They also do not see the need, and note that we discussed this issue in Rel-16 and companies felt it was network implementation.

ZTE think it is an enhancement, not a correction, and they think there could be a lot of Rel-16 impact from the change.

Ericsson think it addresses the lack of MO-LR implementations, which means that broadcast AD may be needed. They agree that it would not be needed if MO-LR were widely used.

CATT think this is not essential; the network can handle it in implementation, e.g., by always broadcasting the periodic posSIBs. They also see it as an enhancement.

Nokia agree that it is an enhancement, not a correction, and it could be handled as a TEI if needed.

Huawei think the point is to address the cases where LPP and broadcast are not used or not available.

Xiaomi also consider it an enhancement; the UE can request the SIB repeatedly.

Huawei agree that the gNB cannot request the data from the LMF, but they think the periodicity should often be fixed and the UE should just request the needed periodicity. They also think this is a real problem that occurs in practice.

Qualcomm think there is no connection to MO-LR, but they understand the gNB cannot broadcast the SIBs dynamically with different periodicities, so the possibility for the UE to request a different periodicity is not clear. What they do see missing in the RRC is the network behaviour when an RTK SIB is requested; they think this could be clarified, but a complete solution requires involving RAN3 so we have an on-demand SIB solution to the LMF.

[R2-2402456](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402456%20Correction%20to%20on-demand%20SIB%20request%20for%20RTK%20in%20r17.docx) Correction to on-demand SIB request for RTK in R17 Huawei, HiSilicon CR Rel-17 38.331 17.8.0 4659 - A NR\_pos-Core

* Revised in R2-2403701

[R2-2403701](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403701%20Correction%20to%20on-demand%20SIB%20requestt.docx) Correction to on-demand SIB request for RTK Huawei, HiSilicon, Ericsson CR Rel-17 38.331 17.8.0 4659 1 A NR\_pos-Core, TEI16

* Not pursued

[R2-2402457](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402457%20Correction%20to%20on-demand%20SIB%20request%20for%20RTK%20in%20r18.docx) Correction to on-demand SIB request for RTK in R17 Huawei, HiSilicon CR Rel-18 38.331 18.1.0 4660 - A NR\_pos-Core

* Revised in R2-2403702

[R2-2403702](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403702%20Correction%20to%20on-demand%20SIB%20request.docx) Correction to on-demand SIB request for RTK Huawei, HiSilicon, Ericsson CR Rel-18 38.331 18.1.0 4660 1 A NR\_pos-Core, TEI16

* Not pursued

[R2-2403559](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403559%20SBASF.docx) RIL E138 SBAS-ID Field Description Correction Ericsson, ZTE Corporation CR Rel-16 38.331 16.16.0 4756 - F NR\_pos-Core

* Revised in R2-2403804

Discussion:

ZTE recall that we discussed previously about the remote UE requesting from the relay UE, and we determined the remote UE should set the SBAS type. They consider that this CR is aligned with that decision and the principle is similar.

Nokia do not see what is being corrected; it seems to be stating in a different way what is already there. Qualcomm agree with Nokia, and they think the reason for change on the coversheet is unclear.

Samsung agree that the current specification is not broken, but the conditional presence of SBAS-ID should be described in its own field description, not that of gnss-ID.

Xiaomi think the current description is not wrong, but the CR is OK and makes it more clear.

Lenovo have a concern on the reason for change.

CATT think we should keep the existing description because nothing is broken and the bar for Rel-16 should be high.

vivo think the CR is essential, because it excludes the case that the GNSS-ID is SBAS but the SBAS-ID is absent.

Nokia think the justification is unclear and the coversheet needs to be fixed with a clear reason why this is essential.

ZTE see some functional difference, and they think we should align between the Uu and PC5 cases.

Intel think the change is correct because the UE should select gnss-ID first, but they are not sure it is essential. They assume the coversheet can be worked on offline.

OPPO do not think it is essential; the circumstances mentioned by vivo can be avoided by a good implementation.

Intel think we could agree only from Rel-18. CATT think it is important for real deployments to have it from Rel-16 if we make the change.

[R2-2403528](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403528%20SBASAa.docx) SBAS-ID Field Description Correction Ericsson, ZTE Corporation CR Rel-17 38.331 17.8.0 4753 - A NR\_pos-Core

* Revised in R2-2403805

[R2-2403527](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403527%20SBASA.docx) RIL E138 SBAS-ID Field Description Correction Ericsson, ZTE Corporation CR Rel-18 38.331 18.1.0 4752 - A NR\_pos-Core

* Revised in R2-2403806
* [AT125bis][404][POS] CRs on SBAS-ID (Ericsson))

 Scope: Revise the CRs in R2-2403559 / R2-2403528 / R2-2403527 to clarify the reason for change.

 Intended outcome: Agreeable CRs (with CB) in R2-2403804 / R2-2403805 / R2-2403806

 Deadline: Thursday 2024-04-18 1000 CST

[R2-2403804](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403804%20SBAS.docx) SBAS-ID Field Description Correction Ericsson, ZTE Corporation, vivo CR Rel-16 38.331 16.16.0 4756 1 F NR\_pos-Core

* Not pursued

Discussion:

Lenovo object because they think the CR is not needed, because a standard-compliant UE will already set the fields properly and we do not specify behaviour for a non-compliant UE.

Ericsson think we need to write the standard in a clear way. They are not sure if a failure mode can occur, but they are more concerned about text quality.

Qualcomm think it is not an essential correction and nothing is technically broken.

Intel tend to agree with Ericsson that it is not clear, but they think it is not justified in Rel-16. It could be considered as an editorial change for Rel-18 only.

[R2-2403805](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403805%20SBASAa.docx) SBAS-ID Field Description Correction Ericsson, ZTE Corporation, vivo CR Rel-17 38.331 17.8.0 4753 1 A NR\_pos-Core

* Not pursued

[R2-2403806](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403806%20SBASA.docx) SBAS-ID Field Description Correction Ericsson, ZTE Corporation, vivo CR Rel-18 38.331 18.1.0 4752 1 A NR\_pos-Core

* Not pursued (editorial issue can be discussed in Rel-18 RRC CR implementation)

[R2-2403553](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403553%20capF.docx) Missing Conditionally mandatory features without UE radio access capability parameters for 80ms scheduling offset for positioning SI acquisition Ericsson CR Rel-16 38.306 16.16.0 1087 - F NR\_pos-Core

* Replace “for UEs which support the posSIB types” with “for UEs which support acquisition of the posSIB types”.
* Agreed in principle with this change as R2-2403797, with shadow CRs in R2-2403798 and R2-2403799

Discussion:

Lenovo do not see the need; they understand the acquisition of posSIBs is optional for the UE and it could support only the old scheduling mechanism. Ericsson think this should not be the case, because it is a broadcast feature and UEs could miss posSIBs.

Qualcomm have a similar view to Lenovo; they think the wording should be more clearly contingent on the posSIB support and not suggest that posSIB support is mandatory.

Huawei wonder if we have the same thing for LTE. Ericsson think we would need to check the status of 36.306, but it might be needed there as well. Huawei think we could come back next meeting.

Ericsson think it is more essential in NR because we know the feature is implemented.

R2-2403797 Missing Conditionally mandatory features without UE radio access capability parameters for 80ms scheduling offset for positioning SI acquisition Ericsson CR Rel-16 38.306 16.16.0 1087 1 F NR\_pos-Core

* Agreed in principle

[R2-2403558](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403558%20capAa.docx) Missing Conditionally mandatory features without UE radio access capability parameters for 80ms scheduling offset for positioning SI acquisition Ericsson CR Rel-17 38.306 17.8.0 1088 - A NR\_pos-Core

* Revised in R2-2403798

R2-2403798 Missing Conditionally mandatory features without UE radio access capability parameters for 80ms scheduling offset for positioning SI acquisition Ericsson CR Rel-17 38.306 17.8.0 1088 1 A NR\_pos-Core

* Agreed in principle

[R2-2403524](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403524%20capA.docx) Missing Conditionally mandatory features without UE radio access capability parameters for 80ms scheduling offset for positioning SI acquisition Ericsson CR Rel-18 38.306 18.1.0 1086 - A NR\_pos-Core

* Revised in R2-2403799

R2-2403799 Missing Conditionally mandatory features without UE radio access capability parameters for 80ms scheduling offset for positioning SI acquisition Ericsson CR Rel-18 38.306 18.1.0 1086 1 A NR\_pos-Core

* Agreed in principle

# 6 NR Rel-17

Essential corrections only. Editorial/clarifications should be sent to be reviewed and approved by spec rapporteurs prior to submission. Editiorials should only be submitted by spec rapporteurs.

## 6.2 NR Sidelink relay

(NR\_SL\_Relay-Core; leading WG: RAN2; REL-17; WID: [RP-212601](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_93e/Docs/RP-212601.zip))

Tdoc Limitation: 1 tdoc

R2-2402513 Clarification on the Remote UE behaviour on short message monitoring CATT CR Rel-17 38.331 17.8.0 4665 - F NR\_SL\_relay-Core

* Postponed

Discussion:

Huawei think we had a similar correction last meeting, and the RRC rapporteur suggested a general solution instead of individual exceptions. They think this case can be merged into R2-2402678.

OPPO understand that there is a general sentence in the short message section that already says the remote UE does not have to monitor the short message.

[R2-2402514](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5C38331_CR4666_%28Rel-18%29_R2-2402514_Clarification%20on%20the%20remote%20UE%20behavior%20on%20short%20message%20monitoring.docx) Clarification on the Remote UE behaviour on short message monitoring CATT CR Rel-18 38.331 18.1.0 4666 - A NR\_SL\_relay-Core

* Postponed

[R2-2402678](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5C38331_CR4682_%28Rel-17%29_R2-2402678%20Miscellaneous%20RRC%20corrections%20for%20R17%20SL%20relay.docx) Miscellaneous RRC corrections for Rel-17 SL relay Huawei, HiSilicon CR Rel-17 38.331 17.8.0 4682 - F NR\_SL\_relay-Core

* “RLC channel” to be changed to “RLC channels” in the change to the section on SRBs
* Agreed in principle with this change, as R2-2403800

Discussion:

ZTE indicate they proposed a similar change to the second change, but it was missed in the merge process. They think only the second sentence of the new paragraph is needed.

Apple think the first change is not just editorial in section 4.2. Huawei note that we already added measurements for connected mode. ZTE suggest “if the UE is acting as a L2 remote UE”. Huawei do not think such a capability should be mentioned in a high-level description of the functions.

Apple indicate for the new sentences about SRB, SRB0/1 use different RLC channels, and the sentence seems to suggest that all SRBs use a single channel.

R2-2403800 Miscellaneous RRC corrections for Rel-17 SL relay Huawei, HiSilicon CR Rel-17 38.331 17.8.0 4682 1 F NR\_SL\_relay-Core

* Agreed in principle

[R2-2402679](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5C38331_CR4683_%28Rel-18%29_R2-2402679%20Miscellaneous%20RRC%20corrections%20for%20SL%20relay.docx) Miscellaneous RRC corrections for SL relay Huawei, HiSilicon CR Rel-18 38.331 18.1.0 4683 - A NR\_SL\_relay-Core

* Agreed in principle with the change to align with R2-2402678, as R2-2403801

R2-2403801 Miscellaneous RRC corrections for SL relay Huawei, HiSilicon CR Rel-18 38.331 18.1.0 4683 1 A NR\_SL\_relay-Core

* Agreed in principle

[R2-2403309](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403309_SRAP-related%20corrections%20to%2038300.docx) SRAP-related corrections to 38.300 Samsung CR Rel-17 38.300 17.8.0 0787 1 F NR\_SL\_relay-Core R2-2400557

* Postponed

Discussion:

OPPO understand SRB0 can be multiplexed with other SRBs on the Uu path. Samsung understand we agreed that on Uu we would not multiplex SRB0 with other SRBs. OPPO think it is all configured by the network, so there is no exceptional handling for SRB0.

OPPO understand that the second change is related to the first one as well.

[R2-2403652](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403652_SRAP-related%20corrections%20to%2038300.docx) SRAP-related corrections to 38.300 Samsung CR Rel-18 38.300 18.1.0 0788 2 A NR\_SL\_relay-Core R2-2400558

* Postponed

[R2-2403398](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CDocs%5CR2-2403398.zip) Correction on SidelinkUEInformationNR Philips International B.V. CR Rel-17 38.331 17.8.0 4731 - F NR\_SL\_relay-Core

* Agreed in principle

[R2-2403400](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CDocs%5CR2-2403400.zip) Correction on SidelinkUEInformationNR Philips International B.V. CR Rel-18 38.331 18.1.0 4732 - A NR\_SL\_relay-Core

* Agreed in principle

[R2-2403474](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403474%2038331_Corrections%20for%20SL%20relay-r17.docx) Corrections for SL relay ZTE, Sanechips CR Rel-17 38.331 17.8.0 4747 - F NR\_SL\_relay-Core

* Postponed (ZTE are asked to bring a Rel-16 V2X CR next meeting and consult with the secretary about the correct WI codes)

Discussion:

Huawei indicate this is a Rel-16 V2X requirement, so they do not think it is a Rel-17 relay issue. Apple think Huawei are correct and it should be seen in the SL session. Xiaomi see it as related to both sidelink and relay.

[R2-2403475](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403475%2038331_Corrections%20for%20SL%20relay-mirror.docx) Corrections for SL relay ZTE, Sanechips CR Rel-18 38.331 18.1.0 4748 - A NR\_SL\_relay-Core

Not available/Withdrawn

R2-2403310 SRAP-related corrections to 38.300 Samsung CR Rel-18 38.300 18.1.0 0788 1 A NR\_SL\_relay-Core R2-2400558 Withdrawn

## 6.4 NR positioning enhancements

(NR\_pos\_enh-Core; leading WG: RAN1; REL-17; WID: [RP-210903](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_91e/Docs/RP-210903.zip))

Tdoc Limitation: 1 tdoc

R2-2402458 Correction on the UL TEG report Huawei, HiSilicon CR Rel-17 38.331 17.8.0 4661 - F NR\_pos\_enh-Core

* Postponed

Discussion:

ZTE think this configuration is a SetupRelease, and the network can release it explicitly.

Nokia recall that the reportConfig is Need M, and the CR seems to change this behaviour.

Huawei intend that this is a release based on the TAT expiring, not signalling.

ZTE wonder if this would lead to a desync because the network does not know the UE has released the TEG report configuration.

Ericsson think if the UE releases SRS, any characteristics associated with SRS would be released too, but if this is not the general understanding they are OK with the principle. They think we could check further.

Intel think the change is correct, and regarding ZTE’s question, they have the same understanding as Huawei that this is about release from lower layer.

Huawei understand that when the TAT expires, the UE needs to release a lot of resources, and the possibility for network desync already exists.

ZTE would like to postpone and check the scenario further.

Huawei note that there is a similar Rel-18 RIL.

[R2-2402459](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402459%20Correction%20on%20the%20UL%20TEG%20report%20for%20R18.docx) Correction on the UL TEG report Huawei, HiSilicon CR Rel-18 38.331 18.1.0 4662 - A NR\_pos\_enh-Core

* Postponed

[R2-2403387](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CDocs%5CR2-2403387.zip) Correction on posSIB(s) acquisition [SI-SCHEDULING] Philips International B.V., Ericsson CR Rel-17 38.331 17.8.0 4467 1 F NR\_pos\_enh-Core R2-2313100

* Postponed

Discussion:

CATT support the intention but think the details are not correct because the status of different SI scheduling lists should not be combined in one field.

Intel agree with the intention but think the procedural text could be changed instead.

ZTE also agree with the intention but think it should be a NOTE rather than inline in the field description.

Samsung think the CR is not needed, because the UE should check the broadcast status regardless of which list is used. They think the current procedural text already covers both cases. CATT agree with Samsung, but they found that there is no description of the status for one of the scheduling lists, and they think the CR can add the missing status.

Ericsson initially agreed there should be separate broadcast status for the different lists, but after checking further they think all the SIB types are concatenated, and the UE should see a combined list of statuses. They also agree with Intel that now that we understand the issue better, it could be fixed in the procedural text.

CATT agree with Ericsson that the UE should see a combined status list, but they think we can add the description in the uplink message when the UE sends the request. Philips understand that the UE needs to check the broadcast status first before it knows if it should request something.

Philips also note that the broadcast status field names are different.

Nokia understand the motivation and agree with the intention, but they think this should not be part of the field description; instead they would like to see it captured where the concatenated list is used.

[R2-2403388](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CDocs%5CR2-2403388.zip) Correction on posSIB(s) acquisition [SI-SCHEDULING] Philips International B.V., Ericsson CR Rel-18 38.331 18.1.0 4725 - A NR\_pos\_enh-Core

* Postponed

[R2-2403525](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403525%20MACA.docx) Correction of when to cancel the triggered SR for positioning measurement gap activation/deactivation Ericsson CR Rel-18 38.321 18.1.0 1825 - A NR\_pos\_enh-Core

* Not pursued

Discussion:

Huawei think the wording is not quite right as it changes the cancelled MAC CE to a cancelled SR. They think nothing is needed.

ZTE understand the legacy behaviour is that if the MAC CE is cancelled, the corresponding SR is cancelled, and the CR says if the MAC CE has been transmitted, the corresponding SR is cancelled. They think it should be a new condition rather than a change to the legacy behaviour.

vivo agree with ZTE and think the intention is correct but the paragraph can be restructured.

Huawei think the current spec already covers this case.

Ericsson did not find that the SR is cancelled when the MAC CE is transmitted, but they can check further.

OPPO agree with Ericsson that the MAC CE cancellation is not clear.

After checking the spec, Ericsson can agree not to take this CR and there can be further investigation offline.

[R2-2403526](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403526%20MACF.docx) Correction of when to cancel the triggered SR for positioning measurement gap activation/deactivation Ericsson CR Rel-17 38.321 17.8.0 1826 - F NR\_pos\_enh-Core

* Not purused

[R2-2403740](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403740%20ECID.docx) Introduction of NR UE Rx-Tx time difference measurement in NR UL E-CID Ericsson, Polaris Wireless, China Telecom, NTT Docomo, AT&T, FirstNet, Intel, Comtech, Nokia, Nokia Shanghai Bell, Verizon Wireless, Huawei, ZTE CR Rel-18 38.305 18.1.0 0164 1 F NR\_pos\_enh-Core, TEI18

* Agreed in principle

Discussion:

Qualcomm agree that the feature is there in RAN3.

OPPO wonder why the gNB Rx-Tx time difference is missing. vivo have the same concern. Qualcomm think it is already there somewhere, but if it is missing it would be a separate CR.

Huawei think normally RAN3 would provide the stage 2 CR. They also wonder if it should be category B. Ericsson understand that RAN3 decided that it was under RAN2 responsibility.

Intel agree that what RAN3 added was the UE measurement, and the gNB Rx-Tx could be a separate CR.

OPPO think RAN3 should be asked to generate the CR for the gNB measurement. Qualcomm think we have seen similar CRs in the past, and they note that RAN3 took it as a category F CR.

Ericsson consider that the UE and gNB Rx-Tx measurements are separate features and do not need to be linked for the CR. OPPO disagree and think both are needed for the RTT.

Intel think we could agree in principle and ask Ericsson to look into the gNB measurement. Qualcomm understand that the measurements were intentionally structured in a bit unusual way to avoid RAN1 impact.

Qualcomm think we should just align with what RAN3 did, and anything additional is a separate discussion.

OPPO think the measurement by itself does not allow the feature to work properly. Intel think this should be a separate discussion.

# 7 Rel-18

## 7.2 Expanded and improved NR positioning

(NR\_pos\_enh2; leading WG: RAN1; REL-18; WID: [RP-232670](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_101/Docs/RP-232670.zip))

Time budget: 0 TU

Tdoc Limitation: 4 tdocs

### 7.2.1 Organizational

Including incoming LSs and rapporteur inputs. CR rapporteurs are asked to continue maintaining an open issues list reflecting known issues to be handled during the maintenance phase.

Incoming LS with RAN2 in Cc:

[R2-2402141](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CDocs%5CR2-2402141.zip) Reply LS on UE selection for Ranging\_SL (S2-2403682; contact: Qualcomm) SA2 LS in Rel-18 Ranging\_SL To:CT1 Cc:RAN2

Intel note that Q4 is related to discovering method support by the server UE. OPPO think SA2’s solution is not adequate and they have a related contribution.

* Noted

Incoming LSs with “take into account” actions and no draft reply

[R2-2402106](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402106_R1-2401552.docx) Reply LS on MAC agreements for SL Positioning (R1-2401552; contact: Intel) RAN1 LS in Rel-18 NR\_pos\_enh2-Core To:RAN2

* Noted

[R2-2402121](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402121_R1-2401827.docx) LS on higher layer parameters for SL Positioning (R1-2401827; contact: Intel, Qualcomm) RAN1 LS in Rel-18 NR\_pos\_enh2-Core To:RAN2

* Noted

[R2-2402127](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402127_R4-2403363.docx) Updates on measurement report mapping for Positioning Enhancements WI (R4-2403363; contact: Huawei) RAN4 LS in Rel-18 NR\_pos\_enh2 To:RAN2, RAN3 Cc:RAN1

* Noted

Other incoming LSs and related inputs (note: RAN2 are in Cc: but have an action in R2-2402133)

[R2-2402108](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402108_R1-2401708.doc) LS on bandwidth aggregation for positioning (R1-2401708; contact: ZTE) RAN1 LS in Rel-18 NR\_pos\_enh2-Core To:RAN2, RAN3

Discussion:

ZTE think it is not explicit if the value 32 applies to RRC\_CONNECTED, RRC\_INACTIVE, or both. Huawei thought it was 32 for connected and 16 for inactive, and they want to point out that RAN1 have agreed that for an SCell, the UE may be configured only for SRS without other configurations, and they think this has impact to the MAC CE.

ZTE indicate the number of combinations in RRC\_CONNECTED and RRC\_INACTIVE are provided in their contribution, but they think we may need to ask for clarification from RAN1.

CATT agree with ZTE that a request for clarification is needed.

* [AT125bis][405][POS] LS to RAN1 on bandwidth aggregation (ZTE)

 Scope: Draft an LS to RAN1 in reply to R2-2402108 asking for clarification of the provided number of combinations, and other aspects necessary for our design of the related MAC CE. To be coordinated with online MAC discussion.

 Intended outcome: Approvable LS (with CB) in R2-2403807

 Deadline: Thursday 2024-04-18 1000 CST

[R2-2403807](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403807%20LS%20to%20RAN1%20on%20bandwidth%20aggregation.docx) LS to RAN1 on bandwidth aggregation ZTE LS out Rel-18 NR\_pos\_enh2 To:RAN1 Cc:RAN3

* Approved

Discussion:

CATT note that we did not allocate it as Cc: RAN3. They also think the title should say “reply LS”.

[R2-2402118](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402118_R1-2401801.docx) LS on the bandwidth used in measurements for positioning of RedCap UEs (R1-2401801; contact: Ericsson) RAN1 LS in Rel-18 NR\_pos\_enh2 To:RAN2,RAN4

* Noted

[R2-2403532](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403532%20RedcapLS.docx) Bandwidth used in measurements for positioning of RedCap Ues Ericsson discussion Rel-18

Discussion:

CATT think other positioning methods should be included besides DL-TDOA, and there are other TPs for capturing the RAN1 agreements.

[R2-2402133](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402133_R4-2403654.docx) LS on SRS and PRS bandwidth aggregation feature for positioning (R4-2403654; contact: Ericsson) RAN4 LS in Rel-18 NR\_pos\_enh2 To:RAN1 Cc:RAN2

* Noted

[R2-2403536](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403536%20BWACapLS.docx) On SRS and PRS bandwidth aggregation feature for positioning Ericsson discussion Rel-18

* Noted

Discussion:

Intel think we should wait for the RAN1 reply before implementing anything, since RAN4 are asking RAN1 for guidance. Xiaomi understand RAN1 will update the feature list, and we will update the UE capabilities accordingly. Lenovo also think we should wait for RAN1. Ericsson are OK with waiting but think we need to check whether the band combination list proposed in the contribution is needed.

Draft LS out [measurement report issue to be discussed under LPP agenda item]

[R2-2402258](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402258%20Questions%20on%20PRS%20and%20SRS%20bandwidth%20aggregation.docx) Questions on PRS and SRS bandwidth aggregation CATT LS out Rel-18 NR\_pos\_enh2 To:RAN1 Cc:RAN4

* Noted

Discussion:

Huawei wonder why the spatial relation indication is not supported for the aggregation case, and they think this might be one reason why we need a new MAC CE.

ZTE think the two questions make sense, but they wonder if we should discuss now or under the MAC or LPP contributions. They think for now, the LS is not needed; for the first one, we can follow the parameter list and reuse the legacy resource ID, and for question 2, they think we can decide in the MAC discussion and ask in the already allocated LS on SRS aggregation.

Qualcomm think the questions are not needed; they have the same understanding as ZTE on the first question, and think RAN1 have discussed and not concluded that the resource ID is needed; on the second question, they have the same understanding as Huawei.

CATT are fine if the LS is not agreed for now; the second question can be handled in the already allocated LS and the first one can be discussed from contributions.

vivo think Q1 can be contribution-driven in RAN1.

RIL/open issue lists [note: RRC RIL list is in AI 7.2.5 and SLPP open issue list is in AI 7.2.3]

[R2-2402255](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CDocs%5CR2-2402255.zip) LPP RIL list for Rel-18 Positioning CATT discussion Rel-18 NR\_pos\_enh2

* Revised in R2-2403721

[R2-2403721](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CDocs%5CR2-2403721.zip) LPP RIL list for Rel-18 Positioning CATT discussion Rel-18 NR\_pos\_enh2

Discussion:

Qualcomm think the PRU-related RILs need some more discussion in connection with the definition, the use of locationInformationType, and the capability, and these should not be PropAgree/PropReject yet.

CATT indicate that from the rapporteur’s perspective, they think we can reach a conclusion on these items during the meeting, and the three PRU RILs can be discussed under the contribution from Huawei.

Intel agree that it is OK to move these issues to ToDo.

Agreements:

M001, A006, and H001 move to ToDo.

Other PropAgree/PropReject RILs from R2-2403721 move to Agreed/Rejected respectively.

[R2-2403533](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403533%20RRCOpenIssueList.docx) Open issues list For RRC Positioning Ericsson discussion Rel-18

* Noted

[R2-2402257](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402257%20Leftover%20Issues%20on%20LPP.docx) Leftover Issues on LPP CATT discussion Rel-18 NR\_pos\_enh2

Proposal 1: Stage 3 impact is not specified any more to align PRS to fixed (e)DRX.

Discussion:

ZTE note that this issue is in the WID, and “best effort” does not mean we do not do anything. They understand that the UE reporting an offset is essential.

Intel think having the issue in the WID does not mean we have to have spec impact, and based on the existing on-demand PRS request, they understand that the UE can indicate the periodicity and the slot offset.

Samsung think the slot offset is not there and should be introduced to meet the alignment objective.

OPPO understood from CATT’s paper that the PO of the UE could be derived based on the UE’s ID by the gNB; they agree with CATT’s interpretation.

Ericsson support the proposal and think the UE can already request the start time to align with its DRX cycle.

vivo also agree with the proposal, and think we should avoid introducing a new UE capability to allow a new parameter in the on-demand PRS request. They also think we can follow the guidance from the network vendors.

Intel indicate that in Rel-17 we have two forms of request, and the periodicity and slot offset are there in the request matching a network configuration; the slot offset is not there in the second mode.

CATT understand that the offset can be determined by the RAN implementation without assistance from the UE. Xiaomi agree and support the proposal.

Qualcomm cannot see how the alignment can be supported without information from the UE; they think it is straightforward to add the slot offset in the request.

Ericsson think the start time in the request is sufficient. They also note that PRS is a shared resource and different UEs may request it at different times, and the network has to take all the requests into consideration. Qualcomm think this is not different from Rel-17, where the UE requests something and the network makes an effort to balance all requests; but here they think the start time does not define a slot offset but the time when the configuration should be switched on.

Qualcomm indicate the resolution of the start time is in seconds, so it will not work for a slot offset.

Sony agree the PRS configuration is a shared resource, and they do not see the value in adapting PRS to DRX rather than the other way around. Intel understand this is why it is best effort; the network cannot align exactly for every UE.

CATT agree with Intel and think the server can work with assistance information from the gNB; the PO can be calculated by the server and the RAN. Qualcomm wonder how the LMF would get this information from the gNB. CATT understand that the server could calculate the PO independently based on the UE ID, which could be provided by OAM. Ericsson agree that the configuration is somewhat static and could be described based on OAM.

Qualcomm think this would mean every on-demand PRS request forces alignment with DRX; the server has no way to know for what purpose the UE requests the configuration.

Intel understand the stage 2 only indicates that the UE can make the request so that PRS aligns with DRX, but it does not mean we have to have stage 3 impact to support it. Ericsson agree with Intel.

Chair thinks Qualcomm have a point that the server will not know when the UE needs alignment with DRX. Intel think the server could assume this for a UE supporting LPHAP.

Apple agree with Qualcomm and Samsung and would not like to see the situation where the UE sends the request and does not know what the server is going to do. They think we could ask RAN3 to add signalling support. Intel think anyway the UE does not know what the server will decide.

Samsung agree that the feature can be operated in a best-effort manner, but the UE should be able to provide enough information to the LMF to allow the LMF to align PRS with DRX if the LMF is willing to. Without the slot offset, they see that the LMF does not have enough information to do this.

CATT understand that the UE does not know if the server is going to align with DRX; it just sends the request to the server. So they do not see that Apple’s comment is connected to the availability of the offset.

Ericsson think what we have in the spec now works, but we could have some offline discussion.

Nokia understand we agreed that we align using the UE’s request, so they think it is better to have a standardized solution and they support adding the offset.

vivo recall that we had an LS from SA2 saying that the LMF will send an LPHAP indication to RAN, so the RAN will know that the UE supports LPHAP and can take the decision directly to match the DRX configuration.

Intel think vivo’s suggestion is a valid alternative. Qualcomm understand we agreed that we use the UE-initiated OD-PRS request for this feature, and if we do not support doing that, we should remove it from the stage 2 NOTE. They also note that the WI summary lists the feature.

Intel think we may need to change something in the stage 2 to reflect using the LPHAP indication.

Nokia understood the feature was intended for the UE to request a PRS configuration that matches the DRX, and the solution with the LPHAP indication has the RAN doing it instead.

Intel indicate that we agreed to support PRS aligning with DRX to avoid impact on other WGs, but RAN3 introduced the LPHAP indication and so they can already support the feature from that perspective.

Ericsson agree with Intel and note that for RRC\_INACTIVE, the gNB can match the DRX configuration.

OPPO understand that RAN3 discussed the indication but did not have a specific agreement to use it for alignment, and we should not be pursuing this feature in maintenance.

CATT wonder if we could take a WA for no stage 3 impact. Qualcomm think we do not need a WA in the maintenance phase, and this is a new feature that was not discussed before maintenance. They do think stage 3 support for the feature is missing, however, and if we do not have the stage 3 impact we should back it out from stage 2.

Intel think there was a compromise to reuse the OD-PRS request without stage 3 impact.

Ericsson think not every feature must have stage 3 impact, and we can indicate in stage 2 that the new feature uses legacy signalling; they also think the start time is sufficient.

Show of hands:

Option 1: Stage 3 impact is not specified any more to align PRS to fixed (e)DRX. (8)

Option 2: Introduce a slot offset in stage 3 to support alignment of PRS to fixed (e)DRX. (5)

Intel think we should consider documenting the LPHAP indication in stage 2.

Agreement:

Stage 3 impact is not specified any more to align PRS to fixed (e)DRX. Can consider towards next meeting if some modification is needed to the related NOTE in stage 2.

Proposal 2: Keep the existing IE structure of the request for location+measurements for LocationInformationType in CommonIEsRequestLocationInformation.

Discussion:

Qualcomm think P3 shows why a change is needed; they understand that “location+measurements” is not a location information type but a new reporting attribute, i.e., we should keep the existing location types and add the ability to indicate “include measurements as well”. They see the current structure as mixing concepts in a way that will create a mess, because other characteristics of the request like QoS apply only to the measurements, not to the whole location+measurements combination. They think it would be clearer to have an additional field in the message to request the PRU’s location along with the measurements.

Ericsson think what we have is clear, and this is in fact a new location type because it combines UE-based and UE-assisted; in any case there is a clear description of what is expected from the UE in the field description. They also think the support of shapes is not a problem because the PRU will indicate appropriate shape support.

CATT agree with Qualcomm that the location of the PRU is not based on the measurements, and the uncertainty of the PRU location should be provided to the server. They think it would be valid to have a separate location report for this purpose, and the dual purpose of the location report may be confusing to a reader.

OPPO wonder about P3, if it is truly invalid to have types without uncertainty; they think there may be cases where the precision is very high or not known by the PRU. CATT understand that RAN1 guidance for CPP is that the server needs the uncertainty to adjust the measurements. OPPO think nothing breaks if the location information has very low uncertainty.

Ericsson think the only case without an uncertainty would be if we chose to use a more compact representation; there is always an inherent uncertainty with a location estimate. They also note that there can be mobile PRUs, e.g., using RTK, and they see it as natural to provide the location and measurements in a combined location type in this case.

Intel understand that the mobile PRU case is valid, and the PRU never uses RAT-dependent positioning to derive its location. They think we have not actually excluded the case of the LMF requesting location+measurements for GNSS positioning, even though the UE is guided not to provide both the location and the measurements used to derive it.

Qualcomm see that it is not UE-based/UE-assisted combined, but more like UE-assisted and standalone. They think the current specification is ambiguous and it is not clear what the NOTE means; we also mix the “PRU” and “UE” terminology, and they think we should have a cleaner arrangement of the whole feature.

CATT agree with Qualcomm that it is not UE-based+UE-assisted, because the location given here is not from UE-based positioning. They would prefer a separate IE.

Lenovo understand that we need to differentiate the UE and PRU location information. They wonder if it is clear that the measurements were always taken at the provided location.

vivo think the current structure is good, and to Qualcomm’s concern about ambiguity, they think we will have similar explanatory language if we have a new indication too. They see the current structure as more forward-compatible if we have a feature later than requires both location and measurements. They also understand that the LMF knows the UE is a PRU.

Intel do not see the problem with the existing structure, and they think we would need the same language describing how a new indication applies to a PRU.

Samsung agree with vivo and Intel and think the current specification is not broken.

Qualcomm think the spec is broken in the sense of the PRU terminology.

Ericsson understand that the PRU terminology is used in different ways in the spec. They are not sure we need the term in stage 3 at all and think we could talk about UEs instead.

ZTE think PRU should be kept and this is not a normal UE feature. They indicate that the current spec has a capability for the target device to support location+measurements, and they think this should also be scoped specifically to PRUs.

Lenovo wonder if it is still clear that the location and measurements are linked, i.e., the measurements are always taken at that specific location. Qualcomm think we have not captured this. Nokia think that RAN1 indicated the location and measurements are decoupled, and they think adding a new IE as suggested by Qualcomm would clarify things.

Ericsson note that we have the capability for location+measurements, which informs the LMF effectively that the target device is a PRU, and this is the only place the distinction is captured in LPP.

Qualcomm think a PRU is a UE that supports certain features at the SS level, and it is not a target device or a target UE from the stage 2 point of view, because the PRU is not “to be positioned”.

Ericsson think the location+measurements capability differentiates between PRUs and non-PRUs. They understand that if a random non-PRU UE reports the capability, the LMF will not use it since it knows the UE is not a PRU.

Apple think the capability shall be specific to PRUs.

Nokia think if the capability is specific to PRUs, and we try to avoid referring to PRUs explicitly, it becomes confusing. On the linkage between location and measurements, they think we should check the RAN1 LS; they think it was indicated that the two are decoupled. Lenovo agree that they are decoupled in the sense of computing the location, but the measurements are valid at the location. OPPO think the decoupling is best-effort, in the sense that the location might not be determined at the same instant the measurements were taken. CATT think it is important for accuracy that the measurements be taken at the location.

Qualcomm think the alignment of location and measurements will not be best-effort but should actually be tested.

vivo see that we could capture the description from the RAN1 LS: The measurement and the location information should be decoupled, in the sense that the PRU location information is determined independently of the reported measurements. Qualcomm think we have not captured this restriction, and it is part of the general terminological problem.

CATT think the restriction on decoupling is captured in a NOTE under LocationInformationType. Qualcomm think this NOTE does not capture the intention correctly.

Intel think the remaining concerns are about the PRU terminology generally.

Qualcomm think the PRU is already defined in upper-layer specs, and it is not just a UE that can report location+measurements; a stationary PRU reports its location at registration and does not need to repeat it.

CATT think we can refer to the stage 2 definition of PRU in LPP.

* [AT125bis][401][POS] PRU terminology in LPP (CATT)

 Scope: Evaluate company views on the use of “PRU” terminology in 37.355, including how much detail to capture on the related agreements. Candidates for terminology to be drawn from company contributions.

 Discuss also P3 of R2-2402257.

 Intended outcome: Report to Thursday CB session in R2-2403796

 Deadline: Wednesday 2024-04-17 2000 CST

Agreements:

In this release, the new capability on location+measurements is only for PRUs.

Keep the existing IE structure for LocationInformationType.

When location+measurements are reported by a PRU, the measurements are valid at the reported location.

Proposal 3: The PRU shall not support types in LocationCoordinates including Ellipsoid-Point, Polygon and EllipsoidPointWithAltitude which don't support uncertainty.

[R2-2403796](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403796%20Report%20of%20%5BAT125bis%5D%5B401%5D%5BPOS%5D%20PRU%20terminology%20in%20LPP%20%28CATT%29.docx) Report of [AT125bis][401][POS] PRU terminology in LPP (CATT) CATT discussion Rel-18 NR\_pos\_enh2

Proposal 1: RAN2 to agree the use of “PRU” directly in TS 37.355.

Proposal 2: RAN2 to agree the TP on the related agreements and proposal 1:

[Chair’s note: TP in document, affecting field descriptions in CommonIEsProvideCapabilities and CommonIEsRequestLocationInformation]

Discussion:

Huawei are OK with P1, but they think something could be done in the definition section.

Ericsson agree with Huawei and think we should try to have the definition in terms of LPP rather than just referring to other specs.

CATT understand that the use of the PRU term should be acceptable, and they do not think a new definition is needed since it is defined in stage 2 (38.305 and 23.273). Ericsson think 23.273 just refers to 38.305.

Qualcomm think a definition can be brought in company contributions next meeting.

Huawei think it would be sufficient to add a reference to the definition.

Agreements:

The TP from R2-2403796 is merged into the rapporteur CR.

The term “PRU” can be used in 37.355. FFS if a definition is needed (possibly just a pointer to an existing definition).

M001 remains ToDo.

Rapporteur CRs

[R2-2402256](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402256%20Corrections%20to%20TS%2037.355.docx) Corrections to TS 37.355 CATT CR Rel-18 37.355 18.1.0 0500 - F NR\_pos\_enh2-Core

[R2-2403537](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403537%20RRC.docx) Miscellaneous RRC Positioning Corrections Ericsson CR Rel-18 38.331 18.1.0 4759 - F NR\_pos\_enh2

* [Post125bis][406][POS] Rel-18 positioning SLPP CR (Intel)

 Scope: Update and check the Rel-18 positioning CR to 38.355.

 Intended outcome: Endorsed CR in R2-2403817

 Deadline: Short

* [Post125bis][407][POS] Rel-18 positioning LPP CR (CATT)

 Scope: Update and check the Rel-18 positioning CR to 37.355.

 Intended outcome: Endorsed CR in R2-2403818

 Deadline: Short

* [Post125bis][408][POS] Rel-18 positioning RRC CR (Ericsson)

 Scope: Update and check the Rel-18 positioning CR to 38.331.

 Intended outcome: Endorsed CR in R2-2403819

 Deadline: Short

* [Post125bis][409][POS] Rel-18 positioning MAC CR (Huawei)

 Scope: Update and check the Rel-18 positioning CR to 38.321.

 Intended outcome: Endorsed CR in R2-2403820

 Deadline: Short

* [Post125bis][410][POS] Rel-18 positioning capability CRs (Xiaomi)

 Scope: Update and check the Rel-18 positioning capability CRs to 38.331 and 38.306.

 Intended outcome: Endorsed CRs in R2-2403971 (38.331) and R2-2403972 (38.306)

 Deadline: Short

* [Post125bis][414][POS] Rel-18 positioning SLPP capability CR (Xiaomi)

 Scope: Draft and check a CR for the Rel-18 positioning capability impact to 38.355.

 Intended outcome: Endorsed CR in R2-2403977

 Deadline: Short

* [Post125bis][415][POS] Rel-18 positioning LPP capability CR (Xiaomi)

 Scope: Draft and check a CR for the Rel-18 positioning capability impact to 37.355.

 Intended outcome: Endorsed CR in R2-2403978

 Deadline: Short

### 7.2.2 Stage 2

Impact to 38.300, 37.340, and 38.305. For each specification, a single CR with miscellaneous corrections is requested from the CR rapporteur; minor and editorial issues should be coordinated with the rapporteur and merged into the miscellaneous CR. Larger issues can be discussed based on contributions.

This agenda item may be handled at lower priority.

R2-2402469 Correction to TS 38300 for R18 SL positioning Huawei, HiSilicon CR Rel-18 38.300 18.1.0 0835 - F NR\_pos\_enh2 Revised

* Revised in R2-2403625

[R2-2403625](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403625%20Correction%20to%20TS%2038300%20for%20SL%20positioning.docx) Correction to TS 38300 for SL positioning Huawei, HiSilicon CR Rel-18 38.300 18.1.0 0835 1 F NR\_pos\_enh2 R2-2402469

[R2-2402470](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402470%20Correction%20to%20TS%2038305%20for%20R18%20positioning.docx) Correction to TS 38305 for R18 positioning Huawei, HiSilicon CR Rel-18 38.305 18.1.0 0162 - F NR\_pos\_enh2

[R2-2402646](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402646%20Discussion%20on%20remaining%20corrections%20in%20stage-2.docx) Discussion on remaining corrections in stage-2 ZTE Corporation discussion Rel-18 NR\_pos\_enh2

[R2-2403188](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403188_%28Misc%20Stage%202%20Corrections%29.docx) Miscellaneous Stage 2 Corrections Qualcomm Incorporated CR Rel-18 38.305 18.1.0 0163 - F NR\_pos\_enh2

[R2-2403500](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403500%20Pos%20RRC_INACTIVE.docx) Further clarifications for Positioning in RRC\_INACTIVE state Nokia discussion Rel-18 38.305 NR\_pos\_enh2-Core

[R2-2403535](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403535%20stage2.docx) Text Proposal for Stage2 TS 38.305 Ericsson discussion Rel-18

### 7.2.3 SLPP corrections

Impact to 38.355. A single CR with miscellaneous corrections is requested from the spec rapporteur; minor and editorial issues should be coordinated with the rapporteur and merged into the miscellaneous CR. Larger issues can be discussed based on contributions.

Open issue list

R2-2402414 [Post125][407][POS] 38.355 updated Open Issue list Intel Corporation discussion Rel-18 NR\_pos\_enh2-Core

Agreement:

PropAgree/PropReject RILs from R2-2402414 are moved to Agreed/Rejected respectively.

Rapporteur CR

[R2-2402416](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402416%20Miscellaneous%20corrections%20to%20SLPP%20specification.docx) Miscellaneous corrections to SLPP specification Intel Corporation CR Rel-18 38.355 18.1.0 0003 - F NR\_pos\_enh2-Core

Contributions including RILs identified in R2-2402414 (S101, A006, H016, ZTE004, Q004, Rapp002)

[R2-2403261](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403261-%5BH016%5D%5BZTE004%5D%5BA006%5D%20SLPP%20corrections.docx) [H016][ZTE004][A006] SLPP corrections Nokia discussion Rel-18

Proposal 1: ApplicationLayerID is provided in conjunction with SL-AoA/RTT/TDOA/TOA-ProvideCapabilities.

Proposal 2: RAN2 to consider specifying ApplicationLayerID in CommonIEsProvideCapabilities.

Proposal 3: Include SL PRS resource pool ID along with sl-PRS-ResourceId in the SL positioning measurement report (e.g., Common-SL-PRS-MethodsIEsProvideLocationInformation, SL-AoA-ProvideLocationInformation, SL-RTT-ProvideLocationInformation, SL-TDOA-ProvideLocationInformation, SL-TOA-ProvideLocationInformation).

Proposal 4: RAN2 to add new IE/field under CommonSL-PRS-MethodsIEsProvideAssistanceData for the Anchor UE to indicate its unavailability/availability during an ongoing session. The IE may contain further information regarding unavailability, e.g., time duration, area, etc.

Discussion:

Qualcomm think the ALID is not only needed in ProvideCapabilities; they think it is needed in all SLPP messages to identify the source of the message, so it should be in the header.

Huawei generally agree with Qualcomm, but they think the only change needed is to remove the ALID from the common SL-PRS IE RequestAssistanceData, and it is needed elsewhere. They think this has become more complex than anticipated.

ZTE thought the ALID was already in the RSPP message, but they agree with Qualcomm that the protocol entity should know the destination and it can only get it from the SLPP messages.

Nokia note that we need to consider the possibility of the LMF being the recipient. Qualcomm agree, and they also see that the RSPP message includes the ALID, but the sending UE needs to populate that field and can only get it from the SLPP layer.

Intel think the question is how the receiver can know the ALID of the source, but they do not see the need to carry it in SLPP since CT1 already specified it. They understand that, e.g., the target UE will already know the ALID from each anchor UE after discovery.

Huawei think there are a lot of cases where the ALID can be known from the PC5 link, but there are a lot of different cases and we need to check when the ALID is needed.

Ericsson generally agree with Intel and think discovery will provide the ALID, but we would need to confirm this with CT1. Intel think we could ask SA2/CT1 if the UEs can be assumed to know one another’s ALIDs.

Qualcomm note that discovery will not exist when the LMF is one of the endpoints. vivo think this communication uses legacy procedures and does not need the ALID anyway.

Huawei think Qualcomm’s solution can work, but with a lot of overhead, because it would require multiple SLPP messages to convey the measurements from different UEs in forwarding cases.

Nokia think it is not a big deal to include the identifier, and it would avoid cross-layer information sharing in the implementation.

ZTE think it is not needed for point-to-point communication between UEs, but only for forwarding cases.

Intel think the only issue is when the server sends messages to multiple UEs and needs to identify which message is for which UE, and in this case we already have the ALID provided; the open question is whether we need it elsewhere. They see Huawei’s proposal as different from what is discussed here, related to combining SLPP capabilities from different UEs in a single SLPP message.

Intel think P3 is not aligned with the RAN1 parameter list. ZTE think the pool ID is not meaningful to the LMF. Huawei agree with both Intel and ZTE.

Intel think P4 is more of an optimization.

Agreements:

Add the ALID in the SLPP header.

LS to SA2/CT4/CT1 informing them of this agreement and asking them to take it into account.

* [AT125bis][407][POS] LS to SA2/CT4 on application layer ID (Huawei)

 Scope: Draft an LS to SA2/CT4/CT1 informing them of our agreement on including the ALID in the SLPP header and asking them to take it into account.

 Intended outcome: Approved LS (without CB if possible) in R2-2403809

 Deadline: Thursday 2024-04-18 1000 CST

[R2-2403809](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403809%20LS%20on%20application%20layer%20ID.docx) LS on application layer ID Huawei LS out Rel-18 NR\_pos\_enh2 To:SA2, CT4, CT1

* Approved (email discussion [AT125bis][407])

[R2-2403189](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403189_%28SLPP%29.docx) Remaining issues for SLPP Qualcomm Incorporated discussion

Proposal 2: Delete/void the empty SLPP clause 6.3.3.

Proposal 3: Keep the (currently) empty IEs in SLPP.

Proposal 4: Delete the text "when SLPP operates over the control plane" in the field description for the acknowledgement field in the SLPP-Message.

Proposal 5: Use the LPP value ranges for the expected AoA uncertainty (i.e., +/- 60 degrees for Azimuth, and +/- 30 degrees for the Zenith).

Proposal 6: The Zenith angle value range is from 0 to 180 degrees.

Proposal 7: Delete the fields sl-AzimuthAoA-LCS-GCS-Translation and sl-ZenithAoA-LCS-GCS-Translation in IE SL-AoA-AdditionalPath.

Proposal 8: Move the sl-RTD-Info in IEs SL-TDOA-ProvideAssistanceData and SL-TOA-ProvideAssistanceData one level up in the ASN.1 (i.e., directly in IEs SL-TDOA-ProvideAssistanceData and SL-TOA-ProvideAssistanceData).

Proposal 9: Align the sl-PRS-BW definition IE SL-PRS-TxInfo with the corresponding definition in RRC.

Proposal 10: Restore the field sl-TimingQuality in IE SL-RTT-AdditionalPath and remove the field tx-TimeInfo in IE SL-RTT-AdditionalPath.

Proposal 11: Restore the field sl-TimingQuality in IE SL-TDOA-AdditionalPath and SL-TOA-AdditionalPath.

Proposal 12: The assistance data request IEs includes the application layer ID(s) of the UE(s) for which the assistance data are requested.

Discussion:

Intel note P5 differs from the RAN1 parameter list (but follows LPP), and we would need to inform RAN1.

Huawei wonder if the sequence number and ACK fields should be optional. Qualcomm understand that support of reliable delivery is mandatory, but use of it is not mandatory for every message, so the fields should be optional.

Intel think P12 is an optimization and the server UE can decide which anchor UEs to provide AD for.

MediaTek and Samsung understood the server UE would decide which anchor UEs. Qualcomm think the AD signalling is overloaded and this is needed to disambiguate.

Agreements:

Delete/void the empty SLPP clause 6.3.3.

Keep the (currently) empty IEs in SLPP.

Delete the text "when SLPP operates over the control plane" in the field description for the acknowledgement field in the SLPP-Message.

Use the LPP value ranges for the expected AoA uncertainty (i.e., +/- 60 degrees for Azimuth, and +/- 30 degrees for the Zenith). LS to RAN1 to notify them of the difference.

The Zenith angle value range is from 0 to 180 degrees. Inform RAN1 of the divergence from RAN3 value range.

Delete the fields sl-AzimuthAoA-LCS-GCS-Translation and sl-ZenithAoA-LCS-GCS-Translation in IE SL-AoA-AdditionalPath.

Move the sl-RTD-Info in IEs SL-TDOA-ProvideAssistanceData and SL-TOA-ProvideAssistanceData one level up in the ASN.1 (i.e., directly in IEs SL-TDOA-ProvideAssistanceData and SL-TOA-ProvideAssistanceData).

Align the sl-PRS-BW definition IE SL-PRS-TxInfo with the corresponding definition in RRC.

Restore the field sl-TimingQuality in IE SL-RTT-AdditionalPath and remove the field tx-TimeInfo in IE SL-RTT-AdditionalPath.

Restore the field sl-TimingQuality in IE SL-TDOA-AdditionalPath and SL-TOA-AdditionalPath.

* [AT125bis][408][POS] LS to RAN1 on SLPP agreements (Intel)

 Scope: Draft an LS notifying RAN1 of our agreements on SLPP and flagging where we depart from the RAN1 parameter list.

 Intended outcome: Approved LS (without CB if possible) in R2-2403810

 Deadline: Thursday 2024-04-18 2000 CST

R2-2403810 (LS from [408]) Intel LS out Rel-18 NR\_pos\_enh2 To:RAN1

* [AT125bis][409][POS] Remaining SLPP issues (Intel)

 Scope: F2F offline to discuss remaining open issues on SLPP

 Intended outcome: Report to Thursday CB session in R2-2403811

 Schedule: Wednesday 2024-04-17 1730-1830 in Brk2

 Deadline: Thursday 2024-04-18 1000 CST

[R2-2403811](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403811_%5BAT125bis%5D%5B409%5D%5BPOS%5D%20Remaining%20SLPP%20issues%20%28Intel%29-report%20v01.docx) [AT125bis][409][POS] Remaining SLPP issues (Intel) Intel Corporation discussion Rel-18 NR\_pos\_enh2-Core

Proposal 1: For the issue “The SL-PRS Rx UE reports measurements for multiple Rx ARP-IDs in a single measurement report”, wait for RAN1 feedback.

Discussion:

Intel indicate that this is resolved in RAN1 and we will need to discuss the signalling next meeting.

Proposal 2: P5 on Assistance data for Tx and Rx UE from R2-2402415 is not pursued.

Proposal 3: to keep consistence with RRC, Introduce the requested periodicity in SL-PRS-TxInfo.

Proposal 4: supported/required positioning method for server in Metadata is not pursued.

Proposal 5: P2 and P3 in R2-2402937 on anchor UE location is not pursued.

Proposal 6: R2-2402555 on the maximum number of SL-PRS-Resource IDs is not pursued.

Proposal 7: Change rtd-BetweenAnchorUEs, referenceRTD-Info, rtd-Quality and syncSourceType in 38.355 SL-RTD-Info as OPTIONAL IE

Proposal 8: Add LCS to GCS translation parameter together with the expected SL Azimuth AOA and SL Zenith AOA in assistanceinforamtion, i.e. P1 in R2-2402707.

Proposal 9: For transaction ID issue, Leave it to UE implementation without spec impact if issue exists.

Proposal 10: For session ID issue, Leave it to UE implementation without spec impact if issue exists.

Proposal 11: The range of rangeResult is set to (0, 134217727) to align with the range of relative location”. ,i.e. P5 in R2-2402707

Proposal 12: The range of uncertaintySemiMajor, uncertaintySemiMinor and uncertaintyAltitude is set to (0, 255). And the notes of the number of bits occupied by x/y/z IEs should be corrected.” ,i.e. P6 in R2-2402707

Proposal 13: Agreed to introduce relative velocity. TP to be provided in next meeting by companies. (Qualcomm)

Proposal 14: Introduce error IEs. FFS on what error causes should be selected, TP is to be discussed in next meeting. (Lenovo)

Proposal 15: P12 in R2-2403189 on The assistance data request IEs includes the application layer ID(s) of the UE(s) for which the assistance data are requested is not purused.

Proposal 16: Ask RAN1 whether “upper layer” in their agreement “• Support SL-PRS transmission triggering at the physical layer by the UE’s own higher layers” is SLPP or not, to be discussed in [408].

Discussion:

On P16, Intel indicate that RAN1 have already agreed that the “higher layer” is SLPP, so they understand no related question is needed.

Agreements:

P5 on Assistance data for Tx and Rx UE from R2-2402415 is not pursued.

To keep consistence with RRC, Introduce the requested periodicity in SL-PRS-TxInfo.

Supported/required positioning method for server in Metadata is not pursued.

P2 and P3 in R2-2402937 on anchor UE location is not pursued.

R2-2402555 on the maximum number of SL-PRS-Resource IDs is not pursued.

Change rtd-BetweenAnchorUEs, referenceRTD-Info, rtd-Quality and syncSourceType in 38.355 SL-RTD-Info as OPTIONAL IE

Add LCS to GCS translation parameter together with the expected SL Azimuth AOA and SL Zenith AOA in assistanceinforamtion, i.e. P1 in R2-2402707.

For transaction ID issue, Leave it to UE implementation without spec impact if issue exists.

For session ID issue, Leave it to UE implementation without spec impact if issue exists.

The range of rangeResult is set to (0, 134217727) to align with the range of relative location”. ,i.e. P5 in R2-2402707

The range of uncertaintySemiMajor, uncertaintySemiMinor and uncertaintyAltitude is set to (0, 255). And the notes of the number of bits occupied by x/y/z IEs should be corrected.” ,i.e. P6 in R2-2402707

Agreed to introduce relative velocity. TP to be provided in next meeting by companies.

Introduce error IEs. FFS on what error causes should be selected, TP is to be discussed in next meeting.

P12 in R2-2403189 on The assistance data request IEs includes the application layer ID(s) of the UE(s) for which the assistance data are requested is not purused.

[R2-2402415](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402415%20SLPP%20related%20open%20issues.docx) Further considerations on SLPP open issues Intel Corporation discussion Rel-18 NR\_pos\_enh2-Core

[R2-2402647](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402647%20Discussion%20on%20remaining%20corrections%20in%20SLPP.docx) Discussion on remaining corrections in SLPP ZTE Corporation discussion Rel-18 NR\_pos\_enh2

Other contributions

[R2-2402465](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402465%20Discussion%20on%20the%20remaining%20issues%20for%20R18%20SLPP_v.docx) Discussion on the remaining issues for R18 SLPP Huawei, HiSilicon discussion Rel-18 NR\_pos\_enh2 Late

[R2-2402517](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402517%20Discussion%20on%20the%20necessity%20of%20including%20the%20server%20UE%20positioning%20method%20in%20the%20discovery%20message.docx) Discussion on the necessity of including the server UE positioning method in the discovery message OPPO, LG discussion Rel-18 NR\_pos\_enh2 R2-2401464

[R2-2402555](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402555%20Correction%20on%20the%20maximum%20number%20of%20SL-PRS%20resource%20ID%20in%20ARP%20info.docx) Correction on the maximum number of SL-PRS resource ID in ARP info vivo draftCR Rel-18 38.355 18.1.0 F FS\_NR\_pos\_enh2

[R2-2402707](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402707%20Discussion%20on%20SLPP%20open%20issues-v1.doc) Discussion on SLPP open issues Xiaomi discussion Rel-18 NR\_pos\_enh2

[R2-2402792](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402792_SLPP%20error%20messaging.doc) Discussion on error messaging in SLPP Lenovo discussion Rel-18 NR\_pos\_enh2

[R2-2402937](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402937%20Further%20discussion%20on%20anchor%20UE%20selection.docx) Further discussion on anchor UE selection LG Electronics Inc. discussion Rel-18

[R2-2403231](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403231%20Inclusion%20of%20the%20UE%20positioning%20method%20in%20the%20discovery%20message.docx) Inclusion of the Server UE Positioning Method in the Discovery Message CEWiT discussion

[R2-2403424](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403424_Remaining%20issues%20on%20SLPP.docx) Remaining issues on SLPP Samsung discussion Rel-18 NR\_pos\_enh2

R2-2403534 Discussion on SLPP RIL issues Ericsson discussion Rel-18 Late

[R2-2403541](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403541%20SLPP.docx) SLPP RIL Issue Ericsson discussion Rel-18

Not available/Withdrawn

[R2-2402899](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402899-38355-misc.docx) Miscellaneous SLPP corrections Apple discussion Rel-19 NR\_pos\_enh2 Withdrawn

### 7.2.4 LPP corrections

Impact to 37.355. A single CR with miscellaneous corrections is requested from the CR rapporteur; minor and editorial issues should be coordinated with the rapporteur and merged into the miscellaneous CR. Larger issues can be discussed based on contributions.

Prioritised RIL ToDo items: Q014, Q019, Q024, Q028 [note H006 and N013 are waiting for input from RAN1]

[R2-2403190](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403190_%28LPP%20Corrections%29.docx) [RILs Q014 Q019, Q024, Q028] LPP Corrections Qualcomm Incorporated discussion

Proposal 1: Regarding Q014 (IntegrityLocationBounds), agree the Text Proposal in section 2.1.2. [Chair’s note: description of subfields in field description table]

Proposal2: Regarding Q019, Q028 (nr-RSTD-BasedOnAggregatedResources, nr-UE-RxTxTimeDiffBasedOnAggregatedResources), agree the Text Proposal in section 2.2.2. [Chair’s note: clarification of which measurements are based on aggregation]

Proposal 3: Regarding Q024 (nr-DL-PRS-RxHoppingRequest), agree the Text Proposal in section 2.3.2. [Chair’s note: indicating for which measurements the hopping request is applicable]

Proposal 4: Regarding nr-DL-PRS-RSCPD-Request/nr-DL-PRS-RSCP-Request, agree the Text Proposal in section 3.1.2. [Chair’s note: new issue on signalling format for RSCPD request]

Proposal 5: Regarding IE description for SpatialDelta in IE GNSS-LOS-NLOS-GridPoints, agree the Text Proposal in section 3.2.2. [Chair’s note: actually a TEI18 issue, on an IE description for SpatialDelta that should be included in a field description instead]

Discussion:

CATT think there is a concern with P3 for the DL-PRS with Rx frequency hopping; they understand that the TP does not match the RAN1 parameter list in ASN.1 structure. Qualcomm think the OPTIONAL flags combine correctly.

Ericsson think on P1, there is a related discussion on the correlation times.

Intel think there are some ASN.1 errors in the TP.

CATT think for the DL-AoD correction, we should wait to capture it until we have the reply LS from RAN1.

Nokia think the change to add RSCPD to the requested measurements bitmap may not be ideal and the joint measurements bit should be moved out of the BIT STRING. Qualcomm agree that the joint measurements bit probably can be removed.

Huawei think in the CA measurement report, the same issue with duplicated signalling arises when the UE reports the linkage. Qualcomm think this is not duplicated and the current rapporteur CR is right.

Agreements:

TPs from R2-2403190 are agreeable in principle and can be taken into the rapporteur CR discussion. The corresponding RILs go to Agreed.

DL-AoD aspects will not be captured until we have a reply from RAN1; the existing DL-AoD part can be removed pending the reply.

Identified open issues: PRU terminology (P1); BWA capability alignment (P2) if time permits

[R2-2402466](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402466%20Discussion%20on%20the%20remaining%20issues%20for%20R18%20LPP.docx) Discussion on the remaining issues for R18 LPP Huawei, HiSilicon discussion Rel-18 NR\_pos\_enh2 Late

Proposal1: Specify PRU in the LPP spec as a feature that a UE supports, not as a new UE type/LPP signaling entity. Adopts the following changes [Chair’s note: changes to describe “supporting PRU” in field description of locationInformationType]

Proposal2: Move the two fields posSRS-BWA-RRC-Connected-r18 and posSRS-BWA-IndependentCA-RRC-Connected-r18 from IE SRS-CapabilityPerBand-r16 to SRS-PosResourcesPerBand-r16. Adopt the TP in Annex A.

Discussion:

Xiaomi think the proposal is correct and can be captured in the capability CR.

Agreement:

Move the two fields posSRS-BWA-RRC-Connected-r18 and posSRS-BWA-IndependentCA-RRC-Connected-r18 from IE SRS-CapabilityPerBand-r16 to SRS-PosResourcesPerBand-r16.

Identified open issues: PRS-DRX alignment (P1-P3) if not resolved under open issues document; CPP measurement window (P4) if time permits

[R2-2402648](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402648%20Discussion%20on%20remaining%20corrections%20in%20LPP.docx) Discussion on remaining corrections in LPP ZTE Corporation discussion Rel-18 NR\_pos\_enh2

Proposal 1: In LPP on-demand PRS request message, support UE to request one or more PRS time offset(s) associated with each requested PRS periodicity, to better align the actual paging location.

Proposal 2: In LPP on-demand PRS request message, support UE to request separate PRS periodicities per PFL in order to align with the paging cycle inside-PTW and outside-PTW, respectively.

Proposal 3: Support LMF to include UE’s requested PRS periodicities or PRS time offsets in the NRPPa PRS CONFIGURATION REQUEST message. Send LS to RAN3 to inform the NRPPa impact.

Proposal 4: In NR-DL-PRS-MeasurementTimeWindowsConfig, change need ON to need OR for the IE nr-PeriodicityAndSlotOffsetTimeWindow-r18, and add a slot offset IE dedicated for one-shot window configuration. Take the corresponding TP.

Discussion:

Intel think one-shot configuration normally uses Need ON intentionally. ZTE understand that if the IE is absent the periodicity still holds. CATT understand that one-shot support was intended.

Huawei consider that configuration and the measurement request are different; they think that the measurement request is one-shot and the current text is fine.

vivo think the intention is valid and the structure could be changed.

Agreement:

NR-DL-PRS-MeasurementTimeWindowsConfig should support one-shot window configuration. How to capture this in ASN.1 and field descriptions can be discussed in CR implementation.

Potential LS to RAN1 on bandwidth aggregation

R2-2402259 Discussion on measurement report for the bandwidth aggregation CATT discussion Rel-18 NR\_pos\_enh2

Proposal 1: The used PRS resource for measurement within each aggregated PRS resource set can be indicated to LMF within the measurement report.

Proposal 2: LS to RAN1 to ask them whether UE also need to indicate the used PRS resource for measurement within each aggregated PRS resource set when reporting the measurement results to LMF.

Discussion:

ZTE think the aggregated PRS resource can be reported, but not adding a new PRS resource in Rel-18; they understand that this would conflict with the RAN1 parameter list.

Qualcomm think there is no problem to solve; we only have to indicate the set ID, and they understand RAN1 concluded that the resource ID is not needed.

CATT think that because resource ID is in the time domain, if only the set ID is indicated, the time domain is not accurate enough.

Huawei think this could be proposed in RAN1 and they will update the list if needed.

Other contributions (all with ASN.1 impact)

[R2-2402556](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402556%20Correction%20on%20RSCP%20measurement%20info%20in%20PRU%20DL%20info.docx) Correction on RSCP measurement info in PRU DL info vivo draftCR Rel-18 37.355 18.1.0 F FS\_NR\_pos\_enh2

[R2-2402998](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402998_LPP_Open_Issue.docx) LPP Stage 3 Open Issue - CPP Lenovo discussion Rel-18

[R2-2403191](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403191_%28LPP%20Open%20Issues%29.docx) LPP Open Issues: PRU Operation and DL-PRS–DRX Alignment Qualcomm Incorporated discussion

[R2-2403501](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403501%20NR-PRU-DL-Info.docx) Corrections to NR-PRU-DL-Info IE Nokia discussion Rel-18 37.355 NR\_pos\_enh2-Core

[R2-2403502](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403502%20ReqLocInfo_CPP_BWA.docx) Request for carrier phase measurement or joint measurement and clarification for time window configuration Nokia discussion Rel-18 37.355 NR\_pos\_enh2-Core

[R2-2403540](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403540%20LPP.docx) LPP RIL issue Ericsson discussion Rel-18

* [AT125bis][406][POS] Remaining LPP ASN.1 proposals (CATT)

 Scope: F2F offline to briefly check the proposed ASN.1 changes to LPP and determine if some of them are essential and agreeable.

 Intended outcome: Report to Thursday CB session in R2-2403808; additional TP allocated during the discussion to be provided in R2-2403812

 Schedule: 1000-1100 Wednesday 2024-04-17 in Brk3

 Deadline: Thursday 2024-04-18 1000 CST

[R2-2403808](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403808%20Report%20of%20%5BAT125bis%5D%5B406%5D%5BPOS%5D%20Remaining%20LPP%20ASN.1%20proposals%20%28CATT%29.docx) Report of [AT125bis][406][POS] Remaining LPP ASN.1 proposals (CATT) CATT discussion Rel-18 NR\_pos\_enh2

[RSCP measurement info in PRU DL info]

Proposal 1: TP in R2-2402556 is not agreed.

[CPP open issues]

Proposal 2: TP in R2-2402998 is not agreed.

[NR-PRU-DL-Info]

Proposal 3: P2 in R2-2403501 will be merged in LPP CR and send an LS by Nokia to RAN1.

 Q1: Should measurement results in DL-AoD (in nr-PRU-DL-AoD-MeasInfo-r18) be included in PRU info (in NR-PRU-DL-Info)?

Discussion:

ZTE checked with RAN1 and understand that RAN1 intend to include it in NR-PRU-DL-Info in the parameter list, so they think no LS may be needed. They also indicate that they will submit an alignment CR to RAN1.

Nokia have a different interpretation and would prefer to get a formal reply from RAN1.

CATT think we can wait for the revised parameter list. Nokia think if we wait until next meeting and then need to ask the question, we would lose time.

CATT think there will be no LPP impact, because it is currently aligned with the RAN1 LS (not the parameter list).

Huawei are OK to send the LS.

[Request for carrier phase measurement and joint measurement]

Proposal 4: TP on nr-RequestedMeasurements and jointMeasurementsReq in R2-2403502 can be merged to LPP CR.

[Time window clarification]

Proposal 5: TP on nr-DL-PRS-MeasurementTimeWindowsConfig in R2-2403502 is not pursued in LPP protocol.

[TRP/ARP error source correlation time]

Proposal 6: Agree three levels for the correlation time in principle and update TP in R2-2403540 for CB.

Proposal 7: TP in R2-2403540 is not agreed.

Agreements:

TP in R2-2402556 is not agreed.

TP in R2-2402998 is not agreed.

P2 in R2-2403501 will be merged in LPP CR and send an LS by Nokia to RAN1.

 Q1: Should measurement results in DL-AoD (in nr-PRU-DL-AoD-MeasInfo-r18) be included in PRU info (in NR-PRU-DL-Info)?

TP on nr-RequestedMeasurements and jointMeasurementsReq in R2-2403502 can be merged to LPP CR.

TP on nr-DL-PRS-MeasurementTimeWindowsConfig in R2-2403502 is not pursued in LPP protocol.

Agree three levels for the correlation time in principle. TP in R2-2403540 is revised.

* [Post125bis][413][POS] LS to RAN1 on DL-AoD measurements in PRU info (Nokia)

 Scope: Draft an LS to RAN1 asking the question:

Q1: Should measurement results in DL-AoD (in nr-PRU-DL-AoD-MeasInfo-r18) be included in PRU info (in NR-PRU-DL-Info)?

 Intended outcome: Approved LS

 Deadline: Short

[R2-2403812](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403812%20Integrity%20TRP%20correlation%20time.docx) RAT-dep Integrity TRP/ARP error source correlation time correction Ericsson discussion Rel-18

Discussion:

CATT note that “DL-PRS” appears twice in the field names.

Agreement:

TP from R2-2403812 is merged into the LPP rapporteur CR.

### 7.2.5 RRC corrections

Impact to 38.331, except for UE capabilities. A single CR with miscellaneous corrections is requested from the CR rapporteur; minor and editorial issues should be coordinated with the rapporteur and merged into the miscellaneous CR. Larger issues can be discussed based on contributions.

RIL list

ToDo RILs: H905, H906, H924, X041, H914

[R2-2403530](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CDocs%5CR2-2403530.zip) RRC Positioning RIL List Ericsson discussion Rel-18 Late

* Revised in R2-2403791

[R2-2403791](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CInbox%5CR2-2403791.zip) RRC Positioning RIL List Ericsson discussion Rel-18

* Revised in R2-2403795

[R2-2403795](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CInbox%5CR2-2403795.zip) RRC Positioning RIL List Ericsson discussion Rel-18

Discussion:

Samsung think on S209, the RIL is related to including the SRS configuration in HO preparation, and they think this is essential, so they would like to move it to ToDo. ZTE think the neighbour gNB should definitely know the configuration, but maybe it can be controlled by the LMF rather than sent in HO preparation, and they think RAN3 can handle it. Qualcomm think RAN3 are discussing it, but we could leave the item open. ZTE think we do not need to have two parallel solutions, and we could close the RIL and let RAN3 discuss it. Ericsson agree with ZTE and think it is mainly related to the context fetch; they see that if RAN3 determine there is RAN2 impact, they can trigger us to work on it. Ericsson also think it is additional functionality rather than an ASN.1 review correction.

Samsung understand that RAN3 have not agreed anything, and maybe we can check the progress and come back to the issue later. They also think the gNB needs to be aware of whether the UE has a valid preconfiguration in the cell.

OPPO are concerned about O800 and do not understand the rationale since we did not discuss SL positioning during handover. Ericsson think this could go to ToDo, but some more motivation and impact analysis should be provided; the current CR follows the sidelink communication model.

Agreements:

Issue S209 is closed as proposed in the RIL list, but if RAN3 do not resolve the issue of enabling the gNB to receive the UE’s SRS preconfiguration, RAN2 intend to do the necessary work.

Issue O800 moves to ToDo.

Other PropAgree/PropReject RILs in R2-2403795 are confirmed.

ToDo RIL issues: H905, H906, H914, H924

[R2-2402468](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402468%20Discussion%20on%20the%20remaining%20issues%20for%20R18%20RRC.docx) Discussion on the remaining issues for R18 RRC Huawei, HiSilicon discussion Rel-18 NR\_pos\_enh2 Late

Proposal1: Release SRS linkage configuration for CA positioning when SRS release request is received from lower layers. [H905]

Proposal2: The access category for RRCResumeRequest when triggered by SRS configuration activation request is provided by the upper layer. [H906]

Discussion:

ZTE think there is another case when the validity area changes, so this is an RRC decision, not from upper layer. Huawei understand there are three cases, and the proposal attempts to address the case when there is no positioning session ongoing and the resume request is triggered by SRS configuration activation request.

vivo have some sympathy with ZTE’s comments and think there are other cases; they would prefer to see a unified design.

OPPO think ZTE and Huawei are addressing different cases.

Proposal3: Remove SL-PRS-Priority and SL-PRS-DelayBudget from the UEAssistanceInformation RRC message. [H914]

Discussion:

Qualcomm wonder about the bandwidth. Huawei clarify that it is already there based on an LS from RAN1.

vivo wonder why the proposal is necessary. Huawei clarify that the parameters are included in the SUI that has preceded this procedure, and this aligns with the sidelink communication case. vivo understand that SUI is used to indicate interest in transmitting PRS, and UAI is for the resource request; they think these fields should be in the UAI, not the SUI.

Intel think we should remove the fields from SUI to avoid redundancy.

Huawei think we could keep both.

Samsung think there is no clear mapping between the QoS information and the UAI request, so it may not be an issue if there is duplication, but the question is whether the parameters are needed in UAI.

ZTE understand that the interested frequency and requested traffic in UAI should be bound by the QFI identity, but here we do not have the same linkage, so we can keep the fields in both messages.

vivo intend to introduce an identity to link the characteristics between the messages. OPPO agree with vivo’s intention. Intel think there is a majority to keep the parameters in UAI, and the purposes of the messages are different, so we could keep both.

Proposal6: Move the TA configuration from SRS-PosRRC-InactiveValidityAreaPreConfigList to srs-PosRRC-Inactive-v1800. [H924]

Discussion:

Ericsson think the question is whether we need separate TA configurations for each validity area. Huawei think it would be OK to keep it per validity area, but it should also be available when not preconfigured.

Agreements:

Release of SRS linkage configuration for CA positioning when SRS release request is received from lower layers can be discussed in CR implementation. H905 remains ToDo.

The access category for RRCResumeRequest is provided by the upper layer when the RRCResumeRequest is triggered by SRS configuration activation request. H906 moves to Agreed.

SL-PRS-Priority and SL-PRS-DelayBudget are kept in the UEAssistanceInformation RRC message. H914 moves to Rejected.

Bandwidth is added in SUI message. X041 moves to Agreed.

H924 moves to Rejected.

ToDo RIL issue: X041

[R2-2403718](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403718%20%5BX041%5D%20Correction%20on%20SL-PRS-QoS-Info.doc) [X041] Correction on SL-PRS-QoS-Info Beijing Xiaomi Mobile Software discussion Rel-18

Proposal 1 [X041] include SL-PRS bandwidth in the SL-PRS-QoS-Info-r18.

SRS activation and release

[R2-2402261](file:///C%3A%5C%5CUsers%5C%5Cmtk16923%5C%5CDocuments%5C%5C3GPP%20Meetings%5C%5C202404%20-%20RAN2_125bis%2C%20Changsha%5C%5CExtracts%5C%5CR2-2402261%20Discussion%20on%20the%20release%20of%20SRS%20configuration.docx%22%20%5Co%20%22C%3AUsersmtk16923Documents3GPP%20Meetings202404%20-%20RAN2_125bis%2C%20ChangshaExtractsR2-2402261%20Discussion%20on%20the%20release%20of%20SRS%20configuration.docx) Discussion on the release of SRS configuration CATT, Samsung, LG Electronics Inc, Xiaomi discussion Rel-18 NR\_pos\_enh2 R2-2400202

Proposal 1: Further discuss the following candidate solutions.

－ Option 1: UE does not release the SRS when srs-ValidityAreaTimeAlignmentTimer expires. Introduce a separate validity timer for the SRS resource to indicate how long the resource is valid for the UE.

－ Option 2: UE releases the SRS when srs-ValidityAreaTimeAlignmentTimer expires. When the UE receives Timing Advance Command, the anchor gNB is indicated that the timer at the UE side is restarted.

Discussion:

CATT think there are issues with option 2 of P1. Ericsson understood that we decided to have explicit release only, and they think part of P2 is already implemented. Ericsson see RAN3 impact if we take option 1 of P1, but they could accept it in principle.

Huawei think the baseline for the non-preconfigured case is to follow Rel-17, where when the TAT timer expires, the lower layer indicates the release. For P2, they understand the issue is that the network does not know the UE has reselected.

CATT indicate we did not discuss this situation last meeting, but we did agree to have the explicit release; they understand we did not exclude having other mechanisms. They think there are RAN3 impacts from either option; in option 2, the anchor gNB should know that the timer is restarted.

Intel note that we have discussed this for several meetings and the explicit release was a compromise. They think this solution works and nothing else needs to be introduced, especially during the ASN.1 review; they see this as an optimization.

CATT think the need to inform the anchor gNB is not related to the explicit release mechanism; they see that there is still an issue when the UE releases the SRS without informing the gNB.

ZTE understand the current spec does not say the UE releases the SRS when the timer expires, only when the network explicitly releases it with signalling. They think the current spec has nothing wrong, and the timer is long enough that reconfigurations will not be frequent and not have a big battery impact.

Ericsson wonder if the network has configured a long TAT and the UE moves out of the validity area, what happens. They understand that currently the network will continue trying to monitor. CATT think it is a power saving issue.

Xiaomi think the UE should not be required to store the configuration for a long time, and the explicit release mechanism increases RRC and NRPPa signalling overhead.

Intel think there is a balance between resource efficiency and power usage, and the network needs to manage the resources according to its priorities. They do not think the extra overhead is a big issue over the lifetime of the timer.

Intel do not think we could reach consensus to introduce the new timer. Ericsson have a similar view, and they understand that RAN3 are also discussing the issue this meeting; if RAN3 decide a timer is needed, we would have to do something. Intel think RAN3 should not be deciding this since it is a RAN2 feature.

CATT intend the new timer to be a “lifetime” timer for the SRS configuration, and they think this is a straightforward solution.

Proposal 2: When UE resumes to a cell out of the validity area of non-preconfigured SRS, it releases the non-preconfigured SRS configuration and inform MAC layer to stop the inactivePosSRS-ValidityAreaTAT. Adopt the TP in Annex.

Discussion:

Intel think the configuration does not need to be released, but if the UE enters a new area, the UE needs to indicate to the network that it will use the new configuration, per existing agreements. Ericsson have a similar view and think the configuration need not be released because the UE might come back to the previous validity area.

CATT see the resources being wasted if the UE does not come back.

Huawei note that in Rel-17 we did not release SRS, and it seems not to be a problem. CATT think the Rel-18 areas will be larger.

Intel think we need to ask if anything is broken with the current spec. Here they think nothing is broken and the proposal is more of an optimization. They think the resource management can be left to network implementation.

Proposal 3: Send an LS to RAN3 on RAN2’s agreement for their discussion on possible protocol impacts.

[R2-2402260](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402260%20Activation%20of%20SP%20SRS%20When%20Configured%20with%20Validity%20Area.docx) Activation of SP SRS When Configured with Validity Area CATT discussion Rel-18 NR\_pos\_enh2

[R2-2402832](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402832%20Discussion%20on%20remaining%20issues%20for%20the%20SRS%20with%20valdity%20area.doc) Discussion on the remaining issues for the SRS with validity area Xiaomi discussion

[R2-2403416](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403416_%5BS208%5D%5BS209%5D%5BS210%5DRemaining%20issues%20on%20RRC.docx) [S208][S209][S210] Remaining issues on RRC Samsung discussion Rel-18 NR\_pos\_enh2

SUI and UAI contents

[R2-2402417](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402417%20%5BI166-I171%5D.docx) [I166-I171] Further considerations on parameters in SUI and UAI Intel Corporation discussion Rel-18 NR\_pos\_enh2-Core

[R2-2402333](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402333%20Discussion%20on%20remaining%20RRC%20issues%20on%20the%20positioning.docx) Discussion on remaining RRC issues on the positioning OPPO discussion NR\_pos\_enh2

[R2-2402557](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402557%20Discussion%20on%20SUI%20content%20for%20Sidelink%20Positioning.docx) Discussion on SUI Content for Sidelink Positioning vivo discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2402649](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402649%20Discussion%20on%20remaining%20corrections%20in%20RRC.docx) Discussion on remaining corrections in RRC ZTE Corporation discussion Rel-18 NR\_pos\_enh2

Other contributions

[R2-2402558](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402558%20RRC%20Correction%20for%20UE%20not%20supporting%20NR%20sidelink%20positioning%20in%20limited%20service%20state.docx) RRC correction for UE not supporting sidelink positioning in limited service state in 5GS vivo draftCR Rel-18 38.331 18.1.0 F FS\_NR\_pos\_enh2

[R2-2403194](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403194_%28LPHAP%29.docx) Remaining issues for pre-configured SRS Qualcomm Incorporated discussion

### 7.2.6 MAC corrections

Impact to 38.321. A single CR with miscellaneous corrections is requested from the CR rapporteur; minor and editorial issues should be coordinated with the rapporteur and merged into the miscellaneous CR. Larger issues can be discussed based on contributions.

Rapporteur CR

[R2-2402467](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402467%20Rapporteur%20MAC%20CR%20for%20R18%20positioning.docx) Rapporteur MAC CR for R18 positioning Huawei, HiSilicon CR Rel-18 38.321 18.1.0 1794 - F NR\_pos\_enh2

Other contributions

[R2-2402650](file:///C%3A%5C%5CUsers%5C%5Cmtk16923%5C%5CDocuments%5C%5C3GPP%20Meetings%5C%5C202404%20-%20RAN2_125bis%2C%20Changsha%5C%5CExtracts%5C%5CR2-2402650%20Discussion%20on%20remaining%20corrections%20in%20MAC.docx%22%20%5Co%20%22C%3AUsersmtk16923Documents3GPP%20Meetings202404%20-%20RAN2_125bis%2C%20ChangshaExtractsR2-2402650%20Discussion%20on%20remaining%20corrections%20in%20MAC.docx) Discussion on remaining corrections in MAC ZTE Corporation discussion Rel-18 NR\_pos\_enh2

Proposal 1: In shared pool, specify:

 The maximum number of parallel SL processes that a UE can use to perform SL-PRS transmission, the candidate value can be {2,4,6,8,12,16};

 The maximum number of parallel SL processes that a UE can use to perform SL-PRS transmission using scheme 2, the candidate value can be {1,2,4}.

Proposal 2: In dedicated pool, specify:

 The maximum number of parallel SL-PRS transmission for dedicated pool, the candidate value can be {2,4,6,8,12,16};

 The maximum number of parallel SL-PRS transmission for dedicated pool using scheme 2, the candidate value can be {1,2,4}.

Discussion:

Qualcomm think this is not aligned with the RAN1 LS. There is no HARQ for SL-PRS, so the term “parallel SL-PRS transmission” needs to be explained, and they think this should not be associated with the HARQ process concept in the TP.

Ericsson have the same understanding that there is no HARQ process similar to data. They think at most we could have a NOTE saying there is no HARQ on SL-PRS and otherwise there should be no spec impact.

Huawei think we do not need to discuss the shared resource pool, because SL-PRS is piggybacked on the data transmission. In the dedicated pool, they think there is a question of how many “processes” of SL-PRS transmission can be ongoing at once, irrespective of HARQ. Regarding the proposal, they wonder if the values would be configurable; if it is fixed, we may not need to introduce anything new.

ZTE do not intend to introduce something configurable, just to define a maximum number of parallel processes. For the parallel transmission in dedicated pool, they intend that the UE can use up to a maximum number of different SL-PRS grants; they agree that one slot can only have one SL-PRS transmission.

ZTE understand that different slots could be used for different grants in an interleaved way and be “parallel” in that sense, without being transmitted in the same slot.

Huawei think we could correlate the proposal to the SL positioning session, but we may need RAN1 discussion since it is related to a PHY limitation.

Intel understand that the limitation comes from storage and RTT, and without HARQ we do not have these issues, so they do not see why there needs to be a limitation at all.

Qualcomm think we discussed the number of supportable parallel positioning sessions and left it to implementation.

ZTE think the number of sessions is a service issue, not a MAC issue, and a session does not necessarily correspond to a grant.

Huawei think this is more of a UE capability discussion; the question is what the UE can support transmitting, and they would like UE vendor input.

Intel think if the UE can support ten sessions (e.g.), and another session is requested beyond what the UE can request, it just rejects the eleventh session. They think anyway the number of sessions cannot be correlated across different server UEs, so the service layer cannot know how many “processes” (or whatever we call them) are currently in use.

Huawei think it would be OK not to define a limitation in the spec, but it is important not to change anything for the shared pool, where SL-PRS is piggybacked with data. Ericsson think SL-PRS is on a separate resource and “piggybacked” is not the right term. ZTE think the PSSCH is still sent. Huawei understand that if the grant in a shared pool is empty, the whole grant is skipped and the SL-PRS will not be transmitted.

ASUSTeK understand that the SL-PRS should be transmitted with padding data if there are no actual data. Huawei think the padding is not sent if the grant is skipped.

Agreements:

In shared pool, there is no additional limitation on how many SL-PRS the UE can transmit (the data limitations apply to SL-PRS transmitted together with PSSCH). Spec impact to be checked in rapporteur CR.

In dedicated pool, the UE’s ability to transmit multiple SL-PRS (e.g., for different SL positioning sessions) is left to UE implementation. If the UE is asked to transmit more SL-PRS than it can handle, it will be unable to comply.

Proposal 3: Do not define the total maximum number of parallel SL-PRS transmission on shared pool and dedicated pool.

Proposal 4: Adopt the corresponding TP for continuous SL-PRS retransmission in shared pool when SL data is positively acknowledged.

Discussion:

Huawei understand RAN1 already agreed this, and they can take the TP into the rapporteur CR.

Proposal 5: Introduce a new MAC CE to indicate activation or deactivation of a SP SRS bandwidth aggregation:

 The new MAC CE has an Aggregation Indication field with the size of 2 bits;

 The new MAC CE has a Linage combination field with the size of 5 bits.

Discussion:

ZTE recall that we agreed to a new MAC CE, format FFS. Qualcomm have the same understanding, but they think 32 bits for up to 32 configurations would be needed. The question is whether we activate/deactivate only one configuration or multiple ones.

Ericsson think multiple activations/deactivations might require a UE capability. Huawei think as a baseline we only need one linkage per MAC CE; if the network wants to activate multiple linkages, it can include several MAC CEs within the same PDU or close together.

CATT agree with Qualcomm that we should be able to activate/deactivate up to 32 configuration combinations, and they are not sure why multiple combinations would be active at the same time, so they think the MAC CE can contain only one. Qualcomm understand that 32 is a safe overestimate, and they think sending one MAC CE for all configurations or separate MAC CEs is an efficiency question.

ZTE think only one combination per MAC CE is the baseline, and they think it was RAN1 intention.

Ericsson wonder how many combinations are valid at the UE at a time. They had assumed there might be only one possible, but we might need to check with RAN1.

Huawei think one possible scenario is multiple positioning sessions, each activating one configuration. They think the difference from legacy is having only one spatial relation, and this is why we need the new MAC CE for efficiency.

CATT do not think aggregation can work for multiple positioning sessions.

Qualcomm understand we have up to 3 carriers, each with up to 16 sets, and each carrier could have all 16 activated; the legacy MAC CE configures per cell per BWP, and here the SRS could be anywhere, including outside any BWP.

ZTE think if one MAC CE can activate multiple combinations, it would be hard to design the aggregation indication with the linkage for each combination.

Huawei think the aggregation indication may not be needed. ZTE indicate that for each combination, there could be two or three linked carriers, and the MAC CE needs to indicate which carriers of the up-to-three-carriers are activated. They understand that RAN1 indicated RRC can configure up to three carriers and the MAC CE can activate two of the three.

Ericsson think the aggregation indication breaks the usual model between RRC and MAC responsibilities. They understand that the MAC CE can just point into the RRC configurations.

CATT do not think the two bits are needed, and we could send an LS to RAN1 to confirm the number of combinations. They do not recall RAN1 indicating the “two of three” activation.

Xiaomi wonder if we need a capability. Huawei think it could be a component of the capability for SP-SRS. Xiaomi think the UE may support SP-SRS but not aggregation.

* [Post125bis][401][POS] Aggregated SP-SRS activation/deactivation MAC CE (ZTE)

 Scope: Discuss the design of the new MAC CE for activation/deactivation of SP-SRS with aggregation.

 Intended outcome: Report to next meeting

 Deadline: Long

[R2-2402262](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402262%20Discussion%20on%20the%20remaining%20issues%20on%20bandwidth%20aggregation%20for%20SRS.docx) Discussion on the remaining issues on bandwidth aggregation for SRS CATT discussion Rel-18 NR\_pos\_enh2

[R2-2402334](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402334%20Discussion%20on%20RAN1%20reply%20LS%20on%20SL-PRS%20transmission.docx) Discussion on RAN1 reply LS on SL-PRS transmission OPPO discussion NR\_pos\_enh2

[R2-2402471](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402471%20Remaining%20issues%20for%20MAC%20spec%20for%20R18%20positioning.docx) Discussion on the remaining issues for MAC for R18 positioning Huawei, HiSilicon discussion Rel-18 NR\_pos\_enh2

[R2-2402577](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402577%20Discussion%20on%20SL-PRS.docx) Discussion on SL-PRS ASUSTeK discussion Rel-18 38.321 NR\_pos\_enh2

[R2-2402706](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402706%20Discussion%20on%20positioning%20MAC%20open%20issues.doc) Discussion on SL positioning MAC open issues Xiaomi discussion Rel-18 NR\_pos\_enh2

[R2-2403201](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403201_%28SRS%20Aggregation%20MAC-CE%29.docx) MAC CE for activation/deactivation of aggregated SP SRS for positioning Qualcomm Incorporated discussion

[R2-2403341](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403341%20%28R18%20NR%20POS%20A726%20SL%20POS%29.docx) Discussion on remaining MAC issues for SL positioning InterDigital, Inc. discussion Rel-18 NR\_pos\_enh2

[R2-2403417](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403417_Remaining%20issues%20on%20MAC.docx) Remaining issues on MAC Samsung discussion Rel-18 NR\_pos\_enh2

[R2-2403531](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403531%20MAC.docx) Addressing MAC open issues Ericsson discussion Rel-18

### 7.2.7 UE capabilities

Impact to 38.306 and capability-related impact to 38.331. A single CR with miscellaneous corrections is requested from the CR rapporteur; minor and editorial issues should be coordinated with the rapporteur and merged into the miscellaneous CR. Larger issues can be discussed based on contributions.

R2-2402321 Compatibility between Redcap positioning feature and other R18 positioning features CATT discussion Rel-18 NR\_pos\_enh2

Proposal 1: RAN2 to discuss and agree that neither CPP nor bandwidth aggregation is supported by Redcap positioning. A note that neither FG 41-2 (for CPP) nor bandwidth aggregation is supported should be added in FG 41-5(for redap) in the UE feature list, in order to unify the clarification of limitations for redcap positioning.

Proposal 2: Send an LS to RAN1 indicating the agreement in RAN2 and kindly request them to update the UE feature list.

Discussion:

Intel think P1 is straightforward. Ericsson agree. CATT think if we agree, we should ask RAN4 to update the feature list.

Qualcomm think the capability came from RAN1 or RAN4 and they are not sure why we discuss it here.

Xiaomi agree with the intention but think it should be captured in stage 2. CATT think we need to clarify the limitation.

Huawei think it can be discussed in RAN1 directly.

Ericsson think we should not specify what is not supported, only what is supported.

[R2-2402578](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402578%20Correction%20on%20UE%20capability%20regarding%20SL%20PRS.docx) Correction on UE capability regarding SL PRS ASUSTeK discussion Rel-18 38.306 NR\_pos\_enh2

[Chair’s note: Proposals are to restructure FG 41-1-5 (SL-PRS congestion control in dedicated resource pool) to include components 1 and 3, add a description in 38.306, and take TPs with specific structure and naming.]

Discussion:

Intel think the proposal is correct. Xiaomi agree and indicate the missing capability will be added in the capability CR.

### 7.2.8 Corrections to other specifications

Impact to any specifications not identified above.

## 7.9 Enhanced NR Sidelink Relay

(NR\_SL\_relay\_enh-Core; leading WG: RAN2; REL-18; WID: [RP-223501](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_98e/Docs/RP-223501.zip))

Time budget: 0TU

Tdoc Limitation: 3 tdocs

### 7.9.1 Organizational

Including incoming LSs and rapporteur inputs. CR rapporteurs are asked to continue maintaining an open issues list reflecting known issues to be handled during the maintenance phase.

* [Post125bis][402][Relay] Rel-18 relay RRC CR (Huawei)

 Scope: Update and check the Rel-18 relay CR to 38.331.

 Intended outcome: Endorsed CR in R2-2403813

 Deadline: Short

* [Post125bis][403][Relay] Rel-18 relay SRAP CR (OPPO)

 Scope: Update and check the Rel-18 relay CR to 38.351.

 Intended outcome: Endorsed CR in R2-2403814

 Deadline: Short

* [Post125bis][404][Relay] Rel-18 relay PDCP CR (InterDigital)

 Scope: Update and check the Rel-18 relay CR to 38.323.

 Intended outcome: Endorsed CR in R2-2403815

 Deadline: Short

Note: [Post125bis][405] was voided after allocation

* [Post125bis][411][Relay] Rel-18 relay stage 2 CR (LG)

 Scope: Draft and check a Rel-18 relay CR to 38.300 capturing agreements of this meeting.

 Intended outcome: Endorsed CR in R2-2403974

 Deadline: Short

* [Post125bis][412][Relay] Rel-18 relay UE capability CRs (Samsung)

 Scope: Draft and check CRs for the Rel-18 relay capabilities.

 Intended outcome: Endorsed CRs in R2-2403975 (38.331) and R2-2403976 (38.306)

 Deadline: Short

### 7.9.2 Stage 2 corrections

Impact to 38.300. A single CR with miscellaneous corrections is requested from the CR rapporteur. Minor and editorial issues should be coordinated with the rapporteur and merged into the miscellaneous CR. Larger issues can be discussed based on contributions.

R2-2402209 Discussion on stage-2 corrections OPPO discussion Rel-18 NR\_SL\_relay\_enh-Core

Proposal 1 RAN2 to confirm R17 SL DRX design applies to R18 L2/L3 U2U relay discovery and L2/L3 U2U relay communication without additional specification effort. And LS to S2/C1 if needed.

Discussion:

CATT think after checking the SA2 spec that this is already captured. Samsung agree and think no LS is needed.

[R2-2402428](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402428.docx) Correction to 38.300 on Relay enhancement Xiaomi discussion

[R2-2402721](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402721%20LTM%20in%20L2%20relay%20case%20v1.0.doc) LTM in L2 relay case Lenovo discussion Rel-18

Proposal 1: Both L2 U2N Relay UE and U2U Relay UE support LTM.

Discussion:

Lenovo indicate this was discussed previously in the mobility session.

Samsung have some concern about whether there would be additional impact, since this is a new topic for us.

LG have doubts about supporting it at the last minute after closing the WI.

InterDigital also have similar concerns and think it is similar to the CHO discussion. Huawei agree.

Lenovo note that we did support MUSIM with relays, and they are not sure why we do not support LTM.

LG are afraid it would lead to supporting CHO, which we agreed not to do.

[R2-2403311](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403311%20Stage-2%20Corrections%20on%20SL%20relay%20enhancements.doc) Stage-2 Corrections for SL relay enhancements Huawei, HiSilicon discussion Rel-18 NR\_SL\_relay\_enh-Core

### 7.9.3 RRC corrections

Impact to 38.331, except for capability-related issues (see agenda item 7.9.7). A single CR with miscellaneous corrections is requested from the CR rapporteur. Minor and editorial issues should be coordinated with the rapporteur and merged into the miscellaneous CR. Larger issues where no clear conclusion was reached in [Post125][417] can be discussed based on contributions.

Including outcome of [Post125][417][Relay] Rel-18 relay RRC open issues (Huawei)

RIL list

ToDo RILs outside the scope of [Post125][417]: B113, B107, Z777, Z778, K008, Z779, N122, B109, C263, Z770

[R2-2403705](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CDocs%5CR2-2403705.zip) RIL list for Rel-18 SL relay enhancement Huawei, HiSilicon report Rel-18 NR\_SL\_relay\_enh-Core

Discussion:

Nokia have concerns about H130, O406, and O407 and think they should go to ToDo in connection with ongoing discussions. Huawei wonder if this relates to having the remote and relay UE use the SIB12 configuration and indicate that the corresponding RIL is currently PropReject.

Apple understand Nokia’s concern for H130 is that we have not resolved the flow mapping in the relay UE and it will be closed when we resolve that question from the email discussion.

Lenovo think C262 should be ToDo based on their understanding of company views.

Xiaomi think X260 (related to document R2-2403719) should go to ToDo.

Nokia think N121 should be ToDo as well instead of PropReject.

Agreements:

H130, O406, O407, C262, X260, and N121 move to ToDo status.

Other PropAgree and PropReject RILs from R2-2403705 are confirmed.

Open issues list

[R2-2402681](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402681%20RRC%20open%20issue%20list%20for%20Rel-18%20SL%20relay.docx) RRC open issue list for Rel-18 SL relay Huawei, HiSilicon report Rel-18 NR\_SL\_relay\_enh-Core

* Noted

Email discussion report

[R2-2402682](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402682%20Report%20of%20%5BPost125%5D%5B417%5D%5BRelay%5D%20Rel-18%20relay%20RRC%20open%20issues.docx) Report of [Post125][417][Relay] Rel-18 relay RRC open issues Huawei, HiSilicon report Rel-18 NR\_SL\_relay\_enh-Core

[MP issues]

[13/14] Proposal 10: Add a new indication in SIB1 for support of N3C MP, to allow UE to perform early detection of candidate N3C relay UEs, with the understanding that whether to report UAI is still controlled by otherConfig as H659.

Discussion:

Qualcomm think the UE needs the RRCReconfiguration, so they are not sure the additional indication is critical. They do not see a big problem if the UE does the candidate relay search after receiving the configuration from the gNB.

MediaTek understand that it allows the data transfer to start earlier.

Ericsson wonder what the ramifications of not having the indication are.

Apple think there is some benefit because the remote UE should be able to avoid searching if the gNB does not support the feature. Qualcomm note that the gNB still may not configure multi-path for this UE.

Huawei think there is a similar mechanism in MR-DC for measurement reporting, and the indication in the SIB allows the UE to prepare the configuration in advance. They see no harm in having it.

Ericsson can accept the majority view, but they want to understand what the UE will do. They want to avoid changes to reselection.

LG are sceptical about putting the indication in SIB1. They think we could create a new SIB. Ericsson have the same concern and wonder if SIB12 could be used.

Qualcomm can accept the gNB indication but would also like to consider if SIB12 could be used.

Agreements:

The intention of H659 is confirmed.

Add a new indication in SI for support of N3C MP, to allow UE to perform early detection of candidate N3C relay UEs, with the understanding that whether to report UAI is still controlled by otherConfig as H659. No impact to (re)selection behaviour is expected. Rapporteur will implement the indication in SIB1 and it can be further discussed if another SIB would be more suitable.

[unanimous] Proposal 11: N3C indirect path addition/change failure reporting is supported, and the corresponding procedural text is to be added. The statues of C234, C235 are to be changed to PropAgree.

[unanimous] Proposal 12: For s-MeasConfig issue raised by J062, clarify in spec that gNB does not configure s-MeasureConfig in relay operation, and do the similar change for Rel-17 relay operation.

Discussion:

Nokia think P12 could be more explicit about what needs to be clarified; they are OK with the principle but would like to understand the spec impact.

Huawei indicate that there are two options, stage 2 or a field description in stage 3 (“gNB does not provide s-MeasureConfig for relay operation”). They think stage 2 might be better.

Nokia note this is also a Rel-17 issue; Huawei indicate we agreed this for Rel-17 already but it was missed in the specification, meaning that there should be no backward compatibility issue but a Rel-17 CR is needed.

Xiaomi and Nokia think we can discuss the Rel-17 part next meeting.

Agreements:

N3C indirect path addition/change failure reporting is supported, and the corresponding procedural text is to be added. The statues of C234, C235 are to be changed to PropAgree.

For s-MeasConfig issue raised by J062, clarify in spec that gNB does not configure s-MeasureConfig in relay operation. A similar change for Rel-17 relay operation can be discussed based on separate Rel-17 contributions in future. Can be discussed in CR implementation if this agreement should be captured in stage 2 or in a stage 3 field description.

[U2U issues – easier proposals]

Proposal 5: For an E2E SLRB, source remote UE configures the same value of SLRB index to Relay UE and target Remote UE. FFS: for the same SLRB, the relay UE is allowed to set different value of SLRB index in SUI from what it received from remote UE (related to H064).

Proposal 6: FFS whether to clarify that IE SLRB-Uu-ConfigIndex can be reported by Relay UE, or introduce a new IE for SLRB ConfigIndex to address O428.

Discussion:

Huawei indicate that these can be handled after P1.

[11/13] Proposal 8: Introduce a L3 U2U discovery indication in SIB12, FFS explicit indication or implicit indication.

[unanimous] Proposal 9: UE type is to be added in SUI to differentiate U2U relay UE and U2U remote UE, which can also be used to differentiate U2U discovery from U2N discovery. Further discuss whether the L2/L3 discovery indication is needed on top of UE-type.

Discussion:

Ericsson think P8 is not specific enough; if we agree with the intention, we still need to decide how to capture it in the specification. Huawei think there is a majority view for the explicit indication.

Qualcomm think the currently specified UE behaviour looks like an explicit indication, and they would like to avoid disrupting it.

On P9, Apple think there is no need for the L2/L3 differentiation. Xiaomi agree with Apple.

Agreements:

Introduce an explicit L3 U2U discovery indication in SIB12.

UE type is to be added in SUI to differentiate U2U relay UE and U2U remote UE, which can also be used to differentiate U2U discovery from U2N discovery. No L2/L3 differentiation in the discovery indication is introduced.

[U2U – discussion required]

Proposal 1: To convey QoS flow-to-SLRB mapping information from source Remote UE to Relay UE (J107, H693, Z755, A622, O409), down-select from the two alternatives:

 - [7/14] Alternative 1: to include flow-to-SLRB mapping in the current UEInformationRequestSidelink.

 - [6/14] Alternative 2: to introduce an explicit mapping list in the current RRCReconfigurationSidelink including SLRB index and associated QFI.

Discussion:

Apple think alternative 1 makes more sense and alternative 2 does not conform with our previous discussions.

Samsung can accept alternative 1.

LG support alternative 1.

Nokia can also accept alternative 1, but they think the underlying issue is that the procedure is not clear in stage 2.

Agreement:

Include flow-to-SLRB mapping in the current UEInformationRequestSidelink. Stage 2 rapporteur is asked to review the description of the procedure and see if some clarification/alignment is needed.

[U2U – lower priority]

[11/14] Proposal 2: Keep sl-SourceUE-Identity in SidelinkUEInformationNR, with the status of O418 changed to PropReject.

[9/13] Proposal 3: Introduce new IE including only RLC mode but not QoS flow list in SUI for L2 U2U, with the status of H686 is changed to PropAgree.

[13/14] Proposal 4: Do not pursue that relay UE sends both of UE capability received from source remote UE and target remote UE, with the status of K002 is changed to PropReject.

Discussion:

OPPO are fine with the majority view on P2, but they understand there is some connection to P5.

Apple do not see the connection to P5 and understand that P2 just says the gNB knows the source UE identity, which they think is helpful to the gNB (knowing which bearers come from which source). Huawei have the same understanding.

Xiaomi have a concern about P3 that the RLC mode is per RLC channel, but the channel is determined by the SRAP configuration provided by the gNB, and before that configuration the UE cannot know how many RLC modes to report. They do not see the need to introduce the IE. Huawei think the RIL just fixes a situation where a currently mandatory field is not applicable to U2U; the relay UE is not handling the e2e QoS flows, so there is no QoS flow to be reported by the relay UE. They understand that the RLC mode is received from the Tx UE.

Qualcomm wonder if there is an issue without the change in P3.

ZTE think only RLC AM mode needs to be reported, and the new IE can reflect this.

Agreements:

Keep sl-SourceUE-Identity in SidelinkUEInformationNR, with the status of O418 changed to PropReject.

Do not pursue that relay UE sends both of UE capability received from source remote UE and target remote UE, with the status of K002 is changed to PropReject.

QoS flow list in SUI for L2 U2U should not be mandatory, with the status of H686 is changed to PropAgree. Companies can further discuss if there should be accompanying changes to the handling of the RLC mode in SUI.

[unanimous] Proposal 7a: Upon E2E failure/release, the relay UE/remote UEs release local ID pair for the E2E connection locally, without initiating an explicit release procedure between UEs.

[8/9] Proposal 7b: The release procedure in current spec is to be removed, since there is no release case other than E2E link failure/release.

Discussion:

Apple are OK with the proposals, but upon e2e release, they think the relay UE does not know that the link is released, so they think there may need to be an upper layer notification procedure. They think we might check with SA2.

Huawei indicate that in email after the last meeting, we already captured the AS layer notification to the relay UE of an e2e PC5 failure/release, and this is already specified. Apple find the proposals confusing in this light; we are specifying local release but also a notification. Huawei indicate that the previous discussion was about DRB release, not local ID release.

Apple understood the NotificationMessageSidelink was only for the failure case. Huawei agree this was not discussed in the last meetingv but captured from a RIL in post-meeting discussion.

Agreements:

Upon E2E failure/release, the relay UE/remote UEs release local ID pair for the E2E connection locally, without initiating an explicit release procedure between UEs.

The explicit local ID release procedure in current spec is to be removed, since there is no release case other than E2E link failure/release.

Details can be checked in CR implementation.

* [AT125bis][402][Relay] Remaining Rel-18 relay RRC issues (Huawei)

 Scope: F2F offline to check P5/P6 of R2-2402682 and the remaining RIL issues, prioritizing items with ASN.1 impact. Other RRC proposals can be treated on a time-available basis.

 Intended outcome: Report to Thursday CB session in R2-2403802

 Schedule: Wednesday 0800-0900 CST in Brk3

 Deadline: Thursday 2024-04-18 1000 CST

[R2-2403802](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403802%20Report%20of%20%5BAT125bis%5D%5B402%5D%5BRelay%5D.docx) [AT125bis][402][Relay] Remaining prioritized issues on relay RRC (Huawei) Huawei, HiSilicon discussion Rel-18 NR\_SL\_relay\_enh-Core

Proposal 1: To include PC5-S release as a failure case for indirect path failure reporting.

Proposal 2: N122 is postponed.

Proposal 3: Remove relayUE-CellReselection from failureTypeIndirectPath, and clarify in the spec about “serving PCell”, “before” “cell change” if needed during CR update.

Discussion:

Samsung think we should look at how to implement this agreement in CR drafting.

Proposal 4: Clarify the terminology as below:

– Keep using MCG in the spec when the description is applicable to MCG in MR-DC as well as direct path in MP;

– using direct path in the spec if the description is added only for MP.

Proposal 5: For an E2E SLRB, source remote UE configures the same value of SLRB index to Relay UE and target Remote UE, assuming no spec impact to allow relay UE setting different value of SLRB index in SUI. Any essential change identified can be discussed based on company contributions in next meeting.

Discussion:

Apple are not sure that P5 matches the discussion; they think it was agreeable to revisit the “different value in SUI” issue next meeting, but no assumption of no spec impact.

Ericsson understood that it should be captured how the relay UE maps the IDs, and they wonder why the relay UE would need to be able to report a different value.

Qualcomm think we could add a NOTE leaving this to relay UE implementation. Apple think this would not work, because we have other text saying that the relay UE should configure based on the network SRAP configuration. Apple also agree that there may not be a motivation to use a different ID.

OPPO understand that there is no specification impact to allow the relay UE to set a different value and there is no need to restrict; they think this is aligned with Rel-16.

Huawei think we are repeating the discussion.

Proposal 6: Not to pursue defining a new IE of SLRB-Uu-ConfigIndex, and to clarify the existing IE can be used for U2U.

Proposal 7: Z777/778/779 are rejected, with the understanding that for E2E DRB add/change, the UE does not need to establish a new RLC channel if the newly derived RLC configuration equals to an old one. Wording can be checked in CR update.

Discussion:

ZTE think Z779 can be taken as agreed and aligns with the rest of the proposal.

Proposal 8: C263 is agreed, and take the following change as baseline for the further checking in CR update:

[Chair’s note: See document for the detailed changes on P8]

Proposal 9: No change to the previous agreement that Rely on dedicated SLRB configuration for RRC\_CONNECTED UE, and add a note as below, detailed wording can be checked during CR update.

– NOTE: the L2 U2U UE is allowed to use previous configuration based on SIB12 before receiving dedicated configuration during state transition from idle/inactive to connected.

Discussion:

Qualcomm wonder if we allow delta configuration for the dedicated configuration. Chair understands we do not have delta signalling between SIB and dedicated configuration. Huawei have the same understanding as the chair.

Apple think the device should be able to use the SIB12 configuration until it has the new configuration, not just during the state transition.

Ericsson think this is the same as Rel-16.

Proposal 10: The intention of X260 is agreeable, i.e. to allow upper layer to trigger relay selection for new E2E connection when the UE has selected a relay UE, e.g. change “reselection” in “if the upper layers indicate to reselect another NR sidelink U2U Relay UE” to “(re)selection”.

Proposal 11: Z770 is rejected.

Discussion:

Huawei clarify this was the proposal to add the traffic pattern.

Proposal 12: Add the following note in 5.8.3.3:

– NOTE X: If UE is in RRC\_CONNECTED, how to merge the split per-flow QoS on the second hop into a per-SLRB level QoS for SUI reporting is up to relay UE implementation.

Proposal 13: No signaling change for E2E specific T400, and to add a note that remote UE can double the value of T400 for E2E RRC reconfiguration message.

Discussion:

Nokia would like to understand if it is mandatory UE behaviour. They think the network should be aware of the value, and if the UE can just do this as an implementation choice, the network does not know what the UE is using. Huawei indicate it is intended to be a mandatory UE behaviour and agree it should be normative text.

Qualcomm wonder why the network would not just configure a larger value.

Apple originally thought there would be no spec impact, and if there is a new mandatory behaviour we could just use a new timer.

OPPO are open to the alternatives but wonder why it has to be a mandatory UE behaviour; they think there may be no problem if the network does not know, since the RLF is detected per direction. Huawei understand it is not about the network but the peer UE should be aligned, or there will be an unnecessary delay. OPPO point out that the two UEs may anyway have different T400 values configured by the network.

Ericsson think the doubling is not ideal and we should just configure a longer value, especially if we have to think about multihop in future. Lenovo have a similar view.

Proposal 14: Do not pursue a new timer for UEInformationResponseSidelink.

Discussion:

LG wonder what happens if the source remote UE did not get the response. Qualcomm have a similar question; should it retransmit or wait longer or something else?

Apple think this is an impossible case; there should be no delivery failure. Huawei have the same understanding, and they recall that companies thought this scenario should not result in a failure case for RRCReconfigurationSidelink. Huawei also think there are other similar cases.

Qualcomm want to clarify if this means existing RLF detection mechanisms would be used when the message is lost on PC5. Apple understand it is RLC AM and an RLF will be detected.

Huawei clarify that B109 was missed; it is proposed to have RRCReconfigurationFailureSidelink for the indirect path failure case. Lenovo clarify that the case is that the U2U relay UE received the failure message from the wrong remote UE in the second hop, and there could be a new failure type for this case.

OPPO understand that this is not a failure case since the UE can just fall back to the previous configuration and the link will not break.

LG understand that if the target remote UE cannot apply the new configuration, the relay UE cannot deliver a packet within the PDB restriction, and they wonder if the relay UE can send a message to the target remote UE.

Apple think this is not only about the PDB but the need to configure the RLC channels between the UEs. The intention is to tell the source remote UE that something is wrong in the second hop.

OPPO recall that the failure message was introduced for the case where the Rx UE cannot comprehend the configuration sent by the Tx UE, which normally happens in IOT rather than in the field, so they assume this is not a frequent scenario.

Huawei agree with OPPO and think the UE will just retry the reconfiguration procedure. They also think the source remote UE needs to configure the relay UE, and therefore this notification cannot address all the cases; if there is a problem on the first hop, the relay UE cannot notify any remote UE.

ZTE think the relay UE should be able to notify the source remote UE to trigger relay reselection.

Lenovo indicate that in the existing SUI message, we have a similar configuration failure indication.

OPPO think that triggering relay reselection will cause service interruption anyway, so the failure indication does not really solve the problem.

Apple understand that we recognise this failure case in the SUI, which suggests that we consider it a “real” case and there is no reason to ignore it here. For the first-hop case, they think we can look further at whether something needs to be done.

Ericsson understand that this is about the second hop, not the e2e link, which means that the relay UE is not suitable and relay reselection should be triggered. So they do not see a benefit from the failure indication. Lenovo think relay reselection will not be triggered based on the current spec. Ericsson think the e2e link establishment will fail and the source remote UE can detect the issue from that.

LG have a different understanding and think the source remote UE cannot detect the problem.

Agreements:

Include PC5-S release as a failure case for indirect path failure reporting.

N122 is postponed.

Remove relayUE-CellReselection from failureTypeIndirectPath, and clarify in the spec about “serving PCell”, “before” “cell change” if needed during CR update.

Keep using MCG in the spec when the description is applicable to MCG in MR-DC as well as direct path in MP; use “direct path” in the spec if the description is added only for MP.

For an E2E SLRB, source remote UE configures the same value of SLRB index to Relay UE and target Remote UE. No change is made now in relation to allowing relay UE setting different value of SLRB index in SUI; whether to allow this, and if there would be any spec impact to do so, can be discussed next meeting based on contributions.

Not to pursue defining a new IE of SLRB-Uu-ConfigIndex, and to clarify the existing IE can be used for U2U.

Z777/Z778 are rejected and Z779 is agreed, with the understanding that for E2E DRB add/change, the UE does not need to establish a new RLC channel if the newly derived RLC configuration equals to an old one. Wording can be checked in CR update.

C263 is agreed, and take the changes in P8 of R2-2403802 as baseline for the further checking in CR update.

No change to the previous agreement that Rely on dedicated SLRB configuration for RRC\_CONNECTED UE, and add a note as below, detailed wording can be checked during CR update.

– NOTE: the L2 U2U UE is allowed to use previous configuration based on SIB12 before receiving dedicated configuration during and immediately after state transition from idle/inactive to connected.

RAN2 understand the NOTE above aligns with Rel-16 V2X behaviour.

The intention of X260 is agreeable, i.e. to allow upper layer to trigger relay selection for new E2E connection when the UE has selected a relay UE, e.g. change “reselection” in “if the upper layers indicate to reselect another NR sidelink U2U Relay UE” to “(re)selection”. X260 moves to Agreed.

Z770 is rejected.

Add the following note in 5.8.3.3:

– NOTE X: If UE is in RRC\_CONNECTED, how to merge the split per-flow QoS on the second hop into a per-SLRB level QoS for SUI reporting is up to relay UE implementation.

Add a new timer for the E2E equivalent of T400, with double the current values.

Do not pursue a new timer for UEInformationResponseSidelink.

B109 is postponed and remains ToDo.

Rapporteur CR

[R2-2402680](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5C38331_CR4684_%28Rel-18%29_R2-2402680%20RRC%20corrections%20for%20Rel-18%20SL%20relay%20enhancements_update.docx) Rapp RRC CR for Rel-18 SL relay enhancement Huawei, HiSilicon CR Rel-18 38.331 18.1.0 4684 - F NR\_SL\_relay\_enh-Core Late

Flow-to-bearer mapping [U2U]

[R2-2402890](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402890%20Discussion%20on%20remaining%20ASN.1%20issue%20for%20L2%20U2U.docx) Discussion on remaining ASN.1 issues for Layer-2 UE-to-UE Relay Apple discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2403552](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403552-U2U-QoS-SLRB.docx) discussion on flow-to-bearer mapping indication Sharp discussion Rel-18 NR\_SL\_relay\_enh-Core

ToDo RIL items with ASN.1 impact: O418, B107, B109, N122

[R2-2402208](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402208%20-%5BO400-407%2C%20O421%5D%2C%20%5BO425%5D%2C%20%5BO418%2C%20O427%2C%20O428%5D%2C%20%5BO419%5D%2C%20%5BQ581%5D%20Discussion%20on%20ToDo%20RILs%20for%20R18%20Relay.docx) [O400-407, O421], [O425], [O418, O427, O428], [O419], [Q581] Discussion on ToDo RILs for R18 Relay OPPO discussion Rel-18 NR\_SL\_relay\_enh-Core

Proposal 4 For [O418], RAN2 to discuss removing the source remote UE ID report from the SUI report of L2 U2U Relay UE as the above TP.

[R2-2402286](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402286%20%5BB107%5D%20Discussion%20on%20IndirectPathFailureInformation%20message%20v2.0.doc) [B107] Discussion on IndirectPathFailureInformation message Lenovo, Apple, China Telecom, Sharp, InterDigital, Kyocera discussion Rel-18 38.331 NR\_SL\_relay\_enh-Core

Proposal 1: Same as SL RLF detection and reception of NotificationMessageSidelink cases, the remote UE initiates the transmission of IndirectPathFailureInformation message including measurement results for the serving relay UE and candidate relay UE(s) upon PC5 unicast link release indicated by upper layer.

Proposal 2: The failure type e.g sl-release can be added in IndirectPathFailureInformation message due to PC5 unicast link release indicated by upper layer.

[R2-2402718](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402718%20%5BB109%5D%20on%20sidelink%20RRC%20reconfiguration%20failure%20for%20U2U%20v1.0.doc) [B109] on sidelink RRC reconfiguration failure for U2U Lenovo discussion Rel-18

Proposal 1: A U2U Relay UE initiates transmission of the NotificationMessageSidelink message due to sidelink RRC reconfiguration failure.

[R2-2403603](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403603%20%5BN121%5D%5BN122%5D%20RILs%20on%20Sidelink%20relay.docx) [N121][N122] RILs on sidelink relay Nokia discussion NR\_SL\_relay\_enh-Core

Proposal 2.1: Allow configuring split SRB1 without duplication and direct SRB1 even when one of the remote or relay UE does not support PC5-RRC trigger.

Proposal 2.2: Introducing an indication indicating whether the remote UE sends RemoteUEInformationSidelink including connectionForMP or not (option 1). Alternatively, RAN2 considers allowing at least the direct SRB1 based on gNB implementation even when PC5-RRC trigger is not supported by one of remote or relay UE (option 2).

Other RILs with possible ASN.1 impact

[R2-2402504](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402504_%5BC262%5DClarification%20on%20Indirect%20Path%20Failure%20for%20MP%20Scenario%201.docx) [C262]Clarification on Indirect Path Failure for MP Scenario 1 CATT discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2402927](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402927-Discussion%20on%20the%20remaining%20issues%20for%20U2U%20relay.docx) Discussion for the remaining issues for U2U relay LG Electronics Inc. discussion Rel-18

[R2-2403140](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403140-Open%20issues%20on%20RRC%20specification.docx) Remaining issues and corrections on RRC specification Qualcomm Incorporated discussion NR\_SL\_relay\_enh-Core

[R2-2403200](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403200%20RSRP%20for%20U2N%20relay%20%28re-%29selection%20TDoc.docx) RSRP thresholds for U2N relay selection and re-selection Nokia discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2403357](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403357.docx) Discovery [O419] Open Issues [Post125][417] and [X033] [X251] PC5 trigger for U2U Relay UE selection Beijing Xiaomi Mobile Software discussion Rel-18 NR\_SL\_relay\_enh-Core

MCG terminology

[R2-2403607](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403607_E105%20E267%20E269%20Issues%20on%20SL%20Relays.docx) RILs on SL Relays Ericsson discussion Rel-18 Late

Proposal 1 Use Remove the reference to ‘MCG’ in the MP operations and replace it with the term ‘direct path’. Adopt the TP in the annex.

Covered by email discussion

[R2-2402785](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402785.docx) [H659] Network support for non-3GPP multi-path relay MediaTek Inc., OPPO, ZTE discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2403314](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403314%20%5BH064%5D%5BH686%5D%20Discussion%20for%20RIL%20issues%20on%20U2U%20relay.doc) [H064][H686] Discussion for RIL issues on U2U relay Huawei, HiSilicon discussion Rel-18 NR\_SL\_relay\_enh-Core

Other contributions

R2-2402427 [X028] Correction on SIB1 forwarding in multipath Xiaomi discussion

[R2-2402505](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402505_%5BC261%5DHandling%20of%20indirect%20path%20when%20Remote%20UE%20enters%20RRC_IDLE.docx) [C261]Handling of Indirect Path When Remote UE Enters RRC\_IDLE CATT discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2402506](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402506_%5BC263%5DClarification%20on%20U2U%20Remote%20UE%20Threshold%20Conditions.docx) [C263]Clarification on U2U Remote UE Threshold Conditions CATT discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2402600](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402600%20%5BX029%2C030%2C031%5D%20Correction%20on%20the%20relay%20reselection.docx) [X029,030,031] Correction on the relay reselection Xiaomi discussion

[R2-2402717](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402717%20%5BB108%5D%20on%20unsolicited%20SIB1%20forwarding%20in%20MP%20v1.0.doc) [B108] on unsolicited SIB1 forwarding in MP Lenovo discussion Rel-18

[R2-2402719](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402719%20%5BB112%5D%20on%20maintained%20indirect%20path%20during%20direct%20path%20addition%20v1.0.doc) [B112] on maintained indirect path during direct path addition v1.0 Lenovo discussion Rel-18

[R2-2402720](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402720%20%5BB113%5D%20TP%20on%20T390%20in%20MP%20scenario.doc) [B113] TP on T390 in MP scenario Lenovo discussion Rel-18

[R2-2403369](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403369_Discussion_of_Open_Issues_in_38331.docx) Remaining Open Issues in 38.331 Ericsson discussion Rel-18

[R2-2403476](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403476_%5BZ756%5DSRAP%20configuration%20for%20non-RRC%20connected%20L2%20U2U%20UE.doc) [Z756]SRAP configuration for non-RRC connected L2 U2U UEs ZTE, Sanechips discussion NR\_SL\_relay\_enh-Core

[R2-2403477](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403477_Relay%20UE%20traffic%20pattern%20reporting%20in%20UAI.doc) Discussion on relay UE traffic pattern reporting in UAI ZTE, Sanechips discussion NR\_SL\_relay\_enh-Core

[R2-2403719](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403719.docx) [X260] [X262] U2U Relay UE selection Beijing Xiaomi Mobile Software discussion Rel-18 38.331 NR\_SL\_relay\_enh-Core

### 7.9.4 SRAP corrections

Impact to 38.351. A single CR with miscellaneous corrections is requested from the specification rapporteur. Minor and editorial issues should be coordinated with the rapporteur and merged into the miscellaneous CR. Larger issues can be discussed based on contributions.

Rapporteur CR

[R2-2402206](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5C38351_CR0034_%28REL-18%29_R2-2402206%20-%20Corrections%20for%20NR%20sidelink%20relay%20enhancements.docx) Corrections for NR sidelink relay enhancements OPPO CR Rel-18 38.351 18.1.0 0034 - F NR\_SL\_relay\_enh-Core

Other contributions

[R2-2403478](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403478%20Discussion%20on%20SRAP%20corrections%20for%20U2U%20relay.docx) Discussion on SRAP corrections for U2U relay ZTE, Sanechips discussion NR\_SL\_relay\_enh-Core

Proposal 1: For BEARER ID field determination, it should be determined in a UE pair. Add UE pair info for BEARER ID determination.

Proposal 2: The Local ID pair info is configured by “sl-LocalID-PairToAddModList” in RRC spec. UE checks the UE ID fields in SRAP header of the received SRAP PDU with all the entries of the configured Local ID pair list.

Discussion:

Huawei think the second change in the TP (for P1) is already clear and may not be needed.

Apple think including the egress link in the changes for P1 is out of order; the egress link is determined first to identify the involved relay. Samsung understood this change was more editorial in the title. Apple are concerned with the order of the bullets, and they also think the second change is not needed.

ZTE think it is clear that the UE pair should be considered. Apple think this is already clear without a text change; there is no way to do anything else.

Agreements:

The first set of changes from the TP in R2-2403478 is not adopted (except for adding “egress link” in the section title).

The second set of changes from the same TP is adopted and can be merged into the rapporteur CR.

[R2-2402587](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402587%20Clarification%20on%20UE%20ID%20pair%20allocation%20and%20determination.docx) Clarification on UE ID pair allocation and determination ASUSTeK discussion Rel-18 38.331 NR\_SL\_relay\_enh-Core

Proposal 1: RAN2 to confirm that local ID pair is allocated per end-to-end PC5 RRC connection.

Discussion:

Huawei think this issue is a corner case. ASUSTeK clarify this is not about the use of a wrong local ID but the scope of the pair.

Apple think we already agreed that this is up to relay UE implementation and we do not need to have an explicit agreement on the scope.

Proposal 2: The behaviour of L2 U2U Remote UE in clause 5.3a.1.2 is aligned with that of L2 U2U Relay UE in clause 5.3a.3.2 i.e.:

the L2 U2U Remote UE determines the UE ID fields according to an entry in sl-LocalID-PairToAddModList, in which the sl-RemoteUE-L2Identity and the sl-PeerRemoteUE-L2Identity match the source L2 ID of the L2 U2U Remote UE and the destination L2 ID of the peer L2 U2U Remote UE.

Discussion:

Samsung think this may be covered in the error handling section.

ZTE think the change is OK and clarifies the section. They note the last bullet should be indented further.

OPPO think the change is fine if companies think it clarifies, but they wonder if there is any wrong behaviour without it.

Nokia also think it is covered by the error handling.

### 7.9.5 MAC corrections

Impact to 38.321. A single CR with miscellaneous corrections is requested from the CR rapporteur. Minor and editorial issues should be coordinated with the rapporteur and merged into the miscellaneous CR. Larger issues can be discussed based on contributions.

### 7.9.6 RLC and PDCP corrections

Impact to 38.322 and 38.323. For each specification, a single CR with miscellaneous corrections is requested from the CR rapporteur. Minor and editorial issues should be coordinated with the rapporteur and merged into the miscellaneous CR. Larger issues can be discussed based on contributions

Rapporteur CR

[R2-2402816](file:///C%3A%5C%5CUsers%5C%5Cmtk16923%5C%5CDocuments%5C%5C3GPP%20Meetings%5C%5C202404%20-%20RAN2_125bis%2C%20Changsha%5C%5CExtracts%5C%5C38323_CR0135_Rel-18_R2-2402816_MiscRelayCorrections.docx%22%20%5Co%20%22C%3AUsersmtk16923Documents3GPP%20Meetings202404%20-%20RAN2_125bis%2C%20ChangshaExtracts38323_CR0135_Rel-18_R2-2402816_MiscRelayCorrections.docx) Miscellaneous Rapporteur Corrections to 38.323 for SL Relay InterDigital France R&D, SAS CR Rel-18 38.323 18.1.0 0135 - F NR\_SL\_relay\_enh-Core

Deactivated path case (overlap with rapporteur CR)

[R2-2402207](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402207%20-%20Discussion%20on%20duplicated%20PDU%20submitted%20to%20indirect%20path%20RLC.docx) Discussion on duplicated PDU submitted to indirect path RLC OPPO discussion Rel-18 NR\_SL\_relay\_enh-Core

Data volume calculation

[R2-2403313](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403313%20PDCP%20corrections%20on%20data%20volume%20calculation%20for%20multi-path.docx) PDCP corrections on data volume calculation for multi-path relay Huawei, HiSilicon discussion Rel-18 NR\_SL\_relay\_enh-Core

Proposal 1: To avoid duplicated PDCP data volume for split DRB resulting in excessive resource allocation and waste of radio resource, a PDCP data split ratio should be configured for split DRB, which can be used for precise PDCP data volume calculation in Uu BSR and SL BSR.

Discussion:

Nokia think the problem exists but the mechanism to solve it may be complicated. They see that the problem is excessive resource allocation, and they do not see the need for the change to resolve it.

Samsung agree with Nokia and think it may be a UE implementation issue. Qualcomm also agree; this can also occur in DC and they see the proposal as an optimization.

Huawei indicate the intention is to have a simple solution as per the TP.

Lenovo agree with Nokia and Samsung and think similar issues have been discussed before.

Proposal 2: RAN2 can discuss the following options for the PDCP data volume split raito:

• Option 1: NW determines the split ratio and configures to the remote UE.

• Option 2: UE determines the split ratio by itself.

P1 only (P2 overlaps with R2-2403412 and may be addressed by an updated rapporteur CR)

[R2-2403479](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403479_Discussion%20on%20PDCP%20corrections%20for%20MP.doc) Discussion on PDCP corrections for MP ZTE, Sanechips discussion NR\_SL\_relay\_enh-Core

Proposal 1: For the PDCP structure of N3C indirect path for MP, remove “NG-RAN” from Figure 4.2.1-3, and clarify all PDCP entities of MP remote UE are associated with the N3C.

Discussion:

InterDigital think the change is needed.

Agreement:

For the PDCP structure of N3C indirect path for MP, remove “NG-RAN” from Figure 4.2.1-3, and clarify all PDCP entities of MP remote UE are associated with the N3C.

[R2-2403412](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403412%20Clarification%20of%20PDCP%20for%20MP.docx) Clarification on PDCP with multi-path Nokia discussion Rel-18

### 7.9.7 UE capabilities

Impact to 38.306 and capability-related impact to 38.331. A single CR with miscellaneous corrections is requested from the CR rapporteur. Minor and editorial issues should be coordinated with the rapporteur and merged into the miscellaneous CR. Larger issues can be discussed based on contributions.

R2-2403139 UE capabilities on MP relay Qualcomm Incorporated discussion NR\_SL\_relay\_enh-Core

Proposal 1: Clarify IMS voice over split bearer is not supported for MP operation.

Proposal 2: Introduce new UE capability to indicate whether UE supports UL transmission via direct path and DL reception via either direct path or indirect path for split SRB.

Proposal 3: Introduce new UE capability to indicate whether UE supports UL transmission via both direct path and indirect path for the split DRB.

Discussion:

Huawei are OK with these proposals.

Nokia want to understand if the split DRB capability would block the configuration or mean that the UE transmits only via one leg. Qualcomm intended that the gNB would determine how to configure the uplink threshold based on this. Nokia see that there would be no spec impact and the gNB would just configure the threshold appropriately; they think it may not be clear enough how the network would use the capability.

Samsung have the same concern as Nokia and wonder what the network will do. Ericsson also have a similar concern. Qualcomm think the gNB implementation can do what it likes. Nokia wonder if the gNB would just never configure the split bearer.

Nokia understand that there is a related DC baseline, but they want more time to check. Samsung would also like more time.

Nokia wonder what happens if the UE does not support UL transmission in both legs for split SRB but supports the PC5-RRC trigger, and the UE is required to transmit something in the indirect path.

* [AT125bis][403][Relay] UE capability for simultaneous transmission on split bearer (Qualcomm)

 Scope: Allow companies to check the proposed agreements and determine if network guidance is needed:

* Introduce new UE capability to indicate whether UE supports UL transmission via direct path and DL reception via either direct path or indirect path for split SRB.
* Introduce new UE capability to indicate whether UE supports UL transmission via both direct path and indirect path for the split DRB.

 Intended outcome: Report to Thursday CB session in R2-2403803

 Deadline: Thursday 2024-04-18 1000 CST

Agreement:

IMS voice over split bearer is not supported for MP operation.

[R2-2403803](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403803-UE%20capability%20for%20simultaneous%20transmission%20on%20split%20bearer%20%28Qualcomm%29.docx) UE capability for simultaneous transmission on split bearer (Qualcomm) Qualcomm Incorporated discussion NR\_SL\_relay\_enh-Core

Proposal 1: Postpone the discussion of new UE capability to indicate whether UE supports UL transmission via direct path and DL reception via either direct path or indirect path for split SRB.

Proposal 2: Introduce new UE capability to indicate whether UE supports UL transmission via both direct path and indirect path for the split DRB.

Agreements:

Postpone the discussion of new UE capability to indicate whether UE supports UL transmission via direct path and DL reception via either direct path or indirect path for split SRB.

Introduce new UE capability to indicate whether UE supports UL transmission via both direct path and indirect path for the split DRB.

[R2-2403370](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403370_Discussion_of_Open_Issues_in_38306.docx) Remaining Open Issues in 38.306 Ericsson discussion Rel-18

Proposal 1 Remove the supportedBandCombinationListSL-U2U-RelayDiscovery capability, related capabilities and reuse the supportedBandCombinationListSL-RelayDiscovery list.

Proposal 2 Modify the supportedBandCombListPerBC-SL-U2U-RelayDiscovery-r18 to have a single bit indication to follow same bit string as indicated in supportedBandCombListPerBC-SL-RelayDiscovery-r17. Adopt the TP as shown in the Annex.

Proposal 3 If P2 is not agreed, agree to P1 and keep the bit string indication for supportedBandCombListPerBC-SL-U2U-RelayDiscovery-r18.

Discussion:

OPPO understand that the solution requires the UE to support both U2U and U2N, and they wonder about a UE that only supports U2U relay. Ericsson think it is unlikely that there will be different handling for U2U/U2N in terms of bands, but anyway they think the UE does not have to implement the U2N relay to signal the band combination list.

OPPO think the Rel-17 IE indicates support of the Rel-17 relay feature.

Ericsson can accept a new BC list if companies think it is necessary, but they see a lot of growth in the capabilities.

Samsung think U2N and U2U are separate from UE perspective and it is better to separate them in the capabilities. Huawei agree with OPPO and Samsung.

[R2-2403312](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403312%20UE%20capability%20corrections%20for%20multi-path%20operation.docx) UE capability corrections for multi-path operation Huawei, HiSilicon discussion Rel-18 NR\_SL\_relay\_enh-Core

### 7.9.8 Idle mode corrections

Impact to 38.304. A single CR with miscellaneous corrections is requested from the CR rapporteur. Minor and editorial issues should be coordinated with the rapporteur and merged into the miscellaneous CR. Larger issues can be discussed based on contributions.

R2-2403602 Correction on 38.304 for SL Relays Ericsson CR Rel-18 38.304 18.1.0 0400 - F NR\_SL\_relay\_enh

* Postponed

Discussion:

Apple and OPPO note this is related to UAV rather than relay.

## 7.24 TEI18

Specific items may be allocated to a breakout session for treatment.

Time budget: 1 TU

### 7.24.1 TEI proposals by Other Groups

Items initiated by other groups that is/has been communicated by LS, where the other group indicate this is TEI18. (Specific other-group-WIs should use the R18 Other Agenda Item below).

R2-2403538 Introduction of LCS User Plane Ericsson, Intel Corporation, Huawei, HiSilicon, ZTE Corporation, vivo CR Rel-18 38.305 18.1.0 0159 1 B TEI18 R2-2401320

* Postponed

Discussion:

Nokia think the diagram is problematic; they do not think we should change the architecture diagram without stage 3 impact to us, and it could be handled in 23.273 instead. Ericsson note that SUPL is also there in the architecture with no stage 3 impact.

Qualcomm note that in stage 2 we have protocol stacks and description for transport of LPP PDUs, and it seems that there should be impact to these sections. They would prefer for 23.273 to be updated first and then we can migrate it into RAN specs; they agree that the figure looks right but think it is strange that we add CN elements that are not yet in SA2 stage 2.

Ericsson think we can come back in a future meeting to address these issues.

Nokia think it would be good for SA2 to update their specs.

### 7.24.2 TEI proposals by RAN2

Items initiated in RAN2 for NR and LTE.

No contributions should be submitted under 7.24.2. They should be submitted under 7.24.x

Tdoc limitation: 1 tdoc, limitation applicable to new proposals. No new Cat. B proposals expected for this meeting

#### 7.24.2.2 Other RAN2 TEI-18

Contributions should focus only critical issues/corrections for already agreed TEI-18 topics. New TEI proposals should address critical issues that should be resolved by RAN2#125. Co-sourcing of such proposals is encouraged. Contributions on items that were explicitly downprioritized from Rel-18 WIs should not be brought as TEI18. No new Cat. B proposals expected for this meeting

Including outcome of [POST125][022][RedCap emergency calls] Review CRs (Apple) and [POST125][612][TEI18] CR for MBS operation with eDRX/MICO (Nokia)

BT AoA/AoD [corrections to existing TEI18 item]

[R2-2402418](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402418%20Corrections%20for%20Bluetooth%20AoAAoD%20%5BBT-AoA-AoD%5D.docx) Corrections for Bluetooth AoA/AoD [BT-AoA-AoD] Intel Corporation discussion Rel-18 TEI18

[R2-2403794](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403794%20BT-AoA-AoD.docx) Corrections for Bluetooth AoA/AoD [BT-AoA-AoD] Ericsson, Intel Corporation CR Rel-18 37.355 18.1.0 0502 - F TEI18

* Agreed in principle

PosL2RemoteUE [ASN.1 issue B021, corrections to existing TEI18 item]

[R2-2403792](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403792.docx) [B021] Missing posSibType2-17a in list of posSIB types [PosL2RemoteUE] MediaTek Inc., Lenovo CR Rel-18 38.331 18.1.0 4767 - F TEI18 Late

* Agreed in principle

MUSIM paging cause forwarding [corrections to existing issue, coded as multi-WI rather than TEI18]

[R2-2402372](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402372_Rel_18_Corrections%20for%20MUSIM%20paging%20cause%20forwarding_draft%20CR.docx) Corrections for MUSIM paging cause forwarding Samsung Electronics Co., Ltd discussion Rel-18 TEI18

SUI for U2N relay [new proposal, referred from relay maintenance work]

R2-2402210 Remove of AS condition checking of SUI for U2N Relay communication OPPO, Apple CR Rel-18 38.331 18.1.0 4645 - F TEI18, NR\_SL\_relay\_enh-Core

* Agreed in principle
* Proponents are asked to check the coversheet formalities with the secretary (category and WI code)

[R2-2402211](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2402211%20-%20Discussion%20on%20AS%20condition%20checking%20for%20SUI%20transmission.docx) Discussion on AS condition checking of SUI for U2N Relay communication OPPO, Apple discussion Rel-18 TEI18, NR\_SL\_relay\_enh-Core

Discussion:

Ericsson are fine with the intention, but they wonder if it is really a problem; if the condition was originally satisfied, it should still be satisfied, and the issue will not prevent the UE from sending the SUI.

Apple indicate that when the UE can do discovery, it can subsequently move to a location that no longer satisfies the discovery threshold, but communication still works, and then the UE cannot send the SUI.

Sub-1s periodicity in LPP [new proposal, referred from positioning work]

[R2-2403605](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403605%20LPPsubSec.docx) LPP support for sub 1s location information reporting periodicity Ericsson, AT&T, T-Mobile, Vivo, Deutsche Telekom CR Rel-18 37.355 18.1.0 0501 - B TEI18

* Revised in R2-2403793

[R2-2403793](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403793%20LPPsubSec.docx) LPP support for sub 1s location information reporting periodicity [Sub\_1s\_periodicity] Ericsson, AT&T, T-Mobile, Vivo, Deutsche Telekom, Huawei, HiSilicon, Vodafone CR Rel-18 37.355 18.1.0 0501 1 B TEI18

Discussion:

Qualcomm think there is an issue on the capabilities; we indicate the capabilities per positioning mode, but that is not reflected here.

* [AT125bis][410][POS] Sub 1s periodicity CR (Ericsson)

 Scope: Revise the CR in R2-2403793 to introduce the capabilities as per-positioning-mode.

 Intended outcome: Agreeable CR (with CB) in R2-2403973

 Deadline: Thursday 2024-04-18 1000 CST

R2-2403973 LPP support for sub 1s location information reporting periodicity [Sub\_1s\_periodicity] Ericsson, AT&T, T-Mobile, Vivo, Deutsche Telekom, Huawei, HiSilicon, Vodafone CR Rel-18 37.355 18.1.0 0501 2 B TEI18

LS out to RTCM [new proposal]

[R2-2403358](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403358_Draft%20Ls%20to%20RTCM.docx) LS to RTCM on GNSS positioning and integrity Swift Navigation, Ericsson discussion

* Noted

Discussion:

Qualcomm think the only place this might fit is TEI19; the Rel-18 WIs are already closed. They also think we have not touched the content of some of these questions online in the meeting.

Nokia think this would have to be associated with some work that we are doing or plan to do, and there is no Rel-19 positioning WI.

Ericsson agree that the placement of the discussion is a problem. They note that one aspect is soliciting RTCM comments on the PCV TEI18 changes.

Not available/Withdrawn

R2-2403539 LPP support for sub 1s location information reporting periodicity Ericsson, AT&T, T-Mobile, Vivo, Deutsche Telekom CR Rel-18 38.305 18.1.0 0159 2 B TEI18 R2-2401320 Withdrawn

## 7.25 R18 Other

Specific items may be allocated to a breakout session for treatment.

Impacts from Other RAN WGs and TSGs that has no separate TU budget in RAN2. LS ins for Rel-18 specific WIs/SIs that has no RAN WI.

Clarification CRs should be discussed with spec rapporteurs of the topic prior to submission.

Time budget: 2 TU

Tdoc Limitation: -

### 7.25.3 Other

RAN3, SA2, SA3, CT1 led items and others, e.g. eNPN, Slicing, NTN self evaluation issues, etc.

[R2-2403529](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202404%20-%20RAN2_125bis%2C%20Changsha%5CExtracts%5CR2-2403529%20ECID.docx) Introduction of NR UE Rx-Tx time difference measurement in NR UL E-CID [ECID-UERxTx] Ericsson, Polaris Wireless, China Telecom, NTT Docomo, AT&T, FirstNet, Intel, Comtech, Nokia, Nokia Shanghai Bell, Verizon Wireless, Huawei, ZTE CR Rel-18 38.305 18.1.0 0164 - F NR\_pos-Core

* Revised in R2-2403740 [AI 6.4]