3GPP TSG-RAN WG2 Meeting #126 R2-240xxx

Fukuoka, Japan, 20-26 May 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.

* [AT126][401][POS] Rel-15 LTE positioning CR (Huawei)

 Scope: Check the CR in R2-2404749 (and mirrors in R2-2404750 / R2-2404751 / R2-2404752).

 Intended outcome: Agreed CRs (without CB if possible)

 Deadline: Thursday 2024-05-23 1000 JST

# 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 tdoc

R2-2404749 Correction to mandatory 80ms scheduling offset for positioning SI acquisition Huawei, HiSilicon, Ericsson CR Rel-15 36.306 15.11.0 1885 - F LCS\_LTE\_acc\_enh-Core

[R2-2404750](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404750%20Correction%20to%20mandatory%2080ms%20scheudling%20offset%20for%20positioning%20SI%20acquisition_r16.docx) Correction to mandatory 80ms scheduling offset for positioning SI acquisition Huawei, HiSilicon, Ericsson CR Rel-16 36.306 16.12.0 1886 - A LCS\_LTE\_acc\_enh-Core

[R2-2404751](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404751%20Correction%20to%20mandatory%2080ms%20scheudling%20offset%20for%20positioning%20SI%20acquisition_r17.docx) Correction to mandatory 80ms scheduling offset for positioning SI acquisition Huawei, HiSilicon, Ericsson CR Rel-17 36.306 17.6.0 1887 - A LCS\_LTE\_acc\_enh-Core

[R2-2404752](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404752%20Correction%20to%20mandatory%2080ms%20scheudling%20offset%20for%20positioning%20SI%20acquisition_r18.docx) Correction to mandatory 80ms scheduling offset for positioning SI acquisition Huawei, HiSilicon, Ericsson CR Rel-18 36.306 18.1.0 1888 - A LCS\_LTE\_acc\_enh-Core

* [AT126][401][POS] Rel-15 LTE positioning CR (Huawei)

 Scope: Check the CR in R2-2404749 (and mirrors in R2-2404750 / R2-2404751 / R2-2404752).

 Intended outcome: Agreed CRs (without CB if possible)

 Deadline: Thursday 2024-05-23 1000 JST

# 5 NR Rel-15 and Rel-16

Essential corrections only.

Tdoc Limitation: 2 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 tdoc

AIP CRs

[R2-2405252](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405252%20capFRel16.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 2 F NR\_pos-Core R2-2403797

* Revised in R2-2405854

[R2-2405854](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405854.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 3 F NR\_pos-Core R2-2403797

* Agreed

[R2-2405251](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405251%20capARel17.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 2 A NR\_pos-Core R2-2403798

* Revised in R2-2405853

[R2-2405853](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405853.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 3 A NR\_pos-Core R2-2403798

* Agreed

[R2-2405250](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405250%20capARel18.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 2 A NR\_pos-Core R2-2403799

* Revised in R2-2405852

[R2-2405852](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405852.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 3 A NR\_pos-Core R2-2403799

* Agreed

Other documents

R2-2404753 Correction to Positioning SRS Configuration Huawei, HiSilicon CR Rel-16 38.331 16.16.0 4791 - F NR\_pos-Core

[R2-2404754](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404754%20Correction%20to%20Positioning%20SRS%20configuration-r17.docx) Correction to Positioning SRS configuration Huawei, HiSilicon CR Rel-17 38.331 17.8.0 4792 - A NR\_pos-Core

[R2-2404755](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404755%20Correction%20to%20Positioning%20SRS%20configuration-r18.docx) Correction to Positioning SRS configuration Huawei, HiSilicon CR Rel-18 38.331 18.1.0 4793 - A NR\_pos-Core

Discussion:

Lenovo agree with the intention but think it would be better to introduce new field descriptions instead of adding the behaviour in the resource type field description.

vivo think it should be clarified that the SRS configuration is for positioning. Ericsson think it should also apply for legacy; vivo understand that this case is specific to positioning.

Samsung agree with Lenovo.

Huawei indicate that the field descriptions are separate for legacy (resource set level) and positioning (resource level).

Intel also agree with Lenovo and Samsung and clarify that the intention is to introduce the field description for slotOffset-r16. Huawei think this is a bit divergent from MIMO SRS but possible to do.

Nokia felt the differing granularity between MIMO and positioning caused some confusion. They would like to see a revised CR.

* [AT126][402][POS] Slot offset for positioning SRS configuration (Huawei)

 Scope: Update the CR in R2-2404753 (and its mirror CRs) to introduce the change in a field description for the field slotOffset-r16.

 Intended outcome: Agreeable CR (with CB)

 Deadline: Thursday 2024-05-23 1000 JST

[R2-2405104](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405104.docx) Corrections on the prerequisite feature groups of NR-Multi-RTT-MeasurementCapability Xiaomi CR Rel-16 37.355 16.13.0 0505 - F NR\_pos-Core

* Not pursued

[R2-2405105](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405105.docx) Corrections on the prerequisite feature groups of NR-Multi-RTT-MeasurementCapability Xiaomi CR Rel-17 37.355 17.8.0 0506 - A NR\_pos-Core

* Not pursued

[R2-2405106](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405106.docx) Corrections on the prerequisite feature groups of NR-Multi-RTT-MeasurementCapability Xiaomi CR Rel-18 37.355 18.1.0 0507 - A NR\_pos-Core

* Not pursued

Discussion:

Lenovo agree with the intention but note that the IE has been extended in Rel-17 and -18 with contents that are not conditional, so it seems not right to have the condition at IE level. They think instead it should be in the field description.

CATT think there is no need for the new wording in light of the last two fields in the IE.

Qualcomm think the CR is not needed; the UE needs SRS for multi-RTT, of course, but they think this is obvious without stating it here.

Nokia also wonder why this change is in the LPP spec instead of being clarified in RRC.

CATT understand that the prerequisite capability is already captured by the last two fields.

Intel have some sympathy with the intention; they think normally we would capture it in the field description.

Huawei agree with Qualcomm that nothing is needed; the UL-SRSp capability is mandatory present in the multi-RTT capabilities, so this already implies that SRSp has to be supported and the current sentence is not wrong. Intel understand after checking that with the current structure, if the UE indicates support of multi-RTT, it always has to indicate support of the SRS capability.

Xiaomi think there is no technical impact if the CR is not agreed, but the precondition features should generally be aligned with the feature list. Intel think it is OK as long as there is no UE/NW misalignment.

[R2-2405574](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405574%20OAMF.docx) OAM solution for the provisioning PRS Assistance Data to LMF Ericsson CR Rel-16 38.305 16.10.0 0169 - F NR\_pos-Core

* Not pursued

[R2-2405573](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405573%20OAMA.docx) OAM solution for the provisioning PRS Assistance Data to LMF Ericsson CR Rel-17 38.305 17.7.0 0168 - A NR\_pos-Core

* Not pursued

[R2-2405572](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405572%20OAMAA.docx) OAM solution for the provisioning PRS Assistance Data to LMF Ericsson CR Rel-18 38.305 18.1.0 0167 - A NR\_pos-Core

* Not pursued

Discussion:

ZTE wonder what “DL-PRS related assistance data” means in this context; they think the mobile TRP information cannot be set by OAM.

vivo think the contribution is based on a RAN3 agreement and RAN3 could do the stage 2 change.

Nokia would also prefer for RAN3 to handle it, and they think that both OAM and implementation options are possible in any case and not precluded from RAN2 spec perspective.

Qualcomm think nothing is broken in Rel-16 with or without the NOTE.

Ericsson intended the NOTE mainly for the beam-related configuration. They also think there is some connection to the NTN text added in Rel-18. Qualcomm think this is a different situation and we already have everything specified in NRPPa, but not excluding the OAM solution, whereas NTN uses OAM for things that are not in NRPPa.

# 6 NR Rel-17

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

AIP CRs

[R2-2405365](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405365%20Miscellaneous%20RRC%20corrections%20for%20SL%20relay%20%28Rel-17%29.docx) Miscellaneous RRC corrections for SL relay Huawei, HiSilicon CR Rel-17 38.331 17.8.0 4682 2 F NR\_SL\_relay-Core R2-2403800

[R2-2405366](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405366%20Miscellaneous%20RRC%20corrections%20for%20SL%20relay%20%28Rel-18%29.docx) Miscellaneous RRC corrections for SL relay Huawei, HiSilicon CR Rel-18 38.331 18.1.0 4683 2 A NR\_SL\_relay-Core R2-2403801

[R2-2405408](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CDocs%5CR2-2405408.zip) Correction on SidelinkUEInformationNR Philips International B.V. CR Rel-17 38.331 17.8.0 4731 1 F NR\_SL\_relay-Core R2-2403398

[R2-2405412](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CDocs%5CR2-2405412.zip) Correction on SidelinkUEInformationNR Philips International B.V. CR Rel-18 38.331 18.1.0 4732 1 A NR\_SL\_relay-Core R2-2403400

Other documents

R2-2405349 Corrections for sidelink UE Information ZTE, Sanechips CR Rel-17 38.331 17.8.0 4828 - F NR\_SL\_relay-Core

[R2-2405350](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405350%20Corrections%20for%20sidelink%20UE%20information-r18.docx) Corrections for sidelink UE Information ZTE, Sanechips CR Rel-18 38.331 18.1.0 4829 - A NR\_SL\_relay-Core

[R2-2405363](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405363%20Clarification%20to%20s-MeasConfig%20for%20L2%20U2N%20relay%20case%20%28Rel-17%29.docx) Clarification to s-MeasConfig for L2 U2N relay case Huawei, HiSilicon, Sharp, CATT, LG CR Rel-17 38.331 17.8.0 4830 - F NR\_SL\_relay-Core

[R2-2405364](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405364%20Clarification%20to%20s-MeasConfig%20for%20L2%20U2N%20relay%20case%20%28Rel-18%29.docx) Clarification to s-MeasConfig for L2 U2N relay case Huawei, HiSilicon, Sharp, CATT, LG CR Rel-18 38.331 18.1.0 4831 - A NR\_SL\_relay-Core

## 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

AIP CR

[R2-2405255](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405255%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 2 F NR\_pos\_enh-Core R2-2403740

* Agreed

Other documents

[R2-2404625](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404625%20Correction%20on%20SP%20SRS%20activation%20deactivation%20MAC%20CE%28R17%29.docx) Correction on SP SRS activation/deactivation MAC CE ZTE Corporation CR Rel-17 38.321 17.8.0 1840 - F NR\_pos\_enh-Core

* Postponed

[R2-2404626](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404626%20Correction%20on%20SP%20SRS%20activation%20deactivation%20MAC%20CE%28R18%29.docx) Correction on SP SRS activation deactivation MAC CE(R18) ZTE Corporation CR Rel-18 38.321 18.1.0 1841 - F NR\_pos\_enh-Core

* Postponed

Discussion:

Huawei understand the idea but think the correction does not completely resolve the problem, because there is also a cell ID. ZTE understand that the network would use the last serving cell ID. Huawei think SP-SRS in RRC\_INACTIVE in Rel-17 is not a big problem, because the RRCRelease can just configure periodic SRS.

Qualcomm note that there is subsequent DL data transfer; the UE can send MO-LR via SDT and SP-SRS can be activated with subsequent DL data. They also wonder if the cell ID by itself is enough.

ZTE intended that the cell ID would use the last serving cell, but they could revise the CR to make a similar change to the cell ID.

Intel think there is nothing wrong with the cell ID, just the BWP ID, and they think changing the behaviour for the cell ID might create a problem in Rel-18. Huawei wonder if we will reuse this MAC CE in Rel-18; Intel understand that we will not.

ZTE suggest that we change BWP ID now and see how the cell ID should be handled in light of the MAC CE decisions for aggregated SRS.

[R2-2404756](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404756%20Correction%20on%20the%20UL%20TEG%20report%20for%20R17.docx) Correction on the UL TEG report Huawei, HiSilicon, Ericsson CR Rel-17 38.331 17.8.0 4794 - F NR\_pos\_enh-Core

* Multi-RTT to be removed from the coversheet
* “a ue-TxTEG-ID” to be changed to “the ue-TxTEG-ID” in the last field description
* Remove duplicated field description table
* Add 6.2.2 to affected clauses
* Agreed with these changes as R2-2405862

[R2-2404757](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404757%20Correction%20on%20the%20UL%20TEG%20report%20for%20R18.docx) Correction on the UL TEG report Huawei, HiSilicon, Ericsson CR Rel-18 38.331 18.1.0 4795 - A NR\_pos\_enh-Core

* Multi-RTT to be removed from the coversheet
* “a ue-TxTEG-ID” to be changed to “the ue-TxTEG-ID” in the last field description
* Remove duplicated field description table
* Add 6.2.2 to affected clauses
* Agreed with these changes as R2-2405863

Discussion:

Qualcomm think the impacted functionality on the coversheet should not mention multi-RTT.

CATT think “a ue-TxTEG-ID” should be “the ue-TxTEG-ID” in the last field description.

Lenovo note there is a duplicated field description table, and 6.2.2 is missing from the affected clauses.

[R2-2405282](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405282%2037355%20Corrections%20REL-17.docx) Corrections to NR-On-Demand-DL-PRS-Information IE and ten-ms-unit-ResponseTime capability Nokia CR Rel-17 37.355 17.8.0 0508 - F NR\_pos\_enh-Core

* Postponed

[R2-2405283](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405283%2037355%20Corrections%20REL-18.docx) Corrections to NR-On-Demand-DL-PRS-Information IE and ten-ms-unit-ResponseTime capability Nokia CR Rel-18 37.355 18.1.0 0509 - A NR\_pos\_enh-Core

* Postponed

Discussion:

CATT think the fourth change is not accurate because OD-PRS is just a request for the configuration, not the transmission of PRS, so all the changes of the “transmission” wording are wrong.

Ericsson would also be fine with the removal of “transmission” in the fourth set of changes. They think the purpose does not need to be extensively described here since we already have it in the stage 2.

ZTE think there is nothing functionally wrong and it is somewhat editorial. They think the procedure is already clear from the stage 2 and stage 3 specs.

Nokia note that there are requests for start time/duration and PRS information, and the “transmission” changes were to disambiguate what the first one means. They agree there are no functional changes, but they think at least the “recommended” aspect is important for clarity of the spec.

Intel think there is nothing wrong, but they agree the changes clarify. ZTE understand that it is clear in the stage 2.

Qualcomm think the description of the QCL information is on the borderline of functional impact and should be in Rel-17.

ZTE think the QCL part is also clear without the CR.

[R2-2405405](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CDocs%5CR2-2405405.zip) Correction on posSIB(s) acquisition [SI-SCHEDULING] Philips International B.V., Ericsson CR Rel-17 38.331 17.8.0 4467 2 F NR\_pos\_enh-Core R2-2403387

* Work item to change to TEI17
* First change to be removed
* NE-DC and NR-DC should be impacted
* Filename format to be corrected (start with tdoc number)
* Agreed with these changes as R2-2405864

[R2-2405406](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CDocs%5CR2-2405406.zip) Correction on posSIB(s) acquisition [SI-SCHEDULING] Philips International B.V., Ericsson CR Rel-18 38.331 18.1.0 4725 1 A NR\_pos\_enh-Core R2-2403388

* Work item to change to TEI17
* First change to be removed
* NE-DC and NR-DC should be impacted
* Filename format to be corrected (start with tdoc number)
* Agreed with these changes as R2-2405865

Discussion:

Chair notes the WI code should be TEI17.

Lenovo think most of the changes are OK, but for change 1, the case is already covered because the type 2 SIB is discussed elsewhere in the existing text. They also think some coversheet changes are needed (NE-DC and NR-DC should be impacted).

Huawei note the filename should start with the tdoc number.

[R2-2405570](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405570%20MACF.docx) Correction of when to stop the triggered SR for positioning measurement gap activation/deactivation Ericsson, vivo CR Rel-17 38.321 17.8.0 1871 - F NR\_pos\_enh-Core

* Postponed

[R2-2405571](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405571%20MACA.docx) Correction of when to stop the triggered SR for positioning measurement gap activation/deactivation Ericsson, vivo CR Rel-18 38.321 18.1.0 1872 - A NR\_pos\_enh-Core

* Postpomed

Discussion:

Ericsson indicate that some more offline time is needed.

Huawei think this has been discussed previously and they do not see that anything is wrong.

vivo think Huawei’s comment makes sense for the current spec, but they see that the MAC CE may not be cancelled, and they think the CR can be lightly modified to make sense. Ericsson indicate the CR has changed relative to vivo’s proposal.

Withdrawn/Not available

R2-2404617 Correction on SP SRS activation deactivation MAC CE(R17) ZTE Corporation draftCR Rel-17 38.321 17.8.0 F NR\_pos\_enh-Core Withdrawn

R2-2404618 Correction on SP SRS activation deactivation MAC CE(R18) ZTE Corporation draftCR Rel-18 38.321 18.1.0 F NR\_pos\_enh-Core Withdrawn

R2-2405608 Correction on internode message for posSRS in RRC\_INACTIVE Huawei, HiSilicon CR Rel-17 38.331 17.8.0 4849 - F NR\_pos\_enh-Core Withdrawn

R2-2405609 Correction on internode message for posSRS in RRC\_INACTIVE Huawei, HiSilicon CR Rel-18 38.331 18.1.0 4850 - A NR\_pos\_enh-Core Withdrawn

# 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: 3 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 LSs with RAN2 in Cc:

[R2-2404105](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404105_R1-2403539.docx) Reply LS on SRS BW aggregation impact on other channels/signals (R1-2403539; contact: Huawei) RAN1 LS in Rel-18 NR\_pos\_enh2-Core To:RAN4 Cc:RAN2, RAN3

* Noted

[R2-2404140](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CDocs%5CR2-2404140.zip) LS reply on LCS user plane connection binding to the UE (S2-2405797; contact: CATT) SA2 LS in Rel-18 5G\_eLCS\_Ph3 To:CT1 Cc:CT4, RAN2

* Noted

Incoming LSs with “take into account” action and no related document

[R2-2404107](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404107_R1-2403577.docx) LS on UE’s reporting SL PRS CBR measurement to gNB (R1-2403577; contact: Qualcomm) RAN1 LS in Rel-18 NR\_pos\_enh2-Core To:RAN2

* Noted

[R2-2404118](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404118_R1-2403732.docx) LS on the dci-FormatsSL and DCI format 3\_2 (R1-2403732; contact: Qualcomm) RAN1 LS in Rel-18 NR\_pos\_enh2-Core To:RAN2

* Noted

Other incoming LSs and related documents

R2-2404104 Reply LS on positioning MAC agreements (R1-2403536; contact: Huawel) RAN1 LS in Rel-18 NR\_pos\_enh2-Core To:RAN2

* Noted

Discussion:

Huawei understand that the spec is in line with RAN1 understanding.

[R2-2404111](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404111_R1-2403622.doc) Reply LS on decisions on SLPP (R1-2403622; contact: vivo) RAN1 LS in Rel-18 NR\_pos\_enh2-Core To:RAN2

[R2-2404304](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404304%20Discussion%20on%20RAN1%20Reply%20LS%20regarding%20SLPP%20parameters.docx) Discussion on RAN1 Reply LS regarding SLPP parameters vivo discussion Rel-18 FS\_NR\_pos\_enh2

Proposal 1: Endorse TP in Annex1, to move sl-POS-ARP-ID-Tx into CommonSL-PRS-MethodsIEsProvideAssistanceData. Inform RAN1 about the decision.

Discussion:

Qualcomm think this does not make sense as assistance data. They think it works fine in the RequestLocationInformation and is only valid for a single UE, and they do not see from the contributions a strong motivation for making this change.

Intel think if we use the location request procedure, the Tx UE has to signal a requested positioning method, and this is a misuse of the procedure. Qualcomm still think the alternative does not work because the server talks only to a single UE (“UE1”), and there is no way for the server to know when the SL-PRS have been transmitted/measured.

Intel understand that the server can request assistance information from each anchor via CT1’s upper layer procedure.

vivo agree with Intel, and they think this information is subject to change with time and can also be provided as assistance data.

Qualcomm understand the procedures from SA2 are the same for the server UE and the LMF; it talks to the target UE, including SLPP messages for the anchor UEs, and the anchor UEs do not respond to the server directly. They also observe that the assistance data have no timestamp, and the measurement reports include the time when the signal was measured. They see no difference in procedures since the server (UE or LMF) only talks to UE1.

Intel understand we already agreed the server needs to get the sequence ID from each anchor UE.

ZTE understand Qualcomm’s argument is that the assistance data procedure should come first, but in their view there is no strict requirement on the order of the procedures.

Huawei wonder if the information might be needed in both RequestLocationInformation and ProvideAssistanceData. If the UE is acting like a gNB (DL-like), it looks more like ProvideAssistanceData, and in the UL-like case it may be more like assistance information.

vivo indicate that other WGs view this information as assistance data, and they see no technical issue about where to put it. They also understand that SLPP does not specify which role each UE is in; they are just endpoints.

Intel agree with vivo.

Qualcomm see it as similar to reporting TEGs as part of the measurement; this is information that will be used for position calculation, not to “assist” the measurement procedure. They understand that the ProvideAssistanceData is for a list of UEs.

Intel understand that the server will receive several SLPP messages via UE1, each for one anchor UE.

* [AT126][403][POS] Tx UE configuration as assistance data or location information (vivo)

 Scope: F2F offline to further discuss P1 of R2-2404304 and attempt to converge.

 Intended outcome: Report to CB session and approvable LS to RAN1 (to include responses to other SLPP issues where RAN1 need to be notified)

 Schedule: Tuesday 2024-05-21 0930-1030 in Brk3 [slot to be confirmed]

 Deadline: Thursday 2024-05-23 1000 JST

Proposal 2: Endorse TP in Annex2, to introduce a list of measurement elements, to support multiple Rx ARPs reporting in single measurement report. Inform RAN1 about the decision.

Discussion:

ZTE think the list size should be larger than 4 based on the RAN1 LS. Qualcomm have a different understanding and think we just need to repeat the measurement list multiple times if there are additional measurements; however, they think the request and capabilities also need to be modified.

vivo indicate there should be only one ARP ID corresponding to one SL-PRS resource in Rel-18, so they understand 4 is enough.

Agreement:

Introduce a list of 4 measurement elements, to support multiple Rx ARPs reporting in single measurement report. Implementation to be worked out in SLPP rapporteur CR (including request and potentially capability, to be discussed).

Proposal 3: Adopt Draft Reply LS to RAN1 in Annex3.

[R2-2404112](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404112_R1-2403636.docx) Reply LS on questions on RAN1 parameter list (R1-2403636; contact: CATT) RAN1 LS in Rel-18 NR\_pos\_enh2-Core To:RAN2 Cc:RAN3, RAN4

* Noted

[R2-2404433](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404433%20TPs%20for%20the%20Reply%20LS%20on%20questions%20on%20RAN1%20parameter%20list.docx) TPs for the Reply LS on questions on RAN1 parameter list CATT discussion Rel-18 NR\_pos\_enh2

Proposal 1: RAN2 to agree the TP 1 above to support Rx hopping in DL-AoD.

Proposal 2: RAN2 to agree the TP 2 above for the aggregated report.

Discussion:

ZTE understand the LS indicates two cases, one where a single DL-PRS-ID is enough, another where multiple IDs are needed, and they think the TP does not address the first one, but the legacy DL-PRS-ID can be used for this case. They think this can be reflected in the field description.

CATT understand the TP from ZTE changes the DL-PRS-ID from mandatory to OPTIONAL.

Qualcomm think the DL-PRS-ID should still be mandatory, because the resource can never be identified uniquely with only the resource set ID. They understand we always need set ID / resource ID / DL-PRS-ID.

Huawei think it is OK to keep it optional, but if there is only one DL-PRS-ID it will be duplicated in multiple linkages.

Qualcomm think the point is that the IE should be included in the first measurement and the additional measurements, and as RAN1 indicated the subsequent measurements come from the same TRP and the ID is not needed there, so they think it makes sense to change it to OPTIONAL as proposed by CATT.

Ericsson think we could specify in the field description that it is always included for the first measurement.

ZTE think we can say “if the field is present and the DL-PRS-ID is present, the legacy DL-PRS-ID shall be ignored”. Qualcomm think this is wrong because the legacy DL-PRS-ID should always be there in the first measurement and would apply to the additional measurements.

Proposal 3: RAN2 to agree set the RIL H006 “Rejected”.

[Chair’s note: Issue N013 is also related to the TPs in this document.]

Agreements:

Rx hopping in DL-AoD is supported as indicated by RAN1, with TP 1 from R2-2404433 as baseline.

Aggregated measurement reports are supported as indicated by RAN1, with TP 2 from R2-2404433 as baseline (DL-PRS-ID changed to OPTIONAL, with an indication that it is always provided for the first measurement). TP to be checked as part of the LPP CR update.

H006 is rejected.

N013 is agreed.

[R2-2404117](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404117_R1-2403728.docx) LS on PRS resource ID for bandwidth aggregation (R1-2403728; contact: ZTE) RAN1 LS in Rel-18 NR\_pos\_enh2-Core To:RAN2

* Noted

[R2-2404611](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404611%20Discussion%20on%20reporting%20PRS%20resource%20ID%20in%20PRS%20BW%20aggregation.docx) Discussion on reporting PRS resource ID in PRS BW aggregation ZTE Corporation discussion Rel-18 NR\_pos\_enh2

Proposal 1: To achieve using the existing PRS resource ID for PRS aggregation, RAN2 to adopt the following LPP changes:

 Change nr-AggregatedDL-PRS-ResourceSetID-List-r18 from (SIZE (2.. 3)) to (SIZE (1.. 2));

 Change field description in nr-AggregatedDL-PRS-ResourceSetID-List-r18 to ‘if the field is present, the nr-DL-PRS-ResourceSetID-r16 should be present, and the nr-DL-PRS-ResourceID-r16 is taken as one of aggregated PRS resource ID’.

Adopt the corresponding TP.

Discussion:

Huawei would prefer to directly add the PRS resource ID into the linkage; they think this would be simpler. Intel agree. Samsung also agree.

ZTE clarify that this is intended to follow RAN1’s wording, but they agree that the exact structure from the LS is not mandatory; they can accept adding the resource ID to the linkage.

CATT understand that each measurement report includes the resource ID, but the TP from ZTE has only one resource ID. They understand that if there are several aggregated measurement reports there should be several resource ID. ZTE indicate that whether the PRS resources are aggregated depends on the configuration, and the LMF only needs to know one PRS resource ID; they understand this is why RAN1 said reuse is also workable.

Nokia are not sure how you can use one resource set to aggregate. ZTE clarify that it is aggregated with the legacy value, so the number of aggregated resource set IDs is still 2..3. However, companies seem to prefer putting the ID directly in the linkage.

Samsung understand that the field should be OPTIONAL since the LMF can infer the other aggregate resource sets.

Agreement:

Address PRS BW aggregation by adding the PRS resource ID to the linkage as an OPTIONAL field.

[R2-2404125](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404125_R4-2406386.docx) LS on SL positioning measurements (R4-2406386; contact: Huawei) RAN4 LS in Rel-18 NR\_pos\_enh2-Core To:RAN1, RAN2

[R2-2404770](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404770%20Discussion%20on%20the%20reply%20LS%20for%20SL%20positoning%20measurement.docx) Discussion on the reply LS for SL positoning measurement Huawei, HiSilicon discussion Rel-18 NR\_pos\_enh2

Proposal1: Specify in the field description of SL-AOA measurement that either one of Azimuth and Zenith results or both shall be present in SL-AOA-MeasElement. Adopt the TP in Annex A

Proposal2: Reply to RAN4 that it is not possible for SL-AOA measurement to report only SL PRS-RSRP and/or SL PRS-RSRPP measurement (without SL AzimuthAoA or SL ZenithAoA measurement) for SL-AoA positioning. Adopt the rely LS in Annex B.

Discussion:

Intel think this is in line with company views and Qualcomm have a related TP.

Ericsson think the power measurements could make sense by themselves for SL “E-CID” if we had such a thing.

Agreements:

At least one angular measurement (AoA/ZoA) is mandatory in the measurement report for SL-AoA positioning.

[R2-2404769](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404769%20Draft%20reply%20LS%20to%20RAN4%20on%20SL%20positioning%20measurement.docx) LS on SL positioning measurements Huawei, HiSilicon LS out Rel-18 NR\_pos\_enh2 To:RAN4

* Revised in R2-2405866
* [AT126][404][POS] LS to RAN4 on SL positioning measurements (Huawei)

 Scope: Revise the draft LS in R2-2404769 to include our agreement on AoA/ZoA measurements.

 Intended outcome: Approved LS (without CB if possible)

 Deadline: Thursday 2024-05-23 1000 JST

RIL and open issue lists

Note: RRC open issues document proposes resolutions for O800, H907, H908

[R2-2404432](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CDocs%5CR2-2404432.zip) LPP RIL list for Rel-18 Positioning CATT discussion Rel-18 NR\_pos\_enh2

* Noted

[R2-2405256](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405256%20RRCOpenIssueList.docx) Open issues list For RRC Positioning Ericsson discussion Rel-18

Proposal 1 Current text which follows legacy SL-Commuication “if the UE is configured with sl-RxPool and/or sl-PRS-RxPool included in RRCReconfiguration message with reconfigurationWithSync (i.e. handover)” is kept as it is; i.e O800 is set to PropDisagree.

Proposal 2 H905 is agreed.

Proposal 3 H907 and H908 are PropDisagree and O320 is removed from Positioning RIL.

Agreements:

O800 is set to Rejected.

H905 is set to Agreed.

H907/H908 are set to Rejected.

[R2-2405258](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CDocs%5CR2-2405258.zip) RIL For RRC Positioning Ericsson discussion Rel-18

* Noted

Agreement:

PropAgree and PropReject/PropDisagree RILs from R2-2405258 are confirmed as Agreed/Rejected respectively.

Rapporteur CRs (endorsed after RAN2#125bis)

[R2-2404434](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404434%20Corrections%20to%20TS%2037.355.docx) Corrections to TS 37.355 CATT CR Rel-18 37.355 18.1.0 0500 2 F NR\_pos\_enh2 R2-2403818

[R2-2405257](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405257.docx) Miscellaneous and RRC Positioning RILs based Corrections Ericsson CR Rel-18 38.331 18.1.0 4759 2 F NR\_pos\_enh2 R2-2403819

### 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.

Rapporteur CR

[R2-2405247](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405247_%28Misc%20Stage%202%20Corrections%29.docx) Miscellaneous Stage 2 Corrections Qualcomm Incorporated CR Rel-18 38.305 18.1.0 0163 1 F NR\_pos\_enh2 R2-2403188

Other documents

R2-2404435 Corrections on TS 38.305 for CPP CATT, Nokia, NSB, Ericsson CR Rel-18 38.305 18.1.0 0165 - F NR\_pos\_enh2

[R2-2404765](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404765%20Remaining%20issues%20R18%20POS%20stage2%20for%20TS%2038.300.docx) Remaining issues R18 POS stage2 for TS 38.300 Huawei, HiSilicon, VIVO discussion Rel-18 NR\_pos\_enh2

[R2-2404766](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404766%20Remaining%20issues%20R18%20POS%20stage2%20for%20TS%2038.305.docx) Remaining issues R18 POS stage2 for TS 38.305 Huawei, HiSilicon discussion Rel-18 NR\_pos\_enh2

[R2-2405259](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405259%20stage2.docx) DRX and PRS alignment for positioning Ericsson CR Rel-18 38.305 18.1.0 0166 - F NR\_pos\_enh2

[R2-2405284](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405284%20Pos%20RRC_INACTIVE.docx) Further clarifications for Positioning in RRC\_INACTIVE state Nokia discussion Rel-18 38.305 NR\_pos\_enh2-Core R2-2403500

### 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 issues list

Open RILs: Rapp022, Rapp023, Rapp024, Rapp025, Rapp026

R2-2404189 [Post125bis][406][POS] 38.355 update Open Issue list Intel Corporation discussion Rel-18 NR\_pos\_enh2-Core

* Noted

Rapporteur CRs (endorsed after RAN2#125bis)

[R2-2404191](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404191%20Miscellaneous%20corrections%20to%20SLPP%20specification%20v04.docx) Miscellaneous corrections to SLPP specification Intel Corporation CR Rel-18 38.355 18.1.0 0003 2 F NR\_pos\_enh2-Core R2-2403817

[R2-2404760](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404760%20CR%2038.355%20for%20SLPP%20capability.docx) CR 38.355 for SLPP capability Xiaomi CR Rel-18 38.355 18.1.0 0004 1 B NR\_pos\_enh2-Core R2-2403977

Rapp022, Rapp023, Rapp026

[R2-2404190](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404190%20SLPP%20related%20open%20issues.docx) Rapp022, Rapp023, Rapp026, Further Considerations on SLPP related open issues Intel Corporation discussion Rel-18 NR\_pos\_enh2-Core

Proposal 1: For SL-AoA-MeasElement, SL-RTT-MeasElement and SL-TDOA-MeasElement, change maxNrOfUE to maxNrOfARP (max number 256).

Proposal 2: reverse RAN2 agreements, the association information between ARP-ID and the already transmitted SL PRS resource(s) is still placed inside CommonSL-PRS-MethodsIEsRequestAssistanceData and SL-PRS-AssistanceData of CommonSL-PRS-MethodsIEsProvideAssistanceData;

Proposal 3: Server needs to inform the Rx UE of upcoming assistance data post SL PRS reception, i.e., the Rx UE should expect to receive this information subsequent to a SL PRS reception. Server should trigger the second round of assistance data transfer procedure to configure the association information for ARP-ID and already transmitted SL PRS to the Rx UE.

Proposal 4: introduce a new field to indicate the Tx UE to transmit SL-PRS immediately once resource is available. If this field is absent, the UE can store the SL-PRS-TxInfo for future SL-PRS transmission (e.g., triggered by SCI from a peer UE).

Discussion:

ZTE think one UE should not indicate in SLPP to another UE when to start transmitting SL-PRS; they understand that this is only used for the SL-RTT scenario, in which case the anchor UE should wait for the SCI, so they do not see the need to signal this explicitly. Intel clarify that the proposal is for the server to indicate to the Tx UE.

Huawei think from the resource allocation pov, this is not entirely feasible: For RA scheme 1, the UE requests resources from the network, and for scheme 2 it is uncertain when the UE can secure the resources. They also want to clarify that the peer UE should have started transmission before the ProvideAssistanceData.

Samsung think the intention of the proposal is to introduce a flag to indicate whether the SLPP message is for triggering transmission “right now” or providing Tx information for a future transmission triggered by SCI; they can accept the proposal.

vivo think the current Tx info can be used to trigger the UE to send SL-PRS and there is no need to indicate explicitly.

Qualcomm think the flag is needed for the TDOA scenario with anchor UEs that do not support Rx PRS, because such UEs will never receive an SCI, but we still need also the Tx parameters in SLPP in both cases.

ZTE think if the UE receives SCI after transmitting, it can always transmit it again; they see no restriction that if the UE sends according to SLPP it cannot send it according to a later SCI, so they think the current spec is OK. They agree with Qualcomm’s scenario, but they think it can be done without an explicit flag.

Samsung think without the flag, the UE would always transmit the SL-PRS at least once, even though it might not be needed. They think the 1-bit indication can just be used to indicate “transmit now” or not, with no restriction on future transmission.

vivo think we already have an agreement that the SL-PRS transmission parameters are provided by upper layer by implementation, so they do not see that the provision of transmission parameters is relevant to this scenario.

Intel understand that the server should provide bandwidth, delay budget, etc. to allow the UE to select resources properly, and the anchor does not know what positioning method is in use, so the Tx UE should be informed of when to transmit. ZTE think the anchor does know based on which IEs were used to configure it. Intel indicate we did not structure the assistance data in this way with different IEs per positioning method.

ZTE checked the assistance data and understand that the Tx UE can distinguish which method the assistance data are being configured for. Intel indicate that the assistance data found by ZTE are location calculation assistance for the Rx UE.

Agreement:

Introduce a new field in the ProvideAssistanceData to indicate to the Tx UE to transmit SL-PRS once resource is available. If this field is absent, the UE can store the SL-PRS-TxInfo for future SL-PRS transmission (e.g., triggered by SCI from a peer UE).

Rapp025

[R2-2404518](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404518%20TP%20on%20error%20messaging%20in%20SLPP.doc) Text proposal on error messaging in SLPP Lenovo discussion Rel-18 NR\_pos\_enh2

Proposal 1: Agree on the initial set of SL-specific error cause values as listed in Table 1.

[Chair’s note: Error causes as follows:

General::undefined

Measurements::notAllRequestedMeasurementsPossible

Assistance data::assistanceDataMissing

Assistance data::assistanceDataNotSupportedByServer

Assistance data::assistanceDataSupportedButCurrentlyNotAvailableByServer

Assistance data::notAllRequestedAssistanceDataAvailableByServer

]

Discussion:

Qualcomm think it is not clear why we need an explicit error for “not all measurements possible”, but they acknowledge we have it in LPP and we need a baseline set of values.

OPPO wonder if we need to capture something in stage 2. Lenovo think we could do it in the stage 3 field descriptions as in LPP.

Intel understand we only have field descriptions for fields where they are needed, and if the errors are already clear we don’t need them.

Nokia generally agree with Qualcomm and think we need a motivation for the codes and clear behaviour for what will happen when we receive them. Lenovo think if we do not agree an initial set we will just have a generic undefined error.

OPPO agree with Nokia.

Intel think some of the causes are not different from the device perspective, e.g., AD “not available” vs. “not supported”. They think we should have different causes when the UE behaviour is different.

Proposal 2: Discuss and decide on the option for introducing SL-specific error cause values in SLPP. [Common vs. method-specific IEs]

Discussion:

Qualcomm would somewhat prefer method-specific, in case we have method-specific error causes later.

* [AT126][405][POS] SLPP error causes (Lenovo)

 Scope: F2F offline to converge on a list of SLPP error causes. If possible, determine whether to capture them in a common or method-specific way.

 Intended outcome: Report to CB session

 Schedule: Wednesday 2024-05-22 0930-1030 in Brk3 [slot to be confirmed]

 Deadline: Thursday 2024-05-23 1000 JST

Rapp024

[R2-2405268](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405268.docx) Open SLPP issues Nokia discussion Rel-18

Proposal 2: RAN2 to define relative velocity with uncertainty as defined in TS 23.032 based on

- absolute value of the radial speed component,

- vector of the traversal speed component, consisting of its absolute value, azimuth and elevation

while specifying

- independent uncertainty and confidence values for each radial / traversal component parameter.

Proposal 3: Application layer ID is used to define the reference point employed for relative velocity measurements.

Proposal 4: RAN2 to adopt the text proposal associated with Proposals 2 and 3 as section 2.2b below.

Proposal 5: RAN2 to decide if to send an LS to SA2 with the request to define the traverse velocity component as a vector specified by its absolute value, azimuth and elevation.

Discussion:

Huawei think this is OK as a baseline. They wonder why/how SA2 settled on defining relative to the horizontal plane of device A.

Qualcomm think there is some confusion about the term “velocity” since the unit is degrees/second rather than m/s. They think P5 does not define transverse velocity properly in this sense.

Nokia understand that the change of direction is a 3-D vector, irrespective of specific units.

Qualcomm think we do not need the application layer ID; the reference point is always the requesting device.

Agreement:

Define relative velocity with uncertainty as defined in TS 23.032 based on

- radial velocity component,

- angular velocity components (exact representation to be discussed in CR implementation)

while specifying

- independent uncertainty and confidence values for each radial / traversal component parameter.

Details to be further discussed in SLPP CR implementation.

* [AT126][406][POS] Remaining SLPP issues (Intel)

 Scope: F2F offline to discuss remaining SLPP issues with ASN.1 impact.

 Intended outcome: Report to CB session

 Schedule: Wednesday 2024-05-22 0900-0930 in Brk3

 Deadline: Thursday 2024-05-23 1000 JST

Other contributions

[R2-2404305](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404305%20Discussion%20on%20open%20issue%20of%20SLPP%20specification.docx) Discussion on open issue of SLPP specification vivo discussion Rel-18 FS\_NR\_pos\_enh2

[R2-2404612](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404612%20Discussion%20on%20remaining%20corrections%20in%20SLPP.docx) Discussion on remaining corrections in SLPP ZTE Corporation discussion Rel-18 NR\_pos\_enh2

[R2-2404742](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404742%20Discussion%20on%20SLPP%20relative%20velocity.doc) Discussion on SLPP relative velocity Xiaomi discussion Rel-18 NR\_pos\_enh2

[R2-2404763](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404763%20Discussion%20on%20the%20remaining%20issues%20for%20R18%20SLPP.docx) Discussion on the remaining issues for R18 SLPP Huawei, HiSilicon discussion Rel-18 NR\_pos\_enh2

[R2-2404869](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404869%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 discussion Rel-18 NR\_pos\_enh2

[R2-2405248](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405248_%28Remaining%20SLPP%20Issues%29.docx) Remaining issues for SLPP Qualcomm Incorporated discussion

[R2-2405390](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405390_Discussion%20on%20SL-PRS%20triggering%20via%20SLPP.docx) Discussion on SL-PRS Tx triggering by SLPP Samsung discussion Rel-19 NR\_pos\_enh2 Late

Withdrawn/Not available

[R2-2404710](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404710.docx) Open SLPP issues Nokia France discussion 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.

Rapporteur CR on capabilities (endorsed after RAN2#125bis)

[R2-2404595](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404595.docx) Miscellaneous corrections on LPP for Rel-18 positioning UE capabilities Xiaomi CR Rel-18 37.355 18.1.0 0503 1 F NR\_pos\_enh2-Core R2-2403978

ToDo RILs: M001, H006, N013

Note: H006 and N013 are addressed in R2-2404433

[R2-2404510](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404510.docx) [M001] Inclusion of PRU as an LPP endpoint MediaTek Inc., Ericsson draftCR Rel-18 37.355 18.1.0 F NR\_pos\_enh2-Core

ASN.1 impact

Measurement time window (P1,P2)

Failure cause for RSCP/RSCPD measurements (P3)

Failure cause for location information (P4 first, then detailed proposals in P5/P6/P7 if agreeable; also related to R2-2404235 P1)

[R2-2405261](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405261%20LPP.docx) Removing Legacy terminology for Correction on Time Window Config and other CPP corrections and PRU Error cause Ericsson discussion Rel-18

Proposal 1 Replace supportOfLegacyMeasurementInTimeWindow by supportOfMeasurementInTimeWindowForDL-TDOA and similarly for other methods.

Proposal 2 Adopt the text proposal from section 2.2 signal which measurements are to be performed in the configured time window.

Proposal 3 Allow UE to report failure (error cause) for RSCP, RSCPD measurements when timing estimation are unrerliable.

Proposal 4 Allow the UE configured as a PRU and configured with the locationInformatioType locationEstimateAndMeasurementsRequired-r18 to indicate a specific error when it is able to provide location measurements but not a location.

Proposal 5 Agree to add a specific error to represent indications of failed location estimates from a PRU when configured with the locationInformatioType locationEstimateAndMeasurementsRequired-r18

Proposal 6 Add a specific location source for the location estimate part for the UE configured as a PRU and configured with the locationInformatioType locationEstimateAndMeasurementsRequired-r18.

Proposal 7 Agree to the text proposal in Appendix.

PFL indication for CPP

[R2-2404872](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404872%20Discussion%20on%20DL%20RSCPD%20RSCP%20measurement%20on%20single%20DL%20PFL.docx) Discussion on DL RSCPD RSCP measurement on single DL PFL OPPO discussion Rel-18 NR\_pos\_enh2

Proposal : RAN2 to discuss which of following option should be adopted:

1. LMF could configure on which PFL the UE shall perform DL RSCPD/RSCP measurement in the NR-Multi-RTT- RequestlocationInformation/NR-DL-TDOA-RequestLocationInformation message

2. UE reports the information of the PFL on which it performs the DL RSCPD/RSCP measurement in the NR-Multi-RTT- ProvideLocationInformation/NR-DL-TDOA-ProvideLocationInformation message

DL-AoD capability issue

[R2-2404870](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404870%20Discussion%20on%20support%20of%20bandwidth%20aggregation%20by%20the%20DL-AOD.docx) Discussion on no support of bandwidth aggregation by the DL-AOD OPPO discussion Rel-18 NR\_pos\_enh2

Proposal 1: RAN2 to agree to delete nr-DL-AoD-OnDemandPRS-ForBWA-Support-r18 IE from NR-DL-AoD-ProvideCapabilities.

ASN.1 impact, but may be covered by other discussions

[R2-2404235](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404235%20Discussion%20on%20the%20remaining%20LPP%20issues.docx) Discussion on the remaining LPP issues CATT discussion Rel-18 NR\_pos\_enh2

[R2-2404761](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404761%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

Other documents

R2-2404613 Discussion on PRS bandwidth aggregation in LPP ZTE Corporation discussion Rel-18 NR\_pos\_enh2

[R2-2404871](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404871%20Discussion%20on%20UE%20capability%20on%20bandwith%20aggregation%20positioning.docx) Discussion on UE capability on bandwith aggregation positioning OPPO discussion Rel-18 NR\_pos\_enh2

### 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.

G117 (status unclear)

[R2-2405323](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405323.docx) Correction on srs-PosRRC-Inactive handling Google CR Rel-18 38.331 18.1.0 4822 - F NR\_pos\_enh-Core

Additional RILs (closed but with contributions)

[R2-2404306](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404306%20%5BV800%5D%20Correction%20on%20UE%20not%20supporting%20NR%20sidelink%20positioning%20in%20the%20limited%20service%20state.docx) [V800] Correction on UE not supporting NR sidelink positioning in limited service state vivo draftCR Rel-18 38.331 18.1.0 F FS\_NR\_pos\_enh2

[R2-2404764](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404764%20Discussion%20on%20the%20remaining%20issues%20for%20R18%20RRC%20%5BH905%5D%5BH920-921%5D.docx) Discussion on the remaining issues for R18 RRC [H905][H920-921] Huawei, HiSilicon discussion Rel-18 NR\_pos\_enh2

ASN.1 impact

[R2-2404614](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404614%20Discussion%20on%20remaining%20corrections%20in%20RRC.docx) Discussion on remaining corrections in RRC ZTE Corporation discussion Rel-18 NR\_pos\_enh2

[R2-2405249](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405249_%28RRC%20SL%20DCI%20CBR%29.docx) Addition of SL DCI Formats and SL PRS CBR measurement Results Qualcomm Incorporated discussion

Other documents

R2-2404236 Activation of SRS when configured with validity area CATT discussion Rel-18 NR\_pos\_enh2

[R2-2405103](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405103.doc) Discussion on the activation of the semi-persistent SRS of preconfigured SRS Xiaomi 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.

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

Rapporteur CR (endorsed after RAN2#125bis)

[R2-2404762](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404762%20Rapporteur%20MAC%20CR%20for%20R18%20positioning.docx) Rapporteur MAC CR for R18 positioning Huawei, HiSilicon CR Rel-18 38.321 18.1.0 1844 - F NR\_pos\_enh2

Email discussion report

R2-2404615 Report of [Post125bis][401][POS] Aggregated SP-SRS activation deactivation MAC CE ZTE Corporation discussion Rel-18 NR\_pos\_enh2

Other documents

[R2-2404741](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404741%20Discussion%20on%20positioning%20MAC%20open%20issues.doc) Discussion on SL positioning MAC open issues Xiaomi discussion Rel-18 NR\_pos\_enh2

[R2-2404767](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404767%20Discussion%20on%20the%20remaining%20isues%20for%20MAC%20for%20R18%20POS.docx) Discussion on the remaining isues for MAC for R18 POS Huawei, HiSilicon discussion Rel-18 NR\_pos\_enh2

[R2-2405260](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405260%20MAC.docx) Addressing MAC open issues Ericsson discussion Rel-18

[R2-2405267](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405267.docx) Miscellaneous MAC issues Nokia discussion Rel-18

[R2-2405420](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CDocs%5CR2-2405420%20.zip) Corrections for SL-PRS transmission and reception ASUSTeK discussion Rel-18 NR\_pos\_enh2

MAC CE design (overlap with email discussion)

[R2-2405504](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405504_MAC%20CE%20for%20activation_deactivation%20of%20aggregated%20SP%20SRS%20for%20positioning.docx) MAC CE for activation/deactivation of aggregated SP SRS for positioning Samsung discussion Rel-18 NR\_pos\_enh2 Late

Withdrawn/Not available

[R2-2404714](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404714.docx) Miscellaneous MAC issues Nokia France discussion Rel-18 Withdrawn

### 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.

Rapporteur CRs (endorsed after RAN2#125bis)

[R2-2404623](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404623.docx) Miscellaneous corrections for Rel-18 positioning UE capabilities Xiaomi CR Rel-18 38.331 18.1.0 4772 1 F NR\_pos\_enh2-Core R2-2403971

[R2-2404624](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404624.docx) Miscellaneous corrections for Rel-18 positioning UE capabilities Xiaomi CR Rel-18 38.306 18.1.0 1090 1 F NR\_pos\_enh2-Core R2-2403972

Other documents

[R2-2404768](file:///C%3A%5C%5CUsers%5C%5Cmtk16923%5C%5CDocuments%5C%5C3GPP%20Meetings%5C%5C202405%20-%20RAN2_126%2C%20Fukuoka%5C%5CExtracts%5C%5CR2-2404768%20Discussion%20on%20the%20remaining%20issues%20for%20UE%20capability.docx%22%20%5Co%20%22C%3AUsersmtk16923Documents3GPP%20Meetings202405%20-%20RAN2_126%2C%20FukuokaExtractsR2-2404768%20Discussion%20on%20the%20remaining%20issues%20for%20UE%20capability.docx) Discussion on the remaining issues for UE capability Huawei, HiSilicon discussion Rel-18 NR\_pos\_enh2

[R2-2404519](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404519%20NR%20positioning%20caps%20corrections.doc) Corrections on NR positioning capability signaling Lenovo discussion Rel-18 NR\_pos\_enh2

### 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.

Incoming LS with “take into account” action and no related document

R2-2404134 Reply LS on L2ID and user info for L2 based U2U (S2-2405379; contact: OPPO) SA2 LS in Rel-18 NR\_SL\_relay\_enh-Core To:RAN2, CT1

Incoming LS with “take into account” action and related document

[R2-2404136](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404136_S2-2405531.docx) Reply LS on U2U relay selection (S2-2405531; contact: OPPO) SA2 LS in Rel-18 NR\_SL\_relay\_enh-Core To:RAN2 Cc:CT1

[R2-2404251](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404251%20-%20Discussion%20on%20LS%20S2-2405531.docx) Discussion on LS S2-2405531 OPPO discussion Rel-18 NR\_SL\_relay\_enh-Core

Rapporteur CRs (endorsed after RAN2#125bis)

[R2-2405367](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405367%20RRC%20corrections%20for%20SL%20relay_Resubmission.docx) RRC corrections for Rel-18 SL relay enhancements Huawei, HiSilicon, Ericsson, ZTE, CATT, Sharp, Lenovo, OPPO, Nokia, Apple, MediaTek, Xiaomi, Samsung, ASUSTeK CR Rel-18 38.331 18.1.0 4684 2 F NR\_SL\_relay\_enh-Core R2-2403813

[R2-2405532](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405532%20CR4774r1%20Correction%20for%20SL%20Relay%20UE%20capability.docx) Correction for SL Relay UE capability Samsung CR Rel-18 38.331 18.1.0 4774 1 F NR\_SL\_relay\_enh-Core R2-2403975

[R2-2405533](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405533%20CR1091r1%20Correction%20for%20SL%20Relay%20UE%20capability.docx) Correction for SL Relay UE capability Samsung CR Rel-18 38.306 18.1.0 1091 1 F NR\_SL\_relay\_enh-Core R2-2403976

### 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.

R2-2404254 Discussion on stage-2 corrections OPPO discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2404326](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404326%20Candidate%20MP%20Relay%20UEs%20Reporting%20for%20N3C%20Remote%20UE.docx) Candidate MP Relay UEs Reporting for N3C Remote UE CATT 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.

RIL list

[R2-2405369](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CDocs%5CR2-2405369.zip) RIL list for SL relay Huawei, HiSilicon report Rel-18 NR\_SL\_relay\_enh-Core

ToDoRILs: N122, B109, O437

[R2-2404803](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404803%20%5BB109%5D%20sidelink%20RRC%20reconfiguration%20failure%20for%20U2U%20v1.0.doc) [B109]Sidelink RRC reconfiguration failure for U2U Lenovo discussion Rel-18

[R2-2405458](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405458%20%5BN122%5D%20and%20capability%20issue.docx) [N122] and capability issue Nokia discussion NR\_SL\_relay\_enh-Core

[R2-2404327](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404327%20Discussion%20on%20N122%2C%20B109%20and%20SA2%20LS%20Reply.docx) Discussion on N122, B109 and SA2 LS Reply CATT discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2405286](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405286_On%20RIL%20B109.docx) On RIL B109 Ericsson discussion Rel-18

ASN.1 impact

[R2-2404732](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404732%20SLrelay%20RRC%20issues.docx) SL relay RRC correction proposals Nokia discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2404733](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404733%20RSRP%20for%20U2N%20relay%20%28re-%29selection.docx) RSRP thresholds for U2N relay selection and re-selection Nokia discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2405237](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405237%20correction%20on%20the%20UE%20capability%20reporting%20in%20SUI.docx) Corrections on UE capability reporting in SUI for L2 U2U relay Huawei, HiSilicon discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2405352](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405352_Discussion%20on%20n3c-BearerAssociated.doc) Discussion on n3c-BearerAssociated ZTE, Sanechips discussion NR\_SL\_relay\_enh-Core

Multi-company corrections CR

[R2-2405601](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405601%20Rapp%20CR%20for%20SL%20relay_update.docx) RRC corrections for Rel-18 SL relay enhancements Huawei, HiSilicon, ASUSTeK, Nokia, OPPO CR Rel-18 38.331 18.1.0 4847 - F NR\_SL\_relay\_enh-Core

Other documents

R2-2404252 Correction of local ID setting by U2U Relay UE OPPO discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2404328](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404328%20Clarification%20on%20the%20U2U%20Relay%20%28Re-%29selection%20Procedure.docx) Clarification on the U2U Relay (Re-)selection Procedure CATT discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2404663](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404663%20Discussion%20on%20SUI%20end-to-end%20U2U%20bearer%20index%20.docx) Discussion on SLRB index in SUI for L2 U2U relay Apple discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2404678](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404678-Discussion%20on%20the%20remaining%20issues%20for%20U2U%20relay.docx) Discussion on the remaining issues for U2U relay LG Electronics Inc. discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2405238](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405238%20Discussion%20on%20the%20SLRB%20index%20in%20the%20SUI%20for%20U2U%20relay%20UE.doc) Discussion on the SLRB index in the SUI for U2U relay UE Huawei, HiSilicon discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2405322](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405322.docx) Correction on setuprelease type sidelink fields handling Google CR Rel-18 38.331 18.1.0 4821 - F NR\_SL\_enh-Core

[R2-2405351](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405351_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

[R2-2405425](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405425%20%5BK008%5D%20How%20to%20set%20the%20contents%20of%20sidelink%20UE%20capability%20messages%20for%20L2%20U2U%20Relay.docx) [K008] How to set the contents of sidelink UE capability messages for L2 U2U Relay ASUSTeK discussion Rel-18 38.331 NR\_SL\_relay\_enh-Core

[R2-2405628](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405628-U2U.docx) discussion on U2U relay related issues Sharp discussion Rel-18 NR\_SL\_relay\_enh-Core

Withdrawn/Not available

R2-2405368 Rapp RRC CR for Rel-18 SL relay enhancement Huawei, HiSilicon report Rel-18 38.331 NR\_SL\_relay\_enh-Core Withdrawn

### 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 (endorsed at RAN2#125bis)

R2-2404247 Corrections for NR sidelink relay enhancements OPPO, ZTE CR Rel-18 38.351 18.1.0 0034 2 F NR\_SL\_relay\_enh-Core R2-2403814

Other documents

[R2-2404253](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404253%20-%20Discussion%20on%20SRAP%20corrections.docx) Discussion on SRAP corrections OPPO discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2404662](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404662%20Correction%20on%20egresss%20link%20determination%20in%20L2%20U2U%20relay_38351.docx) Correction for egress link determination in L2 U2U Relay UE Apple CR Rel-18 38.351 18.1.0 0036 - F NR\_SL\_relay\_enh-Core

### 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

[R2-2405856](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5C38323_CR0135_Rel-18_R2-2405856_MiscRelayCorrections.docx) Miscellaneous Rapporteur Corrections to 38.323 for SL Relay InterDigital, ZTE CR Rel-18 38.323 18.1.0 0135 2 F NR\_SL\_relay\_enh-Core Late

Other document

R2-2405353 Discussion on PDCP corrections for MP ZTE, Sanechips discussion NR\_SL\_relay\_enh-Core

### 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.

To include handling of RIL O437

R2-2405236 UE capability corrections for multi-path operation Huawei, HiSilicon discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2405287](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405287_Discussion_of_Open_Issues_in_38306.docx) Discussion on Open Issues in 38.306 Ericsson discussion Rel-18

### 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.

## 7.24 TEI18

Specific items may be allocated to a breakout session for treatment.

Time budget: 1 TU

### 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

#### 7.24.2.0 In Principle agreed CRs

[R2-2404246](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5C38331_CR4645r1_%28REL-18%29_R2-2404246%20-%20Remove%20of%20AS%20condition%20checking%20of%20SUI%20for%20U2N%20Relay%20communication.docx) Remove of AS condition checking of SUI for U2N Relay communication OPPO, Apple CR Rel-18 38.331 18.1.0 4645 1 F TEI18, NR\_SL\_relay-Core R2-2402210

[R2-2404509](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404509.docx) [B021] Missing posSibType2-17a in list of posSIB types [PosL2RemoteUE] MediaTek Inc., Lenovo CR Rel-18 38.331 18.1.0 4767 1 F TEI18 R2-2403792

[R2-2405253](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405253%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 3 B TEI18 R2-2403973

[R2-2405254](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405254%20BT.docx) Corrections for Bluetooth AoA/AoD [BT-AoA-AoD] Ericsson, Intel Corporation CR Rel-18 37.355 18.1.0 0502 1 F TEI18 R2-2403794

Withdrawn/Not available

R2-2404245 Remove of AS condition checking of SUI for U2N Relay communication OPPO, Apple CR Rel-18 38.351 18.1.0 0035 - F TEI18, NR\_SL\_relay\_enh-Core R2-2402210 Withdrawn

#### 7.24.2.2 Other RAN2 TEI-18

Contributions should focus only critical issues/corrections for already agreed TEI-18 topics. NCo-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 [POST125bis][019][Emergency Calls] Common solution (Lenovo)

R2-2405575 Corrections related to LPP RILs E001-E003 and Q033 due to agreed CT4 corrections [LocalCoords] Ericsson CR Rel-18 37.355 18.1.0 0510 - F TEI18

* Revised in R2-2405858

[R2-2405858](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2405858.docx) Corrections related to LPP RILs E001-E003 and Q033 due to agreed CT4 corrections [LocalCoords] Ericsson CR Rel-18 37.355 18.1.0 0510 1 F TEI18

* Revised in R2-2405861

R2-2405861 Corrections related to LPP RILs E001-E003 and Q033 due to agreed CT4 corrections [PosLocalCoords] Ericsson CR Rel-18 37.355 18.1.0 0510 2 F TEI18

[R2-2404758](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202405%20-%20RAN2_126%2C%20Fukuoka%5CExtracts%5CR2-2404758%20Correction%20to%20on-demand%20SIB%20request%20%5BOdSIBReq%5D.docx) Correction to on-demand SIB request [OdSIBReq] Huawei, HiSilicon, Ericsson, Qualcomm CR Rel-18 38.331 18.1.0 4796 - B TEI18