3GPP TSG-RAN WG2 Meeting #131 R2-25xxxxx

Bengaluru, India, 25-29 August 2025

Source: Session Chair (MediaTek)

Title: Report from session on positioning and sidelink relay

# 4 EUTRA Rel-17 and earlier

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

## 4.3 Positioning corrections Rel-16 and earlier

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

Tdoc Limitation: 1 tdoc

# 5 NR Rel-15 and Rel-16

Essential corrections only.

Tdoc Limitation: 4 Tdocs in total for agenda item 5 (incl. its sub agenda items) and agenda item 6 (incl. its sub agenda items)

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 treated 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.

[R2-2505324](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505324%20Correction%20on%20delivery%20of%20posSIB%20segments%20by%20dedicated%20siganling%20in%20RRC_CONNECTED_r16.docx) Correction to delivery of posSIB segments by dedicated signalling in RRC\_CONNECTED Huawei, HiSilicon, Ericsson, Qualcomm CR Rel-16 38.331 16.20.0 5407 - F NR\_pos-Core

[R2-2505325](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505325%20Correction%20on%20delivery%20of%20posSIB%20segments%20by%20dedicated%20siganling%20in%20RRC_CONNECTED_r17.docx) Correction to delivery of posSIB segments by dedicated signalling in RRC\_CONNECTED Huawei, HiSilicon, Ericsson, Qualcomm CR Rel-17 38.331 17.13.0 5408 - A NR\_pos-Core

[R2-2505326](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505326%20Correction%20on%20delivery%20of%20posSIB%20segments%20by%20dedicated%20siganling%20in%20RRC_CONNECTED_r18.docx) Correction on delivery of posSIB segments by dedicated siganling in RRC\_CONNECTED Huawei, HiSilicon, Ericsson, Qualcomm CR Rel-18 38.331 18.6.0 5409 - A NR\_pos-Core

* Revised in R2-2505640

[R2-2505640](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505640%20Correction%20on%20delivery%20of%20posSIB%20segments%20by%20dedicated%20siganling%20in%20RRC_CONNECTED_r18.docx) Correction to delivery of posSIB segments by dedicated signalling in RRC\_CONNECTED Huawei, HiSilicon, Ericsson, Qualcomm CR Rel-18 38.331 18.6.0 5409 1 A NR\_pos-Core R2-2505326

# 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.

Tdoc Limitation: 4 Tdocs in total for agenda item 5 (incl. its sub agenda items) and agenda item 6 (incl. its sub agenda items)

## 6.3 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))

# 7 Rel-18

## 7.0 Common

Rel-18 WIs not covered under an explicit AI in 7.x. Multi-WI Rel-18 items, e.g. cross-WI-issues not handled under another WI. UE capabilities.

### 7.0.2 Rel-18 corrections

*Essential corrections only. For smaller corrections please contact CR editor / Rapporteur directly. Coordinate with rapporteurs and chair if input above limit is required*

*Tdoc limitation: 5*

#### 7.0.2.19 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))

[R2-2505356](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5C38331_CR5413_%28REL-18%29_R2-2505356.docx) Correction on field description of sl-CapabilityInformationSidelink for U2U Relay OPPO CR Rel-18 38.331 18.6.0 5413 - F NR\_SL\_relay\_enh-Core

[R2-2505543](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505543%20CR5422%20to%2038.331%20on%20SI%20reception%20for%20MP.docx) Correction to SI reception by remote UE for multi path LG Electronics Inc. CR Rel-18 38.331 18.6.0 5422 - F NR\_SL\_relay\_enh-Core

[R2-2505760](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505760%20Corrections%20on%20N3C%20multi-path.doc) Corrections on N3C multi-path ZTE Corporation, Sanechips discussion Rel-18 NR\_SL\_relay\_enh-Core

Stage 2 CRs postponed from RAN2#130

[R2-2505183](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505183%20Correction%20to%20PDCP%20duplication%20description%20for%20L2%20MP%20using%20SL%20relay%20or%20N3C%20indirect%20path.docx) Correction to PDCP duplication description for L2 MP using SL relay or N3C indirect path Huawei, HiSilicon, Nokia (Rapporteur), CMCC CR Rel-18 38.300 18.6.0 0989 1 F NR\_SL\_relay\_enh-Core R2-2504002

[R2-2505885](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505885%20-%2038.300_1020_Rel18_U2URelays_Bidirectional.docx) U2U Relays, Peer Remote UE Control Plane Procedures Ericsson CR Rel-18 38.300 18.6.0 1020 - F NR\_SL\_relay\_enh-Core

#### 7.0.2.21 Expanded and improved NR positioning

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

LS on startSFN and related contributions

[R2-2505014](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505014_R1-2504854.docx) Reply LS on startSFN for positioning SRS frequency hopping (R1-2504854; contact: ZTE) RAN1 LS in Rel-18 NR\_pos\_enh2-Core To:RAN2

[R2-2506181](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2506181%20Corrections%20on%20the%20startSFN%20of%20the%20UTW.docx) Corrections on the startSFN of the UTW ZTE Corporation, Ericsson, vivo, Qualcomm, Samsung, Nokia CR Rel-18 38.331 18.6.0 5464 - F NR\_pos\_enh2-Core

SP SRS frequency hopping

[R2-2505323](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505323%20Discussion%20on%20SP-SRS%20frequency%20hopping_final.docx) Discussion on SP positioning SRS frequency hopping Huawei, HiSilicon, Ericsson discussion Rel-18 NR\_pos\_enh2-Core

[R2-2505266](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505266.docx) Correction to SP positioning SRS transmission with frequency hopping Ofinno CR Rel-18 38.321 18.6.0 2097 - F NR\_pos\_enh2-Core

Other stage 3 CRs

[R2-2505155](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505155_CR5398_38.331%20Correction%20on%20sidelink%20measurements%20based%20on%20SL-PRS.docx) Correction on NR Sidelink measurements based on SL-PRS vivo, Ericsson CR Rel-18 38.331 18.6.0 5398 - F NR\_pos\_enh2-Core

[R2-2505599](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505599%20Misc%20corrections%20NR%20positioning%20%28Rel-18%2038331%29.docx) Miscellaneous corrections on NR positioning enhancements Lenovo CR Rel-18 38.331 18.6.0 5425 - F NR\_pos\_enh2-Core

[R2-2505600](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505600%20Misc%20corrections%20Aggregated%20positioning%20SRS%20MAC%20CE%20%28Rel-18%2038321%29.docx) Miscellaneous corrections on Aggregated SP Positioning SRS Activation/Deactivation MAC CE Lenovo CR Rel-18 38.321 18.6.0 2107 - F NR\_pos\_enh2-Core

[R2-2505896](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505896%20LPP%20timing.docx) Correction for timing Reporting Granularity Factor Ericsson CR Rel-18 37.355 18.5.0 0560 - F NR\_pos\_enh2-Core

[R2-2506027](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2506027%20Correction%20regarding%20SL-PRS%20Resource%20Request.docx) Correction regarding SL-PRS Resource Request ASUSTeK CR Rel-18 38.321 18.6.0 2112 - F NR\_pos\_enh2-Core

Stage 2 CRs

[R2-2505124](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505124%20Corrections%20on%20LPHAP%2C%20carrier%20phase%2C%20bandwidth%20aggregation%20and%20frequency%20hopping%20for%20positioning.docx) Corrections on LPHAP, carrier phase, bandwidth aggregation and frequency hopping for positioning CATT, Ericsson, Nokia, ZTE Corporation CR Rel-18 38.305 18.6.0 0187 2 F NR\_pos\_enh2-Core R2-2504883

[R2-2505848](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505848%20Removal%20of%20stage2%20description%20%28Rel-17%2038305%29.docx) Removal of description for positioning in RRC\_INACTIVE state Lenovo CR Rel-17 38.305 17.8.0 0193 - F NR\_pos\_enh-Core

[R2-2505849](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505849%20Removal%20of%20stage2%20descriptions%20%28Rel-18%2038305%29.docx) Removal of descriptions for positioning in RRC\_INACTIVE and RRC\_IDLE state Lenovo CR Rel-18 38.305 18.6.0 0194 - F NR\_pos\_enh2-Core

Withdrawn/Not available

[R2-2505589](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505589%20Corrections%20on%20the%20startSFN%20of%20the%20UTW.docx) Corrections on the startSFN of the UTW ZTE Corporation, Ericsson, vivo, Qualcomm, Samsung, Nokia CR Rel-18 38.331 18.6.0 5424 - F NR\_pos\_enh2-Core Withdrawn

* Withdrawn

# 8 Rel-19

## 8.13 NR sidelink multi-hop relay

(NR\_SL\_relay\_multihop; leading WG: RAN2; REL-19; WID: [RP-250188](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_107/Docs/RP-250188.zip))

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

### 8.13.1 Organizational

LSs and rapporteur input, including workplan, etc.

Including outcomes of email discussions on running CRs

Running CRs and open issue lists

[R2-2505353](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5C38351_CR0041_%28REL-19%29_R2-2505353%20-%20Introduction%20of%20NR%20sidelink%20multi-hop%20relay%20in%20TS%2038.351.docx) Introduction of NR sidelink multi-hop relay in TS 38.351 OPPO CR Rel-19 38.351 18.4.0 0041 - B NR\_SL\_relay\_multihop-Core

[R2-2505354](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505354%20-%20SRAP%20open%20issues%20for%20NR%20sidelink%20multi-hop%20relay_V02_Rapp.docx) SRAP open issues for NR sidelink multi-hop relay OPPO other Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2505427](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5C38.321_CR2101_Rel-19_R2-2505427_FeatureIntroduction.docx) Introduction of NR Sidelink Multi-hop Relay InterDigital France R&D, SAS CR Rel-19 38.321 18.6.0 2101 - B NR\_SL\_relay\_multihop-Core

[R2-2505621](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505621%20Introduction%20of%20NR%20sidelink%20multi-hop%20U2N%20relay%20in%20TS%2038.300.docx) Introduction of NR sidelink multi-hop U2N relay in TS 38.300 LG Electronics Inc. draftCR Rel-19 38.300 18.6.0 NR\_SL\_relay\_multihop

[R2-2505714](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505714%20RRC%20CR%20for%20R19%20Multihop_SL_Relay.docx) Introduction of NR sidelink multi-hop relay in TS 38.331 Huawei, HiSilicon CR Rel-19 38.331 18.6.0 5429 - B NR\_SL\_relay\_multihop-Core

[R2-2505432](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505432%20Open%20issues%20for%20Multi%20hop%20Sidelink%20Relay%20in%20TS%2038.331.docx) Open issues for Multi hop Sidelink Relay in TS 38.331 Huawei, HiSilicon discussion Rel-19 38.331 NR\_SL\_relay\_multihop-Core

Proposal 1: Introduce sl-L2U2N-MH-Relay for indicating the support of NR sidelink Layer-2 U2N multi hop relay operation in SIB 12. Status: Closed.

Proposal 2: Introduce capabilities for R19 e.g. relayUE-MH-Operation-L2-r19 and remoteUE-MH-Operation-L2-r19 in SidelinkParameters IE. Status: Closed.

Proposal 3: Update TS 38.331, Section 3.1, to include the following clarification in the definitions of Intermediate U2N Relay UE and First Relay UE:

“An Intermediate U2N Relay UE first establishes a connection to the network as a U2N Remote UE, before beginning to relay traffic for connected U2N Remote UEs.”

Proposal 4: Confirm that the Remote UE can request the SFN-DFN offset from the connected parent Relay UE and that the SFN-DFN offset provided at the L2 U2N Relay UE or the L2 Last U2N Relay UE can be forwarded by intermediate U2N Relay UEs within the multihop relay chain, as proposed in the current running CR.

Proposal 5 – RAN 2 should discuss if there are any parameter not visible to AS layer that could change and would affect reselection and force the remote UE to be notified.

Proposal 6 – RAN2 to confirm that the Intermediate Relay UE sets the indication type to a specific value, relayUE-RelayReselection, to clearly signal that the notification is triggered by its own reselection action, which follows a notification of AS failure received from its parent relay UE.

Proposal 7 – RAN2 to discuss if we need to further fine tune the timers value calculation for the multihop scenario.

Proposal 8 – RAN2 should clarify in TS 38.300 or TS 38.331 that, for Scenario C and Scenario D, the Remote UE shall report only Relay UEs in RRC\_CONNECTED state for path switching, based on the Relay State indication received in the discovery message RRC container.

Proposal 9 – RAN2 confirms that the existing note, stating that the Remote UE may prioritize selecting/reselecting a suitable Relay UE that is in the RRC\_CONNECTED state based on RRC state information included in the Discovery Message container, is retained in the running CR.

[R2-2505796](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505796%20-%2038323%20CR%200150%20for%20R19%20SL%20Relay.docx) Introduction of multi-hop U2N relay in TS 38.323 Ericsson CR Rel-19 38.323 18.5.0 0150 - B NR\_SL\_relay\_multihop

[R2-2506047](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2506047.docx) Introduction of multi-hop U2N relay in TS 38.304 MediaTek Inc. CR Rel-19 38.304 18.4.0 0444 - B NR\_SL\_relay\_multihop-Core

UE capabilities

[R2-2505771](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505771_%5BPost130%5D%5B401%5D%5BRelay%5D%20Rel-19%20relay%20capability%28Samsung%29_v8.docx) Summary on [Post130][401][Relay] Rel-19 relay capability Samsung discussion Rel-19 NR\_SL\_relay\_multihop-Core

Proposal 1: FFS on capability differentiation between last relay UE and intermediate relay UE. If the differentiation is needed, RAN2 is kindly asked to discuss how to define two capabilities based on the following two options:

 Option 1: define two new capabilities, LastRelayUE-MH-Operation-L2, and IntermediateRelayUE-MH-Operation-L2, where the remoteUE-MH-Operation-L2 is the prerequisite of IntermediateRelayUE-MH-Operation-L2;

 Option 2: keep relayUE-MH-Operation-L2 for both last relay UE and intermediate relay UE, while for intermediate relay UE, the remoteUE-MH-Operation-L2 also indicates.

Proposal 2: In Rel-19, the new band combination capability for multi-hop relay discovery is not needed.

Proposal 3: In Rel-19, the new path switch capability for multi-hop relay is not needed.

Proposal 4: In Rel-19, the L3 relay capability for multi-hop relay is not needed.

[R2-2505772](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505772_MHSLRelayCap_CR_v0_Rapp.docx) Introduction of multi-hop sidelink relay capability Samsung CR Rel-19 38.306 18.6.0 1334 - B NR\_SL\_relay\_multihop-Core

Withdrawn/Not available

R2-2505431 Introduction of NR sidelink multi-hop relay in TS 38.331 Huawei, HiSilicon draftCR Rel-19 38.331 18.6.0 F NR\_SL\_relay\_multihop-Core Withdrawn

* Withdrawn

### 8.13.2 Relay discovery and (re)selection

Enhancements to relay dscovery and (re)selection to support one additional hop relay (remote UE ⬄ first relay UE ⬄ last relay UE ⬄ gNB). Extensibility to a second additional hop in this WI is considered as a design criterion.

RRC-5/RRC-12: notification and cause code

[R2-2505085](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505085_%28RRC-5%2011%2012%29%20Notification%20message%20handling%20for%20intermediate%20relay%20UE.docx) (RRC-5/11/12) Notification message handling for intermediate relay UE vivo discussion Rel-19

Proposal 1: (RRC-5/12) When an intermediate relay UE receives a NotificationMessageSidelink message from the parent relay, it forward a copy of the original notification (with the same cause) to its child UEs.

Proposal 2: (RRC-5/12) When intermediate relay UE detects PC5 RLF, it should set the cause value to ‘relayUE-PC5-RLF’ to its child UE.

[R2-2505418](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505418%20%28R19%20SL%20Relay%20WI_AI8132%20RelayDiscoverySelection%29.doc) Open Issues on Discovery and Relay (Re)Selection for Multi-hop U2N Relays InterDigital discussion Rel-19 NR\_SL\_relay\_multihop

Proposal 5: In case of notification message triggered by an error (e.g., RLF) the intermediate relay UE can send cell/relay reselection cause value to the remote UE in RRC\_IDLE/INACTIVE if it successfully performs a recovery action. Otherwise, it sends relayUE-PC5-RLF cause value if PC5 RLF is detected by itself or the same cause value received in the notification message from the parent node.

Proposal 6: In case of notification message triggered by an error (e.g., RLF), the intermediate relay UE sends relayUE-PC5-RLF cause value if PC5 RLF is detected by itself or the same cause value as received by the parent node in the notification message to an RRC\_CONNECTED remote UE.

RRC-11: notifications in idle/inactive

[R2-2505773](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505773_RelayDisc%26Resel_v0.0.docx) Discussion on remaining issues of relay discovery and (re)selection Samsung discussion Rel-19 NR\_SL\_relay\_multihop-Core

Proposal 5: RAN2 is kindly asked agree that the intermediate relay UE in RRC\_IDLE/INACTIVE can omit the notification message transmission if the relay reselection does not cause the change of the hop count or serving cell.

RRC-6: model B without PC5 link

[R2-2505174](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505174%20Discussion%20on%20Multi-hop%20Discovery%20and%20%28Re%29selection.docx) Discussion on Multi-hop Discovery and (Re)selection CATT discussion Rel-19 NR\_SL\_relay\_multihop-Core

Proposal 2: (RRC-6) RAN2 confirms that the case for the last relay UE to check AS conditions before responding to intermediate relay UE’s discovery model B request is valid and the corresponding FFS can be deleted without further handling.

Proposal 3: In case the Last Relay UE needs to decide whether to send a discovery response message to the Intermediate Relay UE, RAN2 introduces a separate SD-RSRP threshold similar as the threshold used by the Intermediate Relay UE to determine whether to forward the solicitation message be applied.

WA on state information in discovery message

Discussed jointly

[R2-2505616](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505616-Discussion%20on%20discovery%20and%20relay%20reselection%20for%20multi-hop%20U2N%20relay.docx) Discussion on discovery and relay reselection for multi-hop U2N relay LG Electronics Inc. discussion Rel-19 NR\_SL\_relay\_multihop

Proposal 8: Including the RRC state in the discovery message looks like a useless enhancement for the following reasons:

- The RRC state of the intermediate Relay UEs can be changed at any time. In other words, it’s not a deterministic value.

- If the RRC state of only the first Relay UE is included in the discovery message, the Remote UE cannot differentiate which path has many RRC\_CONNECTED intermediate Relay UEs.

- It is up to Remote UE’s implementation whether the RRC state information of the intermediate Relay UEs used for the relay (re)selection (i.e., it’s not an essential element for fast relay (re)selection).

- Regardless of the RRC state of the intermediate Relay UEs, the Remote UE can try connection establishment.

Proposal 9: If there exist clear reasons that the RRC states of the intermediate Relay UEs should be included in the Discovery message, we support including the RRC state of the only first Relay UE in the announcement message in the Discovery model A and the response message in the Discovery model B.

Proposal 10: If there exist clear reasons that the RRC states of the intermediate Relay UEs should be included in the Discovery message, it will be an optional feature (it's not an essential one).

[R2-2505844](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505844_relay_reselection.docx) Relay reselection and discovery under multihop relay Kyocera discussion

Proposal 6 Confirm the working assumption that Relay UE includes an indication of whether it is RRC\_CONNECTED in the discovery message RRC container.

Potential SA2 interaction (both documents moved from AI 8.13.3)

[R2-2505932](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505932_U2NRRCContainer.docx) Feasibility of Including RRC State Information through RRC Container in Discovery Messages for L2 Multi-hop U2N Relay NIST discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2506044](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2506044.docx) Ensure L2 Multi-hop U2N relay operation conditions Qualcomm Incorporated discussion NR\_SL\_relay\_multihop-Core

Other contributions

[R2-2505100](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505100%20Discussion%20on%20Relay%20discovery%20and%20%28re%29selection.doc) Discussion on Relay discovery and (re)selection ZTE Corporation, Sanechips discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2505341](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505341%20-%20Discovery%20and%20relay%20%28re%29selection%20for%20multi-hop%20U2N%20relay.docx) Discovery and relay (re)selection for multi-hop U2N relay OPPO discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2505433](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505433%20Relay%20discovery%20and%20%28re%29selection%20for%20multi-hop%20Relay.docx) Relay discovery and (re)selection for multi-hop Relay Huawei, HiSilicon discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2505450](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505450%20Discussion%20on%20relay%20discovery%20and%20reselection.docx) Discusison on Remaining issue on relay discovery and reselection Apple discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2505662](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505662.docx) Multi-hop relay selection/re-selection Sony discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2505697](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505697%20Discussion%20on%20notification%20message%20v1.0.doc) Discussion on notification message Lenovo discussion Rel-19

[R2-2505732](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505732_Discovery%20%28Model-B%29%20forwarding%20thresholds%20for%20multi-hop%20U2N%20relay.docx) Discovery (Model-B) forwarding thresholds for multi-hop U2N relay Jio Platforms Limited CR Rel-19 38.331 18.6.0 5431 - B NR\_SL\_relay\_multihop

[R2-2505795](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505795%20-%20discussion%20on%20discovery%20and%20relay%20%28re%29selection.docx) Discussion on relay discovery and relay (re)selection Ericsson discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2506019](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2506019-MH-reselection.docx) Remaining issues and solutions on Relay discovery and (re)selection for multi-hop relay Sharp discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2506036](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2506036%20Discussion%20on%20remaining%20issues%20on%20notification%20message.docx) Discussion on remaining issues on notification message ASUSTeK discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2506043](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2506043-Open%20issues%20on%20relay%20discovery%20and%20%28re%29selection.docx) Open issues on relay discovery and (re)selection Qualcomm Incorporated discussion NR\_SL\_relay\_multihop-Core

[R2-2506165](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CDocs%5CR2-2506165.zip) Relay (re)selection in multi-hop Relay TOYOTA Info Technology Center discussion Rel-19

### 8.13.3 Control Plane Procedures and SRAP impact

Contributions should focus on control plane procedures and can include SRAP impact and QoS handling to support additional hops.

RRC-10: SFN-DFN offset

[R2-2505698](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505698.doc) Passing the SFN-DFN offset in multi-hop scenario Lenovo discussion Rel-19

Proposal 1(RRC-10): support passing the SFN-DFN offset at the L2 U2N Relay UE or at the L2 Last U2N Relay UE in a multi-hop scenario.

Proposal 2(RRC-10): the intermediate relay UE sets sfn-DFN-OffsetSupported to supported once the intermediate relay UE obtains the SFN-DFN offset from the connected parent relay UE if the previous setting is absent.

[R2-2505127](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505127%20Remaining%20issues%20for%20Multi-hop%20Relay.docx) Remaining issues for Multi-hop Relay NEC discussion Rel-19 NR\_SL\_relay\_multihop

Proposal-1[RRC-10]: When the Remote UE requests the SFN-DFN offset from the connected parent Relay UE, the SFN-DFN offset provided at the L2 U2N Relay UE or the L2 Last U2N Relay UE should be compensated by the timing offset between the UEs when it is forwarded by intermediate U2N Relay UEs within the multi-hop relay chain.

RRC-13: timers

[R2-2505434](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505434%20Control%20plane%20procedures%20for%20multi-hop%20relay.docx) Control plane procedures for multi-hop relay Huawei, HiSilicon discussion Rel-19 NR\_SL\_relay\_multihop-Core

Proposal 5: Extend the T300, T301 and T319 timer for multi-hop U2N relay operation in accordance with the hop count for connection establishment/ re-establishment and resume procedure by either

• Multiplying the UE-TimersAndConstants with the hop count ( eg t300 \* hop count) that includes only the Uu hop count; or

• Introducing PC5-specific timers (t300-PC5/t301-PC5/t319-PC5) and calculating the timer value as t300 + t300-PC5\*n, where n is the number of PC5 hops and one Uu hop is included.

Paging issues

[R2-2505175](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505175%20Discussion%20on%20the%20Control%20Plane%20Procedures.docx) Discussion on the Control Plane Procedures CATT discussion Rel-19 NR\_SL\_relay\_multihop-Core

Proposal 1: Once the intermediate relay UE enters into RRC\_CONNECTED mode, it should release the paging-related information in the parent for its child UEs if there is any.

Proposal 2: When Last Relay UE in RRC CONNECTED and L2 Remote UE(s) or Intermediate Relay UE(s) in RRC\_IDLE/RRC\_INACTIVE, the Last Relay UE can monitor PO on behalf of each RRC\_IDLE/RRC\_INACTIVE intermediate relay UE or remote UE connected to it via multi-hop if the active DL BWP of Last Relay UE is configured with common CORESET and common search space.

Multi-hop QoS

[R2-2506020](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2506020-MH-Cplane.docx) Remaining issues and solutions on C-plane procedure for multi-hop relay Sharp discussion Rel-19 NR\_SL\_relay\_multihop-Core

Proposal 6. QoS related optimization should be considered since very low E2E latency is required for some use cases.

Proposal 7. The principles of resource allocation follow the legacy mechanism, i.e., last relay can be configured with mode 1 resource allocation, and remote UE and other relay UEs are configured with mode 2 resource allocation.

Proposal 8. UE reports hop-by-hop link quality to gNB for path selection and split QoS configuration.

RLC channel configuration

[R2-2505451](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505451%20Discussion%20on%20remaining%20issues%20on%20UP%20and%20CP.docx) Discusison on Remaining UP and CP issues for multi-hop U2N relay Apple discussion Rel-19 NR\_SL\_relay\_multihop

Proposal 1 RAN2 discuss whether each SL-RLC Channel configuration in sl-ConfigDedicatedNR for Intermediate relay UE is to be established in all N+1 PC5-RRC connections (N child node, 1 parent node). If not, what would be the correct UE behaviour in Rel-19.

SRAP-1: reflective bearer mapping

[R2-2505102](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505102%20Discussion%20on%20Reflective%20Bearer%20mapping%20of%20SL%20relay.doc) Discussion on Reflective Bearer mapping of SL relay ZTE Corporation, Sanechips, Ericsson, Apple, Nokia discussion Rel-19 NR\_SL\_relay\_multihop

Proposal 1. (SRAP-1)Re-use legacy remote UE add/mod/release list to configure indirect remote UE’s SRAP configuration in intermediate relay UE.

Proposal 2. (SRAP-1)RAN2 to downselect the two options:

Option 1 - reflective bearer mapping is mandatory supported for indirectly connected child, no new field is needed to be included(TP in 4.2.1).

Option 2 - reflective bearer mapping is optional, we need to include a new field sl-DLNextHop-L2Identity-r19 in SRAP configuration, based on absence or presence of the field, it is indicated that the intermediate relay UE shall apply reflective bearer mapping or not(TP in 4.1 and 4.2.2).

Fast failover proposal

[R2-2505726](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505726_Fast%20failover%20via%20pre%E2%80%91configured%20egress%20candidate%20list%20for%20multi%E2%80%91hop%20L2%20U2N%20relay.docx) Fast failover via pre-configured egress candidate list for multi-hop L2 U2N relay Jio Platforms Limited CR Rel-19 38.331 18.6.0 5430 - B NR\_SL\_relay\_multihop

Other contributions

[R2-2505086](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505086_%28SRAP-1%20RRC-13%29%20Discussion%20on%20SRAP%20configuration%20and%20timer%20extension%20in%20multi-hop%20relay.docx) (SRAP-1/RRC-13) Discussion on SRAP configuration and timer extension in multi-hop relay vivo discussion Rel-19

[R2-2505101](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505101%20Discussion%20on%20paging%20for%20multi-hop%20relay.doc) Discussion on paging for multi-hop relay ZTE Corporation, Sanechips discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2505342](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505342%20-%20SRAP%20configuration%20for%20multi-hop%20U2N%20Relay.docx) SRAP configuration for multi-hop U2N Relay OPPO discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2505343](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505343%20-%20Control%20plane%20procedures%20of%20multi-hop%20U2N%20relay.docx) Control plane procedures of multi-hop U2N relay OPPO discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2505419](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505419%20%28R19%20SL%20Relay%20WI_AI8133_CP%29.doc) Remaining Issues on Control Plane for Multi-Hop U2N Relays InterDigital discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2505617](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505617.doc) Remaining issues on control plane procedure for SL relay KT Corp. discussion

[R2-2505618](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505618-Discussion%20on%20the%20control%20plane%20procedure%20for%20multi-hop%20U2N%20relay.docx) Discussion on the control plane procedure for multi-hop U2N relay LG Electronics Inc. discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2505759](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505759%20Discussion%20on%20control%20plane%20procedures%20for%20multi-hop%20SL%20Relay.doc) Discussion on control plane procedures for multi-hop SL Relay ZTE Corporation, Sanechips discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2505774](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505774_CP_v0.0.docx) Discussion on remaining issues of MH SL relay control plane procedures Samsung discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2505775](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505775%20Outstanding%20issues%20related%20to%20MH%20SRAP%20design.docx) Outstanding issues related to MH SRAP design Samsung R&D Institute UK discussion

[R2-2505794](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505794%20-%20discussion%20on%20control%20plane%20procedure.docx) Discussion on control plane procedures Ericsson discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2505927](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505927%20On%20SFN%20DFN%20offset%20and%20time%20sensitive%20applications.docx) On SFN DFN offset and time sensitive applications Nokia discussion NR\_SL\_relay\_multihop

[R2-2506037](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2506037%20Missing%20Intermediate%20U2N%20Relay%20UE%20behaviours%20upon%20sidelink%20radio%20link%20failure.docx) Missing Intermediate U2N Relay UE behaviours upon sidelink radio link failure ASUSTeK discussion Rel-19 38.331 NR\_SL\_relay\_multihop

* Revised in R2-2506199

[R2-2506199](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2506199%20Missing%20Intermediate%20U2N%20Relay%20UE%20behaviours%20upon%20sidelink%20radio%20link%20failure.docx) Missing Intermediate U2N Relay UE behaviours upon sidelink radio link failure ASUSTeK discussion Rel-19 38.331 NR\_SL\_relay\_multihop

### 8.13.4 Service continuity

First priority scenarios: (A) intra-gNB multi-hop indirect to direct path switch, (B) intra-gNB multi-hpo indirect to single-hop indirect path switch. Second priority scenarios: (C) intra-gNB direct to multi-hop indirect path switch, (D) intra-gNB single-hop indirect to multi-hop indirect path switch.

RRC-14: reporting of target relays

[R2-2505797](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505797%20-%20Intra%20gNB%20Service%20Continuity%20for%20Multihop%20Relays.docx) Service Continuity for Multi-Hop Relays Ericsson discussion Rel-19 NR\_SL\_relay\_multihop

Proposal 1 To discuss whether the agreements on RRC state of (first)intermediate/last Relay UE need to be captured in spec or can be up to gNB’s implementation to handle.

Multi-hop reporting and inter-gNB cases

[R2-2505435](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505435%20Discussion%20on%20service%20continuity%20for%20Multi-hop%20Relay.docx) Discussion on service continuity for Multi-hop Relay Huawei, HiSilicon discussion Rel-19 NR\_SL\_relay\_multihop-Core

Proposal 4: The remote UE can obtain the sidelink measurement quantity information between each adjacent relay UEs along the candidate multi-hop relaying path to help determining a better target path. This information can be provided by the first relay UE in the discovery message.

Proposal 5: Either the serving gNB shall only allow inter-gNB path switching from indirect (single-hop) to indirect (single-hop) paths for Rel-18 UEs, or RAN2 shall consider adding an indication in the measurement report to specify whether the candidate Relay UE is on a single-hop or multi-hop target path, or to provide the hop count information.

[R2-2506021](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2506021-MH-ServiceContinuity.docx) Remaining issues and solutions on service continuity for multi-hop relay Sharp discussion Rel-19 NR\_SL\_relay\_multihop-Core

Proposal 5. The cellIdentity in sl-MeasResultRelay without enhancement can be used for decision whether the candidate first relay UE is connecting with the same gNB.

Path switch for relay UE

[R2-2506045](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2506045.docx) Service continuity discussion Qualcomm Incorporated discussion NR\_SL\_relay\_multihop-Core

Proposal 2 The intermediate Relay UE can report measurement report UE to gNB for path switching to direct path or indirect path acting as a Remote.

Proposal 3 When the intermediate Relay UE performs path switching to direct path or indirect path, the intermediate Relay UE informs the Remote UE via the child intermediate relay UE with release cause 'RRC connection failure'.

Proposal 4 When the Remote UE receives notification from the relay UE, the Remote UE should go back to IDLE.

Other contributions

[R2-2505087](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505087_%28RRC-14%29%20Reporting%20of%20Target%20Relay%20UEs%20for%20scenario%20C%20and%20D.docx) (RRC-14) Reporting of Target Relay UEs for scenario C and D vivo discussion Rel-19

[R2-2505176](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505176%20Intra-gNB%20Service%20Continuity%20for%20Multi-hop%20U2N%20Relay.docx) Intra-gNB Service Continuity for Multi-hop U2N Relay CATT discussion Rel-19 NR\_SL\_relay\_multihop-Core

## 8.15 NavIC L1 SPS A-GNSS support

(LCS\_NAVIC\_L1\_SPS\_NR\_LTE-Core; leading WG: RAN2; REL-19; WID [RP-251552](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_108/Docs/RP-251552.zip)

Time budget: 0 TU

Tdoc Limitation: 1 tdoc

[R2-2505776](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505776_%28SSR%20Orbit-Clock%20Corrections%20Set%202%29.docx) Missing Capabilities for SSR Orbit/Clock Corrections Set2 Qualcomm Incorporated discussion

[R2-2505720](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505720%20NR.docx) Introduction of NavIC L1 SPS A-GNSS in NR Stage 2 specification Ericsson, Reliance Jio, ISRO, MediaTek Inc., CEWiT, Huawei CR Rel-19 38.305 18.6.0 0179 2 B LCS\_NAVIC\_L1\_SPS\_NR\_LTE-Core R2-2504298

[R2-2505721](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505721%20LTE.docx) Introduction of NavIC L1 SPS A-GNSS in LTE Stage 2 specification Ericsson, Reliance Jio, ISRO, MediaTek Inc., CEWiT, Huawei CR Rel-19 36.305 18.0.0 0120 2 B LCS\_NAVIC\_L1\_SPS\_NR\_LTE-Core R2-2504299

[R2-2505722](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505722%20LPPNaVIC.docx) Introduction of NavIC L1 SPS A-GNSS in LPP Ericsson, Reliance Jio, ISRO, MediaTek Inc., CEWiT, Huawei CR Rel-19 37.355 18.5.0 0532 5 B LCS\_NAVIC\_L1\_SPS\_NR\_LTE-Core R2-2504893

## 8.16 BDS B2b in A-GNSS

LCS\_BDS\_B2b\_LTE\_NR; leading WG: RAN2; REL-19; WID [RP-250767](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_107/Docs/RP-250767.zip))

Time budget: 0 TU

Tdoc Limitation: 1 tdoc

[R2-2505094](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505094%20Introduction%20of%20B2b%20signal%20in%20BDS%20system%20in%20A-GNSS_37355_CR0545r2_%28Rel-19%29_rev%20of%20R2-2501435.docx) Introduction of B2b signal in BDS system in A-GNSS CAICT, CATT, CMCC, China Telecome, China Unicom, Ericsson, Huawei, HiSilicon, Lenovo, OPPO, vivo, Xiaomi, ZTE, MediaTek Inc, Qualcomm Incorporated CR Rel-19 37.355 18.5.0 0545 2 B LCS\_BDS\_B2b\_LTE\_NR-Core R2-2501435

[R2-2505095](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505095%20Introduction%20of%20BDS%20B2b%20in%20A-GNSS_CR0121r1_%28Rel-19%29_rev%20of%20R2-2410158.docx) Introduction of BDS B2b in A-GNSS CAICT, CATT, CMCC, China Telecome, China Unicom, Ericsson, Huawei, HiSilicon, Lenovo, OPPO, vivo, Xiaomi, ZTE CR Rel-19 36.305 18.0.0 0121 1 B LCS\_BDS\_B2b\_LTE\_NR-Core R2-2410158

[R2-2505096](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505096%20Introduction%20of%20BDS%20B2b%20in%20A-GNSS_CR0180r1_%28Rel-19%29_rev%20of%20R2-2410159.docx) Introduction of BDS B2b in A-GNSS for TS 38305 CAICT, CATT, CMCC, China Telecome, China Unicom, Ericsson, Huawei, HiSilicon, Lenovo, OPPO, vivo, Xiaomi, ZTE CR Rel-19 38.305 18.6.0 0180 1 B LCS\_BDS\_B2b\_LTE\_NR-Core R2-2410159

## 8.19 TEI19

Time budget: 1 TU

Tdoc Limitation: 1 tdoc for new proposals and 1 tdoc for old proposals for RAN2-led.

1 additional tdoc for primary co-sourcing company on top of the limit is allowed for co-sourced contribution with 4 or more companies.

Companies are encouraged to submit co-sourced contributions, which will have priority for discussion in RAN2#130

### 8.19.1 RAN2-led

Periodic assistance data for integrity service alert (new)

[R2-2505321](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505321%20Introduction%20of%20periodic%20delivery%20of%20NR%20integrity%20service%20alert%20%5BIntegrityPeriodicAD%5Dlpp.docx) Introduction of periodic AD for NR integrity service alert [IntegrityPeriodicAD] Huawei, HiSilicon, Ericsson, Vivo CR Rel-19 37.355 18.5.0 0558 - B TEI19

[R2-2505322](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505322%20Introduction%20of%20periodic%20delivery%20of%20NR%20integrity%20service%20alert%20%5BIntegrityPeriodicAD%5Dstage2.docx) Introduction of periodic delivery of NR integrity service alert [IntegrityPeriodicAD] Huawei, HiSilicon, Ericsson, VIVO CR Rel-19 38.305 18.6.0 0192 - B TEI19

* Revised in R2-2505676

[R2-2505676](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505676%20Introduction%20of%20periodic%20delivery%20of%20NR%20integrity%20service%20alert%20%5BIntegrityPeriodicAD%5Dstage2.docx) Correction on the periodic AD of NR integrity service alert [IntegrityPeriodicAD] Huawei, HiSilicon, Ericsson, Vivo CR Rel-19 38.305 18.6.0 0192 1 B TEI19 R2-2505322

Equal integer ambiguity level assistance data (postponed from RAN2#130)

[R2-2505840](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505840%20TEI19_RTKequalIntegerAmbiguityLevel.docx) UE request for equalIntegerAmbiguityLevel assistance data [GNSS-EqualIntegerAmbiguity] AT&T, Ericsson, Huawei, CATT, Samsung, ZTE Corporation, Nokia, Deutsche Telekom CR Rel-19 37.355 18.5.0 0557 1 B TEI19 R2-2504306

### 8.19.2 Other WG-led

SRS frequency hopping ofr non-RedCap UE (CRs endorsed at RAN2#130)

[R2-2505032](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505032_R3-253749.docx) Reply LS on non-RedCap UE UL SRS frequency hopping for positioning (R3-253749; contact: ZTE) RAN3 LS in Rel-19 TEI19 To:RAN1, RAN2

[R2-2505594](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505594%20Introduction%20of%20UE%20capability%20for%20SRS%20frequency%20hopping%20for%20non-RedCap%20UE%20in%2037355%20%5BPos_SRSHop%5D.docx) Introduction of UE capability for SRS frequency hopping for non-RedCap UE in 37355 [Pos\_SRSHop] ZTE Corporation CR Rel-19 37.355 18.5.0 0553 1 B TEI19 R2-2503877

[R2-2505595](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202508%20-%20RAN2_131%2C%20Bengaluru%5CExtracts%5CR2-2505595%20Introduction%20on%20the%20SRS%20frequency%20hopping%20for%20non-RedCap%20UE%20in%2038331%20%5BPos_SRSHop%5D.docx) Introduction on the SRS frequency hopping for non-RedCap UE in 38331 [Pos\_SRSHop] ZTE Corporation, Ericsson CR Rel-19 38.331 18.6.0 5290 2 B TEI19 R2-2503878