3GPP TSG-RAN WG2 Meeting #127 [R2-240xxx](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-240xxx.zip)

Maastricht, Netherlands, Aug 19th – 23rd, 2024

Source: RAN2 Chair (InterDigital)

Title: Agenda

# 1 Opening of the meeting

## 1.1 Call for IPR

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| --- |
| The attention of the delegates of this Working Group is drawn to the fact that **3GPP Individual Members have the obligation** under the IPR Policies of their respective Organizational Partners **to inform their respective Organizational Partners of Essential IPRs** they become aware of.  The delegates were asked to take note that they were hereby invited:   * to investigate whether their organization or any other organization owns IPRs which were, or were likely to become Essential in respect of the work of 3GPP. * to notify their respective Organizational Partners of all potential IPRs, e.g., for ETSI, by means of the IPR Statement and the Licensing declaration forms (https://www.etsi.org/images/files/IPR/etsi-ipr-form.doc) |

NOTE: IPRs may be declared to the Director-General or Chairman of the SDO, but not to the RAN WG2 Chairman.

## 1.2 Network usage conditions

1/ To avoid email system overload, please don’t attach files and documents to emails e.g. for offline email discussions, but instead use files placed on the meeting server instead. Inbox/Drafts folder is used for meeting offline discussions.

## 1.3 Other

|  |
| --- |
| In accordance with the Working Procedures it is reaffirmed that:  (i) compliance with all applicable antitrust and competition laws is required;  (ii) timely submissions of work items in advance of TSG or WG meetings are important to allow for full and fair consideration of such matters; and  (iii) the chair will conduct the meeting with strict impartiality and in the interests of 3GPP |

Note on (i): In case of question please contact your legal counsel.

Note on (ii): WIDs don’t need to be submitted to the RAN2 meeting and will typically not be discussed here either.

# 2 General

## 2.1 Approval of the agenda

[R2-2406201](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406201.zip) Agenda for RAN2#127 Chairman agenda

=> Approved

## 2.2 Approval of the report of the previous meeting

[R2-2406202](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406202.zip) RAN2#126 Meeting Report MCC report

=> Approved

## 2.3 Reporting from other meetings

## 2.4 Instructions

CRs

* Use latest CR template version 12.3 for all CRs submitted to RAN2 meeting

Rel-17 maintenance CRs

* Only essential/critical corrections are expected
* Editorial and clarification corrections should be sent to be reviewed and approved by spec rapporteurs prior to submission.
* Editorials corrections should be collected and submitted by spec rapporteurs.

Rel-18 CR Handling

- CR editors / Rapporteurs continue to support maintenance related to their respective CR / WI and are required to follow drafting rules

- Single correction CR per spec coordinated by CR editor/rapporteurs will be agreed per feature for RAN#105

- CR editors / Rapporteurs are to gather miscellaneous and non-controversial issues, if any, for their respective specification prior to submission deadline. Other companies are expected to give inputs to these CRs and not have contributions on such issues.

- Companies should give inputs on editorials and clarifications to the CR editors/rapporteurs and not have individual CRs/contributions on such issues. Emails to CR editors/rapporteurs should follow the following naming convention when sending emails to rapporteurs:

[Pre\_RAN2#127][CR xx.yyy] Clarification CRs

- The organizational AIs for each WIs are reserved for rapporteurs only. CR rapporteurs are expected to submit only 1 CR per spec.

- Companies are expected to submit Tdocs with TP (not CRs). More specifically, the Tdoc should contain description of open issues/proposal and the proposed corrections/TP in the contribution itself. Small issues can be included in the tdoc with just short justification, same level of detail as in cover sheet. DraftCRs can be submitted for straightforward changes instead of Tdoc (i.e. DraftCRs count toward Tdoc limit)

- RRC ASN.1 changes should be drafted in BC way.

- Inter-op analysis on Rel-18 CR cover pages in now required for each CR. Companies are expected to identify inter-op analysis/impact in their tdoc for each proposed changes. CRs rapporteurs when merging should highlight the changes that have interoperability issues.

Remaining/updated Rel-18 RRC parameters and MAC CEs

- RRC parameters updates/corrections, including those requested by other groups, e.g. RAN1, are covered by WI-specific RRC CRs.

- MAC CE parameters updates/corrections, including those requested by other groups, e.g. RAN1, are covered by WI-specific MAC CRs

Rel-18 UE capabilities

- EUTRA UE capabilities corrections are covered by separate CRs

- NR UE capabilities (new) and corrections are covered in Rel-18 common MegaCRs (38306 and 38331) covering all rel-18 WIs (end outcome).

- UE capabilities in LPP 37355 and SLPP 38355 are covered in the main CRs for the Positioning WI.

During the work on NR UE caps:

- In a Common Rel-18 Agenda Item (AI): RAN1 and RAN4 feature corrections are handled jointly under a common AI, with some explicit exceptions. Running UE cap MegaCRs are maintained for the parts handled in the common AI.

- In WI-specific Rel-18 Agenda Items: RAN2 features/corrections are handled per WI and only a draft CR per WI is expected and will be merged with the running mega CR

Tdoc limitations

Tdoc limitations doesn’t apply to Rapporteur Input, i.e.

- Assigned summary rapporteur input of the summary.

- Email / offline discussions outcomes by discussion rapporteur,

- Limit of 1 WI/SI rapporteurs input for WI planning. The work plan is not expected to be updated/submitted every meeting, unless needed. It can include progress of other WG groups in the same Tdoc (i.e. separate Tdocs on other WG agreements are not required).

- TS rapporteur input for TS maintenance.

- Contact Company of a LSin that triggers RAN2 action may submit one tdoc to facilitate the LS reply. This only applies to one of the contact companies in case there are several (default the first).

Tdoc limitations doesn’t apply to Input created at the meeting, revisions, assigned documents etc.

Tdoc limitations doesn’t apply to shadow / mirror CRs (Cat A), or In-Principle Agreed CRs.

Tdoc limitations applies to all other submitted tdocs (e.g. discussion tdoc and CR tdoc are counted as two).

Tdoc request/submission for RAN2#127 deadlines:

* Tdoc Submission deadline: August 9th, 2024 1000 UTC

## 2.5 Others

[R2-2406203](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406203.zip) RAN2 Handbook MCC discussion Late

Withdrawn

[R2-2406464](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406464.zip) Report on RAN2 Cricket team to take on RAN4 Offline Rapporteur (ZTE) report

=> Noted

# 3 Incoming liaisons

Note: LSs are moved to the respective agenda items if any.

[R2-2406204](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406204.zip) LS on RAN4 vs RAN2 Cricket Match (R4-2410764; contact: Nokia) RAN4 LS in Rel-19 TEI19 To:RAN2

[R2-2406234](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406234.zip) LS on Avoiding Cross-TSG TEI (RP-241686; contact: NEC) RAN LS in To:CT, CT1, CT3, CT4, CT6, TSG SA, SA1, SA2, SA3, SA4, SA5, SA6 Cc:RAN1, RAN2, RAN3, RAN4, RAN5

# 4 EUTRA Rel-17 and earlier

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

## 4.1 EUTRA corrections Rel-17 and earlier

(NB\_IOTenh4\_LTE\_eMTC6-Core; leading WG: RAN1; REL-17; WID: [RP-211340](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_92e/Docs/RP-211340.zip))

(UPIP\_EN-DC\_UE; leading WG: RAN3; REL-17; WID: [RP‑213669](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_94e/Docs/RP-213669.zip))

(LTE TEI17)

Essential corrections to LTE Rel-17 topics not covered by other agenda items.

(NB\_IOTenh3-Core; leading WG: RAN1; REL-16; started: Jun 18; Completed: June 20; WID: [RP-200293](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_87e/Docs/RP-200293.zip)); REL-15 and Earlier NB-IoT WIs are in scope but not listed explicitly (long list).

(LTE\_eMTC5-Core; LTE\_eMTC5-Core; leading WG: RAN1; REL-16; started: Jun 18; Completed: June 20; WID: [RP-192875](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_86/Docs/RP-192875.zip);), REL-15 and Earlier eMTC WIs are in scope but not listed explicitly (long list).

(LTE\_feMob-Core; leading WG: RAN2; REL-16; started: Jun 18; Completed: June 20; WID: [RP-190921](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_84/Docs/RP-190921.zip));

(LTE\_terr\_bcast-Core, LTE\_DL\_MIMO\_EE-Core, LTE\_high\_speed\_enh2-Core; LTE TEI16 Non-positioning);

(LTE\_NBIOT\_eMTC\_NTN; leading WG: RAN1; REL-17; WID: [RP-211601](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_92e/Docs/RP-211601.zip))

REL-16 and Earlier EUTRA WIs are in scope but not listed explicitly (long list), Except V2X and Sidelink WIs and Positioning WIs, which are addressed by AIs below.

NOTE that LTE corrections related to NR WIs or Joint NR LTE WIs should be submitted to NR AIs below.

NOTE that LTE corrections which are the same as an NR correction should be submitted to the respective NR AI (so the NR CR and LTE CR can be treated together).

This Agenda Item is treated in the Maintenance Breakout session (Corrections for LTE\_NBIOT\_eMTC\_NTN might be treated in the NTN breakout session)

[R2-2406272](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406272.zip) Correction on the field of scg-State Huawei, HiSilicon, Qualcomm Incorporated CR Rel-17 36.331 17.9.0 5034 - F LTE\_NR\_DC\_enh2-Core

[R2-2406273](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406273.zip) Correction on the field of scg-State Huawei, HiSilicon, Qualcomm Incorporated CR Rel-18 36.331 18.2.0 5035 - A LTE\_NR\_DC\_enh2-Core

[R2-2406274](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406274.zip) Correction on the field of scg-State Huawei, HiSilicon, Qualcomm Incorporated CR Rel-17 38.331 17.9.0 4864 - F LTE\_NR\_DC\_enh2-Core

[R2-2406275](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406275.zip) Correction on the field of scg-State Huawei, HiSilicon, Qualcomm Incorporated CR Rel-18 38.331 18.2.0 4865 - A LTE\_NR\_DC\_enh2-Core

[R2-2406631](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406631.zip) extendedWaitTime correction Peraton Labs, CISA ECD, AT&T, Verizon CR Rel-18 36.331 18.2.0 5041 - F NB\_IOT-Core

[R2-2406646](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406646.zip) Correction to MIB-MBMS systemFrameNumber field description Qualcomm Incorporated, Samsung, ABS, SJTU CR Rel-14 36.331 14.17.0 5042 - F MBMS\_LTE\_enh2-Core

[R2-2406647](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406647.zip) Correction to MIB-MBMS systemFrameNumber field description Qualcomm Incorporated, Samsung, ABS, SJTU CR Rel-15 36.331 15.22.0 5043 - A MBMS\_LTE\_enh2-Core

[R2-2406648](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406648.zip) Correction to MIB-MBMS systemFrameNumber field description Qualcomm Incorporated, Samsung, ABS, SJTU CR Rel-16 36.331 16.16.0 5044 - A MBMS\_LTE\_enh2-Core

[R2-2406649](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406649.zip) Correction to MIB-MBMS systemFrameNumber field description Qualcomm Incorporated, Samsung, ABS, SJTU CR Rel-17 36.331 17.9.0 5045 - A MBMS\_LTE\_enh2-Core

[R2-2406650](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406650.zip) Correction to MIB-MBMS systemFrameNumber field description Qualcomm Incorporated, Samsung, ABS, SJTU CR Rel-18 36.331 18.2.0 5046 - A MBMS\_LTE\_enh2-Core Revised

[R2-2407210](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407210.zip) Correction to MIB-MBMS systemFrameNumber field description Qualcomm Incorporated, Samsung, ABS, SJTU CR Rel-18 36.331 18.2.0 5046 1 A MBMS\_LTE\_enh2-Core [R2-2406650](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406650.zip)

## 4.2 V2X and Sidelink corrections Rel-15 and earlier

REL-15 and Earlier WIs related to V2x and Sidelink are in scope but not listed explicitly (long list).

This Agenda Item is treated in the V2X and Sidelink Breakout session

Tdoc Limitation: 1 tdocs

## 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

[R2-2406288](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406288.zip) Correction on SBAS and GNSS ID for posSIB-r15 Huawei, HiSIlicon CR Rel-15 36.331 15.22.0 5036 - F LCS\_LTE\_acc\_enh-Core

[R2-2406289](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406289.zip) Correction on SBAS and GNSS ID for posSIB-r16 Huawei, HiSIlicon CR Rel-16 36.331 16.16.0 5037 - A LCS\_LTE\_acc\_enh-Core

[R2-2406290](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406290.zip) Correction on SBAS and GNSS ID for posSIB-r17 Huawei, HiSIlicon CR Rel-17 36.331 17.9.0 5038 - A LCS\_LTE\_acc\_enh-Core

[R2-2406291](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406291.zip) Correction on SBAS and GNSS ID for posSIB-r18 Huawei, HiSIlicon CR Rel-18 36.331 18.2.0 5039 - A LCS\_LTE\_acc\_enh-Core

# 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 treated together), the sub-Ais below this

## 5.1 Common

Includes the following WIs and input that doesn’t fit elsewhere.

(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\_IAB-Core; leading WG: RAN2; REL-16; started: Dec 18; target Aug 20; WID: [RP-200840](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_88e/Docs/RP-200840.zip))

(NR\_unlic-Core; leading WG: RAN1; REL-16; started: Dec 18; Closed June 20; WID: [RP-192926](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_86/Docs/RP-192926.zip)).

(NR\_IIOT-Core; leading WG: RAN2; REL-16; started: Mar 19; Completed: Jun 20; WID: [RP-200797](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_88e/Docs/RP-200797.zip))

(NR\_UE\_pow\_sav-Core; leading WG: RAN1; REL-16; started: Mar 19; Completed Jun 20; WID: [RP-200494](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_87e/Docs/RP-200494.zip)).

(NR\_2step\_RACH-Core; leading WG: RAN1; REL-16; started: Dec 18; Completed: June 20; WID: [RP-200085](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_87e/Docs/RP-200085.zip)).

(SRVCC\_NR\_to\_UMTS-Core; leading WG: RAN2; REL-16; started: Dec 18; Completed; Mar 20; WID: [RP-190713](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_83/Docs/RP-190713.zip))

(RACS-RAN-Core, leading WG: RAN2; REL-16; started: Mar 19; completed: Jun 20; WID: [RP-191088](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_84/Docs/RP-191088.zip))

(NG\_RAN\_PRN-Core; leading WG: RAN3; REL-16; started: Mar 19; completed: June 20; WID: [RP-200122](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_87e/Docs/RP-200122.zip))

(NR\_eMIMO-Core, leading WG: RAN1; REL-16; started: Jun 18; target; Aug 20; WID: [RP-200474😉](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_87e/Docs/RP-200474.zip)

(NR\_CLI\_RIM; leading WG: RAN1; REL-16; started: Dec 18; Completed: Jun 20; WID: [RP-191997](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_85/Docs/RP-191997.zip);)

(NR\_L1enh\_URLLC-Core, leading WG: RAN1; REL-16; Completed: June 20; WID: [RP-191584](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_84/Docs/RP-191584.zip))

(LTE\_NR\_DC\_CA\_enh-Core; leading WG: RAN2; REL-16; started: Jun 18; Target Aug 20; WI [RP-200791](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_88e/Docs/RP-200791.zip))

(NR\_Mob\_enh-Core; leading WG: RAN2; REL-16; started: Jun 18; Completed June 20; WID: [RP-192277](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_85/Docs/RP-192277.zip)).

(NR\_SON\_MDT-Core; leading WG: RAN3; REL-16; started: Jun 19; Completed June 20; WID: [RP-191776](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_85/Docs/RP-191776.zip))

(NR\_HST, NR\_RRM\_enh-Core, NR\_RF\_FR1, NR\_RF\_FR2\_req\_enh, NR\_n66\_BW, LTE\_NR\_B41\_Bn41\_PC29dBm-Core, NR\_CSIRS\_L3meas,)

(NR TEI16)

LTE mob enh corrections that are common with NR mobility enhancements should be submitted to this AI.

### 5.1.1 Stage 2 and Organisational

Incoming LSs, etc. You should discuss your stage 2 CRs with the specification rapporteurs before submission. Includes impact to 38.300, 36.300, 37.340

[R2-2406634](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406634.zip) Alignment of mps-PriorityAccess cause in RRC resume Peraton Labs, CISA ECD, Verizon CR Rel-18 38.300 18.2.0 0882 - F NR\_newRAT-Core

[R2-2407281](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407281.zip) Correction on Transport Channels Philips International B.V. CR Rel-15 38.300 15.17.0 0889 - F NR\_newRAT-Core

[R2-2407282](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407282.zip) Correction on Transport Channels Philips International B.V. CR Rel-16 38.300 16.16.0 0890 - F NR\_newRAT-Core

[R2-2407284](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407284.zip) Correction on Transport Channels Philips International B.V. CR Rel-17 38.300 17.9.0 0891 - A NR\_newRAT-Core

[R2-2407288](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407288.zip) Correction on Transport Channels Philips International B.V. CR Rel-18 38.300 18.2.0 0892 - A NR\_newRAT-Core

### 5.1.2 User Plane corrections

User Plane corrections will be handled in the User Plane break out session

#### 5.1.2.1 MAC

[R2-2407431](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2407431.zip) Clarification on Rel-16 BFR and Rel-17 BFR ZTE Corporation discussion Rel-16 NR\_eMIMO-Core, NR\_FeMIMO-Core

*Proposal 1: RAN2 clarifies that the sr-ProhibitTimer for the SR Configuration of BFR shall be stopped if all pending SRs for the SR configuration are canceled.*

- LG doesn’t agree with ZTE

- MEdiatek doesn’t think this is a problem as this is a Rel16.

- Lenovo, Nokia, Ericsson also don’t think there is a problem

=> Not supported

*Proposal 2: For a BFR triggered by a BFD-RS set of a DL BWP that is deactivated, The BFR triggered by a BFD-RS set shall be cancelled if the candidate beam RS information for the BFD-RS set is contained in the enhanced BFR MAC CE.*

- Vivo thinks we should let it to UE implementation and leave the specification unchanged for Rel-17. Qualcomm also doesn’t to have a NBC change and we can leave it to UE implantation.

Proposal 3: RAN2 confirms that, for a BFR triggered by a BFD-RS set of a DL BWP that is deactivated, the candidate beam RS selected by UE, if any, in the enhanced BFR MAC CE is from the candidate beam RS list of the current active DL BWP.

**Agreements:**

- RAN2 assumes that the UE reports a suitable beam information from the current active DL BWP. Not specification change.

#### 5.1.2.2 RLC PDCP SDAP BAP

#### 5.1.2.3 Other

User plane related corrections that should be handled in User plane break out session.

### 5.1.3 Control Plane corrections

#### 5.1.3.1 NR RRC

Corrections to 38331, and related change to other TS if applicable, e.g. 36331, Stage-2 etc.

[R2-2406336](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406336.zip) Preconditions for MCG reconfiguration with sync MediaTek Inc. discussion Rel-15 NR\_newRAT-Core

[R2-2406350](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406350.zip) Correction on the way to include ReconfigurationWithSync in masterCellGroup in RRCReconfiguration NTTDOCOMO, INC., Nokia, Nokia Shanghai Bell, Ericsson, Samsung CR Rel-15 38.331 15.26.0 4870 - F NR\_newRAT-Core

[R2-2406351](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406351.zip) Correction on the way to include ReconfigurationWithSync in masterCellGroup in RRCReconfiguration NTTDOCOMO, INC., Nokia, Nokia Shanghai Bell, Ericsson, Samsung CR Rel-16 38.331 16.17.0 4871 - A NR\_newRAT-Core

[R2-2406353](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406353.zip) Correction on the way to include ReconfigurationWithSync in masterCellGroup in RRCReconfiguration NTTDOCOMO, INC., Nokia, Nokia Shanghai Bell, Ericsson, Samsung CR Rel-17 38.331 17.9.0 4872 - A NR\_newRAT-Core

[R2-2406354](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406354.zip) Correction on the way to include ReconfigurationWithSync in masterCellGroup in RRCReconfiguration NTTDOCOMO, INC., Nokia, Nokia Shanghai Bell, Ericsson, Samsung CR Rel-18 38.331 18.2.0 4873 - A NR\_newRAT-Core

[R2-2406799](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406799.zip) Discussion on going to IDLE triggered by inter-RAT cell selecton or reselection vivo discussion Rel-16

[R2-2406800](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406800.zip) Correction on going to IDLE triggered by inter-RAT cell selection or reselection vivo CR Rel-16 38.331 16.17.0 4888 - F NR\_newRAT-Core

[R2-2406801](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406801.zip) Correction on going to IDLE triggered by inter-RAT cell selection vivo CR Rel-16 36.331 16.16.0 5047 - F NR\_newRAT-Core

[R2-2406841](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406841.zip) Correction on IE SRS-CarrierSwitching CATT CR Rel-15 38.331 15.26.0 4893 - F NR\_newRAT-Core

[R2-2406842](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406842.zip) Correction on IE SRS-CarrierSwitching CATT CR Rel-16 38.331 16.17.0 4894 - A NR\_newRAT-Core, TEI16

[R2-2406843](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406843.zip) Correction on IE SRS-CarrierSwitching CATT CR Rel-17 38.331 17.9.0 4895 - A NR\_newRAT-Core, TEI17

[R2-2406844](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406844.zip) Correction on IE SRS-CarrierSwitching CATT CR Rel-18 38.331 18.2.0 4896 - A NR\_newRAT-Core, TEI18

#### 5.1.3.2 UE capabilities

UE cap corrections 38306, 38331

[R2-2407069](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2407069.zip) Parallel Tx capability discussion Ericsson, Qualcomm Incorporated discussion

[R2-2407297](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407297.zip) Clarification on increasedNumberofCSIRSPerMO Huawei, HiSilicon, vivo, MediaTek Inc., Nokia, Nokia Shanghai Bell, ZTE Corporation CR Rel-16 38.306 16.17.0 1138 - F NR\_CSIRS\_L3meas-Core

[R2-2407298](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407298.zip) Clarification on increasedNumberofCSIRSPerMO Huawei, HiSilicon, vivo, MediaTek Inc., Nokia, Nokia Shanghai Bell, ZTE Corporation CR Rel-17 38.306 17.9.0 1139 - A NR\_CSIRS\_L3meas-Core

[R2-2407299](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407299.zip) Clarification on increasedNumberofCSIRSPerMO Huawei, HiSilicon, vivo, MediaTek Inc., Nokia, Nokia Shanghai Bell, ZTE Corporation CR Rel-18 38.306 18.2.0 1140 - A NR\_CSIRS\_L3meas-Core

[R2-2407323](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407323.zip) Clarification on the Prerequisite of the ssb-AndCSI-RS-RLM (r15) ZTE Corporation, Sanechips CR Rel-15 38.306 15.25.0 1142 - F NR\_newRAT-Core

[R2-2407324](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407324.zip) Clarification on the Prerequisite of the ssb-AndCSI-RS-RLM (r16) ZTE Corporation, Sanechips CR Rel-16 38.306 16.17.0 1143 - A NR\_newRAT-Core

[R2-2407325](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407325.zip) Clarification on the Prerequisite of the ssb-AndCSI-RS-RLM (r17) ZTE Corporation, Sanechips CR Rel-17 38.306 17.9.0 1144 - A NR\_newRAT-Core

[R2-2407326](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407326.zip) Clarification on the Prerequisite of the ssb-AndCSI-RS-RLM (r18) ZTE Corporation, Sanechips CR Rel-18 38.306 18.2.0 1145 - A NR\_newRAT-Core

#### 5.1.3.3 Other

This agenda item addresses the idle and inactive behaviour specified in 38.304 or 36.304, LTE-specific changes for the applicable WIs, Other parts not covered elsewhere.

[R2-2407341](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2407341.zip) Correction to Relaxed measurement LG Electronics CR Rel-16 38.304 16.10.0 0412 - F NR\_newRAT-Core

[R2-2407361](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407361.zip) Correction to Relaxed measurement LG Electronics CR Rel-17 38.304 17.9.0 0413 - A NR\_newRAT-Core

[R2-2407363](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407363.zip) Correction to Relaxed measurement LG Electronics CR Rel-18 38.304 18.2.0 0414 - A NR\_newRAT-Core

## 5.2 NR V2X

(5G\_V2X\_NRSL-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Aug 20; WID: [RP-200129](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_87e/Docs/RP-200129.zip)).

CR rapporteurs will take care of miscellaneous CRs to collect small changes. Please contact / coordinate with CR rapporteur company first for small changes (e.g. non-controversial clarification/correction, editorial correction, etc.).

Tdoc Limitation: 1 tdocs

[R2-2406699](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406699.zip) Correction to MAC on cast type ZTE Corporation, Sanechips CR Rel-16 38.321 16.16.0 1888 - F 5G\_V2X\_NRSL-Core

[R2-2407464](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407464.zip) MAC correction on resource selection LG Electronics Inc. CR Rel-16 38.321 16.16.0 1915 - D 5G\_V2X\_NRSL-Core

[R2-2407472](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407472.zip) MAC correction on resource selection LG Electronics Inc. CR Rel-17 38.321 17.9.0 1916 - A 5G\_V2X\_NRSL-Core

[R2-2407475](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407475.zip) MAC correction on resource selection LG Electronics Inc. CR Rel-18 38.321 18.2.0 1917 - A 5G\_V2X\_NRSL-Core

## 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

[R2-2406295](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406295.zip) Correction on SP positioning SRS MAC CE Huawei, HiSIlicon CR Rel-16 38.321 16.16.0 1876 - F NR\_pos-Core

[R2-2406296](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406296.zip) Correction on SP positioning SRS MAC CE Huawei, HiSIlicon CR Rel-17 38.321 17.9.0 1877 - A NR\_pos-Core

[R2-2406297](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406297.zip) Correction on SP positioning SRS MAC CE Huawei, HiSIlicon CR Rel-18 38.321 18.2.0 1878 - A NR\_pos-Core

# 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.

## 6.1 Common

(NR\_MG\_enh-Core; leading WG: RAN4; REL-17; WID: [RP-211591](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_92e/Docs/RP-211591.zip))

(NR\_UDC\_enh-Core; leading WG: RAN2; REL-17; WID: [RP-211203](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_92e/Docs/RP-211203.zip))

(NG\_RAN\_PRN\_enh-Core; leading WG: RAN3; REL-17; WID: [RP-202363](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_90e/Docs/RP-202363.zip))

(NR\_IAB\_enh-Core; leading WG: RAN2; REL-17; WID: [RP-211548](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_92e/Docs/RP-211548.zip))

(NR\_UE\_pow\_sav\_enh-Core; leading WG: RAN2; REL-17; WID: [RP-212630](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_93e/Docs/RP-212630.zip))

(LTE\_NR\_DC\_enh2-Core; leading WG: RAN2; REL-17; WID: [RP-201040](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_88e/Docs/RP-201040.zip))

(LTE\_NR\_MUSIM-Core; leading WG: RAN2; REL-17; WID: [RP-212610](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_93e/Docs/RP-212610.zip))

(NR\_Slice -Core; leading WG: RAN2; REL-17; WID: [RP-212534](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_93e/Docs/RP-212534.zip))

(NR\_QoE-Core; leading WG: RAN3; REL-17; WID: [RP-211406](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_92e/Docs/RP-211406.zip))

(NR\_ext\_to\_71GHz-Core; leading WG: RAN1; REL-17; WID: [RP-212637](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_93e/Docs/RP-212637.zip))

(NR\_cov\_enh-Core; leading WG: RAN1; REL-17; WID: [RP-211566](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_92e/Docs/RP-211566.zip)): non-RACH-indication parts

(NR\_redcap-Core; leading WG: RAN1; REL-17; WID: [RP-211574](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_92e/Docs/RP-211574.zip))

(NR\_feMIMO-Core; leading WG: RAN1; REL-17; WID: [RP-212535](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_93e/Docs/RP-212535.zip))

(NR\_SmallData\_INACTIVE-Core, leading WG: RAN2; REL-17; WID: [RP-212594](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_93e/Docs/RP-212594.zip))

(NR\_IIOT\_URLLC\_enh-Core; leading WG: RAN2; REL-17; WID: [RP-210854](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_91e/Docs/RP-210854.zip))

(NR\_MBS-Core; leading WG: RAN2; REL-17; WID: [RP-201038](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_88e/Docs/RP-201038.zip))

(NR\_ENDC\_SON\_MDT\_enh-Core; leading WG: RAN3; REL-17; WID: [RP-201281](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_88e/Docs/RP-201281.zip))

(NR\_NTN\_solutions-Core; leading WG: RAN2; REL-17; WID: [RP-211557](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_92e/Docs/RP-211557.zip))

PRACH partitioning items

(NR TEI17)

Includes Rel-17 Work Items without specific R2 Agenda Item, e.g. RAN1 and RAN4 led items, SA2 and CT1 led items (was previously “Rel-17 Other”)

Includes aspects that does not fit under the more specific AIs, e.g. multi-WI aspects.

Corrections for NR\_NTN\_solutions-Core might be treated in the NTN breakout session.

Tdoc limitation: 4 Tdocs

### 6.1.1 Stage 2 and Organisational

Incoming LSs, etc. You should discuss your stage 2 CRs with the specification rapporteurs before submission. Includes impact to 38.300, 37.340, (36.300 if applicable)

### 6.1.2 User Plane corrections

User Plane Related aspects will be handled in the User Plane break out session. (exception: TEI new proposals if any).

[R2-2406910](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406910.zip) Discussion on PHR for mTRP PUSCH repetition LG Electronics Inc. discussion Rel-17 NR\_FeMIMO-Core

=> Revised in R2-2407564

R2-2407564 Discussion on PHR for mTRP PUSCH repetition LG Electronics Inc. discussion Rel-17 NR\_FeMIMO-Core

*Proposal 1. RAN2 decides whether/how to report one Type 3 PH value for a serving cell configured with mTRP PUSCH repetition and configured with two UL carriers.*

- Qualcomm thinks that the UE should report one Type 3. ZTE Thinks that the problem is that the current spec doesn’t indicate how many PH fields will be present. Qualcomm thinks that we need to revise the specification anyways.

- ZTE and Nokia is concerned that there is no more R fields so we would need to restructure the MAC CE. ZTE thinks that the simplest solution is to restrict the configuration. Qualcomm thinks that maybe RAN1 needs to be involved. Mediatek thinks that proposal 2 would solve the problem.

*Proposal 2. One or two Type 1 PH values are always obtained for a serving cell configured with mTRP PUSCH repetition, if the MAC entity the serving cell belongs to is configured with twoPHRMode.*

- Qualcomm thinks that we would need a UE capability as the network wouldn’t know what the UE is reporting.

*Proposal 3. Remove Type 2 PH2 field for SpCell in PHR for mTRP MAC CE.*

- MEdiatek is concerned that this is a NBC change. ZTE explains that this is only for LTE MAC CE and it is optional.

**Agreements**

1. No Type 3 PH value is reported for *a* serving cell configured with mTRP PUSCH repetition, if the MAC entity the serving cell belongs to is configured with twoPHRMode. FFS whether a UE capability is needed
2. Remove Type 2 PH2 field for SpCell in PHR for mTRP MAC CE

* [AT127][006][R17 UP] PHR for mTRP (LG/ZTE)

Intended outcome: discuss FFSs, agree on proposals and agree to CRs

Deadline: short

[R2-2407767](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407767.zip) Report of [AT127][006][R17 UP] PHR for mTRP LG Electronics Inc., ZTE discussion Rel-17 NR\_FeMIMO-Core

- Qualcomm explains that this is a NBC MAC change so a new capability may be needed.

=> FFS whether a new capability is needed.

=> Noted

[R2-2407782](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407782.zip) Correction on PHR for mTRP PUSCH repetition (R17) ZTE, LG Electronics Inc., Ericsson, Samsung, CATT, Nokia, Apple CR Rel-18 38.321 18.2.0 1925 - A NR\_FeMIMO-Core

=> The CR is endorsed but will be officially approved once UE capability discussion is concluded

[R2-2407432](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407432.zip) Clarification On PHR and PHR MAC CE for mTRP ZTE Corporation, Samsung, Nokia, CATT, Apple discussion Rel-17 NR\_FeMIMO-Core

Proposal 2: In the case of the MAC entityEnhanced Multiple Entry PHR for multiple TRP MAC CE is generated is not configured with twoPHRMode, RAN 2 clarifies that only type 1 PH value can be obtained from PHY layer for a serving cell configured with mTRP PUSCH repetition if the MAC entity the serving cell belongs to is configured with twoPHRmode if there is no real PUSCH transmission at the slot where the PHR MAC CE is transmitted.

Proposal 3: Clarify in the subclause 6.1.3.51, one or multiple of type PH fields shall be present for the PCell.

=> Noted

[R2-2406911](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406911.zip) Correction on PHR for mTRP PUSCH repetition LG Electronics. CR Rel-17 38.321 17.9.0 1892 - F NR\_FeMIMO-Core

=> Revised in R2-2407565

R2-2407565 Correction on PHR for mTRP PUSCH repetition LG Electronics Inc., Ericsson CR Rel-17 38.321 17.9.0 1892 1 F NR\_FeMIMO-Core

=> Revised in R2-2407768

[R2-2407768](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407768.zip) Correction on PHR for mTRP PUSCH repetition LG Electronics Inc., Ericsson, ZTE CR Rel-17 38.321 17.9.0 1892 2 F NR\_FeMIMO-Core

=> The CR is endorsed but will be officially approved once UE capability discussion is concluded

[R2-2406912](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406912.zip) Correction on PHR for mTRP PUSCH repetition (R18) LG Electronics Inc. CR Rel-18 38.321 18.2.0 1893 - A NR\_FeMIMO-Core

=> Revised in R2-2407566

R2-2407566 Correction on PHR for mTRP PUSCH repetition LG Electronics Inc., Ericsson CR Rel-18 38.321 18.2.0 1893 1 A NR\_FeMIMO-Core

[R2-2407425](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407425.zip) Clarification on the activated TCI codepoints for Unified TCI States Activation/Deactivation MAC CE Samsung CR Rel-17 38.321 17.9.0 1913 - F NR\_FeMIMO-Core

- LG is not sure how the UE know TCI state ID field(s) are not present. Samsung indicates it can be done by checking the field. Qualcomm agrees that you can know by the length of the MAC CE.

=> RAN2 assumes that If the corresponding TCI state ID field(s) are not present, MAC entity shall ignore the Pi field. No specification change is needed.

=> The CR is not pursued

[R2-2407426](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407426.zip) Clarification on the activated TCI codepoints for Unified TCI States Activation/Deactivation MAC CE Samsung CR Rel-18 38.321 18.2.0 1914 - A NR\_FeMIMO-Core

[R2-2407137](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407137.zip) Correction on HARQ process Samsung CR Rel-17 38.321 17.9.0 1899 - F NR\_NTN\_solutions-Core, NR\_MBS-Core

- Mediatek doesn’t agree with the change as for NTN we have the behaviour where HARQ is disabled. This can be resolved by network implementation and can utilize the HARQ processes that are enabled.

- Vivo also doesn’t agree and we have discussed this and current spec is enough

- LG supports as in the previous meeting we agreed that MBS configuration would override the configuration.

- Qualcomm explains that the change would cause problem with some RAN1 agreements, so we would have to first check with RAN1.

- CATT agrees with CR

- Huawei doesn’t think the change is needed as the existing sentence already covers. Nokia also doesn’t think the change is needed.

=> The CR is postponed (check what clarification may be needed and what the issue is)

[R2-2407138](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407138.zip) Correction on HARQ process Samsung CR Rel-18 38.321 18.2.0 1900 - A NR\_NTN\_solutions-Core, NR\_MBS-Core

[R2-2407171](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407171.zip) Correction on use of recommended of IAB-MT beam indication. Ericsson CR Rel-17 38.321 17.9.0 1901 - F NR\_IAB\_enh-Core

=> the CR is postponed

[R2-2407172](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407172.zip) Correction on use of recommended of IAB-MT beam indication. Ericsson CR Rel-18 38.321 18.2.0 1902 - A NR\_IAB\_enh-Core

### 6.1.3 Control Plane corrections

#### 6.1.3.1 NR RRC

Corrections to 38331, and related change to other TS if applicable, except UE caps.

[R2-2406225](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406225.zip) LS on inconsistent issue between extended k1 range and RRC parameter DL-DataToUL-ACK-v1700 for R17 NTN (R4-2409974; contact: CMCC) RAN4 LS in Rel-18 NR\_ATG To:RAN2 Cc:RAN1

[R2-2406372](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406372.zip) Corrections on the application of intraFreqReselection Huawei, HiSilicon CR Rel-17 38.331 17.9.0 4874 - F NR\_redcap-Core

[R2-2406373](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406373.zip) Corrections on the application of intraFreqReselection Huawei, HiSilicon CR Rel-18 38.331 18.2.0 4875 - A NR\_redcap-Core, NR\_redcap\_enh-Core

[R2-2406411](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406411.zip) Consideration on overlapping preamble range and empty FeatureCombination ZTE Corporation discussion Rel-17 NR\_newRAT-Core

[R2-2406467](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406467.zip) Clarification on Validity Duration vivo, Ericsson CR Rel-17 38.331 17.9.0 4877 - F NR\_NTN\_solutions-Core

[R2-2406468](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406468.zip) Clarification on Validity Duration vivo, Ericsson CR Rel-18 38.331 18.2.0 4878 - A NR\_NTN\_solutions-Core

[R2-2406691](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406691.zip) Correction on Slicing based RACH Apple CR Rel-17 38.331 17.9.0 4884 - F NR\_slice-Core

[R2-2406692](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406692.zip) Correction on Slicing based RACH Apple CR Rel-18 38.331 18.2.0 4885 - A NR\_slice-Core

[R2-2406838](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406838.zip) Discussion on missing PRACH SCS configuration CATT discussion Rel-17 NR\_ext\_to\_71GHz-Core

[R2-2406839](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406839.zip) Correction on the missing PRACH SCS configuration CATT CR Rel-17 38.331 17.9.0 4891 - F NR\_ext\_to\_71GHz-Core

[R2-2406840](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406840.zip) Correction on the missing PRACH SCS configuration CATT CR Rel-18 38.331 18.2.0 4892 - F NR\_ext\_to\_71GHz-Core, TEI18

[R2-2406845](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406845.zip) On the Inconsistency between extended k1 range and DL-DataToUL-ACK-v1700 (RAN4 LS) Nokia discussion Rel-18 NR\_ATG-Core

[R2-2406862](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406862.zip) Discussion on the inconsistency issue in RAN4 LS [R2-2406225](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406225.zip) for Rel-17 NR NTN CATT discussion Rel-17 NR\_NTN\_solutions

[R2-2406927](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406927.zip) Correction for CFRA configuration due to PRACH partitioning Huawei, HiSilicon CR Rel-17 38.331 17.9.0 4899 - F NR\_redcap-Core

[R2-2406928](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406928.zip) Correction for CFRA configuration due to PRACH partitioning Huawei, HiSilicon CR Rel-18 38.331 18.2.0 4900 - A NR\_redcap-Core, NR\_redcap\_enh-Core

[R2-2406990](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406990.zip) Miscellaneous corrections to mobility history information ZTE Corporation, Sanechips CR Rel-17 38.331 17.9.0 4907 - F NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2406991](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406991.zip) Miscellaneous corrections to mobility history information ZTE Corporation, Sanechips CR Rel-18 38.331 18.2.0 4908 - A NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2407009](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407009.zip) Correction on featureCombination and SI-RequestConfig ZTE Corporation CR Rel-17 38.331 17.9.0 4911 - F NR\_newRAT-Core

[R2-2407010](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407010.zip) Correction on featureCombination and SI-RequestConfig ZTE Corporation CR Rel-18 38.331 18.2.0 4912 - A NR\_newRAT-Core

[R2-2407080](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407080.zip) Miscellaneous non-controversial corrections Set XXII Ericsson CR Rel-16 38.331 16.17.0 4915 - F NR\_newRAT-Core, TEI16 Withdrawn

[R2-2407081](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407081.zip) Miscellaneous non-controversial corrections Set XXII Ericsson CR Rel-17 38.331 17.9.0 4916 - F NR\_newRAT-Core, TEI17

[R2-2407082](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407082.zip) Miscellaneous non-controversial corrections Set XXII Ericsson CR Rel-18 38.331 18.2.0 4917 - A NR\_newRAT-Core, TEI18

[R2-2407083](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407083.zip) Generic procedure text for SetupRelease Ericsson CR Rel-15 38.331 15.26.0 4918 - F NR\_newRAT-Core

[R2-2407084](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407084.zip) Generic procedure text for SetupRelease Ericsson CR Rel-16 38.331 16.17.0 4919 - A NR\_newRAT-Core, TEI16

[R2-2407085](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407085.zip) Generic procedure text for SetupRelease Ericsson CR Rel-17 38.331 17.9.0 4920 - A NR\_newRAT-Core, TEI17

[R2-2407086](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407086.zip) Generic procedure text for SetupRelease Ericsson CR Rel-18 38.331 18.2.0 4921 - A NR\_newRAT-Core, TEI18

[R2-2407089](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407089.zip) Improvement of procedure text for QoE measurements Ericsson CR Rel-17 38.331 17.9.0 4923 - F NR\_QoE-Core

[R2-2407114](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407114.zip) Correction of reestablishmentCellId Nokia CR Rel-17 38.331 17.9.0 4924 - F NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2407115](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407115.zip) Correction of reestablishmentCellId Nokia CR Rel-18 38.331 18.2.0 4925 - A NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2407144](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407144.zip) Clarification on MBS broadcast acquisition Samsung, CATT, Nokia, LG Electronics Inc., Ericsson, Apple, Qualcomm Incorporated CR Rel-17 38.331 17.9.0 4926 - F NR\_MBS-Core, NR\_SmallData\_INACTIVE-Core

[R2-2407150](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407150.zip) Clarification on MBS broadcast acquisition Samsung, CATT, Nokia, LG Electronics Inc., Ericsson, Apple, Qualcomm Incorporated CR Rel-18 38.331 18.2.0 4927 - A NR\_MBS-Core, NR\_SmallData\_INACTIVE-Core

[R2-2407173](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407173.zip) Correction on when featureCombination is empty Ericsson CR Rel-17 38.331 17.9.0 4801 1 F NR\_redcap-Core, NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_slice-Core [R2-2404965](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2404965.zip)

[R2-2407174](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407174.zip) Correction on when featureCombination is empty Ericsson CR Rel-18 38.331 18.2.0 4802 1 A NR\_redcap-Core, NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_slice-Core [R2-2404966](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2404966.zip)

[R2-2407300](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407300.zip) Clarification on smtc4list-r17 Huawei, HiSilicon CR Rel-17 38.331 17.9.0 4943 - F NR\_NTN\_solutions-Core

[R2-2407301](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407301.zip) Clarification on smtc4list-r17 Huawei, HiSilicon CR Rel-18 38.331 18.2.0 4944 - A NR\_NTN\_solutions-Core

[R2-2407340](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407340.zip) Corrections for RA resource related parameters in RA report Sharp discussion Rel-17

[R2-2407371](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407371.zip) Clarification on the case the SIB17 is absent Google CR Rel-18 38.331 18.2.0 4947 - F NR\_UE\_pow\_sav\_enh-Core

[R2-2407428](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407428.zip) Discussion on indication of reserved SN-side NR-DC and aggregated BW resources Nokia discussion Rel-17 NR\_newRAT-Core, NR\_eMIMO-Core, NR\_BCS4-Core

[R2-2407429](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407429.zip) Correction to indication of reserved SN-side NR-DC and aggregated BW resources Nokia CR Rel-17 38.331 17.9.0 4952 - F NR\_newRAT-Core, NR\_eMIMO-Core, NR\_BCS4-Core

[R2-2407430](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407430.zip) Correction to indication of reserved SN-side NR-DC and aggregated BW resources Nokia CR Rel-18 38.331 18.2.0 4953 - F NR\_newRAT-Core, NR\_eMIMO-Core, NR\_BCS4-Core

[R2-2407459](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407459.zip) Clarification on configuring RACH partition in RedCap-specific initial BWP for Msg1-based SI request LG Electronics Inc. discussion Rel-17 NR\_redcap-Core

[R2-2407500](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407500.zip) Correction on mappingPattern for mTRP DG/CG PUSCH repetition schemes Nokia CR Rel-17 38.331 17.9.0 4958 - F NR\_FeMIMO-Core

[R2-2407519](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407519.zip) Miscellaneous non-controversial corrections Set XXII Ericsson CR Rel-16 38.331 16.17.0 4960 - F NR\_newRAT-Core, TEI16

[R2-2407528](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407528.zip) Clarification on parallel lists in MeasObjectNR Samsung CR Rel-17 38.331 17.9.0 4961 - F NR\_NTN\_solutions-Core

[R2-2407529](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407529.zip) Clarification on parallel lists in MeasObjectNR Samsung CR Rel-18 38.331 18.2.0 4962 - F NR\_NTN\_enh-Core

[R2-2407556](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407556.zip) Correction on power control parameters to support unified TCI state framework Ericsson CR Rel-18 38.331 18.2.0 4963 - A NR\_feMIMO-Core

[R2-2407557](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407557.zip) Correction on power control parameters to support unified TCI state framework Ericsson CR Rel-17 38.331 17.9.0 4964 - F NR\_feMIMO-Core

#### 6.1.3.2 UE capabilities

UE cap corrections 38306, 38331.

[R2-2406817](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406817.zip) Corrections to UE capabilities related to Rel-17 URLLC and RedCap Huawei, HiSilicon discussion Rel-17 NR\_IIOT\_URLLC\_enh-Core, NR\_redcap-Core

[R2-2407076](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407076.zip) Support of Enhanced channel raster by (e)RedCap UE Rel-17 Ericsson discussion Rel-17 NR\_redcap-Core

[R2-2407826](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407826.zip)

=> Noted

* [POST127][032][Channel Raster] Capability (Ericsson)

Intended outcome:

Deadline: short

#### 6.1.3.3 Other

Including idle and inactive behaviour specified in 38.304 or 36.304.

## 6.2 NR Sidelink relay

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

Tdoc Limitation: 1 tdoc

[R2-2406948](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406948.zip) Correction on T300 and T302 handling due to relay selection or cell selection Huawei, HiSilicon CR Rel-17 38.331 17.9.0 4905 - F NR\_SL\_relay-Core

[R2-2406949](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406949.zip) Correction on T300 and T302 handling due to relay selection or cell selection Huawei, HiSilicon CR Rel-18 38.331 18.2.0 4906 - A NR\_SL\_relay-Core

[R2-2407270](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407270.zip) RRC correction on NR SL U2N Relay UE selection and reselection procedure Philips International B.V., NEC CR Rel-17 38.331 17.9.0 4938 - F NR\_SL\_relay-Core

[R2-2407272](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407272.zip) RRC correction on NR SL U2N Relay UE selection and reselection procedure Philips International B.V., NEC CR Rel-18 38.331 18.2.0 4939 - A NR\_SL\_relay-Core

[R2-2407495](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407495.zip) Corrections for SL relay measurements ZTE Corporation, Sanechips, Apple, OPPO, Nokia CR Rel-17 38.331 17.9.0 4956 - F NR\_SL\_relay-Core

[R2-2407496](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407496.zip) Corrections for SL relay measurements ZTE Corporation, Sanechips, Apple, OPPO, Nokia CR Rel-18 38.331 18.2.0 4957 - 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

[R2-2406298](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406298.zip) Correction on PPW for MAC spec Huawei, HiSIlicon CR Rel-17 38.321 17.9.0 1879 - F NR\_pos\_enh-Core

[R2-2406299](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406299.zip) Correction on PPW for MAC spec Huawei, HiSIlicon CR Rel-18 38.321 18.2.0 1880 - A NR\_pos\_enh-Core

[R2-2406788](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406788.zip) Correction on SP SRS activation/deactivation MAC CE ZTE Corporation, Ericsson CR Rel-17 38.321 17.9.0 1840 1 F NR\_pos\_enh-Core [R2-2404625](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2404625.zip)

[R2-2406789](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406789.zip) Correction on SP SRS activation/deactivation MAC CE ZTE Corporation, Ericsson CR Rel-18 38.321 18.2.0 1841 1 A NR\_pos\_enh-Core [R2-2404626](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2404626.zip)

[R2-2406790](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406790.zip) Discussion on DL MAC CE in Rel-17 and Rel-18 SP SRS in RRC\_INACTIVE ZTE Corporation, Ericsson discussion Rel-17 38.321 NR\_pos\_enh-Core

[R2-2407223](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407223.zip) Corrections related to additional path reporting and QCL for positioning Ericsson CR Rel-17 37.355 17.8.0 0513 - F NR\_pos\_enh-Core

[R2-2407226](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407226.zip) Corrections related to additional path reporting and QCL for positioning Ericsson CR Rel-18 37.355 18.2.0 0514 - A NR\_pos\_enh-Core

## 6.6 NR Sidelink enhancements

(NR\_SL\_enh-Core; leading WG: RAN1; REL-17; WID: [RP-202846](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_90e/Docs/RP-202846.zip))

Tdoc Limitation: 1 tdoc

CR rapporteurs will take care of miscellaneous CRs to collect small changes. Please contact / coordinate with CR rapporteur company first for small changes (e.g. non-controversial clarification/correction, editorial correction, etc.).

[R2-2406262](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406262.zip) Correction on resource (re)selection for IUC OPPO CR Rel-17 38.321 17.9.0 1873 - F NR\_SL\_enh-Core

[R2-2406263](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406263.zip) Correction on resource (re)selection for IUC OPPO CR Rel-18 38.321 18.2.0 1874 - A NR\_SL\_enh-Core

[R2-2406514](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406514.zip) Correction on prioritization between SL transmission and MAC CE-triggered SR ASUSTeK CR Rel-17 38.321 17.9.0 1886 - F NR\_SL\_enh-Core

[R2-2406515](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406515.zip) Correction on prioritization between SL transmission and MAC CE-triggered SR ASUSTeK CR Rel-18 38.321 18.2.0 1887 - A NR\_SL\_enh-Core, NR\_SL\_enh2

[R2-2407011](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407011.zip) Correction on SL IUC and SL DRX configurations for SL enhancements Huawei, HiSilicon CR Rel-17 38.331 17.9.0 4913 - F NR\_SL\_enh-Core

[R2-2407012](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407012.zip) Correction on SL IUC and SL DRX configurations for SL enhancements Huawei, HiSilicon CR Rel-18 38.331 18.2.0 4914 - A NR\_SL\_enh-Core

[R2-2407019](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407019.zip) Correction to MAC on HARQ feedback indicator Ericsson CR Rel-17 38.321 17.9.0 1895 - F NR\_SL\_enh-Core

[R2-2407020](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407020.zip) Correction to MAC on cast type Ericsson CR Rel-18 38.321 18.2.0 1896 - A NR\_SL\_enh-Core Withdrawn

[R2-2407246](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407246.zip) Correction to MAC on HARQ feedback indicator Ericsson CR Rel-18 38.321 18.2.0 1906 - A NR\_SL\_enh-Core

[R2-2407405](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407405.zip) Correction on resource selection for IUC LG Electronics Inc. CR Rel-17 38.321 17.9.0 1909 - F NR\_SL\_enh-Core Withdrawn

[R2-2407412](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407412.zip) Correction on resource selection for IUC LG Electronics Inc. CR Rel-18 38.321 18.2.0 1910 - A NR\_SL\_enh-Core Withdrawn

# 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.

### 7.0.1 UE Capabilities

**UE feature list LS**

[R2-2406210](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406210.zip) LS on Rel-18 RAN1 UE features list for NR after RAN1#117 (R1-2405566; contact: NTT DOCOMO, AT&T) RAN1 LS in Rel-18 NR\_MIMO\_evo\_DL\_UL, NR\_pos\_enh2, Netw\_Energy\_NR, NR\_netcon\_repeater, NR\_NTN\_enh, NR\_Mob\_enh2, NR\_SL\_enh2, NR\_redcap\_enh, NR\_MC\_enh, NR\_XR\_enh, NR\_FR1\_lessthan\_5MHz\_BW, NR\_DSS\_enh, NR\_BWP\_wor, NR\_cov\_enh2, TEI18 To:RAN2, RAN4

=> Noted

[R2-2406232](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406232.zip) LS on RAN4 UE feature list for Rel-18 (version 5) (R4-2410748; contact: CMCC) RAN4 LS in Rel-19 NR\_ENDC\_RF\_FR1\_enh2, NR\_channel\_raster\_enh, NR\_FR2\_multiRX\_DL, NR\_RRM\_enh3, NR\_MG\_enh2, NonCol\_intraB\_ENDC\_NR\_CA, NR\_HST\_FR2\_enh, NR\_ATG, NR\_demod\_enh3, NR\_pos\_enh2, NR\_MC\_enh, NR\_Mob\_enh2, NR\_NTN\_enh, NR\_cov\_enh2, Netw\_Energy\_NR, 4Rx\_low\_NR\_band\_handheld\_3Tx\_NR\_CA\_ENDC, NR\_SL\_enh2 To:RAN2 Cc:RAN1

=> Noted

**Other corrections**

*Corrections to AccessStratumRelease and ue-ConfigRelease*

[R2-2406535](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406535.zip) Correction to UE capabilities and configuration Google CR Rel-18 36.331 18.2.0 5040 - F IoT\_NTN\_enh-Core, NR\_ENDC\_SON\_MDT\_enh2-Core, LTE\_UAV\_enh-Core

- Lenovo thinks that for the first two changes we should change the description to be generic like this field indicated the AS release supported by UE.

=> Update the CR with a generic sentence

=> Revised in R2-2407805

* [AT127][001][UE cap] CR update to [R2-2406535](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406535.zip) (Google)

Intended outcome: agree to CR

Deadline: 08-23-24

[R2-2407805](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407805.zip) Correction to UE capabilities and configuration Google CR Rel-18 36.331 18.2.0 5040 1 F IoT\_NTN\_enh-Core, NR\_ENDC\_SON\_MDT\_enh2-Core, LTE\_UAV\_enh-Core

=> The CR is agreed

*Redundant pre-requisite of UE features*

[R2-2407327](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407327.zip) Consideration on the Redundant Prerequisite of UE Features ZTE Corporation, Sanechips discussion Rel-18 NR\_MIMO\_evo\_DL\_UL-Core

Proposal 1: Based on the above 4 observations, RAN2 can keep the Rel-18 as it is, but send LS to RAN1/4 to ask RAN1/4 to avoid such kinds of the redundant prerequisites in the feature list table from Rel-19.

- Intel agrees with the intention but there is no need to send an LS and for R19 we can communicate with the RAN1/RAN4 feature leads for next release

- Ericsson thinks that this is minor and nothing really breaks

- Samsung thinks it should be avoided and some clarification points are required and RAN1 may update the feature list.

=> No formal action but companies can communicate internally to their delegates

=> Noted

[R2-2407328](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407328.zip) Draft LS on the Redundant Prerequisite ZTE Corporation, Sanechips LS out Rel-18 NR\_MIMO\_evo\_DL\_UL-Core To:RAN1,RAN4

=> Not treated

### 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*

#### 7.0.2.1 RACH-less HO

**Rapporteur corrections**

[R2-2406300](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406300.zip) Rapporteur MAC CR for generalized RACH-less HO/LTM [RACH-lessHO] Huawei, HiSilicon CR Rel-18 38.321 18.2.0 1881 - F TEI18, NR\_Mob\_enh2-Core, NR\_NTN\_enh-Core, NR\_mobile\_IAB-Core

[R2-2407180](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407180.zip) Correction on beam indication for NTN RACH-less [RACH-lessHO] Ericsson discussion Rel-18 TEI18

Proposal 1 RAN2 to clarify in TS 38.331 that the field ssb-Index should not be configured when the field cg-RRC-Configuration-r18 is configured.

[R2-2407181](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407181.zip) Misc RRC corrections for RACH-less HO [RACH-lessHO] Ericsson (Rapportuer) CR Rel-18 38.331 18.2.0 4932 - F TEI18

=> Revised in R2-2407787

R2-2407787 Misc RRC corrections for RACH-less HO [RACH-lessHO] Ericsson (Rapportuer) CR Rel-18 38.331 18.2.0 4932 1 F TEI18

**Other corrections**

*CG restriction for RACH-less LTM*

[R2-2406493](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406493.zip) Correction on RRC parameters for RACH-less LTM cell switch CATT discussion Rel-18 NR\_mobile\_IAB-Core, NR\_Mob\_enh2-Core, NR\_NTN\_enh-Core, TEI18

Proposal 1: Apply the restriction of the configured grant parameters as described in the LS [R2-2405997](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2405997.zip) also to CG-based RACH-less LTM cell switch, if cg-LTM-Configuration is configured.

Proposal 2: Adopt the draft CR in the Appendix.

[R2-2406492](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406492.zip) Correction on retransmission in RACH-less HO CATT draftCR Rel-18 38.321 18.2.0 F NR\_mobile\_IAB-Core, NR\_Mob\_enh2-Core, NR\_NTN\_enh-Core, TEI18

* [AT127][007][RACH-less] CRs (Ericsson/Huawei)

Intended outcome: Review suggested changes/agreed on which changes are necessary and update CRs accordingly. Agree to CRs by email

Deadline: 08-23-24

#### 7.0.2.2 NR network-controlled repeaters

(NR\_NetConRepeater; leading WG: RAN1; REL-18; WID: [RP-230175](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_99/Docs/RP-230175.zip))

[R2-2406277](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406277.zip) Discussion on NCR capability Huawei, HiSilicon, Intel Corporation discussion Rel-18 NR\_netcon\_repeater-Core

[R2-2406278](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406278.zip) Correction on NCR capability Huawei, HiSilicon, Intel Corporation CR Rel-18 38.331 18.2.0 4866 - F NR\_netcon\_repeater-Core

[R2-2406279](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406279.zip) Correction on NCR capability Huawei, HiSilicon, Intel Corporation CR Rel-18 38.306 18.2.0 1133 - F NR\_netcon\_repeater-Core

[R2-2406415](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406415.zip) Introduction of waveform capability for NCR-MT ZTE Corporation (Rapporteur), Fujitsu CR Rel-18 38.306 18.2.0 1136 - F NR\_netcon\_repeater-Core Revised

[R2-2406416](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406416.zip) Introduction of waveform capability for NCR-MT ZTE Corporation (Rapporteur), Fujitsu CR Rel-18 38.331 18.2.0 4876 - F NR\_netcon\_repeater-Core Revised

[R2-2407524](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407524.zip) Introduction of waveform capability for NCR-MT ZTE Corporation (Rapporteur), Fujitsu CR Rel-18 38.306 18.2.0 1136 1 F NR\_netcon\_repeater-Core [R2-2406415](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406415.zip)

[R2-2407525](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407525.zip) Introduction of waveform capability for NCR-MT ZTE Corporation (Rapporteur), Fujitsu CR Rel-18 38.331 18.2.0 4876 1 F NR\_netcon\_repeater-Core [R2-2406416](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406416.zip)

* [AT127][010][NCR] Capability CRs (ZTE/Huawei)

Intended outcome: Discuss the two CRs and merge after receiving comments and endorse by email

Deadline: 08-23-24

R2-2407814 [AT127][010][NCR] Capability CRs (ZTE/Huawei) ZTE Corporation, Huawei discussion Rel-18 NR\_netcon\_repeater-Core

#### 7.0.2.3 NR support for UAV

**Rapporteur corrections**

[R2-2407193](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407193.zip) Correction for NR UAV capabilities Huawei, HiSilicon CR Rel-18 38.306 18.2.0 1137 - F NR\_UAV-Core

- Qualcomm thinks that the existing spec is clear enough. Samsung agrees with the intention but perhaps we don’t need to repeat the RRC text again.

=> Revised in R2-2407784

[R2-2407784](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407784.zip) Correction for NR UAV capabilities Huawei, HiSilicon CR Rel-18 38.306 18.2.0 1137 1 F NR\_UAV-Core

=> Add period at the end of the sentence when merging the mega CR

=> The CR is endorsed

[R2-2407196](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407196.zip) Correction for UAV capabilities Huawei, HiSilicon CR Rel-18 36.306 18.2.0 1890 - F LTE\_UAV\_enh-Core

=> Update to category F

=> Remove “real” from inter-operability impact

=> There is a mismatch between 306 capability description and ASN.1 for both V2X and A2X. We should update the description to include band combinations and that band class is provided for each band combination.

=> LTE V2X description should also be updated in Rel-18 with magic sentence. Qualcomm will bring the CR

=> The CR is revised in R2-2407747 [CB]

After CB session

- Lenovo has indicate that the description doesn’t match the ASN.1 which is per band combination and indicates more things. Qualcomm agrees that ASN.1 has more information but we copied V2X description that also signals more information. Should we go to each field and discussing if this field is for A2X?

- Qualcomm is concerned that if V2X and A2X have different descriptions but should have the same behaviour this causes problem.

* [POST127][011][UAV] UE capabilities (Huawei)

Intended outcome: Review updated wording for LTE CR (agreed)

Deadline: short

**Other corrections**

*Updated reference*

[R2-2406597](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406597.zip) Miscellaneous Corrections in 38.331 Ericsson discussion Rel-18

Proposal 1 Update the TBD in reference to the RAN4 specification for the EUTRA-NS-PmaxList IE. Adopt the TP as in the Annex.

- Qualcomm thinks that we can remove the table references all together as maintaining the list is complicated. We did this for LTE specs.

=> Noted

Agreement

=> Fix the issue by just referring to 36.101 and clause 6.

=> Merge/Include the agreement change is Spec rapporteur CR

#### 7.0.2.4 Mobile Terminated Small Data Transmission

(NR\_NR\_MT\_SDT-Core; leading WG: RAN2; REL-18; WID: [RP-222993](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_98e/Docs/RP-222993.zip))

[R2-2406304](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406304.zip) Rapporteur MAC CR for MT-SDT Huawei, HiSIlicon CR Rel-18 38.321 18.2.0 1882 - F NR\_MT\_SDT-Core

- Xiaomi and LG think it is already clear.

=> Update to indicate that it is only a clarification in cover page

=> “The SDT procedure initiated for MT-SDT cannot be performed by RA-SDT (i.e., RA-SDT is not applicable as specified in clause 5.1.1b), but can be performed either by Random Access procedure (i.e. with 2-step RA type or 4-step RA type) or by configured grant Type 1 (i.e., CG-SDT).”

=> the CR is agreed in R2-2407580 with the changes above

#### 7.0.2.5 IDC enhancements for NR and MR-DC

(NR\_IDC\_enh-Core; leading WG: RAN2; REL-18; WID: [RP-221281](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_96/Docs/RP-221281.zip))

Corrections. For smaller corrections please contact CR editor / Rapporteur directly.

[R2-2406706](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406706.zip) Miscellaneous corrections for IDC Xiaomi CR Rel-18 38.331 18.2.0 4887 - F NR\_IDC\_enh-Core

=> Include inter-operability

=> The CR is not pursued

[R2-2407292](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407292.zip) Discussion on handling of TDM Config for IDC Huawei, HiSilicon discussion Rel-18 NR\_IDC\_enh-Core Withdrawn

#### 7.0.2.6 Mobile IAB (Integrated Access and Backhaul) for NR

( NR\_mobile\_IAB -Core; leading WG: RAN3; REL-18; WID: [RP-232669](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_101/Docs/RP-232669.zip))

[R2-2406330](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406330.zip) Corrections on mobile IAB terminologies Huawei, HiSilicon (Rapporteur) CR Rel-18 38.340 18.0.0 0036 - F NR\_mobile\_IAB-Core

- Qualcomm thinks this is not needed, except change number 1

=> Agree to change 1 only

=> The CR is agreed in R2-2407748 with the agreement above and updated cover page

[R2-2407170](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407170.zip) Misc RRC corrections for mobile IAB Ericsson (Rapportuer) CR Rel-18 38.331 18.2.0 4929 - F NR\_mobile\_IAB-Core

- Huawei and Samsung don’t think the first change is needed. Second change can be implemented in RRC editor CRs

- Nokia is not even sure the second change is needed.

- Huawei thinks that only the English needs to be changed for second change “may be”

=> The CR is not pursued

=> the only change is related to second change and should be updated to “may be”.

=> merge/include this agreement in RRC spec rapporteur

#### 7.0.2.7 Timing Resiliency and URLLC Enh

(NR\_TRS\_URLLC; leading WG: RAN3; REL-18; WID: [RP-230754](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_99/Docs/RP-230754.zip))

[R2-2407476](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407476.zip) Correction on UE determining the clock quality information update Huawei, HiSilicon CR Rel-18 38.300 18.2.0 0895 - F TRS\_URLLC-NR-Core

- Nokia think there is no issue as this figure is from a single gNB perspective.

- Vivo thinks it makes the procedure more clear.

- Samsung doesn’t think this is needed as text in bullet 4 is describing same thing

- Ericsson also doesn’t think it is needed

=> the CR is not pursued

#### 7.0.2.8 Others

**Rapporteur corrections**

[R2-2407031](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407031.zip) Miscellaneous corrections Samsung (Rapporteur), Ericsson CR Rel-17 38.321 17.9.0 1897 - F NR\_pos\_enh-Core  
=> The Category is update to D and CR is agreed in R2-247577

[R2-2407032](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407032.zip) Miscellaneous corrections Samsung (Rapporteur), Ericsson CR Rel-18 38.321 18.2.0 1898 - F NR\_pos\_enh-Core, NR\_MIMO\_evo\_DL\_UL-Core

=> The Category is update to D and CR is agreed in R2-247578

**RAN1 parameter list**

[R2-2407569](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407569.zip) Reply LS on Rel-18 higher-layers parameter list RAN2 LS out Rel-18 NR\_MC\_enh-Core, NR\_MIMO\_evo\_DL\_UL-Core, NR\_pos\_enh2-Core, Netw\_Energy\_NR, NR\_cov\_enh2, NR\_XR\_enh-Core, NR\_Mob\_enh2, NR\_BWP\_wor-Core, NR\_NTN\_enh, IoT\_NTN\_enh-Core, NR\_SL\_enh2-Core, NR\_netcon\_repeater-Core, NR\_DSS\_enh, NR\_redcap\_enh-Core, TEI18 To:RAN1 Cc:RAN3, RAN4

[R2-2407570](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407570.zip) ASN.1 names in RAN1 parameter list Rev 1 Ericsson discussion NR\_newRAT-Core

=> RRC/(S)LPP editors should check the email discussion and parameter lists

* [AT127][002][RAN1 Parameters] Updated parameter lists (Ericsson)

Intended outcome: Agree to LS by email

Deadline: 08-23-24

*ToAddModList extention*

[R2-2407494](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407494.zip) Discussion on extensions of ToAddModList Samsung discussion Rel-18 TEI18, NR\_DualTxRx\_MUSIM-Core, NR\_SL\_enh2

=> Update CG-SDT-ConfigLCH-Restriction-v1800 to CG-SDT-ConfigLCH-RestrictionExt-v1800.

*Proposal 2. Discuss on whether to update gapPriority-r18 in MUSIM-GapExt-v1820 which is mandatory field, to optional field with Need R, which is NBC.*

- Huawei is not sure that we should have NBC and there are other places where it is worst than here. Lenovo thinks that Samsung is technically correct but we can do BC changes by dummifying and introducing them correctly.

- Vivo thinks that we don’t have this case occurring and it is not critical.

=> we will not pursue the proposal 2

Proposal 3. Discuss on whether to update Need code (from Need M to Need R) the fields in SL-FreqConfigExt-v1800.

- Oppo thinks that we can keep the current spec. Mediatek thinks that there are a couple of fields that don’t allow the need code to be set to False. Ericsson thinks that this is not an ANS.1 change it is a behaviour change.

=> Agree to make the change for all these impacted fields

* [AT127][003][RRC CR] ToAddModList CR (Samsung)

Intended outcome: agree to CR

Deadline: 08-23-24

R2-2407788 Correction on extension of ToAddModList Samsung CR Rel-18 38.331 18.2.0 4967 - F TEI18, NR\_SL\_enh2

=> The CR is agreed

*SI request*

[R2-2406814](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406814.zip) Corrections on SI request with Msg1 repetition Lenovo CR Rel-18 38.331 18.2.0 4889 - F NR\_cov\_enh2-Core, NR\_pos\_enh2, TEI17 (moved from 7.0.2)

=> Philips indicates that these changes overlap with 7278

=> Check offline on whether to merge them or not

=> Revised in R2-2407774

* [AT127][025][SI request] 331 CR (Lenovo)

Intended outcome: agree to CR by email

Deadline: 08-23-24

R2-2407774 Corrections on SI request with Msg1 repetition Lenovo CR Rel-18 38.331 18.2.0 4889 1 F NR\_cov\_enh2-Core, NR\_pos\_enh2, TEI17

**Other corrections to be treated after we breakout in parallel session on Monday**

*RACH resource selection*

[R2-2406412](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406412.zip) Restructure of RACH resource set selection procedure in MAC ZTE Corporation discussion Rel-18

Proposal 1: RAN2 to discuss the updated TP structure (Option 1 and Option 2) and select one TP from [1] and [2].

- LG and Vivo is positive to re-structure and slight preference to option 1 but some procedures related to LTM are not accurate

- Huawei and Vivo think that we need to discuss some cases related to LTM and 2TA.

- Ericsson is open to simplify the text but we should have a consensus on what to resolve and what are the issues.

- CATT also prefers option

=> Noted

* [AT127][005][RACH resources] Restructuring of selection procedure (ZTE)

Intended outcome: Discuss the technical issues and all the cases. Start with option 1

Deadline: 08-23-24

[R2-2406413](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406413.zip) Correction on RACH resource set selection--Option 1 ZTE Corporation CR Rel-18 38.321 18.2.0 1884 - F NR\_cov\_enh2, NR\_MIMO\_evo\_DL\_UL-Core, NR\_Mob\_enh2-Core, NR\_redcap\_enh-Core Revised

[R2-2406414](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406414.zip) Correction on RACH resource set selection--Option 2 ZTE Corporation CR Rel-18 38.321 18.2.0 1885 - F NR\_cov\_enh2, NR\_MIMO\_evo\_DL\_UL-Core, NR\_Mob\_enh2-Core, NR\_redcap\_enh-Core Revised

[R2-2407522](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407522.zip) Correction on RACH resource set selection---Option 1 ZTE Corporation CR Rel-18 38.321 18.2.0 1884 1 F NR\_cov\_enh2, NR\_MIMO\_evo\_DL\_UL-Core, NR\_Mob\_enh2-Core, NR\_redcap\_enh-Core [R2-2406413](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406413.zip)

=> Revised in R2-2407813

R2-2407813 Correction on RACH resource set selection---Option 1 ZTE Corporation CR Rel-18 38.321 18.2.0 1884 2 F NR\_cov\_enh2, NR\_MIMO\_evo\_DL\_UL-Core, NR\_Mob\_enh2-Core, NR\_redcap\_enh-Core

[R2-2407523](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407523.zip) Correction on RACH resource set selection--Option 2 ZTE Corporation CR Rel-18 38.321 18.2.0 1885 1 F NR\_cov\_enh2, NR\_MIMO\_evo\_DL\_UL-Core, NR\_Mob\_enh2-Core, NR\_redcap\_enh-Core [R2-2406414](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406414.zip)

*absoluteFrequencySSB field description*

[R2-2407169](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407169.zip) Correction on absoluteFrequencySSB corresponding to CD-SSB for PCell vivo, ZTE CR Rel-18 38.331 18.2.0 4928 - F NR\_BWP\_wor-Core, Netw\_Energy\_NR-Core, NR\_redcap\_enh-Core, NR\_redcap-Core

=> The CR is revised with “no interoperability issue” and agreed in [R2-2407828](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407828.zip)

***R18 MBS support in NTN to be treated in NTN breakout session***

[R2-2406338](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406338.zip) Discussion on supporting eMBS in NTN Huawei, HiSilicon discussion Rel-18 NR\_NTN\_enh-Core, NR\_MBS\_enh-Core

Proposal 1: R18 eMBS (i.e., multicast reception in RRC\_INACTIVE) is supported in NTN.

- LG is ok but don’t think that new capability is needed

[R2-2407266](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407266.zip) Discussion on multicast DRX to support NTN in INACTIVE LG Electronics Inc. discussion NR\_MBS\_enh-Core

Proposal 1. The UE in INACTIVE should extend the drx-HARQ-RTT-Timer-PTM by considering the UE-gNB RTT if the MBS downlink assignments are received from the NTN.

Proposal 2. For extension of the drx-HARQ-RTT-Timer-PTM, the new capability for the UE in INACTIVE should not be introduced.

[R2-2406823](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406823.zip) Correction on multicast DRX to support NTN in RRC\_INACTIVE [MBSoverNTN\_RRCINACTIVE] Nokia, Qualcomm CR Rel-18 38.321 18.2.0 1890 - B NR\_MBS\_enh-Core, NR\_NTN\_enh-Core

Discussion

- ZTE is concerned that this is a whole new use case and we don’t see any requirements from operators and there may be quite a bit of impacts that are considered in Rel-19.

- Qualcomm points out that there are a lot of supporting companies and we introduced this in terrestrial.

- Samsung would also like to understand the use cases. CMCC asks if this is for transparent or regenerative. For some scenarios like moving there may be some unidentified impacts. Qualcomm qualifies that the complicated case is being discussed in R19. ZTE thinks that it is questionable whether it can be supported.

- Huawei thinks it should be simple.

**Agreements**

=> The UE in INACTIVE should extend the drx-HARQ-RTT-Timer-PTM by considering the UE-gNB RTT if the MBS downlink assignments are received from the NTN

=> We will not further optimize MBS and NTN support in Inactive

=> No new capability is introduced

R2-2407778 Correction on DRX to support eMBS in NTN Huawei, HiSilicon, Qualcomm, LG Electronics Inc, vivo, Ericsson, Nokia CR Rel-18 38.321 18.2.0 1924 - F NR\_MBS\_enh-Core, NR\_NTN\_enh-Core

=> The CR is agreed

R2-2407779 Correction to support eMBS in NTN Huawei, HiSilicon, Qualcomm, LG Electronics Inc, vivo, Ericsson, Nokia CR Rel-18 38.306 18.2.0 1152 - F NR\_MBS\_enh-Core, NR\_NTN\_enh-Core

=> The CR is endorsed and will be merged in mega CR

## 7.1 Void

## 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: 2 tdocs

### 7.2.1 Organizational

Including incoming LSs and rapporteur inputs.

[R2-2406207](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406207.zip) LS on the UE role list in RSPP-Metadata (C1-243690; contact: ZTE) CT1 LS in Rel-18 Ranging\_SL To:RAN2 Cc:SA2

[R2-2406208](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406208.zip) Reply LS on SL positioning measurement (R1-2405511; contact: Huawei) RAN1 LS in Rel-18 NR\_pos\_enh2-Core To:RAN4, RAN2

[R2-2406213](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406213.zip) Reply LS on DL-AoD measurements in NR-PRU-DL-Info forwarded to target UE (R1-2405586; contact: Nokia) RAN1 LS in Rel-18 NR\_pos\_enh2-Core To:RAN2

[R2-2406228](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406228.zip) LS on synchronization source change at the transmitting anchor UE in SL positioning (R4-2410352; contact: Ericsson) RAN4 LS in Rel-18 NR\_pos\_enh2-Core To:RAN1, RAN2

[R2-2406238](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406238.zip) Reply LS on application layer ID (S2-2407318; contact: Xiaomi) SA2 LS in Rel-18 Ranging\_SL To:RAN2, CT1, CT4

[R2-2406292](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406292.zip) Rapporteur MAC CR for R18 positioning Huawei, HiSilicon CR Rel-18 38.331 18.2.0 4868 - F NR\_pos\_enh2 Revised

[R2-2406315](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406315.zip) Rapporteur MAC CR for R18 positioning Huawei, HiSIlicon CR Rel-18 38.321 18.2.0 1883 - F NR\_pos\_enh2 [R2-2406292](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406292.zip)

[R2-2406791](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406791.zip) Draft reply LS on the UE role list in RSPP-Metadata ZTE Corporation LS out Rel-18 NR\_pos\_enh2 To:CT1 Cc:SA2

[R2-2406950](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406950.zip) Miscellaneous corrections to LPP specification CATT CR Rel-18 37.355 18.2.0 0512 - F NR\_pos\_enh2-Core

[R2-2407228](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407228.zip) draft LS reply on synchronization source change at the transmitting anchor UE in SL positioning Ericsson discussion Rel-18 38.355 NR\_pos\_enh2-Core

### 7.2.2 Stage 2

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

This agenda item may be handled at lower priority.

[R2-2406508](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406508.zip) Corrections on TS 38.305 for time windows configuration CATT, Nokia, NSB, Ericsson, Qualcomm Incorporated CR Rel-18 38.305 18.2.0 0165 1 F NR\_pos\_enh2-Core [R2-2404435](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2404435.zip)

[R2-2407227](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407227.zip) DRX and PRS alignment for positioning Ericsson, Intel Corporation CR Rel-18 38.305 18.2.0 0166 1 F NR\_pos\_enh2-Core [R2-2405259](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2405259.zip)

[R2-2407234](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407234.zip) Correction of Notes for Assistance Data Transfer procedures Philips International B.V. discussion Rel-18 NR\_pos\_enh2

### 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.

[R2-2406294](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406294.zip) Discussion on the remaining issues for SLPP for R18 POS Huawei, HiSilicon discussion Rel-18 NR\_pos\_enh2

[R2-2406374](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406374.zip) [Post126][410] 38.355 update Open Issue list Intel Corporation discussion Rel-18 NR\_pos\_enh2-Core

[R2-2406375](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406375.zip) Miscellaneous corrections to SLPP specification Intel Corporation CR Rel-18 38.355 18.2.0 0005 - F NR\_pos\_enh2-Core

[R2-2406509](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406509.zip) Correction on SL-RTT-provideLocationInformation field description in TS 38.355 CATT,CICTCI CR Rel-18 38.355 18.2.0 0006 - F NR\_pos\_enh2-Core Withdrawn

[R2-2406516](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406516.zip) Clarification on RSPP metadata for direct communication request message ASUSTeK CR Rel-18 38.355 18.2.0 0007 - F NR\_pos\_enh2

[R2-2406809](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406809.zip) Miscellaneous corrections on SLPP Lenovo draftCR Rel-18 38.355 18.2.0 NR\_pos\_enh2

[R2-2407146](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407146.zip) Correction to SLPP PDU Common Contents Qualcomm Incorporated draftCR Rel-18 38.355 18.2.0 F NR\_pos\_enh2-Core

[R2-2407369](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407369.zip) Correction on SL-RTT-provideLocationInformation field description in TS 38.355 CATT, CICTCI draftCR Rel-18 38.355 18.2.0 F NR\_pos\_enh2-Core

### 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.

[R2-2407149](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2407149.zip) Editorial clean up of NR-UL-SRS-Capability Qualcomm Incorporated draftCR Rel-18 37.355 18.2.0 F NR\_pos\_enh2-Core

[R2-2407230](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407230.zip) Corrections related to carrier phase measurements Ericsson draftCR Rel-18 37.355 18.2.0 F NR\_pos\_enh2-Core

[R2-2407253](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407253.zip) On-demand DL-PRS bandwidth aggregation corrections Nokia CR Rel-18 37.355 18.2.0 0515 - F NR\_pos\_enh2-Core

### 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.

[R2-2406405](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406405.zip) Miscellaneous Corrections for sidelink positioning vivo draftCR Rel-18 38.331 18.2.0 F FS\_NR\_pos\_enh2

[R2-2406510](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406510.zip) Corrections on SL positioning in TS 38.331 CATT CR Rel-18 38.331 18.2.0 4879 - F NR\_pos\_enh2-Core

[R2-2406793](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406793.zip) Correction on SRS transmission in RRC\_INACTIVE ZTE Corporation draftCR Rel-18 38.331 18.2.0 F NR\_pos\_enh2

[R2-2407221](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407221.zip) Miscellaneous Positioning Corrections Ericsson CR Rel-18 38.331 18.2.0 4934 - F NR\_pos\_enh2-Core

[R2-2407273](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407273.zip) RRC correction on NR sidelink positioning Philips International B.V. CR Rel-18 38.331 18.2.0 4940 - F NR\_pos\_enh2-Core

[R2-2407559](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407559.zip) Corrections for the extension of these IEs which do not support the maximum number of CBR ranges and levels for sidelink positioning in TS 38.331 CATT, Ericsson draftCR Rel-18 38.331 18.2.0 F NR\_pos\_enh2-Core

### 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.

[R2-2406293](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406293.zip) Discussion on the remaining issues for MAC for R18 POS Huawei, HiSilicon discussion Rel-18 NR\_pos\_enh2

[R2-2406376](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406376.zip) eLCID for SL-PRS Resource Request MAC CE Intel Corporation draftCR Rel-18 38.321 18.2.0 NR\_pos\_enh2-Core

[R2-2406404](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406404.zip) Correction on UE behavior of SL-PRS transmission vivo draftCR Rel-18 38.321 18.2.0 F FS\_NR\_pos\_enh2

[R2-2406792](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406792.zip) Correction on SL pos in dedicated pool and SRS aggregation MAC CE in MAC spec ZTE Corporation draftCR Rel-18 38.321 18.2.0 F NR\_pos\_enh2

[R2-2406855](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406855.zip) SL-PRS Resource Request MAC CE in the logical channel prioritization list Samsung CR Rel-18 38.321 18.2.0 1891 - F NR\_pos\_enh2

[R2-2407232](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407232.zip) Aggregated Resource Definition and corrections Ericsson discussion Rel-18 38.321 NR\_pos\_enh2-Core

[R2-2407296](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407296.zip) Corrections on SL-PRS ASUSTeK discussion NR\_pos\_enh2

### 7.2.7 UE capabilities

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

[R2-2406810](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406810.zip) Addition of capability sl-PathlossBasedOLPC-SL-RSRP-Report-r18 (FG R1 41-1-17) in UECapabilityInformation message Lenovo draftCR Rel-18 38.331 18.2.0 NR\_pos\_enh2

### 7.2.8 Corrections to other specifications

Impact to any specifications not identified above.

[R2-2407560](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407560.zip) Corrections on the UE capability of indication on supporting the extension for sidelink positioning in TS 38.306 CATT, Ericsson draftCR Rel-18 38.331 18.2.0 F NR\_pos\_enh2-Core

## 7.3 Network energy savings for NR

(Netw\_Energy\_NR -Core; leading WG: RAN1; REL-18; WID: [RP-223540](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_98e/Docs/RP-223540.zip))

Time budget: 0 TU

Tdoc Limitation: 1 tdocs

### 7.3.1 Organizational

LS, workplan, email discussion etc

Spec rapporteurs are expected to submit additional contribution on open issues to conclude WI by December

[R2-2406603](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406603.zip) Network energy savings for NR miscellaneous RRC CR Huawei, HiSilicon CR Rel-18 38.331 18.2.0 4881 - F Netw\_Energy\_NR-Core

=> the CR is agreed

### 7.3.2 Other

**SFN timing of Cell DTX/DRX**

[R2-2406999](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406999.zip) Discussion on the clarification of the SFN on Cell DTXDRX CATT discussion Rel-18 Netw\_Energy\_NR-Core

Proposal 2: RAN2 discuss which of the following cases can be used for Cell DTX/DRX:

- Case1: using the SFN of SpCell for Cell DTX/DRX

- Case2: using the SFN of each serving cell for Cell DTX/DRX

Discussion

- CATT, Qualcomm, Apple, Interdigital, Oppo, and Huawei think case 1 is preferable.

- LG and ZTE think that case 2 is better as this is a serving cell feature.

- Interdigital thinks both cases work as long as network has same understanding, but case 1 is simpler.

- Apple thinks that case 2 would result in new UE behavior.

Agreements

=> for cell DTX/DRX will use the SFN of SpCell for Cell DTX/DRX. Will add a note to specify.

[R2-2406668](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406668.zip) Remaining issue on SFN timing of Cell DTX/DRX Apple discussion Rel-18 Netw\_Energy\_NR-Core

Proposal 1: RAN2 down-select between two alternative way-forward on SFN timing issue of Cell DTX/DRX:

Alt-1: RAN2 confirm asynchronized CA is not in Rel-18 scope, and thereby Cell DTX/DRX is not configured together with asynchronized CA in Rel-18.

Alt-2: Cell DTX/DRX uses the SFN of primary cell (i.e., same as UE CDRX), and NW takes the timing difference into consideration when configuring SPS/CG whose SFN is from the concerned serving cell.

[R2-2406602](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406602.zip) Discussion on the SFN issues of Cell DTX/DRX Huawei, HiSilicon discussion Rel-18 Netw\_Energy\_NR-Core

Proposal 1: In case the SFN is unaligned across carriers, the UE uses the same principle as in C-DRX for on-duration calculations.

**Other Issues**

[R2-2406917](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406917.zip) Clarification for SP CSI reporting on PUCCH Samsung discussion Rel-18

*Proposal 1: All the sub-configurations, if any, of a configured Semi-presistent CSI reporting on PUCCH are initially deactivated upon (re-)configuration by upper layers and after reconfiguration with sync. Adopt text proposal 1 as provided.*

-` LG, InterDigital and Vivo doesn’t think this is needed as the configuration contains the sub-configuration so it is implied.

=> no need to clarify

=> Noted

[R2-2407060](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407060.zip) NW identifying RACH for emergency call Nokia, Nokia Shanghai Bell discussion Rel-18 Netw\_Energy\_NR-Core

*Proposal 1: RAN2 to confirm that at least for the case when there is dedicated SR configuration, the NW can identify RACH triggered during Cell DTX non-active period is for emergency call if there is NAS request.*

- Interdigital explains that this is already specified

*Proposal 2: RAN2 to confirm if RA-SR is also prevented during Cell DTX non-active period so that the NW can identify RACH triggered during Cell DTX non-active period is only for emergency call.*

- Interdigital, Oppo, Apple doesn’t think we need to specify anything as the network has the tools to identify if there is an emergency call. Nokia explains that the network may not know that it is for emergency call as other data arrival can trigger RACH. Apple thinks that in message 5 the NAS container will indicate that there is an emergency call. The spec is not broken.

- LG supports this proposal.

=> Noted

Agreements

*-* RAN2 confirms the understanding that at least for the case when there is a SR configuration, the NW can identify RACH triggered during Cell DTX non-active period is for emergency call if there is NAS request.

[R2-2407070](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407070.zip) Handling of inter-band SSB-less configuration Ericsson discussion

[Proposal 1 Clarify in 38.331 that the “default cell” behaviour applied upon absence of the referenceCell field is only applicable if both referenceCell and absoluteFrequencySSB are absent for an inter-band SSB-less SCell.](#_Toc171587309)

=> Not treated

[R2-2407128](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407128.zip) Coexistence of Cell DTXDRX and RACH-less LTM Rakuten Mobile, Inc discussion Rel-18

*Proposal 1 When a serving gNB-DU expects a UE to undergo LTM cell switch, the UE is configured with an extended active duration or permitted to monitor PDCCH even during Cell DTX.*

- Huawei and Interdigital think this is a new functionality and it is late in the release. Qualcomm thinks this is an optimization and not feasible at the moment.

- LG thinks that this is not needed as the source cell can do different things to improve the LTM performance.

*Proposal 2 RAN2 agrees that a serving gNB-DU can perform LTM cell switch even during CEL*

=> Noted

* [AT127][014][NES] MAC CR (InterDigital)

Intended outcome: Agree by email to CR capturing agreements from this meed

Deadline: 08-23-24

R2-2407766 Miscellaneous MAC corrections for network energy savings InterDigital CR Rel-18 38.321 18.2.0 1921 - F Netw\_Energy\_NR-Core

- need to use the correct template next time

=> The CR is revised and agreed in R2-2407801

R2-2407801 Miscellaneous MAC corrections for network energy savings InterDigital CR Rel-18 38.321 18.2.0 1921 1 F Netw\_Energy\_NR-Core

## => Agreed7.4 Further NR mobility enhancements

(NR\_Mob\_enh2-Core; leading WG: RAN2; REL-18; WID:RP-233970)

Time budget: 0 TU)

Tdoc Limitation: 2 tdocs.

### 7.4.1 Organizational

Including incoming LSs and rapporteur inputs.

[R2-2406217](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406217.zip) Reply LS on intra-SN SCPAC in MN format (R3-243775; contact: ZTE) RAN3 LS in Rel-18 NR\_Mob\_enh2-Core To:RAN2

[R2-2406227](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406227.zip) Reply LS on LTM L1 intra and inter-frequency measurements (R4-2410303; contact: Ericsson) RAN4 LS in Rel-18 NR\_Mob\_enh2-Core To:RAN2 Cc:RAN1

[R2-2406417](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406417.zip) Miscellaneous corrections for mobility enhancements ZTE Corporation CR Rel-18 37.340 18.2.0 0399 - F NR\_Mob\_enh2-Core

[R2-2407562](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407562.zip) Discussion on RAN3 LS on intra-SN SCPAC in MN format ZTE Corporation discussion Rel-18 NR\_Mob\_enh2-Core

### 7.4.2 Control plane corrections

Including stage 2 and control plane (e.g. RRC) corrections (including [Post126][514][R18MobE]). A single CR with miscellaneous corrections is requested; minor and editorial issues should be coordinated with the CR rapporteur and merged into the miscellaneous CR. A contribution can include multiple TPs. Note RRC CR rapporteur’s summary and suggestion (based on the submitted contributions) may be provided.

[R2-2406332](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406332.zip) Miscellaneous Corrections for SCPAC CATT discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2406337](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406337.zip) Rel-18 LTM CP remaining issues MediaTek Inc. discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2406355](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406355.zip) Leftover LTM UE capability issues MediaTek Inc. discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2406418](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406418.zip) Inter-node coordination on L1 measurement for LTM ZTE Corporation discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2406438](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406438.zip) Discussion on the impact of s-Measure on L1 measurement vivo discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2406476](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406476.zip) Report of [Post126][514][R18MobE] UE capabilities Open Issues (Intel) Intel Corporation report Rel-18 NR\_Mob\_enh2-Core

[R2-2406477](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406477.zip) Draft 331 CR on updates to UE FeMob LTM capabilities Intel Corporation draftCR Rel-18 38.331 18.2.0 NR\_Mob\_enh2-Core

[R2-2406478](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406478.zip) Draft 306 CR on updates to UE FeMob LTM capabilities Intel Corporation draftCR Rel-18 38.306 18.2.0 NR\_Mob\_enh2-Core

[R2-2406531](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406531.zip) Discussion on remaining issues for SCPAC OPPO discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2406552](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406552.zip) Triggering LTM Cell Switch without L1 Measurement and Reports Google Ireland Limited discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2406726](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406726.zip) Clarification on LTM configuration Apple discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2406847](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406847.zip) Miscellaneous Rel-18 LTM Corrections (Early decoding, TA acquisition and estimation) Nokia discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2406852](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406852.zip) Discussion on LTM fast processing capabilities Google Ireland Limited discussion Rel-18 38.306

[R2-2407050](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407050.zip) RRC corrections for Mobility Enhancements Samsung discussion

[R2-2407072](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407072.zip) correction related to security configuration for SCPAC and corrections on EMR reselection measurement reporting Nokia discussion

[R2-2407091](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407091.zip) Draft CR for subsequent CPAC corrections Ericsson draftCR Rel-18 37.340 18.2.0 F NR\_Mob\_enh2-Core

[R2-2407175](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407175.zip) Misc RRC corrections for feMob Ericsson (Rapportuer) CR Rel-18 38.331 18.2.0 4930 - F NR\_Mob\_enh2-Core

[R2-2407176](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407176.zip) Remaining issues related to LTM Ericsson discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2407177](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407177.zip) Summary of RRC proposals for feMob Ericsson discussion Rel-18 NR\_Mob\_enh2-Core Late

[R2-2407200](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407200.zip) RRC issues for LTM Huawei, HiSilicon discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2407370](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407370.zip) Discussion on PRACH occasion validation for LTM Qualcomm Incorporated discussion

[R2-2407410](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407410.zip) Correction on LTM related procedure for UE-based TA measurement Sharp CR Rel-18 38.331 18.2.0 4950 - F NR\_Mob\_enh2-Core

[R2-2407449](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407449.zip) TP for Stage 2 in coexistence case Lenovo discussion Rel-18 NR\_Mob\_enh2-Core

### 7.4.3 User plane corrections

Including user plane (e.g. MAC) corrections. A single CR with miscellaneous corrections is requested; minor and editorial issues should be coordinated with the CR rapporteur and merged into the miscellaneous CR. A contribution can include multiple TPs. Note MAC CR rapporteur’s summary and suggestion (based on the submitted contributions) may be provided.

[R2-2406331](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406331.zip) Corrections to TS 38.321 for LTM CATT discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2406349](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406349.zip) MAC corrections for LTM Samsung Electronics Co., Ltd discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2406439](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406439.zip) Discussion on MAC open issue for LTM vivo discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2406517](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406517.zip) Discussion on fallback RACH for LTM ASUSTeK discussion Rel-18 38.321 NR\_Mob\_enh2-Core

[R2-2406530](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406530.zip) Discussion on carrier selection for RACH-LESS LTM OPPO discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2406853](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406853.zip) Corrections of MAC issues for RACH-less LTM NEC discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2407197](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407197.zip) User plane corrections for LTM Huawei, HiSilicon CR Rel-18 38.321 18.2.0 1904 - F NR\_Mob\_enh2-Core

=> Revised in [R2-2407563](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407563.zip)

[R2-2407563](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407563.zip) User plane corrections for LTM Huawei, HiSilicon CR Rel-18 38.321 18.2.0 1904 1 F NR\_Mob\_enh2-Core

[R2-2407198](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407198.zip) MAC CR rapporteur summary Huawei, HiSilicon discussion Rel-18 NR\_Mob\_enh2-Core Late

[R2-2407199](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407199.zip) Issues for RACH-less LTM cell switch Huawei, HiSilicon discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2407433](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407433.zip) Consideration on Remaining Issues on LTM UP Aspect ZTE Corporation discussion Rel-18 NR\_Mob\_enh2-Core

## 7.5 XR Enhancements for NR

(NR\_XR\_enh-Core; leading WG: RAN2; REL-18; WID: [RP-230786](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_99/Docs/RP-230786.zip))

Time budget: 0 TU

Tdoc Limitation: 2 Tdocs

### 7.5.1 Organizational

Including LSs, any rapporteur inputs

**Editorial**

[R2-2406925](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406925.zip) Parameter names corrections for XR Huawei, HiSilicon CR Rel-18 38.331 18.2.0 4898 - D NR\_XR\_enh-Core

Editorial change in parameter names to align with naming conventions from official guidelines.

=> The CR is agreed

R2-2407789 Corrections for XR Qualcomm CR Rel-18 38.321 18.2.0 1926 - F NR\_XR\_enh-Core

=> Interoperability analysis will be included and add Ericsson to co-sourcing companies

=> The CR is agreed in R2-2407811 with changes above

R2-2407811 Corrections for XR Qualcomm, Ericsson CR Rel-18 38.321 18.2.0 1926 1 F NR\_XR\_enh-Core

=> Agreed

### 7.5.2 Control plane corrections

Including RRC and UE capabilties

**Handling non-integer DRX during RRC INACTIVE state**

[R2-2407375](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2407375.zip) Non-integer DRX Configuration when UE enters RRC\_INACTIVE CATT discussion Rel-18 NR\_XR\_enh-Core

Proposal 1: The non-integer DRX configuration is released when the UE enters RRC\_INACTIVE state.

- Huawei thinks that we can clarify in MAC that when the UE resumes it should reset.

- Qualcomm thinks that this is similar to the HO case and we should to aim to have a similar behaviour.

- Nokia doesn’t think we need to do anything. LG agrees.

=> Noted

### 7.5.3 User plane corrections

Including MAC, RLC and PDCP

**DRX\_SFN\_COUNTER**

*Rely on NW implementation – no enhancements*

[R2-2406301](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406301.zip) Remaining issues for DRX operation for XR Huawei, HiSilicon discussion Rel-18 NR\_XR\_enh-Core

Proposal 1: The issue of DRX initialization in case of handover can be resolved by NW implementation. There is no need for enhancement.

[R2-2406555](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406555.zip) Further Consideration on DRX SFN Counter Initialization CATT discussion Rel-18 NR\_XR\_enh-Core

Proposal 1: Non-integer DRX configuration is not configured during HO, and PSCell Addition/PSCell change cases with reconfiguration with sync.

Proposal 2: Non-integer DRX configuration is not configured for CHO, CPAC and LTM cases.

[R2-2406779](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406779.zip) Further discussion on the DRX\_SFN\_COUNTER initialization OPPO discussion Rel-18 NR\_XR\_enh-Core

Proposal 1 No spec change on the DRX\_SFN\_COUNTER initialization for handover.

*Initialized upon HO complete*

[R2-2407061](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407061.zip) Remaining issues for on setting DRX SFN counter during handover Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_XR\_enh-Core

Proposal: For CHO/LTM, DRX\_SFN\_COUNTER is initiated to 0 upon HO complete regardless of the drx-TimeReferenceSFN.

[R2-2406607](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406607.zip) MAC Corrections for Rel-18 XR Samsung discussion Rel-18 NR\_XR\_enh-Core

Proposal 1: RAN2 is kindly asked to agree that the initialization of DRX\_SFN\_COUNTER occurs when RRCReconfigurationComplete message is sent for HO case.

Proposal 2: RAN2 is kindly asked to agree that the initialization of DRX\_SFN\_COUNTER occurs when RRC response message is sent by the UE for all cases.

[R2-2406440](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406440.zip) Discussion on DRX\_SFN\_COUNTER initialization for handover case vivo discussion Rel-18 38.321 NR\_XR\_enh-Core

Proposal 1: For handover case, the DRX\_SFN\_COUNTER should be initialized only after acquiring the SFN of the target SpCell .

Proposal 3: The network implementation should ensure that the non-integer DRX configuration is not provided in the CHO/CPAC/LTM candidate cell configuraitons.

[R2-2406909](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406909.zip) Initialization of DRX\_SFN\_COUNTER at handover ZTE Corporation, Sanechips discussion Rel-18

Proposal: In case of handover, the UE uses the target cell SFN as reference for initializing the DRX\_SFN\_COUNTER.

[R2-2406918](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406918.zip) Correction to DRX\_SFN\_COUNTER for handover case ZTE Corporation, Sanechips CR Rel-18 38.321 18.2.0 1894 - F NR\_XR\_enh-Core

Discussion

- Qualcomm and Lenovo thinks it can be left to network but we should capture in the field description what to expect. ZTE doesn’t want to leave it to network implementation and we should fix it.

- Vivo also thinks that we should capture it in the spec.

- LG agrees with Huawei’s proposal.

- ZTE would like to avoid the problem all together.

- Qualcomm suggest to capture in field description - Network ensures that it provides reference SFN within one hyper frame before the UE initialize the DRX SFN context. Vivo thinks that this is still not clear behaviour in the UE. Nokia thinks that for CHO And LTm you may not complete the procedure within 10s.

- Lenovo thinks that ZTE proposal is simple. Nokia thinks that the issue is the timepoint. Samsung agrees.

- Huawei thinks that maybe if we change the one word in MAC to say when the configuration is applied rather than when it is received.

- Ericsson explains that for LTM the MAC is reset already and we may end up resetting twice.

**Agreements**

- We leave this up to network implementation, unless a solution that works in all scenarios (CHO/LTM/Normal HO/Reconfiguration etc) and does not require network to send an extra RRC reconfiguration message can be agreed at next meeting.

After CB

We leave this up to network implementation, unless a solution that works in all scenarios (CHO/LTM/Normal HO/Reconfiguration etc) and does not require network to send an extra RRC reconfiguration message can be agreed at next meeting.

**RX\_NEXT handling based on PDCP SN gap report**

[Change to RX\_NEXT update operation]

[R2-2406891](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406891.zip) Update RX\_NEXT based on PDCP SN gap report Lenovo, CMCC discussion Rel-18

Proposal 1: PDCP entity updates RX\_NEXT to the COUNT value of the first PDCP SDU which is not considered as discarded and expected to be received, with COUNT value > RX\_NEXT if RX\_NEXT is equal to any COUNT value associated with the discarded PDCP SDUs.

[R2-2406394](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406394.zip) PDCP SN gap report and updating RX\_NEXT Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_XR\_enh-Core

Proposal 1: SDUs considered as discarded (i.e. indicated as discarded in some received SN gap report) lead to incrementing RX\_NEXT (upon reception of a SN gap report and upon being updated by a received SDU) only if, without the incrementing, the SDU with associated COUNT equal to RX\_NEXT would be considered as discarded.

Proposal 2: RAN2 agree the text proposal in Annex for Proposal 1.

*[Add a note to disallow combining of PDCP gap reports for non-contiguously discarded PDCP SDUs, leaving details to UE implementation]*

[R2-2406598](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406598.zip) Remaining Open Issues for PDCP SN Gap Reporting Ericsson discussion Rel-18

Proposal 2 Update the NOTE about limiting the frequency of reporting to include “for e.g., combining of the PDCP SN gap report(s) for contiguous PDCP SDU(s) discarded”. Adopt the TP as shown in the Annex.

Proposal 3 Capture a NOTE to prevent the RX\_DELIV to be updated beyond the PDCP SDU(s) yet to be received when t-Reordering expires for e.g., by not combining the PDCP SN Gap reports for non-contiguous PDCP SDU(s) discarded. Adopt the TP as in the Annex.

- LG thinks that there is a wrong assumption that status report is transmitted earlier than the stored PDU. Huawei agrees in general with LG. The simplest solution for the network to just not do it. LG thinks that you can anyways re-associated SN. Nokia doesn’t think you can if they are ciphered. Ericsson also thinks we can’t also reassign as we can do pre-processing.

- Ericsson thinks that we should be cautious and solution is simple to not combine. Nokia doesn’t think that this can help.

- Nokia would like to capture that we can’t always re-assign SN when this case happens.

=> We will leave this as it is

*[No change to PDCP window update operation]*

[R2-2406777](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406777.zip) Discussion on PDCP window update based on the SN gap report vivo discussion Rel-18 NR\_XR\_enh-Core

Proposal: No further modification on the PDCP window update based on the SN gap report is needed and no spec impact.

**Editorial stage 2 change**

[R2-2406926](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406926.zip) Correction for discarding operation for XR Huawei, HiSilicon, Nokia (Rapporteur) draftCR Rel-18 38.300 18.2.0 F NR\_XR\_enh-Core

The CR is to clarify that the shorter discard timer is applied per PDCP SDU. Without this clarification, the text suggests that the discard timer is applied per PDU set which is not the case.

=> Update to a CR

=> The CR is agreed in R2-2407579 in CR 0896

**DSR**

[R2-2406607](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406607.zip) MAC Corrections for Rel-18 XR Samsung discussion Rel-18 NR\_XR\_enh-Core

*Proposal 3: RAN2 is kindly asked to consider clarifying that DSR and the SR for DSR can be triggered after the assembly of a MAC PDU which contains a DSR MAC CE, but before the transmission of this MAC PDU. In addition, DSR and SR for DSR can be triggered during MAC PDU assembly. Adopt TP 1.*

- Qualcomm doesn’t think this is needed as DSR is different from BSR. Samsung thinks that is a chance as assembly is up to UE implementation so there may be a gap. LG thinks it is possible but it clear in current spec so it is not needed.

=> Not supported

Proposal 4: RAN2 is kindly asked to agree that, for cancelling a pending DSR, only the PDCP SDUs associated with the DSR before MAC PDU assembly are reported in the DSR MAC CE or included in the MAC PDU. Adopt TP 2.

- LG doesn’t think there is a problem.

=> Not supported

[R2-2406805](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406805.zip) Corrections on DSR MAC CE Langbo draftCR Rel-18 38.321 18.2.0 F NR\_XR\_enh-Core

The CR is to clarify that if BT field is reserved, Table 6.1.3.1-2 is used to set the value of the Buffer Size field.

- Samsung thinks it is already very clear

- LG thinks it is needed

=> The CR is not pursued

[R2-2407046](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407046.zip) Discussion on user plane corrections Ericsson discussion Rel-18 NR\_XR\_enh-Core

=> Add description of the reserved bit field for the DSR MAC CE in 38.321.

=> Noted

**Handling more than one RLC entity**

[R2-2406598](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406598.zip) Remaining Open Issues for PDCP SN Gap Reporting Ericsson discussion Rel-18

Proposal 1 Update the triggering conditions text to include DC and CA by adding “RLC entities” in the PDCP SN gap reporting procedure. Adopt the TP as shown in the Annex.

- Nokia thinks that we can say “any”. LG and Apple think that RLC is already clear. Ericsson and Intel thinks that it is just making it consistent with other changes.

=> The change can be added when we have a PDCP CR as an editorial

=> Noted

**Setting of FDC (First Discarded Count) field to account for out-of-sequence discard of PDCP SDUs**

[R2-2406504](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406504.zip) Corrections for PDCP SN Gap Reporting Samsung discussion Rel-18

Proposal 1: FDC field is set to the smallest COUNT value among the COUNT values associated with the discarded PDCP SDU(s) since the last transmission of the PDCP SN gap report. Adopt text proposal TP1 provided.

- Ericsson and others haven’t changed their mind since last time.

=> Not supported

*Proposal 2: PDCP SN gap report is submitted to lower layers as the first PDCP PDU for transmission. Adopt text proposal TP2 provided.*

- Ericsson and LG think that this will introduce the problem.

=> Not supported

=> Noted

## 7.6 IoT NTN enhancements

(IoT\_NTN\_enh-Core; leading WG: RAN1; REL-18; WID: [RP-223519](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_98e/Docs/RP-223519.zip))

Time budget: 0 TU

Tdoc Limitation: 1 tdocs

### 7.6.1 Organizational

LSs, rapporteur inputs.

Editorials/clarifications should not be included in any tdoc but sent to the WI spec rapporteurs, who can submit a rapporteur CR as part of this AI.

Rapporteur inputs do not count towards the tdoc limitation.

[R2-2406211](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406211.zip) LS on Rel-18 RAN1 UE features list for LTE after RAN1#117 (R1-2405569; contact: NTT DOCOMO, AT&T) RAN1 LS in Rel-18 IoT\_NTN\_enh To:RAN2 Cc:RAN4

[R2-2406938](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406938.zip) Miscellaneous MAC correction for IoT NTN MediaTek CR Rel-18 36.321 18.2.0 1588 - F IoT\_NTN\_enh-Core

[R2-2407303](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407303.zip) Miscellaneous corrections to TS 36.331 for IoT NTN Huawei, HiSilicon CR Rel-18 36.331 18.2.0 5049 - F IoT\_NTN\_enh-Core

### 7.6.2 Corrections

Corrections for all specifications.

[R2-2406329](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406329.zip) Correction on SIB33 CATT discussion Rel-18 36.331 IoT\_NTN\_enh-Core

[R2-2406450](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406450.zip) Miscellaneous RRC Correction for IoT-NTN vivo draftCR Rel-18 36.331 18.2.0 IoT\_NTN\_enh-Core

[R2-2406642](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406642.zip) Clarification of note on UL and DL parallel scheduling for NB-IoT Qualcomm Incorporated CR Rel-18 36.321 18.2.0 1587 - F IoT\_NTN\_enh-Core

[R2-2406951](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406951.zip) Discussion on RRC Corrections to IoT NTN MediaTek Inc. discussion Rel-18 36.331 IoT\_NTN\_enh-Core

[R2-2407166](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407166.zip) Further discussion on T390 stop and GNSS validity report during C-DRX inactive time Nokia, Nokia Shanghai Bell discussion Rel-18 IoT\_NTN\_enh-Core

[R2-2407254](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407254.zip) Various corrections for IoT NTN Rel-18 Samsung discussion Rel-18 IoT\_NTN\_enh-Core

[R2-2407302](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407302.zip) Clarification on scenario support Huawei, HiSilicon CR Rel-18 36.306 18.2.0 1891 - F IoT\_NTN\_enh-Core

[R2-2407538](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407538.zip) GNSS correction for IoT NTN ZTE Corporation, Sanechips CR Rel-18 36.331 18.2.0 5051 - F IoT\_NTN\_enh-Core

[R2-2407553](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407553.zip) R18 IoT NTN GNSS extension Ericsson discussion Rel-18

## 7.7 NR NTN enhancements

(NR\_NTN\_enh -Core; leading WG: RAN1; REL-18; WID: [RP-232669](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_101/Docs/RP-232669.zip))

Time budget: 0 TU

Tdoc Limitation: 1 tdocs

### 7.7.1 Organizational

LSs, rapporteur inputs.

Editorials/clarifications should not be included in any tdoc but sent to the WI spec rapporteurs, who can submit a rapporteur CR as part of this AI.

Rapporteur inputs do not count towards the tdoc limitation.

[R2-2406215](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406215.zip) Reply LS on Reference Point for SSB-TimeOffset (R1-2405719; contact: Apple) RAN1 LS in Rel-18 NR\_NTN\_enh-Core To:RAN2 Cc:RAN4

[R2-2406229](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406229.zip) Reply LS on reference point for SSB-TimeOffset (R4-2410381; contact: Apple) RAN4 LS in Rel-18 NR\_NTN\_enh-Core To:RAN2 Cc:RAN1

[R2-2407239](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407239.zip) Rapporteur Input to Rel-18 NR NTN Ericsson CR Rel-18 38.331 18.2.0 4935 - D NR\_NTN\_enh-Core

### 7.7.2 Corrections

Corrections for all specifications.

[R2-2406280](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406280.zip) Correction on network verification of UE location Huawei, HiSilicon, CATT CR Rel-18 37.355 18.2.0 0511 - F NR\_NTN\_enh-Core

[R2-2406328](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406328.zip) Discussion on the absence of validity duration in SIB19 broadcast by a TN serving cell CATT discussion NR\_NTN\_enh-Core

[R2-2406451](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406451.zip) Remaining Issues on F[R2-NTN](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-NTN.zip) Support vivo discussion Rel-18 NR\_NTN\_enh-Core

[R2-2406641](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406641.zip) Discussion on soft satellite switch with re-sync Qualcomm Incorporated discussion Rel-18 NR\_NTN\_enh-Core

[R2-2406727](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406727.zip) Clarification on Reference Point for SSB-TimeOffset Apple discussion Rel-18 NR\_NTN\_enh-Core

[R2-2406846](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406846.zip) Addressing Various Release 18 NTN Issues Nokia discussion Rel-18 NR\_NTN\_enh-Core

[R2-2406992](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406992.zip) Miscellaneous corrections to epochTime ZTE Corporation, Sanechips CR Rel-18 38.331 18.2.0 4909 - F NR\_NTN\_enh-Core

[R2-2407238](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407238.zip) Remaining open issues for NR NTN enhancements Ericsson discussion NR\_NTN\_enh-Core

[R2-2407255](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407255.zip) Miscellaneous corrections to NR NTN Rel-18 Samsung discussion Rel-18 NR\_NTN\_enh-Core

[R2-2407482](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407482.zip) Clarification on the ssb-TimeOffset Google draftCR Rel-18 38.331 18.2.0 F NR\_NTN\_enh-Core

## 7.8 Void

## 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: 2 tdocs

### 7.9.1 Organizational

Including incoming LSs and rapporteur inputs.

### 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.

[R2-2406698](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406698.zip) Corrections for U2U relay ZTE Corporation, Sanechips CR Rel-18 38.300 18.2.0 0883 - F NR\_SL\_relay\_enh-Core

[R2-2407059](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407059.zip) draft\_(Rel-18)\_38.300 relay stage 2 CR\_rapp LG Electronics France draftCR Rel-18 38.300 18.2.0 NR\_SL\_relay\_enh-Core

[R2-2407267](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407267.zip) Correction on NR SL Multi-path relay operation Philips International B.V. CR Rel-18 38.300 18.2.0 0888 - F 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.

[R2-2406368](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406368.zip) Correction for U2N remote UE's serving cell during path switch OPPO draftCR Rel-18 38.331 18.2.0 F NR\_SL\_relay\_enh-Core

[R2-2406369](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406369.zip) Discussion on SLRB index in SUI for L2 U2U relay OPPO discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2406556](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406556.zip) Clarification on the filtering of SL-RSRP for U2U relay CATT discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2406557](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406557.zip) Correction on the indirect path failure reporting condition CATT draftCR Rel-18 38.331 18.2.0 F NR\_SL\_relay\_enh-Core

[R2-2406599](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406599.zip) Remaining Open Issues in 38.331 Ericsson discussion Rel-18

[R2-2406679](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406679.zip) Discussion on remaining RRC issues for NR Sidelink relay enhancements Apple discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2406680](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406680.zip) Miscellaneous corrections on TS 38.331 Apple CR Rel-18 38.331 18.2.0 4883 - F NR\_SL\_relay\_enh-Core

[R2-2406697](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406697.zip) Corrections for SL relay ZTE Corporation, Sanechips CR Rel-18 38.331 18.2.0 4886 - F NR\_SL\_relay\_enh-Core

[R2-2406946](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406946.zip) Miscellaneous corrections for SL relay enhancements Huawei, HiSilicon CR Rel-18 38.331 18.2.0 4904 - F NR\_SL\_relay\_enh-Core

[R2-2407116](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407116.zip) Correction in U2U relay sidelink DRB addition/modification Nokia discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2407268](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407268.zip) RRC correction on NR SL U2U relay operation Philips International B.V. CR Rel-18 38.331 18.2.0 4937 - F NR\_SL\_relay\_enh-Core

[R2-2407411](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407411.zip) Discussion on U2U relay related issues Sharp discussion Rel-18 NR\_SL\_relay\_enh-Core

### 7.9.4 SRAP corrections

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

### 7.9.5 MAC, RLC, and PDCP corrections

Impact to 38.321, 38.322, and 38.323. A single CR for each specification 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.

[R2-2406600](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406600.zip) Remaining Open Issues in 38.323 Ericsson discussion Rel-18

[R2-2406947](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406947.zip) Correction on data transmission and data valume calculation in MP Huawei, HiSilicon draftCR Rel-18 38.323 18.2.0 NR\_SL\_relay\_enh-Core

[R2-2407293](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407293.zip) RLC correction for multi-path relay with N3C Huawei, HiSilicon CR Rel-18 38.322 18.1.0 0057 - F NR\_SL\_relay\_enh-Core

### 7.9.6 UE capabilities

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

[R2-2407103](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2407103.zip) Discussion on MP relay capabilities Qualcomm Incorporated discussion

### 7.9.7 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.

## 7.10 Void

## 7.11 Enhancements of NR Multicast and Broadcast Services

(NR\_MBS\_enh-Core; leading WG: RAN2; REL-18; WID: [RP-231829](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_101/Docs/RP-231829.zip))

Time budget: 0 TU

Tdoc Limitation: 1 tdoc

### 7.11.1 Organizational

LS in, rapporteur input

[R2-2407477](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2407477.zip) Miscellaneous correction on eMBS Huawei, HiSilicon CR Rel-18 38.331 18.2.0 4955 - F NR\_MBS\_enh-Core

### 7.11.2 Corrections

Corrections for all specifications

[R2-2406333](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406333.zip) Corrections on UE behavior in Multicast MCCH-Less Cell CATT, CBN, China Broadnet discussion Rel-18 NR\_MBS\_enh-Core

[R2-2406507](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406507.zip) Corrections for Multicast Reception Samsung discussion Rel-18

[R2-2406661](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406661.zip) Data losing avoiding for multicast reception in RRC\_INACTIVE Sharp discussion

[R2-2406953](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406953.zip) [N103] [N105] Control plane aspects of multicast reception in RRC\_INACTIVE state Nokia discussion Rel-18 NR\_MBS\_enh-Core

[R2-2407395](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407395.zip) Validity of PTM configuration in RRCRelease Ericsson discussion Rel-18 NR\_MBS\_enh-Core

[R2-2407474](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407474.zip) Correction on broadcast reception for eRedcap UE Huawei, HiSilicon CR Rel-18 38.300 18.2.0 0894 - F NR\_MBS\_enh-Core

[R2-2407526](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407526.zip) RedCap UE's Multicast reception in RRC\_INACTIVE - not a good idea ZTE Corporation, Sanechips discussion Rel-18 NR\_MBS\_enh-Core

## 7.12 Void

## 7.13 Further enhancement of data collection for SON MDT in NR and EN-DC

(NR\_ENDC\_SON\_MDT\_enh2-Core; leading WG: RAN3; REL-18; WID: [RP-221825](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_96/Docs/RP-221825.zip))

Includes LS in’s related to AI/ML for NG-RAN

Time budget: 0 TU

Tdoc Limitation: 1 tdocs

### 7.13.1 Organizational

Ls in and Rapporteur input. WI/Spec Rapporteur(s) are invited to provide updated open issues lists that need to be handled.

[R2-2406218](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406218.zip) Reply LS on MDT for NPN (R3-243892; contact: Ericsson) RAN3 LS in Rel-18 NR\_ENDC\_SON\_MDT\_enh2-Core To:RAN2 Cc:SA2, SA5

[R2-2406219](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406219.zip) Reply LS to SA5 on improved KPIs involving end-to-end data volume transfer time analytics (R3-243941; contact: Nokia) RAN3 LS in Rel-18 NR\_AIML\_NGRAN-Core To:SA5 Cc:SA2, CT3, CT4, RAN2

[R2-2407117](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407117.zip) Stage 2 alignments with stage 3 specification Nokia, NEC CR Rel-18 37.320 18.2.0 0136 - F NR\_ENDC\_SON\_MDT\_enh2-Core

### 7.13.2 Corrections

[R2-2406997](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406997.zip) Miscellaneous SON corrections ZTE Corporation, Sanechips, CR Rel-18 38.331 18.2.0 4910 - F NR\_ENDC\_SON\_MDT\_enh2-Core

[R2-2407000](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407000.zip) Corrections on SPR configuration CATT draftCR Rel-18 38.331 18.2.0 F NR\_ENDC\_SON\_MDT\_enh2-Core

[R2-2407038](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407038.zip) RRC Corrections for SON/MDT Samsung, Ericsson discussion

[R2-2407118](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407118.zip) RAN2 impacts of RAN3 reply LS on MDT for NPN ([R2-2406218](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406218.zip)/R3-243892) Nokia discussion Rel-18 NR\_ENDC\_SON\_MDT\_enh2-Core

[R2-2407217](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407217.zip) Addressing SONMDT issues Ericsson discussion NR\_ENDC\_SON\_MDT\_enh2-Core

[R2-2407337](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407337.zip) Correction to 38.306 on SON reports Huawei, HiSilicon CR Rel-18 38.306 18.2.0 1146 - F NR\_ENDC\_SON\_MDT\_enh2-Core

[R2-2407338](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407338.zip) Miscellaneous corrections on R18 SONMDT for 36.331 Huawei, HiSilicon CR Rel-18 36.331 18.2.0 5050 - F NR\_ENDC\_SON\_MDT\_enh2-Core

[R2-2407367](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407367.zip) SCG failure information in fast MCG recovery MRO Sharp discussion Rel-18

[R2-2407373](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407373.zip) Correction on the successPSCell-Config handling Google CR Rel-18 38.331 18.2.0 4948 - F NR\_ENDC\_SON\_MDT\_enh2-Core

## 7.14 Enhancement on NR QoE management and optimizations for diverse services

(NR\_QoE\_enh-Core; leading WG: RAN3; REL-18; WID: [RP-223488](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_98e/Docs/RP-223488.zip))

Time budget: 0 TU

Tdoc Limitation: 1 tdoc

### 7.14.1 Organizational

LSs and rapporteur inputs

[R2-2407088](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2407088.zip) Correction of Enhancement on NR QoE management and optimizations for diverse services Ericsson CR Rel-18 38.331 18.2.0 4922 - F NR\_QoE\_enh-Core

### 7.14.2 Corrections

*Corrections to all specifications.*

[R2-2406998](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406998.zip) Consideration on QoE configuration release during inter-RAT mobility ZTE Corporation, Sanechips discussion Rel-18 NR\_QoE\_enh-Core

[R2-2407001](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407001.zip) The correction for RRC spec for R18 QoE CATT draftCR Rel-18 38.331 18.2.0 F NR\_QoE\_enh-Core

[R2-2407168](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407168.zip) Miscellaneous Stage-2 corrections on R18 QoE Nokia, Nokia Shanghai Bell,China Unicom CR Rel-18 38.300 18.2.0 0886 - F NR\_QoE\_enh-Core

[R2-2407336](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407336.zip) Correction on area scope checking for MBS QoE Huawei, HiSilicon draftCR Rel-18 38.331 18.2.0 F NR\_QoE\_enh-Core

[R2-2407339](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407339.zip) Correction on application layer measurement report re-submittion Google CR Rel-18 38.331 18.2.0 4946 - F NR\_QoE\_enh-Core

## 7.15 NR Sidelink evolution

(NR\_SL\_enh2; leading WG: RAN1; REL-18; WID: [RP-230077](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_99/Docs/RP-230077.zip))

Time budget: 0 TU

Tdoc Limitation: 1 tdocs

### 7.15.1 Organizational

Including incoming LSs and rapporteur inputs.

[R2-2406209](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406209.zip) Reply LS on Sidelink Feature Co-configuration (R1-2405530; contact: OPPO) RAN1 LS in Rel-18 NR\_SL\_enh2-Core To:RAN2

[R2-2406264](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406264.zip) Discussion on LS R1-2405530 OPPO discussion Rel-18 NR\_SL\_enh2

### 7.15.2 Corrections

Including corrections to all specifications. A single CR with miscellaneous corrections is requested; minor and editorial issues should be coordinated with the CR rapporteur and merged into the miscellaneous CR. A contribution can include multiple TPs. Note RRC and MAC CR rapporteurs’ summary and suggestion (based on the submitted contributions) may be provided.

[R2-2406265](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406265.zip) Miscellaneous correction on R18 SL Evolution OPPO CR Rel-18 38.331 18.2.0 4863 - F NR\_SL\_enh2

[R2-2406316](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406316.zip) Correction on selection of resources for MCSt CATT, CICTCI draftCR Rel-18 38.321 18.2.0 F NR\_SL\_enh2

[R2-2406518](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406518.zip) Discussion on SR prioritization regarding SL transmission ASUSTeK discussion Rel-18 38.321 NR\_SL\_enh2

[R2-2406554](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406554.zip) TP for SL CA in TS38300 NEC discussion NR\_SL\_enh2

[R2-2406584](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406584.zip) Discussion on MAC corrections when supporting IUC and DRX in Co-Ex LG Electronics France discussion Rel-18 38.321 NR\_SL\_enh2

[R2-2406596](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406596.zip) Miscellaneous corrections for SL evolution Huawei, HiSilicon discussion Rel-18 NR\_SL\_enh2-Core

[R2-2406700](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406700.zip) Correction on legacy carrier selection ZTE Corporation, Sanechips CR Rel-18 38.321 18.2.0 1889 - F NR\_SL\_enh2-Core

[R2-2406746](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406746.zip) Discussion on carrier selection for SL MAC CE(s) LG Electronics Inc. discussion Rel-18 38.321 NR\_SL\_enh2

[R2-2406806](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406806.zip) Correction to per-LCH carrier set restriction in LCP Ericsson draftCR Rel-18 38.321 18.2.0 NR\_SL\_enh2

[R2-2407131](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407131.zip) Carrier reselection for IUC Nokia discussion

[R2-2407372](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407372.zip) Correction on setuprelease type sidelink fields handling Google CR Rel-18 38.331 18.2.0 4821 1 F NR\_SL\_enh2 [R2-2405322](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2405322.zip)

[R2-2407381](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407381.zip) MAC corrections on Release-18 Sidelink evolution LG Electronics Inc. CR Rel-18 38.321 18.2.0 1907 - F NR\_SL\_enh2

[R2-2407388](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407388.zip) Rapporteur Stage 2 Corrections for NR Sidelink Evolution InterDigital France R&D, SAS, NEC CR Rel-18 38.300 18.2.0 0893 - F NR\_SL\_enh2

## 7.16 Void

## 7.17 Dual Transmission/Reception (Tx/Rx) Multi-SIM for NR

(NR\_DualTxRx\_MUSIM-Core; leading WG: RAN2; REL-18; WID: [RP-233071](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_100/Docs/RP-231461.zip))

Time budget: 0 TU

Tdoc Limitation: 1 tdocs

### 7.17.1 Organizational

Incoming LS, Rapporteur input, etc.

Corrections to TS 38.300.

[R2-2407186](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2407186.zip) Corrections to TS 38.300 for R18 MUSIM China Telecom, Samsung CR Rel-18 38.300 18.2.0 0887 - F NR\_DualTxRx\_MUSIM-Core

### 7.17.3 Corrections

[R2-2406715](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406715.zip) Discussion on configuration for temporary capability restriction Huawei, HiSilicon discussion Rel-18 NR\_DualTxRx\_MUSIM-Core

[R2-2407077](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407077.zip) Further discussion on MUSIM capability restriction signalling Ericsson discussion Rel-18 NR\_DualTxRx\_MUSIM-Core

[R2-2407104](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407104.zip) Clarification on DAPS Handover for Dual TX/RX MUSIM operation Nokia discussion Rel-18

[R2-2407321](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407321.zip) Further Clarification on the Reconfiguration Failure Processing ZTE Corporation, Sanechips discussion Rel-18 NR\_DualTxRx\_MUSIM-Core

[R2-2407515](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407515.zip) Remaining issues on MUSIM Samsung Electronics Czech discussion Rel-18 NR\_DualTxRx\_MUSIM-Core

## 7.18 Void

## 7.19 Enhanced support of reduced capability NR devices

(NR\_redcap\_enh-Core; leading WG: RAN1; REL-18; WID: [RP-232671](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_101/Docs/RP-232671.zip))

WI is declared 100% complete

Time budget: 0 TU

Tdoc Limitation: 1 Tdocs

### 7.19.1 Organizational

Incoming LSs, CR rapporteur’s miscellaneous non-controversial corrections, etc.

[R2-2406205](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406205.zip) Reply LS on Rel-18 RedCap enhancements to address remaining ENs in TS 23.502 (C1-243517; contact: Huawei) CT1 LS in Rel-18 NR\_redcap\_enh-Core To:SA2 Cc:CT4, RAN2, RAN3

[R2-2407314](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407314.zip) Miscellaneous corrections on TS 38.304 for eRedCap Huawei, HiSilicon CR Rel-18 38.304 18.2.0 0411 - F NR\_redcap\_enh-Core, NR\_redcap-Core

[R2-2407554](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407554.zip) Miscellaneous corrections on TS 38.321 for eRedCap vivo (Rapporteur) CR Rel-18 38.321 18.2.0 1920 - F NR\_redcap\_enh-Core

=> Withdrawn

### 7.19.2 Other

*Critical corrections, if any.*

[R2-2406442](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406442.zip) Discussion on 2-step RACH for eRedCap vivo, Guangdong Genius discussion Rel-18 NR\_redcap\_enh-Core

[R2-2407315](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407315.zip) Corrections on some features application to (e)RedCap UE Huawei, HiSilicon draftCR Rel-18 38.306 18.2.0 NR\_redcap\_enh-Core, NR\_redcap-Core

[R2-2407534](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407534.zip) MAC correction for eRedCap ZTE Corporation, Sanechips CR Rel-18 38.321 18.2.0 1919 - F NR\_redcap\_enh-Core

=> Withdrawn

## 7.20 NR MIMO evolution

(NR\_MIMO\_evo\_DL\_UL-Core; leading WG: RAN1; REL-18; WID: [RP-233028](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_98e/Docs/RP-223276.zip))

Time budget: 0TU

Tdoc Limitation: 1 tdoc

### 7.20.1 Organizational

Incoming LS, Rapporteur input, etc.

Stage 2 corrections.

[R2-2406214](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406214.zip) Reply to RAN2 LS on type 3 PH value for the serving cell configured with mTRP (R1-2405619; contact: MediaTek) RAN1 LS in Rel-18 NR\_FeMIMO-Core, NR\_MIMO\_evo\_DL\_UL-Core To:RAN2

[R2-2406489](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406489.zip) Remaining issues on PHR for mTRP STx2P Samsung discussion Rel-18 NR\_MIMO\_evo\_DL\_UL-Core

### 7.20.2 Corrections

[R2-2406488](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406488.zip) Correction to MIMO Evolution Samsung draftCR Rel-18 38.331 18.2.0 NR\_MIMO\_evo\_DL\_UL-Core

[R2-2406519](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406519.zip) Discussion on remaining issue for 8Tx in MAC specification ASUSTeK discussion Rel-18 NR\_MIMO\_evo\_DL\_UL-Core

[R2-2406574](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406574.zip) Correction on simultaneousU-TCI-UpdateListx CATT draftCR Rel-18 38.331 18.2.0 NR\_MIMO\_evo\_DL\_UL-Core

[R2-2406778](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406778.zip) Correction on unified TCI state for SRS vivo draftCR Rel-18 38.331 18.2.0 F NR\_MIMO\_evo\_DL\_UL-Core

[R2-2406807](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406807.zip) Random Access problem for SpCell with two TAGs Langbo discussion Rel-18 38.321 NR\_MIMO\_evo\_DL\_UL-Core

[R2-2406808](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406808.zip) Clarification on the codebook type request in the UE capability enquiry Nokia Corporation discussion NR\_MIMO\_evo\_DL\_UL-Core

[R2-2406915](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406915.zip) Remaining issue on STx2P PHR LG Electronics Inc. discussion Rel-18 NR\_MIMO\_evo\_DL\_UL-Core

[R2-2407202](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407202.zip) Correction on PHR for STx2P in NR-DC Huawei, HiSilicon CR Rel-18 38.321 18.2.0 1905 - F NR\_MIMO\_evo\_DL\_UL-Core

[R2-2407434](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407434.zip) Further Considerations on Harmonizing the PHR for Different Features ZTE Corporation discussion Rel-18 NR\_MIMO\_evo\_DL\_UL-Core

## 7.21 Further NR coverage enhancements

(NR\_cov\_enh2-Core; leading WG: RAN1; REL-18; WID: [RP-221858](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_96/Docs/RP-221858.zip))

Time budget: 0 TU

Tdoc Limitation: 1 tdoc

### 7.21.1 Organizational

Incoming LSs, Rapporteur input etc.

Editorials/clarifications should not be included in any tdoc but sent to the WI spec rapporteurs, who can submit a rapporteur CR as part of this AI.

Rapporteur inputs and other pre-assigned documents in this AI do not count towards the tdoc limitation.

[R2-2407419](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2407419.zip) Miscellaneous corrections for further NR coverage enhancements in RRC Huawei, HiSilicon CR Rel-18 38.331 18.2.0 4951 - F NR\_cov\_enh2-Core

[R2-2407517](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407517.zip) Miscellaneous corrections on further NR Coverage enhancements in MAC ZTE Corporation CR Rel-18 38.321 18.2.0 1918 - F NR\_cov\_enh2-Core

### 7.21.2 Other Essential corrections

[R2-2406811](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406811.zip) Addition of missing prerequisite in the description of capability dynamicWaveformSwitchIntraCA-r18 Lenovo draftCR Rel-18 38.306 18.2.0 NR\_cov\_enh2-Core

[R2-2406922](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406922.zip) Conditional Presence for absence of field preambleTransMax-Msg1-Repetition Ericsson CR Rel-18 38.331 18.2.0 4897 - F NR\_cov\_enh2-Core

[R2-2407275](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407275.zip) RRC Correction on Msg1 based SI request with Msg1 Repetition Philips International B.V. CR Rel-18 38.331 18.2.0 4941 - F NR\_cov\_enh2-Core

[R2-2407278](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407278.zip) Correction on posSIB(s) acquisition for Msg1 based SI request with Msg1 Repetition [TEI17 SI-SCHEDULING] Philips International B.V., Ericsson CR Rel-18 38.331 18.2.0 4942 - F TEI17, NR\_cov\_enh2-Core

[R2-2407420](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407420.zip) Clarifications on initilization of RACH parameters during repetition fallback Huawei, HiSilicon CR Rel-18 38.321 18.2.0 1911 - F NR\_cov\_enh2-Core

## 7.22 Void

## 7.23 Void

## 7.24 TEI18

Specific items may be allocated to a breakout session for treatment. Essential corrections only. No new proposals will be treated.

Time budget: 1 TU

### 7.24.1 TEI proposals by Other Groups

Items initiated by other groups that is/has been communicated by LS, where the other group indicate this is TEI18. (Specific other-group-WIs should use the R18 Other Agenda Item below).

**NOTE: Include TEI identifiers in agreed CRs.**

**SDT related topics**

Tdocs related to RAN3 LS:

[R2-2406458](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406458.zip) SDT signalling optimization for partial context transfer ZTE Corporation, Sanechips discussion

*Proposal 1: Capture in RAN2 specs that the network should not send RRCSetup if DL data is sent to the UE*

*Proposal 2: Reply to RAN3 as follows:*

*- A MAC Reset is needed if RRCSetup procedure is initiated in the middle of the SDT session and this needs new UE capability and is hence not compatible with Rel-17 operation.*

*- Network based solution would result in data loss since UE will discard any pending UL data and setup a new RRC connection.*

*- Network based solution would result in additional signalling to reestablish AS context and AS security context both of which are released upon receiving RRCSetup*

*- Hence RAN2 agreed that the network should not send RRCSetup message after sending any DL data during SDT*

[R2-2406660](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406660.zip) Impacts on RAN2 for supporting of SDT signalling optimization for partial context transfer Sharp discussion

[R2-2406929](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406929.zip) Impact of SDT signalling optimization for partial context transfer on RAN2 Huawei, HiSilicon discussion Rel-18 TEI18

*Proposal 1: RAN2 to discuss if it is acceptable for the UE not to perform MAC reset upon RRCSetup reception during an ongoing SDT procedure when some data has already been exchanged.*

*Proposal 2: In the reply LS to RAN3, RAN2 should mention the potential issue on the residual data in MAC and clarify whether or not it can be handled by the network implementation (depending on the outcome of RAN2 discussion).*

[R2-2407229](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407229.zip) Discussion on LS to RAN3 Ericsson, Nokia discussion Rel-18 TEI18, NR\_MT\_SDT-Core

=> Moved from 7.24.2.2

Discussion

- Nokia doesn’t think that a reset is needed. Xiaomi thinks that if we do a MAC reset this would cause backward compatibility problems.

- LG indicates that today the MAC is not reset and if there is some data in the buffer this may cause some desynch issues.

- Intel indicates that there will be some impact if we have to introduce a MAC reset and support ZTE.

- Qualcomm would prefer to not introduce a new mechanism a MAC reset and not sure how the network would handle this issue.

- CATT asks if a MAC reset is acceptable to RAN2.

- Apple thinks that this would be either a UE impact or NW impact.

- Vivo thinks that the network can handle this.

- Intel thinks that we should also include service continuity. Nokia doesn’t think this is a big issue.

Agreements on the LS in addition to what is already agreed in the LS from last meeting

1 Acknowledge that there is an issue for the cases that there is some data in the buffer which causes dy-synch issues. RAN2 discussed how to solve the issue and identified two possible ways to handle this: potentially a MAC reset may be needed or NW implementation can handle it. If a MAC reset is needed, this would be a non-backward compatible change (i.e. not desirable), and some companies are not sure whether NW implementation can handle this issue.

[R2-2407501](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407501.zip) Reply LS on SDT signalling optimization for partial context transfer ZTE Corporation, Sanechips LS out Rel-18 TEI18 To:RAN3

=> The LS is revised in R2-2407746

* [AT127][008][SDT] LS to RAN3 (ZTE)

Intended outcome: agree to LS

Deadline: 08-23-24

[R2-2407746](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407501.zip) Reply LS on SDT signalling optimization for partial context transfer ZTE Corporation, Sanechips LS out Rel-18 TEI18 To:RAN3

=> Update actions to RAN3 instead of RAN2 and update date of next meeting

=> The LS is approved in R2-2407816 with changes above

R2-2407816 Reply LS on SDT signalling optimization for partial context transfer RAN2 LS out Rel-18 TEI18 To:RAN3

=> Approved

Paging Monitoring for CG-SDT (moved from 7.24.2)

[R2-2406465](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406465.zip) Paging monitoring for extended CG period [CG-SDT-Enh] ZTE Corporation, Sanechips, Mediatek, Qualcomm, Ericsson CR Rel-18 38.331 18.2.0 4788 1 F TEI18 [R2-2404546](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2404546.zip)

[R2-2406930](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406930.zip) Correction for Paging monitoring during SDT [CG-SDT-Enh] Huawei, HiSilicon CR Rel-18 38.331 18.2.0 4901 - F TEI18

*Discussion*

- LG thinks that we should have a common behaviour regardless of the extended CG periodicity configured. The CR from Huawei just to make an exception for RedCap is better. Qualcomm explains that the behavior doesn’t change from legacy, only when extended periodicity is configured.

- MEdiatek doesn’t understand why we can’t have new behaviour for the new feature.

- Vivo thinks that ZTEs CR addresses all issues.

- Huawei doesn’t want to link to a capability

- Intel suggests to have it for RedCap but link it to extended CG

- Huawei is only ok to change it only for RedCap

- Sony prefers to do it for all UEs, as ZTE proposes

=> Rel-17 behaviour will not change for RA-SDT and CG-SDT. Baseline wording from ZTE CR (ZTE)

R2-2407803 Paging monitoring for extended CG period [CG-SDT-Enh] ZTE Corporation, Sanechips, Mediatek, Qualcomm, Ericsson CR Rel-18 38.331 18.2.0 4788 2 F TEI18

=> The CR is agreed

Other

[R2-2406206](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406206.zip) Reply LS on 5GS missing CBC support for shared networks (C1-243686; contact: Ericsson) CT1 LS in Rel-18 TEI18 To:SA2 Cc:RAN2, RAN3, SA1

=> Noted

[R2-2406243](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406243.zip) Reply LS Mitigation of Downgrade attacks (S3-242367; contact: Apple) SA3 LS in Rel-18 TEI18 To:CT1 Cc:RAN2

=> Noted

**Intra-band EN-DC channel spacing**

[R2-2406231](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406231.zip) LS on intra-band EN-DC channel spacing (R4-2410693; contact: Huawei) RAN4 LS in Rel-18 TEI18 To:RAN2

=> Noted

[R2-2406833](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406833.zip) Discussion on LS on intra-band EN-DC channel spacing CATT discussion Rel-18 TEI18

*Proposal 1: Instead of introducing new UE capabilities, update the field descriptions of the following UE capabilities from R18, including intraBandENDC-Support, intrabandENDC-Support-UL, intraBandENDC-Support-v1790 and intraBandENDC-Support-UL-v1790, to add restriction that a UE only indicates ‘both’ if the corresponding UE capability is supported.*

*Proposal 2: Send a reply LS to R4 and explain RAN2 approach.*

=> Noted

[R2-2407466](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407466.zip) Discussion on intra-band EN-DC channel spacing Huawei, HiSilicon discussion Rel-18 TEI18

*Proposal 1: Introduce new capability to indicate support of intra-band non-contiguous (NG)EN-DC with nominal channel spacing.*

*Proposal 2: The new capability is in per-BC level, which is applicable for all the DL and/or UL intra-band EN-DC component(s) with non-contiguous capability in the BC.*

*Proposal 3: The UE indicating support of the new capability shall indicate support of “non-contiguous” in at least one among intrabandENDC-Support/intrabandENDC-SupportUL/intrabandENDC-Support-DL-v1790/ intrabandENDC-Support-UL-v1790.*

=> Noted

Discussion

- ZTE thinks that it is not clear whether such UEs support contiguous or not. Qualcomm thinks that this has been very clear in RAN4 that for this nominal gap we would need a new capability.

=> Wait for further RAN4 discussions before deciding what to do

[R2-2406261](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406261.zip) Discussion on LS R4-2410693 OPPO discussion Rel-18 TEI18

[R2-2406834](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406834.zip) Capability update for intraBandENDC-Support CATT draftCR Rel-18 38.306 18.2.0 F TEI18

[R2-2406835](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406835.zip) DRAFT Reply LS on intra-band EN-DC channel spacing CATT LS out Rel-18 TEI18 To:RAN4

[R2-2407329](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407329.zip) Consideration on the intra-band EN-DC Channel Spacing ZTE Corporation, Sanechips discussion Rel-18 TEI18

[R2-2407330](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407330.zip) Draft Reply LS on the intra-band EN-DC Channel Spacing ZTE Corporation, Sanechips LS out Rel-18 TEI18 To:RAN4

[R2-2407467](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407467.zip) Introduction of new capability for intra-band EN-DC channel spacing Huawei, HiSilicon CR Rel-18 38.331 18.2.0 4954 - B TEI18

[R2-2407468](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407468.zip) Introduction of new capability for intra-band EN-DC channel spacing Huawei, HiSilicon CR Rel-18 38.306 18.2.0 1147 - B TEI18

[R2-2407469](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407469.zip) Reply LS on intra-band EN-DC channel spacing Huawei, HiSilicon LS out Rel-18 TEI18 To:RAN4

### 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

#### 7.24.2.1 Rx XR

Contributions on signaling support for ‘2Rx non-REDCAP XR devices’ as per RP-234015. Co-source contributions are highly encouraged.

**NOTE: Include TEI identifiers in agreed CRs.**

[R2-2406933](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406933.zip) Cell barring depending on the UE band for 2Rx XR UE Huawei, HiSilicon, Xiaomi Communications, Ericsson, LG Electronics discussion Rel-18 TEI18

*Proposal 1: RAN2 to confirm that it is possible for the UE to be 2Rx XR UE only in some bands while being a regular UE in other bands.*

- Apple and Qualcomm thinks that the plenary agreed that it is a band specific capability. ZTE confirms. ZTE doesn’t think we should modify the band selection because of this.

- Vodafone this also depends on whether the operator will support this scenario.

- CMCC thinks that the current implementation is better.

=> No change to current specification is needed

=> Noted

#### 7.24.2.2 Other RAN2 TEI-18

Contributions should focus only critical issues/corrections for already agreed TEI-18 topics. Co-sourcing of such proposals is encouraged. Contributions on items that were explicitly downprioritized from Rel-18 WIs should not be brought as TEI18. No new Cat. B proposals expected for this meeting

**NOTE: Include TEI identifiers in agreed CRs.**

**Emergency call**

[R2-2406441](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406441.zip) Discussion on issues for emergency call with barringExemptEmergencyCall vivo, China Telecom, China Unicom, Guangdong Genius discussion Rel-18 TEI18

- Vodafone thinks that this scenario is not used as the PLMNs are not talking.

- Samsung and Qualcomm thinks this is a valid issue but there are a number of other cases and we can have a generic solution.

=> attempt to capture this in a generic way

[R2-2406511](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406511.zip) Discussion on cell barring and barring exemption Qualcomm Incorporated discussion Rel-18 TEI18

Proposal 1: Clarify that an acceptable cell is not a barred cell without any exception.

.

Proposal 2: Clarify that after the barring exemption, the UE is still required to check the cell reservations.

Proposal 3: Clarify that after the barring exemption, the UE is no longer required to select another cell on the same frequency or other frequency.

**Proposal 4:** Agree on the following principles with regards to the “work split” between 38.331 and 38.304.

|  |  |
| --- | --- |
| **38.331** | **38.304** |
| * Specify the determination of cell barring status. | * Specify the behaviour associated with cell reservations (which can result in cell barring) * Specify the barring exemption. * Specify whether cell reselection to another cell on the same frequency as barred cell is allowed or not. |

Discussion

- Vodafone thinks that we should go through all possible cases.

- LG supports the proposals from Qualcomm.

- DT thinks that we should be extremely carefully of touching legacy behavior/text. ZTE and Apple also doesn’t think we need to change anything with regards to existing behaviour

**Agreements**

- Clarify that an acceptable cell is not a barred cell without any exception.

- Start with ZTE CR and see if anything additional is needed to be clarified and remove anything not needed

* [AT127][012][Emergency calls] Acceptable cells (ZTE)

Intended outcome: Review CR for acceptable cells behaviour. Attempt to find a generic way, if possible.

Deadline: 08-23-24

R2-2407804 Correction to barring exemption for (e)Redcap and XR 2RX UEs [EM\_Call\_Exemption] ZTE Corporation, Sanechips CR Rel-18 38.304 18.2.0 0409 1 F TEI18

- Nokia is concerned that “The RedCap UE that supports only 1Rx branch **may** treat this cell as an acceptable cell.” this is a ‘may’. Qualcomm thinks that this is an optional feature and should be without capability signaling.

- Huawei and Nokia think the problem is that it is not testable so we can link it to a UE capability.

- LG doesn’t understand why the “may” doesn’t work as we have multiple cases in idle mode spec.

=> Introduce an optional capability without signaling and link the description to the capability with a “shall”

=> the CR is revised and will be reviewed by email in [012].

[R2-2407505](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407505.zip) Introduction of a UE capability for the barring exemption for emergency call [EM\_Call\_Exemption] Huawei, HiSilicon CR Rel-18 38.306 18.2.0 1148 - B TEI18

- Nokia and ZTE thinks that this is not needed and all UEs supporting redcap, XR, etc. should support it.

- Apple doesn’t think it is need

- Qualcomm thinks that this only applies to some UEs.

- Huawei thinks that we should not make it mandatory for eRedcap as it is supposed to be low complexity and it is quite late in the release. BT asks if it supports voice then why can’t it do emergency calls.

- Qualcomm agreed to the feature with the assumption that it was optional and we wouldn’t agree to this feature.

- Vodafone thinks we can work offline for the description and we highlight that it is desirable for all UEs to support this.

=> It is recommended that UEs supporting voice/emergency calls support this feature

=> The CR is agreed

[R2-2406461](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406461.zip) Open issues for emergency calls for 2RX UEs ZTE Corporation, Sanechips discussion

=> Nothing specific for NES will need to be done for Rel-18

[R2-2406462](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406462.zip) Correction to barring exemption for (e)Redcap and XR 2RX UEs [EM\_Call\_Exemption] ZTE Corporation, Sanechips CR Rel-18 38.304 18.2.0 0409 - F TEI18

[R2-2406512](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406512.zip) Clarifications on cell barring [EM\_Call\_Exemption] Qualcomm Incorporated CR Rel-18 38.331 18.2.0 4880 - F TEI18

[R2-2406513](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406513.zip) Clarifications on cell barring [EM\_Call\_Exemption] Qualcomm Incorporated CR Rel-18 38.304 18.2.0 0410 - F TEI18

[R2-2406931](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406931.zip) Introduction of barring exemption for emergency call [EM\_Call\_Exemption] Huawei, HiSilicon CR Rel-18 38.300 18.2.0 0884 - B TEI18

- Qualcomm thinks we should contain all changes in one section. Nokia thinks we can simplify the description.

=> Need to update the text to simplify and improve

* [AT127][013][Emergency Calls] 38.300 CR (Huawei)

Intended outcome: Agree to CR by email

Deadline: 08-23-24

[R2-2406932](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406932.zip) Corrections on the barring exemption for emergency call [EM\_Call\_Exemption] Huawei, HiSilicon CR Rel-18 38.331 18.2.0 4902 - F TEI18 Withdrawn

=> The CR

**[meas\_report\_enh]**

[R2-2406859](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406859.zip) Discussion on TEI18 enhancement to measurement report Samsung Electronics discussion Rel-18 TEI18

*Proposal 1: When the event leaving condition is fulfilled, the UE stores the concerned cell(s) in cellsMetLeavingCond only if enteringLeavingReport is configured in the corresponding reportConfig. The TP1 in annex can be considered for the correction.*

- Ericsson and LG support

*Proposal 2: The UE stores each of the concerned cell(s) in cellsMetLeavingCond only if the cell has been reported to the gNB before. The TP2 in annex can be considered for the correction.*

- LG thinks this is a rare occurring event so we can leave it up to implementation. Samsung things this is not a corner case

- Huawei thinks the intention is correct but the proposal is not.

- Qualcomm and Ericsson would like to avoid further optimization

=> Not supported

*Proposal 3: The UE can set the first cell in reportedBestNeighbourCell only if measResultNeighCells is not empty and the UE can set the second cell in reportedBestNeighbourCell only if there is more than one entry in measResultNeighCells. The TP3 in annex can be considered for the correction.*

- Ericsson doesn’t understand why we need to specify anything. If the UE doesn’t have anything it shouldn’t report. We agreed to not over specify.

**Agreements**

=> When the event leaving condition is fulfilled, the UE stores the concerned cell(s) in cellsMetLeavingCond only if enteringLeavingReport is configured in the corresponding reportConfig. The TP1 in annex can be considered for the correction.

=> Add “if available” to both cases where n1 and n2.

=> Revised in R2-2407749

R2-2407749 Discussion on TEI18 enhancement to measurement report Samsung Electronics discussion Rel-18 TEI18

* [AT127][015][TEI18] Measurement Reporting (Samsung)

Intended outcome: Agree to CR capturing agreements

Deadline: 08-23-24

R2-2407783 Correction on enhancements to measurement report [meas\_report\_enh] Samsung CR Rel-18 38.331 18.2.0 4966 - F TEI18

=> The CR is agreed

**[CIO\_in\_ReportConfig]**

[R2-2407493](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407493.zip) Discussion on remaining issues on cell individual offset Samsung, Ericsson discussion Rel-18 TEI18

*Proposal 1. RAN2 to discuss whether to introduce CIO in reportConfig for conditional handover.*

- CATT and Huawei don’t think we should introduce for CHO.

=> Not supported

*Proposal 2. RAN2 to discuss whether to introduce CIO in reportConfig for handover from LTE (i.e., LTE to NR handover, or LTE to LTE handover).*

*-* Qualcomm would like to avoid it as LTE Deployments are stable.

*=>* Noted

[R2-2407182](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407182.zip) Correction on frequency introduced for CIO [CIO\_in\_ReportConfig] Ericsson, Samsung, NTT Docomo, INC., KDDI, Qualcomm Incorporated CR Rel-18 38.331 18.2.0 4933 - F TEI18

- Mediatek suggestion to capture: this new feature doesn’t apply to CSI-RS measurement. Ericsson thinks we can then capture in some field description. Huawei thinks that this is already clear from current signaling.

=> The CR is postponed

**Enterleavingreport**

[R2-2407510](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407510.zip) Correction to enteringLeavingReport condition LG Electronics France discussion Rel-18 TEI18

=> Noted

[R2-2407513](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407513.zip) Correction to EnteringLeavingReport condition LG Electronics CR Rel-18 38.331 18.2.0 4959 - F TEI18

- Qualcomm thinks that these are optimizations and we need to keep the feature simple

[R2-2407822](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407822.zip)

=> Update with TEI identifier and add space to second change.

=> The CR is agreed in R2-2407833 with changes above

**NES/NCR**

[R2-2407521](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407521.zip) NES for NCR LG Uplus discussion Rel-18

**Treated in MBS breakout session**

**NOTE: Include TEI identifiers in agreed CRs.**

[R2-2406281](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406281.zip) Correction on the capabilities on PTM retransmission Huawei, HiSilicon, Intel Corporation, Nokia, vivo CR Rel-18 38.306 18.2.0 1134 - F NR\_MBS\_enh-Core, TEI18

[R2-2406282](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406282.zip) Correction on the capabilities on PTM retransmission Huawei, HiSilicon, Intel Corporation, Nokia, vivo CR Rel-18 38.331 18.2.0 4867 - F NR\_MBS\_enh-Core, TEI18

[R2-2406345](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406345.zip) Correction on PTM Retransmission Capability Samsung CR Rel-18 38.306 18.2.0 1135 - F NR\_NTN\_solutions-Core, NR\_MBS-Core

[R2-2407527](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407527.zip) Search space configuration for RedCap UE’s MBS broadcast reception ZTE Corporation, Sanechips discussion Rel-18 TEI18

## 7.25 R18 Other

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

Impacts from Other RAN WGs and TSGs that has no separate TU budget in RAN2. LS ins for Rel-18 specific WIs/SIs that has no RAN WI.

Clarification CRs should be discussed with spec rapporteurs of the topic prior to submission.

Time budget: 1 TU

Tdoc Limitation: -

### 7.25.1 RAN4 led items

[R2-2406226](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406226.zip) Reply LS to RAN2 on RRM enhancements for NR FR2 HST (R4-2410285; contact: Samsung) RAN4 LS in Rel-18 NR\_HST\_FR2\_enh To:RAN2

=> Noted

[R2-2407247](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407247.zip) Clarification on highSpeedMeasFlagFR2 for HST FR2 RRM Samsung CR Rel-18 38.331 18.2.0 4936 - F NR\_HST\_FR2\_enh

- Huawei doesn’t think the CR is aligned with the LS. Samsung can clarify that it is intra-band

=> The CR is revised

* [AT127][016][HST] 331 CR (Samsung)

Intended outcome: Review revised CR and agree by email

Deadline: 08-23-24

R2-2407792 Clarification on highSpeedMeasFlagFR2 for HST FR2 RRM Samsung CR Rel-18 38.331 18.2.0 4936 1 F NR\_HST\_FR2\_enh

[R2-2407335](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407335.zip) Correction on the configuration parameter highSpeedMeasFlagFR2 for FR2 HST Huawei, HiSilicon CR Rel-18 38.331 18.2.0 4945 - F NR\_HST\_FR2\_enh

[R2-2407379](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407379.zip) Discussion on RRM enhancements for NR FR2 HST ZTE Corporation, Sanechips discussion Rel-18 NR\_HST\_FR2\_enh

[R2-2406230](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406230.zip) Reply LS on inter-frequency neighbour cells supporting NR dedicated spectrum less than 5 MHz for FR1 (R4-2410600; contact: Qualcomm) RAN4 LS in Rel-18 NR\_FR1\_lessthan\_5MHz\_BW-Core To:RAN1, RAN2

=> Noted

[R2-2406339](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406339.zip) Correction on inter-frequency configuration for less than 5MHz Huawei, HiSilicon CR Rel-18 38.331 18.2.0 4869 - F NR\_FR1\_lessthan\_5MHz\_BW

- Qualcomm explains that it was not included on purpose as some companies wanted to sue the whole list for some cases.

=> check if we can indicate 12 or 20 PRB in SIB1

=> The CR is postponed

[R2-2407322](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407322.zip) Correction on asymmetricBandwidthCombinationSet for the 3M ZTE Corporation, Sanechips CR Rel-18 38.306 18.2.0 1141 - F NR\_FR1\_lessthan\_5MHz\_BW-Core

=> simplify text: “if defined for the band in the TS 38.101-1 [2]. If the field is absent the UE supports asymmetric channel bandwidth combination set 0, if defined for the band in the TS 38.101-1 [2]”

=> The CR is endorsed in R2-2407761 and will be merged in mega CR

[R2-2406604](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406604.zip) Clarification of offsetThresholdTA-r18 for NR ATG Huawei, HiSilicon, CMCC CR Rel-18 38.331 18.2.0 4882 - F NR\_ATG-Core

[R2-2407380](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407380.zip) Discussion on ATG ZTE Corporation, Sanechips discussion Rel-18 NR\_ATG-Core

[R2-2407530](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407530.zip) Clarifications for ATG timing advance reporting procedures Samsung discussion Rel-18 NR\_ATG-Core

* [AT127][024][ATG] Clarification CR (Samsung)

Intended outcome: agree to CR

Deadline: 08-23-24

R2-2407806 Report of [AT127][024][ATG] Clarification on SCS for Timing Advance reporting Samsung discussion Rel-18 NR\_ATG

=> The issue is postponed to next meeting

=> Noted

[R2-2406836](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406836.zip) Dummify the capability bit multiRx-F[R2-Preference](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-Preference.zip)-r18 CATT, Apple, Intel Corporation draftCR Rel-18 38.331 18.2.0 F NR\_FR2\_multiRX\_DL-Core

=> Update cover page with no interoperability

=> The CR is endorsed in R2-2407762 with changes above and merged in mega CR

[R2-2406837](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406837.zip) Dummify the capability bit multiRx-F[R2-Preference](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-Preference.zip)-r19 CATT, Apple, Intel Corporation draftCR Rel-18 38.306 18.2.0 F NR\_FR2\_multiRX\_DL-Core

=> Delete (i.e. not supporting simultaneous reception with different QCL-typeD)

=> Update cover page with no interoperability

=> The CR is endorsed in R2-2407763 with changes above and merged in mega CR

[R2-2406944](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406944.zip) Introduction of unknown SCell activation enhancement Huawei, HiSilicon, Apple CR Rel-18 38.300 18.2.0 0885 - B NR\_RRM\_enh3

=> Revise to simplify text and references to RAN4

* [AT127][017][SCell act] Stage 2 CR (Huawei)

Intended outcome: Agree to CR by email

Deadline: 08-23-24

R2-2407815 Introduction of unknown SCell activation enhancement Huawei, HiSilicon, Apple CR Rel-18 38.300 18.2.0 0885 1 B NR\_RRM\_enh3

[R2-2407178](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407178.zip) MAC correction on fast unknown SCell activation Ericsson CR Rel-18 38.321 18.2.0 1903 - F NR\_RRM\_enh3

=> The CR is not pursued

[R2-2407179](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407179.zip) RRC correction on fast unknown SCell activation Ericsson CR Rel-18 38.331 18.2.0 4931 - F NR\_RRM\_enh3

- Samsung, Apple, Huawei, think that it is clear already that one SCell can trigger it

=> RAN2 understanding is that if at least one of the activated indicated SCell(s) fulfills the measurement requirement then measurement report can be triggered

=> The CR is not pursued

[R2-2407399](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407399.zip) Miscellaneous corrections for fast unknown SCell activation Huawei, HiSilicon CR Rel-18 38.331 18.2.0 4949 - F NR\_RRM\_enh3

=> The CR is not pursued

[R2-2407400](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407400.zip) Miscellaneous corrections for fast unknown SCell activation Huawei, HiSilicon CR Rel-18 38.321 18.2.0 1908 - F NR\_RRM\_enh3

=> The CR is not pursued

### 7.25.2 RAN1 led items

E.g. UL Tx Switching, MC enhancements, DSS

[R2-2406317](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_127\\Docs\\R2-2406317.zip) Correction on PDCCH monitoring for Multi-cell scheduling CATT draftCR Rel-18 38.321 18.2.0 F NR\_MC\_enh-Core Withdrawn

[R2-2406815](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406815.zip) Removal of term ‘legacy’ from the description of dci-FormatsMC Lenovo CR Rel-18 38.331 18.2.0 4890 - F NR\_MC\_enh-Core

=> The CR is merged with [R2-2406945](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406945.zip)

[R2-2406945](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406945.zip) Miscellaneous corrections for Multi-Carrier enhancements Huawei, HiSilicon CR Rel-18 38.331 18.2.0 4903 - F NR\_MC\_enh-Core

=> The CR is merged with 6815 and revised in R2-2407764

* [AT127][018][MC] 331 CR (Huawei)

Intended outcome: Agree to revised CR by email

Deadline: 08-23-24

R2-2407764 Miscellaneous corrections for Multi-Carrier enhancements Huawei, HiSilicon, Lenovo, NTT DOCOMO INC. CR Rel-18 38.331 18.2.0 4903 1 F NR\_MC\_enh-Core

[R2-2407424](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407424.zip) Clarification on deactivated or dormant cells in multi-cell scheduling Samsung, ZTE Corporation, Sanechips, NTT DOCOMO, OPPO CR Rel-18 38.321 18.2.0 1912 - F NR\_MC\_enh-Core

- Qualcomm and LG don’t think this is needed. CATT thinks that the change is correct and aligned with RAN1 behaviour.

=> RAN2 understands that current specifications supports UE to monitor the PDCCH for multicell scheduling with deactivated/dormant SCell

=> The CR is not pursued

[R2-2407463](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407463.zip) Reply LS on UE capability for multi-carrier enhancements NTT DOCOMO, INC., vivo LS out Rel-18 NR\_MC\_enh-Core To:RAN4 Cc:RAN1

=> The LS is approved

### 7.25.3 Other

RAN3, SA2, SA3, CT1 led items and others, e.g. eNPN, Slicing, NTN self evaluation issues, etc.

# 8 Rel-19

## 8.0 General

*This AI is reserved for Rel-19 LSs from other WGs*. *No contributions are expected on these LSs for this meeting*

**ASN.1 input**

[R2-2407087](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407087.zip) On new ASN.1 review process Ericsson discussion Rel-19 NR\_newRAT-Core, TEI19

Proposal 1: RAN2 to discuss if the review file should be split into smaller files to allow for more delegates to access in parallel.

Proposal 2: RAN2 to discuss the need for automated file lock mechanism for ASN.1 review.

Proposal 3: RAN2 to ask MCC to delete “StyleRefs” from 3GPP specifications.

Proposal 4: RAN2 to discuss the following challenges of the new ASN.1 review process: - Commercial tools need to be selected and be available to all companies. - Availability of scripts and adaptions of the selected commercial tools to all companies need to be ensured. - RAN2 delegates need to learn new tools and process.

Proposal 5: RAN2 to discuss if new ASN.1 review tools and process [1] should be developed.

Proposal 6: RAN2 to discuss whether for 6g consider providing the RRC ASN.1 on file server separated from the procedure texts in Word document.

[R2-2407190](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407190.zip) ASN.1 Review Modernization Nokia Corporation discussion Rel-19 [R2-2405470](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2405470.zip)

Proposal 1: Initiate a discussion on how to modernize the ASN.1 and procedural text review procedure using Git version control. (moved from 7.0.2.8)

[R2-2407786](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407786.zip) Report of [AT127][004][ASN.1 Modernization] F2F offline (Nokia) Nokia discussion Rel-19

=> Conduct an email discussion with a deadline of 4 November 2024 to discuss requirements of the end of release ASN.1 review process.

* [POST127][004][ASN.1 Modernization] requirements (Nokia)

Intended outcome: discuss requirements of the end of release ASN.1 review process

Deadline: November deadline

VMR

[R2-2406223](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406223.zip) Reply LS on FS\_VMR\_Ph2 solution impacts to RAN (R3-243961; contact: Qualcomm) RAN3 LS in Rel-19 FS\_VMR\_Ph2 To:SA2 Cc:RAN2

[R2-2406239](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406239.zip) LS on questions regarding FS\_VMR\_Ph2 (S2-24073455; contact: Samsung) SA2 LS in Rel-19 FS\_VMR\_Ph2 To:RAN3 Cc:RAN2

NTZ (to be noted without presentation)

[R2-2406235](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406235.zip) LS on NTZ solution impacts to RAN (S2-2407355; contact: LGE & Ericsson) SA2 LS in Rel-19 FS\_UAS\_Ph3 To:RAN Cc:RAN2, RAN3

[R2-2406233](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406233.zip) Reply LS RP-240891 on NTZ solution impacts to RAN (RP-241668; contact: InterDigital) RAN LS in Rel-19 FS\_UAS\_Ph3 To:SA2 Cc:RAN1, RAN2, RAN3, SA, ETSI MSG TFES

## 8.1 AI/ML for NR air interface

(NR\_AIML\_air-Core; leading WG: RAN1; REL-19; WID: [RP-240774](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_103/Docs/RP-240774.zip))

Time budget: 2 TU

Tdoc Limitation: 3 tdocs

[R2-2406224](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406224.zip) LS on terminology definitions for AI-ML in NG-RAN (R3-243969; contact: Ericsson) RAN3 LS in Rel-18 NR\_AIML\_NGRAN-Core To:SA5, RAN2 Cc:RAN1, RAN, SA

### 8.1.1 Organizational

LS, Rapporteur input, including workplan, etc.

[R2-2406212](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406212.zip) Reply LS on data collection to enable ML model training and inference in 5GC for Direct AI/ML based positioning (R1-2405578; contact: Ericsson) RAN1 LS in Rel-19 FS\_AIML\_CN To:SA2 Cc:RAN2, RAN3

=> Noted

[R2-2406236](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406236.zip) LS on data collection to enable ML model training and inference in 5GC for Direct AI/ML based positioning (S2-2405833; contact: vivo) SA2 LS in Rel-19 FS\_AIML\_CN To:RAN1, RAN2 Cc:RAN3

=> Noted

[R2-2407252](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407252.zip) On RAN3 inputs about AIML Terminology Ericsson discussion NR\_AIML\_air-Core

- Huawei thinks that RAN1 should discuss this as they are the leading group

- Xiaomi thinks that we can agree to parts of the terminology

=> Noted

### 8.1.2 Functionality based LCM

Contributions should focus on general understanding of LCM procedure (except for data collection and model transfer/delivery), what is required to enable the UE to perform different steps of the LCM procedure, what is the granularity of functionality, dependencies with RAN1 and what is needed from RAN1 to progress in RAN2

Contributions should be submitted in 8.1.2.x and aspects related to data collections should be submitted in data collection section

Two-sided model discussions are out of scope of this AI

Model identification and model transfer/delivery is out of scope of this AI and will not be discussed in RAN2#127 given further RAN1 progress is required. Work post RAN2#127 depends on RAN 105 outcome.

#### 8.1.2.1 LCM for NW-sided model for Beam Management use case

LCM related to NW-sided model for beam management use case only

No contributions expected for this meeting, waiting for further RAN1 progress

#### 8.1.2.2 LCM for UE-sided model for Beam Management use case

Including functionality identification, additional conditions and further reporting of applicable functionalities

Including outcome of email discussion [POST126][032][AI/ML PHY] LCM (Intel/Samsung)

[R2-2407165](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407165.zip) Report of [POST126][032][AI/ML PHY] LCM (Intel/Samsung) – Phase 1 Samsung discussion Rel-19 NR\_AIML\_air-Core

*Easy agreements:*

*Proposal 1:* *Supported functionalities refer to functionalities that UE can indicate by using UE capability information (via RRC/LPP signalling).*

*Proposal 3: Applicable functionalities refers to functionalities that the UE is ready to apply for inference.*

- This is too simple and what is ready

- Lenovo also thinks that this is also dependent on when inference information is provided

*Proposal 5: Activated functionalities refers to functionalities already enabled for performing inference.*

*For discussion:*

Proposal 2: RAN2 discuss further whether definition on configured functionalities is needed.

Proposal 4: RAN2 discuss further relationship between configured functionalities and applicable functionalities as a part of discussion on the need of defining configured functionalities.

Proposal 6: RAN2 discuss further on the need of defining available functionalities separately from applicable functionalities.

[R2-2406381](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406381.zip) Report of [POST126][032][AI/ML PHY] LCM (Intel/Samsung)\_Phase 2 Intel Corporation discussion Rel-19 NR\_AIML\_air-Core



*Proposal 2: “Step 3”: Following configurations are provided from NW to UE:*

*1) UE is allowed to do UAI reporting via OtherConfig.*

*2) Network may provide NW-side additional condition. FFS on the RRC signalling and whether it is mandatory or optional.*

*3) FFS on configuration (e.g. inference configuration) of supported functionalities. FFS on the content of configuration.*

- Huawei thinks this is a good approach and there is no mention of reactive and proactive. WE should wait for RAN1 for the FFS

- Samsung thinks that we should identify the important questions for RAN1 so we can make progress. Apple agrees and there are some divergence between RAN1 and RAN2 understanding. Nokia agrees but we should have an email discussion

- CMCC thinks that if we were to inference configuration in step 3 there will be singaling overhead so we should only provide the inference configuration in step 5. Qualcomm thinks that this is too early to discuss.

- ZTE thinks that the step 5 shouldn’t be dotted lines.

*Proposal 3: UE decides the applicable functionalities based on NW-side additional conditions (if provided), UE-side additional conditions (internally known by UE) and model availability in device. FFS whether other configuration can considered by UE (e.g. inference configuration). FFS how the applicable functionality is decided if NW-side additional condition is not provided in step 3.*

- Xiaomi doesn’t think that the FFS is needed. Intel explains that this will keep all proposals consistent and we can discuss the FFSs after RAN1 progress.

- Qualcomm asks if we are changing the applicable functionality definition and whether the applicable functionality can be determined without NW-side additional conditions. Samsung indicates that this is why we have to ask RAN1 as there are different interpretations. Interdigital thinks that the confusion is who decides/checks but for a functionality to be used the three conditions must be fulfilled.

- Intel thinks that we can add another FFS.

*Proposal 4: “Step 4”: UE reports applicable functionality in the following scenarios:*

*1) Upon being configured to provide applicable functionality and upon change of applicable functionality via UAI*

*2) As response to NW-side additional condition requesting applicable functionality reporting in step 3, FFS other network configuration (e.g. inference configuration), FFS via UAI or RRCReconfigurationComplete, etc*

- Vivo would like to have a unified solution rather than have two procedures UAI and RRC reconfigurationcomplete. Nokia thinks that even in legacy NR we can provide UAI in reconfiguration complete.

- Oppo thinks that bullet 1 and 2 are the same. Intel explains that they are different and that bullet 2 is also referring to the case where the network requests the UAI.

- Futurwei thinks that there may be other UE capabilities to take into account (i.e. memory). Intel explains that in email discussions companies didn’t want to expose this internal information and the UE can use this information internally to determine applicability.

- LG asks whether we will consider the cases where the network requests but the applicable functionality hasn’t changed. Should the UE report anyways. Xiaomi thinks that if the network asks the UE should always report. Apple explains that that logic for UAI has always been that the UE may report, so it doesn’t have to.

*Proposal 5: Step 5:*

*1) Network configures inference configuration to UE after applicable functionality reporting, if inference configuration based on supported functionality is not provided in Step 3 (i.e. inference configuration is provided in Step 5).*

*2) If inference configuration based on supported functionality is provided in Step 3, it is up to network implementation whether to provide an updated configuration or not.*

- Nokia thinks that we need to ask RAN1 on what is required.

*Proposal 6: The applicable functionality may be activated by receiving its configuration when it is provided in Step 5. FFS the initial activation state. FFS on initial activation of applicable functionality if configuration of supported functionality is agreed to be provided in Step 3. FFS on additional L1/L2 signaling for activation/deactivation.*

- ZTE thinks that the second FFS is not reasonable as the initial state should be deactivate. Qualcomm agrees.

- NEC thinks that not all applicable functionality will be activated. Lenovo thinks that the network can configure which functianility should be activated. Qualcomm thinks that only one would be activated.

**Agreements on definitions**

1. Supported functionalities refer to functionalities that UE can indicate by using UE capability information (via RRC/LPP signalling)
2. Applicable functionalities refers to functionalities that the UE is ready to apply for inference
3. Activated functionalities refers to functionalities already enabled for performing inference

|  |
| --- |
| **Agreements on procedures**  - Step 1: Network sends UECapabilityEnqiry message to initiate the procedure to a UE reporting its AI/ML supported functionalities.  - Step 2: UE sends UECapablityInformation message to network, containing supported functionalities at the UE side.  - “Step 3”: Following configurations are provided from NW to UE:  1) UE is allowed to do UAI reporting via OtherConfig.  2) Network may provide NW-side additional condition. FFS on the RRC signalling and whether it is mandatory or optional.  3) FFS on configuration (e.g. inference configuration) of supported functionalities. FFS on the content of configuration.  - UE decides the applicable functionalities based on NW-side additional conditions (if provided), UE-side additional conditions (internally known by UE) and model availability in device. FFS whether other configuration can considered by UE (e.g. inference configuration). FFS how the applicable functionality is decided if NW-side additional condition is not provided in step 3.  - “Step 4”: UE reports applicable functionality in the following scenarios:  1) Upon being configured to provide applicable functionality and upon change of applicable functionality via UAI  2) As response to NW-side additional condition requesting applicable functionality reporting in step 3, FFS other network configuration (e.g. inference configuration), FFS via UAI or RRCReconfigurationComplete, etc  - Step 5:  1) Network configures inference configuration to UE after applicable functionality reporting, if inference configuration based on supported functionality is not provided in Step 3 (i.e. inference configuration is provided in Step 5).  2) If inference configuration based on supported functionality is provided in Step 3, it is up to network implementation whether to provide an updated configuration or not.  - The applicable functionality may be activated by receiving its inference configuration when it is provided in Step 5. FFS the initial activation state. FFS on initial state of applicable functionality if inference configuration of supported functionality is provided in Step 3. FFS on additional L1/L2 signaling for activation/deactivation. FFS if multiple applicable functionalities can be activated at the same time. FFS what is the granularity of functionality  - We will write an LS to RAN1 to provide our agreements and ask specific questions that RAN2 needs to enable progress. |

* [POST127][019][AI PHY] LS to RAN1(Intel)

Intended outcome: Agree to list of questions to ask RAN1 to enable RAN2 progress.

Deadline: two weeks

Postponed

Proposal 7: For positioning Case 1, UE can report a change in applicable functionality by sending applicable functionalities upon change via LPP signaling (unsolicited information transfer). UE can also provide applicable functionality reporting as a response to LMF request (solicited information transfer). FFS on the order of inference configuration and applicable functionality reporting, FFS on functionality activation.

[R2-2407365](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407365.zip) Functionality definition and applicability related report LG Electronics discussion Rel-19 NR\_AIML\_air-Core

Proposal 1. Before (i) idefining configured functionality and (ii)clarifying relationship between configured functionality and applicable functionality, RAN2 to wait RAN1 input to address below ambiguities:

* Ambiguity on relation between NW sided additional condition and full inference configuration: For the network-sided additional conditions, whether they are partial/separate configuration of full inference configuration (At least for proactive reporting)
* Ambiguity on timing for full inference configuration: Whether full inference configuration needs to be provided to UE before applicable functionality reporting (At least for reactive reporting)
* Ambiguity on range of full inference configuration: Beam related configuration like set A and set B, other CSI framework related configuration, or outside of CSI framework (For both proactive and reactive reporting)

[R2-2407189](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407189.zip) Applicable functionality reporting InterDigital discussion Rel-19 NR\_AIML\_air-Core

Proposal 1: Postpone conclusion on applicable functionality reporting procedure until RAN1 progresses on: 1) definition of NW-side additional conditions; 2) relationship of Associated ID and inference configuration information; and 3) required configuration(s) for applicable functionality determination.

[R2-2406259](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406259.zip) Reporting of applicable functionalities OPPO discussion Rel-19 NR\_AIML\_air-Core

[R2-2406260](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406260.zip) Other LCM for UE-sided model for Beam Management use case OPPO discussion Rel-19 NR\_AIML\_air-Core

[R2-2406335](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406335.zip) LCM for UE-sided model for Beam Management use case Fraunhofer IIS, Fraunhofer HHI discussion

[R2-2406381](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406381.zip) Report of [POST126][032][AI/ML PHY] LCM (Intel/Samsung)\_Phase 2 Intel Corporation discussion Rel-19 NR\_AIML\_air-Core

[R2-2406382](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406382.zip) Beam management UE-sided model LCM signaling Intel Corporation discussion Rel-19 NR\_AIML\_air-Core

[R2-2406387](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406387.zip) Discussion on LCM for UE-sided model for Beam Management vivo discussion Rel-18 NR\_AIML\_air-Core

[R2-2406537](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406537.zip) Discussion on the LCM for UE-sided Model for Beam Management Fujitsu discussion Rel-19 NR\_AIML\_air-Core

[R2-2406564](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406564.zip) Discussion on LCM for UE-sided model NEC discussion Rel-19 NR\_AIML\_air-Core

[R2-2406578](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406578.zip) Availability and Applicability Reporting for UE-side Functionality MediaTek Inc. discussion

[R2-2406613](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406613.zip) Some aspects for model inference Sony discussion Rel-19 NR\_AIML\_air-Core

[R2-2406643](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406643.zip) On LCM for UE-sided models Qualcomm Incorporated discussion Rel-19

[R2-2406672](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406672.zip) Further discussion on LCM procedure of UE-sided model for AI/ML based beam management Apple discussion Rel-19 NR\_AIML\_air-Core

[R2-2406701](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406701.zip) Discussion on LCM for UE-sided model for BM Xiaomi discussion

[R2-2406758](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406758.zip) Discussion on LCM for UE-sided model for Beam Management Spreadtrum Communications discussion Rel-19

[R2-2406827](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406827.zip) Discussion on LCM for UE-sided model for Beam Management use case CATT discussion Rel-19 NR\_AIML\_air-Core

[R2-2406876](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406876.zip) LCM for UE-sided model in beam management Lenovo discussion Rel-19

[R2-2406934](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406934.zip) Discussion on LCM for UE-sided model for Beam Management use case Huawei, HiSilicon discussion Rel-19 NR\_AIML\_air-Core

[R2-2406963](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406963.zip) Discussion on LCM for UE-sided model for BM CMCC discussion Rel-19 NR\_AIML\_air-Core

[R2-2407066](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407066.zip) LCM for UE-side model for Beam Management Nokia discussion Rel-19 NR\_AIML\_air-Core

[R2-2407154](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407154.zip) Discussion on LCM for UE-sided model for Beam Management Sharp discussion

[R2-2407164](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407164.zip) Remaining issues in LTM for UE-sided model Samsung discussion Rel-19 NR\_AIML\_air-Core

[R2-2407251](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407251.zip) LCM for UE-side models for beam management Ericsson discussion NR\_AIML\_air-Core

[R2-2407435](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407435.zip) Further Discussion on LCM for UE side Model ZTE Corporation discussion Rel-19 NR\_AIML\_air-Core

[R2-2407457](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407457.zip) LCM for UE-sided model for beam management use case TCL discussion

[R2-2407471](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407471.zip) Considerations for the Five Functionalities Conditions Kyocera discussion

[R2-2407485](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407485.zip) Discussion on Functionality-based LCM of UE-sided Model for Beam Management Use Cases CEWiT discussion Rel-19 NR\_AIML\_air-Core

[R2-2407488](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407488.zip) Discussion on LCM for UE-Side Models (Beam Management) Futurewei discussion Rel-19

#### 8.1.2.3 LCM for Positioning use case

No Contributions expected for this meeting, waiting for further RAN1 progress.

should focus on UE-sided model, but can discuss NW-sided model and should focus on 1st priority positioning use cases

Not treated

[R2-2406334](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406334.zip) Lifecycle management for positioning use-cases Fraunhofer IIS, Fraunhofer HHI discussion

[R2-2407456](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407456.zip) Discussion on Dynamic Capability Report for Positioning Sharp discussion

=> Withdrawn

### 8.1.3 NW side data collection

Contributions should focus on the mechanisms and principles identified for data collection for network side model training during rel-18

##### **Starting/stopping of data collection:**

[R2-2406383](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406383.zip) Enhancements for NW-side model training data collection Intel Corporation discussion Rel-19 NR\_AIML\_air-Core

*Proposal 1: Network controls the time duration of how UE performs training data collection in below two options:*

*Option 1: Network monitors a timer by implementation and releases training data collection configuration upon completion,*

*Option 2: Network configures a time window/timer of when UE performs training data collection via RRC signaling.*

*- Oppo thinks that option 2 would make UE*

*Proposal 2: UE stores the logged training data at AS layer with a minimum AS layer memory size supported by the UE. FFS on the memory size.*

*Proposal 3: When UE reaches its buffer limitation, following two options can be considered up to UE’s implementation:*

*1) stop measurements and reports the logged measurement reports to network based on network configuration*

*2) continuously perform training data collection measurement, releases the most oldest data in the buffer, then reports to network based on network configuration*

=> Noted

[R2-2406573](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406573.zip) Enhanced MDT for Data collection for Network Side Model Training MediaTek Inc. discussion

*Proposal 3: As the baseline approach, the UE initiates the collection and logging of L1 measurement results once it receives the measurement configuration for AI/ML-enabled features/FGs.*

- Qualcomm thinks that gNB will provide different RS configuration for the UE to measure so they can be activated/deactivated by the NW. IT should not be activated based on configuration.

- Nokia thinks that the network should be in charge of activation/deactivation.

- ZTE thinks that baseline should be based on configuration and it should be FFS whether it can be further activated/deactivated.

- Apple is not sure about the gain of having dynamic activation/deactivation.

- Lenovo thinks that can be multiple configuration and the UE would measure when certain conditions are met.

*Proposal 4: Other criteria to control UE data collection and logging for model training are considered, including the UE memory, power state and link quality.*

=> Noted

Discussions

- LG thinks that memory can be a consideration but the link quality is not necessary as the network can control the stopping

- ZTE explains that MDT memory and IDC can stop the logging

- Huawei wonders if we need a standardized solution

- Oppo thinks we need to differentiate for the case

Power state

- Apple, ZTE, Lenovo would like to consider power state from the UE . Qualcomm thinks it can be very vague if we specify it. Nokia thinks that this isn’t the highest priority. Mediatek thinks we need to consider as the UE needs to stay in connected mode long time. Vivo agrees with MEdiatek. Qualcomm agrees that the network shouldn’t keep the UE in connected just to do data collection, so we should consider it. Xiaomi, CATT and Oppo would like to consider but is not sure how we would specify it.

*Power UE data collection and logging for model training are considered, including the UE memory, power state*

##### **Event based/on-demand reporting:**

[R2-2406673](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406673.zip) Further discussion on NW-sided data collection Apple discussion Rel-19 NR\_AIML\_air-Core

*Proposal 6: Support the following event reporting of logged L1 measurement:*

* *AS buffer based event reporting (e.g. when UE’s AS buffer to store L1 measurement logging is full)*
* *Radio condition based event reporting (e.g. reuse legacy A1/A2 event)*

- Interdigital asks what is the use case for reporting for radio condition based. It may make sense for logging purposes but not reporting.

*Proposal 7: Support NW requested reporting of logged L1 measurement by reusing RRC message pair UEInformationRequest / UEInformationResponse.*

=> Noted

[R2-2407366](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407366.zip) NW side data collection LG Electronics discussion Rel-19 NR\_AIML\_air-Core

*Proposal 2. To report data, to consider report type in RRC: periodic, event-based, on-demand request*

*Proposal 3. To discuss whether there need additional condition to report with respect to UE’s memory size. The straight forward way is to report collected data when the number of data from lower layer is larger than a threshold.*

=> Noted

[R2-2406258](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406258.zip) Data Collection for Network Side Model Training OPPO discussion Rel-19 NR\_AIML\_air-Core

Proposal 5: For data collection for NW-sided BM model training, postpone the discussion on whether to introduce event-based reporting.

[R2-2407040](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407040.zip) Discussion on NW-side data collection Samsung R&D Institute UK discussion

Proposal 3c. RAN2 will not pursue event-based reporting.

**Discussion on AS buffer based event reporting**

**-** Qualcomm doesn’t thinks that makes sense it should just be based on NW request. Qualcomm thinks that the UE would always result in a failure. LG thinks that event based report can be beneficial.

**-** Ericsson thinks that instead of reporting it can send an availability reporting. Qualcomm, Interdigital, CATT, Apple and ZTE think it is a good idea. Samsung doesn’t think this is urgent so periodic reporting is sufficient.

**-** ZTE thinks that the AS buffer based is a good solution.

**-** Vivo thinks that periodic reporting would be enough.

**-** Lenovo thinks that buffer based makes sense as instead of losing data we can provide the data to network and keep logging after.

**-** Huawei thinks that periodic is enough and what are the extra benefits.

**-** Interdigital thinks that if we have event based we don’t need periodic reporting.

**-** Nokia thinks that if we have buffer based event reporting we should report right away rather than sending availability indication as a separate message.

**-** Apple is concerned that the network doesn’t know that the UE has stopped logging.

**-** Oppo thinks that event based may cause congestion in the network. Ericsson thinks that is why we need availability indication. LG and Mediatek agrees with Ericsson.

**-** Xiaomi this is only useful when the UE buffer is full.

**Discussion on demand reporting**

- Interdigital thinks that this should be base line. LG supports and if we have availability indication this needs to be supported. Ericsson thinks this is only linked to availability indications. ZTE doesn’t thinks this should be linked to availability, the NW can request the logged data at any time. Samsung asks what is the difference between aperiodic and on-demand. Nokia doesn’t think that availability is needed.

**Agreements**

1. As the baseline approach, the UE receives the measurement configuration for AI/ML-enabled features/FGs for data collection and logging of measurements. The network can explicitly configure the UE whether the corresponding data collection and logging (if supported) should be immediately started. FFS if multiple configurations can be provided to the UE. FFS if dynamic activation/deactivation is support.
2. UE stores the logged training data at AS layer with a minimum AS layer memory size supported by the UE. FFS on the memory size. This is across all use cases
3. When UE reaches its buffer limitation the UE stops measurement for data collection purposes and logging.
4. Measurements for data collection purposes and logging based can be controlled based on power state of the UE. It is up to UE implementation how the UE determines power state. FFS whether the UE stops autonomously or if it reports to the network .
5. FFS whether AS buffer event based reporting is supported. FFS if we send availability indication or full report if it is supported
6. FFS on event based data collection/logging
7. On-demand request from the network is supported. FFS details on signalling

##### **Handling of large logs:**

[R2-2406388](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406388.zip) Discussion on NW side data collection framework vivo discussion Rel-18 NR\_AIML\_air-Core

*Proposal 6. When a single RRC message is not sufficient to report logged data, RRC message segmentation is used to report logged data.*

=> Noted

[R2-2407248](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407248.zip) NW-side data collection for beam management use cases Ericsson discussion NR\_AIML\_air-Core

*Proposal 2: The UE implementation can determine how many entries to include in the list radio measurements information, such that the maximum PDCP SDU size is not exceeded. No standardized RRC segmentation procedure is needed (as for the logged MDT measurements).*

*Proposal 3: In case all the collected data do not fit into a single RRC message, RAN2 to discuss:*

*a. Whether and how the UE should inform the network about remaining collected data to be transmitted.*

*b. When the UE should transmit remaining collected data, e.g. in following RRC message(s) based on SRB priority, upon gNB request, at the next periodic transmission occasion, etc.*

=> noted

[R2-2406702](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406702.zip) Discussion on NW side data collection Xiaomi discussion

*Proposal 12: Up to UE implementation to send multiple RRC message to carry data, if single RRC message is not sufficient to carry all data.*

=> Noted

**Agreements**

1. *The UE implementation can determine how many entries to include in the list radio measurements information, such that the maximum PDCP SDU size is not exceeded. No standardized RRC segmentation procedure is needed (as for the logged MDT measurements)*
2. Data collection report will not be transmitted over SRB1. FFS which SRB is used.

Discussion on SRBs used

- Qualcomm asks which SRB we would send it on. Interdigital thinks that it shouldn’t be SRB1. LG thinks we can follow MDT over SRB2. Qualcomm thinks that even SRB2 is priority SRB and this is not urgent. Nokia thinks that it should be low priority SRB. Oppo thinks that if we use low priority SRB, periodic reporting is useless.

[R2-2406498](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406498.zip) AIML MDT-based data collection for NW-side model NEC discussion Rel-19 NR\_AIML\_air-Core

[R2-2406503](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406503.zip) NW side data collection TCL discussion Rel-19

[R2-2406538](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406538.zip) Discussion on NW side Data Collection for Beam Management Fujitsu discussion Rel-19 NR\_AIML\_air-Core

[R2-2406539](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406539.zip) Discussion on NW side Data Collection for Positioning Fujitsu discussion Rel-19 NR\_AIML\_air-Core

[R2-2406644](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406644.zip) On Network Side Data Collection Qualcomm Incorporated discussion Rel-19

[R2-2406776](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406776.zip) Discussion on NW side data collection for AI-ML based positioning accuracy enhancement Baicells discussion

[R2-2406828](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406828.zip) Consideration on NW side data collection CATT discussion Rel-19 NR\_AIML\_air-Core

[R2-2406877](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406877.zip) Data collection for NW-sided model training in beam management Lenovo discussion Rel-19

[R2-2406878](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406878.zip) Data collection for NW-sided model training in positioning Lenovo discussion Rel-19

[R2-2406964](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406964.zip) Discussion on NW side data collection CMCC discussion Rel-19 NR\_AIML\_air-Core

[R2-2407067](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407067.zip) Data Collection for Training of NW-side models Nokia discussion Rel-19 NR\_AIML\_air-Core

[R2-2407243](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407243.zip) Data Collection for Network-Sided Model Training InterDigital Inc. discussion Rel-19 NR\_AIML\_air-Core

[R2-2407331](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407331.zip) Discussion on NW-sided data collection for training Huawei, HiSilicon discussion Rel-19 NR\_AIML\_air-Core

[R2-2407417](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407417.zip) Discussion on NW-side Data Collection for Positioning Sharp discussion

[R2-2407436](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407436.zip) Further Consideration on NW side Data Collection ZTE Corporation discussion Rel-19 NR\_AIML\_air-Core

[R2-2407489](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407489.zip) Discussion on Data Collection for NW-side Model Training Futurewei discussion

[R2-2407535](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407535.zip) Discussion on Network Side Data Collection Rakuten Mobile, Inc discussion Rel-19

### 8.1.4 UE side data collection

*Study part of WID - Contributions should focus on the mechanisms identified for data collection for UE side model training during rel-18*

*Including outcome of [POST126][034][AIML PHY] TP for data collection (Ericsson)*

*Contributions should focus to conclude remaining FFSs in table and any potential recommendations for RANP 105.*

##### **Input for TR regarding UE data collection:**

[R2-2407209](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407209.zip) RAN2 inputs to TR 38.843 Ericsson draftCR Rel-19 38.843 18.0.0 F NR\_AIML\_air-Core

=> The draft CR is updated in R2-2407807

R2-2407802 RAN2 inputs to TR 38.843 Ericsson draftCR Rel-19 38.843 18.0.0 F NR\_AIML\_air-Core

[R2-2407807](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407807.zip) RAN2 inputs to TR 38.843 Ericsson draftCR Rel-19 38.843 18.0.0 F NR\_AIML\_air-Core

=> The TP is endorsed and will be sent to RAN1 to be merged in final TR CR

[R2-2407773](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_126\Docs\R2-2407773.zip) Report of [AT127][021][AIML PHY] UE side data collection InterDigital Inc. (Rapporteur) discussion Rel-19 NR\_AIML\_air-Core

Proposal 1: Full controllability to be defined as below:

MNO can control the management of the data collection and transfer, without a need for an SLA.

- Samsung thinks that data collection should not be part of this discussion.

- BT and DT

Proposal 2: Visibility of data content signifies that the MNO can be aware of, access, and comprehend the transferred data, without a need for an SLA. FFS if further refinements/modifications to this definition are needed (e.g. on the capability of the MNO to anonymise the collected data).

Option 1b controllability

- Mediatek thinks that it is absolutely true that RAN doesn’t have any controllability.

Proposal 3: RAN2 to discuss the need for partial visibility (for solutions 1b/2/3).

- Qualcomm asks if it is possible to achieve partial visibility. Nokia explains that there are many ways to do partial visibility, it can be done via a container and an IE indicating the container. Xiaomi thinks that partial visibility should not be removed as this would allow the UE to transmit proprietary information.

- Apple think that partial visibility is not discussed before in 3GPP. Ericsson and Huawei asks what is partial visibility, if it proprietary information then the UE can send it over the top. CMCC and Verizon agrees.

- BT thinks that we have spoken about visibility for a while now and it is possible, even if it is for the first time. It should not be precluded. Samsung also things that there are some benefits.

**Agreements:**

- update note above table to add controllability can be achieved via SLA:

Note: RAN2 discussed that, except for the case of standardized data content, the data content visibility and any level controllability could be achieved via SLA (Service Level Agreement). However, SLA is out of RAN2 scope.

- update note1 in table as follows:

Note 1: Full controllability: The MNO has the capability to manage data transfer to the server for UE-side data collection without the need of SLA. This includes at least initiating, terminating, and fully managing data transfer. ~~FFS if further refinements/modifications to this definition are needed.~~

- Update Note 2

- Note 2: Visibility of data content signifies that the MNO can at least, be aware of, access, and comprehend the data ~~during transfer~~ without the need of SLA. ~~FFS if further refinements/modifications to this definition are needed (e.g. on the capability of the MNO to modify the collected data).~~

- Table modified by chair during online time uploaded in R2-2407785 is agreable and will be reviewed over email for editorial corrections

* [AT127][028][AI PHY] TR update (Ericsson)

Intended outcome: final review of UE data collection, endorsement of draft CR (R2-2407807) , and LS to RAN1 (R2-2407808) to provide the endorse CR for TR

Deadline: 08-23-24

[R2-2407808](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407808.zip) LS to RAN1 on TR 38.843 update Ericsson LS out Rel-19 NR\_AIML\_air-Core To:RAN1

=> The LS is approved

[R2-2406965](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406965.zip) Discussion on UE side data collection CMCC, China Unicom, NTT DOCOMO, ZTE, OPPO discussion Rel-19 NR\_AIML\_air-Core

Proposal 1: RAN2 to revise the full controllability definition as follows:

Note 1: Full controllability on data collection means all the procedures as well as the control info, e.g. data collection configuration, involved in the procedures for data collection are understandable and managed by MNO, MNO can do adjustment anytime without any SLA with third party.

Proposal 2: RAN2 to revise the definition of full visibility as follows:

Note 2: Full visibility of data content signifies the capability of the MNO to decode and process, e.g. modify/use, the data using 3GPP spec and/or standardized spec out of 3GPP without SLA with third party.

[R2-2407250](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407250.zip) UE-side Data Collection Ericsson discussion NR\_AIML\_air-Core

Proposal 1 Clarify in the TR that for option 1b/2/3, the final termination entity can be either the Server for data collection for UE-side model training (inside the MNO), or the OTT server (outside the MNO).

Proposal 2 Clarify in the TR that the full controllability of the UE-side data collection implies the MNO´s ability to manage both the data collection process (including e.g. the ability to allow/reject/initiate/terminate/pause the data collection process) and the data transfer (as already agreed).

Proposal 3 From RAN2 point of view, AIML-specific controllability full or partial should be possible in all the options (except option 1a). The level of controllability should depend on the MNO decision. RAN2 consult SA2 to discuss the details of how controllability can be achieved for the various options.

Proposal 4 Standardized full or partial visibility should be possible in all the options (except option 1a). RAN2 consult SA2 to discuss the details of at least option 1b/2 and 3 (if UP solution is adopted).

Proposal 5 No standardized visibility should be considered only for option 1a.

[R2-2406829](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406829.zip) Consideration on UE side data collection CATT discussion Rel-19 NR\_AIML\_air-Core

Proposal 1: Remove “FFS: UP tunnel” in the aspect of UP/CP tunnel for option 2/3.

Proposal 2: Remove “FFS: LPP” in the aspect of UP/CP tunnel for option 2.

Proposal 3: If Proposal 1 is agreed, remove FFS: the protocol layer for UP tunnel in option 2/3.

Proposal 4: Capture No standardized visibility for Visibility of data content in MNO and Data format for option 1b.

Proposal 5: Partial/partially visibility can be defined as: the MNO is aware of the procedure/PDUs data collection procedure, but has limited access/comprehension to some elements of the data content.

Proposal 6: For option 2, Partial visibility for partially standardized data content in MNO and Data format is captured into TR 38.843.

Proposal 7: For option 2, FFS Opt C) No standardized visibility in the TR 38.843 is removed.

Proposal 8: For option 3, Partial visibility for partially standardized data content in MNO and Data format can be captured into TR 38.843.

Proposal 9: For option 3, FFS Opt C) No standardized visibility in the TR 38.843 is removed.

##### **Requirements:**

[R2-2407413](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407413.zip) Data collection for the training of a UE-sided model InterDigital Inc., Ericsson, Nokia, T-Mobile USA Inc., BT PLC., Deutsche Telekom, Verizon, NTT Docomo, Charter Communications Inc. discussion Rel-19 NR\_AIML\_air-Core

Proposal 1: The network should have full control of the data collection process for the training of a UE-sided model, including the initiation, termination and management of the data collection and data transfer.

[R2-2406674](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406674.zip) Further discussion on UE-sided data collection Apple discussion Rel-19 NR\_AIML\_air-Core

Proposal 11: Remove the FFS on “need for control” in MNO concern because “Controllability of MNO on data transfer” is one evaluation aspect of UE-sided data collection solution but it is not a concern.

Proposal 14: Before making conclusion of option 1b/2/3, RAN2 discuss why UE-sided data collection needs to be enhanced with MNO controllability for training data transfer and visibility of data content, including any blocking issue of solution 1a for RAN1 identified AI/ML use cases and how much system benefit the enhancement can achieve.

##### **Recommendations:**

[R2-2406965](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406965.zip) Discussion on UE side data collection CMCC, China Unicom, NTT DOCOMO, ZTE, OPPO discussion Rel-19 NR\_AIML\_air-Core

Proposal 15: From RAN2 point of view, Option 2 and Option3 is recommended for data collection for UE-sided model training.

Proposal 16: Even if Option 2 and Option 3 is recommended by RAN2, data privacy issue will be addressed for Option 2 and Option 3 when designing the solution details.

[R2-2406407](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406407.zip) Data collection for UE side model training Xiaomi discussion Rel-19 NR\_AIML\_air-Core

Proposal 5: For UE side data collection, it is recommended to select Option 2 with partial visibility for partially standardized data content, with standardized fields for data visibility and container for UE/chipset proprietary information.

[R2-2407332](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407332.zip) Discussion on UE-sided data collection for training Huawei, HiSilicon, CAICT discussion Rel-19 NR\_AIML\_air-Core

Proposal 9: For the study objective of UE-sided model training data, we recommend to only adopt Option 1a as the candidate solution.

[R2-2406389](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406389.zip) Discussion on UE side data collection vivo discussion Rel-18 NR\_AIML\_air-Core

Proposal 11. No down-selection of options for UE-sided data collection is expected in RAN2.

Proposal 12. RANP to further discuss the options based on the analysis of RAN2.

* [AT127][021][AI PHY] UE Data Collection ()

Intended outcome: face to face discussion on table FFS

Deadline: 08-23-24

[R2-2407785](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_126\Docs\R2-2407785.zip) Data Collection Table modified online Chairlady discussion Rel-19 NR\_AIML\_air-Core

[R2-2406340](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406340.zip) Remaining issues for Data Collection for UE side Model training NEC discussion

[R2-2406384](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406384.zip) Discussion on UE-sided model training data collection Intel Corporation discussion Rel-19 NR\_AIML\_air-Core

[R2-2406572](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406572.zip) Discussion on the FFS Issues of UE-Side Data Collection MediaTek Inc. discussion

[R2-2406645](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406645.zip) On UE Side Data Collection Qualcomm Incorporated discussion Rel-19

[R2-2407068](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407068.zip) Data Collection for Training of UE-side models Nokia discussion Rel-19 NR\_AIML\_air-Core

[R2-2407437](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407437.zip) Further Consideration on UE side Data Collection ZTE Corporation discussion Rel-19 NR\_AIML\_air-Core

[R2-2407490](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407490.zip) Discussion on Data Collection for UE-side Model Training Futurewei discussion Rel-19

[R2-2407503](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407503.zip) Remaining FFSs on data collection options for UE-side model training Samsung discussion Rel-19 NR\_AIML\_air-Core

## 8.2 Ambient IoT

(FS\_Ambient\_IoT\_solutions,leading WG: RAN1; REL-19; SID: [RP-240826](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_103/Docs/RP-240826.zip))

Time budget: 2 TU

Tdoc Limitation: 4 tdocs

### 8.2.1 Organizational

LS, Rapporteur input, including workplan, etc.

[R2-2406237](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406237.zip) LS on Clarification of requirements for Ambient IoT (S2-2407231; contact: Ericsson) SA2 LS in Rel-19 FS\_Ambient\_IoT\_solutions To:SA1, RAN1, SA3 Cc:RAN2, RAN3

=> Noted

[R2-2406271](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406271.zip) TP for TR 38.769 update Huawei, CMCC, T-Mobile USA discussion Rel-19 FS\_Ambient\_IoT\_solutions

=> The TP is endorsed as baseline for further updates

=> The TP should be updated to follow 3GPP drafting rules

* [POST127][022][AIoT] TP for TR (Huawei)

Intended outcome: Updated TP based on agreements from RAN2 127

Deadline: long

### 8.2.2 Functionality aspects

Contributions should focus on the functionalities required for A-IoT devices, including security related aspects, need of resource allocation/scheduling, segmentation/reassembly (pending RAN1 progress), QoS handling, higher layer repetition, message size/status indicationetc.?

Segmentation

[R2-2406654](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406654.zip) Ambient IoT transport block size and MAC layer segmentation MediaTek Inc., Samsung, vivo, ZTE Corporation, Sanechips, Qualcomm Incorporated discussion Rel-19 FS\_Ambient\_IoT\_solutions

*Proposal 1: Indicate to RAN1 that RAN2 can define MAC PDU sizes to correspond to the capacity of the PHY layer, and RAN2 will accordingly follow RAN1 on the definition of the TB size.*

*Proposal 2: Ask SA2 what data block sizes are expected to be delivered from upper layers to AIoT AS layers.*

*Proposal 3: Inquire of RAN1 regarding the conditions under which different TB sizes may be used in both the D2R and R2D directions.*

- Nokia supports thinks that we should add SA3 in cc. Lenovo also supports.

- Lenovo thinks that for coverage purposes the TB sizes may be smaller.

- CATT supports RAN1 LS but doubts that SA2 can give us a clear answer on this so perhaps LS to SA2 is not needed.

- CMCC and Intel thinks that RAN1 is anyways discussing this so it doesn’t help.

- Vodafone thinks that application layer can support segmentation, so we can ask SA2 is they can support segmentation.

- CCMC thinks that from RAN2 point of view there is no need for segmentation.

- ZTE thinks that whether segmentation is needed depends on many aspects. But upper layers cannot do segmentation based on physical layer conditions and TBS. WE should understand the functionality need and if we want to do segmentation it should be done in lower layers. Ericsson agrees.

- Interdigital thinks that we can provide information to RAN1 to help us make a decision.

- Telit thinks we should ask about typical size.

- Qualcomm and vivo thinks that if we were to do segmentation it should be done in L2 as it is simpler than doing it in RAN1

**Agreements**

- Send an LS to RAN1 regarding TBS size. Ask SA2 on the max and typical upper layer packet size.

* [AT127][023][AIoT] LS to RAN1/SA2 (Mediatek)

Intended outcome: Approval of LS

Deadline: 08-23-24

[R2-2407830](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407830.zip)

=> The LS is approved in R2-2407831

[R2-2406942](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406942.zip) Views on the segmentation of A-IoT Huawei, HiSilicon, Wiliot Ltd., Quanray, Telit Communications S.p.A., Nordic Semiconductor ASA, China Unicom, China Telecom, China Southern Power Grid, NTT DOCOMO INC., LG Electronics Inc., Spreadtrum Communications, Xiaomi, ASUSTeK, Kyocera, ETRI, CAICT, NEC discussion Rel-19

Proposal 1: For A-IoT device, RAN2 assumes that there is no need of L2 AS segmentation functionality. (This assumption can be revisited, if needed, based on other WGs further progress.)

- Qualcomm and Samsung thinks that we are jumping to a conclusion prematurely before even getting an answer from RAN1. Samsung thinks that we can define a simple segmentation if needed. ZTE agrees and we can have segmentation with no SN and it can be needed.

- LG thinks that segmentation will cause complexity. CATT doesn’t think that there will be a complexity as we can do buffer free segmentation. Xiaomi thinks that you will always need a buffer for segmentation.

=> Noted

Charging Impacts

[R2-2406590](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406590.zip) Energy Status report Vodafone, Qualcomm, Nokia, Interdigital, Xiaomi, Samsung, Deutsche Telekom discussion Rel-19

*Proposal 1: It is proposed to include* *energy status report to be delivered from the UE to the reader in case there the device does not have anergy for the follow up messages*

*Proposal 2: It is proposed to discuss if one bit of information is sufficient for any use case highlighted above or there is a need to represent the energy status in a different way (e.g. sufficient energy for sending of a particular number of bits or an expected time when the device will be ready for subsequent operations or any others)*

- ZTE thinks that some information may be useful on the reader side but wonders if the reader can get this information based on device type. Vodafone thinks that we have a lot of things that we are studying but there may be device type that can’t provide the information but for others it can be useful.

- Lenovo and Nokia are supportive. Lenovo is not convinced that 1 bit indication would be sufficient.

- Intel asks what is the reader action when it receives this indication and whether the intention is for reader to keep the status. Qualcomm explains that the reader would then wait until the device has sufficient energy.

- Huawei thinks that we can study but we shouldn’t make any agreements on the need to use it or not.

- Futurewei thinks that this shouldn’t be a standalone message. RAN1 is not going in this direction and may specify states.

=> Noted

Message Size/Status Indication

[R2-2406769](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406769.zip) Discussion on functionalities required for A-IoT OPPO discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 3 RAN2 to support device message size/status indication.

=> Noted

[R2-2406977](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406977.zip) Discussion on functionality for A-IoT CMCC discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 6: Message size or status reporting is not considered for A-IoT is this release.

=> Noted

[R2-2406608](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406608.zip) Discussions on functionalities required for AIoT Samsung discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 2: RAN2 is kindly asked to agree that the device can provide the message status information, e.g., number of bits for transmission, time length for D2R transmission, to the reader.

=> Noted

*Discussions*

- LG doesn’t support message size reporting as the message size should be known to the reader so the reader can schedule accordingly. Intel thinks that there is also dependency on RAN1 discussion. Xiaomi thinks that this would only be needed if segmentation is needed.

- ZTE thinks that we say that it is useful for the reader to know the message size. Qualcomm thinks that we are talking about the remaining size.

- Interdigital thinks that for segmentation it will be needed and also for command.

- Vodafone asks if this is a one shot indication. ZTE confirms

**Agreements**

- RAN2 will study the need and use of energy status report to be delivered from the device to the reader in case the device does not have energy for the follow up messages. FFS details on signaling

- RAN2 will study the need and use of a simple message “size” reporting to the reader

Visibility of AIOT Information

[R2-2406751](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406751.zip) Discussion on the functionalities required for Ambient IoT Spreadtrum Communications discussion Rel-19

*Proposal 11: The following information is visible to the reader：*

*- The service type of A-IoT (i.e. inventory and/or command);*

*- The service is targeted on single or multiple devices;*

*- The number of devices, if the service is targeted on* multiple devices.

=> Noted

[R2-2406390](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406390.zip) Discussion on functionality aspects for Ambient IoT vivo discussion Rel-18 FS\_Ambient\_IoT\_solutions

*Proposal 6 The reader executes the AS procedure in response to the service request from CN based on the necessary information derived from the received service request, wherein the necessary information may comprise:*

*- the service type information, e.g. inventory, read/write command.*

*- the ID of the target device.*

*- the population of target devices.*

*- D2R data/message size.*

*- periodicity to execute the service request.*

*- QoS requirement (e.g. e2e latency and target successful inventory ratio)*

=> Noted

[R2-2406709](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406709.zip) Functionality for Ambient IOT InterDigital discussion Rel-19 FS\_Ambient\_IoT\_solutions

*Proposal 8: RAN2 assumes the AS layer has some visibility of the command or command type carried by a R2D PDU (e.g., for the reader to determine the transmission behaviour from a device).*

*Proposal 9: RAN2 assumes that commands (e.g., read/write/inventory/disable) themselves are carried over the AIOT interface as upper layer data.*

=> Noted

Discussion

*On need for service type*

- Xiaomi doesn’t think this is necessary.

- Lenovo thinks that we should also be told whether it is for multiple UEs.

**Agreements**

1. At least the following information are considered useful to be visible to the reader from CN

- The service type of A-IoT (e.g. inventory, command) . FFS if more information on command type (e.g. read/write/disable) is useful

- targeted for one or more than one devices;

- approximate number of target devices (if available).

*FFS on mandatory/optional*

2 RAN2 assumes that commands (e.g., read/write/disable) and/or inventory are carried over the AIOT interface as upper layer data.

Temporary Device ID (need, assignment, duration)

[R2-2406737](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406737.zip) Discussion on functionality aspects of Ambient IoT China Telecom discussion

Proposal 4: Whether to introduce temporary ID to identify A-IoT devices needs further discussion.

[R2-2406769](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406769.zip) Discussion on functionalities required for A-IoT OPPO discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 4 A device identifier is used to identify a device during communication with the reader.

Proposal 5 For contention-based random access, the random ID transmitted in Msg1 can be used as the device identifier after the devices receives Msg2 which completes contention resolution.

Proposal 6 For contention-free access, device identifier is allocated by the reader, e.g. in AIoT paging message.

Proposal 7 Device identifier can be updated, e.g. based on the reader’s request.

[R2-2406656](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406656.zip) Ambient IoT data transmission after initial access MediaTek Inc. discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 2: Data can be transferred between the reader and device in the R2D direction as long as the device’s AS identifier (random number or value assigned by the reader) remains valid.

[R2-2406818](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406818.zip) Functionality aspects for A-IoT Ericsson discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 14 Study whether a requirement on how long the AS ID can be kept in memory is feasible and reliable.

L2 Repetitions

[R2-2406459](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406459.zip) A-IoT Functionality ZTE Corporation, Sanechips discussion

Proposal 7: MAC layer should support a mechanism where the upper layer packet/segment is retransmitted when it is not received successfully

[R2-2406751](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406751.zip) Discussion on the functionalities required for Ambient IoT Spreadtrum Communications discussion Rel-19

Proposal 7: R2D repetition can be up to reader implementation.

Proposal 8: D2R repetition can be supported by reader indication or device implementation.

[R2-2406818](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406818.zip) Functionality aspects for A-IoT Ericsson discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 6 RAN2 to study repetitions mechanism in the hypothesis that PHY layer repetitions or just one transmission is not enough to satisfy a success probability requirement at cell edge.

Proposal 7 RAN2 to consider multiple RACH attempts as a mechanism to implement repetitions.

Protocol Stack

[R2-2406540](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406540.zip) Discussions on Functionality Aspect of Ambient IoT Fujitsu discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 1: Only A-IoT MAC layer is needed as AS L2 protocol.

Proposal 2: A-IoT device may be configured via A-IoT MAC layer, using MAC CE-like message.

[R2-2407319](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407319.zip) Views on Functionality Aspects of Ambient IoT Qualcomm Incorporated discussion FS\_Ambient\_IoT\_solutions

Proposal 8: A new simplified AIoT L2 protocol will be introduced.

Proposal 9: Simplified AIoT protocol stack is unified for AIoT CP and UP (i.e. no differentiation between CP and UP protocol stacks).

QoS

[R2-2406608](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406608.zip) Discussions on functionalities required for AIoT Samsung discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 1-2: RAN2 is kindly asked to consider the inventory latency reduction when designing inventory procedure.

Proposal 1-3: RAN2 is kindly asked to discuss whether the inventory + command and command only procedure have the latency requirement or not.

[R2-2406362](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406362.zip) Discussion on protocol stack for ambient IOT Xiaomi discussion Rel-19

[R2-2406377](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406377.zip) Required functions for A-IoT Intel Corporation discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406453](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406453.zip) Considerations for functionality aspects Semtech Neuchatel SA discussion

[R2-2406482](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406482.zip) Discussion on the Functionality Aspects for Ambient IoT CATT discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406505](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406505.zip) Ambient-IoT Functionality Aspects NEC discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406582](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406582.zip) Inventory procedure without permanent device ID VODAFONE Group Plc discussion Rel-19

[R2-2406614](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406614.zip) Considerations on functionality aspects for Ambient IoT Sony discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406666](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406666.zip) Funcitonal Aspects of A-IoT devices Apple discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406812](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406812.zip) Considerations on functionality aspects for Ambient IoT Lenovo discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406941](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406941.zip) A-IoT functionalities Huawei, HiSilicon discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2407063](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407063.zip) Discussion on security aspects for Ambient IoT NTT DOCOMO, INC. discussion Rel-19

[R2-2407126](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407126.zip) Discussion on security related aspects of Ambient IoT devices T-Mobile USA Inc., Ericsson discussion Rel-19 FS\_Ambient\_IoT\_solutions Revised

[R2-2407132](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407132.zip) AIoT Functionality aspects Nokia discussion

[R2-2407231](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407231.zip) Discussion on security related aspects of Ambient IoT devices T-Mobile USA Inc., Ericsson discussion Rel-19 FS\_Ambient\_IoT\_solutions [R2-2407126](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407126.zip)

[R2-2407290](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407290.zip) Discussion on functionality aspects of ambient IoT LG Electronics Inc. discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2407342](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407342.zip) Discussions on functionalities required for A-IoT Communication HONOR discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2407445](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407445.zip) Functionalities for Ambient IoT Kyocera discussion Rel-19

[R2-2407504](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407504.zip) Discussions on functionality aspects for AIoT Futurewei discussion Rel-19 FS\_Ambient\_IoT\_solutions

### 8.2.3 A-IoT Paging

Contributions should focus on paging aspects and content required for Ambient IoT for the different identified procedures (i.e. inventory, inventory + command, command only), including monitoring of DL message and determination of transmission/access occasion.

Paging Triggers/Retransmission

[R2-2407244](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407244.zip) Discussion on DL messages for Ambient IoT UEs Ericsson discussion Rel-19 FS\_Ambient\_IoT\_solutions

[*Proposal 2 The gNB/intermediate UE should be able to trigger multiple/subsequent AIoT paging messages that are associated with the same request from the CN.*](#_Toc174049632)

[*Proposal 3 gNB/intermediate UE provides an ID in the paging message to associate it with a CN request. Details of the ID is FFS.*](#_Toc174049633)

[*Proposal 4 If paging message indicates an ID different that the one indicated in the previous paging message, i.e., paging messages are associated with separate requests from the CN, the device performs the procedure.*](#_Toc174049634)

[*Proposal 5 If paging message is associated with the e.g., same request from the CN, when compared with the previous paging message, the device needs to perform the procedure only if it has not completed the procedure before in one of the earlier rounds that are associated with the same request from the CN. Otherwise, the device can ignore the A-IoT paging message.*](#_Toc174049635)

=> Noted

[R2-2406426](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406426.zip) Discussion on A-IOT paging procedure Xiaomi discussion

*Proposal 8: RAN2 to discuss and support the ~~BS~~ reader to trigger A-IOT paging procedure periodically according to ~~the configuration from~~ ~~CN~~.*

- Apple, Oppo, and Vivo think this should be discussed in SA

- Nokia doesn’t thinks the CN should be in control of the radio resources

=> Noted

Discussion

- CATT ask what is the use case for subsequent paging, if multiple devices failed to answer this paging, it is due to contention conflict and we need to make enhancements to RA.

- Ericsson explains that it is not due coverage but setting the q number properly. Huawei thinks that this is useful and one additional use case is that some devices turn on after the first paging. LG, Docomo, Apple, agrees with Ericsson. Apple explains that the device could have also run out of energy.

- FUturewei asks whether this is for all use cases. MEdiatek and Intel explain that it is use case agnostic.

**Agreements:**

1. Support [mechanism for reader to be able to trigger multiple/subsequent AIoT paging messages that are associated with the same request from the CN.](#_Toc174049632) Study how to avoid duplicated response from devices

Definition of the access occasion

[R2-2407533](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407533.zip) Discussion on Paging procedure for Ambient IoT Philips International B.V. discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 3: Reader may transmit access occasion announcement message.

=> Noted

[R2-2406747](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406747.zip) Discussion on paging procedure of A-IoT Spreadtrum Communications discussion Rel-19

Proposal 1: The boundary of the access occasion can be defined/indicated by the reader sending paging repetition or other message.

=> Noted

Discussion

- Qualcomm and Docomo thinks that RAN1 is discussing this so we should wait. Huawei thinks that from RAN2 perspective we need to understand message. Samsung indication from reader to device to indicate boundary of access occasions.

- Apple, Ericsson, Qualcomm thinks that the paging message would indicate it.

=> wait for further RAN1 progress on indication of the start of access occasion.

Determination of the access occasion in CBRA case

[R2-2407508](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407508.zip) Discussions on AIoT paging Futurewei discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 9. For an AIoT paging message that triggers a random access procedure, the reader should schedule multiple D2R access occasions. An intended device generates an RN within the range of the RNs as indicated in the AIoT paging message, and then uses the RN to determine whether and in which D2R access occasion it can send its response.

[R2-2406710](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406710.zip) Paging Related Aspects for Ambient IOT InterDigital discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 3: A paging message for contention-based access includes parameters that map the device ID to one or more corresponding resources (e.g., access occasions) in a deterministic way.

Proposal 4: A device performing contention-based access may randomly select among the resources determined from the device ID to select the specific resource used for random access initiation (i.e., MSG1). FFS on any resource selection restrictions (e.g., defined by RAN1).

[R2-2407136](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407136.zip) Discussion on A-IoT paging message NTT DOCOMO, INC. discussion Rel-19

Proposal 5. RAN2 wait for RAN1 further progress on details of resources to transmit A-IoT Msg1.

Determination of the access occasion in CFRA case (single device and multiple devices)

[R2-2406960](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406960.zip) Discussion on A-IoT paging CMCC discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 5: There may be no explicit indication of D2R transmission resources when paging a single device.

[R2-2407508](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407508.zip) Discussions on AIoT paging Futurewei discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 8. For an AIoT paging message that triggers a non-RA procedure, if the AIoT paging message is intended for multiple devices, the reader should schedule multiple D2R access occasions, one unique D2R access occasion for each intended device. The intended devices determine their respective D2R access occasions based on a one-to-one mapping between the ranks among the scheduled D2R access occasions and the ranks among the intended devices.

[R2-2407283](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407283.zip) Discussion on A-IoT paging LG Electronics Inc. discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 2: Given that A-IoT paging message including multiple IDs of A-IoT devices could indicate information for resource determination in the RA procedure, RAN2 should confirm the need for A-IoT paging message to include multiple IDs of A-IoT devices without waiting for the SA2 discussion.

[R2-2406856](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406856.zip) Ambient-IoT Paging NEC discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 10: For contention free RA configuration when A-IoT paging message contains multiple IDs of A-IoT devices, mapping relationship between the IDs of A-IoT device and the random access resources is implicitly indicated by the device ID list.

Access type

[R2-2407343](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407343.zip) Discussion on A-IoT Paging HONOR discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 4: RA type, e.g., 2-step/3-step CBRA or CFRA, is provided implicitly or explicitly in A-IoT paging message.

Service type

[R2-2406541](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406541.zip) Discussions on AIoT paging Fujitsu discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 1: Paging type, e.g., for inventory-only, command-only or inventory and command is included in the AIoT paging message.

[R2-2406426](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406426.zip) Discussion on A-IOT paging procedure Xiaomi discussion

Proposal 4: No need to introduce paging type indication to indicate the use case triggered the A-IOT paging procedure, e.g. inventory or command or inventory+command.

Additional contents/indications in the paging message

[R2-2406879](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406879.zip) Discussion on paging procedure for Ambient IoT Lenovo discussion Rel-19

Proposal 8: RAN2 to consider the feasibility of the scenario that one A-IoT device receives the A-IoT paging messages from multiple readers.

[R2-2406960](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406960.zip) Discussion on A-IoT paging CMCC discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 8: To improve the efficiency of A-IoT paging, an identifier of the reader or something like A-IoT paging area can be contained in A-IoT paging.

[R2-2406378](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406378.zip) Consideration on initial trigger message Intel Corporation discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406391](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406391.zip) Discussion on AIoT Paging vivo discussion Rel-18 FS\_Ambient\_IoT\_solutions

[R2-2406483](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406483.zip) Discussion on Paging for Ambient IoT CATT discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406501](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406501.zip) Ambient IoT device paging TCL discussion Rel-19

[R2-2406520](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406520.zip) Discussion on Ambient IoT paging message ASUSTeK discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406609](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406609.zip) Discussion on A-IoT paging Samsung discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406615](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406615.zip) Considerations on paging for Ambient IoT Sony discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406651](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406651.zip) Paging for Ambient IoT Qualcomm Incorporated discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406655](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406655.zip) Procedures and signalling for ambient IoT paging MediaTek Inc. discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406681](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406681.zip) Discussion on Ambient IoT Paging Apple discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406718](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406718.zip) Discussion on paging procedure for Ambient IoT OPPO discussion Rel-18 FS\_Ambient\_IoT\_solutions

[R2-2406738](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406738.zip) Discussion on Ambient IoT Paging China Telecom discussion

[R2-2407021](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407021.zip) Discussion on Paging for A-IoT Transsion Holdings discussion Rel-19

[R2-2407148](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407148.zip) Further consideration on paging procedure for AIoT ZTE Corporation, Sanechips discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2407203](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407203.zip) Ambient IoT identifiers for A-IoT paging Panasonic discussion

[R2-2407212](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407212.zip) Paging procedures for Ambient IoT Nokia France discussion

[R2-2407222](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407222.zip) Discussion on Paging aspects for Ambient-IoT Continental Automotive discussion

[R2-2407261](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407261.zip) Discussion on A-IoT paging Sharp discussion

[R2-2407444](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407444.zip) Consideration of paging for Ambient IoT Kyocera discussion Rel-19

[R2-2407547](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407547.zip) Discussion on A-IOT Paging related aspects Rakuten Mobile, Inc discussion Rel-19

### 8.2.4 A-IoT Random Access

*Contributions should focus on A-IoT random access steps for both 2-step and 3-steps RA, content required for the different procedures, and any additional aspects related to CFRA and CBRA procedures. Failure handling (i.e. msg 3 or paging) will be treated in this AI.*

**3-step CBRA**

MSG1 size

[R2-2406484](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406484.zip) Discussion on the Random Access for Ambient IoT CATT discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 2: With a large enough ID size and slot-ALOHA, it is feasible to use a fixed ID size to generate the random ID for contention resolution. RAN2 to discuss whether the ID size in A-IoT Msg1 can be indicated by the reader.

[R2-2406987](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406987.zip) Further consideration on Ambient IoT random access CMCC discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 7a: A-IoT reader can configure ID length of 3-step CBRA Msg1 to device, can be captured in A-IoT paging message.

Discussion

- Vodafone thinks that it should be a fixed size and not complicate further with configurability. Apple thinks that this is adding complexity.

- Ericsson thinks that the important part is that both reader and device know the message size.

- Qualcomm think that it can be known at the deployment level.

MSG1 ID selection

[R2-2406484](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406484.zip) Discussion on the Random Access for Ambient IoT CATT discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 1: The random ID used in A-IoT Msg1 for “3-step” CBRA is randomly generated by the device within the ID size.

=> Noted

[R2-2406987](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406987.zip) Further consideration on Ambient IoT random access CMCC discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 6: RAN2 to agree to use random ID only in 3-step CBRA Msg1, which may be generated based on device ID.

=> Noted

Discussions

- Ericsson thinks that we should keep both options randomly generated or based on device ID. LG thinks that we should randomly generate. Docomo thinks that if we go based on device ID we would have to ask SA3 if this is causing any security issues. CMCC thinks that it would be based on time as well. Qualcomm, Mediatek, Huawei, ZTE and Apple thinks that we don’t need to specify which option at this stage. This is up to UE implementation.

MSG2 scheduling

[R2-2406682](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406682.zip) Discussion on Random Access for Ambient IoT Apple discussion Rel-19 FS\_Ambient\_IoT\_solutions

*Proposal 7 RAN2 discuss whether resource scheduling for Msg3 transmission is indicated in Msg2 or not.*

*- Option 1: Msg3 transmission resource is allocated together with the Msg1 Tx resource.*

*- Option 2: Msg3 transmission resource is explicitly indicated in Msg2.*

- Apple prefers option 2. Xiaomi and LG thinks that this is RAN1 scope so we can wait.

- Vodafone asks if this would be optional, meaning that the reader can but it doesn’t have to. ZTE thinks that we should at least support msg3 scheduling as a possibility. Huawei thinks this was agreed in RAN1 that R2D will schedule D2R. Qualcomm thinks that this is specific to RAN2 RA and we should agree. Samsung explains that it is agreed in RAN1. Intel explains that RAN1 is discussing whether this is scheduled in PHY or MAC.

- MEdiatek thinks we should be careful with sayng can be explicitly as adding optionality will cause complexity. ZTE agrees but since option 1 is still being discuss we can’t preclude it.

=> RAN2 assumes that Msg3 transmission resource can explicitly be indicated in Msg2 (based on RAN1 agreements/design). Wait for RAN1 for further details.

=> Noted

MSG3 contents

[R2-2407385](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407385.zip) Discussion on random access for ambient IoT Google Ireland Limited discussion FS\_Ambient\_IoT\_solutions

*Proposal 5: Msg3 can contain a buffer status, power status, or device capability information.*

=> Noted

[R2-2406711](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406711.zip) Random Access Procedure for Ambient IOT InterDigital discussion Rel-19 FS\_Ambient\_IoT\_solutions

*Proposal 5: For contention-based random access, MSG3 may contain a control element (e.g., MAC CE) to indicate the device message size/status to the reader.*

=> Noted

Discussions on UE capability

- Intel thinks that it is too early to discuss UE capability. Vodafone that we can restrict the discussion to device type. We should be careful to not increase the message3 size. Nokia agrees. Qualcomm agrees with size limitation but shouldn’t we also consider msg1?

- Lenovo thinks that RAN1 should discuss this.

- Docomo would like to understand whether this is sent by AS or NAS and this also depends on security aspects as well. Ericsson thinks that CN capability report would be more suitable.

- LG doesn’t think we need UE capability as all devices can do RA regardless of capability.

- ZTE thinks that there is also the possibility for the CN to indicate it directly to the reader, so we can minimize the air interface. CMCC agrees as CN has subscriber information and can share the device type with the reader. Also it is not clear whether we need different treatment would depend on further discussions.

- Intel thinks that the coverage is different and that’s why we would need to know to select topology type for example.

- ZTE asks if we should ask SA2 if this is possible. Huawei thinks that we would need to understand the justification. Interdigital explains that RAN1 is discussing device type having different resource capabilities.

- Huawei thinks that we can also differentiate based on device type.

Subesequent R2D message

[R2-2407344](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407344.zip) Discussion on A-IoT random access HONOR discussion Rel-19 FS\_Ambient\_IoT\_solutions

*Proposal 1: For 3-step CBRA, the subsequent R2D transmission after Msg3 could be used for the following one or both potential cases:*

*Confirm the failure/success reception of Msg3.*

*Scheduling/transmission for the following higher layer data.*

=> Noted

[R2-2406899](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406899.zip) Random access procedure for Ambient IoT China Telecom discussion Rel-19 FS\_Ambient\_IoT\_solutions

*Proposal 6: The reader should send a failure indication message to the device if it can't receive the A-IoT Msg3 after sending A-IoT Msg2.*

=> Noted

[R2-2406711](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406711.zip) Random Access Procedure for Ambient IOT InterDigital discussion Rel-19 FS\_Ambient\_IoT\_solutions

*Proposal 7: Absence of the subsequent R2D message (after access procedure) can be interpreted by the device to mean at least successful data transmission and no additional command reception.*

Discussions on subsequent transmission after msg3.

- Docomo asks if the reader can determine whether there was a failure. Intel thinks that there is a case where the reader knows that it hasn’t received but doesn’t know it happens.

- Intel thinks that even the device sends a failure indication the device doesn’t know what to do.

- Xiaomi thinks that there is a case where it can be useful to configure the random value again.

- LG thinks that this would be useful to resolve the collision between device.

- Huawei thinks that the reader can indicate the failure to the device and the device can re-attempt access.

- Ericsson thinks that in some cases it is needed and in some cases it is not needed, so we should study cases it may be needed.

- MEdiatek thinks that if there was data in msg3 we should acknowledge it, but not necessarily a failure indication for msg3.

- Lenovo thinks it is necessary.

- Vodafone is not sure that msg3 contains data, just device ID.

- Interdigital thinks that the device has already completion contention so it would be beneficial for the reader to indicate so it doesn’t have to trigger another message. ZTE agrees.

- Qualcomm thinks that there are different use cases and in some cases it is needed. R2D should indicate whether subsequent acknowledgement should be expected by device.

**Agreements**

- For 3-step CBRA Support fixed random ID size is 16 bit. The ID is randomly generated.

- Failure/success indication of D2R will be studied. FFS if it would be implicit or explicit and for which use case it is needed. FFS whether it is applied only to some cases.

**2-step CBRA**

MSG1 contents

[R2-2406682](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406682.zip) Discussion on Random Access for Ambient IoT Apple discussion Rel-19 FS\_Ambient\_IoT\_solutions

*Proposal 5 Random ID is not included along with the Device ID in A-IoT Msg1.*

=> Noted

[R2-2406716](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406716.zip) A-IoT random access procedure Huawei, HiSilicon discussion Rel-19 FS\_Ambient\_IoT\_solutions

*Proposal 6: For 2-step CBRA, the random ID is also included in A-IoT Msg1, and is echoed in A-IoT Msg2.*

=> Noted

Discussion

- Huawei thinks that if we don’t have random ID in msg1 then what do send back in msg2, as device ID being echoed is too large.

- Samsung thinks that both options are possible, but for option 1 we would have to discuss partial ID or full ID for msg2 and that is more complex.

- CMCC prefers Apple as otherwise what is the difference between 2 and 3 step.

- Docomo thinks that this is dependent on subsequent tranmsion and Intel thinks we need to understand whether we need msg2. The randomID can be useful for command only case.

- CATT thinks that we need the ID to resolve contention and random ID is not preferred as the msg2 can echo back msg1.

- Qualcomm thinks that msg2 is similar to msg4 (i.e. subsequent transmission). We should have a unified solution with the 3 step RA. Vodafone thinks that we should resolve contention based on random number.

- Huawei thinks that for 2-step RA msg2 is needed. Mediatek thinks that it is important for the AS to have an AS device to address the device. ZTE thinks it is important to simplify the devices and including random number will be good.

- Intel explains that there are cases where msg2 is not needed. Inventory only cases – device ID sent to reader and if you don’t receive it you can trigger the device to send the ID again. For command – it may be needed

- Apple doesn’t see the complexity of supporting different design as the UE would only support either 2-step or 4-step. Vodafone thinks that logistically this is difficult to differentiate between devices. Williot agrees that there can devices that only support 2 step RA.

- ZTE thinks that the difference between 2 and 3 step is just the reader indicating to the UE simply send random ID or send data as well.

MSG2

[R2-2406484](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406484.zip) Discussion on the Random Access for Ambient IoT CATT discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 5: The reader confirms the reception of data transmission in A-IoT Msg1 by including the device ID information in A-IoT Msg2. FFS including the whole device ID or partial device ID.

[R2-2407265](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407265.zip) Discussion on random access aspects for Ambient IoT LG Electronics Inc. discussion FS\_Ambient\_IoT\_solutions

Proposal 2. For 2-step CBRA, the A-IOT device transmits the A-IOT device ID and random ID in Msg1. After that, if the A-IOT device receives the same random ID in Msg2, the A-IOT device considers that the contention resolution is successfully completed

**Others**

Determination of type of access

[R2-2406987](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406987.zip) Further consideration on Ambient IoT random access CMCC discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 2c: Reader can indicate CBRA or CFRA for device in A-IoT paging message.

[R2-2407317](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407317.zip) Views on Random Access Aspects of Ambient IoT Qualcomm Incorporated discussion FS\_Ambient\_IoT\_solutions

Proposal 4: Reader may indicate the type of AIoT access (e.g., 2-step or ‘4-step’) to AIoT devices in the initial trigger message.

CFRA procedure

[R2-2406716](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406716.zip) A-IoT random access procedure Huawei, HiSilicon discussion Rel-19 FS\_Ambient\_IoT\_solutions

*Proposal 18: In contention-free access, the A-IoT device directly sends the upper layer data (e.g. device ID) in its very first D2R message after being triggered (i.e. skip contention resolution Msg1/2).*

- Mediatek wonders if we have to confirmed whether the first message needs to be protected. ZTE is concerned that we would go away from the unification, as even for subsequent transmission we would need an ID. Huawei explains that random ID is not needed for contention but maybe for scheduling purposes it would need to be further discussed. Intel also thinks that random ID is needed for subsequent transmissions and context.

- Xiaomi thinks an ID is always needed, so we should try to specify a common procedure.

- LG thinks that the ID Can be fixed in paging message.

- CATT Thinks that the CFRA will give resource so that’s sufficient.

- Qualcomm asks why we use random ID if we have an ID in the reader used for scheduling the initial CFRA message. ZTE asks how long would this ID be and would we want to address the UE with 100bits device all the time. Intel explains that you would need to include the ID again from R2D and that is a large ID. Mediatek thinks that there are also security issues of including the device ID for scheduling purposes. The random ID is needed for subsequent scheduling and we should unify the procedure.

- Nokia thinks that we need an ID but it doesn’t need to be generated by the device. ZTE thinks it is possible for reading to allocate but we are branching it.

- CATT thinks that storing the ID would cause complexity.

- Apple thinks that we would need to maintain some context and random ID could have collision problem.

- MEdiatek thinks that the reader can provide the AS device ID. WE can also consider providing this device ID for CBRA so these id is used for subsequent.

- Vodafone thinks it should be only one approach.

**Agreements**

- for 2step CBRA, RAN2 design will support msg2. Whether it is needed it is up to the reader. FFS when it is needed. For 2-step CBRA (when mgs2 is needed), the random ID (fixed 16bits) is also included in A-IoT Msg1, and is echoed in A-IoT Msg2.FFS if there will be devices support only 2-step RA and any other optimizations will be needed for such devices.

- In contention-free access, the A-IoT device directly sends the upper layer data (e.g. device ID) in its very first D2R message after being triggered (i.e. skip contention resolution Msg1/2). FFS if a short AS ID is also included in the message and what type of ID for scheduling purposes.

- FFS if reader assigns the AS ID for scheduling purposes

Access failure detection

[R2-2407344](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407344.zip) Discussion on A-IoT random access HONOR discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 7: RAN2 to study the failure detection from perspective of both reader and device.

[R2-2406880](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406880.zip) Discussion on random access for Ambient IoT Lenovo discussion Rel-19

Proposal 6: Device detects contention resolution failure if the device does not receive matched ID from the reader in its access occasion.

[R2-2406682](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406682.zip) Discussion on Random Access for Ambient IoT Apple discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 8 RAN2 study two possible solutions for the device to determine random access failure: 1) timer-based; 2) DL-message based.

Re-access following access failure

[R2-2406786](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406786.zip) Discussion on UL multiple access Ericsson discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 12 For handling contention resolution failure and access failure, RAN2 to study the three options:

a. Option 1: a device which experiences contention-failure or access failure, re-accesses in the same round.

b. Option 2: a device which experiences contention-failure or access failure, re-accesses in the next round.

c. Option 3: the round length is adaptive. The round can be adjusted by increasing its length or terminating earlier upon detection of too high collision. More time occasions are added in current round or in the new round (if current one terminated).

Power ramping

[R2-2406392](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406392.zip) Random Access Procedure for A-IoT Device vivo discussion Rel-18 FS\_Ambient\_IoT\_solutions

Proposal 13. Whether to support power ramping for Msg1 transmission is up to RAN1 conclusion and does not affect the RAN2 RACH scheme design.

[R2-2406341](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406341.zip) Random Access for Ambient IoT device NEC discussion

[R2-2406361](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406361.zip) Discussion on access procedure for ambient IOT Xiaomi discussion Rel-19

[R2-2406379](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406379.zip) Consideration on A-IoT Random access Intel Corporation discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406454](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406454.zip) Considerations for Random Access Semtech Neuchatel SA discussion

[R2-2406460](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406460.zip) Unified random-access procedure for A-IoT ZTE Corporation, Sanechips discussion

[R2-2406502](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406502.zip) Random Access for Ambient IOT TCL discussion Rel-19

[R2-2406521](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406521.zip) Discussion on Ambient IoT access message ASUSTeK discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406542](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406542.zip) Discussions on AIoT Random Access Fujitsu discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406616](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406616.zip) Considerations on random access aspects for Ambient IoT Sony discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406752](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406752.zip) Discussion on random access of Ambient IoT Spreadtrum Communications discussion Rel-19

[R2-2406764](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406764.zip) Further discussions on A-IoT random access ETRI discussion Rel-19

[R2-2406770](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406770.zip) Discussion on random access for A-IoT OPPO discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2407022](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407022.zip) Discussion on Random Access for A-IoT Transsion Holdings discussion Rel-19

[R2-2407207](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407207.zip) Discussion on A-IoT random access procedure NTT DOCOMO, INC. discussion Rel-19

[R2-2407220](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407220.zip) Random access for Ambient IoT Nokia France discussion

[R2-2407262](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407262.zip) Discussion on A-IoT random access Sharp discussion

[R2-2407443](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407443.zip) Consideration of random access of Ambient IoT Kyocera discussion Rel-19

[R2-2407458](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407458.zip) Further discussion on Ambient IoT random access Samsung Electronics Czech discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2407509](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407509.zip) Discussions on AIoT random access Futurewei discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2407536](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407536.zip) Discussion on Random Access procedure for Ambient IoT Philips International B.V. discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2407542](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407542.zip) Discussion on Failure Handling Rakuten Mobile, Inc discussion Rel-19

### 8.2.5 Topology 2 considerations

*Contributions should focus on topology 2 related aspects between gNB and reader.*

*General Work Guidelines*

[R2-2406380](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406380.zip) Topology 2 considerations Intel Corporation discussion Rel-19 FS\_Ambient\_IoT\_solutions

*Proposal 1: RAN2 is responsible for the interface between intermediate node (i.e. Reader) and RAN for topology 2.*

=> Noted

[R2-2406881](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406881.zip) Considerations on Topology 2 for Ambient IoT Lenovo discussion Rel-19

*Proposal 1: A-IoT Uu interface in topology 1 between A-IoT device and reader is fully reused in topology 2, i.e. topology is transparent to the A-IoT device and there is no impact on A-IoT device.*

=> Noted

Discussion

- Mediatek, CATT, LG, Samsung, Apple, Oppo, Vivo and Qualcomm think these proposals are good. Apple thinks that we should send an LS to RAN3.

- Samsung thinks that first proposal should just be an understanding. LG thinks we should aim to have low impact.

*UE Authorization*

[R2-2406712](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406712.zip) Topology 2 for Ambient IOT InterDigital discussion Rel-19 FS\_Ambient\_IoT\_solutions

*Proposal 5: Intermediate UE authorization is performed by upper layers without RAN2 impact.*

- Apple thinks that with NCR there was RAN2 impacts.

- Vodafone thinks that the UE reader has to be authorized by the network.

- CATT explains that SA3 has identified this as a key issue and are working to fix this issue and from RAN2 perspective there are no identified impact.

- Samsung thinks whether the gNB needs to be aware that this a UE reader or normal UE. Intel thinks that we should wait as RAN3 is also discussing this. Mediatek thinks that this is a UE capability. Qualcomm thinks that it would be a capability but it also depends on authorization.

*Topology 2 architecture (Upper layer solution or RRC solution)*

[R2-2406485](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406485.zip) Discussion on Topology2 for Ambient IoT CATT discussion Rel-19 FS\_Ambient\_IoT\_solutions

*Proposal 2: RAN2 assumes the transmission between UE reader and RAN node for inventory/command service can be supported by legacy mechanism, i.e., via NAS message or PDU session, which does not bring stage-3 impact on Uu. RAN2 may come back when the network architecture and protocol stack are determined by SA2.*

=> Noted

[R2-2406785](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406785.zip) Topology 2 and DO-A for Ambient IoT Ericsson discussion Rel-19 FS\_Ambient\_IoT\_solutions

*Proposal 2 RAN2 assume RRC sublayer at UE reader handles A-IoT related information.*

=> Noted

[R2-2406380](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406380.zip) Topology 2 considerations Intel Corporation discussion Rel-19 FS\_Ambient\_IoT\_solutions

*Proposal 5: RAN2 should wait for SA2 further inputs before making decision on the protocol stack and how the intermediate node (i.e., reader) obtain the AIoT service related information since they are tightly related to SA2 discussion.*

=> Noted

[R2-2406943](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406943.zip) A-IoT Topology 2 issues Huawei, HiSilicon discussion Rel-19 FS\_Ambient\_IoT\_solutions

*Proposal 3: For Topology 2 protocol stacks, RAN2 considers the upper layer based solution (i.e. A-IoT device's upper layer data is carried by the UE reader's upper layer) and the RRC layer based solution for further study.*

*Proposal 4: In upper layer based solution, the data forwarding for inventory (and command) has minor RAN2 impact, which can be left to SA2 study.*

*Proposal 5: In RRC based solution, the data forwarding for inventory (and command) includes the additional NR Uu impact as follows, and can be captured in TR for Topology 2:*

* BS sends the A-IoT related information (e.g. paging identifier) to intermediate UE via Uu RRC message based on received A-IoT service request.*

* The device’s upper layer data is forwarded between the intermediate UE and BS, via Uu RRC messages.*

=> Noted

Discussions

- Intel thinks that SA2 is still discussing but between CP and UP solution from CATT there are no impact for now, but we can wait for further progress

- Apple, Quacomm, CATT, LG, Oppo, Lenovo, Intel, Mediatek, Interdigital etc is not sure we need yet another RRC solutions.

- Ericsson thinks that RRC options is being considered in SA2 and can’t be excluded. Qualcomm explains that it is a NAS option carried by RRC. Huawei explains that this is captured in SA2 solutions. ZTE thinks that we shouldn’t fully leave it SA2 and we should at least agree that the gNB has visibility and is in control of the radio resources.

- CMCC and ZTE thinks that RRC solution should be kept. ZTE Thinks that RRC is more efficient from an air interface resource.

- Vivo thinks that we should be a little bit more open, but for progress sake we can focus.

- Mediatek suggests that we follow what SA2 decides.

- Xiaomi thinks that we should study other AS solutions like MAC layer.

*Resource Allocation*

[R2-2406610](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406610.zip) Discussion on A-IoT Topology 2 Samsung discussion Rel-19 FS\_Ambient\_IoT\_solutions

*Proposal 2: RAN2 is kindly asked to discuss the resource allocation for topology 2 by considering the following two options:*

* Option 1: resource allocation via gNB directly*

* Option 2: resource allocation via the intermediate node based on the resource pool allocated by gNB.*

=> Noted

[R2-2406652](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406652.zip) Topology 2 related aspects Qualcomm Incorporated discussion Rel-19 FS\_Ambient\_IoT\_solutions

*Proposal 1: Both in-coverage and out-of-coverage scenarios are studied.*

*Proposal 3: SL-mode-2-like resource allocation is further studied for resource allocation for the UE Reader. SL-mode-1-like resource allocation is not considered.*

=> Noted

[R2-2406712](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406712.zip) Topology 2 for Ambient IOT InterDigital discussion Rel-19 FS\_Ambient\_IoT\_solutions

*Proposal 2: Resources for AIOT operations in topology 2 between the intermediate UE and the device are determined/controlled by the gNB (in either option 1 or option 2).*

*Proposal 3: For option 1, the gNB sends the inventory and/or command trigger and corresponding resources to the intermediate UE (e.g., using RRC signalling).*

*Proposal 4: For option 2, signalling (e.g., RRC) between the intermediate UE and the gNB is required to allow the UE to inform the gNB of a triggered AIOT operation and to provide appropriate operation-related information necessary for AIOT resource allocation.*

=> Noted

Discussion on in-coverage/out-of-coverage

- Ericsson thinks out coverage shouldn’t be considered and the RRC should always be used. The reader should always be in connected mode.

- Qualcomm and Mediatek thinks that it should be NW is in control. Mediatek thinks that pre-configuration should be considered.

- CMCC thinks we should support only in-coverage as out of coerage is topology 4 and base line should be gNB direct scheduling (mode 1). Vodafone thinks that it can be quite often that it becomes out of coverage especially if you are in cell edge. If the device becomes out of coverage, the reader doesn’t stop.

- Apple thinks that out-of-coverage is out of scope. We should consider something like SL mode 1 and mode 2.

- LG, Huawei and Intel doesn’t think we should consider out-of-coverage. Huawei thinks that idle is also complicated and pre-configured should be discussed in SA2.

- Qualcomm thinks that if we if we exclude idle mode then we may develop a solution that won’t work for both.

- Samsung thinks that we should study connected and in-coverage.

- Mediatek explains that the scope of the SI covers in-coverage and we shouldn’t exclude the case that Vodafone mentioned on the device going out of coverage while connected. Vivo thinks that the reader would be configured only in-coverage.

- T-mobile reminds everyone that RF ID is our competion and they can be read anywhere.

- Oppo thinks that we should take SL as a baseline.

- ZTE thinks that coverage is important as that has implication on cell planning and that would require reserving frequencies.

- Mediatek thinks that as well forward, we will consider extendibility of temporary with full gNB control of resources.

**Agreements**

1. RAN2 is responsible for the interface between intermediate node (i.e. Reader) and RAN for topology 2.
2. A-IoT air interface in topology 1 between A-IoT device and reader is fully reused in topology 2, i.e. topology is transparent to the A-IoT device and there is no impact on A-IoT device.
3. RAN2 assumes that intermediate UE authorization is performed by upper layers. RAN2 impact can be studied after further SA/RAN3 progress.
4. RAN2 will study the impacts to RAN2 based on the SA2 identified architecture options (i.e. no new AS layer architecture options will be studied)
5. NW is in control of resources to be used by AIoT air interface.
6. Will support in-coverage and study cases for reader “temporarily” out of connection (e.g. RLF, HO). May consider extendibility to future “temporarily” out of coverage case with full NW control of resources (if possible).

*RRC State*

[R2-2406652](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406652.zip) Topology 2 related aspects Qualcomm Incorporated discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 2: The UE Reader can be in any RRC State while performing R2D/D2R activities.

[R2-2407074](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407074.zip) RAN2 aspects for Topology 2 Nokia discussion

Proposal 5: For topology 2, RAN2 to study AIoT operation with reader UE in RRC\_CONNECTED and RRC\_INACTIVE in the time between initial paging till last response. FFS on RRC\_IDLE.

[R2-2406748](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406748.zip) Discussion on topology 2 issues Spreadtrum Communications discussion Rel-19

Proposal 6: In R19, the intermediate UE should be in RRC\_Connected state only.

*Reader Selection*

[R2-2407074](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407074.zip) RAN2 aspects for Topology 2 Nokia discussion

Proposal 4: RAN2 to study both options for reader selection before down selecting in WI:

• Option 1: Readers are selected based on actual radio conditions. FFS whether this includes reader assistance information based on previous device status, keep alive messaging, or discovery procedure.

• Option 2: Readers are selected by core network based on prior topology knowledge without considering actual radio conditions. FFS fallback options.

[R2-2407112](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407112.zip) Discussion on Topology 2 related aspects for Ambient IoT China Telecom discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 2: For the selection of UE reader, RAN2 wait for more progress in RAN3/SA2 and further discuss the potential impacts if identified by RAN3/SA2.

*Intermediate Node Mobility*

[R2-2407442](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407442.zip) Topology 2 aspects of Ambient IoT Kyocera discussion Rel-19

Proposal 6 RAN2 should agree the mobility of UE acting as Reader is supported. The details will be discussed in a normative phase.

[R2-2406393](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406393.zip) Discussion on Topology 2 related aspects vivo discussion Rel-18 FS\_Ambient\_IoT\_solutions

[R2-2406406](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406406.zip) Considerations on TP2 related aspects between BS and UE reader Xiaomi discussion Rel-19

[R2-2406522](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406522.zip) Consideration on resource and scenario in topology 2 ASUSTeK discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406543](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406543.zip) Discussions on topology 2 related aspects Fujitsu discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406565](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406565.zip) Discussion on topology 2 related aspects between gNB and reader NEC discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406657](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406657.zip) A-IoT Architecture MediaTek Inc. discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406667](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406667.zip) Discussion on Topology 2 for A-IoT Apple discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406720](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406720.zip) Discussion on topology 2 for Ambient IOT OPPO discussion Rel-18 FS\_Ambient\_IoT\_solutions

[R2-2406785](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406785.zip) Topology 2 and DO-A for Ambient IoT Ericsson discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2406961](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406961.zip) Discussions on topology 2 for A-IoT CMCC discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2407151](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407151.zip) Consideration on TP2 for AIoT ZTE Corporation, Sanechips discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2407291](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407291.zip) Discussion on topology 2 considerations of ambient IoT LG Electronics Inc. discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2407450](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407450.zip) Discussion on topology 2 specific issues for Ambient IoT NTT DOCOMO, INC. discussion Rel-19

## 8.3 AI/ML for Mobility

(FS\_NR\_AIML\_Mob; leading WG: RAN2; REL-19; SID: [RP-240082](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_103/Docs/RP-240082.zip))

Time budget: 2 TUs

Tdoc Limitation: 3 tdocs

### 8.3.1 Organizational

LS, Rapporteur input, including workplan, etc.

[R2-2406309](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406309.zip) Text proposal of 38.744 OPPO draft TR Rel-19 38.744 0.0.3 FS\_NR\_AIML\_Mob

=> The TR is endorsed and will be used as baseline for further updates

### 8.3.2 RRM measurement prediction

#### 8.3.2.1 Simulation results for RRM measurement prediction

*Contributions should focus on initial simulation results on the agreed on prioritized scenarios and agreed assumptions. Any other results should be submitted in AI 8.3.2.2*

##### **Observations from initial simulation results:**

[R2-2406422](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406422.zip) Evaluation on RRM measurement prediction ZTE Corporation discussion Rel-19 FS\_NR\_AIML\_Mob

For FR1 to FR1 intra-frequency temporal domain case B:

*Observation 1: With the increase of MRRT from 33.3% to 60%, the average RSRP difference increases at most 1.27dB, and the prediction accuracy for temporal domain measurement prediction case B decreases.*

*Observation 2: Regarding temporal domain measurement prediction B, even with the same MRRT, skipping pattern (e.g. [400ms,400ms] or [600ms,600ms]) can also impact the prediction accuracy, their average prediction error difference achieves up to 0.6dB.*

*Observation 3: Regarding temporal domain measurement prediction B, the prediction accuracy of temporal domain measurement prediction with spatial consistency option A is better than that with option B.*

*Observation 4: As UE speed decreases from 90km/h to 30km/h, the prediction accuracy of temporal domain measurement prediction Case B improves. The average and maximum RSRP difference decrease at most 32.2% and 33.3%, respectively.*

*Observation 5: For temporal domain measurement prediction case B, even under the same condition, different AI model can bring different prediction accuracy.*

*Observation 6: The prediction accuracy of temporal domain measurement prediction case B on the best cell is similar as that on the sub-best cell. And the difference between the average RSRP difference for the best cell and for the sub-best cell keeps within 0.14dB.*

For FR2 to FR2 intra-frequency temporal domain case A:

*Observation 7: With the same observation window length, the prediction accuracy is decreased with the increase of predicted time, and the average RSRP difference increases at most 127.1%.*

*Observation 8: The prediction accuracy of temporal domain measurement prediction Case A with RRM sub use case 1 and RRM sub use case 2 are similar, the maximum difference is less than 0.5dB.*

- Huawei asks if L1 filtering was done for this case. L1 filtering may have an impact on the results and should clarify if they do L1 filtering and how they do it. MEdiatek explains that L1 filtering should be used as baseline. Mediatek has seen a different outcome that use case 2 is better than case 1.

- Samsung also agrees that companies should provide L1 filtering method. Samsung has a similar observation for case 2 showing better results.

- Vivo thinks that we should provide the real RSRP change. And case 2 and 3 show better performance.

- Mediatek asks how to capture all these observations. ZTE thinks that we should at least capture where we have consensus on the trends.

- Qualcomm doesn’t see a good explanation for the discrepancy between companies for case 1 and 2.

- Apple wonders why would we capture this observations as this is UE implementation. Huawei explains that its good to understand for NW sided model.

- Xiaomi also doesn’t the need to compare the performance of these usecases.

- Ericsson thinks that it is too early to capture results as the assumptions haven’t been fully aligned. Oppo agrees that we should capture only once simulations are stable

- Oppo thinks that the main cause of the discrepancies are due to how to do the L1 filtering.

- Huawei thinks that we need to discuss how the model is trained. Mediatek thinks that this would be a lot of work. Qualcomm also doesn’t think it matters.

- CATT thinks that we should discuss the observations by email.

- ZTE thinks that we should also discuss L3 filtering. MEdiatek thinks that it is totally UE implementation and there isn’t much point. ZTE thinks that L3 is specified in RAN4 and we should clarify and companies may have different values. Oppo agrees with ZTE and there is difference on the frequency

- Qualcomm thinks that we should add comparison with sample and hold. MEdiatek agrees that we should have a reasonable benchmark. Samsung agrees as we agreed to not do any calibration. Oppo thinks that it is not as simple as sample and hold as there are quite a bit of details on how to do it. Apple doesn’t think it is needed and same and hold is not a reasonable benchmark. Mediatek thinks that we need to a benchmark to compare. Apple thinks that we agreed to compare them with the actual measurements. Nokia agrees with Qualcomm. Ericsson agrees with Apple and we have ground truth, real measurements and we can determine the accuracy.

- Xiaomi thinks that there is a problem with sample and hold as we do filtering so you are adding additional problems. And the sample you hold is not actual ground truth. CATT also is not interested in same and hold.

- Samsung thinks that sample and hold is only applicable to temporal predication and case B

*Observation 9: The observation 4~6 for temporal domain measurement prediction case B are applicable for temporal domain prediction case A.*

For FR1 to FR1 frequency domain prediction:

Observation 10: The prediction accuracy of full correlation inter-freq shadowing fading model is better than that of no correlation model.

Observation 11: The maximum average RSRP difference of frequency domain prediction with no correlation inter-freq shadowing fading model is only 1.4dB, which is acceptable.

Observation 12: The prediction accuracy of frequency domain measurement prediction is not impacted by UE speed.

For FR2 to FR2 intra-frequency spatial domain measurement prediction

Observation 13: With the MRRS increase from 50% to 75%, the prediction accuracy of spatial domain prediction degrades largely. The average RSRP difference increases 183%.

Observation 14: The prediction accuracy of spatial domain measurement prediction with RRM sub use case 1 is better than that with RRM sub use case 3.

[R2-2406579](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406579.zip) Evaluation and Simulation Results for AIML RRM Prediction MediaTek Inc. discussion

Preliminary Results for Temporal domain prediction on serving cell and neighbouring cells (Case 2)

Observation 1: The correlation between the discrepancy in predicted versus actual values and the overall system performance does not inherently follow a linear or proportional pattern. Minor prediction errors may not substantially affect the overall system performance, but when the error surpass a certain threshold, the system performance may precipitously decline.

Observation 2: For Case 2 (FR1 to FR1 intra-frequency temporal domain case B), an increase in speed leads to a decrease in prediction accuracy and an increase in the cell-level RSRP difference.

Observation 3: For Case 2 (FR1 to FR1 intra-frequency temporal domain case B), an increase in the measurement reduction ration leads to a decrease in prediction accuracy and an increase in the cell-level RSRP difference.

Observation 4: For Case 2 (FR1 to FR1 intra-frequency temporal domain case B), among all the sub-cases, the L3 to L3 prediction exhibits the smallest cell-level RSRP difference compared to both the L1 to L1 and L1 to L3 prediction.

Observation 5: For Case 2 (FR1 to FR1 intra-frequency temporal domain case B), at least for 50% reduction in reference signal and UE measurement effort can be achieved, without any degradation in mobility performance compared with legacy L3 HO in the metrics such as HOF, Ping-pong, data interruption time, and average TOS.

Observation 6: For Case 2 (FR1 to FR1 intra-frequency temporal domain case B), at least for 50% reduction in reference signal and UE measurement effort, cluster-specific model has better system level results than cell-specific model.

Preliminary Results for Frequency domain prediction on serving cell and neighbouring cell (Case 3)

Observation 7: In Case 3, it demonstrates that reducing the frequency domain measurement effort and the need for measurement gaps results in better AI/ML prediction performance under the same beam pattern settings compared to different ones. This suggests that the consistency of beam patterns is essential for AI to achieve accurate predictions.

*Consider same beam pattern or explore different beam pattern*

- Vivo thinks that we should stick to the same beam pattern. ZTE We can consider different beam patterns

- ZTE thinks that we should explore the non-collocated case.

=> Stick to the same beam pattern

***Need to further discuss simulation assumptions [CB]***

* *UE RX and TX numbers*
* *For temporal domain prediction to consider some candidates for prediction and observation window*
* *L1 filtering*
* *L3 filtering (clarify how L3 filtering is done – e.g. sliding window/non-sliding window) [CB to see if we can agree to non-sliding window]*
* *How is model trained and what is used for inference*
* Beam level Filter co-efficient

##### **Way forward:**

[R2-2406310](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406310.zip) Discussion on simulation result of RRM measurement OPPO discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 1: RAN2 to focus on predicting cells with high signal strength, e.g., the serving cell and/or cells with high RSRP values.

- Samsung agrees. MediaTek asks how do you know which one is high signal strength if you haven’t predicted yet. Oppo explains that it is current RSRP not predicted. CATT thinks that companies are free to report which cells were selected as input and don’t need to restrict.

- NTT Docomo supports this proposal. Xiaomi agrees with intention but we need to define how we determine which one is high and in practice the cell’s RSRP changes dynamically. Ericsson thinks that this is the case we are interested.

- Apple and Nokia think that this is what companies will do anyways.

*Proposal 2: Inter-frequency prediction considers both prediction from low-frequency cell to high-frequency cell and prediction from high-frequency cell to low-frequency cell. Only one UE speed is considered for inter-frequency prediction in simulation, e.g., 30km/h.*

- Ericsson has seen a difference with speeds when distance between frequencies is large. Nokia agrees with the direction but we can consider more speeds.

- Samsung asks if this would mean that we simulate both prediction.

*Proposal 3: For intra-frequency temporal domain case B prediction, no need to align detailed patterns and time instances chosen for AI/ML model input and output as long as the basic assumptions, e.g., measurement reduction rate, are aligned.*

- Nokia thinks that at least companies should provide details.

Proposal 4: Companies to use case-specific spreadsheets to collect and report simulation assumptions and results as what TR 38.843 presented.

**Agreements**

=> companies are encouraged to considers both prediction from low-frequency cell to high-frequency cell and prediction from high-frequency cell to low-frequency cell, but only low to high is expected.

=> For the agreed frequencies for inter-frequence case, only one UE speed is considered for inter-frequency prediction in simulation, e.g., 30km/h. Companies can consider other speeds for other frequencies if they chose to simulate them.

=> For temporal domain case B prediction the input is historical measurement values and the output is the values at the subsequent time instances that measurement is skipped, i.e., the prediction is always after the measurement and is at future time instance(s).

* [AT127][026][AI Mob] Simulation assumptions (OPPO)

Intended outcome: discuss simulation assumptions

Deadline: 08-22-24

* [POST127][027][AI Mob] Simulation table (Mediatek )

Intended outcome: Agree how to capture simulation results

Deadline: two weeks

[R2-2407781](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_126\Docs\R2-2407781.zip) Summary of [AT127][026][AI Mob] Simulation assumptions (OPPO) OPPO discussion Rel-19 FS\_NR\_AIML\_Mob

*3: In the definition of 3 RRM sub-cases, all cell level measurement result(s) refers to L3 filtered cell level measurement*

- Xiaomi is concerned that this doesn’t work for case B.

=> Noted

**Agreements**

1 To keep two filtering options on the table and up to company to report.

*2* One fixed sampling period of FR2 is introduced for L1/L3 filtering option 1 to replace existing one i.e., 20ms. The detail value is FFS.

3 In the definition of 3 RRM sub-cases, all cell level measurement result(s) refers to L3 filtered cell level measurement

*4 continue to discuss following issues in the post email discussion:*

*1, Further clarification of intra-frequency of temporal domain case A and case B.*

*2, The set of observation vs prediction window parameters for intra-frequency temporal domain case A and case B*

*3, The number of TX and RX for FR1 and FR2*

*4, Filtering co-efficient for beam level prediction*

* [POST127][030][AI mobility] RRM simulation assumptions (Oppo)

Intended outcome: agree to simulation assumptions

Deadline: short

[R2-2406401](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406401.zip) Simulation results for RRM measurement prediction vivo discussion Rel-19 FS\_NR\_AIML\_Mob

*Proposal 1: For temporal domain case B prediction for measurement reduction, further clarify the timing relationship between the measurement and prediction. The following two options can be considered:*

* *Option 1: the input is historical measurement values and the output is the values at the subsequent time instances that measurement is skipped, i.e., the prediction is always after the measurement and is at future time instance(s).*
* *Option 2: The input is historical measurement values and the output is the values between the historical measurement time instances where measurement is skipped, i.e., the prediction is at historical time instance(s).*

- ZTE would like to discuss this and option 1 should be used. Vivo thinks option 1 is best. Oppo thinks that there are even more options possible. Samsung and Mediatek thinks that option1.

Proposal 3: To evaluate the gain of AI-based prediction, introduce a non-AI mechanism as the benchmark, e.g., sample and hold (the predicted value equals the previous actual measured value). Other non-AI mechanisms are up to company’s implementation and report.

Proposal 4: For temporal domain prediction with sample period of 40ms, consider 3/4 as another alternative value of measurement reduction rate.

Proposal 5: For Inter\_F\_C RRM prediction, non-colocated neighbouring cell should also be considered.

Proposal 6: RAN2 to discuss whether to down-select the sub-use cases based on simulation results.

[R2-2406664](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406664.zip) RRM measurement prediction results Apple discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2406665](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406665.zip) Field data for RRM measurement prediction Apple discussion Rel-19 FS\_NR\_AIML\_Mob Late

[R2-2406703](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406703.zip) Discussion on RRM prediction simulation result Xiaomi discussion

[R2-2406816](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406816.zip) Simulation results for RRM measurement prediction Qualcomm Incorporated discussion Rel-19

[R2-2406824](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406824.zip) Discussions on simulation results for RRM measurement prediction NTT DOCOMO, INC. discussion

[R2-2406830](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406830.zip) Simulation results of intra-frequency RRM Measurement Prediction CATT, Turkcell discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2406831](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406831.zip) Simulation results of inter-frequency RRM Measurement Prediction CATT, Turkcell discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2406860](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406860.zip) Discussion on the simulation results for RRM measurement prediction Samsung Electronics discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2406935](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406935.zip) Simulation results for RRM measurement prediction Huawei, HiSilicon discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2406936](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406936.zip) Discussion on other aspects related to RRM prediction Huawei, HiSilicon, China Telecom discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2406975](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406975.zip) Initial simulation results for RRM measurement prediction CMCC discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2407092](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407092.zip) Simulation results for RRM measurement inter-frequency predictions Ericsson discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2407219](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407219.zip) Simulation results for RRM measurement temporal prediction Ericsson discussion FS\_NR\_AIML\_Mob

[R2-2407376](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407376.zip) Initial simulation results for RRM measurement predictions InterDigital Inc. discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2407451](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407451.zip) Simulation results for RRM measurement prediction Indian Institute of Tech (M), IIT Kanpur discussion Rel-19

[R2-2407479](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407479.zip) Measurement Reduction based on RRM Measurement Prediction Nokia, Nokia Shanghai Bell discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2407484](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407484.zip) Intial simulation results RRM Measurement prediciton CEWiT discussion Rel-19 FS\_NR\_AIML\_Mob

#### 8.3.2.2 Other aspects related to RRM measurement prediction

*Further input on remaining issues related to RRM measurement prediction. Any simulation results on non-prioritized scenarios and/or not yet agreed assumptions should be submitted in this AI.*

##### **Beam level prediction:**

[R2-2406423](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406423.zip) Discussion on RRM measuremnet prediction ZTE Corporation discussion Rel-19 FS\_NR\_AIML\_Mob

*Proposal 1: To support L3 beam level measurement prediction, and consider the following cases:*

*Case 1: To predict L1 filtered beam level results, then generate L3 filtered results based on the predicted L1 beam results.*

*Case 2: To directly predict L3 filtered beam level results based on the L3 beam level measurement results.*

*Case 3: To directly predict L3 filtered beam level results based on the L1 beam level measurement results.*

*Proposal 2: Companies are encouraged to provide simulation results for comparing the prediction accuracy of case 1~3.*

*Proposal 3: Considering large simulation overhead, not all agreed simulation scenario in cell level prediction should be considered in beam level prediction, we can select some of them.*

*Proposal 4: The simulation for beam level prediction should focus on F*[*R2-to*](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-to.zip)*-FR2 intra-frequency temporal domain prediction case A and FR2 to FR2 intra-frequency spatial domain prediction.*

*Proposal 5: For L3 beam level measurement prediction, consider average L3 beam level RSRP difference and Top-K/1 beam prediction accuracy as KPI.*

*Proposal 6: RAN2 to discuss and decide which understanding for layer 3 filtering period is correct in the AI-mobility simulation.*

=> Noted

[R2-2406402](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406402.zip) Other aspects related to RRM measurement prediction vivo discussion Rel-19 FS\_NR\_AIML\_Mob

*Proposal 9: For RRM measurement prediction, besides Case1-3, a new sub-use case (Case 4) is considered: To directly predict cell-level results and beam-level results based on beam-level results and optional cell-level results.*

*Proposal 11: For spatial domain prediction, RAN2 to consider how to derive cell-level quality based on predicted beam qualities and measured beam qualities.*

=> Noted

[R2-2406966](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406966.zip) Discussion on other aspects related to RRM measurement prediction CMCC discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 3: The temporal domain, spatial domain and frequency domain can be applied for L3 beam level results prediction.

Discussions

- Huawei agrees with all cases thinks we should agree to the filter co-efficient. Ericsson thinks that the workload could be high so the companies can select. Apple, Nokia and CATT thinks that this isn’t the highest priority.

- ZTE is proposing to focus on FR2 cases. Docomo and Samsung agrees to focus on FR2.

- CATT Thinks that it should only be applied to case 1 and 3.

- Nokia thinks that we should first finish L3 results.

- Qualcomm thinks that it should be inter-cell and what is the benefit of doing this now. The higher priority should be other cases like event prediction. ZTE explains that this is still intra-cell prediction.

- Interdigital thinks that for case 1 we should compare the accuracy of beam level prediction and cell level prediction.

**Agreements**

* Companies can consider to do L3 filtered beam level results for any of this cases. L3 filtered beam level prediction cases are lower priority.
  + Case 1: To predict L1 filtered beam level results, then generate L3 filtered results based on the predicted L1 beam results.
  + Case 2: To directly predict L3 filtered beam level results based on the L3 beam level measurement results.
  + Case 3: To directly predict L3 filtered beam level results based on the L1 beam level measurement results.
* If companies do L3 filtered beam level prediction simulations, they should focus on F[R2-to](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-to.zip)-FR2 intra-frequency temporal domain prediction case A

##### **Cluster based approach:**

[R2-2406385](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406385.zip) Discussion on AI/ML based RRM measurement prediction China Telecom discussion Rel-19

Proposal 1: At least, following cases can be studied at first for high priority sub-use cases (Case 2 and Case 3).

Option1: cluster-based AI/ML model training with 1-to-1.

Option2: cluster-based AI/ML model training with N-to-1.

Option3: cluster-based AI/ML model training with N-to-K.

Option4: site-based AI/ML model training with 1-to-1.

Table 2. Site/Cluster-based cell Options

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Options | AI/ML Model | Number of input/output cells | Domain | comments |
| Option 1 | Cluster-Based | 1-to-1 | Temporal | Past time/  Predicted time |
| Inter Frequency | Co-located/  Neighbouring cells |
| Option 2 | Cluster-Based | N-to-1 | Temporal | Past time/  Predicted time |
| Inter Frequency | Co-located/  Neighbouring cells |
| Option 3 | Cluster-Based | N-to-1  (N>1) | Temporal | Past time/  Predicted time |
| Inter Frequency | Co-located/  Neighbouring cells |
| Option 4 | Site-Based | N-to-K  (N>1,K>1) | Temporal | Past time/  Predicted time |
| Inter Frequency | Co-located/  Neighbouring cells |

Proposal 2: At least, for cluster cells, the co-location scenario can be considered.

[R2-2406580](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406580.zip) Cluster-based Approach for RRM Prediction and Other Aspects MediaTek Inc. discussion

Proposal 3: RAN2 support to study the cluster-based approaches in each RRM prediction use case.

Discussion

- Docomo agrees that we should consider cluster-based approach but don’t need to go into details. Interdigital thinks that this is an implementation details and we just need to agree that it can be allowed, but how companies do it doesn’t have to be specified.

- Lenovo thinks we need to discuss which cells should be part of the cluster and how much correlation.

- Ericsson thinks that due to workload we should just leave it up to companies if they do it.

- ZTE thinks that for NW side model it would impact data collection. Ok to simulate but we have to clarify how many cells we consider in simulation, we should consider only 3. Nokia doesn’t think this is needed for NW side model.

- Huawei thinks we need some reasonable assumption and exclude inter-frequency.

- Apple thinks that using multiple measurement as input this is a already allowed. The output part seems to be model generalization. Nokia agrees with apple.

- CATT this is up to companies to select number of input and output

=> it is up to companies to select the number of cells for input and output (companies should clarify what they are using for cluster-based approach). Cluster-based approach evaluation is optional and lower priority for now.

##### **Input/Output:**

[R2-2406499](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406499.zip) AIML mobility RRM measurement prediction NEC discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal-3: RAN2 to confirm the model input and output for different scenarios based on the following table:

|  |  |  |  |
| --- | --- | --- | --- |
| **Scenario** | **Case 1** | **Case 2** | **Case 3** |
| **intra-F-intra-C-T-Case A/B** | **For case A:**  Input: L1 intra beam within observation window  Output: L1 intra beam within prediction window  **For case B:**  Input: subset of measurement instance of L1 intra beam  Output: the whole set of measurement instance of L1 intra beam | **For case A:**  Input: L1 or L3 intra cell within observation window  Output: L3 intra cell level within prediction window  **For case B:**  Input: subset of measurement instance of L1 or L3 intra cell  Output: the whole set of measurement instance of L3 intra cell | **For case A:**  Input: L1 intra beam within observation window  Output: L3 intra cell within prediction window  **For case B:**  Input: subset of measurement instance of L1 intra beam  Output: the whole set of measurement instance of L3 intra cell |
| **intra-F-intra-C-S** | Input: set B of L1 intra beam  Output: set A of L1 intra beam | N/A | Input: set B of L1 intra beam  Output: L3 intra cell |
| **intra-F-inter-C-T-Case A** | Input: L1 intra beam (+ inter beam if cluster) within observation window  Output: L1 inter beam within prediction window | Input: L1 or L3 intra cell (+ inter cell if cluster) within observation window  Output: L3 inter cell level within prediction window | Input: L1 intra beam (+ inter beam if cluster) within observation window  Output: L3 inter cell within prediction window |
| **intra-F-inter-C-S** | Input: L1 intra beam (+ inter beam if cluster)  Output: L1 inter beam | Input: L1 or L3 intra cell (+ inter cell if cluster)  Output: L3 inter cell | Input: L1 intra beam (+ inter beam if cluster)  Output: L3 inter cell |
| **inter-F-inter-C-T-Case A** | Input: intra frequency L1 beam (+ inter frequency L1 beam if cluster) within observation window  Output: inter frequency L1 beam within prediction window | Input: intra frequency L1 or L3 cell (+ inter frequency cell if cluster) within observation window  Output: inter frequency L3 cell within prediction window | Input: intra frequency L1 beam (+ inter frequency L1 beam if cluster) within observation window  Output: inter frequency L3 cell within prediction window |
| **inter-F-inter-C-S** | Input: intra frequency L1 beam + (inter frequency L1 beam if cluster)  Output: inter frequency L1 beam | Input: intra frequency L1 or L3 cell (+ inter frequency L1 or L3 cell if cluster)  Output: inter frequency L3 cell | Output: intra frequency L1 beam + (inter frequency L1 beam if cluster)  Output: inter frequency L3 cell |

[R2-2407287](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407287.zip) Discussion on RRM Measurement Prediction Framework Meta Ireland discussion

Proposal 1: For RRM prediction case 1 and 3, model input should consider filtered L1-RSRP with standardized and configurable filter coefficients.

Proposal 2: For RRM prediction case 1, the model output should be filtered L1 RSRP and the data for model training (set A of beams) should apply the same L1 filter as the model input (set B of beams)

FFS: If L3 filtering of model output needs to be aligned for consistency.

Proposal 3: For RRM prediction case 2/3, the model output may be filtered L3 RSRP.

[R2-2407359](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407359.zip) Discussion on AI aided RRM measurement prediction HONOR discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 4: Discuss following model input/output for RRM measurement prediction:

Model input:

* Measured RSRP for SSB/CSI-RS (FFS L1 or L3 measurement)
* Pattern information:
* Time instances
* SetA/SetB pattern, i.e., Measured serving/neighbor cells vs predicted intra/inter-frequency neighbor cells
* prediction window

Model output:

* Predicted L3 RSRP for time instances
* Predicted average L3 RSRP of the configured prediction window
* Predicted L3 RSRP for time instances for Top-K neighbor cells

##### **KPIs:**

[R2-2406402](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406402.zip) Other aspects related to RRM measurement prediction vivo discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 2: System-level performance evaluation is needed to reflect the impact on mobility performance after RRM measurement prediction is introduced for both study goals.

Proposal 3: The system-level performance KPIs for RRM measurement prediction include Ping-pong HO rate, short ToS rate, HOF rate, RLF frequency, handover interruption.

[R2-2407480](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407480.zip) Mobility Optimization based on RRM Measurement Prediction Nokia discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 2: RAN2 should consider at least a selection of the following common mobility related KPIs as discussed in TR 36.839 as a starting point for the metrics evaluated in each use case:

• HO performance: total number of HOs, unnecessary HOs, Ping-Pong HOs, etc.

• Failure performance: total number of HO failure, RLF, percentage of failure (RLF+HOF)/(HO+ RLF+HOF) in %, etc.

• HO timing performance: HO interruption time, Time of outage (ToO), time of staying (in a cell, in a beam, in a UE panel), etc.

• Measurement performance: measurement reduction, measurement accuracy (absolute and relative), CDF of measurement difference, etc.

• QoS related KPIs such as downlink/uplink throughput, latency

Proposal 3: RAN2 should discuss incorporating system-level simulations into the study to better understand what actions should be taken by the network in response to predictions, as well as the effects that prediction errors and the distribution of predictions have on the system KPIs.

[R2-2406966](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406966.zip) Discussion on other aspects related to RRM measurement prediction CMCC discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 6: RAN2 consider the performance evaluation metrics/KPIs (Ping-pong HO rate, HO failure rate, RLF rate, short stay rate, HO successful rate), and discuss the baseline threshold for evaluation, such as the HO successful rate above a threshold (e.g. 95%) or the degrading of HO successful rate below a threshold (e.g. 3%).

*Discussions on system level performance results*

- Apple is open to look at something reasonable like handover failure rate to understand how measurement accuracy impacts it. Huawei agrees but we can do it after.

[R2-2406308](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406308.zip) Discussion on cluster based RRM measurement prediction BJTU discussion

[R2-2406311](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406311.zip) Discussion on open issue of RRM measurement use case OPPO discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2406500](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406500.zip) AI/ML RRM measurement prediction TCL discussion Rel-19

[R2-2406568](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406568.zip) Discussion on RRM Measurement Prediction Fraunhofer HHI, Fraunhofer IIS discussion

[R2-2406704](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406704.zip) Discussion on cell and beam RRM prediction Xiaomi discussion

[R2-2406759](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406759.zip) Discussion on other aspects related to RRM measurement prediction Spreadtrum Communications discussion Rel-19

[R2-2406825](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406825.zip) Discussion on other aspects related to RRM measurement prediction NTT DOCOMO, INC. discussion

[R2-2406861](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406861.zip) Discussion on temporal domain RRM measurement prediction Samsung Electronics discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2406924](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406924.zip) Discussion on RRM Measurement Prediction Sharp discussion Rel-19

[R2-2407113](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407113.zip) AI-ML based Inter-frequency measurement prediction Rakuten Mobile, Inc discussion Rel-19

[R2-2407130](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407130.zip) RRM measurement prediction Lenovo discussion

[R2-2407377](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407377.zip) Other aspects of RRM measurement predictions InterDigital Inc. discussion Rel-19 FS\_NR\_AIML\_Mob

### 8.3.3 Measurement event predictions

Contributions should focus on measurement event prediction use cases/scenarios to focus during the study and relevant performance metrics/KPIs to evaluate

This AI will not be treated this meeting

[R2-2406344](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406344.zip) Target scenarios for measurement event prediction NEC discussion

[R2-2406796](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406796.zip) Further Discussion on AI based Measurement Event Prediction Continental Automotive discussion Rel-19

[R2-2407360](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407360.zip) Discussion on AI aided measurement events prediction HONOR discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2407541](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407541.zip) Discussion on measurement event predictions III discussion

### 8.3.4 RLF/HO failure prediction

#### 8.3.4.1 Simulation assumptions and evaluation methodology for RLF failure prediction

*Contributions should focus on discussing RLF specific methodology and simulation assumptions (addressing the differences or additional aspects from RRM predicution asssumptions).*

*FFS issue on RLF definition and relevant metrics discussions should be submitted to this AI.*

*No evaluations/simulation results expected for this meeting*

##### **Simulation parameters and assumptions:**

[R2-2406937](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406937.zip) Discussion on simulation assumptions and evaluation methodology for RLF failure prediction Huawei, HiSilicon discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 1: Reuse the simulation assumptions listed in Table 1 as much as possible.

Table 1. Summarized simulation assumptions for FR2

|  |  |
| --- | --- |
| **Parameter** | **Value for FR2** |
| Frequency Range | FR2 @ 30 GHz; SCS: 120 kHz |
| Deployment | 2-tier model with wrap-around (7 sites, 3 sectors/cells per site) |
| Channel model | Umi  With distance-dependent LoS probability function defined in Table 7.4.2-1 in TR 38.901, fast fading and optional LOSsoft;  without UE rotation, Oxygen absorption, Time-varying Doppler shift, Explicit ground reflection model and blockage |
| System BW | 80MHz |
| UE speed | 30,60,90 km/h for study targeting measurement reduction  60,90,120 km/h for study targeting HO performance improvement |
| UE distribution | 100% outdoor |
| BS Antenna Configuration | Antenna setup and port layouts at gNB: (4, 8, 2, 1, 1, 1, 1), (dV, dH) = (0.5, 0.5) λ  Other assumptions are not precluded. |
| BS Antenna radiation pattern | TR 38.802 Table A.2.1-6, |
| UE Antenna Configuration | Antenna setup and port layouts at UE: (1, 4, 2, 1, 2, 1, 1), 2 panels (left, right)  Other assumptions are not precluded |
| UE Antenna radiation pattern | TR 38.802 Table A.2.1-8, |
| BS Tx Power | 40 dBm (baseline)  Other values (e.g., 34 dBm) not precluded |
| Maximum UE Tx Power | 23 dBm |
| BS receiver Noise Figure | 7 dB |
| UE receiver Noise Figure | 10 dB |
| Inter site distance | 200 m |
| BS Antenna height | 10m |
| UE Antenna height | 1.5 m |
| Spatial consistency | companies report one of the spatial consistency procedures:  - Procedure A in TR38.901  - Procedure B in TR38.901 |
| UE trajectory model | 3 options in 38.843 section 6.3.1 |
| UE trajectory boundary processing model | Companies report which of the following models they used:  wrap round model,  circle-bouncing model,  boundary-terminated model |

=> Agree to use this table as a baseline. Companies can chose the UE speeds and UE distribution they use and report it.

- Vivo thinks that the UE speed should be discussed and highspeed should be considered

- Samsung would like to add traffic model as that has impact on SINR. Oppo thinks that the real question is how we simulate interference, we should have some simple. Samsung doesn’t want to make anything complex and perhaps we can consider full buffer.

- Qualcomm asks if we should explore blockage models. Mediatek thinks that would be a huge effort.

- Mediatek thinks that in addition to full buffer we should assume that all the cells are fully loaded (e.g. 100% loaded). Interdigital agrees and thinks we should assume no HO.

- CATT thinks that this is linked whether we consider HO failure.

- Samsung thinks that we have to train the model with HO, it doesn’t make sense we can train a model assuming no HO and then we use it for HO performance KPIs.

- Qualcomm thinks that simple model for beam schedule

- ZTE thinks that companies should chose whether to simulate blockage.

Proposal 2: The recommended values in TR 36.839 can be considered as the baseline, including:

* + - Monitoring windows of Qout and Qin are 200ms and 100ms, respectively;
    - The sample period is 10ms;
    - The values of Qout and Qin are -8dB and -6 dB, respectively.

- Catt and apple thinks that the sampling period it should be aligned and be 20ms

Proposal 3: For RLF prediction, RAN2 can start to evaluate the simulations using indirect prediction as a baseline.

- Apple thinks we should used direct as a baseline or both. Samsung and Qualcomm think it is reasonable to start with indirect first given that we have already RRM results. For direct it is unclear and it would increase overhead without much gain in prediction. Apple thinks that we have to use SINR so we can’t reuse and direct would be much simpler. Nokia agrees with Apple.

- Huawei explains that indirect SINR as an input and output SINR and calculate whether RLF can happen with direct you can predict RLF. Mediatek thinks that interference prediction is very difficult so not sure if we can really do if we use SINR. Qualcomm agrees with mediatek.

- Interdigital for direct one, some inputs are N310 and N311 and T310 or different combination values. Ericsson thinks that this should be the current values.

- ZTE thinks that the timer and counter are used as input for the indirect case. For direct case there are other magic inputs (e.g. trajectory etc). It is a bit hard to model direct case in simulation.

- Nokia thinks that the only difference if we are using predicted SIRN or actual SINR. Samsung thinks this is UE implementation and we shouldn’t spend time discussing inputs. The only difference is that for indirect we would use the RRM prediction results for direct we would have to use another model.

- Xiaomi, Ericsson and Oppo think that the output the is not the same. For indirect output is time instance the RLF occurs. Huawei agrees that the output is not same, probability of RLF in direct case and other case we predict SINR.

- Interdigital thinks that the simulation assumptions would be different for direct case.

- Apple asks how we are going to use the time instance the RLF occurs. Ericsson thinks that the UE can sent a report to indicate that RLF is about to happen but we can discuss that later.

- Nokia asks whether we will get a confidence score for indirect. Samsung thinks that confidence level doesn’t make sense. Apple thinks that we can’t have prediction without confidence. Qualcomm and Lenovo agrees we should have a confidence score for the predicted time instance.

- Oppo and CMCC thinks confidence is not need as we don’t have it for RRM.

- Huawei thinks that we are mixing KPI with output. For indirect we would evaluate if the RLF would happened at that instance and if we predicted it correctly. ZTE thinks the time difference of true time RLF and predicted RLF would be the KPI.

- Qualcomm asks how useful is this KPI. Xiaomi thinks this is an important KPI to understand how accurate our prediction is. Interdigital indicates that time instance doesn’t make sense as one measurement (i.e. ho failure happens after 5mins) can bias the results. ZTE thinks that even if the UE reports confident can we trust the UE. Nokia thinks this would be a RAN4 requirement.

- Docomo thinks we should have missed prediction rate and false detection. CATT also agrees if the time difference is larger than a threshold this would be marked as false detection.

- Ericsson thinks that we should have the SINR difference for indirect and for direct we can have false detection.

- Docomo doesn’t think that probability is a KPI, it is an outpu.

**Agreements**

- Both direct and indirect are allowed. Companies should indicate what they used and what inputs they are using

- Output for indirect: predicted SINR. Based on predicted SINR the time instance the RLF occurs can be determined without further AI/ML models.

- Output for direct: probability of RLF within an window

- Companies should report the prediction time window they have used in the simulations

KPI

For indirect

- SINR difference, missed RLF detection, false RLF detection, F1 score, time difference of true time RLF and predicted RLF, true RLF prediction.

Direct

- missed RLF detection, false RLF detection, F1 score.

- Whether the RLF will happen based on the following methodology. Above a probability threshold we assume that RLF will happen. This is then compared with true RLF.

- For the time being we don’t need HO procedure simulation in RLF simulation

- FFS full buffer and assumption that all the cells are fully loaded. We will not simulate traffic.

- Simulation results are not expected before February

* [POST127][029][AI mobility] RLF Simulation Assumption (Oppo)

Intended outcome: Agreeable simulation assumption

Deadline: Super long (November meeting)

Discussion

[R2-2406832](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406832.zip) Simulation assumptions and evaluation methodology for RLF prediction CATT, Turkcell discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 2: The UE will be re-dropped during simulation when RLF occurs.

Proposal 3: RAN2 to discuss how to handle HO procedure in RLF simulation:

- Option 1: Simple HO procedure;

- Option 2: No HO procedure simulation

- Option 3: Adjusting RLF parameters with HO procedure

Proposal 4: The RLF parameter values from Hetnet mobility simulation can be used with small modification for RLF predication in AI mobility as starting point:

|  |  |
| --- | --- |
| Items | Description |
| Qout | -8 dB |
| Qin | -6 dB |
| T310 | 1s (the default value in 38.331) |
| N310 | 1 |
| T311 | Not used ~~for calibration~~ (since RLF recovery is not simulated in the calibration) |
| N311 | 1 |
|  |  |

[R2-2406312](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406312.zip) Discussion on RLF use case OPPO discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 11: A sliding window scheme is adopted for both observation window and prediction window

Proposal 12: RAN2 is kindly requested to discuss the two alternatives when a real RLF occurs during the simulation. We slightly prefer option 1 due to its simplicity

Option 1: the simulation stops for this UE and this trajectory

Option 2: the simulation continues after a fixed duration (to simulate RRC re-established). The serving cell may be changed and count on the best measurement result of recovery time point.

Proposal 14: the assumption of T310 and N311 should be set as such that RLF could be a bit easy to happen and a bit hard to cancel to facilitate training and inference

Proposal 15: RAN2 is kindly asked to discuss the detailed values of T310 and N331 so that they can be aligned among companies. Our recommendation: T310 = 100ms, N311=2.

HO

Proposal 8: A hypothetical HO procedure should run in parallel with model for RLF prediction to change PCell.

Proposal 9: The handover parameter i.e. event A3 offset, hysteresis and TTT timer are aligned for simulation

Proposal 16: The recommended value for handover parameters i.e. event A3 offset, hysteresis , TTT timer, and handover preparation and execution time (HPET), the recommended value are: 5db, 0db, 480ms and 80ms

[R2-2407211](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407211.zip) Simulation assumptions and evaluation methodology for RLF prediction InterDigital Inc. discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 4: For the RLF prediction use case, the following simulation parameters can be considered along with the other RRM prediction use case evaluation parameters:

* UE Distribution: A combination of options 1 and 2 in Question 2.3.1.3-2 [4] can be considered, i.e., x% of UEs are uniformly dropped in the cell and (100-x)% of UEs are dropped in circular disk at cell edge.
* UE Speed: Consider higher speed UEs (e.g., 60 kmh, 90 kmh).
* UE Trajectory: Consider option 3 in Question 2.3.1.1-1 [4] (i.e., “random direction, straight line trajectory”), with inter-cell handover or beam switching enabled for fair comparison with non-AI baseline.

##### **Input/output:**

[R2-2406581](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406581.zip) Simulation assumptions and evaluation methodology for RLF failure prediction MediaTek Inc. discussion

Proposal 4: For direct prediction, AI predicts whether RLF events will happen in a given prediction region, i.e. a temporal window within which AI is used to predict the likelihood of an RLF event occurring. The predicted distance and the length of the prediction region could be FFS according to the application and other configurations, e.g., T310 timer.

Proposal 5: For direct prediction, the AI model input is SINR of all cells and AI model output is the probability (or YES/NO flag) of any RLF event occurring at the given prediction region.

Proposal 6: For indirect prediction, AI predicts the serving cell SINR. RLF can be detected based on the continuous predicted SINR. The predicted distance is FFS according to the applications and other configurations, e.g., T310 timer. The AI model input is the SINR of all cells and AI model output is the predicted serving cell SINR.

[R2-2407093](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407093.zip) AI/ML based RLF predictions Ericsson discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 1 Measured and/or predicted SINR of the cell and running values of T310, N310 and N311 can be used as input to direct RLF prediction model.

Proposal 2 Additional input to the direct RLF prediction model is FFS.

Proposal 3 Expected time of RLF is one output from direct RLF predictions.

Proposal 4 The output of indirect RLF predictions is the predicted time of the RLF and the RLF probability.

[R2-2406813](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406813.zip) RLF prediction and RLF prediction reporting Qualcomm Incorporated discussion Rel-19

Proposal 1. In simulation evaluation, the AI/ML model for Indirect RLF prediction, which is based on the temporal domain source cell predictions of RRM measurements, produces as output one or more of the following:

* Prediction regarding whether RLF will occur in a certain window of time into the future (the prediction window).
* Predicted time of occurrence of RLF.
* Predicted times of occurrence of RLF and associated probabilities.

E.g., Probability of occurrence of RLF is 10% 100ms into the future, 20% 150ms into the future, etc.

##### **KPIs:**

[R2-2406976](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406976.zip) Discussion on Simulation Assumption and Methodology for RLF prediction CMCC discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 8: The following performance metrics/KPIs could be considered for RLF prediction:

* + - The performance metrics/KPIs defined for RRM measurement prediction can be reused for indirect RLF prediction, e.g. the SINR difference to the actual measurement
    - The prediction accuracy for the occurrence of RLF, e.g. Precision, Recall or F1-score

[R2-2406705](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406705.zip) RLF prediction simulation assumption and evaluation methodology Xiaomi discussion

Proposal 10: If the AI output is RLF/no RLF within a time window, the positive and negative can be defined by whether real RLF/no RLF occurs within the time window.

Proposal 11: If the output is RLF/no RLF at a time instance, e.g. indirect prediction, the positive and negative can be defined whether real RLF/no RLF occurs at the time instance.

Proposal 12: Time difference between real RLF and predict RLF can also be used to further evaluate the accuracy.

[R2-2406663](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406663.zip) On RLF prediction Apple discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 5: consider additional KPIs (beyond RLF prediction accuracy and prediction window) once it has been established that AI/ML is capable of predicting RLF with sufficiently high accuracy and sufficiently long prediction window.

[R2-2406343](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406343.zip) Simulation assumption for RLF prediction NEC discussion

[R2-2406403](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406403.zip) Simulation assumptions and evaluation methodology for RLF prediction vivo discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2406424](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406424.zip) Discussion on simulation assumption for RLF prediction ZTE Corporation discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2406826](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406826.zip) Discussions on simulation assumptions and EVM for RLF predictions NTT DOCOMO, INC. discussion

[R2-2406885](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406885.zip) Discussion on RLF Prediction Lenovo discussion Rel-19

[R2-2407071](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407071.zip) AI-ML based RLF/HO failure prediction Rakuten Mobile, Inc discussion Rel-19

[R2-2407289](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407289.zip) Evaluation Assumptions for RLF/HO Failure Prediction Meta Ireland discussion Rel-19

[R2-2407389](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407389.zip) Discussion on simulation assumption for RLF prediction KDDI Corporation discussion Rel-19

[R2-2407481](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407481.zip) RLF Prediction Aspects Nokia discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2407492](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407492.zip) Discussion on simulation assumptions and evaluation methodology for RLF prediction Samsung discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2407514](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407514.zip) RLF prediction result for indirect case LG Electronics France discussion FS\_NR\_AIML\_Mob

#### 8.3.4.2 Other aspects related to RLF/HO failure prediction

*No contributions expected for this meeting*

*Including definition of RLF and HO prediction sub use cases, scenarios, metrics/KPIs, prioritizations etc.*

[R2-2406313](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406313.zip) Discussion on RLF use case OPPO discussion Rel-19 FS\_NR\_AIML\_Mob Withdrawn

## 8.4 Low-power wake-up signal and receiver for NR (LP-WUS/WUR)

(NR\_LPWUS-Core; leading WG: RAN1; REL-19; WID: [RP-240801](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_103/Docs/RP-240801.zip))

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

### 8.4.1 Organizational

LS, Rapporteur input, including workplan, etc.

### 8.4.2 Procedure and configuration of LP-WUS in RRC\_IDLE/INACTIVE

Procedure and configuration of LP-WUS indicating paging monitoring triggered by LP-WUS, including at least configuration, sub-grouping and entry/exit condition for LP-WUS monitoring

[R2-2406427](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406427.zip) Discussion on LP-WUS WUR in RRC\_IDLE INACTIVE vivo discussion Rel-19 NR\_LPWUS-Core

[R2-2406447](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406447.zip) Procedure and configuration of LP-WUS for IDLE and INACTIVE mode ZTE Corporation, Sanechips discussion Rel-19 NR\_LPWUS-Core

[R2-2406495](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406495.zip) LP-WUS procedure in RRC\_IDLE INACTIVE NEC discussion Rel-19 NR\_LPWUS-Core

[R2-2406575](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406575.zip) LP-WUS in RRC\_IDLE/INACTIVE CATT discussion Rel-19 NR\_LPWUS-Core

[R2-2406585](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406585.zip) General considerations on the procedure for RRC\_IDLE\_INACTIVE Xiaomi Communications discussion

[R2-2406617](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406617.zip) RAN2 aspects on LP-WUS/WUR in RRC Idle/Inactive mode Sony discussion Rel-19 NR\_LPWUS-Core

[R2-2406730](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406730.zip) Procedure and configuration of LP-WUS in RRC\_IDLE/INACTIVE Apple discussion Rel-19 NR\_LPWUS-Core

[R2-2406753](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406753.zip) Discussion on LP-WUS operation in IDLE/INACTIVE mode Spreadtrum Communications discussion Rel-19

[R2-2406772](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406772.zip) Discussion on procedure and configuration of LP-WUS in RRC\_IDLE/INACTIVE OPPO discussion Rel-19 NR\_LPWUS-Core

[R2-2406787](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406787.zip) Discussion on procedure and configuration of LP-WUS in RRC\_IDLE/INACTIVE Huawei, HiSilicon discussion

[R2-2406802](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406802.zip) Discussion on entry exit conditions for LP-WUS monitoring Sharp discussion

[R2-2406900](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406900.zip) LP-WUS Operation in RRC\_IDLE/INACTIVE China Telecom discussion Rel-19 NR\_LPWUS-Core

[R2-2406985](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406985.zip) LP-WUS operation in IDLE/INACTIVE modes CMCC discussion Rel-19 NR\_LPWUS-Core

[R2-2407013](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407013.zip) LP-WUS in IDLE and INACTIVE Nokia discussion Rel-19 NR\_LPWUS-Core

[R2-2407096](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407096.zip) LP-WUS operation in IDLE/Inactive state Qualcomm Incorporated discussion NR\_LPWUS-Core

[R2-2407127](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407127.zip) Procedure and Configuration of LP-WUS in RRC Idle/ Inactive Lenovo discussion NR\_LPWUS-Core

[R2-2407156](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407156.zip) LP-WUS operation in RRC\_IDLE and RRC\_INACTIVE LG Electronics Inc. discussion Rel-19 NR\_LPWUS-Core

[R2-2407240](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407240.zip) Discussion on LP-WUS operation in RRC\_IDLE/INACTIVE modes InterDigital, Inc. discussion Rel-19 NR\_LPWUS-Core

[R2-2407310](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407310.zip) Procedure and Configuration of LP-WUS in RRC Idle Inactive Mode Samsung discussion Rel-19

[R2-2407357](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407357.zip) Procedure of LP-WUS in RRC\_IDLE and INACTIVE HONOR discussion Rel-19 NR\_LPWUS-Core

[R2-2407396](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407396.zip) LP-WUS in Idle and Inactive Ericsson discussion Rel-19 NR\_LPWUS-Core

[R2-2407543](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407543.zip) Discussion on Procedure and configuration in RRC\_IDLE-INACTIVE NTT DOCOMO INC.. discussion Rel-19 NR\_LPWUS-Core

### 8.4.3 RRM measurement relaxation and offloading in RRC\_IDLE/INACTIVE

RRM relaxation of UE MR for both serving and neighbor cell measurements, and UE serving cell RRM measurement offloaded from MR to LP-WUR, including the necessary conditions

[R2-2406285](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406285.zip) RRM measurement relaxation and offloading in RRC\_IDLE or RRC\_INACTIVE Huawei, HiSilicon discussion Rel-19 NR\_LPWUS-Core

[R2-2406428](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406428.zip) Discussion on RRM measurement relaxation and offloading in RRC\_IDLE/INACTIVE vivo discussion Rel-19 NR\_LPWUS-Core

[R2-2406448](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406448.zip) RRM measurement relaxation and offloading in RRC\_IDLE and RRC\_INACTIVE mode ZTE Corporation, Sanechips discussion Rel-19 NR\_LPWUS-Core

[R2-2406496](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406496.zip) LP-WUS RRM measurement NEC discussion Rel-19 NR\_LPWUS-Core

[R2-2406576](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406576.zip) RRM Relaxation and Offloading in RRC\_IDLE/INACTIVE CATT discussion Rel-19 NR\_LPWUS-Core

[R2-2406586](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406586.zip) Discussion on RRM measurement relaxation for RRC\_IDLE\_INACTIVE Xiaomi Communications discussion

[R2-2406618](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406618.zip) Discussion on RRM aspects for LP-WUS/WUR Sony discussion Rel-19 NR\_LPWUS-Core

[R2-2406731](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406731.zip) RRM measurement relaxation and offloading in RRC\_IDLE/INACTIVE Apple discussion Rel-19 NR\_LPWUS-Core Late

[R2-2406739](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406739.zip) Discussion on RRM measurement relaxation and offloading in RRC\_IDLE/INACTIVE mode China Telecom discussion

[R2-2406754](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406754.zip) Discussion on RRM measurement relaxation and offloading in IDLE/INACTIVE mode Spreadtrum Communications discussion Rel-19

[R2-2406767](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406767.zip) Discussion on RRM measurement in RRC IDLE and INACTIVE OPPO discussion Rel-19 NR\_LPWUS-Core

[R2-2406803](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406803.zip) Discussion on RRM measurement offloading and relaxation Sharp discussion

[R2-2406882](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406882.zip) RRM measurement relaxation and offloading in RRC\_IDLE/INACTIVE Lenovo discussion Rel-19

[R2-2406970](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406970.zip) Discussion on RRM measurement relaxation and offloading in RRC\_IDLE INACTIVE CMCC discussion Rel-19 NR\_LPWUS-Core

[R2-2407014](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407014.zip) RRM measurement relaxation in RRC\_IDLE/INACTIVE Nokia discussion Rel-19 NR\_LPWUS-Core

[R2-2407098](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407098.zip) LP-WUS RRM measurement relaxation and offloading Qualcomm Incorporated discussion NR\_LPWUS-Core

[R2-2407157](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407157.zip) RRM relaxation and RRM offloading LG Electronics Inc. discussion Rel-19 NR\_LPWUS-Core

[R2-2407241](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407241.zip) Discussion on RRM measurement relaxation and offloading InterDigital, Inc. discussion Rel-19 NR\_LPWUS-Core

[R2-2407311](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407311.zip) RRM measurement relaxation and offloading in RRC Idle Inactive Mode Samsung discussion Rel-19

[R2-2407397](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407397.zip) LP-WUS and RRM measurements Ericsson discussion Rel-19 NR\_LPWUS-Core

### 8.4.4 Procedures for LP-WUS in RRC\_CONNECTED

Procedures to allow UE MR PDCCH monitoring triggered by LP-WUS including activation and deactivation procedure of LP-WUS monitoring.

[R2-2406429](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406429.zip) Discussion on LP-WUS WUR in RRC\_Connected vivo discussion Rel-19 NR\_LPWUS-Core

[R2-2406449](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406449.zip) Procedures for LP-WUS in RRC\_CONNECTED ZTE Corporation, Sanechips discussion Rel-19 NR\_LPWUS-Core

[R2-2406497](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406497.zip) LP-WUS procedure in RRC\_CONNECTED NEC discussion Rel-19 NR\_LPWUS-Core

[R2-2406577](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406577.zip) Analysis on LP-WUS for RRC\_CONNECTED Mode CATT discussion Rel-19 NR\_LPWUS-Core

[R2-2406587](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406587.zip) Discussing on LP-WUS monitoring for RRC\_Connected Xiaomi Communications discussion

[R2-2406619](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406619.zip) Considerations on LP-WUS/WUR in RRC Connected mode Sony discussion Rel-19 NR\_LPWUS-Core

[R2-2406717](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406717.zip) Discussion on LP-WUS for RRC\_CONNECTED mode Huawei, HiSilicon discussion Rel-19 NR\_LPWUS-Core

[R2-2406732](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406732.zip) Procedures for LP-WUS in RRC\_CONNECTED Apple discussion Rel-19 NR\_LPWUS-Core

[R2-2406768](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406768.zip) Discussion on LP-WUS in RRC\_CONNECTED OPPO discussion Rel-19 NR\_LPWUS-Core

[R2-2406901](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406901.zip) Discussion on LP-WUS in RRC\_CONNECTED China Telecom discussion Rel-19 NR\_LPWUS-Core

[R2-2406978](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406978.zip) Discussion on LP-WUS operation in CONNECTED mode CMCC discussion Rel-19 NR\_LPWUS-Core

[R2-2407097](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407097.zip) LP-WUS operation in CONNECTED state Qualcomm Incorporated discussion NR\_LPWUS-Core

[R2-2407134](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407134.zip) LP-WUS in RRC Connected Mode Lenovo discussion NR\_LPWUS-Core

[R2-2407242](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407242.zip) Discussion on LP-WUS operation in RRC\_CONNECTED mode InterDigital, Inc. discussion Rel-19 NR\_LPWUS-Core

[R2-2407286](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407286.zip) Discussion on Procedures for UE MR PDCCH monitoring triggered by LP-WUS in RRC\_CONNECTED Mode LG Electronics Inc. discussion Rel-19 NR\_LPWUS-Core

[R2-2407312](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407312.zip) Procedures for LP-WUS in RRC Connected Mode Samsung discussion Rel-19

[R2-2407358](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407358.zip) Discussion on LP-WUS in RRC\_CONNECTED HONOR discussion Rel-19 NR\_LPWUS-Core

[R2-2407398](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407398.zip) LP-WUS in Connected Ericsson discussion Rel-19 NR\_LPWUS-Core

[R2-2407406](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407406.zip) LP-WUS in RRC\_CONNECTED Nokia discussion NR\_LPWUS-Core

[R2-2407512](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407512.zip) Discussion on LP-WUS in RRC\_CONNECTED NTT DOCOMO INC.. discussion Rel-19 NR\_LPWUS-Core

## 8.5 Network Energy Saving Enh.

(Netw\_Energy\_NR\_enh-Core; leading WG: RAN1; REL-19; WID: [RP-241650](https://www.3gpp.org/ftp/meetings_3gpp_sync/ran/docs/RP-241650.zip) )

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

### 8.5.1 Organizational

Including incoming LSs and rapporteur inputs.

### 8.5.2 On-demand SSB SCell operation

RAN2 spec impacts and high-level solutions.

[R2-2406266](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406266.zip) Discussion on On-Demand SSB OPPO discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406347](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406347.zip) On-demand SSB SCell Operation Samsung Electronics Co., Ltd discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406425](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406425.zip) Discussion on on-demand SSB Xiaomi discussion

[R2-2406444](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406444.zip) On-demand SSB SCell operation in connected mode ZTE Corporation, Sanechips discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406469](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406469.zip) RAN2 impacts to enable on-demand SSB SCell Intel Corporation discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406620](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406620.zip) On-demand SSB Scell operation discussion Sony discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406669](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406669.zip) Discussion on RAN2 work of on-demand SSB for Scell Apple discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406721](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406721.zip) Discussion on on-demand SSB SCell operation vivo discussion Rel-19

[R2-2406749](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406749.zip) Discussion on on-demand SSB Scell operation Spreadtrum Communications discussion Rel-19

[R2-2406889](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406889.zip) Issues on the procedure of on-demand SSB SCell operation Lenovo discussion Rel-19

[R2-2406895](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406895.zip) Discussion on on-demand SSB China Telecom discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406954](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406954.zip) On demand SSB handling Nokia, Nokia Shanghai Bell discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406979](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406979.zip) Discussion on on-demand SSB CMCC discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2407002](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407002.zip) Consideration on on-demand SSB SCell operation CATT discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2407039](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407039.zip) Discussion on on-demand SSB for NES Ericsson discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2407123](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407123.zip) Discussion on On-demand SSB for SCell NEC discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2407158](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407158.zip) On-demand SSB SCell operation LG Electronics Inc. discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2407161](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407161.zip) Discussion on On-demand SSB SCell Operation Qualcomm discussion

[R2-2407162](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407162.zip) Discussion on On-demand SIB1 Qualcomm Incorporated discussion

[R2-2407185](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407185.zip) On demand SSB transmission for SCell InterDigital discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2407271](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407271.zip) Discussion on on-demand SSB SCell operation Fujitsu discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2407304](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407304.zip) Discussion on on-demand SSB SCell operation for NES Huawei, HiSilicon discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2407414](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407414.zip) Discussion on on-demand SSB SCell operation Sharp discussion

### 8.5.3 On-demand SIB1

Leftover issues from RAN2#126 and remaining essential issues for study (e.g. need of WUS configuration acquisition from NES cell (if needed, what’s use cases and how it works)?, need of SIB1 validity (if needed, what’s use case and how it works), whether/how to support case 3 defined in RAN1 (e.g. reuse/enhance on-demand SIB request procedure)?, etc.). Note study of OD-SIB1 needs to be concluded

[R2-2406346](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406346.zip) On-demand SIB1 Samsung Electronics Co., Ltd discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406359](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406359.zip) Discussion on on-demand SIB1 Xiaomi discussion Rel-19

[R2-2406445](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406445.zip) Remaining issues of on-demand SIB1 in idle and inactive mode ZTE Corporation, Sanechips discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406470](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406470.zip) Remaining details to enable on-demand SIB1 Intel Corporation discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406569](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406569.zip) The procedure for the on-demand SIB1 transmission Google discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406605](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406605.zip) Discussion on on-demand SIB1 operation for NES Huawei, HiSilicon discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406621](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406621.zip) On-demand SIB1 for IDLE/INACTIVE UEs Sony discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406622](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406622.zip) Further study on Case 3 in on-demand SIB1 Sony discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406653](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406653.zip) Discussion on On-demand SIB1 for RAR KDDI Corporation discussion Rel-19

[R2-2406659](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406659.zip) Discussion on on-demand SIB1 transmission for network energy savings Fujitsu Limited discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406670](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406670.zip) Finalize study of on-demand SIB1 Apple Inc, BT Plc discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406722](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406722.zip) Discussion on on-demand SIB1 for RRC IDLE and INACTIVE UE vivo discussion Rel-19

[R2-2406780](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406780.zip) Consideration on on-demand SIB1 OPPO discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406804](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406804.zip) Discussion on on-demand SIB1 Sharp discussion

[R2-2406896](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406896.zip) Discussion on left issues of on-demand SIB1 China Telecom discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406955](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406955.zip) On demand SIB1 handling Nokia, Nokia Shanghai Bell discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406980](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406980.zip) Discussion on on-demand SIB1 CMCC discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2407003](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407003.zip) Consideration on on-demand SIB1 issues CATT discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2407041](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407041.zip) Discussion on on-demand SIB1 for NES Ericsson discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2407042](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407042.zip) Discussion on on-demand SIB1 for NES Rakuten Mobile, Inc discussion Rel-19

[R2-2407043](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407043.zip) Discussion on On-demand SIB1 procedure and UL WUS configuration NEC discussion

[R2-2407051](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407051.zip) Detection and access of NES cells with OD-SIB1 Rakuten Mobile, Inc discussion Rel-19

[R2-2407159](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407159.zip) On-demand transmission of SIB1 LG Electronics Inc. discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2407183](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407183.zip) On-demand SIB1 request and reception InterDigital discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2407351](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407351.zip) Further discussion on on-demand SIB1 HONOR discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2407438](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407438.zip) Remaining essential issues for study Lenovo discussion Netw\_Energy\_NR-Core

[R2-2407455](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407455.zip) Discussion on on-demand SIB1 NTT DOCOMO INC.. discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2407499](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407499.zip) On-demand SIB1 for NES Fraunhofer IIS, Fraunhofer HHI discussion Rel-19

[R2-2407540](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407540.zip) On-demand SIB1 for Idle/Inactive mode UEs III discussion

### 8.5.4 Adaptation of common signal/channel transmissions

Further consideration of adapation of paging occasions in time domain, legacy UE impact (including barring aspect for paging adaptation), configuration aspect for paging adaptation, RAN2 spec impact and solutions for RACH adaptation and SSB (with consideration of RAN1 progress), etc.

[R2-2406270](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406270.zip) Discussion on PO confinement options OPPO, Samsung, ZTE, Huawei, HiSilicon, Qualcomm discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406348](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406348.zip) Adaptation of common signal channel transmissions Samsung Electronics Co., Ltd discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406360](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406360.zip) Discussion on common signal adaptation Xiaomi discussion Rel-19

[R2-2406446](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406446.zip) Further consideration on paging occasion adaptation ZTE Corporation, Sanechips discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406471](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406471.zip) RAN2 impacts to enable adaptation of paging and RACH in time Intel Corporation discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406523](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406523.zip) Discussion on paging adaptation ASUSTeK discussion Rel-19 Netw\_Energy\_NR\_enh-Core [R2-2405428](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2405428.zip)

[R2-2406544](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406544.zip) Adaptation of common signal or channel Fujitsu discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406671](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406671.zip) Further discussion on common signal transmission adaptation Apple discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406723](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406723.zip) Discussion on adaptation on common signal transmissions vivo discussion Rel-19

[R2-2406750](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406750.zip) Discussion on adaptation of common signal channel transmissions Spreadtrum Communications discussion Rel-19

[R2-2406866](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406866.zip) Discussion on the paging occasion adaptation for NES cell ITRI discussion Netw\_Energy\_NR\_enh-Core

[R2-2406890](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406890.zip) Paging statistics from field and PRACH adaptation Lenovo discussion Rel-19

[R2-2406897](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406897.zip) Discussion of adaption of paging occasions China Telecom discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406956](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406956.zip) Common signal aspects of NES WI Nokia, Nokia Shanghai Bell discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2406981](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406981.zip) Discussion on adaptation of common signal channel transmissions CMCC discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2407004](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407004.zip) Consideration on adaptation of common signalchannel transmissions CATT discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2407048](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407048.zip) PRACH and paging adaptation NEC discussion

[R2-2407163](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407163.zip) Discussion on Adaptation of Common Signal/Channel Transmissions Qualcomm Incorporated discussion

[R2-2407184](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407184.zip) Time domain adaptation of common signalling and channels InterDigital discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2407245](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407245.zip) Adaptation of common signal/channel transmissions for NES Ericsson discussion Rel-19 Netw\_Energy\_NR\_enh-Core [R2-2405290](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2405290.zip)

[R2-2407305](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407305.zip) Discussion on adaptation of common signals/channels transmissions Huawei, HiSilicon discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2407352](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407352.zip) Discussion on adaptation of common channel transmissions HONOR discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2407440](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407440.zip) Discussion on RACH adaptation SHARP discussion Rel-19

[R2-2407454](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407454.zip) Discussion on Adaptation of paging occasions NTT DOCOMO INC.. discussion Rel-19 Netw\_Energy\_NR\_enh

[R2-2407486](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407486.zip) Adaptation of Common Signals and Channels for NES Fraunhofer IIS, Fraunhofer HHI discussion Rel-19

[R2-2407520](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407520.zip) Discussion on common signal and channel adaptation LG Electronics Inc. discussion Rel-19 Netw\_Energy\_NR\_enh

[R2-2407531](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407531.zip) Adaptation of common signal/channel transmissions III discussion

## 8.6 Mobility Enhancement Ph4

(NR\_Mob\_Ph4-Core; leading WG: RAN2; REL-19; WID: [RP-241515](https://www.3gpp.org/ftp/meetings_3gpp_sync/ran/docs/RP-241515.zip))

Time budget: 2 TU

Tdoc Limitation: 3 tdocs

### 8.6.1 Organizational

Including incoming LSs, WI rapporteur inputs, etc.

[R2-2406244](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406244.zip) Reply LS to RAN2 on security handling for inter-CU LTM in non-DC cases (S3-242400; contact: Apple) SA3 LS in Rel-19 NR\_Mob\_Ph4-Core To:RAN2 Cc:RAN3

[R2-2406693](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406693.zip) Important topics for resolution for Rel-19 Mob Enh WI (Rapporteur) Apple Inc, China Telecom discussion Rel-19 NR\_Mob\_Ph4-Core

### 8.6.2 Inter-CU LTM

Remaining open issues and further details of LTM preparation phase (e.g. single or multiple reference configuration(s)?, details of RRC signaling structure, etc.), early sync phase, execution phase (e.g. support of mixture of intra-CU and inter-CU, etc.), and LTM cell switch completion phase. Initial discussion on inter-CU LTM with DC (high-level spec impacts and solutions).

[R2-2406305](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406305.zip) Discussion on inter-CU LTM CATT discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406356](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406356.zip) Further discussion on Inter-CU LTM MediaTek Inc. discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406386](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406386.zip) Discussion on inter-CU LTM ETRI discussion Rel-19

[R2-2406419](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406419.zip) Discussion on inter-CU LTM ZTE Corporation discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406430](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406430.zip) Discussion on inter-CU LTM vivo discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406532](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406532.zip) Discussion on open issues for inter-CU LTM OPPO discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406623](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406623.zip) LTM for Inter-CU Sony discussion Rel-19 NR\_Mob\_Ph4

[R2-2406658](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406658.zip) Discussion on Inter-CU LTM InterDigital, Inc. discussion Rel-19

[R2-2406694](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406694.zip) View on open issues in inter-CU LTM Apple discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406743](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406743.zip) Discussion on inter-CU LTM KT Corp. discussion

[R2-2406775](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406775.zip) Discussion on Inter CU LTM Lekha Wireless Solutions discussion Rel-19

[R2-2406819](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406819.zip) Discussion on Inter-CU LTM Xiaomi discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406820](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406820.zip) Initial considerations for inter-CU LTM Rakuten Mobile, Inc discussion Rel-19

=> Revised in [R2-2407561](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407561.zip)

[R2-2407561](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407561.zip) Initial considerations for inter-CU LTM Rakuten Mobile, Inc discussion Rel-19

[R2-2406854](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406854.zip) Discussion on inter-CU LTM NEC discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406863](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406863.zip) Cell switch command for subsequent inter-CU LTM ITRI discussion NR\_Mob\_Ph4-Core

[R2-2406867](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406867.zip) Discussion on the reference configuration for inter-CU LTM ITRI discussion NR\_Mob\_Ph4-Core

[R2-2406919](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406919.zip) Important aspects regarding inter-CU LTM Ericsson discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406982](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406982.zip) Discussion on Inter-CU LTM CMCC discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407023](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407023.zip) Further detailed discussion on supporting inter-CU LTM cell switch Transsion Holdings discussion Rel-19

[R2-2407033](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407033.zip) Security impacts of Inter-CU LTM Rakuten Mobile, Inc discussion Rel-19

=> Withdrawn

[R2-2407073](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407073.zip) On Inter-CU LTM Open Issues Nokia discussion

[R2-2407107](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407107.zip) Radio Resource aspects for intra-CU and inter-CU LTM Rakuten Mobile, Inc discussion Rel-19

=> Withdrawn

[R2-2407108](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407108.zip) Discussion on Inter-CU LTM China Telecom discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407133](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407133.zip) Fast LTM recovery in DC scenarios Rakuten Mobile, Inc discussion Rel-19

[R2-2407155](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407155.zip) RACH-less LTM completion in inter-CU LTM Rakuten Mobile, Inc discussion Rel-19

=> Withdrawn

[R2-2407201](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407201.zip) Inter-CU LTM Huawei, HiSilicon discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407269](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407269.zip) Discussion on inter-CU LTM LG Electronics discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407320](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407320.zip) Discussion on subsequent inter-CU or inter-CU LTM Fujitsu discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407348](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407348.zip) Further discussion on inter-CU LTM HONOR discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407374](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407374.zip) Inter-gNB LTM with no change of RRC/PDCP anchor Qualcomm Incorporated, NTT DOCOMO, Vodafone, Bharti Airtel (India), Sony discussion

[R2-2407407](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407407.zip) Discussion on issues for supporting inter-CU LTM Sharp discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407421](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407421.zip) Further Considerations to Support Inter-CU LTM Samsung discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407439](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407439.zip) Discussion on inter-CU LTM Kyocera discussion Rel-19

[R2-2407441](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407441.zip) Discussion on inter-CU LTM DENSO CORPORATION discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407448](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407448.zip) Discussion on Inter-CU LTM Lenovo discussion NR\_Mob\_Ph4-Core

[R2-2407465](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407465.zip) Discussion on inter-CU LTM ITL discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407478](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407478.zip) RRC Modelling for Inter-CU LTM Nokia discussion Rel-19 NR\_Mob\_Ph4

[R2-2407483](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407483.zip) LTM enhancements for Inter-CU mobility CEWiT discussion Rel-19 NR\_Mob\_Ph4-Core

### 8.6.3 Measurement event evaluation

Remaining open issues and further details of measurement event evaluation (e.g. need of event LTM1 (if needed, what’s use case)? , what beam(s) of the serving cell and neighboring cell is used for event evaluation?, Need of cell level measurement result for event evaluation (if needed, what’s use case and how it works)? Further details on event configuration signaling design, e.g. how to associate with resource configuration,, etc.)

[R2-2406287](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406287.zip) Discussion on event triggered report Huawei, HiSilicon discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406306](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406306.zip) Measurement Event Evaluation CATT discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406357](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406357.zip) Discussion on measurement and signalling design MediaTek Inc. discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406420](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406420.zip) Discussion on measurement event evaluation ZTE Corporation discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406431](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406431.zip) Discussion on LTM measurement event evaluation vivo discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406524](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406524.zip) Discussion on beam for evaluation of LTM event-triggered reporting ASUSTeK discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406533](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406533.zip) Open issues for event triggered L1 measurement reporting OPPO discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406545](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406545.zip) Open issues of measurement event evaluation for LTM Fujitsu discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406707](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406707.zip) Discussion on the measurement event evaluation for LTM Xiaomi discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406728](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406728.zip) LTM measurement event evaluation and configuration Apple discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406733](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406733.zip) Measurement enhancements for LTM Qualcomm Incorporated discussion

[R2-2406756](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406756.zip) Discussion on measurement event evaluation for L1 measurement event Spreadtrum Communications discussion Rel-19

[R2-2406851](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406851.zip) Further View on Measurement-related Enhancements for Rel-19 LTM Nokia discussion Rel-19 NR\_Mob\_Ph4 [R2-2405149](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2405149.zip)

[R2-2406886](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406886.zip) L1 Measurement enhancements Lenovo discussion Rel-19

[R2-2406908](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406908.zip) Discussion on measurement event evaluation for LTM Lekha Wireless Solutions discussion Rel-19

[R2-2406920](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406920.zip) Important aspects regarding event triggered L1 measurements Ericsson discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406968](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406968.zip) Discussion on measurement event evaluation CMCC discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407024](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407024.zip) Discussion on event triggered L1 measurement configuration for LTM Transsion Holdings discussion Rel-19

[R2-2407109](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407109.zip) Discussion on measurement event evaluation for LTM China Telecom discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407124](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407124.zip) Event evaluation of L1 measurement reporting NEC discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407141](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407141.zip) Event triggered L1 measurement evaluation for LTM Interdigital, Inc. discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407160](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407160.zip) Event based L1 measurements triggered LTM candidate cell addition/release Rakuten Mobile, Inc discussion Rel-19

[R2-2407195](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407195.zip) Reference resource configuration for L1 measurement event Panasonic discussion

[R2-2407349](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407349.zip) Discussion on measurement event evaluation HONOR discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407393](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407393.zip) Discussion on measurement event evaluation KDDI Corporation discussion Rel-19

[R2-2407408](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407408.zip) Discussion issues on related to measurement event evaluation Sharp discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407422](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407422.zip) Remaining Issues for Measurement Event Evaluation Samsung discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407446](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407446.zip) Measurement event evaluation for LTM enhancement Kyocera discussion Rel-19

[R2-2407470](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407470.zip) Discussion on event triggered L1 measurement ITL discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407506](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407506.zip) Event LTM - Event variant, new event, RS determination, configuration LG Electronics France discussion Rel-19 NR\_Mob\_Ph4-Core

### 8.6.4 Measurement reporting

Remaining open issues and further details of measurement reporting procedure (e.g. what information in the measurement report? MAC CE or UCI for measurement report?, need of measurement reporting once leaving condition is met, etc.)

[R2-2406286](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406286.zip) Discussion on measurement event evaluation Huawei, HiSilicon discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406307](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406307.zip) Measurement Reporting CATT discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406358](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406358.zip) Discussion on measurement reporting of event triggered L1 MR MediaTek Inc. discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406421](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406421.zip) Discussion on measurement reporting ZTE Corporation discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406432](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406432.zip) Discussion on event-triggered L1 measurement reporting vivo discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406534](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406534.zip) Discussion on the UL signalling for L1 reproting OPPO discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406546](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406546.zip) Open issues of measurement reporting procedure for LTM Fujitsu discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406708](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406708.zip) Event-based measurement reporting procedure for L1 measurement Xiaomi discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406729](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406729.zip) LTM event triggered measurement reporting Apple discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406757](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406757.zip) Discussion on measurement reporting for L1 measurement event Spreadtrum Communications discussion Rel-19

[R2-2406921](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406921.zip) Discussion on which layer reports the event triggered L1 measurements Ericsson, Honor, Huawei, InterDigital Inc., MediaTek Inc., NEC, Nokia, NTT DOCOMO, Oppo, T-Mobile USA, Vivo, ZTE corporation discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2406969](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406969.zip) Discussion on measurement reporting CMCC discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407025](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407025.zip) Discussion on L1 measurement reporting for LTM Transsion Holdings discussion Rel-19

[R2-2407110](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407110.zip) Discussion on measurement reporting for LTM China Telecom discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407125](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407125.zip) Details of event triggered L1 measurement report NEC discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407142](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407142.zip) Event triggered L1 measurement reporting for LTM Interdigital, Inc. discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407208](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407208.zip) Event triggered reporting enhancements for LTM Panasonic discussion Rel-19

[R2-2407285](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407285.zip) Discussion on Event-triggered L1 measurement reporting NTT DOCOMO, INC. discussion Rel-19

[R2-2407350](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407350.zip) Discussion on measurement reporting HONOR discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407394](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407394.zip) Discussion on event triggered L1 measurement reporting KDDI Corporation discussion

[R2-2407409](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407409.zip) Discussion issues on related to measurement reporting Sharp discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407423](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407423.zip) Support of Event Triggered L1 Measurement Reporting Samsung discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2407447](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407447.zip) Measurement reporting procedures for LTM enhancements Kyocera discussion Rel-19

[R2-2407507](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407507.zip) Event LTM - Report triggering, report contents and transmission procedure LG Electronics France discussion Rel-19 NR\_Mob\_Ph4-Core

## 8.7 XR Enhancements Ph3

(NR\_XR\_Ph3-Core; leading WG: RAN2; REL-19; WID: [RP-240791](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_103/Docs/RP-240791.zip))

Time budget: 2 TU

Tdoc Limitation: 4 tdocs

### 8.7.1 Organizational

LS, Rapporteur input, including workplan, etc.

[R2-2406216](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406216.zip) LS on UE assistance information (R1-2405736; contact: Nokia) RAN1 LS in Rel-19 NR\_XR\_Ph3-Core To:RAN4 Cc:RAN2

[R2-2406221](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406221.zip) LS on UL PSI based PDU discarding in NR-DC (R3-243957; contact: Qualcomm) RAN3 LS in Rel-19 NR\_XR\_Ph3-Core To:RAN2

[R2-2406222](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406222.zip) Response LS on FS\_XRM Ph2 (R3-243958; contact: Lenovo) RAN3 LS in Rel-19 FS\_XRM\_Ph2 To:SA2 Cc:RAN2, SA4

[R2-2406241](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406241.zip) LS on FS\_XRM Ph2 (S2-2407351; contact: vivo) SA2 LS in Rel-19 FS\_XRM\_Ph2 To:SA4, RAN2, RAN3

[R2-2406242](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406242.zip) LS Reply on FS\_XRM Ph2 (S4-241370; contact: Huawei) SA4 LS in Rel-19 FS\_XRM\_Ph2, FS\_5G\_RTP\_Ph2 To:SA2 Cc:RAN2, RAN3

[R2-2406395](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406395.zip) XR Workplan Nokia, Qualcomm (Rapporteurs) Work Plan Rel-19 NR\_XR\_Ph3-Core

[R2-2406396](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406396.zip) XR Agreements Nokia, Qualcomm (Rapporteurs) discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406397](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406397.zip) SA2 Overview Nokia, Qualcomm (Rapporteurs) discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406398](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406398.zip) RAN3 Overview Nokia, Qualcomm (Rapporteurs) discussion Rel-19 NR\_XR\_Ph3-Core

#### 8.7.1.1 Discussion on incoming LSs

Discussion on RAN2 replies to SA2 LS on FS\_XRM Ph2 (S2-2407351) and RAN3 LS on UL PSI based PDU discarding in NR-DC (R3-243957)

[R2-2406253](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406253.zip) Reply to RAN3 LS on UL PSI based PDU discarding in NR-DC Qualcomm Incorporated LS out Rel-19 NR\_XR\_Ph3-Core to:RAN3

[R2-2406254](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406254.zip) Discussion on reply to RAN3 LS on PSI-based PDU discard in NR-DC Qualcomm Incorporated, Nokia, Nokia Shanghai Bell discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406255](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406255.zip) Discussion on reply LS to SA2 on FS\_XRM Ph2 Qualcomm Incorporated discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406303](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406303.zip) Discussion on incoming LSs Huawei, HiSilicon discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406399](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406399.zip) Periodicity and Time to Next Burst Nokia, Nokia Shanghai Bell discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406408](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406408.zip) Discussion on SA2 and RAN3 LSs for Rel-19 XR Xiaomi discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406433](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406433.zip) Discussion on LS from SA2 on FS\_XRM Ph2 vivo discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406434](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406434.zip) Discussion on LS from RAN3 on UL PSI based PDU discarding in NR-DC vivo discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406457](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406457.zip) Discussion on LSs for XR ZTE Corporation, Sanechips discussion

[R2-2406472](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406472.zip) RAN2 views and responses to LSs from SA2, RAN3 and SA4 Intel Corporation discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406480](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406480.zip) Discussion on XRM and UL PSI-based PDU Discard Sharp discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406558](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406558.zip) Discussion on SA2 and RAN3 LSs CATT discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406566](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406566.zip) Discussion on SA2 LS on FS\_XRM Ph2 and RAN3 LS on UL PSI based PDU discarding in NR-DC NEC discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406624](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406624.zip) Views on LSs for SA2 and RAN3 Sony discussion Rel-19 NR\_XR\_Ph3

[R2-2406675](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406675.zip) On Responses to SA2 and RAN3 LS for XR Apple discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406781](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406781.zip) Discussion on the LS from SA2 and RAN3 OPPO discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406783](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406783.zip) Discussion on incoming LSs Samsung discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406892](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406892.zip) Discussion on RAN2 Replies to LS Lenovo discussion Rel-19

[R2-2406913](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406913.zip) Discussion on SA2 and RAN3 LSs for XR LG Electronics Inc. discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2407044](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407044.zip) Discussion on LSs from SA2 and RAN3 Ericsson discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2407216](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407216.zip) Discussion on incoming LSs InterDigital discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2407276](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407276.zip) Discussion on SA2 and RAN3 LSs on Rel-19 XR Meta discussion

[R2-2407383](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407383.zip) Discussion on LS on FS\_XRM Ph2 and UL PSI based PDU discarding in NR-DC CMCC discussion Rel-18 NR\_XR\_Ph3-Core

### 8.7.2 Multi-modality support

Objective: Study and if justified, specify aspects related to multi-modality (intra-UE) (with coordination with SA2/SA4 as needed by LS request). Aim to facilitate efficient and effective support for XR application with Multiple QoS flows with multi-modal inter-dependencies, meeting multi-modal QoS requirements, e.g. synchronization and/or coordination. Efficiency enhancements are expected to be visible in terms of capacity or power consumption.

Including aspects such as:

* potential enhancements based on multi-modal information awareness depending on traffic direction (UL/DL)
* can the multi-modal information be provided from the UE
* other enhancements for multi-modal traffic not strictly related to multi-modality awareness, e.g. power saving, scheduling

[R2-2406302](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406302.zip) Discussion on multi-modal XR Huawei, HiSilicon discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406370](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406370.zip) Discussion on Multi-modality for XR TCL discussion Rel-19

[R2-2406435](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406435.zip) Discussion on Multi-modality vivo discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406463](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406463.zip) Multi-modality assistance information for RAN awareness ZTE Corporation, Sanechips discussion

[R2-2406473](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406473.zip) UE/RAN enhancements considering multi-modal awareness Intel Corporation discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406525](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406525.zip) Discussion on DRX enhancements for multi-modality ASUSTeK discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406547](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406547.zip) Discussions on Multi-modality XR Fujitsu discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406559](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406559.zip) Discussion on Multi-Modality CATT discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406567](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406567.zip) Potential enhancements based on multi-modal information awareness NEC discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406589](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406589.zip) Discussion on Multi-modality support for XR traffic Xiaomi Communications discussion

[R2-2406595](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406595.zip) Enhancements for support of Multi-Modal XR applications Lenovo discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406625](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406625.zip) Need for MMSID and DRB mapping Sony discussion Rel-19 NR\_XR\_Ph3

[R2-2406662](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406662.zip) Discussion on Multi-Modality Sharp discussion

[R2-2406676](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406676.zip) Views on Support of Multi-Modality Services in Rel-19 XR Apple discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406740](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406740.zip) Discussion on XR multi-modality China Telecom discussion

[R2-2406760](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406760.zip) Discussion on enhancements for XR Multi-modality Spreadtrum Communications discussion Rel-19

[R2-2406782](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406782.zip) Discussion on the multi-modality support OPPO discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406864](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406864.zip) Discussion on scheduling enhancements for multi-modal traffic ITRI discussion NR\_XR\_Ph3-Core

[R2-2406914](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406914.zip) Discussion on Multi-modal support for XR LG Electronics Inc. discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406916](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406916.zip) Further aspects of multi-modality support in RAN Samsung R&D Institute UK discussion

[R2-2406988](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406988.zip) Further discussion on multi-modality support for XR CMCC discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2407045](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407045.zip) Discussion on Multi-Modality Ericsson discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2407135](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407135.zip) Multi-modality support for XR Google Ireland Limited discussion

[R2-2407213](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407213.zip) Multi-modality support for XR InterDigital discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2407225](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407225.zip) Discussion on multi-modality MediaTek Inc. discussion Rel-19

[R2-2407277](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407277.zip) Discussion on Multi-Modality XR Meta discussion

[R2-2407356](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407356.zip) Discussion on multi-modality support HONOR discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2407404](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407404.zip) Multi-modality support Nokia discussion NR\_XR\_Ph3-Core

[R2-2407516](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407516.zip) Primary use cases for multi-modality support in RAN III discussion NR\_XR\_Ph3-Core

### 8.7.3 RRM measurement gaps/restrictions related enhancements

Objective: Specify enhancements to enable transmission/reception in gaps/restrictions that are caused by RRM measurements (from inter-frequency RRM measurement gaps, or intra-frequency measurements, or other scheduling restrictions etc).

**This agenda item will not be treated during RAN2#127 and no contributions should be submitted for this AI for this meeting.**

### 8.7.4 Scheduling enhancements

Objective: For the UL, Study and if justified, Specify enhancements using delay/deadline information, for support of UL scheduling to enable high XR capacity while meeting delay requirements/avoiding too late PDUs.

Including aspects such as:

* further details of the additional priority for LCH with dealy-critical data
* whether/how to enhance LCP restrictions
* further details of DSR with multiple pairs of remaining time and buffer size, e.g. does PSI need to be included, whether/how is DSR triggering impacted etc.

[R2-2406256](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406256.zip) Discussion on delay-aware scheduling Qualcomm Incorporated discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406269](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406269.zip) Discussion on scheduling enhancements for XR OPPO discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406371](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406371.zip) Discussion on delay-aware LCP enhancement TCL discussion

[R2-2406436](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406436.zip) Discussion on scheduling enhancement for XR vivo discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406455](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406455.zip) Scheduling enhancements for XR ZTE Corporation, Sanechips discussion

[R2-2406474](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406474.zip) Scheduling enhancements using delay related information Intel Corporation discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406479](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406479.zip) Discussion on additional priority for delay-critical data SHARP Corporation discussion NR\_XR\_Ph3-Core

[R2-2406548](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406548.zip) Discussions on enhancement of the LCP for delay-critical data Fujitsu discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406560](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406560.zip) Consideration on XR-specific scheduling enhancement CATT discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406588](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406588.zip) Discussion on scheduling enhancements of XR traffic Xiaomi Communications discussion

[R2-2406594](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406594.zip) Enhanced uplink scheduling for XR Lenovo discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406626](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406626.zip) UL Scheduling enhancements for XR Sony discussion Rel-19 NR\_XR\_Ph3

[R2-2406677](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406677.zip) Views on Delay-Aware Operations for Rel-19 XR Apple discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406741](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406741.zip) Discussion on XR scheduling enhancements China Telecom discussion

[R2-2406761](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406761.zip) Discussion on XR scheduling enhancements Spreadtrum Communications discussion Rel-19

[R2-2406784](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406784.zip) Scheduling enhancements for Rel-19 XR Samsung discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406797](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406797.zip) Delay-aware scheduling enhancements Huawei, HiSilicon discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406798](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406798.zip) Considerations on delay-sensitive scheduling for XR NEC discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406858](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406858.zip) Discussion on DSR enhancement TCL discussion Rel-19

[R2-2406923](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406923.zip) Discussion on additional priority for delay aware LCP CANON Research Centre France discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406939](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406939.zip) Discussion on Delay status report CANON Research Centre France discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406989](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406989.zip) Further discussion on scheduling enhancement on XR CMCC discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2407047](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407047.zip) Discussion on scheduling enhancements Ericsson discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2407062](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407062.zip) Scheduling Enhancements for XR Nokia, Nokia Shanghai Bell discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2407214](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407214.zip) Scheduling enhancements for XR InterDigital discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2407274](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407274.zip) Discussion on scheduling enhancements for XR DENSO CORPORATION discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2407279](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407279.zip) Discussion on Scheduling Enhancement for XR Meta discussion

[R2-2407354](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407354.zip) Discussion on Scheduling enhancements HONOR discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2407384](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407384.zip) Discussion on LCP enhancement for XR Google Ireland Limited discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2407392](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407392.zip) Discussion on UL scheduling enhancements MediaTek Inc. discussion Rel-19

[R2-2407460](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407460.zip) Discussion on Scheduling enhancement for XR LG Electronics Inc. discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2407518](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407518.zip) Discussion on XR scheduling enhancements III discussion NR\_XR\_Ph3-Core

[R2-2407539](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407539.zip) Discussion on UL related Scheduling Enhancements for XR Rakuten Mobile, Inc discussion Rel-19

### 8.7.5 RLC enhancements

Objective: RLC re-transmission related enhancements for operation of RLC Acknowledged Mode (AM) with small packet delay budget.

Including aspects such as:

* how to avoid unnecessary retransmissions, e.g. details of Tx and Rx approaches, pros and cons comparison.
* how to ensure timely RLC retransmissions for XR, e.g.
  + can existing mechanisms be reused or do we need enhancements?
  + what kind of enhancements are needed, e.g. autonomous retransmission, retransmission based on enhanced status report, retransmission based on enhanced polling.
  + details and pros and cons of different solutions.

[R2-2406257](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406257.zip) Discussion on RLC enhancements Qualcomm Incorporated discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406364](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406364.zip) Considerations on RLC re-transmission related enhancements for XR KDDI Corporation discussion

[R2-2406367](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406367.zip) Discussion on RLC re-transmission related enhancements OPPO discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406400](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406400.zip) RLC AM enhancements for XR Nokia, Nokia Shanghai Bell discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406409](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406409.zip) RLC AM retransmission enhancements Xiaomi discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406437](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406437.zip) Discussion on RLC enhancement for XR vivo discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406443](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406443.zip) RLC Enhancements for XR Samsung discussion Rel-19

[R2-2406456](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406456.zip) RLC enhancements for XR ZTE Corporation, Sanechips discussion

[R2-2406475](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406475.zip) RLC AM enhancements for XR traffic Intel Corporation discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406481](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406481.zip) Analysis of RLC AM Enhancements Sharp discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406549](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406549.zip) Discussions on RLC enhancements Fujitsu discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406561](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406561.zip) Consideration on XR-specific RLC enhancement CATT discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406601](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406601.zip) Further Discussions on RLC AM Enhancements Ericsson discussion Rel-19

[R2-2406627](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406627.zip) RLC AM enhancements Sony discussion Rel-19 NR\_XR\_Ph3

[R2-2406678](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406678.zip) Views on RLC-AM Enhancements for Rel-19 XR Apple discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406734](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406734.zip) Discussion on RLC AM enhancements Huawei, HiSilicon discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406742](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406742.zip) Discussion on RLC enhancements for XR China Telecom discussion

[R2-2406762](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406762.zip) Discussion on timely RLC retransmission(s) Spreadtrum Communications discussion Rel-19

[R2-2406857](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406857.zip) Discussion on RLC AM enhancement TCL discussion Rel-19

[R2-2406893](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406893.zip) AM RLC enhancement Lenovo discussion Rel-19

[R2-2406940](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406940.zip) Discussion on RLC AM Enhancements CANON Research Centre France discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2406984](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406984.zip) Discussion on the RLC Enhancements for XR CMCC discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2407015](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407015.zip) RLC AM enhancement NEC discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2407215](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407215.zip) RLC enhancements for XR InterDigital discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2407280](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407280.zip) Discussion on RLC AM Enhancements for XR Meta discussion

[R2-2407355](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407355.zip) Discussion on RLC enhancements HONOR discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2407368](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407368.zip) Discussion on details of RLC enhancements for XR LG Electronics Inc. discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2407391](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407391.zip) Discussion on RLC enhancements on small packet delay budget scenario MediaTek Inc. discussion Rel-19

[R2-2407511](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407511.zip) Discussions on RLC enhancements for Rel-19 XR Futurewei discussion Rel-19 NR\_XR\_Ph3-Core

## 8.8 NTN for NR Ph3

(NR\_NTN\_Ph3-Core; leading WG: RAN2; REL-19; WID: RP-241667)

LTE\_TN\_NR\_NTN\_mob, leading WG: RAN2, Rel-19 WID: RP-240924)

Time budget: 2 TU

Tdoc Limitation: 4 tdocs

### 8.8.1 Organizational

LS, Rapporteur input, including workplan, etc.

For the LTE\_TN\_NR\_NTN\_mob WI, including initial draft CRs from the WI spec rapporteurs: draft 36.300 CR (Samsung), draft 36.331 CR (CATT), draft 36.306 CR (Vivo).

Rapporteur inputs do not count towards the tdoc limitation.

[R2-2406220](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406220.zip) Reply LS on Support of Regenerative-based Satellite Access (R3-243954; contact: ZTE) RAN3 LS in Rel-19 NR\_NTN\_Ph3-Core To:SA2 Cc:RAN2

[R2-2406240](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406240.zip) LS on FS\_5GSAT\_Ph3\_ARCH conclusions (S2-2407350; contact: OPPO) SA2 LS in Rel-19 FS\_5GSAT\_Ph3\_ARCH To:SA3, SA3-LI Cc:RAN2

[R2-2406245](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406245.zip) Reply LS on FS\_5GSAT\_Ph3\_ARCH conclusions (s3i240477; contact: Tencastle) SA3-LI LS in Rel-19 FS\_5GSAT\_Ph3\_ARCH To:SA2 Cc:SA3, RAN2

[R2-2406250](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406250.zip) Introduction of LTE TN to NR NTN Mobility UE Capability vivo draftCR Rel-19 36.306 18.2.0 LTE\_TN\_NR\_NTN\_mob-Core

[R2-2406318](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406318.zip) Open issue list for LTE\_TN\_NR\_NTN\_mob WI CATT discussion LTE\_TN\_NR\_NTN\_mob

[R2-2406319](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406319.zip) Introduction of LTE TN to NR NTN IDLE mode mobility (Option 1) CATT draftCR Rel-19 36.331 18.2.0 B LTE\_TN\_NR\_NTN\_mob

[R2-2406320](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406320.zip) Introduction of LTE TN to NR NTN IDLE mode mobility (Option 2) CATT draftCR Rel-19 36.331 18.2.0 B LTE\_TN\_NR\_NTN\_mob

[R2-2406321](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406321.zip) Introduction of LTE TN to NR NTN IDLE mode mobility (Option 3) CATT draftCR Rel-19 36.331 18.2.0 B LTE\_TN\_NR\_NTN\_mob

### 8.8.2 Downlink coverage enhancements

Contributions should focus on RAN2 aspects of DL coverage enhancements (e.g. cell level / beam level DTX/DRX mechanism, etc.).

[R2-2406246](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406246.zip) Further Considerations on DL Coverage Enhancements vivo discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406324](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406324.zip) Discussion on Downlink Coverage Enhancements CATT discussion NR\_NTN\_Ph3-Core

[R2-2406490](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406490.zip) Discussion on Downlink Coverage Enhancement Samsung discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406550](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406550.zip) Discussions on cell DTX during satellite dynamic power sharing Fujitsu discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406571](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406571.zip) Discussion on the DL coverage enhancement Google discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406591](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406591.zip) Discussion on the impact of SSB extension and cell DTXDRX for NTN Beijing Xiaomi Mobile Software discussion Rel-19

[R2-2406638](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406638.zip) Discussion on cell DTX Qualcomm Incorporated discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406685](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406685.zip) DL coverage enhancement in NTN Apple discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406765](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406765.zip) Discussion on DL coverage enhancement for NTN OPPO discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406870](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406870.zip) On beam-level DL coverage enhancement in NTN Lenovo discussion Rel-19

[R2-2406894](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406894.zip) Consideration on downlink coverage enhancement NEC Corporation discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406902](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406902.zip) Beam management of NR NTN coverage enhancement China Telecom discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406952](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406952.zip) Discussion on Downlink Coverage Enhancements CSCN discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406993](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406993.zip) Consideration on downlink coverage enhancements ZTE Corporation, Sanechips discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2407129](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407129.zip) Idle mode considerations for downlink coverage enhancements Nokia, Nokia Shanghai Bell discussion

[R2-2407187](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407187.zip) Downlink coverage enhancement for NTN InterDigital discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2407306](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407306.zip) Discussion on DL coverage enhancements Huawei, HiSilicon, Turkcell discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2407345](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407345.zip) Discussion on downlink coverage enhancement HONOR discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2407382](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407382.zip) RAN2 Impact on DL coverage enhancements CMCC discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2407401](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407401.zip) Discussion on NTN downlink coverage enhancements NERCDTV discussion

[R2-2407462](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407462.zip) Discussion on downlink coverage enhancement LG Electronics Inc. discussion Rel-19

[R2-2407532](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407532.zip) Downlink coverage enhancement SMTC impacts Sequans Communications discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2407544](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407544.zip) Views on DL Coverage Enhancements for NR-NTN Inmarsat, Viasat discussion Rel-19 NR\_NTN\_Ph3-Core Late

[R2-2407551](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407551.zip) DL coverage enhancements Ericsson discussion Rel-19

### 8.8.3 Uplink Capacity/Throughput Enhancement

No contributions are expected for this AI at this meeting.

[R2-2407545](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407545.zip) Views on UL Capacity Enhancements for NR-NTN Inmarsat, Viasat discussion Rel-19 NR\_NTN\_Ph3-Core Late

### 8.8.4 Support of Broadcast service

Contributions should address the signaling of the intended service area of a broadcast service.

[R2-2406247](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406247.zip) Further Discussion on MBS Broadcast Provision in NTN vivo discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406267](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406267.zip) Discussion on MBS service in NTN system CAICT discussion

[R2-2406323](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406323.zip) Discussion on support of broadcast service in NR NTN CATT discussion NR\_NTN\_Ph3-Core

[R2-2406352](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406352.zip) Signalling for the support of MBS broadcast service in NTN ETRI discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406491](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406491.zip) Discussion on MBS Broadcast Service Area information Samsung discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406551](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406551.zip) Discussions on supporting broadcast intending to serve partial cell Fujitsu discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406583](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406583.zip) MBService area indication & geoblocking PANASONIC discussion

[R2-2406606](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406606.zip) Discussion on MBS Broadcast service area signaling THALES discussion Rel-19 NR\_NTN\_Ph3-Core Late

[R2-2406628](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406628.zip) Broadcast service area signaling Sony discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406635](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406635.zip) MBS broadcast service area information Qualcomm Incorporated discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406687](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406687.zip) Broadcast service support over NTN Apple discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406719](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406719.zip) Discussion on providing MBS service area in NTN network OPPO discussion Rel-18 NR\_NTN\_Ph3-Core

[R2-2406849](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406849.zip) On How To Support MBS in Rel-19 NR NTN Nokia, Nokia Shanghai Bell discussion Rel-19 NR\_NTN\_Ph3

[R2-2406865](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406865.zip) Discussions on handling MRB(s) associated with intended service areas ITRI discussion NR\_NTN\_Ph3-Core

[R2-2406871](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406871.zip) On broadcast service area indication in NTN Lenovo discussion Rel-19

[R2-2406903](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406903.zip) Signaling design of service area in NR NTN China Telecom discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406958](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406958.zip) Discussions on MBS in Rel-19 NTN TOYOTA Info Technology Center discussion

[R2-2406971](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406971.zip) Discussion on MBS broadcast service for NR NTN CMCC discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406994](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406994.zip) Consideration on broadcast service ehancements ZTE Corporation, Sanechips discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2407049](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407049.zip) Further details on intended service area for MBS and ETWS NEC discussion

[R2-2407053](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407053.zip) Discussion on the support of broadcast service Xiaomi discussion

[R2-2407188](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407188.zip) Support for broadcast service in NTN InterDigital discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2407236](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407236.zip) Support for broadcast services in NR NTN Ericsson discussion NR\_NTN\_Ph3-Core

[R2-2407263](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407263.zip) Considerations on MBS in NTN Continental Automotive discussion Rel-19

[R2-2407307](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407307.zip) Discussion on MBS broadcast over NTN Huawei, HiSilicon, Turkcell discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2407346](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407346.zip) Discussion on the support of broadcast service HONOR discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2407415](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407415.zip) UE behaviour for MBS related procedures Sharp discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2407416](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407416.zip) Discussion on MBS service support for NR NTN Sharp discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2407418](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407418.zip) Discussion on support of broadcast service in NTN LG Electronics France discussion Rel-19 38.331 NR\_NTN\_Ph3-Core

[R2-2407453](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407453.zip) Support of broadcast service in NTN NERCDTV discussion

[R2-2407473](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407473.zip) Discussion on support of broadcast service ITL discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2407497](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407497.zip) Discussion on Support of MBS Broadcasting over NTN access TCL discussion

### 8.8.5 Support of regenerative payload

Contributions should focus on the needed updates for Stage 2 description and on whether any existing essential features would be affected - and potentially need any modifications - in a regenerative payload architecture.

[R2-2406248](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406248.zip) Discussion on RACH-less Handover with Regeneration Payload vivo discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406268](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406268.zip) Discussion on NTN regenerative payload CAICT discussion

[R2-2406322](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406322.zip) Further discussion on regenerative payload CATT discussion NR\_NTN\_Ph3-Core

[R2-2406629](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406629.zip) Satellite switch with re-sync in regenerative payload Sony discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406636](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406636.zip) Discussion on regenerative payload Qualcomm Incorporated discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406686](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406686.zip) Features support in regenerative payload architecture Apple discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406744](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406744.zip) Discussion on regenerative payload KT Corp. discussion

[R2-2406773](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406773.zip) Discussion on satellite switch with resynch for regenerative payload OPPO discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406850](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406850.zip) Addressing Potential Issues for NTN over Regenerative Architecture Nokia, Nokia Shanghai Bell discussion Rel-19 NR\_NTN\_Ph3

[R2-2406872](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406872.zip) UE location verification in NTN regenerative architecture Lenovo discussion Rel-19

[R2-2406904](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406904.zip) Consideration of essential features supporting in regenerative payload China Telecom discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406972](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406972.zip) Considerations on regenerative payload CMCC discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406995](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406995.zip) Consideration on support of regenerative payload ZTE Corporation, Sanechips discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2407016](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407016.zip) mobility with regenerative payload NEC discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2407026](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407026.zip) Discussion on RACH-less handover for regenerative payload Transsion Holdings discussion Rel-19

[R2-2407054](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407054.zip) Discussion on the support of regenerative payload Xiaomi discussion

[R2-2407260](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407260.zip) Regenerative payload for NR NTN Samsung discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2407264](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407264.zip) Considerations on RACH-less handover for regenerative payload Continental Automotive discussion Rel-19 Revised

[R2-2407308](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407308.zip) Discussion on regenerative payload Huawei, HiSilicon, Turkcell discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2407347](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407347.zip) Discussion on regenerative payload HONOR discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2407452](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407452.zip) Discussion on time-based measurement initiation for regenerative payload ETRI discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2407498](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407498.zip) Discussion on support of NTN regenerative payload architecture TCL discussion Rel-19

[R2-2407548](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407548.zip) Considerations on RACH-less handover for regenerative payload Continental Automotive discussion Rel-19 [R2-2407264](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407264.zip)

[R2-2407550](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407550.zip) Regenerative payload Ericsson discussion Rel-19

### 8.8.6 LTE to NR NTN mobility

Contributions should focus on the remaining issues for the support of idle mode mobility between LTE and NR NTN.

[R2-2406249](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406249.zip) Further Discussion on LTE TN to NR NTN Mobility vivo discussion Rel-19 LTE\_TN\_NR\_NTN\_mob-Core

[R2-2406325](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406325.zip) Conclusion on remaining open issues for LTE TN to NR NTN IDLE mode mobility CATT discussion LTE\_TN\_NR\_NTN\_mob

[R2-2406637](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406637.zip) Idle mode mobility from LTE to NR NTN Qualcomm Incorporated discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406745](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406745.zip) Discussion on LTE to NR NTN mobility InterDigital, Inc. discussion Rel-19

[R2-2406774](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406774.zip) Discussion on LTE to NR NTN idle mode mobility OPPO discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406848](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406848.zip) On the Remaining Issues for E-UTRA TN to NR NTN Mobility in IDLE mode Nokia, Nokia Shanghai Bell discussion Rel-19 NR\_NTN\_Ph3

[R2-2406873](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406873.zip) NR satellite assistance information provisioning for LTE Lenovo discussion Rel-19

[R2-2406905](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406905.zip) Remaining issues of LTE TN to NR NTN mobility China Telecom discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2406973](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406973.zip) Considerations on LTE to NR mobility CMCC discussion Rel-19 LTE\_TN\_NR\_NTN\_mob

[R2-2406996](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406996.zip) Consideration on idle mode mobility between LTE TN and NR NTN ZTE Corporation, Sanechips discussion Rel-19 LTE\_TN\_NR\_NTN\_mob

[R2-2407017](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407017.zip) LTE TN to NR NTN Idle Mode Mobility NEC discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2407036](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407036.zip) Discussion on cell reselection from E-UTRA TN to NR NTN MediaTek Inc. discussion LTE\_TN\_NR\_NTN\_mob-Core

[R2-2407055](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407055.zip) Discussion on the cell reselection from EUTRA TN to NR NTN Xiaomi discussion

[R2-2407235](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407235.zip) E-UTRAN TN to NR-NTN mobility Ericsson discussion LTE\_TN\_NR\_NTN\_mob

[R2-2407258](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407258.zip) E-UTRAN TN to NR NTN mobility Samsung discussion Rel-19 LTE\_TN\_NR\_NTN\_mob-Core

[R2-2407259](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407259.zip) Stage 2 Running CR for E-UTRAN to NR NTN mobility Samsung draftCR Rel-19 36.300 18.2.0 LTE\_TN\_NR\_NTN\_mob-Core

=> Revised in R2-2407616

R2-2407616 Stage 2 Running CR for E-UTRAN to NR NTN mobility Samsung draftCR Rel-19 36.300 18.2.0 LTE\_TN\_NR\_NTN\_mob-Core

[R2-2407309](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407309.zip) Discussion on LTE TN to NR NTN mobility Huawei, HiSilicon, Turkcell discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2407549](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407549.zip) Views on LTE to NR-NTN Mobility Inmarsat, Viasat discussion LTE\_TN\_NR\_NTN\_mob Late

## 8.9 IoT NTN Ph3

(IoT\_NTN\_Ph3-Core; leading WG: RAN2; REL-19; WID: [RP-241624](https://www.3gpp.org/ftp/meetings_3gpp_sync/ran/docs/RP-241624.zip))

Time budget: 1 TU

Tdoc Limitation: 2 tdocs

### 8.9.1 Organizational

LS, Rapporteur input, including workplan, etc.

Rapporteur inputs do not count towards the tdoc limitation.

### 8.9.2 Support of Store & Forward

Contributions should focus on possible impacts to the radio interface.

[R2-2406251](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406251.zip) RAN2 Aspect for S&F Operation vivo discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2406283](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406283.zip) RAN2 aspects of the Store and Forward satellite operation Huawei, HiSilicon, Turkcell discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2406326](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406326.zip) Discussion on support of store and forward operation CATT discussion IoT\_NTN\_Ph3-Core

[R2-2406526](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406526.zip) Discussion on information for Store & Forward ASUSTeK discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2406536](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406536.zip) Considerations on S&F operation from device perspective Telit Communications S.p.A., Novamint, Sateliot, Thales discussion Rel-19 [R2-2404979](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2404979.zip) Revised

[R2-2406570](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406570.zip) Discussion on the S&F indication Google discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2406639](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406639.zip) Support of S&F mode operation Qualcomm Incorporated discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2406689](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406689.zip) Support of S&F operation in IoT NTN Apple discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2406771](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406771.zip) Discussion on Store & Forward satellite operation OPPO discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2406821](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406821.zip) RAN2 impact on S&F mode MediaTek Inc. discussion IoT\_NTN\_Ph3-Core [R2-2405132](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2405132.zip)

[R2-2406874](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406874.zip) Store and Forward support in IoT NTN Lenovo discussion Rel-19

[R2-2406906](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406906.zip) The design of radio interface for IoT NTN Store & Forward China Telecom discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2406967](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406967.zip) Discussion on IoT NTN Store and Forward CMCC discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2407018](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407018.zip) Support of Store and Forward NEC discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2407027](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407027.zip) Discussion on support of Store&Forward Transsion Holdings discussion Rel-19

[R2-2407056](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407056.zip) Discussion on the support of store and forward Xiaomi discussion

[R2-2407075](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407075.zip) Radio-Interface Impacts for IoT-NTN SF Operations Nokia, Nokia Shanghai Bell discussion

[R2-2407152](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407152.zip) Further consideration on S&F operation in IoT NTN ZTE Corporation, Sanechips discussion Rel-19 IoT\_NTN\_Ph3-Core [R2-2404882](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2404882.zip)

[R2-2407233](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407233.zip) AS Security for Store & Forward Satellite Operation SHARP Corporation discussion

[R2-2407237](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407237.zip) Support for store and forward in IoT NTN Ericsson discussion IoT\_NTN\_Ph3-Core

[R2-2407256](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407256.zip) On SA2 progress and RAN2 aspects of Store and Forward Samsung discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2407353](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407353.zip) Discussion on the Store and Forward satellite operation HONOR discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2407487](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407487.zip) Considerations on S&F operation from device perspective Telit Communications S.p.A., Novamint, Sateliot, Thales discussion Rel-19 [R2-2406536](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406536.zip)

[R2-2407491](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407491.zip) Consideration on S&F operation DENSO CORPORATION discussion IoT\_NTN\_Ph3-Core

[R2-2407537](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407537.zip) Support of Store & Forward Sequans Communications discussion Rel-19 IoT\_NTN\_Ph3-Core

### 8.9.3 Uplink Capacity Enhancement

Contributions should focus on the possible enhancements to reduce the necessary uplink and downlink signaling to complete an EDT transaction (Msg3 transmission without msg1/RAR; efficient delivery of msg4 / RRCEarlyDataComplete).

[R2-2406252](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406252.zip) Further Discussion on EDT Enhancement for IoT-NTN vivo discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2406284](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406284.zip) Way forward for RAN2 discussion on UL capacity enhancement Huawei, HiSilicon, Turkcell discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2406327](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406327.zip) Consideration on the feasibility of RAN2 scope for UL capacity enhancements CATT discussion IoT\_NTN\_Ph3-Core

[R2-2406592](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406592.zip) Discussion on uplink capacity enhancements for IOT NTN Beijing Xiaomi Mobile Software discussion Rel-19

[R2-2406593](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406593.zip) Performance of Advanced Random Access Protocols DLR discussion Rel-19

[R2-2406640](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406640.zip) Discussion on EDT enhancements Qualcomm Incorporated discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2406688](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406688.zip) Uplink capacity enhancement in IoT NTN Apple discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2406763](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406763.zip) Uplink Capacity Enhancement for EDT transaction Spreadtrum Communications discussion Rel-19

[R2-2406766](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406766.zip) Discussion on enhanced EDT for IoT NTN OPPO discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2406868](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406868.zip) Consideration on UL capacity enhancement for IoT-NTN NEC Corporation. discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2406869](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406869.zip) Discussion on enhanced EDT MediaTek Inc. discussion IoT\_NTN\_Ph3-Core [R2-2405133](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2405133.zip)

[R2-2406875](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406875.zip) EDT for uplink capacity enhancement in NTN Lenovo discussion Rel-19

[R2-2406907](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406907.zip) Contention-based Msg3-EDT for IoT NTN capacity enhancement China Telecom discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2406974](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406974.zip) Considerations on uplink capacity enhancement for IoT-NTN CMCC discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2407028](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407028.zip) Discussion on uplink capacity enhancement Transsion Holdings discussion Rel-19

[R2-2407121](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407121.zip) Discussion on Contention Resolution Diversity Slotted ALOHA TOYOTA Info Technology Center other Rel-19 IoT\_NTN\_Ph3-Core

[R2-2407139](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407139.zip) Msg3 transmission without msg1/RAR Interdigital, Inc. discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2407140](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407140.zip) Efficient delivery (reduced overhead) of msg4 / RRCEarlyDataComplete Interdigital, Inc. discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2407153](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407153.zip) Further consideration on uplink capacity enhancements in IoT NTN ZTE Corporation, Sanechips discussion Rel-19 IoT\_NTN\_Ph3-Core [R2-2404884](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2404884.zip)

[R2-2407167](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407167.zip) Consideration on UL capacity enhancement for IoT NTN Nokia, Nokia Shanghai Bell discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2407257](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407257.zip) Procedures for uplink capacity enhancements for IoT NTN Samsung discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2407502](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407502.zip) Discussion on DSA and CRDSA Performance ESA, Eutelsat Group, Viasat, Inmarsat, Novamint, Echostar, Sateliot discussion Rel-19

[R2-2407546](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407546.zip) Views on UL Capacity Enhancements for IoT-NTN Inmarsat, Viasat discussion Rel-19 NR\_NTN\_Ph3-Core Late

[R2-2407552](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407552.zip) UL capacity enhancements objectives for IoT NTN Ericsson discussion Rel-19

=> Revised in [R2-2407555](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407555.zip)

[R2-2407555](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407555.zip) UL capacity enhancements objectives for IoT NTN Ericsson discussion Rel-19

## 8.10 SON/MDT Ph4

(NR\_ENDC\_SON\_MDT\_Ph4-Core; leading WG: RAN3; REL-19; WID: RP-234038)

Time budget: 0.5 TU

Tdoc Limitation: 2 tdocs

### 8.10.1 Organizational

LS, Rapporteur input, including workplan, etc.

### 8.10.2 MRO enhancements for Rel-18 mobility features

LTM, CHO with candidate SCGs, subsequent CPAC

[R2-2406527](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406527.zip) Discussion on random access report for LTM ASUSTeK discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2406883](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406883.zip) Discussion on MRO for R18 mobility Lenovo discussion Rel-19

[R2-2406959](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406959.zip) Discussion on MRO enhancements for R18 mobility features CMCC discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2407005](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407005.zip) Discussion on MRO Enhancements for Mobility CATT discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2407029](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407029.zip) MRO for Rel-18 mobility ZTE Corporation, Sanechips discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2407052](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407052.zip) MRO enhancements for Rel-18 mobility features Samsung discussion

[R2-2407064](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407064.zip) Discussion on MRO enhancement for LTM China Unicom discussion NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2407065](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407065.zip) Discussion on MRO enhancement for CHO with candidate SCGs China Unicom discussion NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2407094](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407094.zip) MRO enhancements for LTM NEC discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2407095](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407095.zip) MRO for CHO with candidate SCG(s) NEC discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2407099](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407099.zip) MRO enhancement for SON and MDT Qualcomm Incorporated discussion NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2407105](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407105.zip) MRO for R18 Mobility LG Electronics discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2407119](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407119.zip) MRO for LTM Nokia discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2407120](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407120.zip) MRO for CHO with candidate SCG Nokia discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2407122](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407122.zip) Configuring UE based TA acquisition for LTM Rakuten Mobile, Inc discussion Rel-19

[R2-2407191](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407191.zip) SON/MDT reports for LTM Kyocera discussion

[R2-2407218](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407218.zip) SON support for MRO Ericsson discussion NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2407333](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407333.zip) Discussion on MRO enhancements for Rel-18 mobility features Huawei, HiSilicon discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2407362](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407362.zip) Discussion on MRO enhancement for R18 mobility features Sharp discussion

[R2-2407386](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407386.zip) MRO for Rel-18 mobility features vivo discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

### 8.10.3 SON/MDT for Slicing

No contributions are expected and this AI will not be treated in RAN2#127, in wait for RAN3 progresses

### 8.10.4 SON/MDT for NTN

No contributions are expected and this AI will not be treated in RAN2#127, in wait for RAN3 progresses

[R2-2407106](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407106.zip) Logging for Unchanged PCI Mobility in NTN LG Electronics discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

### 8.10.5 Leftovers from Rel-18

RACH optimization for SDT, MHI Enhancement for SCG Deactivation/Activation, MRO for MR-DC SCG failure

[R2-2406884](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406884.zip) Discussion on MRO for MR-DC SCG failure Lenovo discussion Rel-19

[R2-2406986](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406986.zip) MHI Enhancement for SCG Deactivation/Activation CMCC, CATT, Ericsson, ZTE, Huawei, HiSilicon discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2407006](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407006.zip) Consideration on leftovers from Rel-18 SONMDT CATT discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2407030](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407030.zip) Rel-18 leftovers for SON MDT ZTE Corporation, Sanechips discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2407037](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407037.zip) SON/MDT enhancements for leftover topics from R18 Samsung discussion

[R2-2407100](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407100.zip) SON and MDT Rel-18 leftover issues Qualcomm Incorporated discussion NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2407249](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407249.zip) On Rel.18 leftovers Ericsson discussion NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2407334](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407334.zip) Discussion on support of the Rel-18 leftovers Huawei, HiSilicon discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2407364](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407364.zip) Discussion on R18 leftovers for SON MDT Sharp discussion

[R2-2407387](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407387.zip) RACH optimization for SDT vivo discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

## 8.11 Evolution of NR duplex operation: Sub-band full duplex (SBFD)

(NR\_duplex\_evo-Core; leading WG: RAN1; REL-19; WID: [RP‑241614](https://www.3gpp.org/ftp/meetings_3gpp_sync/ran/docs/RP-241614.zip))

Time budget: 0.5 TU

Tdoc Limitation: 2 tdocs

### 8.11.1 Organizational

Incoming LS, Rapporteur input, including workplan, etc..

[R2-2406314](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406314.zip) RAN2 workplan for Rel-19 Evolution of NR duplex operation Huawei, HiSilicon Work Plan Rel-19 NR\_duplex\_evo-Core

### 8.11.2 Random access in SBFD

RAN2 impacts to support SBFD operation to support random access in SBFD symbols by UEs in RRC \_CONNECTED mode and RRC\_IDLE/INACTIVE mode.

[R2-2406342](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406342.zip) Random Access for SBFD Operation NEC discussion

[R2-2406363](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406363.zip) Discussion on RACH in SBFD Xiaomi discussion Rel-19

[R2-2406452](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406452.zip) Impacts on the random access by the evolution of duplex operation Huawei, HiSilicon discussion Rel-19 NR\_duplex\_evo-Core

[R2-2406486](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406486.zip) Discussion on SBFD random access operation CATT discussion Rel-19 NR\_duplex\_evo-Core

[R2-2406630](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406630.zip) SBFD configuration and supporting Random access Sony discussion Rel-19 NR\_duplex\_evo-Core

[R2-2406690](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406690.zip) Framework to support RACH in SBFD Apple discussion Rel-19 NR\_duplex\_evo-Core

[R2-2406724](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406724.zip) Discussion on random access in SBFD vivo discussion Rel-19

[R2-2406794](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406794.zip) Discussion on random access procedure in SBFD ZTE Corporation discussion Rel-19 NR\_duplex\_evo-Core

[R2-2406822](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406822.zip) Random Access Aspect of SBFD Nokia Corporation discussion Rel-19 NR\_duplex\_evo-Core

[R2-2406962](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406962.zip) Discussion on random access in SBFD CMCC discussion Rel-19 NR\_duplex\_evo-Core

[R2-2407078](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407078.zip) Discussion on subband full duplex (SBFD) RA operation Ericsson discussion Rel-19 NR\_duplex\_evo-Core

[R2-2407143](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407143.zip) Random Access in Sub-Band Full Duplex Google Ireland Limited discussion

[R2-2407192](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407192.zip) Views on random access for SBFD Qualcomm Incorporated discussion NR\_duplex\_evo-Core

[R2-2407313](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407313.zip) Random access in SBFD Samsung discussion Rel-19

[R2-2407461](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407461.zip) Discussion on Random Access procedure for SBFD LG Electronics Inc. discussion Rel-19 NR\_duplex\_evo-Core

### 8.11.3 Other aspects

Other RAN2 impacts with SBFD if not covered by the previous agenda items.

[R2-2406410](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406410.zip) SBFD resource indication and CLI handling Xiaomi discussion Rel-19 NR\_duplex\_evo-Core

[R2-2406466](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406466.zip) Other impacts by the evolution of duplex operation Huawei, HiSilicon discussion Rel-19 NR\_duplex\_evo-Core

[R2-2406487](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406487.zip) Discussion on other aspects of SBFD CATT discussion Rel-19 NR\_duplex\_evo-Core

[R2-2406725](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406725.zip) Discussion on other issues in SBFD vivo discussion Rel-19

[R2-2406795](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406795.zip) Discussion on CLI measurement in SBFD ZTE Corporation discussion Rel-19 NR\_duplex\_evo-Core

[R2-2406957](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406957.zip) Other aspects of SBFD Nokia discussion Rel-19 NR\_duplex\_evo-Core

[R2-2406983](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406983.zip) Discussion on SBFD related issues CMCC discussion Rel-19 NR\_duplex\_evo-Core

[R2-2407079](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407079.zip) Non-RA aspects for subband full duplex (SBFD) operation Ericsson discussion Rel-19 NR\_duplex\_evo-Core

[R2-2407194](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407194.zip) Other aspects of SBFD Qualcomm Incorporated discussion NR\_duplex\_evo-Core

[R2-2407427](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407427.zip) SBFD Overall and Support of Cross Link Interference Samsung discussion Rel-19 NR\_duplex\_evo-Core

## 8.12 NR MIMO Phase 5

(NR\_MIMO\_Ph5-Core; leading WG: RAN1; REL-19; WID: [RP-240087](https://www.3gpp.org/ftp/tsg_ran/TSG_RAN/TSGR_103/Docs/RP-240087.zip))

Time budget: 0 TU

Tdoc Limitation: 0 tdocs

This WI will not be treated in RAN2#127, therefore no contribution is expected under agenda item 8.12.

## 8.13 NR sidelink multi-hop relay

(NR\_SL\_relay\_enh2; leading WG: RAN2; REL-19; WID: [RP-241609](https://www.3gpp.org/ftp/meetings_3gpp_sync/ran/docs/RP-241609.zip))

Time budget: 1 TU

Tdoc Limitation: 2 tdocs

### 8.13.1 Organizational

LSs and rapporteur input, including workplan, etc.

[R2-2407145](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407145.zip) Work plan for NR sidelink multi-hop relay LG Electronics, InterDigital Work Plan Rel-19 NR\_SL\_relay\_multihop, NR\_SL\_relay\_multihop-Core

[R2-2407147](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407147.zip) Terminologies and Scenarios for SL multihop relay LG Electronics Inc. discussion Rel-19 NR\_SL\_relay\_multihop, NR\_SL\_relay\_multihop-Core

[R2-2407378](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407378.zip) Discussion on Working Assumptions for Multi-hop Relay Mechanisms InterDigital France R&D, SAS, LG Electronics, FirstNet, Ericsson, AT&T, Qualcomm, Samsung discussion

=> Revised in [R2-2407390](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407390.zip)

[R2-2407390](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407390.zip) Discussion on Working Assumptions for Multi-hop Relay Mechanisms InterDigital France R&D, SAS, LG Electronics, FirstNet, Ericsson, AT&T, Qualcomm, Samsung discussion

### 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.

[R2-2406365](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406365.zip) Discovery and relay (re)selection for multi-hop U2N relay OPPO discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2406528](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406528.zip) Discussions on relay discovery for multi-hop U2N Relay ASUSTeK discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2406553](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406553.zip) Discussion on multi-hop U2N relay discovery and relay selection NEC discussion NR\_SL\_relay\_multihop

[R2-2406562](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406562.zip) Discussion on multi-hop discovery and (re)selection CATT discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2406611](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406611.zip) Initial considerations on relay discovery and (re)selection Samsung discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2406632](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406632.zip) Multi-hop relay selection/re-selection Sony discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2406683](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406683.zip) Relay discovery and selection for Multi-hop UE-to-NW Relay Apple discussion Rel-19 DUMMY

[R2-2406695](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406695.zip) Discussion on discovery and (re)selection for support of multi-hop SL Relay ZTE Corporation, Sanechips discussion NR\_SL\_relay\_multihop-Core

[R2-2406714](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406714.zip) Discovery and relay (re)selection for multi-hop relay InterDigital France R&D, SAS discussion

[R2-2406735](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406735.zip) Discussion on multi-hop relay discovery and (re)selection vivo discussion

=> Withdrawn

[R2-2406887](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406887.zip) Relay discovery and (re)selection in Multi-hop relay Lenovo discussion Rel-19

[R2-2406898](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406898.zip) Discussion on multi-hop relay discovery and reselection China Telecom discussion Rel-19

[R2-2407007](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407007.zip) Discussion on multi-hop U2N Relay discovery and (re)selection vivo discussion Rel-19

[R2-2407035](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407035.zip) discussion on discovery and relay (re)selection Ericsson, FirstNet, AT&T discussion Rel-19

[R2-2407057](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407057.zip) Discussion on Relay discovery and selection LG Electronics France discussion Rel-19

[R2-2407101](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407101.zip) Discovery and Relay (re)selection for multi-hop U2N relay Qualcomm Incorporated discussion

[R2-2407111](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407111.zip) Discussion on control plane procedures for NR sidelink multi-hop relay China Telecom discussion Rel-19

[R2-2407204](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407204.zip) Discussion on relay discovery and (re)selection for NR sidelink multi-hop relay TOYOTA InfoTechnology Center discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2407205](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407205.zip) Discovery and (re)selection under multihop relay Kyocera discussion

[R2-2407224](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407224.zip) Discussion on Working Assumptions for Multi-hop Relay Mechanisms FirstNet, Ericsson, AT&T, LG Electronics, InterDigital, Qualcomm discussion Rel-19

=> Withdrawn

[R2-2407294](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407294.zip) Relay discovery and (re)selection for multi-hop Relay Huawei, HiSilicon discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2407316](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407316.zip) Relay discovery and reselection for multi-hop relay Nokia discussion NR\_SL\_relay\_multihop

[R2-2407402](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407402.zip) discussion on Relay discovery and (re)selection for multi-hop relay Sharp discussion Rel-19 NR\_SL\_relay\_multihop-Core

### 8.13.3 Control Plane Procedures

Contributions should focus on control plane procedures and can include QoS handling to support additional hops. NOTE: No service continuity aspects should be discussed in contributions for this meeting.

[R2-2406366](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406366.zip) Control plane procedures of multi-hop U2N relay OPPO discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2406494](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406494.zip) Discussion on control plane procedures for multi-hop relays MediaTek Inc. discussion Rel-19

[R2-2406506](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406506.zip) Considerations on Control Plane of Multi-hop Relay NEC discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2406529](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406529.zip) Discussions on the L2 Intermediate U2N Relay in multi-hop L2 U2N Relay ASUSTeK discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2406563](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406563.zip) E2E Connection Setup and QoS Split for Multi-hop Relay CATT discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2406612](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406612.zip) Initial considerations on CP and UP aspects for R19 multi-hop relay Samsung discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2406633](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406633.zip) Control plane procedure for multi-hop U2N relay Sony discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2406684](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406684.zip) Control Plane Design for Multi-hop UE-to-NW Relay Apple discussion Rel-19 DUMMY

[R2-2406696](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406696.zip) Discussion on architecture and control plane procedures for support of multi-hop SL relay ZTE Corporation, Sanechips discussion NR\_SL\_relay\_multihop-Core

[R2-2406713](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406713.zip) Scenarios, QoS Handling, and Control Plane Procedures for Multi-hop InterDigital France R&D, SAS discussion

[R2-2406736](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406736.zip) Discussion on Multi-hop Control Plane Procedures vivo discussion

=> Withdrawn

[R2-2406755](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406755.zip) Discussion on QoS handling for NR sidelink multi-hop relay Spreadtrum Communications discussion Rel-19

[R2-2406888](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2406888.zip) Control plane in Multi-hop relay Lenovo discussion Rel-19

[R2-2407008](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407008.zip) Discussion on multi-hop U2N Relay Control Plane Procedures vivo discussion Rel-19

[R2-2407034](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407034.zip) discussion on control plane procedure Ericsson, FirstNet, AT&T discussion Rel-19

[R2-2407058](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407058.zip) Discussion on Control Plane Procedure LG Electronics France discussion Rel-19

[R2-2407102](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407102.zip) Control procedure for multi-hop L2 based U2N relay Qualcomm Incorporated discussion

[R2-2407206](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407206.zip) Control Plane under multihop L2 U2N relaying Kyocera discussion

[R2-2407295](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407295.zip) Control plane procedures for multi-hop relay Huawei, HiSilicon discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2407318](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407318.zip) Control plane procedure for multi-hop relay Nokia discussion NR\_SL\_relay\_multihop

[R2-2407403](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407403.zip) discussion on C-plane procedure for multi-hop relay Sharp discussion Rel-19 NR\_SL\_relay\_multihop-Core

## 8.14 Additional topological enhancements

(FS\_WAB\_5GFemto\_NR; leading WG: RAN3; REL-19; SID [RP-241264](https://www.3gpp.org/ftp/meetings_3gpp_sync/ran/docs/RP-241264.zip))

Time budget: 0 TU

Tdoc Limitation: 0 tdocs

This WI will not be treated in RAN2#127, therefore no contribution is expected under agenda item 8.12.

**SUPER-SHORT EMAIL DISC:**

* [POST127][110][MOB] (Intel)

**Scope:** Update the draft CRs (if needed), discuss and finalize them. Prepare a LS to RAN1/4 to inform capability agreement and ask the question (see the discussion on R2-2406476).

**Intended outcome:** Endorsed 38.331 CR in R2-2407599 and 38.306 CR in R2-2407600. Approved LS in R2-2407601.

**Deadline:** Super short email discussion.

**SHORT EMAIL DISC:**

* [POST127][101][V2X/SL] (LG)

**Scope:** Discuss changes in R2-2407381 (only correction 1) and capture all agreements made in RAN2#127. => It is extended to short email discussion. Capture all RAN2#127 agreements.

**Intended outcome:** MAC CR in R2-2407581. => Agreed MAC CR in R2-2407603.

**Deadline:** Short offline discussion.

* [POST127][105][MOB] (Ericsson)

**Scope:** Discuss P1, P2, and P3 in R2-2406332, P3 in R2-2406337, P1, P2, P3, P6, P7 in R2-2407050 and R2-2407175. Update the CR with merging all corrections (if agreeable). => In CB session, this offline discussion is extended to short email discussion and the updated CR will capture all RAN2#127 agreements.

**Intended outcome:** Agreed RRC CR in R2-2407585. Discussion summary in R2-2407595 (if needed). If proposals are straight-forward, it is ok to directly discuss based on the CR (up to offline discussion rapporteur). => In short email discussion, no need of discussion summary.

**Deadline:** Comeback in Thursday CB session => Short email discussion

* [POST127][106][MOB] (ZTE)

**Scope:** Discuss R2-2406417 and R2-2407091. Update the CR with merging all corrections (if agreeable). => In CB session, this offline discussion is extended to short email discussion and the updated CR will capture all RAN2#127 agreements

**Intended outcome:** Endorsed 37.340 CR/TP in R2-2407586. Discussion summary in R2-2407596 (if needed). If proposals are straight-forward, it is ok to directly discuss based on draft TP/CR (up to offline discussion rapporteur). => Agreed 37.340 CR in R2-2407604. In short email discussion, no need of discussion summary.

**Deadline:** Comeback in Thursday CB session. => Short email discussion

* [POST127][111][MOB] (CATT)

**Scope:** Prepare a LS to SA3 to inform RAN2 agreements to ask them to take it into account for their works.

**Intended outcome:** Approved LS in R2-2407602.

**Deadline:** Short email discussion.

**LONG EMAIL DISC:**

* [POST127][109][NES] (OPPO)

**Scope:** For each direction (N extension vs PF bundling): 1) List proposed options, 2) Discuss to understand each option better, 3) Down select options, 4) Discuss pros and cons for each direction or down-selected options (with the consideration of UE impacts, system impacts and specification job). F2F offline discussion in Brk3 room. => It is extended to long email discussion to continue detailed analysis of pros and cons for each direction.

**Intended outcome:** Discussion summary in R2-2407598. => Updated discussion summary

**Deadline:** Comeback in Thursday CB session. => Long email discussion.

* [Post127][202][MIMOevo] CR for TS 38.321 (Samsung)

Scope: Update and review the CR for TS 38.321.

Intended outcome: Agreed CR

Deadline: Short

* [Post127][203][MIMOevo] CR for TS 38.331 (Ericsson)

Scope: Update and review the CR for TS 38.331.

Intended outcome: Agreed CR

Deadline: Short

* [Post127][204][MUSIM] CR for TS 38.331 (vivo)

Scope: Update and review the CR for TS 38.331

Intended outcome: Agreed CR

Deadline: Short

* [Post127][301][R18 NR NTN] 38.300 CR (Thales)

Scope: Draft a 38.300 based on meeting agreements

Intended outcome: Agreed CR

Deadline for agreed CR (in R2-2407621): short

* [Post127][302][R18 NR NTN] 38.331 CR (Ericsson)

Scope: update the RRC CR with meeting agreements

Intended outcome: Agreed CR

Deadline for agreed CR (in R2-2407611): short

* [Post127][303][R18 NR NTN] 38.321 CR (Interdigital)

Scope: update the MAC CR with meeting agreements

Intended outcome: Agreed CR

Deadline for agreed CR (in R2-2407628): short

* [Post127][304][R18 NR NTN] UE Caps CRs (Intel)

Scope: Draft CRs based on meeting agreements

Intended outcome: Endorsed CRs

Deadline for CRs (in R2-2407624 and R2-2407625): very short

* [Post127][305][R18 IoT NTN] 36.300 CR (Ericsson)

Scope: Draft a 36.300 CR with meeting agreements

Intended outcome: Agreed CR

Deadline for agreed CR (in R2-2407626): short

* [Post127][306][R18 IoT NTN] 36.331 CR (Huawei)

Scope: update the RRC CR with meeting agreements

Intended outcome: Agreed CR

Deadline for agreed CR (in R2-2407615): short

* [Post127][307][R18 IoT NTN] 36.321 CR (Mediatek)

Scope: update the MAC CR with meeting agreements

Intended outcome: Agreed CR

Deadline for agreed CR (in R2-2407620): short

* [Post127][308][R18 IoT NTN] 36.306 CR (Qualcomm)

Scope: Draft a 36.306 CR based on meeting agreements

Intended outcome: Agreed CR

Deadline for agreed CR (in R2-2407627): short

* [Post127][309][R18 NR NTN] LS to RAN1 (CATT)

Scope: Draft a LS to RAN1 on correction on network verification of UE location

Intended outcome: Approved LS

Deadline for approved LS (in R2-2407630): short

* [Post127][401][Relay] Multi-hop relay discovery and (re)selection (LG)

Scope:

* + Discovery message initiating/forwarding condition at intermediate relay UE
  + PC5 AS conditions for discovery at the last relay UE
  + Reselection triggers for all UEs
  + (Re)selection criteria for all UEs (considering discovery models A/B and whether criteria beyond the first hop are considered)
  + Whether to support cross-path topologies, e.g., whether (physically) different remote UE can select each (physically) different last relay UE via one (physically same) intermediate relay UE

Intended outcome: Report to RAN2#128

Deadline: Very long (for RAN2#128)

* [Post127][402][Relay] Multi-hop relay control plane (InterDigital)

Scope:

- Describe different solutions (from company contributions) for multihop U2N relay UE by at least describing:

* + Connection establishment procedures
  + Assumptions on RRC state(s) of intermediate UEs and last relay UE
  + Assumptions on controlling gNB/cell of each relay UE
  + How the remote and intermediate relay UEs obtain their configurations in each solution
  + How to meet QoS requirement e2e

- Evaluate the feasibility and pros/cons of the different solutions towards downscoping to a single solution

Intended outcome: Report to RAN2#128

Deadline: Very long (for RAN2#128)

* [Post127][403][POS] LS to RAN1 on CSI-RS for spatial relation in RRC\_INACTIVE (ZTE)

Scope: Draft an LS to RAN1 explaining the situation in RAN2 in relation to using RS from connected configuration as reference for spatial relation in RRC\_INACTIVE, and ask whether UE can take the CSI-RS or SRS configuration provided in RRC\_CONNECTED as the spatial relation RS to be applied in RRC\_INACTIVE state.

Intended outcome: Approved LS

Deadline: Short (not for RP)

* [Post127][404][POS] Rel-18 positioning MAC CR (Huawei)

Scope: Check and update the CR in R2-2407722

Intended outcome: Agreed CR

Deadline: Short (for RP)

* [Post127][405][POS] Rel-18 positioning RRC CRs (Ericsson)

Scope: Check the CRs in R2-2407721 and R2-2407769, including confirming list extension mechanism for R2-2407769.

Intended outcome: Agreed CRs

Deadline: Short (for RP)

* [POST127][505][MBS] RRC CR (Huawei)

Scope: Update the RRC CR with the agreements from the meeting, discuss the related FFSes.

Intended outcome: Agreeable RRC CR in R2-2407736

Deadline: Short

[ [Post127][604][Maint] Parallel Tx capability (Ericsson)](#_Toc175299552)

[ [Post127][602][FeMIMO] Power control parameters to support unified TCI state framework (Ericsson)](#_Toc175299554)

[ [Post127][601][RRC] Miscellaneous non-controversial corrections Set XXII (Ericsson)](#_Toc175299557)

[ [Post127][603][SONMDT] SCG act/deact info (CMCC)](#_Toc175299561)

# 9 Breakout session reports

No documents shall be submitted to this AI or its sub-AIs. It is only for at-meeting-generated contents.

## 9.1 Session on V2X/SL, R19 NES and MOB

[R2-2407571](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407571.zip)

1. ltm-FastProcessingConfig-r18 is corrected to per UE capability (see R2-2407584).

2. fr1-r18, fr2-r18, fr1-AndFR2-r18 in ltm-FastUE-Processing-r18 are corrected to OPTIONAL (see R2-2407584)

3. pdcch-RACH-AffectedBands-r18, pdcch-RACH-SwitchingTimeList-r18, pdcch-RACH-PrepTime-r18 are corrected to all independent (see R2-2407584)

- Qualcomm thinks we should avoid NBC especially for UE capability and SIB as it is not isolated to the feature.

=> These changes will be done in a BC way

=> Approved

## 9.2 Session on R18 MIMOevo, R18 MUSIM, and R19 LP-WUS

[R2-2407572](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407572.zip)

=> Approved

## 9.3 Session on NR NTN and IoT NTN

[R2-2407573](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407573.zip)

=> Approved

## 9.4 Session on positioning and sidelink relay

[R2-2407574](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407574.zip)

=> guidance is that NBC change for SLPP

=> For the RRC CR in R2-2407769 discuss the option over email discussion

=> Approved

## 9.5 Session on R18 MBS, R18 QoE and R19 XR

[R2-2407575](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407575.zip)

=> Approved

## 9.6 Session on maintenance, SON/MDT and eRedCap

[R2-2407576](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_127\Docs\R2-2407576.zip)

=> Approved