3GPP TSG-RAN WG2 Meeting #131 [R2-2505001](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505001.zip)

Bangalore, India Aug 25th – 29th , 2025

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

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| 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.

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| **Consensus principles reminder**  The attention of the delegates to the meeting is drawn to the fact that 3GPP endeavours to reach consensus on all decisions and therefore depends on a cooperative spirit of the Individual Members. In particular, Individual Members are encouraged to seek a consensus-based solution and only to sustain objections as a very last resort, and where absolutely necessary and well justified. The leadership will conduct the present meeting in a manner whereby informal methods of reaching consensus are encouraged, whilst ensuring that well justified concerns are taken into account |

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| **RAN endorsed working principle for 6G (RP-250766)**  3GPP to create lean and streamlined standards for 6G, e.g., by dimensioning an appropriate set of functionalities, minimizing the adoption of multiple options for the same functionality, avoiding excessive configurations, etc. Any exception to the above shall be well justified. |

# 2 General

## 2.1 Approval of the agenda

[R2-2505001](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_131\\Docs\\R2-2505001.zip) Agenda for RAN2#131 Chairman agenda

* Approved

## 2.2 Approval of the report of the previous meeting

[R2-2505002](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_131\\Docs\\R2-2505002.zip) RAN2#130 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-18 and earlier 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.
* NOTE: the tdoc limit applies to all CRs (i.e. WI spec rapporteurs are NO longer expected to submit individual contributions). They can submit a company CR where they also include miscellaneous corrections that have been sent to them.

Rel-18 UE capabilities

- EUTRA UE capabilities corrections are covered by separate CRs

- RAN1/RAN4 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.

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).

Postponed CRs still count towards tdoc limit unless 3 or more companies are co-sourcing it.

For each R19 feature, 1 additional tdoc on top of the limit is allowed for a primary co-sourcing company for co-sourced contribution with 4 or more companies.

**Open issues**

* CR Rapporteurs (as indicated in email discussion scope) are expected to provide open issue list
* Please refer to RAN2 chair guidance document in [POST129bis][001][Organizational] Open issue list.
* CR rapporteurs are expected to ask for inputs, provide proposals on how to resolve the issues or provide limited options to resolve the issue for further discussion online.
* For each issue (before the email discussion deadline), rapporteurs are requested to explicitly indicate whether further contribution input on the open issue is needed. Input should be requested only for difficult to resolve issues and/or new open issues for which there wasn’t sufficient discussion time to resolve it.
* Companies should follow rapporteurs guidance (i.e. only address open issues for which the rapporteur indicates further input is needed).
* Companies should clearly indicate the open issue number they are addressing in their section and proposal, e.g. Proposal x: (RRC-1) Agree to bla bla
* Companies can discuss UE capabilities in their topic-specific Tdocs

**Rel-19 CRs**

* CR already agreed in principle but not yet officially agreed must be submitted to RAN2#131 for formal approval under in-principle agreed CRs AIs
* All Rel-19 WI CRs for approval to RAN#109 should be submitted as real CRs to this meeting (i.e. no draftCRs). All WI CR rapporteurs should ensure that the CRs resulting from post email discussions are submitted as real CRs from beginning of the meeting.
* All Rel-19 CRs should be based on the latest the June version of the specs
* All CRs should follow the CR and formatting rules.

Rel-19 UE capabilities

- EUTRA UE capabilities are covered by separate CRs

- All NR UE capabilities will be included common Mega CRs (38306 and 38331) covering all Rel-19 WIs (end outcome).

During the work on NR UE caps:

- In a Common Rel-19 Agenda Item (AI): RAN1 and RAN4 feature corrections are handled jointly under a common AI, with some explicit exceptions. UE capabilities will be included in UE cap MegaCR directly from UE capability rapporteur

- In WI-specific Rel-19 Agenda Items: RAN2 specific UE capabilities are handled per WI and endorsed as individual CRs. Final endorsed CRs will be merged into mega CR post meeting.

Tdoc request/submission for RAN2#131 deadlines:

* Tdoc Submission deadline: August 15th, 1000 UTC

## 2.5 Others

RAN2 election

Chair, 1st Vice Chair, and 2nd Vice Chair to be elected, see 3GPP web page, where information is/will be posted.

**RAN2#131 Chair Election**

* RAN2: Diana PANI - InterDigital Communications (ATIS)

**RAN2#131 Vice Chair Election Position 1**

* RAN2 Vice Chair: Kyeongin JEONG - Samsung Electronics Co., Ltd (TTA)

**RAN2#131 Vice Chair Election Position 2**

* RAN2 Vice Chair: Erlin ZENG - CATT (CCSA)

[R2-2505003](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_131\\Docs\\R2-2505003.zip) RAN2 Handbook MCC discussion

* Noted

# 3 Incoming liaisons

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

[R2-2505007](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505007.zip) LS on draft-ietf-6man-deprecate-router-alert, “Deprecation of the IPv6 Router Alert Option for New Protocols” (contact: Huawei) IETF IPv6 Maintenance LS in To:RAN2, SA2, CT1, CT3 CT4

* Noted

# 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 Positioning WI, which is 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)

[R2-2505202](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_131\\Docs\\R2-2505202.zip) Correction on LTE RLF report logging CATT CR Rel-16 36.331 16.20.0 5134 - F LTE\_feMob-Core

[R2-2505203](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505203.zip) Correction on LTE RLF report logging CATT CR Rel-17 36.331 17.13.0 5135 - A LTE\_feMob-Core

[R2-2505204](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505204.zip) Correction on LTE RLF report logging CATT CR Rel-18 36.331 18.6.0 5136 - A LTE\_feMob-Core

[R2-2505700](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505700.zip) Correction on MBMS Interest Indication Samsung, Nokia, Ericsson, Qualcomm Incorporated, ZTE CR Rel-18 36.331 18.6.0 5125 1 F LTE\_terr\_bcast-Core, TEI18 [R2-2504325](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504325.zip)

[R2-2505881](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505881.zip) Clarification on UTC time offset in IoT NTN ZTE Corporation, Sanechips CR Rel-17 36.331 17.13.0 5145 - F LTE\_NBIOT\_eMTC\_NTN-Core

[R2-2505886](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505886.zip) Clarification on UTC time offset in IoT NTN ZTE Corporation, Sanechips CR Rel-18 36.331 18.6.0 5146 - A LTE\_NBIOT\_eMTC\_NTN-Core

[R2-2506025](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506025.zip) Correction on UL spatial multiplexing ASUSTeK CR Rel-17 36.321 17.7.0 1595 - F TEI17, LTE\_LATRED\_L2-Core

[R2-2506026](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506026.zip) Correction on UL spatial multiplexing ASUSTeK CR Rel-18 36.321 18.4.0 1596 - A TEI17, LTE\_LATRED\_L2-Core

## 4.3 Positioning corrections Rel-16 and earlier

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

Tdoc Limitation: 1 tdoc

# 5 NR Rel-15 and Rel-16

Essential corrections only.

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

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

## 5.1 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))

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

[R2-2505049](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_131\\Docs\\R2-2505049.zip) LS on mandatory gaps capability (R4-2508379; contact: Ericsson) RAN4 LS in Rel-16 NR\_RRM\_enh-Core To:RAN2

### 5.1.2 User Plane corrections

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

#### 5.1.2.1 MAC

[R2-2506159](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_131\\Docs\\R2-2506159.zip) Correction to F field in MAC subheader for DL-SCH and UL-SCH NTT DOCOMO INC., Huawei, HiSilicon, MediaTek Inc., Nokia, Nokia Shanghai Bell, Qualcomm Incorporated, Samsung, ZTE CR Rel-15 38.321 15.13.0 2116 - F NR\_newRAT-Core

- Xiaomi doesn’t see the issue and this CR was discussed in 2019.

- Qualcomm thinks in theory it is NBC but it doesn’t impact the UEs that have implemented this feature. ZTE and Mediatek agrees and the product is implemented according to this CR. Ericsson thinks that this is NBC for the network but supports it.

- Vivo thinks that we can keep the spec as it was.

- Docomo has tested this and there are no UEs detected that have implemented something else.

- Apple wants to confirm that this impacts only tx side. Confirmed.

* Add Non backward compatible description in cover page
* [AT131][008][UP] F field in MAC (NTT docomo)

Intended outcome: update cover page with NBC and agree by email

Deadline: Thursday by email

[R2-2506435](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506435.zip) Correction to F field in MAC subheader for DL-SCH and UL-SCH NTT DOCOMO INC., Huawei, HiSilicon, MediaTek Inc., Nokia, Nokia Shanghai Bell, Qualcomm Incorporated, Samsung, ZTE CR Rel-15 38.321 15.13.0 2116 1 F NR\_newRAT-Core

[R2-2506161](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506161.zip) Correction to F field in MAC subheader for DL-SCH and UL-SCH NTT DOCOMO INC., Huawei, HiSilicon, MediaTek Inc., Nokia, Nokia Shanghai Bell, Qualcomm Incorporated, Samsung, ZTE CR Rel-16 38.321 16.20.0 2117 - A NR\_newRAT-Core

=> Revised in [R2-2506436](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506436.zip)

[R2-2506436](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506436.zip) Correction to F field in MAC subheader for DL-SCH and UL-SCH NTT DOCOMO INC., Huawei, HiSilicon, MediaTek Inc., Nokia, Nokia Shanghai Bell, Qualcomm Incorporated, Samsung, ZTE CR Rel-16 38.321 16.20.0 2117 1 A NR\_newRAT-Core

=> Revised in R2-2506476

R2-2506476 Correction to F field in MAC subheader for DL-SCH and UL-SCH NTT DOCOMO INC., Huawei, HiSilicon, MediaTek Inc., Nokia, Nokia Shanghai Bell, Qualcomm Incorporated, Samsung, ZTE CR Rel-16 38.321 16.20.0 2117 2 A NR\_newRAT-Core

[R2-2506162](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506162.zip) Correction to F field in MAC subheader for DL-SCH and UL-SCH NTT DOCOMO INC., Huawei, HiSilicon, MediaTek Inc., Nokia, Nokia Shanghai Bell, Qualcomm Incorporated, Samsung, ZTE CR Rel-17 38.321 17.13.0 2118 - A NR\_newRAT-Core

=> Revised in [R2-2506437](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506437.zip)

[R2-2506437](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506437.zip) Correction to F field in MAC subheader for DL-SCH and UL-SCH NTT DOCOMO INC., Huawei, HiSilicon, MediaTek Inc., Nokia, Nokia Shanghai Bell, Qualcomm Incorporated, Samsung, ZTE CR Rel-17 38.321 17.13.0 2118 1 A NR\_newRAT-Core

[R2-2506163](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506163.zip) Correction to F field in MAC subheader for DL-SCH and UL-SCH NTT DOCOMO INC., Huawei, HiSilicon, MediaTek Inc., Nokia, Nokia Shanghai Bell, Qualcomm Incorporated, Samsung, ZTE CR Rel-18 38.321 18.6.0 2119 - A NR\_newRAT-Core

=> Revised in [R2-2506438](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506438.zip)

[R2-2506438](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506438.zip) Correction to F field in MAC subheader for DL-SCH and UL-SCH NTT DOCOMO INC., Huawei, HiSilicon, MediaTek Inc., Nokia, Nokia Shanghai Bell, Qualcomm Incorporated, Samsung, ZTE CR Rel-18 38.321 18.6.0 2119 1 A NR\_newRAT-Core

#### 5.1.2.2 RLC PDCP SDAP BAP

### 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.

[R2-2505288](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_131\\Docs\\R2-2505288.zip) Discussion on tracking area code information in SON reports ZTE Corporation, Sanechips discussion Rel-16 NR\_SON\_MDT-Core, NR\_ENDC\_SON\_MDT\_enh-Core, NR\_ENDC\_SON\_MDT\_enh2-Core

[R2-2505734](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505734.zip) Clarification on RRC procedure delay for BWP switching Samsung CR Rel-15 38.331 15.29.0 5432 - F NR\_newRAT-Core

[R2-2505735](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505735.zip) Clarification on RRC procedure delay for BWP switching Samsung CR Rel-16 38.331 16.20.0 5433 - A NR\_newRAT-Core

[R2-2505743](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505743.zip) Clarification on RRC procedure delay for BWP switching Samsung CR Rel-17 38.331 17.13.0 5434 - A NR\_newRAT-Core

[R2-2505745](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505745.zip) Clarification on RRC procedure delay for BWP switching Samsung CR Rel-18 38.331 18.6.0 5436 - A NR\_newRAT-Core

[R2-2506074](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506074.zip) Correction on previousPCellId in RLF report Huawei, HiSilicon, CATT, CMCC CR Rel-16 38.331 16.20.0 5451 - F NR\_SON\_MDT-Core

[R2-2506075](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506075.zip) Correction on previousPCellId in RLF report Huawei, HiSilicon, CATT, CMCC CR Rel-17 38.331 17.13.0 5452 - A NR\_SON\_MDT-Core

[R2-2506076](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506076.zip) Correction on previousPCellId in RLF report Huawei, HiSilicon, CATT, CMCC CR Rel-18 38.331 18.6.0 5453 - A NR\_SON\_MDT-Core

[R2-2506120](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506120.zip) Clarification of releasing elements from Rel-16 PUCCH Spatial Relation Info List ZTE Corporation CR Rel-16 38.331 16.20.0 5459 - F NR\_eMIMO-Core

[R2-2506121](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506121.zip) Clarification of releasing elements from Rel-16 PUCCH Spatial Relation Info List ZTE Corporation CR Rel-17 38.331 17.13.0 5460 - A NR\_eMIMO-Core

[R2-2506122](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506122.zip) Clarification of releasing elements from Rel-16 PUCCH Spatial Relation Info List ZTE Corporation CR Rel-18 38.331 18.6.0 5461 - A NR\_eMIMO-Core

[R2-2506124](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506124.zip) Summary Report of [Post130][602][Maint] Spatial Relation Info list extension (ZTE)\_Summary ZTE Corporation discussion Rel-16 NR\_eMIMO-Core

#### 5.1.3.2 UE capabilities

UE cap corrections 38306, 38331

[R2-2505112](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_131\\Docs\\R2-2505112.zip) Discussion on R4 LS on Mandatory Gap Capability OPPO discussion Rel-16 NR\_RRM\_enh-Core

[R2-2505465](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505465.zip) Correction on intraF-NeighMeasForSCellWithoutSSB capability ZTE Corporation, Sanechips, Nokia, Huawei, HiSilicon CR Rel-15 38.306 15.28.0 1327 - F NR\_newRAT-Core

[R2-2505466](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505466.zip) Correction on intraF-NeighMeasForSCellWithoutSSB capability ZTE Corporation, Sanechips, Nokia, Huawei, HiSilicon CR Rel-16 38.306 16.21.0 1328 - A NR\_newRAT-Core

[R2-2505467](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505467.zip) Correction on intraF-NeighMeasForSCellWithoutSSB capability ZTE Corporation, Sanechips, Nokia, Huawei, HiSilicon CR Rel-17 38.306 17.13.0 1329 - A NR\_newRAT-Core

[R2-2505809](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505809.zip) Correction to supportedGapPattern-NRonly-r16 Ericsson CR Rel-16 38.306 16.21.0 1335 - F NR\_RRM\_enh-Core

[R2-2505810](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505810.zip) Correction to supportedGapPattern-NRonly-r16 Ericsson CR Rel-17 38.306 17.13.0 1336 - A NR\_RRM\_enh-Core

[R2-2505811](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505811.zip) Correction to supportedGapPattern-NRonly-r16 Ericsson CR Rel-18 38.306 18.6.0 1337 - A NR\_RRM\_enh-Core

[R2-2506138](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506138.zip) Discussion on R16 mandatory gap capability ZTE Corporation, Sanechips discussion Rel-16 NR\_RRM\_enh-Core

[R2-2506145](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506145.zip) Correction to supported gap patterns Huawei, HiSilicon CR Rel-16 38.306 16.21.0 1342 - F NR\_RRM\_enh-Core

[R2-2506146](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506146.zip) Correction to supported gap patterns Huawei, HiSilicon CR Rel-17 38.306 17.13.0 1343 - A NR\_RRM\_enh-Core

[R2-2506147](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506147.zip) Correction to supported gap patterns Huawei, HiSilicon CR Rel-18 38.306 18.6.0 1344 - A NR\_RRM\_enh-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.

## 5.3 NR Positioning Support

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

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

(NR TEI16 Positioning)

Stage 2 corrections shall be discussed with the specification rapporteur (Sven Fischer sfischer@qti.qualcomm.com) before submission. Stage 2 CRs not discussed with the specification rapporteur will not be treated.

[R2-2505324](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505324.zip) Correction to delivery of posSIB segments by dedicated signalling in RRC\_CONNECTED Huawei, HiSilicon, Ericsson, Qualcomm CR Rel-16 38.331 16.20.0 5407 - F NR\_pos-Core

[R2-2505325](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505325.zip) Correction to delivery of posSIB segments by dedicated signalling in RRC\_CONNECTED Huawei, HiSilicon, Ericsson, Qualcomm CR Rel-17 38.331 17.13.0 5408 - A NR\_pos-Core

[R2-2505326](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505326.zip) Correction on delivery of posSIB segments by dedicated siganling in RRC\_CONNECTED Huawei, HiSilicon, Ericsson, Qualcomm CR Rel-18 38.331 18.6.0 5409 - A NR\_pos-Core

=> Revised in [R2-2505640](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505640.zip)

[R2-2505640](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505640.zip) Correction to delivery of posSIB segments by dedicated signalling in RRC\_CONNECTED Huawei, HiSilicon, Ericsson, Qualcomm CR Rel-18 38.331 18.6.0 5409 1 A NR\_pos-Core [R2-2505326](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505326.zip)

# 6 NR Rel-17

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

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

## 6.1 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))

(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))

(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))

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.

### 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)

[R2-2505037](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_131\\Docs\\R2-2505037.zip) Reply LS on stage 1 requirements to support PWS over satellite NG-RAN in Rel-17 (R3-253867; contact: Ericsson) RAN3 LS in Rel-17 NR\_NTN\_solutions-Core, LTE\_NBIOT\_eMTC\_NTN-Core To:SA1, CT1, RAN2 Cc:SA2, CT4, RAN, SA

[R2-2505053](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505053.zip) Reply LS from RAN on removal of support of PWS over satellite NG-RAN in Rel-17 and 18 (RP-251859; contact: Aalyria) RAN LS in Rel-17 NR\_NTN\_solutions-Core, LTE\_NBIOT\_eMTC\_NTN-Core To:CT1, SA1, CT, SA, RAN3, RAN2 Cc:SA2, CT4

[R2-2505060](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505060.zip) Reply LS on emergency call back and paging (S2-2505938; contact: Qualcomm) SA2 LS in Rel-17 NR\_newRAT-Core, NR\_redcap-Core To:RAN3 Cc:RAN2, CT1, RAN

[R2-2505062](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505062.zip) Reply LS on Handling of UE Radio Capability for Paging (S2-2506082; contact: Ericsson) SA2 LS in Rel-17 NR\_newRAT-Core, 5GS\_Ph1, TEI17 To:RAN3 Cc:RAN2

[R2-2505826](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505826.zip) Support for PWS in NTN Ericsson discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2505853](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505853.zip) Clarification on eDRX and emergency PDU session Ericsson CR Rel-18 38.300 18.6.0 1017 - F NR\_redcap-Core Withdrawn

[R2-2505854](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505854.zip) Clarification on eDRX and emergency PDU session Ericsson CR Rel-18 38.300 18.6.0 1018 - A NR\_redcap-Core

[R2-2505865](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505865.zip) Clarification on eDRX and emergency PDU session Ericsson CR Rel-17 38.300 17.13.0 1019 - F NR\_redcap-Core

### 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).

[R2-2505626](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_131\\Docs\\R2-2505626.zip) Correction on DCP considering MUSIM gaps Huawei, HiSilicon CR Rel-17 38.321 17.13.0 2108 - F LTE\_NR\_MUSIM-Core, NR\_UE\_pow\_sav-Core

- Vivo, Apple, Qualcomm, supports but need to update stage 2 specs.

- Apple points that we discussed something similar in LP-WUS.

* The CR is agreed

[R2-2505627](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505627.zip) Correction on DCP considering MUSIM gaps Huawei, HiSilicon CR Rel-18 38.321 18.6.0 2109 - A LTE\_NR\_MUSIM-Core, NR\_UE\_pow\_sav-Core

* The CR is agreed
* [AT131][014][R17 UP] DCP stage 2 CR (Huawei)

Intended outcome: Review stage 2 CR

Deadline: Thursday

[R2-2506209](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506209.zip) Correction on DCP considering MUSIM gaps Huawei, HiSilicon, Nokia (Rapporteur), vivo CR Rel-17 38.300 17.13.0 1025 - F LTE\_NR\_MUSIM-Core, NR\_UE\_pow\_sav-Core

* Update checkbox
* The CR is agreed in R2-2506479 with change above

R2-2506479 Correction on DCP considering MUSIM gaps Huawei, HiSilicon, Nokia (Rapporteur), vivo CR Rel-17 38.300 17.13.0 1025 1 F LTE\_NR\_MUSIM-Core, NR\_UE\_pow\_sav-Core

=> Agreed

[R2-2506210](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506210.zip) Correction on DCP considering MUSIM gaps Huawei, HiSilicon, Nokia (Rapporteur), vivo CR Rel-18 38.300 18.6.0 1026 - A LTE\_NR\_MUSIM-Core, NR\_UE\_pow\_sav-Core

* Update checkbox
* The CR is agreed in R2-2506480 with change above

R2-2506480 Correction on DCP considering MUSIM gaps Huawei, HiSilicon, Nokia (Rapporteur), vivo CR Rel-18 38.300 18.6.0 1026 1 A LTE\_NR\_MUSIM-Core, NR\_UE\_pow\_sav-Core

=> Agreed

[R2-2506058](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506058.zip) Correction on DRX Command handling Samsung CR Rel-17 38.321 17.13.0 2113 - F NR\_MBS-Core

- Nokia doesn’t think this is needed. Vivo, Qualcomm and Lenovo doesn’t see what is changed, the behaviour is the same. Qualcomm agrees with intent but doesn’t see the need for change

- Xiaomi is supportive

* Cover page will be updated to describe the issue
* if a DRX Command MAC CE indicated by PDCCH addressed to C-RNTI or CS-RNTI for unicast transmission
* take latest CR template
* [AT131][040][R17 UP] DRX command handling (Samsung)

Intended outcome: Agree to CR by email R2-2506478

Deadline: Friday

R2-2506478 Correction on DRX Command handling Samsung CR Rel-17 38.321 17.13.0 2113 1 F NR\_MBS-Core R2-2506058

[R2-2506071](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506071.zip) Correction on DRX Command handling Samsung CR Rel-18 38.321 18.6.0 2114 - A NR\_MBS-Core

=> Revised in R2-2506481

R2-2506481 Correction on DRX Command handling Samsung CR Rel-18 38.321 18.6.0 2114 1 A NR\_MBS-Core R2-2506071

### 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.

[R2-2505784](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_131\\Docs\\R2-2505784.zip) Correction on configured grant power control in unified TCI framework Ofinno CR Rel-17 38.331 17.13.0 5439 - F NR\_FeMIMO-Core

[R2-2505785](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505785.zip) Correction on configured grant power control in unified TCI framework Ofinno CR Rel-18 38.331 18.6.0 5440 - A NR\_FeMIMO-Core

[R2-2505830](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505830.zip) Correction on SCGFailureInformation Ericsson CR Rel-17 38.331 17.13.0 5444 - F NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2505831](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505831.zip) Correction on SCGFailureInformation Ericsson CR Rel-18 38.331 18.6.0 5445 - A NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2505841](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505841.zip) Discussion on eventD1/D2 and condEventD1/D2/T1 Samsung, ASUSTek, CATT, Ericsson, Nokia, Huawei, Apple, Xiaomi, ZTE Corporation, vivo discussion Rel-17 NR\_NTN\_solutions, NR\_NTN\_enh-Core

[R2-2505842](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505842.zip) Corrections on eventD1 and condEventD1/T1 Samsung CR Rel-17 38.331 17.13.0 5365 1 F NR\_NTN\_solutions [R2-2504204](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504204.zip)

[R2-2505843](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505843.zip) Corrections on eventD1/D2 and condEventD1/D2/T1 Samsung CR Rel-18 38.331 18.6.0 5366 1 F NR\_NTN\_solutions, NR\_NTN\_enh-Core [R2-2504205](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504205.zip)

[R2-2506155](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506155.zip) Correction of PDD reporting related descriptions Ericsson discussion Rel-17 NR\_NTN\_solutions-Core

#### 6.1.3.2 UE capabilities

UE cap corrections 38306, 38331.

[R2-2505602](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_131\\Docs\\R2-2505602.zip) Clarifications on the applicability of independent gap UE capability Qualcomm Incorporated CR Rel-17 38.306 17.13.0 1331 - F NR\_MG\_enh-Core

[R2-2505603](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505603.zip) Clarifications on the applicability of independent gap UE capability Qualcomm Incorporated CR Rel-18 38.306 18.6.0 1332 - A NR\_MG\_enh-Core

[R2-2505897](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505897.zip) Correction on inter-RAT FR2 measurement capabilities Nokia CR Rel-17 36.331 17.13.0 5147 - F NR\_MG\_enh-Core

[R2-2505898](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505898.zip) Correction on inter-RAT FR2 measurement capabilities Nokia CR Rel-18 36.331 18.6.0 5148 - A NR\_MG\_enh-Core

[R2-2505899](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505899.zip) Correction on inter-RAT FR2 measurement capabilities Nokia CR Rel-17 36.306 17.9.0 1921 - F NR\_MG\_enh-Core

[R2-2505900](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505900.zip) Correction on inter-RAT FR2 measurement capabilities Nokia CR Rel-18 36.306 18.5.0 1922 - A NR\_MG\_enh-Core

#### 6.1.3.3 Other

Including idle and inactive behaviour specified in 38.304 or 36.304.

## 6.3 NR positioning enhancements

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

# 7 Rel-18

## 7.0 Common

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

### 7.0.1 UE Capabilities

Multi-WI handling of Rel-18 feature lists and UE capability Mega CRs.

[R2-2505308](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_131\\Docs\\R2-2505308.zip) Corrections on Rel-18 UE capability descriptions, including [HARQ-ACK MUX on PUSCH] Xiaomi CR Rel-18 38.306 18.6.0 1322 - F NR\_MIMO\_evo\_DL\_UL, NR\_Mob\_enh2, Netw\_Energy\_NR, NR\_XR\_enh, NR\_NTN\_enh, NR\_SL\_enh2, TEI18

* [AT131][022][R18 UE caps] CR (Xiaomi)

Intended outcome: review and agree by email

Deadline: Thursday

R2-2506469 Corrections on Rel-18 UE capability descriptions, including [HARQ-ACK MUX on PUSCH] Xiaomi CR Rel-18 38.306 18.6.0 1322 1 F NR\_MIMO\_evo\_DL\_UL, NR\_Mob\_enh2, Netw\_Energy\_NR, NR\_XR\_enh, NR\_NTN\_enh, NR\_SL\_enh2, TEI18

### 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

*Corrections to generalized RACH-less HO procedure, including NTN, mIAB, and overlapping sections of the LTM cell switch procedure*

#### 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))

#### 7.0.2.3 NR support for UAV

(NR\_UAV-Core; leading WG: RAN2; REL-18; WID: [RP-230782](https://www.3gpp.org/ftp/TSG_RAN/TSG_RAN/TSGR_99/Docs/RP-230782.zip) and LTE WID: [RP-230783](https://www.3gpp.org/ftp/TSG_RAN/TSG_RAN/TSGR_99/Docs/RP-230783.zip) )

#### 7.0.2.4 Mobile Terminated Small Data Transmission

(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))

#### 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))

#### 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))

#### 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))

#### 7.0.2.8 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))

#### 7.0.2.9 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))

#### 7.0.2.10 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))

[R2-2505468](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505468.zip) Presence condition of ssbFrequency in servingCellMO for SSB less Scell ZTE Corporation, Sanechips, Huawei , HiSilicon, Nokia discussion Rel-18 Netw\_Energy\_NR-Core

* Remove the Conditional Presence “*SSBorAssociatedSSB2*” of *ssbFrequency* in *servingCellMO* for SSB-less SCell and change back to “*SSBorAssociatedSSB*”.
* Noted
* [AT131][015][R18 NES] CRs (ZTE)

Intended outcome: Agree to CRs by email

Deadline: Thursday

[R2-2506442](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506442.zip) Correction on Presence condition of ssbFrequency in servingCellMO for SSB-less SCell ZTE Corporation, Sanechips, Huawei, HiSilicon, Nokia CR Rel-15 38.331 15.29.0 5470 - F NR\_newRAT-Core

* The CR is agreed

[R2-2506443](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506443.zip) Correction on Presence condition of ssbFrequency in servingCellMO for SSB-less SCell ZTE Corporation, Sanechips, Huawei, HiSilicon, Nokia CR Rel-16 38.331 16.20.0 5471 - A NR\_newRAT-Core

* The CR is agreed

[R2-2506444](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506444.zip) Correction on Presence condition of ssbFrequency in servingCellMO for SSB-less SCell ZTE Corporation, Sanechips, Huawei, HiSilicon, Nokia CR Rel-17 38.331 17.13.0 5472 - A NR\_newRAT-Core

* The CR is agreed

[R2-2506445](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506445.zip) Correction on Presence condition of ssbFrequency in servingCellMO for SSB-less SCell ZTE Corporation, Sanechips, Huawei, HiSilicon, Nokia CR Rel-18 38.331 18.6.0 5473 - A NR\_newRAT-Core

* The CR is agreed

[R2-2505812](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505812.zip) Correction to scellWithoutSSB Ericsson CR Rel-18 38.306 18.6.0 1338 - F Netw\_Energy\_NR-Core

* The CR is agreed

#### 7.0.2.11 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))

To be treated in breakout session (Mattias)

[R2-2505309](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505309.zip) Correction on SPR determination procedure Xiaomi CR Rel-18 38.331 18.6.0 5404 - F NR\_ENDC\_SON\_MDT\_enh2-Core Withdrawn

[R2-2505310](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505310.zip) Correction on the dlRSRPAboveThreshold in RA-report Xiaomi CR Rel-18 38.331 18.6.0 5405 - F NR\_ENDC\_SON\_MDT\_enh2-Core Withdrawn

[R2-2506055](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506055.zip) Correction on reporting noSuitableCellFound Samsung CR Rel-18 38.331 18.6.0 5448 - F NR\_ENDC\_SON\_MDT\_enh2-Core

[R2-2506077](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506077.zip) Correction on procedual text for successPSCell-Config Huawei, HiSilicon, CATT, CMCC, Samsung, Ericsson CR Rel-18 38.331 18.6.0 5454 - F NR\_ENDC\_SON\_MDT\_enh2-Core

[R2-2506106](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506106.zip) Discussion on parameters for RACH partition in RA-report Sharp discussion

[R2-2506107](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506107.zip) Correction to startPreambleForThisPartition and numberOfPreamblesPerSSB-ForThisPartition in RA-report Sharp CR Rel-18 38.331 18.6.0 5456 - F NR\_ENDC\_SON\_MDT\_enh2-Core

[R2-2506108](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506108.zip) Correction for setting choCandidate in SHR Sharp CR Rel-18 38.331 18.6.0 5457 - F NR\_ENDC\_SON\_MDT\_enh2-Core

[R2-2506182](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506182.zip) Correction on SPR determination procedure Xiaomi CR Rel-18 38.331 18.6.0 5465 - F NR\_ENDC\_SON\_MDT\_enh2-Core

[R2-2506183](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506183.zip) Correction on the dlRSRPAboveThreshold in RA-report Xiaomi CR Rel-18 38.331 18.6.0 5466 - F NR\_ENDC\_SON\_MDT\_enh2-Core

#### 7.0.2.12 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))

[R2-2505052](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505052.zip) LS to RAN2 on MUSIM gap and Measurement gap (R4-2508447; contact: R4-2508447) RAN4 LS in Rel-18 NR\_DualTxRx\_MUSIM-Core To:RAN2

* Noted

[R2-2505996](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505996.zip) Clarification on the MUSIM Gap ZTE Corporation discussion Rel-18 NR\_DualTxRx\_MUSIM-Core

Proposal 2: RAN2 to confirm that when network does not configure the priority even the UE has indicated the preferred MUSIM priority, UE behaviour is not specified.

- Mediatek thinks this is not needed as RAN4 indicated that there are no requirements and that is different from UE behaviour not specified.

*Proposal 3: RAN2 to confirm whether the NOTE below has included the case in the Proposal 2.*

*NOTE: If network does not configure the relative priorities among MUSIM gaps as indicated by the UE, UE behaviour is not specified.*

- Mediatek thinks these are different cases. Ericsson think that it includes the cases where the network doesn’t provide the priorities. Vivo thinks that further clarification are needed.

*Proposal 3a: If not included, the NOTE should be further clarified, e.g.*

*NOTE: If network does not configure the relative priorities among MUSIM gaps (including the case that the network does not configure the priority for the MUSIM Gaps) as indicated by the UE, UE*

*behaviour is not specified.*

* No further clarification

**Agreements**

1. No further RAN2 specification impact is required for resolving MUSIM gap and measurement gap collisions, based on the reply LS [1].

[R2-2505997](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505997.zip) Clarification to musim-AffectedBandsList ZTE Corporation CR Rel-18 38.331 18.6.0 5447 - F NR\_DualTxRx\_MUSIM-Core

- Vivo doesn’t think we can agree to the CR this meeting as it is up to UE implementation. ZTE thinks we need clear specification.

- Huawei thinks that we can agree on the understanding on the chair minutes and not agree to the CR.

[CB Thursday]

* [AT131][016][MUSIM] Offline (ZTE)

Intended outcome: Discuss both CBs for MUSIM

Deadline: Thursday

[R2-2506446](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506446.zip) Clarification to musim-AffectedBandsList ZTE Corporation CR Rel-18 38.331 18.6.0 5447 1 F NR\_DualTxRx\_MUSIM-Core

* The CR is agreed

[R2-2506447](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506447.zip) Report of the [AT131][016][MUSIM] Offline (ZTE) ZTE discussion Rel-18 NR\_DualTxRx\_MUSIM-Core

* Noted

#### 7.0.2.13 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))

To be treated in breakout session (Erlin)

[R2-2505013](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505013.zip) LS on maximum transmission power for STxMP (R1-2504839; contact: Huawei) RAN1 LS in Rel-18 NR\_MIMO\_evo\_DL\_UL-Core To:RAN4 Cc:RAN2

[R2-2505019](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505019.zip) Reply LS on differentiation of sDCI based mTRP and sTRP (R1-2504885; contact: CATT) RAN1 LS in Rel-18 NR\_MIMO\_evo\_DL\_UL-Core To:RAN2

[R2-2505462](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505462.zip) Correction on simultaneousU-TCI-UpdateListx for Unified TCI State Update CATT, Samsung CR Rel-18 38.331 18.6.0 5418 - F NR\_MIMO\_evo\_DL\_UL-Core

[R2-2506160](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506160.zip) Correction to reportQuantity Ericsson CR Rel-18 38.331 18.6.0 5462 - F NR\_MIMO\_evo\_DL\_UL-Core

#### 7.0.2.14 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))

#### 7.0.2.15 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))

[R2-2505066](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505066.zip) LS to RAN3 on MBS Communication Service Type (S4-251096; contact: Nokia) SA4 LS in Rel-18 NR\_QoE\_enh-Core To:RAN3 Cc:RAN2, SA5

* Noted

#### 7.0.2.16 XR Enhancements for NR

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

[R2-2505327](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505327.zip) Correction to the description of PDU set QoS parameter Huawei, HiSilicon, Nokia (Rapporteur) CR Rel-18 38.300 18.6.0 1010 - F NR\_XR\_enh-Core

* Add clarification that PSDB and PSER should be provided together
* [AT131][017][R18 XR] PDU set QoS parameter CR (Huawei)

Intended outcome: update and agree to CR by email

Deadline: Thursday

[R2-2506459](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506459.zip) Correction to the description of PDU set QoS parameter Huawei, HiSilicon, Nokia (Rapporteur) CR Rel-18 38.300 18.6.0 1010 1 F NR\_XR\_enh-Core

* The CR is agreed

[R2-2505408](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505408.zip) Correction on DSR triggering vivo CR Rel-18 38.321 18.6.0 2099 - F NR\_XR\_enh-Core

* Dawid will treat this in XR

#### 7.0.2.17 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))

To be treated in breakout session (Sergio)

[R2-2505420](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505420.zip) Discussion on eventD1/D2 and condEventD1/D2/T1 Samsung discussion Rel-18 NR\_NTN\_solutions, NR\_NTN\_enh-Core Withdrawn

[R2-2505534](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505534.zip) Clarification on reference point for hard satellite switch with resynchronization Qualcomm Inc., Huawei, HiSilicon, Xiaomi CR Rel-18 38.331 18.6.0 5372 1 F NR\_NTN\_enh-Core [R2-2504339](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504339.zip)

[R2-2505577](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505577.zip) Correction on the reference point of t-ServiceStart MediaTek CR Rel-18 38.331 18.6.0 5423 - F NR\_NTN\_enh-Core

[R2-2505715](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505715.zip) Final Thoughts on IDC issue between GNSS and NTN UL Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_NTN\_enh-Core [R2-2504133](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504133.zip)

#### 7.0.2.18 IoT NTN enhancements

(IoT\_NTN\_enh-Core; leading WG: RAN2; REL-18; WID: [RP-223519](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_98e/Docs/RP-223519.zip))

To be treated in breakout session (Sergio)

[R2-2505914](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505914.zip) Various corrections on connected mode RRM for IoT NTN Samsung CR Rel-18 36.331 18.6.0 5121 1 F IoT\_NTN\_enh-Core [R2-2504095](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504095.zip)

[R2-2506172](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506172.zip) Clarification of satellite identifiers THALES, Samsung, Sateliot, Nordic Semiconductor ASA, Novamint, CATT, Ericsson CR Rel-18 36.300 18.5.0 1430 - F IoT\_NTN\_enh-Core

[R2-2506173](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506173.zip) Clarification of satellite identifiers THALES, Samsung, Sateliot, Nordic Semiconductor ASA, Ericsson CR Rel-18 36.331 18.6.0 5152 - F IoT\_NTN\_enh-Core

#### 7.0.2.19 Enhanced NR Sidelink Relay

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

To be treated in breakout session (Nathan)

[R2-2505183](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505183.zip) Correction to PDCP duplication description for L2 MP using SL relay or N3C indirect path Huawei, HiSilicon, Nokia (Rapporteur), CMCC CR Rel-18 38.300 18.6.0 0989 1 F NR\_SL\_relay\_enh-Core [R2-2504002](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504002.zip)

[R2-2505356](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505356.zip) Correction on field description of sl-CapabilityInformationSidelink for U2U Relay OPPO CR Rel-18 38.331 18.6.0 5413 - F NR\_SL\_relay\_enh-Core

[R2-2505543](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505543.zip) Correction to SI reception by remote UE for multi path LG Electronics Inc. CR Rel-18 38.331 18.6.0 5422 - F NR\_SL\_relay\_enh-Core

[R2-2505760](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505760.zip) Corrections on N3C multi-path ZTE Corporation, Sanechips discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2505885](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505885.zip) U2U Relays, Peer Remote UE Control Plane Procedures Ericsson CR Rel-18 38.300 18.6.0 1020 - F NR\_SL\_relay\_enh-Core

#### 7.0.2.20 NR Sidelink evolution

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

#### 7.0.2.21 Expanded and improved NR positioning

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

To be treated in breakout session (Nathan)

[R2-2505014](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505014.zip) Reply LS on startSFN for positioning SRS frequency hopping (R1-2504854; contact: ZTE) RAN1 LS in Rel-18 NR\_pos\_enh2-Core To:RAN2

[R2-2505124](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505124.zip) Corrections on LPHAP, carrier phase, bandwidth aggregation and frequency hopping for positioning CATT, Ericsson, Nokia, ZTE Corporation CR Rel-18 38.305 18.6.0 0187 2 F NR\_pos\_enh2-Core [R2-2504883](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504883.zip)

[R2-2505155](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505155.zip) Correction on NR Sidelink measurements based on SL-PRS vivo, Ericsson CR Rel-18 38.331 18.6.0 5398 - F NR\_pos\_enh2-Core

[R2-2505266](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505266.zip) Correction to SP positioning SRS transmission with frequency hopping Ofinno CR Rel-18 38.321 18.6.0 2097 - F NR\_pos\_enh2-Core

[R2-2505323](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505323.zip) Discussion on SP positioning SRS frequency hopping Huawei, HiSilicon, Ericsson discussion Rel-18 NR\_pos\_enh2-Core

[R2-2505589](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505589.zip) Corrections on the startSFN of the UTW ZTE Corporation, Ericsson, vivo, Qualcomm, Samsung, Nokia CR Rel-18 38.331 18.6.0 5424 - F NR\_pos\_enh2-Core Withdrawn

[R2-2505599](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505599.zip) Miscellaneous corrections on NR positioning enhancements Lenovo CR Rel-18 38.331 18.6.0 5425 - F NR\_pos\_enh2-Core

[R2-2505600](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505600.zip) Miscellaneous corrections on Aggregated SP Positioning SRS Activation/Deactivation MAC CE Lenovo CR Rel-18 38.321 18.6.0 2107 - F NR\_pos\_enh2-Core

[R2-2505848](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505848.zip) Removal of description for positioning in RRC\_INACTIVE state Lenovo CR Rel-17 38.305 17.8.0 0193 - F NR\_pos\_enh-Core

[R2-2505849](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505849.zip) Removal of descriptions for positioning in RRC\_INACTIVE and RRC\_IDLE state Lenovo CR Rel-18 38.305 18.6.0 0194 - F NR\_pos\_enh2-Core

[R2-2505896](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505896.zip) Correction for timing Reporting Granularity Factor Ericsson CR Rel-18 37.355 18.5.0 0560 - F NR\_pos\_enh2-Core

[R2-2506027](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506027.zip) Correction regarding SL-PRS Resource Request ASUSTeK CR Rel-18 38.321 18.6.0 2112 - F NR\_pos\_enh2-Core

[R2-2506181](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506181.zip) Corrections on the startSFN of the UTW ZTE Corporation, Ericsson, vivo, Qualcomm, Samsung, Nokia CR Rel-18 38.331 18.6.0 5464 - F NR\_pos\_enh2-Core

#### 7.0.2.22 Further NR mobility enhancements

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

To be treated in breakout session (Kyeongin)

[R2-2505718](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505718.zip) Corrections to Rel-18 LTM (LTM Recovery to the source cell) Nokia discussion Rel-18 NR\_Mob\_enh2-Core [R2-2504136](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504136.zip)

[R2-2505813](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505813.zip) Correction on capabilities for LTM Ericsson CR Rel-18 38.306 18.6.0 1339 - F NR\_Mob\_enh2-Core Withdrawn

[R2-2505814](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505814.zip) Correction on when the UE applies the SR configuration Ericsson CR Rel-18 38.331 18.6.0 5442 - F NR\_Mob\_enh2-Core

[R2-2506012](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506012.zip) Correction on Power Ramping for early TA Samsung CR Rel-18 38.321 18.6.0 2111 - F NR\_Mob\_enh2-Core

[R2-2506073](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506073.zip) Correction for RRC segment handling Samsung CR Rel-18 38.331 18.6.0 5450 - F NR\_Mob\_enh2-Core

[R2-2506119](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506119.zip) Clarification on PDCCH order triggered early RACH ZTE Corporation CR Rel-18 38.321 18.6.0 2115 - F NR\_Mob\_enh2-Core

#### 7.0.2.23 TEI18

[R2-2505783](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505783.zip) Correction on uplink power control for Type-1 CG-PUSCH [PL RS Type 1 CG] Ofinno CR Rel-18 38.331 18.6.0 5438 - F TEI18

- CATT agrees with the first change. For the second one the changes are not reflected in RAN1 specs.

* Add inter-operability for change 1 and change 2 font (if agreable)
* Only 1st change is pursued

[R2-2506420](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506420.zip) Correction on uplink power control for Type-1 CG-PUSCH [PL RS Type 1 CG] Ofinno CR Rel-18 38.331 18.6.0 5438 1 F TEI18

* The CR is agreed

#### 7.0.2.24 Others

Including NR Others, Multi-WI Rel-18 items, e.g. cross-WI-issues not handled under another WI

[R2-2505269](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505269.zip) Correction on the configuration of the joint TCI for multi-cell scheduling Ofinno CR Rel-18 38.331 18.6.0 5401 - F NR\_MC\_enh-Core

* Remove second paragraph on summary for change

- Docomo and Huawei agree with the change. As we are aligning with RAN1 we don’t need to be so severe.

* Inter-operability needs to be updated
* [AT131][018][R18 Others] MC CR (Offino)

Intended outcome: update cover page and agree to CR by email

Deadline: Thursday

[R2-2506419](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506419.zip) Correction on the configuration of the joint TCI for multi-cell scheduling Ofinno CR Rel-18 38.331 18.6.0 5401 1 F NR\_MC\_enh-Core

[R2-2505535](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505535.zip) UE capability for support of event A4 based CHO for ATG Qualcomm Inc., Samsung CR Rel-18 38.306 18.6.0 1330 - F NR\_ATG-Core

- Huawei and Xiaomi agrees with CR but it should be FR1 only like all ATG features.

- ZTE thinks that this NBC

- Nokia asks if you support CHO and ATG then you support event A4. Qualcomm explains that A4 was only introduced for NTN and it doesn’t meant it’s supported by ATG.

* Update FR1 only

[CB Thursday – whether it is NBC and other concerns]

[R2-2506422](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506422.zip) UE capability for support of event A4 based CHO for ATG Qualcomm Inc., Samsung CR Rel-18 38.306 18.6.0 1330 1 F NR\_ATG-Core

* [AT131][041][R18] ATG (Qualcom)

Intended outcome: agree to CRs after capturing NBC statement

Deadline: Thursday

R2-2506483 UE capability for support of event A4 based CHO for ATG Qualcomm Inc., Samsung CR Rel-18 38.306 18.6.0 1330 2 F NR\_ATG-Core R2-2506422

[R2-2506423](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506423.zip) UE capability for support of event A4 based CHO for ATG Qualcomm Inc., Samsung CR Rel-18 38.331 18.6.0 5468 - F NR\_ATG-Core

=> Revised in R2-2506484

R2-2506484 UE capability for support of event A4 based CHO for ATG Qualcomm Inc., Samsung CR Rel-18 38.331 18.6.0 5468 1 F NR\_ATG-Core R2-2506423

[R2-2505668](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505668.zip) Miscellaneous non-controversial corrections Set XXVI Ericsson CR Rel-18 38.331 18.6.0 5427 - F NR\_newRAT-Core, TEI18

Withdrawn

[R2-2505855](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505855.zip) Clarification for DCP Ericsson CR Rel-18 38.300 18.6.0 1016 - F NR\_UE\_pow\_sav-Core

- Huawei thinks that the current sentence is fine. Vivo agrees and we have other places where we have used similar wording.

* The CR is not pursued

[R2-2506053](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506053.zip) Correction to multi-Rx preference reporting [MultiRx] Huawei, HiSilicon, Apple CR Rel-18 38.331 18.6.0 5449 - F TEI18, NR\_FR2\_multiRX\_DL-Core

* Remove TEI code [MultiRx]

[R2-2506411](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506411.zip) Correction to multi-Rx preference reporting Huawei, HiSilicon, Apple CR Rel-18 38.331 18.6.0 5449 1 F NR\_FR2\_multiRX\_DL-Core

* The CR is agreed

# 8 Rel-19

## 8.0 General

### 8.0.0 In-principle agreed CRs

This AI is reserved for Rel-19 in-principle agreed CRs that need to be formally agreed

[R2-2505270](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505270.zip) SSB position restrictions for less-than-5MHz SCells Qualcomm Incorporated CR Rel-19 38.331 18.6.0 5249 3 B NR\_FR1\_lessthan\_5MHz\_BW\_Ph2-Core [R2-2501389](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2501389.zip)

* The CR is agreed

**To be treated in positioning offline**

[R2-2505317](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505317.zip) Introduction of control parameters for on-demand posSIB request [OdPosSIB-Req] Huawei, HiSilicon, Ericsson, Samsung CR Rel-19 38.331 18.6.0 5406 - B TEI19

[R2-2505318](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505318.zip) Introduction of control parameters for on-demand posSIB request [OdPosSIB-Req] Huawei, HiSilicon, Ericsson, Samsung CR Rel-19 38.306 18.6.0 1323 - B TEI19

[R2-2505319](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505319.zip) Introduction of control parameters for on-demand posSIB request [OdPosSIB-Req] Huawei, HiSilicon, Ericsson, Samsung CR Rel-19 38.300 18.6.0 1009 - B TEI19

[R2-2505320](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505320.zip) Introduction of control parameters for on-demand posSIB request [OdPosSIB-Req] Huawei, HiSilicon, Ericsson, Samsung CR Rel-19 38.305 18.6.0 0191 - B TEI19

[R2-2505514](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505514.zip) Corrections to TS 38.300 on multi-path relay enhancement [N3C\_M\_Relay] CMCC,ZTE, MediaTek, vivo, Huawei, CATT, Nokia, Nokia Shanghai Bell, Xiaomi, Spreadtrum, UNISOC CR Rel-19 38.300 18.6.0 0991 1 B TEI19 [R2-2504382](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504382.zip)

* Update title to introduction of … and remove spec number from title.

=> Revised in [R2-2506408](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506408.zip)

[R2-2506408](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506408.zip) Introduction of Multi-path Relay Enhancement [N3C\_M\_Relay] CMCC,ZTE, MediaTek, vivo, Huawei, CATT, Nokia, Nokia Shanghai Bell, Xiaomi, Spreadtrum, UNISOC CR Rel-19 38.300 18.6.0 0991 2 B TEI19

* The CR is agreed

[R2-2505515](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505515.zip) Corrections to TS 38.331 on multi-path relay enhancement [N3C\_M\_Relay] CMCC,ZTE, MediaTek, vivo, Huawei, CATT, Nokia, Nokia Shanghai Bell, Xiaomi, Spreadtrum, UNISOC CR Rel-19 38.331 18.6.0 5373 1 B TEI19 [R2-2504383](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504383.zip)

* Update as per offline comments

=> Revised in [R2-2506409](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506409.zip)

[R2-2506409](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506409.zip) Introduction of Multi-path Relay Enhancement [N3C\_M\_Relay] CMCC,ZTE, MediaTek, vivo, Huawei, CATT, Nokia, Nokia Shanghai Bell, Xiaomi, Spreadtrum, UNISOC CR Rel-19 38.331 18.6.0 5373 2 B TEI19

* The CR is agreed

[R2-2505516](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505516.zip) Corrections to TS 38.306 on multi-path relay enhancement [N3C\_M\_Relay] CMCC,ZTE, MediaTek, vivo, Huawei, CATT, Nokia, Nokia Shanghai Bell, Xiaomi, Spreadtrum, UNISOC CR Rel-19 38.306 18.6.0 1296 1 B TEI19 [R2-2504384](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504384.zip)

=> Revised in [R2-2506200](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506200.zip)

[R2-2506200](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506200.zip) Corrections to TS 38.306 on multi-path relay enhancement [N3C\_M\_Relay] CMCC,ZTE, MediaTek, vivo, Huawei, CATT, Nokia, Nokia Shanghai Bell, Xiaomi, Spreadtrum, UNISOC CR Rel-19 38.306 18.6.0 1296 2 B TEI19

R2-2506410 Introduction of Multi-path Relay Enhancement [N3C\_M\_Relay] CMCC, ZTE, MediaTek, vivo, Huawei, CATT, Meta, Nokia, Nokia Shanghai Bell, Xiaomi, Spreadtrum, UNISOC CR Rel-19 38.306 18.6.0 1296 3 B TEI19

* The CR is agreed

[R2-2506084](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506084.zip) Introduction of ANR reporting of HSDN cells [ANR\_HSDN] Huawei, HiSilicon, CMCC, China Unicom, China Telecom, CATT, NTT DoCoMo, Samsung CR Rel-19 38.331 18.6.0 5318 4 B TEI19 [R2-2504894](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504894.zip)

=> Revised in [R2-2506207](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506207.zip)

[R2-2506207](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506207.zip) Introduction of ANR reporting of HSDN cells [ANR\_HSDN] Huawei, HiSilicon, CMCC, China Unicom, China Telecom, CATT, NTT DoCoMo, Samsung CR Rel-19 38.331 18.6.0 5318 5 B TEI19

* The CR is agreed

[R2-2506085](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506085.zip) Introduction of ANR reporting of HSDN cells [ANR\_HSDN] Huawei, HiSilicon, CMCC, China Unicom, China Telecom, CATT, NTT DoCoMo, Samsung CR Rel-19 38.306 18.6.0 1264 2 B TEI19 [R2-2504231](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504231.zip)

=> Revised in [R2-2506197](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506197.zip)

[R2-2506197](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506197.zip) Introduction of ANR reporting of HSDN cells [ANR\_HSDN] Huawei, HiSilicon, CMCC, China Unicom, China Telecom, CATT, NTT DoCoMo, Samsung CR Rel-19 38.306 18.6.0 1264 3 B TEI19 [R2-2506085](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506085.zip)

* The CR is agreed

[R2-2506086](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506086.zip) Introduction of ANR reporting of HSDN cells [ANR\_HSDN] Huawei, HiSilicon, CMCC, China Unicom, China Telecom, CATT, NTT DoCoMo, Samsung CR Rel-19 36.331 18.6.0 5110 3 B TEI19 [R2-2504232](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504232.zip)

* The CR is agreed

[R2-2506087](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506087.zip) Introduction of ANR reporting of HSDN cells [ANR\_HSDN] Huawei, HiSilicon, CMCC, China Unicom, China Telecom, CATT, NTT DoCoMo, Samsung CR Rel-19 36.306 18.5.0 1911 2 B TEI19 [R2-2504233](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504233.zip)

* The CR is agreed

[R2-2506403](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506403.zip) Restriction on RAT utilization Apple, Vodafone, InterDigital, Ericsson CR Rel-19 36.300 18.5.0 1432 - B ECRATU

* The CR is agreed

[R2-2506404](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506404.zip) Restriction on RAT utilization Apple, Vodafone, InterDigital, Ericsson CR Rel-19 38.300 18.6.0 1024 - B ECRATU

* The CR is agreed

[R2-2506405](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506405.zip) Restriction on RAT utilization Apple, Vodafone, InterDigital, Ericsson, Nokia, OPPO, Samsung CR Rel-19 36.304 18.4.0 0884 - B ECRATU

=> Revised in [R2-2506424](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506424.zip)

[R2-2506424](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506424.zip) Restriction on RAT utilization Apple, Vodafone, InterDigital, Ericsson, Nokia, OPPO, Samsung CR Rel-19 36.304 18.4.0 0884 1 B ECRATU

* The CR is agreed

[R2-2506406](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506406.zip) Restriction on RAT utilization Apple, Vodafone, InterDigital, Ericsson, Nokia, OPPO, Samsung CR Rel-19 38.304 18.4.0 0446 - B ECRATU

=> Revised in [R2-2506425](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506425.zip)

[R2-2506425](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506425.zip) Restriction on RAT utilization Apple, Vodafone, InterDigital, Ericsson, Nokia, OPPO, Samsung CR Rel-19 38.304 18.4.0 0446 1 B ECRATU

* The CR is agreed

### 8.0.1 Other

This AI is reserved for Rel-19 LSs from other WGs. No contributions are expected on these LSs for this meeting

Reserved for UE capability rapporteur input and Rel-19 ASN.1 review

[R2-2505008](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505008.zip) LS on Rel-19 higher layers parameters list Post RAN1#120bis (R1-2503154; contact: Ericsson) RAN1 LS in Rel-19 NR\_MIMO\_Ph5, NR\_duplex\_evo, Netw\_Energy\_NR\_enh, NR\_LPWUS, NR\_XR\_Ph3, NR\_Mob\_Ph4, NR\_MC\_enh2, TEI19 To:RAN2, RAN3 Cc:RAN4

- Ericsson highlights that we can still update the structure or descriptions

* Noted

[R2-2505009](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505009.zip) LS on Rel-19 higher layers parameters list Post RAN1#121 (R1-2503242; contact: Ericsson) RAN1 LS in Rel-19 NR\_AIML\_air, NR\_MIMO\_Ph5, NR\_duplex\_evo, Netw\_Energy\_NR\_enh, NR\_LPWUS, NR\_Mob\_Ph4, NR\_XR\_Ph3, NR\_NTN\_Ph3, IoT\_NTN\_Ph3, IoT\_NTN\_TDD, NR\_MC\_enh2, NR\_LBCA\_Sw, LTE\_terr\_bcast\_Ph2, TEI19 To:RAN2, RAN3 Cc:RAN4

* Noted

[R2-2505010](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505010.zip) LS on updated Rel-19 RAN1 UE features lists for NR after RAN1#121 (R1-2504675; contact: NTT DOCOMO, AT&T) RAN1 LS in Rel-19 NR\_AIML\_air, NR\_MIMO\_Ph5, NR\_duplex\_evo, Netw\_Energy\_NR\_enh, NR\_LPWUS, NR\_Mob\_Ph4, NR\_NTN\_Ph3, NR\_MC\_enh2, TEI19 To:RAN2 Cc:RAN4

* Noted

[R2-2505011](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505011.zip) LS on updated Rel-19 RAN1 UE features lists for LTE after RAN1#121 (R1-2504678; contact: NTT DOCOMO, AT&T) RAN1 LS in Rel-19 IoT\_NTN\_Ph3, IoT\_NTN\_TDD, LTE\_terr\_bcast\_Ph2 To:RAN2 Cc:RAN4

* Noted

[R2-2505044](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505044.zip) LS on Rel-19 RAN4 UE feature list for NR (version 1) (R4-2508078; contact: CMCC) RAN4 LS in Rel-19 NR\_ENDC\_RF\_Ph4, NonCol\_intraB\_ENDC\_NR\_CA\_Ph2, NR\_ATG\_enh, NR\_RRM\_Ph5, Netw\_Energy\_NR\_enh, NR\_LPWUS, NR\_Mob\_Ph4, NR\_XR\_Ph3, NR\_FR1\_lessthan\_5MHz\_BW\_Ph2, NR\_LBCA\_Sw, NR\_FR1\_7MHz\_BW To:RAN2 Cc:RAN1

* Noted

[R2-2505306](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505306.zip) Introduction of UE capability for Rel-19 R1 R4 feature lists, including [TN32HARQ], [Pos\_SRSHop], [SRTrig\_SSSGSwitch], [SRSCS\_ULTxSwitch], [SimCSI\_count] Xiaomi CR Rel-19 38.306 18.6.0 1321 - B NR\_MIMO\_Ph5, Netw\_Energy\_NR\_enh, NR\_ENDC\_RF\_Ph4, NR\_ATG\_enh, TEI19

* Endorsed as baseline
* The CR will be further updated after RAN1/4 feature list LSs are received
* [POST131][005][UE caps] UE capability CRs (Xiaomi)

Intended outcome:

CR capturing RAN1/4 feature list – Thursday, Sept. 4

CR merging all RAN2 endorsed CRs as well - Tuesday, Sept. 9

Deadline: Thursday

[R2-2505307](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505307.zip) Introduction of UE capability for Rel-19 R1 R4 feature lists, including [TN32HARQ], [Pos\_SRSHop], [SRTrig\_SSSGSwitch], [SRSCS\_ULTxSwitch], [SimCSI\_count] Xiaomi CR Rel-19 38.331 18.6.0 5403 - B NR\_MIMO\_Ph5, Netw\_Energy\_NR\_enh, NR\_ENDC\_RF\_Ph4, NR\_ATG\_enh, TEI19

* Endorsed as baseline
* The CR will be further updated after RAN1/4 feature list LSs are received

[R2-2505525](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505525.zip) Per band and per BC capability Samsung, Xiaomi discussion Rel-19

Proposal 1: The lower capability derived based on both per band and per BC capability is applied.

Proposal 2: If per band capability is absent for a band, the feature is not supported for the band even if per BC capability is indicated for a BC associating the band.

Proposal 3: per BC capability can be indicated when at least one band in a BC indicates corresponding per band capability.

Proposal 4: If per BC capability is absent for a BC, per band capability is applied for the BC.

Proposal 5: if proposal 1-4 is agreed, RAN2 agree to add high level description for per band and per BC capabilities in TS38.306.

Proposal 6: if proposal 1-4 is agreed, RAN2 agree to send an LS to RAN1 to check if the assumptions are correct for per band and per BC capabilities that they introduced.

Proposal 7: RAN2 agree to ask RAN1 to confirm if it is correct to assume that pre-requisite for per band and per BC capabilities is defined for per band and per BC separately.

- Vivo thinks per band and BC are quite independent.

- Nokia and Qualcomm think that we need to do this on a case by case basis. There are too many capabilities. We can send an LS to RAN1 after looking at them one by one.

- Xiaomi thinks that if we can align with the examples we can have an understand offline line and then communicate with RAN1.

- ZTE agrees with the intention of the paper but we can narrow the scope.

- T mobile thinks we should make sure RAN4 is involved.

- Ericsson think that the only capabilities we should look at are the ones that have same signaling for R16.

- Apple thinks that a general principles on what RAN2 thinks would help narrow down RAN1/4 discussions.

* Send LS to RAN1
* [POST131][006][UE caps] Per band/BC (Samsung)

Intended outcome: agree to LS

Deadline: short

R2-2506473 Draft LS on per band and per BC capability Samsung, Xiaomi LS out Rel-19 NR\_MIMO\_Ph5, NR\_AIML\_air To:RAN1 Cc:RAN4

[R2-2505664](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505664.zip) Report of [POST130][002][ASN.1] cross WI interactions Ericsson discussion Rel-19 TEI19

* continue to collect a list of cross-WI issues (and issues with respect to existing features) and try to propose solutions in an AT email discussion.

In POST email discussion, companies to discuss the list of cross-WI issues and specification impacts, conclude on specification impacts at RAN2#131bis.

* [AT131][007][ASN.1] Cross WI interactions (Ericsson)

Intended outcome: continue to collect a list of cross-WI issues (and issues with respect to existing features)

Deadline: Friday

[R2-2506434](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506434.zip) Report of [AT131][007][ASN.1] Cross WI interactions (Ericsson) Ericsson (Rapporteur) discussion

[R2-2505665](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505665.zip) ASN.1 review plan Ericsson discussion Rel-19 TEI19

* Noted and maybe updated after any offline comments

[R2-2505781](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505781.zip) LPP ASN.1 Review Plan Qualcomm Incorporated (Rapporteur) discussion

- Lenovo thinks that we can use the new way as the macro causing issues.

* ASN.1 plan is endorsed

[R2-2505457](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505457.zip) Rel-19 LTE ASN.1 review plan Samsung discussion Rel-19

* For the LTE ASN.1 review, do not split the review file into smaller files i.e. one LTE ASN.1 review file is used.
* For the LTE ASN.1 review, same template used for NR ASN.1 review is used i.e. reduce to WI and RIL number and include a pointer to a comment in a table.
* ASN.1 principle/guideline and ASN.1 review plan is common for LTE and NR ASN.1 review.

**LS from SA4**

[R2-2505068](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505068.zip) LS on the RAN simulation assumptions for ULBC (S4-251584; contact: Qualcomm) SA4 LS in Rel-20 FS\_ULBC To:RAN1, RAN2, RAN4, SA2, CT1 Cc:SA1

- Qualcomm thinks that we can try to respond with a simple answer on header sizes.

**-** Vivo thinks we should wait as there will be discussions. Samsung thinks that the header sizes will not change so we can at least respond on that.

**-** ZTE thinks that in theory we can provide an answer like, if we go with CP vs. UP what would be the header size without deciding.

**-** Vivo, Lenovo, Huawei and Xiaomi think that there are a lot of aspects to consider. Lenovo doesn’t think it is urgent to provide a precise answer.

* Noted
* We will begin this work in RAN2#131bis and will attempt to answer to SA4 after some initial RAN2 work.

[R2-2505077](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505077.zip) Discussion on SA4 LS regarding RAN Simulation Assumptions for ULBC vivo discussion Rel-20 FS\_ULBC

[R2-2505428](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505428.zip) Reply LS on the RAN simulation assumptions for ULBC Qualcomm Technologies Ireland LS out Rel-20 FS\_ULBC SA4 SA2, CT1, RAN1

[R2-2505601](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505601.zip) Response to SA4 LS on the RAN simulation assumptions for ULBC ZTE Corporation, Sanechips discussion Rel-20 FS\_ULBC

[R2-2506125](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506125.zip) Draft Reply LS on the RAN Simulation Assumptions for ULBC vivo LS out Rel-20 FS\_ULBC SA4, SA2 RAN1, CT1

## 8.1 AI/ML for NR air interface

(NR\_AIML\_air-Core; leading WG: RAN1; REL-19; WID: RP-250792 and SID: RP-243245)

Time budget: 2.5 TU

Tdoc Limitation: 3 tdocs

### 8.1.1 Organizational

LS, Rapporteur input, including workplan.

Including outcome of [POST130][022][AI PHY] 38.300 Running CR (Vivo), [POST130][023][AI PHY] 38.305 Running CR (CATT), [POST130][025][AI PHY] 37.355 Running CR (Qualcomm), [POST130][026][AI PHY] 38.331 Running CR (Ericsson), and [POST130][038][AI PHY] UE capabilities (Xiaomi)

Agreements

* The AI/ML for PHY WI is considered complete from RAN2 point of view

**LS**

RAN2 in “To”

[R2-2505029](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505029.zip) LS on Rel-19 AI/ML positioning higher layer parameters list Post RAN1#121 (R1-2505073; contact: Ericsson) RAN1 LS in Rel-19 NR\_AIML\_air To:RAN2, RAN3 Cc:RAN4

* Noted

[R2-2505036](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505036.zip) Reply LS on OAM-centric solution for NW-side data collection (S5-252842; contact: Huawei) SA5 LS in Rel-19 AIML\_MGT\_Ph2 To:RAN2 Cc:RAN3

* Noted

[R2-2505042](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505042.zip) Reply LS on signalling feasibility of dataset and parameter sharing (R3-253961; contact: Xiaomi) RAN3 LS in Rel-19 NR\_AIML\_air-Core To:RAN2, RAN1 Cc:SA2, SA5, SA3

* Noted

[R2-2505043](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505043.zip) Reply LS on OAM-centric solution for NW-side data collection (R3-253962; contact: ZTE) RAN3 LS in Rel-19 NR\_AIML\_air-Core To:RAN2 Cc:SA5

* Noted

**RAN4 LS**

[R2-2505045](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505045.zip) LS on AI/ML functionality activation (R4-2508085; contact: CMCC) RAN4 LS in Rel-19 NR\_AIML\_air-Core To:RAN2 Cc:RAN1

Interpretation 1: the applicable functionalities **are already activated** (i.e., the applicable functionalities activation is completed) before reporting applicable functionalities via RRCReconfigurationComplete in step 4.

Interpretation 2: UE **starts to activate** the applicable functionalities (i.e., the applicable functionalities activation is not completed) upon reporting applicable functionalities via RRCReconfigurationComplete in step 4.

*Interpretation 1 vs. 2*

[R2-2505510](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505510.zip) Discussion and draft reply LS on functionality activation CMCC,OPPO discussion Rel-19 NR\_AIML\_air-Core

Proposal 1: RAN2 confirm that Interpretation 1 is common understanding for AI/ML functionality activation for option A, and update the wording as follows:.

 Interpretation 1: the applicable functionalities are already considered activated (i.e., the applicable functionalities activation is completed) before upon reporting applicable functionalities via RRCReconfigurationComplete in step 4

[R2-2505192](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505192.zip) Discussion on LS on functionality activation and open issues on BM vivo discussion NR\_AIML\_air-Core

Proposal 1. Reply to RAN4 that interpretation 2 is aligned with RAN2 agreements. That is, UE starts to activate the applicable functionalities (i.e., the applicable functionalities activation is not completed) upon reporting applicable functionalities via RRCReconfigurationComplete.

*Discussion*

- ZTE doesn’t think that RRC reconfiguration should be coupled with model loading and handling, so RAN4 has the wrong

- Xiaomi thinks that key point from RAN2 point of view is UE actions and when the UE is ready to apply inference. When we respond applicable it means the UE is ready, when it is not ready it will not respond applicable. How long the UE it takes to load the model it is up to UE implementation. The time needed should be define in RAN4. LG shares the same view as Xiaomi.

- Qualcomm thinks interpretation 1 should be the right one. For semi persistent reporting RAN1 has already addressed them, there is a time for activation.

- MEdiatek thinks that time to load the model is implementation and it is in addition to other configuration loading. We need to understand when it should and how long it takes and whether it is in RRC processing or activation time.

- Nokia agrees we should decouple applicability reporting and inference and shouldn’t couple it with RRC processing delay.

- Ericsson agrees with interpretation 1 and we should ensure there is no ambiguity in the network whether the UE is transmitting something or not.

- Oppo thinks that we only care about RRC processing delay and more than that it is RAN1 scope.

- Apple prefers interpretation 1. RAN4 cares about CSI reporting requirement and they mix the concepts. We should decouple the RRC processing and CSI reporting.

- Clarify the agreement and tell RAN4 that RRC processing delay should be impacted by model loading.

- Samsung agrees with interpretation 1. If the UE is not ready by RRC processing delay it just tells the network the model is not applicable, but up to RAN4 how they define processing delays to enable the models.

- Huawei thinks we should go with interpretation 2.

- Nokia indicates that for CSI reporting if the UE reports non-applicable then the network removes the configuration. Apple understands that the UE can report non-applicable without the release indication then the network shouldn’t release. The time of loading can be very large so it is not possible to delay the message.

R2-2506456 [Draft] Reply LS on AI/ML functionality activation Apple LS out Rel-19 NR\_AIML\_Air-Core To:RAN4 Cc:RAN1

**RRC Open Issues: Issues related to RAN4 [Offline after treating LS]**

[R2-2506455](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506455.zip) Summary report of [AT131][003][AI PHY] Functionality activation (Apple) Apple discussion Rel-19 NR\_AIML\_Air-Core

Agreements

1 On the time duration for an AI functionality to become available for inference, RAN2 conclude that it is up to UE implementation from RAN2 point of view and no further RAN2 work.

2 RRCReconfigurationComplete containing applicability reports has a processing latency requirement of 16 ms with respect to the reception of RRCReconfiguration, from RAN2 point of view.

Need discussion

*After offline discussion, a small group of companies further discuss the issue when UE submits inference configuration of periodic CSI to lower layer. The following two options are identified:*

*• Option 1: Upon reception of RRC Reconfiguration message, UE immediately submits inference configuration of periodic CSI to lower layer.*

*• Option 2: Upon reception of RRC Reconfiguration message, UE holds on submitting inference configuration of periodic CSI to lower layer upon reception of RRC Reconfiguration message until applicable.*

- Samsung and Xiaomi, CMCC, Vivo, think that we should follow option 2 as RAN1 relies on getting the applicable configuration. Nokia and Ericsson thinks that we should follow legacy mechanism. Qualcomm thinks we should ask RAN1 if they see any issue. Apple thinks it is up to UE implementations. ZTE also thinks that we should follow legacy.

- Oppo thinks that both options work but if we go with option 1 we will introduce RAN1 impacts and they have close their work items. Lenovo thinks we should go with legacy and RAN1 can easily fix it.

- LG and Huawei thinks we should go with option 2. Huawei thinks that it is clear from LS that RRC should handle the configuration to the UE.

- Samsung asks what is the problem if we go with option 2 as the ambiguity period also exists in legacy. If we go with option 1 the lower layer will send garbage CSI report.

Companies don’t have consensus on option 1 vs option 2. Some companies think that RAN1 need to fix their issue (e.g. UCI multiplexing during ambiguity time) while some companies don’t think any issue. Some company want to ask what is RAN1’s understanding on how UE handles CSI-ReportConfig when CSI-ReportConfig for inference configuration is not applicable. But some companies think current RAN2 spec is not broken.

Given the situation, Rapporteur suggest to only not to include RAN1 question in the LS to RAN4.

Proposal 6: As no consensus on specific question to RAN1, Reply LS to RAN4 (RAN4) only includes response to RAN4 question (i.e. no specific action to RAN1).

**Agreements**

1. RRC processing delay shouldn’t be impacted by the model loading delay
2. If the UE is ready for inference by end of RRC processing delay, it reports model applicable. If not, it reports model inapplicable and doesn’t set the release flag. The network is not expected to release inference configuration (this will not be added to stage 3 specifcation).
3. Once the model is applicable, UE reports applicability to network via UAI (applicable to all CSI reporting).
4. Respond to RAN4
5. On the time duration for an AI functionality to become available for inference, RAN2 conclude that it is up to UE implementation from RAN2 point of view and no further RAN2 work.
6. RRCReconfigurationComplete containing applicability reports has a processing latency requirement of 16 ms with respect to the reception of RRCReconfiguration, from RAN2 point of view.
7. LS to RAN1 - RAN2 has identified a problem. From RAN2 point of view this can be solved by option 2, but needs to check with RAN1. RAN2 also discussed option 1 and couldn’t conclude as it is outside scope of RAN2. Would like too ask RAN1 which one is best.
8. Current RAN2 specifications will not be updated to cover this problem for now
9. In RAN4 LS, RAN2 will not mention interpretation but just provide agreement 1 - 6

* [POST131][003][AI PHY] Functionality activation (Apple)

Intended outcome: LS to RAN4 and LS to RAN1

Deadline: Thursday

*RRC-15: The time duration for an AI functionality to become available for inference after UE reports applicability*

[R2-2505470](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505470.zip) Further Discussion on the Remaining RRC Issues on LCM MediaTek Inc. discussion

Proposal 6 (RRC-17): It is clarified that loading/preparation time for the model corresponding to the applicable configuration is not considered as a component in the processing latency between the reception of RRCReconfiguration and the reporting of RRCReconfigurationComplete.

[R2-2505502](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505502.zip) Remaining issues on LCM procedure of UE-sided model for AI/ML based beam management Apple discussion Rel-19 NR\_AIML\_air-Core

Proposal 3 (Open issue RRC-15): On the time duration for an AI functionality to become available for inference, RAN2 conclude that it is up to UE implementation and no need of UE reporting. Whether to specify its requirement is left to RAN4.

RRC-17: Processing timing requirement of applicability/inapplicability report via RRCReconfigurationComplete

[R2-2505778](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505778.zip) RRC open issues for AIML for NR air interface Ericsson discussion (Moved from 8.1.1)

to determine the applicability.

Proposal 7: (RRC-17) RRCReconfigurationComplete containing applicability reports has a processing latency requirement of 16 ms with respect to the reception of RRCReconfiguration. FFS whether RAN4 input is needed. FFS whether this solves open issue RRC-15.

[R2-2505301](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505301.zip) Discussion on life cycle management open issues Xiaomi discussion Rel-19 NR\_AIML\_air-Core

Proposal 3: (RRC-17) Introduce multiple RRC processing delay requirements for applicability reporting based on UE capability. Values of RRC processing delay requirement is up to RAN4.

*RRC-45: How/where to capture activation of periodic inference CSI-ReportConfig in specifications*

[R2-2505502](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505502.zip) Remaining issues on LCM procedure of UE-sided model for AI/ML based beam management Apple discussion Rel-19 NR\_AIML\_air-Core

Proposal 7 (Open issue RRC-45): As no concept of “activation/deactivation of periodic CSI reporting” in RAN1, adopt the way of “submit/do not submit the configuration to lower layers” in RRC running CR.

[R2-2505345](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505345.zip) Remaining issues in LCM for BM and CSI prediction Samsung discussion Rel-19 NR\_AIML\_air-Core

Proposal 4: (RRC-45) Handling of periodic CSI-ReportConfig is described in Section 5.3.5.3 when setting the content of RRCReconfigurationComplete.

RAN2 in “CC” (to be noted)

[R2-2505034](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505034.zip) Reply LS on per-UE UE performance metrics (R3-253816; contact: Nokia) RAN3 LS in Rel-18 NR\_AIML\_NGRAN-Core To:SA5 Cc:RAN2

* Noted

[R2-2505057](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505057.zip) Reply LS on AI/ML UE sided data collection (S2-2505713; contact: vivo, Samsung) SA2 LS in Rel-20 NR\_AIML\_air, FS\_AIML\_CN\_Ph2 To:RAN Cc:SA, SA3, SA5, RAN1, RAN2

* Noted

**Running CRs**

*37.320*

[R2-2506078](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506078.zip) Introduction of AI for Air interface feature in TS 37.320 Huawei, HiSilicon, Ericsson, Nokia CR Rel-19 37.320 18.4.0 0143 - B NR\_AIML\_air-Core

* Endorsed and will be used as baseline for further discussion
* [POST131][023][AI PHY] 37.320 (Huawei)

Intended outcome: Agree to final CR

Deadline: short

*37.355*

[R2-2505703](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505703.zip) Summary of [POST130][025][AI PHY] 37.355 CR (Qualcomm) Qualcomm Incorporated (Rapporteur) discussion NR\_AIML\_air-Core

* Noted

[R2-2505704](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505704.zip) Introduction of AI/ML Positioning Accuracy Enhancements Qualcomm Incorporated (Rapporteur) CR Rel-19 37.355 18.5.0 0559 - B NR\_AIML\_air-Core

* Endorsed and will be used as baseline for further discussion
* [POST131][024][AI PHY] 37.355 (Qualcomm)

Intended outcome: Agree to final CR and then trigger LS to RAN1 on questions related to LPP21

Deadline: short for CR and 2 weeks after for LS

*38.300*

[R2-2505191](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505191.zip) Introduction of AI for Air interface feature in 38300 vivo(Rapporteur) CR Rel-19 38.300 18.6.0 1006 - B NR\_AIML\_air-Core

- Qualcomm thinks that we shouldn’t use the word model in the stage 2 and we should align with RAN1 specification. ZTE doesn’t think this is an issue. Ericsson also agrees with comment from Qualcomm.

* Endorsed and will be used as baseline for further discussion
* [POST131][025][AI PHY] 38.300 (Vivo)

Intended outcome: Agree to final CR

Deadline: short

*38.305*

[R2-2505212](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505212.zip) 38.305 running CR for AIML Positioning CATT CR Rel-19 38.305 18.6.0 0190 - B NR\_AIML\_air-Core

* Endorsed and will be used as baseline for further discussion
* [POST131][026][AI PHY] 38.305 (CATT)

Intended outcome: Agree to final CR

Deadline: short

*38.321*

[R2-2505501](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505501.zip) Running MAC CR for AI/ML for Air Interface Apple (Rapporteur) CR Rel-19 38.321 18.6.0 2104 - B NR\_AIML\_air-Core

* Endorsed and will be used as baseline for further discussion
* [POST131][028][AI PHY] 38.321 (Apple)

Intended outcome: Agree to final CR

Deadline: short

R2-2506448 Report of [AT131][028][AI PHY] UE capabilities (Xiaomi) Xiaomi discussion Rel-19 NR\_AIML\_air-Core

*38.331*

[R2-2505777](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505777.zip) Introduction of AIML for NR air interface Ericsson CR Rel-19 38.331 18.6.0 5437 - B NR\_AIML\_air-Core

=> Revised in [R2-2506401](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506401.zip)

[R2-2506401](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506401.zip) Introduction of AIML for NR air interface Ericsson CR Rel-19 38.331 18.6.0 5437 1 B NR\_AIML\_air-Core

* Endorsed and will be used as baseline for further discussion
* [POST131][027][AI PHY] 38.331 (Ericsson)

Intended outcome: Agree to final CR

Deadline: short

**UE capabilities**

[R2-2505298](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505298.zip) Report of [POST130][038][AI PHY] UE capabilities (Xiaomi) Xiaomi discussion Rel-19 NR\_AIML\_air-Core

*Proposal 2 FFS on whether UE can support other memory sizes and indicate to network via optional capability signaling.*

- Qualcomm thinks that if the UE supports more it is up to the UE and doesn’t need to report anything. Nokia agrees. Huawei thinks that if there is no indication then the threshold will be set to the minimum value.

UAI

- ZTE thinks UAI should be mandatory for both option B. Apple thinks that both for option A and B this should be mandatory.

|  |
| --- |
| **Agreements**   1. If UE supports NW side data collection, it is mandatory for UE to support the minimum AS layer memory size of 64kB for UE supporting AI/ML based beam management, which is shared across all use cases with NW-sided model. The assumption is that this will be shared across all use cases (i.e. Rel-20 as well) 2. FFS on whether UE can support other memory sizes and indicate to network via optional capability signaling. 3. Include RAN2 feature ‘UE can provide update of applicability reporting via UAI’ as part of RAN1 FGs (e.g., 58-0-1 and/or FG 58-1-2/3/4/5, the details of those feature group depend on RAN1 progress) once implemented. 4. Introduce two conditional mandatory capabilities (with signaling) for AI/ML based BM Option A and Option B, if UE supports FG58-0-1 and/or FG58-1-2/3/4/5 (the details of those feature group depend on RAN1 progress). 5. Include RAN2 feature ‘providing UE preferred configuration for UE-side data collection’ as part of RAN1 FG58-1-7/FG58-3-4 (once implemented). 6. UAI is mandatory for both Option A and B 7. Introduce an optional per UE capability ‘loggedDataCollection-r19’ to indicate supporting logged measurements of data collection for NW-side model, which includes the following components: 8. the minimum 64kB AS layer memory size 9. periodic logging 10. Provide full buffer indication, low power indication 11. Event-based logging is an optional per UE capability separate from ‘loggedDataCollection-r19’. UE supporting this feature shall also indicate the support of ‘loggedDataCollection-r19’. If UE supports event-based logging it shall support data threshold-based data availability indication. 12. RAN2 will not introduce separate CSI resource capability for logged NW-side data collection. Legacy capability will be used for logged NW-side data collection. Check with RAN1 on whether this assumption is ok. 13. Data threshold-based data availability indication is an optional per UE capability with signaling. A UE supporting this feature shall also indicate support of the basic logged NW-side data collection. |

* [AT131][028][AI PHY] UE capabilities (Xiaomi)

Intended outcome: align on remaining open issues and agreable proposals

Deadline: Thursday

[R2-2506448](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506448.zip)

To be discussed

Proposal 3: (7 proponents, 4 opponents) Data threshold-based data availability indication is an optional per UE capability with signaling. A UE supporting this feature shall also indicate support of the basic logged NW-side data collection.

Proposal 5: (7 proponents, 4 opponents) UE can support other memory sizes and indicate this to network via an optional capability signaling.

[R2-2505299](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505299.zip) Introduction of AI air UE capability Xiaomi, Oppo draftCR Rel-19 38.306 18.6.0 B NR\_AIML\_air-Core

* Endorsed and will be used as baseline for further discussion

[R2-2505300](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505300.zip) Introduction of AI air UE capability Oppo, Xiaomi draftCR Rel-19 38.331 18.6.0 B NR\_AIML\_air-Core

* Endorsed and will be used as baseline for further discussion

### 8.1.2 Functionality based LCM

Contributions should focus on general understanding of LCM procedure (except for data collection transfer (i.e. study item part) 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

#### 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.

No contributions expected for this meeting.

#### 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, and any necessary signaling/protocol aspects including, optiona A and Option B (except RRC parameter details in OtherCongif). Contributions should to take into consideration the reply LS from RAN1 (R1-2410898) on BM applicable functionality reporting and other RAN1 agreements.

Contributions can discuss aspects of LCM that are significantly different from BM for CSI prediction use case.

Including outcome of [POST130][037][AI PHY] UE candidate data collection (Xiaomi\_Ericsson)

**Email discussion: UE candidate data collection [Tuesday]**

Reporting aspects

[R2-2505296](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505296.zip) Report of [POST130][037][AI PHY] UE candidate data collection (XiaomiEricsson) Xiaomi, Ericsson discussion Rel-19 NR\_AIML\_air-Core

* Noted

*Data collection start/stop indication*

[R2-2505296](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505296.zip) Report of [POST130][037][AI PHY] UE candidate data collection (XiaomiEricsson) Xiaomi, Ericsson discussion Rel-19 NR\_AIML\_air-Core

Proposal 3: Besides ‘start/stop indication’, DataCollectionPreference indicated by UE via UAI also includes a list of ID(s) representing its preferred configuration(s).

[R2-2505912](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505912.zip) On Unifying and Simplifying ASN.1 and Procedures for AI/ML Nokia, Qualcomm, Ericsson, T-Mobile USA Inc. discussion Rel-19 NR\_AIML\_air-Core

Proposal 11: The UE will report its preference for a candidate for UE-side data collection by sending a UEAssistanceInformation message. FFS how to signal, e.g., 1) UE indicates list of preferred configuration(s), wherein the presence indicates “start”, and the absence indicates “stop” 2) UE indicates a start list and a stop list, each containing a list of zero or more data collection candidate configurations or 3) UE indicates a list of data collection candidate configurations, each with a corresponding “start” or “stop” indication.

* Noted

[R2-2505345](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505345.zip) Remaining issues in LCM for BM and CSI prediction Samsung discussion Rel-19 NR\_AIML\_air-Core

Proposal 1: (RRC-03) Introduce configuration ID lists UE prefers to stop for UE-side data collection in UAI message. UE can include both 1) configuration ID lists it prefers to start and 2) configuration ID lists it prefers to stop together in a common UAI message.

* Noted

[R2-2505838](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505838.zip) LCM for UE-side models for beam management Ericsson discussion

Proposal 1: (RRC-3) The UE does not request to start data collection for candidate configurations for which a corresponding UE data collection configuration is already configured via CSI-ReportConfig.

* Noted

[R2-2505199](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505199.zip) Open Issues on LCM for UE-sided Models Qualcomm Incorporated discussion Rel-19

Proposal 1: To reduce signaling overhead, the UE should indicate preferred data collection configurations without a START / STOP indication.

Discussions

- Qualcomm thinks that the UE should be able to indicate which configuration it wants to starts.

- Huawei and Nokia thinks that if the UE says start then it should measure. When the UE stops measuring it should indicate stop. Huawei indicates that the UE may measure multiple configuration and it should be able to indicate which ones it wants to stop.

- Apple thinks that the indication it applies to all configurations as if it wants to stop it is related to power issues or other issues.

Configuration aspects

[R2-2505296](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505296.zip) Report of [POST130][037][AI PHY] UE candidate data collection (XiaomiEricsson) Xiaomi, Ericsson discussion Rel-19 NR\_AIML\_air-Core

Proposal 2: Adopt below text in the field description of dataCollectionCandidateConfig:

The UE is not expected to perform measurements solely based on the configurations provided by this IE.

Proposal 5: Solution 1 is adopted for providing candidate UE data collection configurations.

*Solution 1: OtherConfig contains a list of candidate configurations as a list of a new IE, where each candidate configuration contains at least an identifier of the candidate configuration, CSI-ResourceConfigId for Set A, CSI-ResourceConfigId for Set B, and related associated IDs, as agreed in RAN2#130. Each candidate configuration is associated with a cell ID.*

*Proposal 5-1: Include TP in* [*R2-2505297*](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505297.zip) *in the RRC running CR of AI PHY.*

*Proposal 5-2: Send RAN1 LS about RAN2 agreement on candidate UE-side data collection configurations.*

- Nokia thinks we need to include the CSI report config IE. The overhead is not that high as we aren’t providing many configuration.

- ZTE is concerned with *CSI-ResourceConfigId* as this may have RAN4 specification impact. Since the UE doesn’t need to measure there is not RAN4 impact.

- Ericsson agrees with Nokia and in the offline companies agreed that we could use it for CSI prediction. We should adopt the same approach for both. Vivo thinks that if we do it in CSI report config we have to involve RAN1. Qualcomm also agrees with Ericsson.

- Oppo thinks that there only a subset of parameters needed but in CSI report config there are a lot and that causes overhead.

- Apple thinks that it is more than just overhead, there are many mandatory IEs not related to inference. And we need to identify spec work for UEs to ignore IEs. RAN1 has discussed this issues and it is not related to RAN4.

[R2-2505297](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505297.zip) Text proposal of UE candidate data collection configuration Xiaomi, Ericsson discussion Rel-19 NR\_AIML\_air-Core

|  |
| --- |
| **Agreements on UE candidate data collection**  1 Multiple preferred configurations within the list of candidate configurations provided by NW can be indicated by the UE via UAI.  2 No prohibit timer is needed for UE indicating its preferred data collection configuration.  3 On stop/start indication   1. The UE can send start indication (without a preferred list) to indicate preference to start data collection 2. The UE can send preferred list implying that it would like to start data collection on those configuration 3. The UE can send stop indication for all or a given actual CSI report config ID. 4. Rapporteur will determine best way of signaling. This doesn’t preclude merging 1 and 2. 5. Adopt below text in the field description of dataCollectionCandidateConfig:   *The UE is not expected to perform measurements solely based on the configurations provided by this IE.*   1. Adopt the following solution: OtherConfig contains a list of candidate configurations as a list of a new IE, where each candidate configuration contains at least an identifier of the candidate configuration, CSI-ResourceConfigId for Set A, CSI-ResourceConfigId for Set B, and related associated IDs, as agreed in RAN2#130. Each candidate configuration is associated with a cell ID. We will also include individual IEs for CSI prediction case. 2. Ask RAN1 what IEs are needed for CSI prediction and inform them of our agreements on BM and confirm if anything else is needed. |

* [AT131][029][AI PHY] LS to RAN1 (Xiaomi)

Intended outcome: to be approved by email

Deadline: Thursday

R2-2506470 LS on candidate data collection RAN2 LS out Rel-19 NR\_AIML\_air-Core To:RAN1 Cc:RAN4

**RRC Open Issues: Issues with Rapporteur proposal not addressed by contributions [Tuesday]**

[R2-2505778](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505778.zip) RRC open issues for AIML for NR air interface Ericsson discussion (Moved from 8.1.1)

Proposal 1: (RRC-9)

* Update the definition of ‘applicable AI/ML functionality’ in RRC clause 3.1 as: “Applicable AIconfiguration: Configuration according to which an AI/ML functionality is determined to be applicable by the UE, as defined in TS 38.300 [2].”

**RRC Open Issues: Almost agreeable [Offline]**

* [AT131][002][AI PHY] LCM BM OI (Ericsson)

Intended outcome: agreeable proposals on some open issues

Deadline: Wednesday

[R2-2506414](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506414.zip) Summary of offline discussion [AT131][002][AI PHY] LCM BM OI (Ericsson) Ericsson discussion Rel-19 NR\_AIML\_air-Core

*Proposal 1 (RRC-13) (all companies agree) The procedures for UE data collection for the CSI prediction use case are the same as for the beam management use case.*

*Proposal 2 (RRC-13) (1 company disagrees) The candidate UE data collection configuration for CSI prediction is a list of CSI-ReportConfig in otherConfig. To be checked with RAN1.*

*Proposal 3 (RRC-13) (1 company disagrees) The applicability reporting procedures for CSI prediction are the same as for beam management. RAN2 confirms that option B is not supported for CSI prediction.*

*-* Huawei would like to ask RAN1 about option B. Companies think that if they want it they can provide parameters to RAN2.

*Proposal 4 (RRC-14) (3 companies disagree) RAN2 understand that when network releases inference configurations of poor-performed applicable functionalities, network may also provide either non-AI/ML configuration in CSI-ReportConfig or may provide full inference configuration of other applicable functionalities, if previously not configured to UE. There is no spec impact and feedback from the NW to the UE to adjust the applicability determination procedure is not supported in Rel-19.*

*RRC-13: CSI prediction LCM framework*

[R2-2505778](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505778.zip) RRC open issues for AIML for NR air interface Ericsson discussion (Moved from 8.1.1)

Proposal 2: (RRC-13) The procedures for UE data collection for the CSI prediction use case are the same as for the beam management use case (start/stop request from UE, candidate configuration provision from NW, request for preferred candidate configurations from UE, etc.).

Proposal 3: (RRC-13) The candidate UE data collection configuration for CSI prediction has the same content as for BM, except that associated IDs and differentiation between Set A/B are not needed.

Proposal 4: (RRC-13) The applicability reporting procedures for CSI prediction are the same as for beam management. RAN2 to confirm that option B is not supported for CSI prediction.

[R2-2505076](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505076.zip) Delta Part for CSI Prediction OPPO discussion Rel-19 NR\_AIML\_air-Core

Proposal 1: (RRC-13) For applicability check, both Option A and Option B are supported for CSI prediction if this comes for free compared to BM use cases.

*RRC-14: Repeated reports of applicability for configurations which consistently perform poorly*

[R2-2505778](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505778.zip) RRC open issues for AIML for NR air interface Ericsson discussion (Moved from 8.1.1)

Proposal 5: (RRC-14) Feedback from the NW to the UE to adjust the applicability determination procedure is not supported in Rel-19.

[R2-2505199](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505199.zip) Open Issues on LCM for UE-sided Models Qualcomm Incorporated discussion Rel-19

Proposal 7: The network can indicate whether the deactivation signal is due to poor inference performance, which will be useful to the UE side for making retraining / fine-tuning decisions.

[R2-2505301](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505301.zip) Discussion on life cycle management open issues Xiaomi discussion Rel-19 NR\_AIML\_air-Core

Proposal 1: (RRC-14) When network releases inference configurations of poor-performed applicable functionalities, network should also provide either non-AI/ML configuration in CSI-ReportConfig or provides full inference configuration of other applicable functionalities, if previously not configured to UE

**Agreements**

1. The procedures for UE data collection request for the CSI prediction use case are the same as for the beam management use case.
2. The applicability reporting procedures for CSI prediction are the same as for beam management. RAN2 confirms that option B is not supported for CSI prediction, given no parameters were provided by RAN1.
3. RAN2 understand that when network releases inference configurations of poor-performed applicable functionalities, network may also provide either non-AI/ML configuration in CSI-ReportConfig or may provide full inference configuration of other applicable functionalities, if previously not configured to UE. There is no spec impact and feedback from the NW to the UE to adjust the applicability determination procedure is not supported in Rel-19.
4. No enhancements are pursued for reporting applicability in RRCReestablishmentComplete.
5. The UE can report applicability via RRCResumeComplete for SCG inference configurations received in RRCResume, without specification impact beyond already agreed applicability reporting procedure.
6. Applicability reporting is added in RRCResumeComplete for inference configurations that exist at the UE based on legacy procedures (restored or received in RRCResume).
7. RAN2 assumes for no NR DC enhancements are considered and will not ask RAN3 work in Rel-19.

*RRC-42a: Whether applicability reporting comes for free in RRCReestablishmentComplete*

[R2-2505778](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505778.zip) RRC open issues for AIML for NR air interface Ericsson discussion (Moved from 8.1.1)

Proposal 10: (RRC-42) No enhancements are pursued for reporting applicability in RRCReestablishmentComplete.

[R2-2505103](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505103.zip) Discussion signaling aspects of LCM for UE-sided model for BM Transsion Holdings discussion

Proposal 1 Base on the legacy RRC connection re-establishment procedure, when the UE decides to perform RRC connection re-establishment, the UE can report applicable functionalities only for inference configurations through RRCReestablishmentComplete.

*RRC-42b: Whether applicability reporting comes for free in RRCResumeComplete*

[R2-2505778](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505778.zip) RRC open issues for AIML for NR air interface Ericsson discussion (Moved from 8.1.1)

Proposal 11: (RRC-42) The UE can report applicability via RRCResumeComplete for SCG inference configurations received in RRCResume, without specification impact beyond already agreed applicability reporting procedure.

Proposal 12: (RRC-42) Applicability reporting is added in RRCResumeComplete for inference configurations that exist at the UE based on legacy procedures (restored or received in RRCResume).

Question on whether we support DC

- Lenovo explains that in RAN3 doesn’t have time. Nokia thinks that there are some RAN3 areas that are essential.

[R2-2506117](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506117.zip) Continuous Discussion On LCM for UE-sided model ZTE Corporation discussion Rel-19 NR\_AIML\_air-Core

Proposal 4: (RRC-42) If inference configuration with periodic CSI reporting is configured in RRCResume, the UE autonomously activate the applicable inference configuration upon reporting applicability status via RRCResumeComplete.

Proposal 5: (RRC-42) RAN2 to discuss and decide one of following options regarding activation of the restored inference configuration with periodic CSI reporting:

Option 1: To follow the activation status of the inference configuration as the UE is transited to RRC\_INACTIVE. UE activates autonomously the inference configuration with periodic CSI reporting if it is activated before the UE is transited to RRC\_INACTIVE.

Option 2: To activate the inference configuration according to the applicability status upon RRC resumption. The UE autonomously activates the applicable inference configuration with periodic CSI reporting upon reporting applicability status via RRCResumeComplete.

**[After RRC-46 is resolved]**

*RRC-41: Value range for associated ID*

[R2-2505778](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505778.zip) RRC open issues for AIML for NR air interface Ericsson discussion (Moved from 8.1.1)

Proposal 9: (RRC-41) RAN2 to discuss the length of the associated ID (e.g. 7, 8, 16, 24 bits, etc.), after resolving (RRC-46).

[R2-2505757](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505757.zip) LCM for UE-sided model for Beam Management and CSI prediction use cases Huawei, HiSilicon discussion Rel-19 NR\_AIML\_air-Core

Proposal 12: (RRC-41) As a starting point, the length of associated ID is 8 bits.

[R2-2505994](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505994.zip) Discussion on LCM for UE-side model for BM NTT DOCOMO, INC. discussion Rel-19

Proposal 3: Considering multi-vendor operation and support both single-cell specific associated ID and multi-cell specific associated ID, RAN2 to support much enough value range for associated ID (e.g., 24 bit or more) to enable rough allocation to each vendor within a PLMN.

**RRC Open Issues: Issues requiring discussion [for online discussion]**

*RRC-16: UE behaviour when the associated ID is not provided by the network*

[R2-2505778](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505778.zip) RRC open issues for AIML for NR air interface Ericsson discussion (Moved from 8.1.1)

Proposal 6: (RRC-16) RAN2 to discuss the following options:

(a) If the network does not provide the associated ID, the UE reports the applicability (applicable/inapplicable) based on UE-side additional conditions (internally known by UE), model availability in device and the other provided information in the configuration. FFS if the UE reports associated IDs, if available.

(b) If the network does not provide the associated ID, it is up to UE implementation how to determine the applicability.

* Noted

[R2-2505074](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505074.zip) Leftover Issue Discussion on LCM for UE-sided model for BM use case OPPO discussion Rel-19 NR\_AIML\_air-Core

Proposal 3: (RRC-16) If associated ID is not provided by the network for applicability check, UE can optionally provide associated ID(s) to NW per full inference configuration for Option A or per inference related parameters for Option B.

* Noted

[R2-2505502](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505502.zip) Remaining issues on LCM procedure of UE-sided model for AI/ML based beam management Apple discussion Rel-19 NR\_AIML\_air-Core

Proposal 4 (Open issue RRC-16): If the network does not provide the associated ID, it is up to UE implementation how to determine the applicability.

Proposal 5 (Open issue RRC-16): RAN2 don’t pursue UE reporting associated ID, which is an optimization for an unreasonable NW configuration (i.e. NW provides associated ID in training configuration but not in inference configuration).

* Noted

[R2-2505192](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505192.zip) Discussion on LS on functionality activation and open issues on BM vivo discussion NR\_AIML\_air-Core

Proposal 6: (RRC-16) If the other conditions (e.g., UE-side additional conditions, model availability in device and the other provided information in the configuration) are not fulfilled, the UE feedbacks inapplicable regardless of whether associated ID is provided by the network or not.

Proposal 7: (RRC-16) If the other conditions are fulfilled and the associated ID is not provided by the network, the UE feedbacks applicable if there is at least one AI model of the functionality which is applicable to all the associated IDs.

Proposal 8: (RRC-16) If the other conditions are fulfilled, the associated ID is not provided by the network and there is no AI model of the functionality which is applicable to all the associated IDs, RAN2 to discuss the following 3 alternatives:

- Alt1: The UE always feedbacks non-applicable.

- Alt2: The UE feedbacks non-applicable (in order not to activate the functionality by the UE) with indicating the applicable associated ID(s). Then the network may reconfigure the inference configuration with one of the applicable associated ID(s).

- Alt3: The UE feedbacks applicable and also activates the functionality. In this case, the network performs the management based on performance monitoring.

* Noted

*RRC-46: Whether the associated ID is cell specific or multi-cell specific*

[R2-2505524](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505524.zip) Support of associated ID Samsung, Apple, Xiaomi, Qualcomm, Google, Interdigital, NTT DOCOMO, Nokia, LG Electronics, vivo discussion Rel-19 NR\_AIML\_air-Core

Proposal 1: Both single cell and multi-cell associated ID can be supported based on NW implementation (i.e., the network may allocate an Associated ID to a single cell and/or to multiple cells).

Proposal 2: Associated IDs shall be unique within a PLMN in that they can only be associated with one same/similar beam deployment.

[R2-2505838](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505838.zip) LCM for UE-side models for beam management Ericsson discussion

Proposal 7: (RRC-46) RAN2 to confirm that the associated ID is consistent within a cell, i.e. the same values can be reused in other cells, where they can correspond to different beam configurations.

[R2-2505192](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505192.zip) Discussion on LS on functionality activation and open issues on BM vivo discussion NR\_AIML\_air-Core

Proposal 12: (RRC-46) It should be RAN1, not RAN2 to determine whether the associated ID is cell specific or multi-cell specific. RAN2 can assume multi-cell specific associated ID so far to define the value range before RAN1 does not reach the conclusion.

* [AT131][030][AI PHY] Multicell v.s Single cell associate ID (Samsung)

Intended outcome: Agreable proposal for issue 46 and 41

Deadline: Thursday

[R2-2506439](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506439.zip) Summary report of [AT131][030][AI PHY] Multicell v.s Single cell associate ID Samsung discussion

*Support both cell specific ID and multiple-cell specific ID but detailed signaling is FFS*

- ZTE thinks that RAN1 should discuss. Samsung indicates that RAN1 feature lead confirms that this is a RAN2 issue.

- Ericsson has some concerns on the complexity of coordination and the problem wouldn’t even be solved. Even if you keep associated ID but due to different propagation the model would still need to be trained. Samsung thinks that one suggestion was an area rather than full PLMN.

- Vivo explains that from UE perspective everytime we change a cell we need to reload the model. And to alleviate the concern from network vendor we can talk about area. CMCC thinks one compromise is to be tracking area as it is difficult to have same ID throughout all PLMN.

- Interdigital thinks that if it cell specific we are significantly increasing load and if we make it multicell then you will have to dimension once and it shouldn’t change often. If the network doesn’t want to do multicell it can chose to do single cell. Apple has same view and from UE vendor there are some very strong concerns.

- Ericsson thinks that we can have per PLMN and per gNB.

- Docomo supports multicell.

**Agreements on associated ID**

1. Both single cell and multi-cell associated ID can be supported based on NW implementation (i.e., the network may allocate an Associated ID to a single cell and/or to multiple cells).
2. Associated IDs shall be unique within a PLMN in that they can only be associated with one same/similar beam deployment. FFS is we should have signalling indicating multi-cell.
3. We will not define areas. The Associated ID is 24 bits.

**4** If the network does not provide the associated ID, it is up to UE implementation how to determine the applicability.

RRC-40: Configuration for Option B for applicability reporting

[R2-2505778](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505778.zip) RRC open issues for AIML for NR air interface Ericsson discussion (Moved from 8.1.1)

Proposal 8: (RRC-40) RAN2 confirms that UE receives RRCReconfiguration message including one set or multiple sets of inference related parameters via OtherConfig for option B.

[R2-2506011](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506011.zip) Discussion on Applicable Functionality Reporting Option B for BM OPPO, Lenovo, ZTE Corporation, Apple, Huawei, HiSilicon, vivo, CMCC, Samsung, LG Electronics, MediaTek Inc., InterDigital discussion Rel-19 NR\_AIML\_air-Core

Proposal 2: For Option B for BM Case 1/2, one set or multiple sets of inference related parameters can be configured in OtherConfig, where each set in OtherConfig contains the following parameters according to RAN1#121 agreement:

 associatedIDforSetA-r19, resourcesForSetA-r19, resourcesForChannelMeasurement, associatedIDforSetB-r19, reportQuantity-r19, reportConfigType, nrofreportedpredictedrs-r19, TimeGap-r19, nroftimeinstance-r19, applicabilityConfigId-r19.

Proposal 3: For Option B for BM Case 1/2, inference related parameter set is configured per serving cell.

Proposal 4: Take the draft TP in this contribution into account for stage 3 spec design.

[R2-2505912](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505912.zip) On Unifying and Simplifying ASN.1 and Procedures for AI/ML Nokia, Qualcomm, Ericsson, T-Mobile USA Inc. discussion Rel-19 NR\_AIML\_air-Core

Proposa1: Use CSI-ReportConfig as the IE to configure the UE with sets of inference-related parameters, each CSI-ReportConfig representing one set of inference-related parameters.

Proposal 3: The CSI-ReportConfig configured in inferenceRelatedSetConfig-r19 is not to be passed to lower layers for configuration. That is, there shall be no RAN1 impact due to the reuse of CSI-ReportConfig.

Proposal 4: Define a new IE called InferenceRelatedSet-r19, which is configured with an identifier, inferenceRelatedSetId-r19 for use as a reference in the applicability report and a configuration containing a set of inference-related parameters, inferenceRelatedSetConfig-r19, which will minimally include CSI-ReportConfig as one of the choices.

Proposal 5: The field description for inferenceRelatedSetConfig-r19 will be used to specify which fields are relevant for the applicability determination using sets of inference-related parameters based on the type of configuration.

Proposal 6: Add inferenceRelatedSetId as a choice in applicabilityReportConfigId-r19 under ApplicabilityReportConfigIdList-r19 to support the reporting of the applicability of sets of inference-related parameters.

Proposal 7: Move applicabilityCellId-r19 to the ApplicabilityReportConfigIdList-r19.

Proposal 8: RAN2 to discuss adopting the ASN.1 definition of Figure 2.2-1 to simplify the reporting of applicability, reporting the applicability of configurations pertaining to any cell in the same flat list.

Proposal 9: RAN2 to discuss adopting a generic procedure to support the reporting of the applicability of sets of inference-related parameters as exemplified in the provided procedural text prototype.

|  |
| --- |
| **Agreements Other Config for option B**   1. RAN2 confirms that UE receives RRCReconfiguration message including one set or multiple sets of inference related parameters via OtherConfig for option B. 2. For Option B for BM Case 1/2, one set or multiple sets of inference related parameters can be configured in OtherConfig, where each set in OtherConfig contains the following parameters according to RAN1#121 agreement:   associatedIDforSetA-r19, resourcesForSetA-r19, resourcesForChannelMeasurement, associatedIDforSetB-r19, reportQuantity-r19, reportConfigType, nrofreportedpredictedrs-r19, TimeGap-r19, nroftimeinstance-r19, applicabilityConfigId-r19.   1. For Option B for BM Case 1/2, inference related parameter set is configured per serving cell. |

*RRC-44: Whether RRCReconfigurationComplete contains the (in)applicability of all inference configurations*

[R2-2505686](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505686.zip) Left issues for AI based BM Lenovo discussion Rel-19

Proposal 3: The RRCReconfigurationComplete message only contains applicability information of the inference configuration or inference related parameter sets configured (i.e., add or modify) in the respective received RRCReconfiguration.

* Noted

[R2-2505880](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505880.zip) Remaining Open Issues: LCM for UE-Sided AI/ML Beam Management SHARP Corporation discussion

Proposal 3 (RRC 44): RRCReconfigurationComplete shall include applicability/inapplicability status for:

a) All inference configurations included in the immediately preceding RRCReconfiguration message, and

b) Any previously configured inference configurations for which applicability/inapplicability has already been reported and whose applicability status has changed since the last report.

Proposal 4 (RRC 44): All further changes in applicability status shall be reported by the UE using UAI messages.

* Noted

**Agreements on applicability/inapplicability**

1 RRCReconfigurationComplete shall include applicability/inapplicability status for:

a) All inference configurations included in the immediately preceding RRCReconfiguration message, and

b) Any previously configured inference configurations for which applicability/inapplicability has already been reported and whose applicability status has changed since the last report. [CB on how the UE handles previously configured periodic CSI config that becomes applicable]

2 Do not introduce a link, explicit or implicit, between a full inference configuration and a set of inference-related parameters. If the applicability of a full inference configuration changes and there is a corresponding set of inference-related parameters whose applicability changes at the same time, the UE shall report the applicability of both

*RRC-47: FFS how to implement RAN1 parameters in CSI-ReportConfig*

[R2-2505762](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505762.zip) Remaining open issues: LCM for UE-sided model for BM use case InterDigital discussion Rel-19 NR\_AIML\_air-Core

Proposal 3: [RRC-47] Group RAN1 parameters with a CHOICE structure (i.e., Option 2)

* Noted

[R2-2505911](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505911.zip) LCM for UE-side Beam Management Nokia discussion Rel-19 NR\_AIML\_air-Core

Proposal 4: (RRC-47) RAN2 to support ungrouping RAN1 parameters and benefit from using extension markers and adding new fields, new sets of parameters for inference, monitoring and data collection.

* Noted

[R2-2505345](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505345.zip) Remaining issues in LCM for BM and CSI prediction Samsung discussion Rel-19 NR\_AIML\_air-Core

Proposal 6: (RRC-47) a separate structure should be defined for BM and CSI prediction.

Proposal 7: (RRC-47) csi-InferencePrediction-r19 is defined out of configurationForChannelPrediction-r19.

* Noted
* Continue this on CR review phase

*RRC-48: Applicability reporting for parameter sets after the corresponding full inference configuration is provided*

[R2-2505911](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505911.zip) LCM for UE-side Beam Management Nokia discussion Rel-19 NR\_AIML\_air-Core

Proposal 5: (RRC-48) Do not introduce a link, explicit or implicit, between a full inference configuration and a set of inference-related parameters. If the applicability of a full inference configuration changes and there is a corresponding set of inference-related parameters whose applicability changes at the same time, the UE shall report the applicability of both.

* Noted

[R2-2505762](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505762.zip) Remaining open issues: LCM for UE-sided model for BM use case InterDigital discussion Rel-19 NR\_AIML\_air-Core

Proposal 4: [RRC-48] In a subsequent applicability report, UE only includes one configuration ID (e.g., the full inference configuration ID) if both a full inference configuration ID and corresponding parameter set configuration ID are available.

* Noted

[R2-2505301](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505301.zip) Discussion on life cycle management open issues Xiaomi discussion Rel-19 NR\_AIML\_air-Core

Proposal 9: (RRC-48) It is up to UE implementation which ID (either ID of Option A/B or both IDs of Option A/B) is reported when both Option A and Option B are configured.

* Noted

**RRC Open Issues: Issues to be addressed directly in RRC CR [if time allows]**

*RRC-11: How to configure RS configuration for UE sided data collection within CSI-ReportConfig*

[R2-2505074](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505074.zip) Leftover Issue Discussion on LCM for UE-sided model for BM use case OPPO discussion Rel-19 NR\_AIML\_air-Core

Proposal 1: (RRC-11) Data collection resource configuration is configured in CSI-MeasConfig, which is in parallel with csi-ReportConfigToAddModList.

[R2-2506096](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506096.zip) LCM for UE-side models for beam management TCL discussion

Proposal 1: We suggest that RAN2 consider the RAN1-agreed none-BM-r19 in the CSI-ReportConfig to explicitly prevent an actual CSI report.

*RRC-12: Monitoring for AI based beam management*

[R2-2506059](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506059.zip) Discussion on open issues of LCM for UE-side models (BM use case) HONOR discussion Rel-19 NR\_AIML\_air-Core

Proposal 9: (RRC-12) When UE indicates a periodic CSI-ReportConfig is not applicable, the gNB is expected to release the configuration and the linked monitoring report configuration.

Proposal 10: (RRC-12) UE continues to perform the monitoring and reporting until the configuration is released.

Proposal 11: (RRC-12) When gNB instructs UE to release the CSI-ReportConfig for inference configuration and linked monitoring configuration, only the CSI-ReportConfigId of inference report configuration is included in the csi-ReportConfigToReleaseList.

[R2-2506096](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506096.zip) LCM for UE-side models for beam management TCL discussion

Proposal 2: For performance monitoring, event-triggered reporting shall be supported

**RRC Open Issues: Issues listed by Rapporteur as “Already resolved” [If time allows]**

*RRC-1: Cause of inapplicability*

[R2-2505239](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505239.zip) Remaining issues on LCM for UE-sided model for BM LG Electronics discussion Rel-19 NR\_AIML\_air-Core

Proposal 1. [RRC1] UE includes a release flag only when requesting configuration release without specifying an explicit cause, e.g., due to model unavailability

[R2-2505757](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505757.zip) LCM for UE-sided model for Beam Management and CSI prediction use cases Huawei, HiSilicon discussion Rel-19 NR\_AIML\_air-Core

Proposal 1: (RRC-1) The release indication is only in initial inapplicability report via RRCReconfigurationComplete message (i.e. add a condition that the inapplicabilityCause-r19 is only for RRCReconfigurationComplete message).

Proposal 2: (RRC-1) Specify the usage of the “release configuration” flag clearly in the field description (i.e. removing the “e.g.” in the running CR).

[R2-2505880](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505880.zip) Remaining Open Issues: LCM for UE-Sided AI/ML Beam Management SHARP Corporation discussion

Proposal 5 (RRC 1 & 44): The UE shall report an explicit cause value for inapplicability whenever applicability/inapplicability status is reported, both in the initial RRCReconfigurationComplete message and in subsequent UAI messages.

Proposal 6 (RRC 1 & 44): The network may request the cause for inapplicability from the UE when needed (for e.g., in RRCReconfiguration message).

*RRC-4: Activation of a periodic CSI report configuration upon change from inapplicable to applicable*

[R2-2505470](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505470.zip) Further Discussion on the Remaining RRC Issues on LCM MediaTek Inc. discussion

Proposal 1: (RRC-4) The UE is not required to perform applicability determine procedure for the functionalities/configurations that have already been indicated as inapplicable to the network.

[R2-2505712](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505712.zip) Discussion on LCM for UE-sided model for Beam Management Spreadtrum, UNISOC discussion Rel-19

Proposal 2: For RRC4, if periodic CSI report configuration is not released and changes from inapplicable to applicable, it can be activated autonomously upon reporting its applicability via UAI.

*RRC-8: Coexistence between option A and option B*

[R2-2505712](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505712.zip) Discussion on LCM for UE-sided model for Beam Management Spreadtrum, UNISOC discussion Rel-19

Proposal 3: For RRC8, for clarification, option A and option B cannot be configured simultaneously for the same AI functionality.

Not Treated

[R2-2505213](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505213.zip) Discussion on LCM for UE-sided model for BM use case CATT discussion Rel-19 NR\_AIML\_air-Core

[R2-2505582](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505582.zip) Remaining open issues on LCM for UE-sided model for Beam Management NEC Corporation discussion Rel-19

[R2-2506102](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506102.zip) Discussion on LCM for UE-Side Model for Beam Management Use Case Futurewei Technologies discussion Rel-19

#### 8.1.2.3 LCM for Positioning use case

Contributions should focus on LCM for UE-sided model, but can discuss NW-sided model. Aspects related to data collection should be covered in 8.1.3

**Rapporteur’s input (to be noted)**

[R2-2505702](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505702.zip) LPP open issues for feature "AI/ML for NR air interface" Qualcomm Incorporated (Rapporteur) discussion NR\_AIML\_air-Core (Moved from 8.1.1)

* Noted

**LPP Open Issues**

*LPP-6a: Number of PRUs in NR-PRU-DL-Info*

[R2-2505194](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505194.zip) Discussion on LPP-6a for AI based positioning Case1 vivo discussion NR\_AIML\_air-Core

Proposal 1. (LPP-6a) UE is allowed to request the exact number of PRUs that it expects the PRU information.

Proposal 2. (LPP-6a) RAN2 to adopt that the NW can provide a list of PRUs’ information in one Provide Assistance Data message, considering signalling overhead to repeatedly sending LPP message.

* Noted

[R2-2505763](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505763.zip) Remaining open issues: LCM for Positioning use case InterDigital discussion Rel-19 NR\_AIML\_air-Core

Proposal 1: [LPP-6a] Do not introduce a request for additional PRUs (e.g., a number of PRUs) in the Request Assistance Data message.

* Noted

Discussion

- Nokia and Samsung is good with proposal 2. Nokia doesn’t a see a reason to request additional PRUs

- Ericsson doesn’t think any enhancements are needed. SA2 is working on a lot of enhancements in this area so there is no need for further enhancements.

- ZTE and LG thinks that this is essential for training and agree with both 1 and 2.

- Xiaomi thinks that there was no RAN1 evaluation whether these additional PRUs would be helpful and there is no way for the UE to evaluate which PRU it is unless we provide the ID and that information shouldn’t be exposed.

- Samsung and ZTE thinks that we just need to know the location and not exactly with PRU.

- Qualcomm agrees with Interdigital and the PRU supports a lot of measurements but not all of those are useful for the UE.

- Vivo explains that the proposals are also for performance monitoring. Qualcomm thinks that model training is up to UE anyways.

- Interdigital thinks that we can still do training with a bit more signaling overhead but it is not the most important issue. Ericsson agrees we can save some signaling and not worth doing it. Apple agrees with Ericsson.

*LPP-10a: Applicability of "batch reporting" for AI/ML positioning.*

[R2-2505765](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505765.zip) Remaining LPP open issues for "AI/ML Positioning Case 1" Qualcomm Incorporated discussion NR\_AIML\_air-Core

Proposal 2 (LPP-10a): "Batch reporting", i.e., reporting of up to 32 location results in a single report as supported for the current NR positioning methods, is also applicable to "NR AI/ML Positioning Case 1".

* Noted

[R2-2505593](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505593.zip) Discussion on LCM for positioning use case ZTE Corporation discussion Rel-19 NR\_AIML\_air-Core

Proposal 3: Do not support batch reporting in AI/ML positioning method.

* Noted

*LPP-11: Details of IE NR-AI-ML-PositioningRequestLocationInformation*

[R2-2506056](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506056.zip) Discussion on remaining open issues for AIML positioning LG Electronics Inc. discussion Rel-19 37.355

Proposal 4: Keep NR-DL-AIML-RequestLocationInformation, excluding UE-assisted measurement parameters, and retain only UE-based and common parameters (e.g., nr-AssistanceAvailability).

Proposal 5: For AI/ML positioning Case 1, the LocationInformationType field in CommonIEsRequestLocationInformation shall be set to locationEstimateRequired. Other values, including locationMeasurementsRequired, locationEstimatePreferred, locationMeasurementsPreferred, and locationEstimateAndMeasurementsRequired, are not applicable and shall not be used.

* Noted

*LPP-14: Target device error causes*

[R2-2505593](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505593.zip) Discussion on LCM for positioning use case ZTE Corporation discussion Rel-19 NR\_AIML\_air-Core

Proposal 5: Introduce the following additional target device error cause in AI/ML positioning, the error cause are indicated with respect to each LCM procedure (training/inference/monitoring):

- Error cause during training:

UE does not get enough training data to train a AI/ML model;

UE cannot download or acquire or train a AI/ML model;

- Error cause during inference:

UE cannot generate an estimate location using a AI/ML model;

- Error cause during performance monitoring:

UE cannot generate a performance monitoring metric.

* Noted

[R2-2506080](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506080.zip) Discussion on LCM for Positioning use case of UE-sided model Huawei, HiSilicon discussion Rel-19 NR\_AIML\_air-Core

Proposal 2: (LPP-14) It is proposed RAN2 to introduce “low power state” as new target device error.

* Noted

Discussion

- Xiaomi doesn’t think we need anymore error causes, we agreed last meeting.

- Ericsson thinks that we don’t really address how it downloaded etc, so this is an overkill.

*LPP-18: Consistency between training and inference* [Unofficial offline – lead by Vivo]

[R2-2505193](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505193.zip) Discussion on open issue LPP-18 consistency between training and inference vivo, OPPO, CATT, ZTE Corporation, Sanechips, Fraunhofer IIS, Fraunhofer HHI discussion NR\_AIML\_air-Core

Proposal 1. RAN2 to adopt a list of global cell information (i.e., NCGIs, or PCIs with ARFCN) and TRP ID, as the request associated information to ensure consistency between training and inference.

Proposal 2. RAN2 to discuss how to introduce the specific group of TRPs associated with the requested assistance data:

- to directly acquire assistance data of specific TRPs, i.e., right under NR-DL-AIML-RequestAssistanceData;

- to ask specific TRPs for PRS transmission with on-demand PRS configuration, i.e., within NR-On-Demand-DL-PRS-Request.

* Noted

[R2-2505355](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505355.zip) Remaining issues on LCM for POS use case Samsung discussion Rel-19 NR\_AIML\_air-Core

Proposal. 11: To ensure consistency between training and inference, UE can request the assistance data (e.g., DL-PRS configuration) for a specific group of TRPs. I.e., UE can report a list of TRP information (i.e., combination of dl-PRS-ID, NCGI, PCI, ARFCN) to identify the group of TRPs for which the assistance data is requested.

Proposal. 12: To ensure consistency between training and inference, UE can report the associated ID value used during training phase for each TRP.

* Noted

Discussion after offline

- Vivo explains that we can support P1 but in the offline there was no big desire to have associated ID.

- Samsung thinks we can leave it open.

*LPP-19: Applicability of BM related agreements*

[R2-2505214](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505214.zip) Issues to address for AIML Positioning stage-2 CATT discussion Rel-19 NR\_AIML\_air-Core

*(LPP-19)Proposal 1: the following agreements made for BM applicability reporting is also applicable to positioning case 1:*

*- 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.*

*- Support the explicit reporting of applicability/inapplicability in initial report and subsequent reporting it reports only applicability it changed.*

- Qualcomm thinks the second bullet doesn’t map to positioning as it is not clear what is initial report and what is subsequent report. Apple agrees with Qualcomm

* Noted

[R2-2506056](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506056.zip) Discussion on remaining open issues for AIML positioning LG Electronics Inc. discussion Rel-19 37.355

Proposal 8. No LPP changes are needed for applicability reporting in AI/ML positioning Case 1, as the existing capability exchange and unsolicited reporting mechanisms are sufficient.

Proposal 9. Add an explicit field, e.g., nr-dl-aiml-positioning-supported-r19, to NR-DL-AIML-ProvideCapabilities to indicate the applicability of AI/ML positioning Case 1.

* Noted

[R2-2505866](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505866.zip) Applicability reporting for positioning use case Nokia discussion Rel-19 NR\_AIML\_air-Core

*Proposal 1: Add an explicit bit in NR-DL-AIML-ProvideCapabilities-r19 to indicate dynamic change in UE DL AIML positioning applicability from supported to “currently not-applicable”.*

*Proposal 2: The NR-DL-AIML-ProvideAssistanceData IE signals a list of candidate DL PRS configurations which can be used by the target device to determine applicability of AI/ML positioning for the provided set of DL-PRS configurations.*

- Ericsson agrees. Qualcomm thinks this is not an open issue this is a new feature discussion.

*Proposal 3: The UE may optionally include in NR-DL-AIML-ProvideCapabilities IE the DL-PRS configurations from the set of candidate DL-PRS configurations assistance provided by the location server for which the DL AIML positioning is currently applicable in the UE.*

* Noted

*LPP-20: LPP Impacts related to Case 3a/3b*

[R2-2505302](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505302.zip) Discussion on AI positioning open issues Xiaomi discussion Rel-19 NR\_AIML\_air-Core

*Proposal 2: (LPP-20) Case 3a and Case 3b can be supported without new impact to LPP.*

- Ericsson thinks that there may be some impacts like case 3b, the location and time stamp and RAN3 has ensured that the time stamp is also provided. Currently in RAN2 the time stamp is optional.

* Noted

*LPP-21: "Associated ID" for TRP Location Coordinates (IE TRP-ImplicitLocationInfo-r19)* [Unofficial offline – lead by Qualcomm]

[R2-2505765](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505765.zip) Remaining LPP open issues for "AI/ML Positioning Case 1" Qualcomm Incorporated discussion NR\_AIML\_air-Core

Proposal 4a (LPP-21): The new IE for the implicit TRP location information (NR-TRP-LocationInfo-Implicit-r19) has the same structure as the existing IE NR-TRP-LocationInfo-r16, but with the location coordinate information being replaced by an "Associated ID" at each level (TRP, ARPs level).

Proposal 4b (LPP-21): In all NR AI/ML assistance data IEs where Cell IDs (NCGIs, PCIs) can optionally be included for a TRP, the Cell IDs (NCGIs, PCIs) are always present in the IEs if the TRP is associated to a cell.

Proposal 4c (LPP-21): If Proposals 4a/4b are agreeable, the "Associated ID" can be defined with 8-bits.

Proposal 4d (LPP-21): Whether the IEs NR-TRP-LocationInfo-r16 and NR-TRP-LocationInfo-Implicit-r19 can be both provided together or not is left to implementation/deployment and does not need to be specified.

Proposal 4e (LPP-21): If a UE supports explicit TRP location info (NR-TRP-LocationInfo-r16) a UE must not mandatorily support also implicit location info (NR-TRP-LocationInfo-Implicit-r19) (and vice versa).

* Noted

[R2-2505908](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505908.zip) RAN1 Agreements impacting RAN2 and Addressing Open Issues Ericsson discussion Rel-19 NR\_AIML\_air-Core

Proposal 5: (LPP-21) Associate ID for PRS only TP is not considered in Rel-20. The scope of Associate ID (to what granular level the associate ID needs to be updated) is left to NW implementation. Associate ID value range is 0 to 255. Explicit and Implicit TRP coordinates are mutually inclusive. In terms of UE capability, the UE supporting case1 AI/ML must support implicit location info.

* Noted

**Agreements on positioning**

1. Do not introduce a request for additional PRUs (e.g., a number of PRUs) in the Request Assistance Data message
2. "Batch reporting", i.e., reporting of up to 32 location results in a single report as supported for the current NR positioning methods, is also applicable to "NR AI/ML Positioning Case 1".
3. Keep NR-DL-AIML-RequestLocationInformation, excluding UE-assisted measurement parameters, and retain only UE-based and common parameters (e.g., nr-AssistanceAvailability).
4. For AI/ML positioning Case 1, the LocationInformationType field in CommonIEsRequestLocationInformation shall be set to locationEstimateRequired. Other values, including locationMeasurementsRequired, locationEstimatePreferred, locationMeasurementsPreferred, and locationEstimateAndMeasurementsRequired, are not applicable and shall not be used. No specification impact.
5. We do not introduce new error cause for the target device error causes.
6. Case 3a and Case 3b can be supported without new impact to LPP
7. Introduce list of global cell information (i.e., NCGIs, or PCIs with ARFCN) and TRP ID, as the request associated information to ensure consistency between training and inference.
8. The UE asks specific TRPs for PRS transmission with on-demand PRS configuration, i.e., within NR-On-Demand-DL-PRS-Request
9. Similar to BM, 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. If nw side additional conditions are not provided then we follow BM conclusion. No stage 3 impacts.
10. Similar to AI PHY, when applicability changes the UE should report this to the LMF and only what changed. For now capture this at least in stage 2. Check offline if and how this would be implemented in stage 3.
11. Wait for RAN1 for LPP-21. Take what RAN1 gives us and we implemented. Can compile an LS for next meeting if we have questions.

### 8.1.3 NW side data collection

Contributions should focus on the remaining aspects related to mechanisms and principles identified for data collection for network side model training. Including outcome of [POST130][031][AI PHY] NW side data collection (Ericsson and ZTE) and [POST130][034][AI PHY] LS to RAN3 (Nokia).

**Email discussion: Data collection configuration (open issue RRC-24) [for online discussion Tuesday]**

[R2-2505778](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505778.zip) RRC open issues for AIML for NR air interface Ericsson discussion (Moved from 8.1.1)

Proposal 1: (RRC-9)

Proposal 1 (RRC-49) For L1-related content for NW-side data collection, RAN2 to agree on one of the two options: (a) it is sufficient to collect the L1-RSRP and/or beam ID as agreed by RAN2, or (b) RAN2 should ask RAN1 whether other data needs to be collected.

Proposal 2 (RRC-43) RAN2 to discuss the value range for the buffer threshold based on the outcome of the UE capability discussion. Possible values to consider are, e.g. 1 KB, 2 KB, 4 KB, 8 KB, 16 KB, 32 KB, 45 KB, 48 KB, 52 KB, 58 KB, 60 KB, 62KB, 64 KB, 128 KB, 256 KB, etc.

* 16KB, 32KB and 48KB. FFS during CR phase in any higher value is needed depending on UE capability discussion.

[R2-2505859](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505859.zip) Report of email discussion [POST130][031][AI PHY] NW side data collection Ericsson, ZTE Corporation discussion

* Noted

*Can we revert the agreement on event triggered logging*

- Apple and Vivo doesn’t think we should revert as we have spent a lot of time on making decisions. Huawei thinks that we shouldn’t continue this discussion as network vendors don’t think this is useful. Ericsson and Nokia agrees and since the beginning didn’t see a need to have this as we can achieve it by implementation.

- ZTE explains that there was a reason when we agreed to it and now we don’t those benefits.

- Tmobile and AT&T also doesn’t see the need for it either.

Proposal 2 RAN2 to decide on whether to capture the event evaluation for the event-triggered logging in the existing A1/A2 events (in sub-clauses 5.5.4.2 and 5.5.4.3) or in new events.

Proposal 7 RAN2 to discuss and decide on alternative to introduce logging configuration for network data collection:

1. logging configuration is introduced as a new list of configurations under CSI-MeasConfig, based on TP1 in [R2-2505860](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505860.zip), (Acceptable 8/20, Not acceptable 3/20)
2. logging configuration is introduced in a new L3 measurement framework, at the same level as MeasConfig and CellGroupConfig, based on TP2 in [R2-2505861](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505861.zip), (Acceptable 15/20, Not acceptable 3/20)

**Agreements on NW side data collection**

1 RAN2 confirms that the network data logging is captured in a new clause (e.g. 5.5x) in the RRC specification.

2 A hysteresis should be configured and used (alongside threshold and timeToTrigger) for event-triggered logging for NW-side data collection.

3 The resource configuration does not have separate resources for Set A and Set B.

4 RAN2 to send an LS to RAN1 to inform about the RAN2 agreements on solution for network data logging, including L1 related content for NW-side data collection.

5 RAN2 to send an LS to RAN3 to inform about the RAN2 agreements on solution for network data logging

1. keep event-triggered logging
2. logging configuration is introduced as a new list of configurations under CSI-MeasConfig, based on TP1 in [R2-2505860](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505860.zip),
3. Event evaluation for the event-triggered logging will be capturing within the existing A1/A2 events (in sub-clauses 5.5.4.2 and 5.5.4.3)
4. For L1-related content for NW-side data collection, it is sufficient to collect the L1-RSRP and/or beam ID as agreed by RAN2

* [POST131][038][AI PHY] LS to RAN1/RAN3 on nw-sided data collection (ZTE)

Intended outcome: agree to RAN1 and RAN3 LS capturing relevant RAN2 agreements

Deadline: short

[R2-2505860](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505860.zip) TP approach (1) for email discussion [POST130][031][AI PHY] NW side data Ericsson, ZTE Corporation discussion

[R2-2505861](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505861.zip) TP approach (2) for email discussion [POST130][031][AI PHY] NW side data Ericsson, ZTE Corporation discussion

**LS reply to SA5/RAN3: [for online discussion]**

[R2-2506079](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506079.zip) Discussion on measurements for OAM-centric solution [S5-252842] Huawei, HiSilicon, Ericsson, Nokia discussion Rel-19 NR\_AIML\_air-Core

RAN2 measurements

1 For network-side data collection for beam prediction, measurement reports include the following:.

⁻ Cell identity: CGI or PCI of the cell to which the measurement results are related.

⁻ Logged L1 radio measurement results including the beam identifiers associated to CSI-RS resources or SSBs (CSI-RS IDs or SSB IDs) and the corresponding measured L1-RSRPs.

- [CB after OI discussion ]Information to indicate a gap that is longer than the configured logging periodicity in the logged measurements which can happen due to event-based logging. FFS the details.

2: The required L1 measurements (i.e. L1-RSRP of CSI-RS(s) or SSBs) are defined in TS 38.215 which is referenced in the definition of M1 measurement in TS 37.320.

3: RAN2 needs to ask SA5 how to transfer the measurement report with the above content and whether the M1 measurement defined in clause 5.4.1.1 of TS 37.320 can be used to transfer the measurement reports with the above content or not.

4: The gNB will configure the UE to log the above content via the NW-side data collection configuration, which is different from legacy immediate MDT configuration.

* [POST131][036][AI PHY] Reply to SA5/RAN3 (Huawei)

Intended outcome: agree to LS

Deadline: short

**RRC Open Issues: Issues with Rapporteur proposal [online]**

[R2-2505778](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505778.zip) RRC open issues for AIML for NR air interface Ericsson discussion (Moved from 8.1.1)

*Proposal 13 (RRC-26) Multiplexing of legacy SON/MDT report and AIML logged data in the new SRB is not supported.*

- Samsung thinks that anyway the network can control the multiplexing

**Agreements**

1. Multiplexing of legacy SON/MDT report and AIML logged data is not supported in the same UE information response message. Up to the network to ensure that data is not requested at the same time
2. The logging periodicity of a NW-side data collection configuration is configurable.
3. No further indication/condition is specified (beyond already agreed ones) for the UE to inform source gNB about data availability before HO in Rel-19.
4. The UE stores logged data for BM in a variable specific to L1 CSI related measurements.
5. Only periodic CSI resources are used for NW sided data collection. No need for new dynamic MAC CE mechanisms.

**RRC-25/RRC-30: Dynamic Activation/Deactivation and Semi-Persistent Resources [for online discussion]**

[R2-2505675](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505675.zip) Remaining issues of NW-sided data collection Huawei, HiSilicon discussion Rel-19 NR\_AIML\_air-Core

Proposal 8: (RRC-25) (RRC-30) Only periodic CSI resources are used for NW sided data collection, i.e. neither aperiodic nor semi-persistent CSI resources are supported for this purpose.

* Noted

[R2-2505215](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505215.zip) Consideration on NW side data collection CATT discussion Rel-19 NR\_AIML\_air-Core

Proposal 2: (RRC-25) Dynamic activation/deactivation of data collection configurations for logging is not needed, as it can be implicitly achieved by the add/modify/release operation of the related data collection configurations.

* Noted

[R2-2505200](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505200.zip) Open Issues on Network Side Data Collection Qualcomm Incorporated discussion Rel-19

Proposal 1: To avoid the frequent reconfiguration for measurement resource reconfiguration, the network can configure the UE with one or more resource sets for data collection for network-side training.

Proposal 2: The network may dynamically (de)activate measurement on different resource sets (among the configured resource sets) based on the UE mobility and the network requirements.

Proposal 3: To assist the network with (de)activation of the appropriate RS for data collection, the UE may notify the network when the configured RS becomes undetectable, meaning the UE cannot measure the configured RS.

* Noted

**RRC-30: User consent [for online discussion]**

[R2-2505839](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505839.zip) NW-side data collection Ericsson discussion

Proposal 8: (RRC-33) RAN2 does not discuss user consent related aspects for NW-side data collection in Rel-19.

* Noted

[R2-2506186](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506186.zip) User consent for NW-side data collection NTT DOCOMO, Apple, vivo, Xiaomi, OPPO discussion

*Proposal 1: NW-sided data collection for AI/ML model training requires user consent.*

*Proposal 2: re-use the existing user consent framework (defined for MDT) for NW-side data collection.*

* Noted

[R2-2505687](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505687.zip) Left issues for NW side data collection Lenovo discussion Rel-19

*Proposal 3: RAN2 sends LS to SA3/SA5 consulting if existing MDT user consent can be reused or AIML related user consent shall be provided for the gNB to initiate gNB-centric data collection.*

* Noted

Discussion

- CMCC thinks that for MDT the only reason it is because of user location. Apple explains that user consent is for all of MDT and not only for location.

* Send an LS to SA3 indicating our work on nw-sided gNB and OAM centric data collection and content of collected data. RAN2 discussed the need for user consent and would like to SA3 to take it into account and decide on the need for user consent for nw sided data collection.
* [POST131][037][AI PHY] User Consent LS to SA3 (NTT Docomo)

Intended outcome: agree to LS and cc RAN3 ccSA5

Deadline: short

**UE capabilities [for online discussion]**

[R2-2505150](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505150.zip) Discussion on NW side data collection Xiaomi discussion

Proposal 18: (UECap-1) UE can support different data logging AS buffer- size across all use cases, which can be indicated by UE capability. The potential AS buffer size can be 128KB.

Proposal 20: (UECap-2) Periodic and event-based logging are part of basic logged data collection capability.

Proposal 21: (UECap-2) Define separate capability to indicate the supported measurement quantities for logged data collection.

Proposal 22: (UECap-2) Assistance information for NW side data collection is part of basic logged data collection capability.

[CB after offline]

[R2-2505839](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505839.zip) NW-side data collection Ericsson discussion

Proposal 12: (UE-Cap2) Introduce an optional generic UE capability to indicate supporting logged measurements for NW-side data collection, which implies the UE supports at least: the minimum AS layer memory size, periodic logging, reporting data availability upon reaching the full buffer size, and reporting data availability upon exceeding the configured buffer threshold.

**RRC Open issues:** **Open issues that will be discussed first offline in order and then what’s left online**

* [AT131][004][AI PHY] NW sided OIs (InterDigital)

Intended outcome: agreeable proposals

Deadline: Wednesday

[R2-2506413](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506413.zip) Summary of [AT131][AI PHY] NW side data collection open issues InterDigital Inc. (Rapporteur) discussion Rel-19 NR\_AIML\_air-Core

Observation Companies have different views regarding how to capture the gap information in the log and whether if there is even a need for it.

Discussion

- Ericsson doesn’t think 1 bit is enough and we would need some time information.

- Nokia thinks absolute time stamp absolutely not necessary as the UE does’nt stay long in connected mode. Qualcomm agrees with Nokia that we don’t need it. Interdigital also agrees and we can group them together and use 1 bit indication is sufficient.

- ZTE thinks that relative time is enough.

**Agreements:**

1 If LoggedDataCollectionAssistanceConfig is configured, then full buffer and low power indications are configured by default (i.e., no additional fields/bits required to configure them). Data threshold is (optionally) configured by including the threshold in the loggedDataCollectionAssistanceConfig.

2 Both the data collection configuration and the UAI configuration related to data collection are released when the UE transitions to IDLE/INACTIVE or initiates re-establishment (including RLF).

3 If the buffer is not full or the data threshold is configured and the amount of data is below the threshold, UE does not send data availability indication when it sends low power indication.

4 No additional handling of logged data to be specified (apart from the already agreed release during state transition and RLF, and release upon successful delivery).

5 No further discussion is needed on RRC issue 34 in re-19 as we have only one use case.

6 The UE will indicate the presence of a gap (i.e. there will be no indication on the length of gap or time instance, etc). Rapporteur will suggest a way to implemented as part of the RRC review.

RRC-19: Reporting assistance information related to logged measurements

[R2-2505240](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505240.zip) Remaining issues on NW side Data Collection LG Electronics discussion Rel-19 NR\_AIML\_air-Core

Proposal 1. [RRC19] The otherConfig includes separate bits for low power, buffer full, and buffer threshold reached indications.

[R2-2505504](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505504.zip) Remaining issues on NW-sided data collection Apple discussion Rel-19 NR\_AIML\_air-Core

Proposal 4 (open issue RRC-19): Full buffer indication is enabled by default whenever *LoggedDataCollectionAssistanceConfig* is configured (i.e. no additional configuration bit is needed).

[R2-2505675](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505675.zip) Remaining issues of NW-sided data collection Huawei, HiSilicon discussion Rel-19 NR\_AIML\_air-Core

Proposal 2: (RRC-19) The indications reported by the UE as part of UAI for data collection purposes are controlled by the network in the following way:

* Full buffer indication is enabled by default when the UE is configured with

*loggedDataCollectionAssistanceConfig*

* Data threshold is enabled by including data threshold in the configuration
* Low power state indication is configurable with a dedicated parameter to enable it

RRC-21: Time related content of logged data

[R2-2505839](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505839.zip) NW-side data collection Ericsson discussion

Proposal 3 (RRC-21) The UE includes in the logged measurement report, an absolute time stamp (provided by the network at the time of configuring the UE with the NW-side data collection configuration), and for the first measurement entry and each measurement entry separated by a “gap” versus the immediate previous entry, a relative time stamp.

[R2-2505075](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505075.zip) Leftover Issue Discussion on NW side data collection OPPO discussion Rel-19 NR\_AIML\_air-Core

Proposal 1: (RRC-21) Consecutive samples share the same record list, if there is a gap between two samples, another record list is used to include the consecutive samples after the gap. Optionally, the first sample of each record list is associated with a relative timestamp.

[R2-2506118](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506118.zip) Discussion on NW side data collection framework ZTE Corporation discussion Rel-19 NR\_AIML\_air-Core

Proposal 1: For logged data attached with time information, the first logged data is attached with an absolute time stamp as long as UE starts the logging, and the following logged data is attached with relative time stamp until to the corresponding logging configuration is released.

RRC-28: Handling of configuration to report data availability and low power state during RRCReestablishment, transition to RRC\_INACTIVE etc

[R2-2505150](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505150.zip) Discussion on NW side data collection Xiaomi discussion

Proposal 4: (RRC-28) Logging and UAI configuration are released upon IDLE and RLF.

Proposal 5: (RRC-28) Logging and UAI configuration are kept upon INACTIVE.

[R2-2505346](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505346.zip) Discussion on NW side data collection Samsung discussion Rel-19 NR\_AIML\_air-Core

Proposal 3 (RRC-28). Upon RRE initiation (including RLF detection), UE discards any logged data.

Proposal 4 (RRC-28). Upon RRE initiation, UE releases 1) the configuration of NW-side data collection and 2) UAI configuration for NW-side data collection.

Proposal 5 (RRC-28). When going to RRC\_IDLE, UE releases 1) the configuration of NW-side data collection and 2) UAI configuration for NW-side data collection (i.e., No spec change is needed).

Proposal 6 (RRC-28). When going to RRC\_INACTIVE, UE does not store the configuration of NW-side data collection in UE Inactive AS Context.

Proposal 7 (RRC-28). When going to RRC\_INACTIVE, UE first stores UAI configuration for NW-side data collection in UE Inactive AS Context and it is released upon initiation of RRC connection resume.

RRC-29: Data Availability Indication and Low Power State

[R2-2505650](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505650.zip) Discussion on open issues on NW side data collection Sony discussion Rel-19 NR\_AIML\_air-Core

Proposal 3 (RRC-29): Data availability indication is not sent when indicating low power state.

[R2-2506104](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506104.zip) Data Collection for Training of NW-side AI/ML Models Nokia discussion Rel-19 NR\_AIML\_air-Core

Proposal 4: (RRC-29) If the UE is in a low power state AND it has data in its buffer, even below the threshold, UE can still indicate both low power state and buffer threshold met indications. That is, no additional cause or flag is required.

[R2-2505471](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505471.zip) Further Discussion on the Remaining RRC Issues for Network-Side Data Collection MediaTek Inc. discussion

Proposal 3: When the UE enters a low power state, it sends a low power state indication together with the buffer status to the network.

Proposal 4: The buffer status indicator (bufferStatus-r19) is extended to include additional values, i.e. belowThreshold and empty.

RRC-31: Release of Logged AI/ML Data

[R2-2505511](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505511.zip) Discussion on remaining issues on NW side data collection CMCC discussion Rel-19 NR\_AIML\_air-Core

Proposal 4: In case the network does not retrieve logged AI/ML data, UE should store non-retrieved data for 48 hours after the release of data collection configuration. The UE will release all logged AI/ML data at switch off or de-registration, or receiving the explicit indication from the serving gNB.

[R2-2506104](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506104.zip) Data Collection for Training of NW-side AI/ML Models Nokia discussion Rel-19 NR\_AIML\_air-Core

Proposal 6: (RRC-31) Data from the UE buffer will be released in the following scenarios:

* when data has been successfully transmitted using a UEInformationResponse message;
* the configuration for logging has been released and the flag to retain measurements after handover has not been set;
* the configuration for logging has been modified;
* All logged measurement configuration and the logged data shall be removed by the UE at switch off or detach.

[R2-2505839](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505839.zip) NW-side data collection Ericsson discussion

Proposal 7: (RRC-31) RAN2 does not specify further cases when the UE shall discard logged data for NW-side data collection, beyond already agreed cases.

RRC-34: Per use case vs common enhancements for NW-side data collection

[R2-2505195](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505195.zip) Remaining issues on NW side data collection vivo discussion NR\_AIML\_air-Core

Proposal 6. [RRC-34] A common approach should be considered for enhancements for NW-side data collection, and the following enhancements are common for all use cases:

* AS layer memory;
* logged data availability;
* low-power state indication.

[R2-2505075](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505075.zip) Leftover Issue Discussion on NW side data collection OPPO discussion Rel-19 NR\_AIML\_air-Core

Proposal 10: (RRC-34) AS layer memory and low power state indication should be defined per UE, i.e. common for all use cases, while data availability indicator should be sent per use case.

[R2-2505687](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505687.zip) Left issues for NW side data collection Lenovo discussion Rel-19

Proposal 4: When UE indicates the data availability to NW, UE also indicates the list of data logging configuration ID for which data is available.

Proposal 5: When gNB requests logged data from UE via UEInformationRequest message, gNB can also include the interested data logging configuration ID.

Proposal 6: The cause value (i.e., buffer full, buffer threshold reached, low power state) of data availability indication remain generic for all data logging.

RRC-39: The naming of IEs related to NW-side data collection

[R2-2505177](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505177.zip) Discussion on UE-side data collection LG Electronics Inc. discussion Rel-19 NR\_AIML\_air-Core

Proposal 10. [RRC39] To define field names and IE based on the content of the logged data rather than the specific use case

* Noted

[R2-2505675](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505675.zip) Remaining issues of NW-sided data collection Huawei, HiSilicon discussion Rel-19 NR\_AIML\_air-Core

Proposal 3: The names of the fields/IEs to request logged data from the UE and to report logged data or the availability of logged data to the NW should be use case specific.

Proposal 4: (RRC-39) Data availability triggering threshold should be configurable per data collection configuration.

Proposal 5: (RRC-39) The UE should include the corresponding configuration identifier (i.e. CSI-LoggedMeasurementConfigId) in the data available indication to allow the network to request specific data collected by the UE.

Proposal 6: (RRC-39) The network should be able to request the UE to send collected data for a specific data collection configuration, i.e. UEInformationRequest for NW-side data collection should include one or more CSI-LoggedMeasurementConfigId(s).

* Noted

RRC-36/51/52: How data is forwarded to OAM or source gNB after HO (RRC-36), data handling during inter-RAT HO (RRC-51), and how to handle collected data in CHO/LTM (RRC-52) [straight to offline]

[R2-2505195](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505195.zip) Remaining issues on NW side data collection vivo discussion NR\_AIML\_air-Core

Proposal 7: [RRC-36] On how data is forwarded to OAM or the source gNB, the following is proposed:

- How data is forwarded to OAM is out of RAN2 scope and should be referred to SA5;

- Xn signaling procedure can be adopted on how data is forwarded to source gNB, and details should be discussed in RAN3;

- RAN2 to LS to RAN3/SA5 to let them consider how data is forwarded to OAM or source gNB.

* Noted

[R2-2505150](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505150.zip) Discussion on NW side data collection Xiaomi discussion

Proposal 16: (RRC-51) UE discards the logged data upon inter-RAT handover.

* Noted

[R2-2505504](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505504.zip) Remaining issues on NW-sided data collection Apple discussion Rel-19 NR\_AIML\_air-Core

Proposal 3 (open issue RRC-52): RAN2 confirm that the solution agreed in RAN2#130 is only applicable to regular HO. To enable NW control on retaining logged data at CHO/LTM, source cell makes decision and includes a list of 1-bit indication corresponding to each candidate cell configuration in RRCReconfiguration

* Noted

**Agreements**

1. To define field names and IE based on the content of the logged data rather than the specific use case
2. Data forwarding to OAM or source gNB after HO is not in RAN2 scope and understands that other groups don’t have time to work on it.
3. UE discards the logged data upon inter-RAT handover.
4. RAN2 confirm that the solution agreed in RAN2#130 is applicable to regular HO and CHO (i.e. 1-bit indication corresponding to each candidate cell configuration in RRCReconfiguration is provided).
5. Do not introduce an indication from the UE to NW about unsuitable data collection configurations in Rel-19

*RRC-50: Suitability of data collection configuration (for both UE-side and network-side training*

[R2-2505150](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505150.zip) Discussion on NW side data collection Xiaomi discussion

Proposal 15: (RRC-50) Do not introduce an indication from the UE to NW about unsuitable data collection configurations in Rel-19

* Noted

[R2-2505713](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505713.zip) Discussion on NW side data collection Spreadtrum, UNISOC discussion Rel-19

Proposal 8: When UE can’t perform data collection based on received configuration, an indication from UE to

* Noted

[R2-2505873](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505873.zip) Remaining issues for NW side data collection Interdigital Inc. discussion Rel-19 NR\_AIML\_air-Core

[R2-2505995](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505995.zip) Discussion on NW-side data collection NTT DOCOMO, INC. discussion Rel-19

[R2-2506060](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506060.zip) Discussion on NW side data collection HONOR discussion Rel-19 NR\_AIML\_air-Core

[R2-2506072](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506072.zip) Remaining Issues on NW side data collection Kyocera discussion

[R2-2506103](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506103.zip) Discussion on Data Collection for NW-side Model Training Futurewei Technologies discussion Rel-19

[R2-2506109](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506109.zip) Discussion on NW-side data collection framework Ericsson, Nokia, Huawei, HiSilicon, T-Mobile, BT Plc, Verizon, TIM, AT&T, Deutsche Telekom, LG Electronics discussion

### 8.1.4 UE side data collection

*Configuration details for Rel-19 data collection for UE-sided model can be discussed in contributions in 8.1.2.2.*

*Discuss any of the aspects identified in RANP WF*

*o Study RAN aspects related to data transfer over UP*

*o Discuss level of NG-RAN involvement in the control and configuration of UE side data collection.*

*o Discuss NG-RAN involvement in the data transfer of UE side data collection (if any) (including visibility discussion).*

*o Discuss aspects/solutions from RAN perspective that enable the data transfer to CN domain or OAM domain.*

*o Discuss on the scalability aspects of CP*

Including the outcome of [POST130][033][AI PHY] UE Side data collection (Ericsson)

This AI is downprioritized as it will be in scope of Rel-20. If any contributionsa are submiited they should be focused on something critical needed to be included in the TR

**Email discussion: outcome of [POST130][033][AI PHY] UE Side data collection:**

[R2-2505936](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505936.zip) RAN2 inputs to TR 38.843 - first part Ericsson draftCR Rel-19 38.843 18.0.0 F FS\_NR\_AIML\_air\_Ph2

* TP is agreed in R2-2506457 with Annex removed and last sentence above the annex and include this previously agreed TP in the LS to RAN1

[R2-2505937](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505937.zip) RAN2 inputs to TR 38.843 - second part Ericsson draftCR Rel-19 38.843 18.0.0 F FS\_NR\_AIML\_air\_Ph2

* TP is agreed and will be included the LS to RAN1 to be included in the TR
* [AT131][039][AI PHY] LS to RAN1 on TPs (Ericsson)

Intended outcome: Notify RAN1 of agreed TPs, attach them and ask them to include in the TR.

Deadline: Friday by email.

R2-2506474 RAN2 inputs to TR 38.843 RAN2 LS out Rel-19 FS\_NR\_AIML\_air\_Ph2 To:RAN1

[R2-2506088](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506088.zip) Discussion on UE-side data collection Huawei, HiSilicon, OPPO, China Telecom, CATT, China Unicom, ZTE, NTT DoCoMo discussion Rel-19 NR\_AIML\_air-Core

**Not to be treated**

**standaridzed vs non-standaridzed data:**

[R2-2505472](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505472.zip) Discussion on the Necessity of Non-Standardized Data Mediatek Inc.,Nokia,Qualcomm Incorporated,InterDigital Inc. discussion [R2-2503777](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2503777.zip)

Proposal 1: Support non-standardized and partially standardized data contents in Solution 2 and/or Solution 3. The choice of solution will depend on the outcome of the data transfer study.

Proposal 2: Adopt the following principles to mitigate privacy risks and other principles are not excluded:

1. User consent enforcement: Recommendation to adapt the existing 3GPP User consent mechanism for UE sided data collection.
2. Data scope limitation: Restrict collection to non-user identifiable information, such as radio/sensor-generated metrics.
3. MNO governance: Allow operators to enable/disable non-standardized data collection.

[R2-2505177](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505177.zip) Discussion on UE-side data collection LG Electronics Inc. discussion Rel-19 NR\_AIML\_air-Core

Proposal 10. For Rel-19, RAN2 only focuses on standardized data, disregarding partial/non-standardized data.

[R2-2505125](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505125.zip) Analysis of solutions for UE side model data collection NEC discussion Rel-19 NR\_AIML\_air-Core

[R2-2506105](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506105.zip) Discussion on Data Collection for UE-side Model Training Futurewei Technologies discussion Rel-19

### 8.1.5 Model transfer/delivery

*For RAN2#131 contributions can be submitted only by operators addressing requirements. Other companies are encouraged to collaborate with operators.*

*Contributions will be treated in RAN2#131 only if time allows otherwise it is postponed for Rel-20.*

**Operator views on model transfer (If time allows)**

[R2-2505931](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505931.zip) Operators views for the AI\_ML model delivery options BT Plc, T-Mobile, Deutsche Telekom, Turkcell, Orange, TIM, AT&T, Verizon, Docomo, Nokia, KPN discussion Rel-19

=> Revised in [R2-2506169](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506169.zip)

[R2-2506169](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506169.zip) Operators views for the AI\_ML model delivery options BT Plc, T-Mobile, Deutsche Telekom, Turkcell, Orange, TIM, AT&T, Verizon, Docomo, Nokia, KPN, KDDI discussion Rel-19 [R2-2505931](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505931.zip)

Proposal 1: Solution 4a, OTT without 3GPP impact, is no longer discussed in RAN2 as a standardised solution for transferring/delivering AI/ML models

Proposal 2: One-sided model transfer should be specified by 3GPP

Proposal 3: One-sided dataset/model transfer solution shall follow below principles:

• A1 - Size: from RAN2 point of view, aim to support various sizes of dataset/model parameter transfer (FFS on model size);

• A2 - Continuity: service continuity of model transfer/delivery during UE mobility needs to be supported;

• A3 - Controllability: NW decides on if and when to transfer/delivery over the air interface;

• A4 - Latency: relaxed latency requirement and infrequent update;

• A5 - Visibility: dataset to be visible and understandable by MNO;

Proposal 4: Adopt additional requirements for both one-sided and two-sided model transfer/delivery.

• Model transfer/delivery: traffic should be transferred at a different priority, e.g., lower than user traffic.

• Differentiability: model transfer/delivery traffic should be differentiated from other user traffic.

• Security: there should be a guarantee that models are transferred securely, in a NW-aware manner, such that untrusted models cannot be downloaded.

• Addressability: Models need to be addressable such that the UE can request the transfer/delivery of a specific one

• Controllability: the NW is in control of if and when to transfer/deliver a model

## 8.2 Ambient IoT

(Ambient\_IoT\_solutions, leading WG: RAN1; REL-19; WID: RP-250796)

Time budget: 2.5 TU

Tdoc Limitation: 3 tdocs

### 8.2.1 Organizational

LS, Rapporteur input, including workplan, etc.

Including outcome of [POST130][027][AIoT] MAC Running CR (Huawei) and [POST130][028][AIoT] 38.300 Running CR (CMCC)

**LS to RAN2**

[R2-2505006](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505006.zip) Reply LS on paging ID length (C4-252466; contact: CICT Mobile) CT4 LS in Rel-19 Ambient\_IoT\_Solutions To:RAN2 Cc:SA2, SA3, RAN3

- ZTE is concerned that CT4 didn’t try to restrict the size set. In RAN2 we are fighting over 1 or 2 bits and this has added few hundreds bits. CATT thinks that the length is flexible and we have the length indicator. ZTE thinks that the paging message has to support the maximum and we have a restriction of 1000 bits. Qualcomm agrees with ZTE they even have a 8 bit paging type. And also we have multiple paging IDs.

- Xiaomi thinks that they tried but considering that SA3 is also asking for 100 bits. Huawei thinks that the big overhead is the paging ID itself.

- Futurewei thinks that compared to paging ID itself the length is small.

* Noted

[R2-2505040](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505040.zip) Reply LS on D2R message size for inventory response (R3-253940; contact: Xiaomi) RAN3 LS in Rel-19 Ambient\_IoT\_Solutions To:RAN2, SA2 Cc:SA3

* Noted

[R2-2505058](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505058.zip) Reply LS on paging ID length (S2-2505793; contact: CATT) SA2 LS in Rel-19 AmbientIoT-ARC, Ambient\_IoT\_Solutions To:RAN2, CT4, SA3 Cc:RAN3

* Noted

[R2-2505059](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505059.zip) Reply LS on D2R message size for inventory response (S2-2505849; contact: InterDigital) SA2 LS in Rel-19 AmbientIoT-ARC To:RAN2, RAN3

* Noted

[R2-2505064](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505064.zip) LS on security parameter in paging request message (S3-252392; contact: Huawei) SA3 LS in Rel-19 FS\_Ambient\_IoT\_Sec To:RAN2 Cc:SA2

- ZTE and CMCC thinks that there is a mode where this is not needed. It would be nice to not include the 128 bits and wait for SA3.

- CATT thinks it is feasible to include it but SA3 hasn’t concluded if this is mandatory or not. We can assume it is optional.

**Agreements**

1. RAN2 thinks it is feasible from a signalling perspective to add the 128 bits. However, from RAN2 perspective the less overhead the better, so SA3 should avoid adding additional parameters if possible.
2. Indicate to SA3 that RAN2 tries to minimize number of bits required. Have a maximum size of 1000bits, and whatever they include has to fit in the 1000bits considering bits from all TSG.
3. RAN2 will wait for SA3 conclusions in October on whether the “128bit random number in the paging request message” is always required or not.
4. Reply to SA3

- RAN2 thinks it is feasible from a signalling perspective to add the 128 bits. However, from RAN2 perspective the less overhead the better, so SA3 should avoid adding additional parameters if possible.

- Indicate to SA3 that RAN2 tries to minimize number of bits required. Have a maximum size of 1000bits, and whatever they include has to fit in the 1000bits considering bits from all TSG.

- Indicate space pressure from all the WG

* [AT131][020][AIoT] Reply to SA3 (Huawei)

Intended outcome:

Deadline: Thursday

[R2-2506440](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506440.zip) [Draft] Reply LS on security parameter in paging request message Huawei, HiSilicon LS out Rel-19 FS\_Ambient\_IoT\_solutions To:SA3 Cc:RAN3, SA2

* The LS is approved in R2-2506465

8R2-2506465 Reply LS on security parameter in paging request message RAN2 LS out Rel-19 FS\_Ambient\_IoT\_solutions To:SA3 Cc:RAN3, SA2

=> Approved

[R2-2506418](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506418.zip) LS on delayed A-IoT D2R NAS messages (C1-255165; contact: Huawei) CT1 LS in Rel-19 Ambient\_IoT\_Solutions To:RAN2 Cc:SA2

* Noted

**LS with RAN2 in CC**

[R2-2505005](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505005.zip) Reply LS on AIoT device identifier length (C4-252465; contact: Huawei) CT4 LS in Rel-19 AmbientIoT-CT To:SA2 Cc:CT1, RAN2, RAN3, SA3, CT3

* Noted

[R2-2505033](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505033.zip) Reply LS on the removal of service type information (R3-253800; contact: LGE) RAN3 LS in Rel-19 AmbientIoT-ARC, Ambient\_IoT\_Solutions To:SA2, RAN2 Cc:RAN1

* Noted

[R2-2505054](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505054.zip) Reply to LS on power and energy consumption budget for security features in A-IoT (RP-251886; contact: Huawei) RAN LS in Rel-19 FS\_Ambient\_IoT\_Sec, Ambient\_IoT\_Solutions-Core To:SA3, RAN1 Cc:RAN2, SA

* Noted

**Rel19 CR**

[R2-2505520](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505520.zip) A-IoT MAC running CR Huawei, HiSilicon draft TS Rel-19 38.391 0.0.3 Ambient\_IoT\_Solutions

* Endorse and used as a baseline for next revision
* [POST131][021][AIoT] MAC spec (Huawei)

Intended outcome: agree to CR

Deadline: Short

[R2-2505951](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505951.zip) Introduction of Ambient IoT CMCC CR Rel-19 38.300 18.6.0 1022 - B Ambient\_IoT\_Solutions

* [POST131][022][AIoT] Stage 2 CR (CMCC)

Intended outcome: agree to CR with RAN3 CR merged

Deadline: Short

**Email Discussion Outputs**

[R2-2505521](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505521.zip) Summary of A-IoT MAC open issues (outcome of [POST130][027][AIoT] MAC Running CR) Huawei, HiSilicon report Rel-19

Discussions

Proposal 3 (Issue 1-5 Transaction ID in CFRA paging): RAN2 confirms the pervious RAN2 baseline that transaction ID is not included in paging message for CFRA. (23/25)

- ZTE thinks that if we go this way the consequence is that we can’t use CFRA with command. We have to use CBRA. Qualcomm thinks that this is not properly designed as we can’t guarantee what happens down the road and it will create more problems in R20. Offino also agrees with ZTE, having it mandatory is better but we can consider also having it optional could be an option.

- Huawei explains that we can just clarify that for single device that reader can use CBRA.

- Ericsson agrees with Qualcomm that forward compatibility should be taken into account but perhaps there are other ways to solve.

*Proposals Add a 7-bit R2D TBS field (in unit of byte) after R2D message type indication in variable-length R2D messages (i.e., Paging message, Random ID Response message, R2D Upper Layer Data Transfer message, NACK Feedback message). (17/20)*

- CATT asks the need to include the TBS at all in RAN2. How can RAN2 can decode TBS correctly before the CRC check. Xiaomi indicates that you do it in parallel.

**Transaction ID**

*Proposal 1-2 (Issue 1-2 Transaction ID): RAN2 to make quick decision on 4 bits (15/25) or 6 bits (12/25) of Transaction ID length.*

- ZTE thinks that 6 is minimum and the only argument is to save the 2 bits and we shouldn’t argue for 2 bits. Xiaomi wants to confirm that we wouldn’t specify how it is generated.

**AS ID**

Proposal 5 (Issue 3-3 AS ID release): Explicit AS ID release message is not needed. (18/24). [If needed: New message can include no AS ID (to release all devices) or AS ID list (to release one or multiple devices).]

- ZTE explains that we don’t have RRC connections concept and SA2 is referring to is context between reader and CN. Xiaomi further explains that the reader will stop transmitting and the device will lose power.

- Ericsson and Vivo have concerns. Ericsson is concerned that the paging may come another day. Xiaomi and Nokia further explains that the reader will stop transmitting and the device will lose power.

- Mediatek thinks that there is a risk that the device keeps the AS ID as it changes readers, but it doesn’t break the system. Nokia agrees with Mediatek.

**Forward Compatibility Related Issues**

Proposal 11 (Issue 4-5 forward compatibility):

- Add a 1-bit version field in Msg2, NACK feedback message, R2D upper layer data transfer message, and Rel-19 devices drop the whole message when version field is set to 1. (The version field in the Paging message is handled the same way.)

- Similar to Paging message, Access Trigger message can be extended to add more fields at the end of the message in further releases, and Rel-19 devices ignore the extension parts added in future release instead of dropping the whole message.

- Qualcomm and Ericsson indicate that we don’t call these types of message R bits, as this is not how Rbits are used in legacy NR.

- Ericsson thinks that we need a bit to indicate to the R19 UEs whether it should respond to that message or not. ZTE thinks that in this Rel-19 this bit is set to zero. Should we specify something on what happens with the bit is set to 1, we can’t specify that now. We just need to agree how we extend this. Mediatek thinks that we need to specify what happens with Rel-19 when it sees a bit to 1. We can model it as an extension to the message type.

- LG is concerned that with 1 bit version field we can’t introduce new format later on.

- Qualcomm thinks that a version bit is not useful as we can just use a new message type.

- Interdigital explains that we have both levels of flexibility, dropping completing the message (first part of proposal) and second possibility where we can re-use Rel-19 message with some extension.

- Qualcomm thinks that we can just extend message type by 1 bit. ZTE thinks that this allows extension per message, critical vs. non-critical.

*Proposal 6 (Issue 3-5 D2R message type): RAN2 confirms D2R message type is not introduced in this release (Rationale: no valid requirement, as DOA coexist with R19 device is excluded in R20 WID). (20/25)*

- Apple thinks there is a benefit to use in R19, especially for zero message and that doesn’t carry any data. So if we introduced a new message type then we don’t need to care about the next issue. Huawei explains that it would require to add a byte.

- Oppo explains that from RAN1 perspective no co-existing means not dealing with interference but from RAN2 perspective we shouldn’t preclude the new message type. Xiaomi indicates that the note was added to avoid RAN2 discussions. Huawei thinks that without RAN1 there is no point for RAN2 to discuss.

- ZTE thinks that from a protocol perspective it would be beneficial for the reader to get the message type and this would avoid the reader having to process the messages in unexpected ways and remember the state. Qualcomm, Offinno, ETRI and Nokia agrees, and even if DOA co-existance is excluded from deployment point of view there is nothing to exclude this from happening. CCMC thinks that the reader would know what to expect. ZTE thinks that it is not a good protocol design.

- LG thinks that there are exceptional cases to be expected so have similar view with ZTE and Qualcomm. Mediatek agrees with ZTE and has some concerns that we are building a brittle system. If everything goes well by having state knowledge the reader can figure out. However we have made assumptions that may not be necessarily true in real deployments.

- Vivo thinks we should keep it simple.

- Interdigital thinks that we spend a lot of time ensuring forward compatibility for R2D and we should do the same for D2R.

- Sony, Lenovo, agrees with Huawei.

- Samsung asks if we can consider to make it extendable for future releases. CATT agrees as for Rel-19 there is not need but for R20 we have a mechanism to extend for future releases. Huawei thinks that we have ways to do this as we have extra bits on the SDU length.

- Huawei explains that it doesn’t come for free as we have to add one byte. Apple and ZTE thinks it is only 2 bits.

- Mediatek and ZTE think that even if we have an extra byte it is not a critical problem as this UL message anyways typically carries data.

- Oppo thinks that we anyways have to add 128 bits for security so adding one extra byte is not a critical problem.

- Huawei, Lenovo, and CMCC have concerns that we are adding overhead for no reason for Rel-19 without knowing the use cases of Rel-20.

*Proposal 10 (Issue 2-3 trigger message alignment): Access Trigger message is bit-aligned (no padding bits). (16/21)*

- 3 bit message

**More Data Indication (MDI)**

Proposal 8 (Issue 3-7 More data indication): For no data available case, RAN2 to quick decide either to set more data indication to "1" (9/23) or "0" (15/23). (Note: reader behavior is expected to be same either way).

- Futurewei thinks that we have a legitimate case where we have a zero SDU case with nothing else expected. And we have the usual zero SDU but data arrives later. LG agrees as there can be integrity failure and in this case the device should indicate no more data indication. Qualcomm thinks that even the NAS drops something it should create a response. Futurewei thinks that if it doesn’t understand the message it will just drop it.

**Agreements**

1 RAN2 confirms how to generate transaction ID is left to reader (no spec impact)

2 8-bit length field (in unit of bit) is assumed to indicate the paging ID length, based on current SA2/CT4 conclusion.

3 RAN2 confirms the pervious RAN2 baseline that transaction ID is not included in paging message for CFRA. Clarify that CBRA can be used by reader for single device.

4 No entry number is included in either Msg2 or NACK feedback message. RAN2 understands that device can decode the entries one by one till message end, other implementations are not precluded (we will not capture this in the spec).

5 R2D TBS information is not included in the Access Trigger message.

6 Add a 7-bit R2D TBS field (in unit of byte) after R2D message type indication in variable-length R2D messages (i.e., Paging message, Random ID Response message, R2D Upper Layer Data Transfer message, NACK Feedback message).

7 6 bits for Transaction ID length.

8 Explicit AS ID release message is not needed.

9 For forward compatibility:

- Paging message can be extended to add more fields at the end of the message in further releases, and Rel-19 devices ignore the extension parts added in future release instead of dropping the whole message, without extension indication. Future extension using the same message type is not supported for R2D messages other than paging message.

- No version bit will be introduced

- Remove the R-field in paging message from the running CR

- Use 3-bit R2D message type.

10 A 2 bits D2R message type is introduced in this release. For Rel-19 only one message type exists for D2R message. RN16 doesn’t include message type as already agreed.

11 Access Trigger message is 3 bits and no padding bits are added (i.e. not byte aligned)

[R2-2506441](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506441.zip) Outcome of A-IoT forward compatibility offline Huawei discussion Rel-19 FS\_Ambient\_IoT\_solutions

* Noted

Proposal 2b: FFS if to extend 3-bit R2D message type to 4 bits:

Option 1-1: Use 3-bit R2D message type. Use reserve values first if overhead is more critical. Can use a reserved value as future indication like eLCID, if needed. (Xiaomi, Huawei, ZTE, DCM, Ericsson, Lenovo, IDC, MTK, ETRI, vivo)

Option 1-2: Use 4-bit R2D message type. (Apple, SS, LG, QC, Nokia)

- ZTE is concerned with adding extra bits in in access trigger.

### 8.2.2 A-IoT Paging

Contributions should focus on paging message content and format, including paging identifier details, transaction ID details, resource information details , end-of procedure, etc.

**Handling SA3 LS on Security [Monday]**

[R2-2505245](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505245.zip) Discussion on paging procedure for Ambient IoT OPPO discussion Rel-19 Ambient\_IoT\_Solutions

Proposal 1: Rely to SA3 that:

 It is feasible to include additional 128 bits security parameters in paging message.

 The maximum size of paging message is 1000 bits.

 It is difficult to calculate the maximum bits which can be used for security parameters, as the paging message is used to include both the Rel-19 paging fields and future extension fields. We should avoid sending too many bits of security parameters according to the current paging message size.

**Visibility of paging ID**

[R2-2505679](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505679.zip) Remaining issues on paging for Ambient IoT Lenovo discussion Rel-19

Proposal 3 (Issue 1-7): RAN2 to confirm the working assumption that the paging identifier is transparent to the A-IoT MAC layer and can be carried by upper layer.

* Noted

[R2-2505091](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505091.zip) Discussion on Paging for Ambient IoT CATT discussion Rel-19 Ambient\_IoT\_Solutions

Proposal 3: (1-6) The paging ID is visible to the AIoT MAC layer.

* Noted
* The paging ID is visible to the reader. No specification impact.

**Encoding of number of access occasions**

[R2-2505121](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505121.zip) Remaining open issues on A-IOT paging procedure Xiaomi discussion Rel-19 Ambient\_IoT\_Solutions

Proposal 1a: The number of access occasions is introduced as linear value instead of exponential way.

Proposal 1b: If proposal 1a is not acceptable, the device should adjust the number of AOs to the smallest larger or equal multiple of X\*NSFS before performing the AO selection

* Noted

[R2-2505196](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505196.zip) Remaining issues on AIoT Paging vivo discussion FS\_Ambient\_IoT\_solutions

Proposal 1. (Issue1-4) RAN2 to revisit the agreement and to introduce the number of resource sets (a set of resources following Paging message/Access trigger messages) instead of the number of access occasions in the paging message, via 10-bit linear encoding way.

* Noted

[R2-2505429](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505429.zip) Remaining open issues on paging ETRI discussion Rel-19

Proposal 4. The number of AO field has a 4-bit length and its value is interpreted using an exponential mapping.

* Noted

Discussion

- LG thinks we should keep the current way it is the in CR. Qualcomm thinks that we have a problem with existing CR.

After offline

- ZTE thinks that we should back to linear and 15 bits as 4 bit exponential doesn’t provide enough granularity. Huawei agrees and we should either do linear or go back to previous meeting agreements.

- Qualcomm thinks that we would many random generators if we go for linear. Apple doesn’t agree.

**Agreements**

1 Keep current agreement. The reader should provide enough access trigger to cover at least signalled AOs in current round, unless the reader choses to start the subsequent paging round. Capture in stage 2 and rapporteur will work in the wording.

**Additional Information in Access Trigger Message**

[R2-2505447](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505447.zip) Discussion on Paging for Ambient IoT Apple discussion Rel-19 Ambient\_IoT\_Solutions

Proposal 2 The 5 LSB of “Access Slot number” is included in Access Trigger message.

* Noted

[R2-2505768](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505768.zip) Discussion on the remaining issues on A-IoT paging Samsung discussion Rel-19 Ambient\_IoT\_Solutions-Core

Proposal 1: RAN2 is kindly asked to discuss whether the configuration mismatch between reader and device exists due to the miss of the A-IoT paging message with the updated configurations (i.e., number of access occasions, D2R scheduling info. ).

Proposal 2: RAN2 is kindly asked to discuss whether and how to address the configuration mismatch issue, and, if needed, the following options can be considered:

 Option 1: do nothing

 Option 2: no configuration update among A-IoT paging message with the same Transaction ID

 Option 3: add configuration ID in A-IoT paging message and Access trigger message

* Noted

[R2-2505864](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505864.zip) Remaining aspects of Ambient IoT Paging Qualcomm Incorporated discussion Rel-19 Ambient\_IoT\_Solutions-Core

Proposal 2: RAN2 confirms that R2D trigger message does not include slot number/count down number.

* Noted

Discussions

- Xiaomi thinks that the problem in apple and Samsung can agree but the problem is that it is quite late so we may not need to address this in R19. Docomo agrees with qualcomm. CMCC also thinks it is an optimization and we should keep it simple.

- Samsung is concerned with interference problem if there is both UL and DL transmissions at the same time. This will impact the efficiency of the whole system.

- Apple thinks that with their solution it would solve Samsungs problem as well. And thinks that option 2 is not feasible.

- ZTE asks what cannot be changed with option 2. Samsung explains that X and Y shouldn’t be changed but number of AOs can change. ZTE thinks that the reader shall be able to change the number of AOs and this can be done by either changing X and Y or changing number of access triggers.

Option 2: no configuration update for X or Y among A-IoT paging message with the same transaction ID

- Vivo thinks that there is a problem with different transaction ID. Samsung thinks option 3 solves that.

- Huawei thinks that even if we do nothing the consequence is only for one device failure and then they will do re-access. Xiaomi explains that this impacts the system.

- ZTE agrees with the problem but thinks the solution is worst than the problem. Adding bits to the trigger message is not a good solution.

**Agreements**

1. RAN2 confirms that R2D trigger message does not include slot number/count down number in this release
2. RAN2 acknowledges the problem, and it is up to reader implementation to avoid the mismatch between reader and device due to the miss of the A-IoT paging message with updated configurations in this release. RAN2 will not add any explicit information in this release to address this problem

Not treated

[R2-2505181](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505181.zip) Discussion on Paging for A-IoT Transsion Holdings discussion Rel-19

[R2-2505263](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505263.zip) Remaining issues on A-IoT Paging Ofinno discussion Rel-19

[R2-2505313](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505313.zip) Paging consideration for forward compatibility of Device 1 Panasonic discussion Rel-19 Withdrawn

[R2-2505375](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505375.zip) open issues for paging ZTE Corporation, Sanechips discussion

[R2-2505414](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505414.zip) Forward Compatibility and Remaining Paging Details InterDigital discussion Rel-19 Ambient\_IoT\_Solutions

[R2-2505522](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505522.zip) A-IoT paging Huawei, HiSilicon discussion Rel-19

[R2-2505565](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505565.zip) Open issues on AIoT paging Nokia discussion

[R2-2505613](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505613.zip) Remaining issues on A-IoT paging Sharp discussion

[R2-2505614](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505614.zip) Discussion on security parameter in paging message KT Corp. discussion

[R2-2505649](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505649.zip) Discussions on ambient IoT paging ROBERT BOSCH GmbH discussion Rel-19

[R2-2505651](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505651.zip) Discussion on MAC Open issues on Paging Sony discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2505727](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505727.zip) Remaining issues on A-IoT paging ITL discussion

[R2-2505852](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505852.zip) Paging consideration for forward compatibility of Device 1 Panasonic discussion Rel-19

[R2-2505909](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505909.zip) A new issue on AIoT Paging Futurewei discussion Rel-19 Ambient\_IoT\_Solutions

[R2-2505935](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505935.zip) Discussion on remaining issues on AIoT paging NTT DOCOMO INC. discussion Rel-19

[R2-2505950](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505950.zip) Discussion on A-IoT paging CMCC discussion Rel-19 Ambient\_IoT\_Solutions

[R2-2506005](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506005.zip) Discussion on A-IoT paging LG Electronics Inc. discussion FS\_Ambient\_IoT\_solutions

[R2-2506061](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506061.zip) Discussion on A-IoT paging HONOR discussion Rel-19 Ambient\_IoT\_Solutions

[R2-2506094](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506094.zip) Discussion on DL messages for Ambient IoT UEs Ericsson discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2506116](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506116.zip) Discussion on Ambient-IoT paging III discussion

### 8.2.3 A-IoT Random Access

*Contributions should focus on details of contention-based and contention-free access, including re-access for failure handling and MSG2 boundary, msg content/format, format (R2D trigger message, Msg1, Msg2, NACK based feedback for re-access, etc.)*

**MSG2 Boundary and Frequency Index**

[R2-2505415](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505415.zip) Remaining Random Access Issues InterDigital Inc., Huawei, HiSilicon, Xiaomi, Fujitsu, Ofinno, ETRI, Lenovo, NEC, Ericsson, China Telecom, Mediatek discussion Rel-19 Ambient\_IoT\_Solutions

Proposal 1a: Use option C for CBRA failure boundary: “The boundary is the reception of either the kth Access trigger message or the subsequent paging message”

Proposal 1b: RAN2 discuss whether to use fixed value of K (e.g., K=2 or K=4) or a configurable value in option C.

Proposal 2: 3-bit frequency index is included with each echoed random ID in MSG2.

* Noted

[R2-2505769](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505769.zip) Discussion on the remaining issues on A-IoT RA procedure Samsung discussion Rel-19 Ambient\_IoT\_Solutions-Core

Proposal 1: RAN2 is kindly asked to agree that the CBRA failure can be detected when the device receives the next Access Trigger message after Msg.1 transmission.

Proposal 2: RAN2 is kindly asked to agree that the frequency index in Msg. 2 is not needed for Msg.1 collision resolution.

* Noted

Discussion

On boundary

- Qualcomm, Vivo, thinks we increase complexity with option c without getting much value.

- Vivo doesn’t want a configurable value. Huawei and CMCC thinks we can make it fixed and complexity is not a bit problem.

- Mediatek doesn’t see a real complexity problem as when you receive message 2 you always parse ms2 and the processing is the same whether it arrives in first or other windows. Yes there is a counter that needs to be used but that can be done. Qualcomm doesn’t think it is the same complexity, as if it get it in a window I’m not supposed to receive a msg2 I would kill the msg2. Mediatek agrees what we would drop it, but the counter just extends the time you expect message 2.

- ZTE thinks that this will increase collision probability as we increase K. From reader perspective we would transmit message within the same trigger as there is no reason to keep it longer. Huawei thinks that with RN16 we have very very low collision probability and even if increasing K we are increasing collision by 4, which is still very low. Xiaomi agrees with Huawei.

- Apple thinks that K is better for device and larger better for reader. Suggests compromise to set it to 2.

- ZTE would like a configurability to off or on with K=4. Interdigital thinks that this configurability adds more complexity.

- ZTE is concerned that now implementations that would do K=1 are penalized.

Frequency index

- CMCC thinks it should be a bitmap. Samsung thinks that we should first discuss the need for the frequency index.

- Xiaomi wants the index even with k=1

- MEdiatek the issue is for the pool of devices what is the probability of collision. With 16 bits device ID and 64 devices you have a 3% collision probability for these devices. .

[R2-2506431](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506431.zip) Comeback on Random Access and Access Occasion Number InterDigital discussion Rel-19 Ambient\_IoT\_Solutions

Comeback agreements in 8.2.3

*As a baseline, the boundary is the reception of either the kth Access trigger message or the subsequent paging message. K is fixed to 4. Reader implementation to send MSG2 immediately (before k) is not excluded.*

- ZTE thinks that the other implementation is essential and only way to agree is to make it configurable between 1 and 4. Not only the failure case is problematic but also the success case as msg 2 can be repeated. And we are finding more and more problem with K1. CMCC thinks that ZTE comment is valid. Qualcomm thinks that if K=4 the reader will delay the msg2 sending to the 4th window. ZTE thinks that all other RACH parameters are configurable.

- Vivo is concerned with K configurable.

 RAN2 to revisit the agreement and to introduce the number of resource sets (a set of resources following Paging message/Access trigger messages) instead of the number of access occasions in the paging message, via 4-bit exponential to indicate the number of Access trigger messages. The maximum number of access occasions supported is limited to 2^15.

**Agreements**

1. 3-bit frequency index is optionally included with each echoed random ID in MSG2. We have 1 bit in MSG2 to indicate presence/absence of the frequency information for all included RN16s.
2. The boundary is the reception of either the kth Access trigger message or the subsequent paging message. Reader implementation to send MSG2 immediately (before k) is allowed. K can be configured to be either 1 or 4 in paging message.

[R2-2505092](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505092.zip) Discussion on A-IoT random access CATT discussion Rel-19 Ambient\_IoT\_Solutions

[R2-2505122](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505122.zip) Remaining open issues on access procedure for A-IOT Xiaomi discussion Rel-19 Ambient\_IoT\_Solutions

[R2-2505182](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505182.zip) Discussion on Random Access for A-IoT Transsion Holdings discussion Rel-19

[R2-2505197](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505197.zip) Remaining issues on AIoT Random Access vivo discussion FS\_Ambient\_IoT\_solutions

[R2-2505264](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505264.zip) Remaining issues on A-IoT Random Access Ofinno discussion Rel-19

[R2-2505376](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505376.zip) open issues for random access ZTE Corporation, Sanechips discussion

[R2-2505378](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505378.zip) Discussions on ambient IoT random access ROBERT BOSCH GmbH discussion Rel-19

[R2-2505416](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505416.zip) On Byte Alignment of the Access Trigger Message InterDigital, Apple, vivo discussion Rel-19 Ambient\_IoT\_Solutions

[R2-2505448](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505448.zip) Discussion on Random Access for Ambient IoT Apple discussion Rel-19 Ambient\_IoT\_Solutions

[R2-2505574](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505574.zip) Discussion on remaining open issues on random access for A-IoT OPPO discussion Rel-19 Ambient\_IoT\_Solutions

[R2-2505576](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505576.zip) Discussion on random access aspects of Ambient IoT KT Corp. discussion Rel-19 Ambient\_IoT\_Solutions

[R2-2505615](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505615.zip) Msg2 monitoring window for A-IoT random access Panasonic discussion Rel-19

[R2-2505628](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505628.zip) A-IoT random access procedure Huawei, HiSilicon discussion Rel-19 Ambient\_IoT\_Solutions

[R2-2505652](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505652.zip) Random Access msg 2 monitoring configuration Sony discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2505680](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505680.zip) Remaining issues on random access for Ambient IoT Lenovo discussion Rel-19

[R2-2505709](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505709.zip) Discussion on left issues of A-IoT random access Spreadtrum, UNISOC discussion Rel-19

[R2-2505728](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505728.zip) Remaining issues on random access for A-IoT ITL discussion

[R2-2505746](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505746.zip) Handling of Msg2 Continental Automotive discussion

[R2-2505793](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505793.zip) Discussion on UL multiple access Ericsson discussion Rel-19 Ambient\_IoT\_Solutions

[R2-2505818](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505818.zip) Views on Random Access Aspects of Ambient IoT Qualcomm Incorporated discussion Ambient\_IoT\_Solutions-Core

[R2-2505910](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505910.zip) Remaining issue on AIoT Random Access Futurewei discussion Rel-19 Ambient\_IoT\_Solutions

[R2-2505923](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505923.zip) Open issues on random access for AIoT Nokia discussion Ambient\_IoT\_Solutions

[R2-2505969](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505969.zip) Remaining open issues on random access for Ambient IoT CMCC discussion Rel-19 Ambient\_IoT\_Solutions

[R2-2505972](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505972.zip) Remaining issues on random access in Ambient IoT Kyocera discussion Rel-19

[R2-2505981](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505981.zip) Discussion on remaining issues on AIoT random access NTT DOCOMO INC. discussion Rel-19

[R2-2506004](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506004.zip) Discussion on random access aspects for Ambient IoT LG Electronics Inc. discussion FS\_Ambient\_IoT\_solutions

[R2-2506028](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506028.zip) Discussion on Ambient IoT random access ASUSTeK discussion Rel-19 Ambient\_IoT\_Solutions

[R2-2506062](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506062.zip) Discussion on A-IoT random access HONOR discussion Rel-19 Ambient\_IoT\_Solutions

[R2-2506167](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506167.zip) Discussion on A-IoT Random Access CEWiT discussion

### 8.2.4 A-IoT Data Transmission and Other general aspects

*Contributions should focus on MAC PDU/signaling general format (the content of paging, Msg1, Msg2 etc. should be discussed in above specific agendas), TBS size and byte alignment (based on RAN1 discussion), message details for segmentation for D2R, data not available case (pending CT1 inputs), segmentation for D2R, AS ID\*

**More Data Indication (MDI)**

[R2-2505123](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505123.zip) Remaining open issues on Data transmission Xiaomi discussion Rel-19 Ambient\_IoT\_Solutions

Proposal 1: (Issue 3-7) RAN2 to agree that the more data indication is a mandatory field (without specification impact) and should be set to “1” for the case of zero SDU.

[R2-2505924](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505924.zip) Discussion on A-IoT data transmission LG Electronics Inc. discussion Rel-19 Ambient\_IoT\_Solutions

Proposal 6. More Data Indication (MDI) field is set to 0 if upper layer data is not available for transmission.

[R2-2505377](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505377.zip) open issues for data transmission ZTE Corporation, Sanechips discussion

Proposal 2 (Issue 3-7): The setting of “more data indication” can be left to implementation in case zero-sized upper layer SDU is included in the MAC PDU.

**Follow-up discussion on CT1 LS**

[R2-2505523](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505523.zip) A-IoT data transmission Huawei, HiSilicon discussion Rel-19

Proposal 3: (Issue 3-6) No further RAN2 standard action is needed, regardless the CT1 reply:

 In case CT1 concludes “successful execution” as the D2R response for write, implementation behaviors can be the following:

 Reader sends another R2D upper layer data message later (if D2R with “zero SDU” is received);

 Device implementation avoids the redundant write operation (by identifying the same command), and directly sends the actual D2R response.

 Otherwise, no further RAN2 action is needed either (i.e., the issue is addressed by CT1).

* Noted

[R2-2505913](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505913.zip) Discussion on handling the delayed NAS response Futurewei discussion Rel-19 Ambient\_IoT\_Solutions

Proposal 3. The reader, in response to 0 SDU and MDI=1 in the device’s MAC response, will send a follow-up R2D Upper Layer Data Transfer message at a later time to schedule another D2R Upper Layer Data Transfer message from the device. The follow-up R2D Upper Layer Data Transfer message includes the Received Data Size field with the Received Data Size field set to value 0, without including the original command.

Proposal 4. If the delayed NAS response becomes available at the MAC layer of the device, the device responds to the follow-up R2D Upper Layer Data Transfer message by sending a D2R Upper Layer Data Transfer message with 1 SDU (where the MDI is set based on the segmentation status); otherwise, if the delayed NAS response is still unavailable at the MAC layer of the device, the device sends a MAC response with 0 SDU and MDI=1 again.

* Noted

[R2-2505819](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505819.zip) Data Transmission and Other General Aspects of Ambient IoT Qualcomm Incorporated discussion Ambient\_IoT\_Solutions-Core

When there is no NAS response available to transmit at the D2R occasion, besides 0 SDU indication to Reader, A-IoT device sends to Reader an estimated time about when the NAS command response will be ready.

* Noted

Discussion

- Huawei, Mediatek and Xiaomi think that we can agree with not sending the original command.

- Apple wonders how the reader knows when it should send the follow up scheduling to retrieve the data. Mediatek indicates that later means later and it will be a re-iterative process.

- Apple thinks that we are using the offset zero. Interdigital explains that this is aligning the behaviour with segmentation.

- CATT ask how gNB ends this re-iterative scheduling. Xiaomi explains that this is reader implementation. Mediatek explains that other layers and timers will handle this.

**Agreements on no data available due to delay in NAS**

1. The reader determines no data available case by SDU length 0. As more data indication is mandatory, the device sets this bit to "0".
2. The reader, in response to 0 SDU in the device’s MAC response, will send a follow-up R2D Upper Layer Data Transfer message at a later time to schedule another D2R Upper Layer Data Transfer message from the device.
3. The follow-up R2D Upper Layer Data Transfer message includes the Received Data Size field with the Received Data Size field set to value 0, without including the original command.

**AS ID Release Conditions**

[R2-2505829](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505829.zip) Data transmission and other aspects in AIoT Ericsson discussion Rel-19 Ambient\_IoT\_Solutions\_Ph2-Core

Proposal 3 Upon reception of NACK message addressed to the device, its AS ID is released

* Upon reception of NACK message addressed to the device, its AS ID is released
* Noted

**Byte Alignment**

[R2-2505523](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505523.zip) A-IoT data transmission Huawei, HiSilicon discussion Rel-19

*Proposal 6: To ensure byte alignment for the variable size R2D message:*

* Paging and Msg2 (Variable bit length): add one “fill field” in the end of the message (1~7bits).*

* NACK feedback (AS ID entry(ies) self-aligns, message type is 3-bit fixed): add 5 R-bit after message type field.*

* R2D upper layer data message (data SDU self-aligns, other fields are of fixed bits): add R bits after CI field to differentiate R-bit number when data SDU or received data size is present. Confirm MAC padding field and SDU length field are not needed.*

- Docomo and Qualcomm are concerned that we will not be able to multiplex multiple messages in the same PDU.

**Agreements**

To ensure byte alignment for the variable size R2D message:

1. Paging and Msg2 (Variable bit length): add one “fill field” in the end of the message (1~7bits).
2. NACK feedback (AS ID entry(ies) self-aligns, message type is 3-bit fixed): add R-bit(s) after message type field.
3. R2D upper layer data message (data SDU self-aligns, other fields are of fixed bits): add R bits after CI field to differentiate R-bit number when data SDU or received data size is present. Confirm MAC padding field and SDU length field are not needed.
4. R bit is set to zero in this release. [CB]
5. What’s included in the fill field is not specified, but device ignores the fill field.
6. Capture the intended behaviour when R bit is not as expected (i.e. the receiver ignores the R bit and parse the rest of the message).

**Formatting of Scheduling Information**

[R2-2505449](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505449.zip) Discussion on A-IoT MAC message formats and data transmission Apple discussion Rel-19 Ambient\_IoT\_Solutions

Proposal 1 Use a 9-bit field to jointly code “Bit Duration” and “ Frequence Resource Indication “ for D2R scheduling Information, if bitmap is used to indicate frequency resource.Proposal 2 When a single D2R resource is signaled in R2D message, use 3-bit integer to represent “Frequence Resource Indication”.

[R2-2505768](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505768.zip) Discussion on the remaining issues on A-IoT paging Samsung discussion Rel-19 Ambient\_IoT\_Solutions-Core

Proposal 4: RAN2 is kindly asked to use separate fields for bit duration and frequency resource indication (as the current running CR).

**Energy Status Indication**

[R2-2506048](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506048.zip) Ambient IoT data transmission and energy status indication MediaTek Inc., Vodafone, Nokia, Samsung, NTT DOCOMO INC., InterDigital, T-Mobile USA discussion Rel-19 Ambient\_IoT\_Solutions-Core [R2-2506046](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506046.zip)

Proposal 1: Specify a mechanism for the device to indicate to the reader if the device can complete a requested command procedure when considering its energy status and radio conditions (taking into account both R2D and D2R directions, and with no requirement on the reader to take any specific action on the indication).

[R2-2505093](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505093.zip) Discussion on the A-IoT Data Transmission CATT discussion Rel-19 Ambient\_IoT\_Solutions

[R2-2505156](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505156.zip) Left issues for Data transmission in A-IOT Transsion Holdings discussion Rel-19

[R2-2505198](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505198.zip) Remaining issues on AIoT Data Transmission vivo discussion FS\_Ambient\_IoT\_solutions

[R2-2505265](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505265.zip) Remaining issues on A-IoT Data Transmission Ofinno discussion Rel-19

[R2-2505314](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505314.zip) AS ID release upon receiving paging message Panasonic discussion Rel-19 Withdrawn

[R2-2505371](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505371.zip) Discussions on ambient IoT data transmission ROBERT BOSCH GmbH discussion Rel-19

[R2-2505417](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505417.zip) Remaining Aspects on Data Transmission InterDigital discussion Rel-19 Ambient\_IoT\_Solutions

[R2-2505430](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505430.zip) Remaining open issues on data transmission ETRI discussion Rel-19

[R2-2505561](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505561.zip) Open issues in AIoT Nokia discussion

[R2-2505570](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505570.zip) Ambient-IoT Data transmission NEC discussion Rel-19 Ambient\_IoT\_Solutions-Core

[R2-2505573](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505573.zip) Discussion on left FFS issues on A-IoT Data Transmission OPPO discussion Rel-19 Ambient\_IoT\_Solutions

[R2-2505653](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505653.zip) Energy level indication Sony discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2505681](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505681.zip) Remaining issues on data transmission for Ambient IoT Lenovo discussion Rel-19

[R2-2505742](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505742.zip) AS ID release procedure for CFRA Continental Automotive discussion

[R2-2505770](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505770.zip) Discussion on the remaining issues on A-IoT data Samsung discussion Rel-19 Ambient\_IoT\_Solutions-Core

[R2-2505851](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505851.zip) AS ID release upon receiving paging message Panasonic discussion Rel-19

[R2-2505941](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505941.zip) Discussion on the remaining issues of data transmission for A-IoT CMCC discussion Rel-19 Ambient\_IoT\_Solutions

[R2-2505973](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505973.zip) Remaining issues on data transmission in Ambient IoT Kyocera discussion Rel-19

[R2-2506029](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506029.zip) Discussion on Ambient IoT data transmission ASUSTeK discussion Rel-19 Ambient\_IoT\_Solutions

[R2-2506046](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506046.zip) Ambient IoT data transmission and energy status indication MediaTek Inc., Vodafone, Nokia, Samsung, NTT DOCOMO INC., InterDigital discussion Rel-19 Ambient\_IoT\_Solutions-Core

=> Revised in [R2-2506048](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506048.zip)

[R2-2506057](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506057.zip) Discussion on remaining issues on AIoT data transfer NTT DOCOMO INC. discussion Rel-19

[R2-2506123](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506123.zip) Remaining issues on A-IoT data transmission Fraunhofer HHI, Fraunhofer IIS discussion

## 8.3 AI/ML for Mobility

(FS\_NR\_AIML\_Mob; leading WG: RAN2; REL-19; SID: [RP-242393](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_105/Docs/RP-242393.zip))

Time budget: 2 TUs

Tdoc Limitation: 4 tdocs

### 8.3.1 Organizational

LS, Rapporteur input, including workplan, etc.

Including outcome of [POST130][021][AI Mob] TR update (Oppo)

**Agreements**

* The SI is considered completed from RAN2 point of view.

[R2-2505161](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505161.zip) Text proposal of TR 38.744 to capture spec impact\_v15 OPPO pCR Rel-19 38.744 1.1.0 FS\_NR\_AIML\_Mob

* The TP is endorsed and will be used as baseline for further updates
* [POST131][032][AI Mob] TR (Oppo)

Intended outcome: Agree to final TR to be submitted to plenary

Deadline: Short

[R2-2505184](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505184.zip) Text proposal of TR 38.744 on model complexity OPPO pCR Rel-19 38.744 1.1.0 FS\_NR\_AIML\_Mob

- Huawei thinks that we can capture CDF as it is unclear what majority means

- Apple would like to see a Note to capture that some simple models which perform well

- Qualcomm would like to ensure that we don’t use this information to decide on UE capabilities. Oppo confirms it is only informational.

* Agree with intention to capture this information and further check offline how
* Check whether and how to capture the simple AI model

[R2-2505185](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505185.zip) Text porposal of TR 38.744 on conclusion of AI mobility SID OPPO pCR Rel-19 38.744 1.1.0 FS\_NR\_AIML\_Mob

* [AT131][033][AI Mob] Conclusions for TR (Oppo)

Intended outcome: Identify and agree to possible conclusions.

Deadline: Thursday

[R2-2506468](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506468.zip) Summary of [AT131][033][AI Mob] Conclusions for TR (OPPO) OPPO discussion Rel-19 FS\_NR\_AIML\_Mob

* The TP will be directly included in the TR and will take the changes agreed online into account.

### 8.3.2 UE sided model

Contributions should be submitted in 8.3.2.x.

#### 8.3.2.1 Functionality management for RRM measurement prediction

*Including applicability procedure, inference configuration/reporting and performance monitoring for UE sided model for RRM measurement prediction*

**Supported Use cases:**

[R2-2505129](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505129.zip) Recommendation on specification for L3 beam-level prediction vivo, Qualcomm Incorporated, Huawei, HiSilicon, CATT, ZTE, Ericsson, CMCC, NTT DOCOMO, Interdigital discussion Rel-19 FS\_NR\_AIML\_Mob

*Proposal 1: Capture in the TR that the concluded potential specification impact of RRM measurement prediction is applicable for both L3 cell-level and beam-level predictions unless otherwise explicitly described.*

*Proposal 2: From RAN2's perspective, for RRM measurement prediction of both UE- and network-sided models, support of L3 beam-level prediction is recommended for normative work.*

- Oppo indicates that RAN4 only considered cell-level. Apple wonders why this is not submitted in RAN4. Huawei indicates that RAN4 is waiting for us, but there are no feasibility issues.

- Mediatek is concerned about the UE sided feasibility as UE implementation complexity will be doubled. But not for network sided. Also we don’t have beam level simulations.

- Ericsson thinks its not about just feasibility but it also a matter of the solution for interfrequency case working. The current mobility would work as the network is not aware on which beam it should configure the UE. Samsung and Apple thinks that even without this the network can configure the RA resources for all the beams, so nothing is broken. Ericsson then we would need to implement two solutions. Nokia thinks that this would be nice to have, even though nothing is broken.

- Xiaomi that even if we allow beam level prediction it will be a UE capability so the network will have to handle UEs with both capabilities.

- Vivo thinks that mobility will work without beam level but the performance of AI prediction will be reduced.

- Samsung is concerned for network-sided temporal case A it would result in very large signaling delay.

* Noted

**Agreements on L3 beam-level prediction**

* For RRM measurement prediction, L3 beam-level prediction is feasible for network sided model. CB after spec impact/overhead etc on the different cases.
* For RRM measurement prediction, L3 beam-level prediction is feasible for UE sided model. However, there are concerns on complexity and other WGs.

[R2-2505151](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505151.zip) Discussion on functionality management for RRM prediction Xiaomi discussion

Proposal 7: The temporal domain L3 beam-level measurement prediction can be considered, where future or latest L3 beam-level measurement result(s) can be predicted.

Proposal 8: The frequency domain L3 beam-level measurement prediction is not considered in Rel-19

* Noted

**Applicability determination/reporting:**

[R2-2505128](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505128.zip) Discussion on functionality management for RRM measurement prediction vivo discussion Rel-19 FS\_NR\_AIML\_Mob

* Noted

[R2-2505440](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505440.zip) UE-sided measurement prediction Apple discussion Rel-19 FS\_NR\_AIML\_Mob

* Noted

|  |
| --- |
| **Agreements**  1. Confirm that as a baseline following agreements on applicability reporting in AI-based beam management are applicable for AI mobility:   * UE may include “release configuration” flag in applicability reporting to indicate UEs preference to release a non-applicable configuration. * Introduce a flag in OtherConfig indicating whether applicability reporting via UAI is enabled or disabled. * When UE indicates that an inference configuration is not applicable, the gNB is expected to release the configuration (i.e., UE autonomous release is not supported). * The UE continues to perform the inference and reporting until the configuration is released. It is up to network implementation what to do with UE reported predicted values after UE indicates that an inference configuration is not applicable. * The UE shall report when an inference configuration becomes non-applicable. * How to handle RRC configuration in IDLE/INACTIVE/RLF, follow the legacy UE behaviour in TS 38.331 on whether to release or keep the RRC configuration. * Whether Option A and Option B can be configured in the same RRCReconfiguration message with the unified applicability report procedure. * RAN2 assumes applicability report for Option B (sets of inference related parameters) can be included in both RRCReconfigurationComplete and UAI (i.e., same as Option A).   NOTE: these agreements will be aligned with AI PHY agreements at the end of this week and will not be re-discussed |

**Inference configuration/reporting:**

[R2-2505357](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505357.zip) Discussion on functionality management for RRM measurement prediction Samsung discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal. 6: For temporal domain Case A, NW can indicate the list of target cells for which the UE performs the prediction as part of inference configuration.

*Proposal. 7: For the interpretation of “skipping pattern” in temporal domain Case B, RAN2 confirm that it refers to SSB configuration to indicate the timing of NW's SSB transmission—not timing of UE's SSB measurement/skipping.*

- ZTE thinks that it can be left to WI phase. Asustek thinks that it is restricting the possible patterns.

- Xiaomi thinks that this is the only way. Nokia, Apple, Ericcons and Qualcomm agrees.

- CATT thinks it should be similar to what we did for the simulation.

* Noted

[R2-2505186](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505186.zip) Discussion on functionality management for RRM measurement prediction v3 OPPO discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 10: For temporal domain case A, one or more instances of predicted measurement results in PW per one cell are reported in one measurementReport message

Proposal 11: For temporal domain case A, one or more instances of measurement results in OW per one cell are reported in one measurementReport message

* Noted

[R2-2506126](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506126.zip) Discussion on functionality management for RRM measurement prediction ZTE Corporation discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 13 For temporal domain Case B, the inference report includes the latest measurement results (regardless of actual results or predicted results).

Proposal 15 For frequency domain prediction, the inference report includes the latest measurement results of the predicted cell. (No change to the existing measurement report)

* Noted

[R2-2505216](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505216.zip) Functionality management for RRM measurement prediction CATT, Turkcell discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 2: For intra-frequency temporal domain case B, whether measurement result is actual or predicated should be indicated in the measurement results.

* Noted

**Agreements**

1. For the interpretation of “skipping pattern” in temporal domain Case B, RAN2 confirm that it refers to SSB configuration to indicate the timing of NW's SSB transmission—not timing of UE's SSB measurement/skipping.
2. For temporal domain Case A, NW can indicate the list of target cells for which it expects results (if available) as part of inference configuration. This list is optional.
3. For temporal domain case A, one or more instances of predicted measurement results in PW per one cell are reported in one measurementReport message
4. For temporal domain Case B, the inference report can include the latest measurement results (regardless of actual results or predicted results).
5. For frequency domain prediction, the inference report can include the latest measurement results of the predicted cell. (No change to the existing measurement report)

**Inference activation:**

[R2-2505460](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505460.zip) Functionality management for RRM measurement prediction Lenovo discussion

Proposal 7: After receiving the full inference configuration for measurement prediction and reporting the applicable AI/ML functionalities, the inference can be triggered by UE immediately (e.g., for periodic configurations) or upon a certain event.

* Noted

[R2-2505473](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505473.zip) Discussion on Functionality Management for RRM Measurement Prediction MediaTek Inc. discussion

Proposal 5: For RRM Temporal domain case B, Spatial domain prediction, and frequency domain prediction, when to perform inference is up to UE implementation. UE needs to meet the report requirements determined by RAN4.

* Noted

[R2-2505671](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505671.zip) Functionality management for RRM measurement prediction Huawei, HiSilicon discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 5: The exact time of triggering inference follows the inference configuration provided from the network, e.g. PW length, time instances to be reported etc.

* Noted

**Performance monitoring:**

[R2-2505186](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505186.zip) Discussion on functionality management for RRM measurement prediction v3 OPPO discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 18: For UE side model, the metric is calculated per frequency for L3 cell level prediction i.e. intra-frequency cells should be calculated together.

Proposal 19: For temporal domain case A and case B, average L3 RSRP difference within PW is monitoring metric

Proposal 20: L3 RSRP difference should be further averaged within configured monitoring duration

[R2-2505836](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505836.zip) UE-side Model – Functionality Management for RRM Measurement Prediction Ericsson discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 15 Network configures UE with performance monitoring window and/or percentage of prediction samples that UE should monitor in prediction window.

Proposal 18: UE reports performance monitoring outcome in periodic or event triggered basis, according to the performance monitoring report configuration configured by the network. FFS performance monitoring report triggering events.

[R2-2505357](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505357.zip) Discussion on functionality management for RRM measurement prediction Samsung discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 24: For frequency domain prediction, RAN2 need to discuss how to calculate RSRP difference in WI phase (considering the case UE is not able to measure signals on multiple frequency bands simultaneously).

Monitoring window is it configurable or up to UE

- Nokia thinks it based on case, for temporal can be up to UE but for inter-frequency it should be configurable as the UE needs measurement gaps.

- Samsung thinks this is essential for measurement reduction. Vivo also agrees especially when the monitoring window is dedicated.

- Qualcomm thinks that monitoring window may not be needed and it can be up to UE implementation.

- Apple thinks that maybe we may not even need to do performance monitoring if we satisfy the requirements.

* A monitoring window, a window over which the performance monitoring metric can be calculated, can be configured for performance monitoring. Up to WI on which cases (if any) this monitoring window is needed.

[R2-2505114](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505114.zip) Discussions on functionality management for RRM measuerment prediction DOCOMO Beijing Labs discussion

[R2-2505151](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505151.zip) Discussion on functionality management for RRM prediction Xiaomi discussion

[R2-2505216](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505216.zip) Functionality management for RRM measurement prediction CATT, Turkcell discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2505337](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505337.zip) Discussion on UE-side AIML model for RRM measurement prediction NEC discussion NR\_AIML\_Mob-Core

[R2-2505569](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505569.zip) Discussion on Functionality management for RRM measurement prediction for UE sided model KT Corp. discussion FS\_NR\_AIML\_Mob

[R2-2505710](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505710.zip) Discussion on functionality management for RRM measurement prediction Spreadtrum, UNISOC discussion Rel-19

[R2-2505874](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505874.zip) Functionality management for UE sided model for RRM measurement prediction Interdigital Inc. discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2505887](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505887.zip) Functionality management for RRM measurement prediction for UE-side model Qualcomm Incorporated discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2505964](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505964.zip) Discussion on RRM measurement prediction with UE sided model CMCC discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2505984](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505984.zip) Functionality Management for AIML Mobility Continental Automotive discussion

[R2-2506030](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506030.zip) Discussion on functionality management for RRM measurement prediction ASUSTeK discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2506135](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506135.zip) Functionality management for RRM measurement prediction Nokia discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2506177](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506177.zip) Discussion on UE-sided Model Functionality Management Sharp discussion

#### 8.3.2.2 Functionality management for RRM measurement event prediction

*Including applicability procedure, inference configuration/reporting and performance monitoring for UE sided model for RRM measurement event predictions*

**General (direct vs indirect):**

[R2-2505837](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505837.zip) UE Sided model – Functionality Management for RRM Event Prediction Ericsson discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 4 RAN2 first focus on designing signaling solution for the indirect event prediction. If direct event prediction comes for free, it can be left to UE implementation, otherwise it should be ruled out (to avoid different RRC solutions for different UE implementation).

* Noted

[R2-2505672](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505672.zip) Functionality management for measurement event prediction Huawei, HiSilicon discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 1: Only a single event prediction framework should be developed which will not distinguish indirect and direct prediction methods, i.e. method specific configurations/procedures should not be considered.

* Noted

[R2-2505358](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505358.zip) Discussion on functionality management for RRM measurement event prediction Samsung discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal. 8: For measurement event prediction, RAN2 support only indirect prediction in WI phase.

* Noted

**Agreements**

* Aim for a single framework for event prediction and performance monitoring. From RAN2 point of view indirect event prediction, RSRP differences can be used as the performance metric for monitoring. Capture in the TR that there is no consensus on the feasibility of performance monitoring of the direct event prediction and this would need to be resolved in WI phase before proceeding with specifying direct event prediction.

**Applicability determination/reporting:**

[R2-2505130](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505130.zip) Discussion on functionality management for RRM measurement event prediction vivo discussion Rel-19 FS\_NR\_AIML\_Mob

*Proposal 1. For RRM measurement event prediction, the UE determines the applicability considering the inference configuration from network:*

* *For indirect measurement event prediction,* *the applicability determination is the same as RRM measurement prediction, and no need to consider some measurement event-specific parameters, e.g., threshold, hysteresis.*
* *For direct measurement event prediction, the applicability determination is based on measurement event-specific parameters, e.g., threshold, hysteresis.*

- Oppo thinks that we need at least one more bit to indicate that this is for event prediction.

- Xiaomi thinks that this can be up to UE implementation.

* What the UE requires to the determine applicability is similar to RRM prediction.
* Noted

**Inference configuration/reporting:**

[R2-2505875](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505875.zip) Functionality management for UE sided model for RRM measurement event prediction Interdigital Inc. discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 1: For indirect RRM measurement event prediction, the following are included in the inference configuration:

* The length of PW for the associated AIML model
* Event-related information (event type and event-related parameters)

Proposal 2: For direct RRM measurement event prediction, the following are included in the inference configuration:

* The length of PW (“occurrence window”)
* Event-related information (event type and event-related parameters)
* Probability threshold (to control predicted event reporting)

Proposal 3: For indirect RRM measurement event prediction, the event prediction report includes:

* Multiple RRM measurement samples (current measurement and predicted measurements in a detailed and/or summarized form)
* Time-related information about the predicted event (e.g., the time of occurrence)

Proposal 4: For direct RRM measurement event prediction, the event prediction report includes:

* Time-related information about the predicted event (e.g., occurrence window)
* Probability of occurrence for the event

- Apple thinks that the differences are artificial. Interdigital thinks that we can perhaps unify window definition but probability threshold cannot be unified.

- Nokia thinks that probability threshold may not even be needed, and is dependent on RAN4.

- Mediatek asks why multiple predicted RRM samples.

**Agreements**

1 For RRM measurement event prediction, the following are included in the inference configuration:

* The length of PW for the associated AIML model
* Event-related information (event type and event-related parameters)

2 For RRM measurement event prediction, the event prediction report can include:

- RRM measurements (For normative phase to define what types of measurements)

- Time-related information about the predicted event (e.g., the time/window of occurrence)

3 For measurement event determined, when the UE is configured with temporal domain case B, and frequency domain prediction, UE reports measurement event by following an approach similar legacy procedure. This can be achieved without spec impact for measurement reporting. FFS for normative phase if additional information needs to be added.

* Noted

[R2-2505187](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505187.zip) Discussion on functionality management for measurement event prediction V3 OPPO discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 4: *For measurement event prediction based on temporal domain case B, spatial domain and frequency domain prediction, UE need report predicted measurement event by following legacy procedure i.e. no spec impact is introduced.*

- Qualcomm ask how the network knows that there was a prediction. Oppo thinks that the network knows what the UE is reporting as it configured the UE. Vivo thinks that we can remove no spec impact.

Proposal 4x: For measurement event prediction based on temporal domain case A, @t0 UE can report timing information when corresponding TTT timer expires in future i.e. t1, measurement event in t1 and relevant measurement result in t0 and t1. How to treat such measurement report is up to network’s implementation.

* Noted

**Performance monitoring:**

[R2-2505474](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505474.zip) Discussion on Functionality Management for RRM measurement event prediction MediaTek Inc. discussion

Proposal 6: For indirect event prediction, RSRP differences can be used as the performance metric for monitoring.

[R2-2505217](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505217.zip) Functionality management for RRM measurement event prediction CATT, Turkcell discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 9: For measurement event prediction, for performance monitoring, RAN2 agrees the following:

* For indirect measurement event prediction, RSRP differences/F1 score can be used as the

performance metric for monitoring;

* For direct measurement event prediction, F1 score can be used as the performance metric for monitoring.

[R2-2506127](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506127.zip) Discussion on functionality management for measurement event prediction ZTE Corporation discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 12: RAN2 to confirm that F1 score and system level metric (e.g. HOF rate) can not be used as performance metric for both indirect and direct measurement event prediction.

[R2-2505512](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505512.zip) Discussion on functionality management for measurement event prediction CMCC discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 4: For NW-side performance monitoring, the UE can report the following information to the network:

* For indirect prediction: actual measurement results, missed event detection, false event detection, true event time
* For direct prediction: missed event detection, false event detection

Proposal 5: For UE-side performance monitoring, the UE can report the following information to the network:

* For indirect prediction: RSRP differences, missed event detection, false event detection, time difference between true event time and predicted event time
* For direct prediction: missed event detection, false event detection

[R2-2505441](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505441.zip) Event prediction Apple discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2505461](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505461.zip) Functionality management for RRM measurement event prediction Lenovo discussion

[R2-2505512](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505512.zip) Discussion on functionality management for measurement event prediction CMCC discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2505711](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505711.zip) Discussion on functionality management for RRM measurement event prediction Spreadtrum, UNISOC discussion Rel-19

[R2-2505888](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505888.zip) Functionality management for Measurement Event prediction for UE-side model Qualcomm Incorporated discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2506006](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506006.zip) Discussion on Functionality management for RRM measurement event prediction NEC discussion

[R2-2506031](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506031.zip) Discussion on functionality management for measurement event prediction ASUSTeK discussion Rel-19 38.744 FS\_NR\_AIML\_Mob

[R2-2506134](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506134.zip) Functionality management for measurement event prediction Nokia discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2506180](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506180.zip) Discussion on performance monitoring Sharp discussion

#### 8.3.2.3 Data collection

*Aspects related to data collection for UE sided model for RRM measurement prediction and RRM measurement event prediction (excluding those aspects that are under study in AI/ML PHY)*

**Data collection procedure/configuration:**

[R2-2505513](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505513.zip) Discussion on data collection for UE-sided model CMCC discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 1: The following agreements on request/configuration for UE side data collection in AI/ML PHY are also applied for RRM measurement prediction and measurement event prediction for connected mode.

* The UE can request measurement configuration for data collection of AI/ML based beam management. The request can contain one or more of the following:
  + An indication on start/stop of data collection
  + Details of signaling are FFS. It is up to network what it configures at the end.
* Introduce UAI message for UE request of data collection measurement configuration. And it is up to UE implementation when to send the request.
* Data collection related configuration(s) and associated ID(s)(if needed) can be included in training data collection configuration.
* The network can provide or release the data collection configuration (at any point in time), with or without UE request.
* The following methods for network control of the initiation and configuration for data collection:
  + The network can decide when to start/stop the data collection and send configuration.
  + The network can configure whether UE is allowed to initiate request for data collection (e.g. start/stop indication).

Proposal 2: For UE side data collection, the RRM measurement framework is used to provide the data collection configuration to the UE.

- Xiaomi thinks that preferred configuration may not be needed for mobility. Interdigital agrees with Xioami.

Preferred configuration from a list of candidate configurations provided by NW.

* Noted

[R2-2505347](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505347.zip) Discussion on data collection for AI/ML mobility Samsung discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 2. For UE-side data collection, UE can perform measurement by re-using MOs configured for legacy RRM measurement.

Proposal 3. RAN2 to consider two options for UE-side data collection:

In Option 1,

* Step 1) NW configures a list of candidate MOs or frequencies or cells for data collection (e.g., via OtherConfig)
* Step 2) UE indicates its preferred MO(s) or frequencies or cells (e.g., via UEAssisntaceInformation message) among the received candidates for data collection.
* Step 3) NW configures MO(s) for measurement of UE-side data collection. Then, UE starts measuring according to the configuration and acquiring data for model training (e.g., cell level RSRP).

In Option 2,

* Step 1) NW allows transmission of UE’s preference without candidate configuration for data collection (e.g., via OtherConfig)
* Step 2) UE indicates its preferred frequencies or cells (e.g., via UEAssisntaceInformation message)
* Step 3) NW configures MO(s) for measurement of UE-side data collection. Then, UE starts measuring according to the configuration and acquiring data for model training (e.g., cell level RSRP).
* Noted

[R2-2505188](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505188.zip) Discussion on data collection for UE sided model-V2 OPPO discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 5: Some assistant information from UE is necessary for gNB to configure data collection properly.

Proposal 7: Potential assistant information from UE for data collection could be:

|  |  |
| --- | --- |
| Potential assistant information | Applicable scenarios |
| Frequency range information | All scenarios (temporal domain, frequency domain, spatial domain) |
| Whether data collection is for frequency domain prediction | Frequency domain prediction |
| Whether L1 beam level measurement results need collected | RRM sub-case 2 of temporal domain case A |

* Noted

Discussion

- Samsung thinks that the UE can indicate the frequency as the network doesn’t know what frequency the UE needs for input.

- Mediatek thinks that the network needs to provide the frequency information and not the UE. Xiaomi thinks that you can just request measurement gap. Nokia agrees that the UE needs to send some more information and there may be some delay issues. We should consider the network giving a list of options to the UE and the UE can indicate. Docomo agrees that it should be the network that provides which frequencies the UE can measure. Ericsson thinks it makes sense as mobility is networks decisions. ZTE, Huawei also thinks that the network should be the one that provides the frequency information.

- Qualcomm thinks that the UE can measure for predicting on current frequency so it is up to the UE.

- Xiaomi and Apple thinks that we should be allowed to just ask for a measurement gap without frequency. ZTE doesn’t think this is not acceptable for the network side as this will impact legacy measurements. The measurement gap depends on number of frequencies. Also how does the UE know what frequencies/cells belong to the same operator.

- Huawei thinks we can use need for gap and frequency, but shouldn’t give preferred gap. Ericsson that would also impact RAN4.

|  |
| --- |
| Agreements  1 For request/configuration for UE side data collection, the following in AI/ML PHY agreements are also applied as a baseline for RRM measurement prediction and measurement event prediction for connected mode.   * The UE can request measurement configuration for data collection of AI/ML based beam management. The request can contain one or more of the following:   + An indication on start/stop of data collection   + Details of signaling are FFS. It is up to network what it configures at the end. * Introduce UAI message for UE request of data collection measurement configuration. And it is up to UE implementation when to send the request. * Data collection related configuration(s) and associated ID(s)(if needed) can be included in training data collection configuration. * The network can provide or release the data collection configuration (at any point in time), with or without UE request. * The following methods for network control of the initiation and configuration for data collection:   + The network can decide when to start/stop the data collection and send configuration.   + The network can configure whether UE is allowed to initiate request for data collection (e.g. start/stop indication).   NOTE this can be aligned with AI/ML PHY agreements at the end of this   1. For UE-side data collection, UE can perform measurement by re-using MOs configured for legacy RRM measurement. 2. The full list of candidate measurement configuration is not needed for AI mobility.   Capture following options in the TR. Up to normative phase to determine solution.  Option 1   * Network can configure a set of candidate frequencies the UE can request. * The UE can indicate a preference for data collection within the set of candidate frequencies.   Option 2   * The UE can indicate preferred frequencies for data collection (under network control).   FFS what mechanism to use.  UP to normative phase if other information is required. |

**Content of collected data:**

[R2-2505131](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505131.zip) Discussion on UE side data collection vivo discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 5. For UE-side data collection, there is no need for the network to configure the contents of collected data.

[R2-2505218](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505218.zip) Discussion on UE-sided data collection CATT, Turkcell discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 3: The agreements about logging mechanism and content configuration achieved for network-sided data collection could be directly reused for UE-sided data collection:

* UE can be configured to log, at a certain logging periodicity, one or more of the following:
  + L3 cell level measurements;
  + L3 beam level measurements;
  + L1-filtered beam level measurements (if sub-case 1 and 3 is supported);
  + Cell ID (FFS CGI of serving cell. If CGI is unavailable, or for neighboring cells the UE logs PCI-ARFCN as a fallback);
  + Time info (if as agreed by AI/ML and/or if needed).
* The UE can be configured with a L3 event for determining when logging is to be performed. When the event conditions are fulfilled, it performs the logging with the logging periodicity.

[R2-2505188](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505188.zip) Discussion on data collection for UE sided model-V2 OPPO discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 12: Measurement event should be logged if the target use case is measurement event prediction

**Data collection in RRC\_IDLE/INACTIVE:**

[R2-2505889](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505889.zip) Data collection for UE-side model Qualcomm Incorporated discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 3: For a UE-side model for AI/ML for mobility, the UE does not perform data collection in RRC\_IDLE or RRC\_INACTIVE.

Proposal 4: For a UE-side model for AI/ML for mobility, it is up to UE implementation whether to keep the collected data upon handover, upon experiencing RLF, and upon transitioning to RRC\_IDLE or RRC\_INACTIVE.

[R2-2505383](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505383.zip) Data collection for UE sided models Ericsson discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 2 Data collection for UE sided models in RRC\_IDLE/RRC\_INACTIVE state is mainly up to UE implementation.

Proposal 3 RAN2 will discuss configuration of data collection in RRC\_IDLE/RRC\_INACTIVE in the work item phase.

Discussion

- Xiaomi thinks this is up to UE implementation

- Ericsson thinks that at least associated ID is required by the UE. Qualcomm and Interdigital think you can get in connected mode.

- Oppo thinks that this will impact power consumption and the network may need to be involved.

- Nokia thinks that this should be considered and the UE spends most of its time in idle.

- Mediatek doesn’t think this is technical useful but the UE can do it without specification impact. The measurements are relaxed and those measurements are not very useful.

- Huawei and Samsung thinks this can be up to UE implementation.

- Ericsson asks why we have this connected mode then. Qualcomm explains that the UE is not supposed to take these intensive measurements in idle mode but can do it if we are connected to the car for example.

- Nokia thinks it is not that simple as the network doesn’t know where you will show up in the connected mode and whether your associated ID is still applicable.

* UE can perform data collection in IDLE/INACTIVE mode without any specification impacts.

[R2-2505115](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505115.zip) Discussions on data collection for UE sided model DOCOMO Beijing Labs discussion

[R2-2505153](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505153.zip) Discussion on data collection Xiaomi discussion

[R2-2505442](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505442.zip) UE-sided data collection Apple discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2505475](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505475.zip) Discussion on Data Collection for UE-sided Model MediaTek Inc. discussion Withdrawn

[R2-2505654](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505654.zip) UE side Data collection for measurement/ event prediction Sony discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2505673](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505673.zip) Discussion on UE-side data collection Huawei, HiSilicon discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2505876](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505876.zip) Data collection for UE sided model Interdigital Inc. discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2505915](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505915.zip) UE-side data collection for AI Mobility Lenovo discussion

[R2-2506128](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506128.zip) Discussion on data collection for UE side model ZTE Corporation discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2506136](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506136.zip) Data collection for UE-sided model Nokia discussion Rel-19 FS\_NR\_AIML\_Mob

### 8.3.3 Network sided model

*Including (sub)use cases to be supported, assistance information from the UE (e.g., measurements for inference or performance monitoring), and data collection.*

**Supported use cases:**

[R2-2505132](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505132.zip) Discussion on NW-sided mode lin AI enhanced mobility vivo discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 6. All sub-use cases of NW-sided model are recommended for normative work, with the sub-use case type of NW-sided model is transparent to the UE.

* Noted

[R2-2505116](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505116.zip) Discussions on NW-sided model DOCOMO Beijing Labs discussion

Proposal 3: Support the scenarios and sub-use cases in the Table.1 for Rel-20 specification.

Table.1 Supported scenarios and sub-use cases for Rel-20 specification

|  |  |  |  |
| --- | --- | --- | --- |
| **Scenario** | | **UE-sided model** | **NW-sided model** |
| RRM prediction | Temporal domain Case A | Sub-use case 1,2,3,4 | Sub-use case 1,2,3,4 |
| Temporal domain Case B | Sub-use case 1,2,3,4 | Sub-use case 1,2,3,4 |
| Frequency domain | Sub-use case 1,2,3,4 | Sub-use case 1,2,3,4 |
| Spatial domain in beam dimension | -- | Sub-use case 1,3,4 |
| Event prediction | | Indirect, Direct | -- |

* Noted

[R2-2505154](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505154.zip) Discussion on NW sided model Xiaomi discussion

Proposal 1: NW sided model is not supported in temporal domain case B.

Proposal 2: L1 beam measurement result as model input, i.e. sub case 1, 3, 4 and 6, is not supported for NW sided model in RRM prediction and L3 beam prediction.

* Noted

[R2-2505359](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505359.zip) Discussion on Network-sided model Samsung discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal. 3: For cell-level temporal domain Case A, RAN2 support only subcase 2 for NW-sided model. I.e., UE can report only “cell-level” RRM measurement results at multiple time instances in one measurement report.

* Noted

Discussoion

- Apple, Qualcomm, Mediatek shares concerns with Xiaomi and Samsung as we never evaluated overhead and performance.

- ZTE doesn’t thinks the overhead is a big problem as the UE won’t always configure the report only when in certain situations like cell edge. Huawei and Ericsson agrees.

- Huawei thinks the spec impact are minor and these are implementation issues and during implementation it will not configure the UE with something that breaks the system.

- Oppo thinks that if we report for multiple beams that is a lot of overhead. and points out that we agreed that there is no spec impact for other cases. So we should agree with Samsung and only do the Case A.

- Mediatek is concerned with implementation due to buffer size.

- Samsung highlights that we already agreed that sub-case 2 outperforms sub-case 1 and 3. ZTE thinks we need to beam level to enable CFRA.

- Apple just thinks that these are sub optimal use cases that weren’t evaluated. So companies are agreeing that you can do it but not to do further enhancements.

**For network sided models for inference:**

1. For cell-level temporal domain Case A, sub-case 2 the following enhancement is considered UE can report “cell-level RRM measurement results at multiple time instances in one measurement report.
2. For other cases there is no specification impact. Can be discussed in WI phase whether any additional enhancements are needed and justified (i.e. multi-instances reporting of beam)

3 Study item can conclude that all scenarios and sub-cases are feasible.

**Reporting Information from UE for Inference Operation**

[R2-2506133](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506133.zip) Considerations on network-sided model Nokia, Nokia Shanghai Bell discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 10: Capture the overview of inference input to the network sided model in Table 2.2-1 in TR38.744.

Table 2.2-1: RRM measurement prediction per use case analysis for inference input

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use case | Sub-use case | Temporal domain | Frequency domain | Spatial domain |
| Cell-level prediction | 1 | Time-series of L1 filtered beam level measurements | L1 filtered beam level measurements of frequency 1 | Set B of L1 filtered beam level measurements |
| 2 | Time-series of L3 filtered cell level measurements | L3 filtered cell level measurements of frequency 1 | N/A |
| 3 | Time-series of L1 filtered beam level measurements | L1 filtered beam level measurements of frequency 1 | Set B of L1 filtered beam level measurements |
| Beam-level prediction | 4 | Time-series of L1 filtered beam level measurements | L1 filtered beam level measurements of frequency 1 | Set B of L1 filtered beam level measurements |
| 5 | Time-series of L3 filtered beam level measurements | L3 filtered beam level measurements of frequency 1 | N/A |
| 6 | Time-series of L1 filtered beam level measurements | L1 filtered beam level measurements of frequency 1 | Set B of L1 filtered beam level measurements |

Note: Frequency 1 denotes the carrier frequency at which measurements are taken for inference input, whereas the model output corresponds to measurements taken at Frequency 2.

[R2-2505443](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505443.zip) On network-sided models Apple discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 1: for NW-sided inference, a UE should never be configured with extra measurements (in terms of periodicity, cells and frequencies to measure, etc) compared to what it would have been configured for legacy operation.

Proposal 2: UE should be aware whether the measurements configured are for network-sided inference or legacy operation.

[R2-2505674](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505674.zip) Discussion on NW-sided model support Huawei, HiSilicon discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 4: There is no need for the UE awareness or preference indication on whether RRM measurement result is/can be used by the NW as input to NW-sided model based AIML algorithms.

Proposal 5: No assistance information from the UE is needed to support NW-side model inference other than L1/L3 RSRP beam/cell level measurement results.

[R2-2505359](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505359.zip) Discussion on Network-sided model Samsung discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal. 1: For NW-side model inference, RAN2 should consider the ways to reduce the signalling overhead for the report of inference input (e.g., event-triggered reporting, adaptive reporting based on mobility status, …).

**Performance Monitoring:**

[R2-2505965](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505965.zip) Discussion on RRM measurement prediction with NW sided model CMCC discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 3: At least one or more of the following should be considered for performance monitoring of NW-side model in RRM measurement prediction:

* + - L3 cell level measurements
    - L3 beam level measurements
    - L1 beam level measurements

Proposal 4: The existing periodical RRM measurement reporting can be reused to report the actual measurement for performance monitoring of NW-side model.

[R2-2505382](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505382.zip) Network sided model Ericsson discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 5 There is no need for UE (chipset) awareness of network side AI/ML related measurements.

Proposal 6 RAN2 abandons the discussion on UE awareness and leaves the user consent discussion to the relevant working groups (SA3) to discuss it on a need basis.

[R2-2505877](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505877.zip) Network sided model for AI/ML mobility Interdigital Inc. discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 1: The network can request the UE for an on-demand measurement report for a given time duration (past or future time durations).

Proposal 4: A UE may support enhanced measurement logging/reporting for enabling LCM of a network sided AIML model (e.g., inference, performance monitoring, data collection for training, etc.,) without having AI/ML support on its side (e.g., no AI/ML mobility model/capability) or vice versa.

[R2-2505443](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505443.zip) On network-sided models Apple discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 3: network must obtain user consent for using their device for performance monitoring of network-sided models.

Proposal 4: user must be aware when their device is used for performance monitoring of network-sided models.

**Data Collection:**

[R2-2505189](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505189.zip) Discussion on LCM procedures of network sided model OPPO discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 9: For AI mobility, the following agreements also applies:

* + - UAI related to buffer status or low power state is triggered only once when specific conditions are met (e.g., buffer full/threshold, and low power state). A prohibit timer is not necessary for UAI related to buffer status or low power state
    - No additional signaling from the UE is required when the low power issue is resolved
    - No additional signaling from the UE is required when the buffer full issue is resolved

[R2-2505219](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505219.zip) Discussion on Network sided model CATT, Turkcell discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 4: UE can be configured to log and report the CGI of serving cell. If CGI is unavailable, the UE shall log PCI-ARFCN as a fallback.

Proposal 6: The following agreements on starting/stopping logging for NW-side data collection in AI/ML PHY are also applied to RRM measurement prediction:

* + - Data collection is controlled by the network. The UE will not autonomously stop when low power state is detected;
    - When UE reaches its buffer limitation the UE stops measurement for data collection purposes and logging.

Proposal 7: The following agreements on sending of the collected data for NW-side data collection in AI/ML PHY are also applied to RRM measurement prediction:

* + - As baseline, the UEInformationResponse contains one or more logged measurement entries in chronological order (i.e. starting from the oldest measurement entries stored in the UE memory), and an availability indication if there are further data available for transmission. Same principles as for logged MDT;
    - New SRB can be configured for NW-side data collection (with lower priority).

[R2-2505190](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505190.zip) Discussion on AI/ML performance monitoring for network-sided model KT Corp. discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2505637](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505637.zip) Discussion on NW-side model input Sharp discussion Rel-19 Withdrawn

[R2-2505695](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505695.zip) Discussion on network sided model Lenovo discussion Rel-19

[R2-2505890](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505890.zip) Network-side model Qualcomm Incorporated discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2506007](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506007.zip) Discussion on AIML mobility for Network Sided Model Performance NEC discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2506129](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506129.zip) Discussion on AI mobility for network side model ZTE Corporation discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2506164](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506164.zip) Discussion on NW-side model input Sharp discussion Rel-19

## 8.4 Low-power wake-up signal and receiver for NR (LP-WUS/WUR)

(NR\_LPWUS-Core; leading WG: RAN1; REL-19; WID RP-251200)

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

### 8.4.1 Organizational

LS, Rapporteur input, including workplan, Running CRs, email discussion summary, open issue list(s), etc.

[R2-2505020](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505020.zip) Reply LS on LP-WUS in RRC\_CONNECTED (R1-2504888; contact: NTT DOCOMO) RAN1 LS in Rel-19 NR\_LPWUS To:RAN2

[R2-2505025](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505025.zip) Reply LS on LP-WUS UE RF (R1-2504943; contact: vivo) RAN1 LS in Rel-19 NR\_LPWUS-Core To:RAN4 Cc:RAN2

[R2-2505028](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505028.zip) LS on TP to TS38.300 for Rel-19 LP-WUS/WUR (R1-2505070; contact: vivo) RAN1 LS in Rel-19 NR\_LPWUS-Core To:RAN2

[R2-2505035](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505035.zip) Reply LS on LP-WUS subgrouping progress (R3-253846; contact: NEC) RAN3 LS in Rel-19 NR\_LPWUS-Core To:RAN2

[R2-2505234](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505234.zip) Introduction of LP-WUS in TS 38.304 CATT CR Rel-19 38.304 18.4.0 0440 - B NR\_LPWUS-Core

[R2-2505235](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505235.zip) Discussion of [Post130][211][LPWUS] Running CR for 38.304 (CATT) CATT discussion Rel-19 NR\_LPWUS-Core

[R2-2505380](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505380.zip) Introduction of R19 LP-WUS UE Capabilities Huawei, HiSilicon CR Rel-19 38.306 18.6.0 1325 - B NR\_LPWUS-Core Withdrawn

[R2-2505392](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505392.zip) Introduction of LP-WUS/WUR in RRC vivo (Rapporteur) CR Rel-19 38.331 18.6.0 5416 - B NR\_LPWUS-Core

[R2-2505393](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505393.zip) Discussion summary and list of RRC open issue for LP-WUS WUR vivo discussion Rel-19 NR\_LPWUS-Core

[R2-2505469](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505469.zip) Introduction of LP-WUS in TS 37.340 ZTE Corporation, Sanechips CR Rel-19 37.340 18.6.0 0420 - B NR\_LPWUS-Core

[R2-2505476](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505476.zip) Running MAC CR for LP-WUS Apple (Rapporteur) CR Rel-19 38.321 18.6.0 2103 - B NR\_LPWUS-Core

[R2-2505477](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505477.zip) Report of [Post130][213][LPWUS] Running CR for TS 38.321 (Apple) Apple (Rapporteur) discussion Rel-19 NR\_LPWUS-Core

[R2-2505478](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505478.zip) Draft Reply LS on LP-WUS in RRC\_CONNECTED Apple LS out Rel-19 NR\_LPWUS-Core RAN1

[R2-2505670](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505670.zip) Introduction of R19 LP-WUS UE Capabilities Huawei, HiSilicon draftCR Rel-19 38.306 18.6.0 B NR\_LPWUS-Core

[R2-2505863](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505863.zip) Introduction of Low-Power Wake-Up Signal and Receiver for NR Ericsson CR Rel-19 38.300 18.6.0 1015 - B NR\_LPWUS-Core

### 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

[R2-2505236](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505236.zip) Open issues on LP-WUS in IDLE and INACTIVE CATT discussion Rel-19 NR\_LPWUS-Core

[R2-2505280](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505280.zip) Remaining issues on LP-WUS paging monitoring Xiaomi Communications, Huawei, HiSilicon, ZTE Corporation, Sanechips, Apple, Ericsson discussion

[R2-2505336](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505336.zip) Discussion on LP-WUS in RRC\_IDLE INACTIVE NEC discussion NR\_LPWUS-Core

[R2-2505379](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505379.zip) Further discussion on LP-WUS in RRC\_IDLE/INACTIVE Huawei, HiSilicon discussion Rel-19

[R2-2505381](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505381.zip) Summary of [Post130][222][LPWUS] Potential solution to support enabling/disabling LP-WUS monitoring in IDLEI/NACTVE per UE (Huawei) Huawei, HiSilicon discussion Rel-19

[R2-2505394](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505394.zip) Discussion on LP-WUS WUR in RRC\_IDLE INACTIVE vivo discussion Rel-19 NR\_LPWUS-Core

[R2-2505479](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505479.zip) Remaining issues of LP-WUS in RRC\_IDLE/INACTIVE Apple discussion Rel-19 NR\_LPWUS-Core

[R2-2505529](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505529.zip) Procedure and Configuration of LP-WUS in RRC Idle Inactive Mode Samsung discussion Rel-19

[R2-2505588](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505588.zip) Remaining issues on LP-WUS in IDLE and INACTIVE NTT DOCOMO INC. discussion Rel-19 NR\_LPWUS-Core

[R2-2505605](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505605.zip) Discussion on LP-WUS procedure and configuration OPPO discussion Rel-19 NR\_LPWUS-Core

[R2-2505629](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505629.zip) Discussion on prioritizing the frequencies supporting LP-WUS Huawei, HiSilicon, vivo, Nokia, Samsung, LG Electronics Inc., Apple, Ericsson, OPPO, Sharp, NEC discussion Rel-19 NR\_LPWUS-Core

[R2-2505655](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505655.zip) Disabling/enabling LP-WUS in RRC Idle/Inactive mode Sony discussion Rel-19 NR\_LPWUS-Core

[R2-2505682](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505682.zip) Open issues on LP-WUS in RRC\_IDLE/INACTIVE mode Lenovo discussion Rel-19

[R2-2505752](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505752.zip) LP-WUS in IDLE and INACTIVE Nokia discussion Rel-19 NR\_LPWUS-Core

[R2-2505779](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505779.zip) Remaining issues in IDLE/INACTIVE procedure for LP-WUS Tejas Network Limited discussion Rel-19

[R2-2505856](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505856.zip) LP-WUS in Idle and Inactive Ericsson discussion Rel-19 NR\_LPWUS-Core [R2-2504288](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504288.zip)

[R2-2505906](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505906.zip) Remaining issues on LP-WUS operation in RRC\_IDLE/INACTIVE modes InterDigital, Inc. discussion Rel-19 NR\_LPWUS-Core

[R2-2505968](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505968.zip) Remaining issues of LP-WUS operation in IDLE/INACTIVE CMCC discussion Rel-19 NR\_LPWUS-Core

[R2-2505976](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505976.zip) Remaining issues on LP-WUS in RRC IDLE or INACTIVE LG Electronics Inc. discussion Rel-19 NR\_LPWUS-Core

[R2-2505992](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505992.zip) Procedure and configuration of LP-WUS for IDLE and INACTIVE mode ZTE Corporation, Sanechips discussion Rel-19 NR\_LPWUS-Core

[R2-2506038](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506038.zip) IDLE/Inactive LP-WUS disabling and enabling Qualcomm Incorporated discussion 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

[R2-2505237](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505237.zip) Open issues on RRM Relaxation and Offloading in IDLE and INACTIVE CATT discussion Rel-19 NR\_LPWUS-Core

[R2-2505289](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505289.zip) Remaining issues on RRM measurement relaxation for RRC\_IDLE\_INACTIVE Xiaomi Communications discussion

[R2-2505395](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505395.zip) Discussion on RRM measurement relaxation and offloading in RRC\_IDLE/INACTIVE vivo discussion Rel-19 NR\_LPWUS-Core

[R2-2505480](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505480.zip) Remaining issues of LP-WUS RRM Measurement Apple discussion Rel-19 NR\_LPWUS-Core

[R2-2505530](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505530.zip) RRM measurement relaxation and offloading in RRC Idle Inactive Mode Samsung discussion Rel-19

[R2-2505596](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505596.zip) Remaining issues on RRM measurement relaxation and offloading NTT DOCOMO INC. discussion Rel-19 NR\_LPWUS-Core

[R2-2505606](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505606.zip) Discussion on the remaining issues on RRM measurement OPPO discussion Rel-19 NR\_LPWUS-Core

[R2-2505683](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505683.zip) Open issues on RRM measurement relaxation and offloading in RRC\_IDLE/INACTIVE Lenovo discussion Rel-19

[R2-2505737](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505737.zip) Further discussion on the criteria for RRM measurement relaxation and offloading Huawei, HiSilicon discussion Rel-19 NR\_LPWUS-Core

[R2-2505753](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505753.zip) RRM measurement relaxation in RRC\_IDLE/INACTIVE Nokia discussion Rel-19 NR\_LPWUS-Core

[R2-2505780](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505780.zip) Remaining issues in LP-WUS based RRM relaxation and offloading Tejas Network Limited discussion Rel-19

[R2-2505803](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505803.zip) Remaining issues for LP-WUS RRM ZTE Corporation, Sanechips discussion Rel-19 NR\_LPWUS-Core

[R2-2505857](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505857.zip) LP-WUS and RRM measurements Ericsson discussion Rel-19 NR\_LPWUS-Core [R2-2504289](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504289.zip)

[R2-2505907](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505907.zip) Remaining issues on RRM measurement relaxation and offloading InterDigital, Inc. discussion Rel-19 NR\_LPWUS-Core

[R2-2505967](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505967.zip) Remaining issues of RRM measurement relaxation and offloading in RRC\_IDLE INACTIVE CMCC discussion Rel-19 NR\_LPWUS-Core

[R2-2505977](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505977.zip) Remaining issues on measurement offloading and relaxation LG Electronics Inc. discussion Rel-19 NR\_LPWUS-Core

[R2-2506040](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506040.zip) Open issues on LP-WUS RRM measurement relaxation and offloading Qualcomm Incorporated discussion 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.

[R2-2505108](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505108.zip) Discussing on LP-WUS monitoring in Connected mode Xiaomi discussion Rel-19 NR\_LPWUS-Core

[R2-2505238](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505238.zip) Analysis on LP-WUS for RRC\_CONNECTED CATT discussion Rel-19 NR\_LPWUS-Core

[R2-2505396](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505396.zip) Discussion on LP-WUS WUR in RRC\_Connected vivo discussion Rel-19 NR\_LPWUS-Core

[R2-2505463](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505463.zip) Remaining issues on LP-WUS in RRC\_CONNECTED LG Electronics Inc. discussion Rel-19 NR\_LPWUS-Core

[R2-2505481](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505481.zip) Remaining issues of LP-WUS in RRC\_CONNECTED Apple discussion Rel-19 NR\_LPWUS-Core

[R2-2505531](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505531.zip) Procedures for LP-WUS in RRC Connected Mode Samsung discussion Rel-19

[R2-2505581](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505581.zip) LP-WUS in RRC\_CONNECTED Nokia, Nokia Shanghai Bell discussion NR\_LPWUS-Core

[R2-2505597](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505597.zip) Remaining issues on LP-WUS in RRC\_CONNECTED NTT DOCOMO INC. discussion Rel-19 NR\_LPWUS-Core

[R2-2505607](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505607.zip) Discussion on LP-WUS in RRC\_CONNECTED OPPO discussion Rel-19 NR\_LPWUS-Core

[R2-2505630](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505630.zip) Further discussion on LP-WUS for RRC\_CONNECTED mode Huawei, HiSilicon discussion Rel-19 NR\_LPWUS-Core

[R2-2505645](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505645.zip) LP-WUS in CONNECTED mode InterDigital discussion Rel-19 NR\_LPWUS-Core

[R2-2505684](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505684.zip) Open issues on LP-WUS in RRC Connected mode Lenovo discussion Rel-19

[R2-2505782](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505782.zip) Remaining issues in CONNECTED procedure for LP-WUS Tejas Network Limited discussion Rel-19

[R2-2505858](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505858.zip) LP-WUS in Connected Ericsson discussion Rel-19 NR\_LPWUS-Core [R2-2504290](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504290.zip)

[R2-2505942](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505942.zip) Discussion on LP-WUS operation in CONNECTED mode CMCC discussion Rel-19 NR\_LPWUS-Core

[R2-2505993](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505993.zip) Procedure for LP-WUS in RRC\_Connected state ZTE Corporation, Sanechips discussion Rel-19 NR\_LPWUS-Core

[R2-2506039](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506039.zip) Open issues on LP-WUS operation in CONNECTED state Qualcomm Incorporated discussion NR\_LPWUS-Core

## 8.5 Network Energy Saving Enh.

(Netw\_Energy\_NR\_enh-Core; leading WG: RAN1; REL-19; WID: [RP-242354](https://www.3gpp.org/ftp/meetings_3gpp_sync/ran/docs/RP-242354.zip))

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

### 8.5.1 Organizational

Incoming LS, WI rapporteur inputs, CR rapporteur inputs (including post email discussion [POST130][107], [108], [109], [119], summary of identified stage-3 open issues that need online discussion and rapporteur’s suggestions if needed, details of UE capability discussion if needed).

[R2-2505051](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505051.zip) Reply LS on new servingCellMO of OD-SSB on SCell (R4-2508440; contact: Apple) RAN4 LS in Rel-19 Netw\_Energy\_NR\_enh To:RAN2 Cc:RAN1

[R2-2505496](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505496.zip) Running 38.304 CR for network energy saving Apple (Rapporteur) CR Rel-19 38.304 18.4.0 0442 - B Netw\_Energy\_NR\_enh-Core

[R2-2505497](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505497.zip) Summary report of [POST130][108][NES] 38.304 CR (Apple) Apple (Rapporteur) discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505564](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505564.zip) Introduction of Network Energy Savings Enhancements Huawei, HiSilicon CR Rel-19 38.300 18.6.0 1013 - B Netw\_Energy\_NR\_enh-Core

[R2-2505699](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505699.zip) Introduction of enhancements for network energy efficiency Ericsson CR Rel-19 38.331 18.6.0 5428 - B Netw\_Energy\_NR\_enh-Core

[R2-2505708](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505708.zip) Report of [POST130][107][NES] (Ericsson) Ericsson discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505791](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505791.zip) Report of [POST130][109][NES] Comments to 38.321 CR for NES InterDigital discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505792](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505792.zip) Introduction of network energy saving enhancements to TS 38.321 InterDigital CR Rel-19 38.321 18.6.0 2110 - B Netw\_Energy\_NR\_enh-Core

[R2-2505987](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505987.zip) Introduction of UE capability for network energy saving enhancement in TS 38.306 ZTE Corporation, Sanechips draftCR Rel-18 38.306 18.6.0 F Netw\_Energy\_NR\_enh-Core

[R2-2505988](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505988.zip) Introduction of UE capability for network energy saving enhancement in TS 38.331 ZTE Corporation, Sanechips draftCR Rel-18 38.331 18.6.0 A Netw\_Energy\_NR\_enh-Core

### 8.5.2 On-demand SSB SCell operation

Remaining essential open issues including stage-3 identified open issues if needed, etc.

[R2-2505097](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505097.zip) Remaining open issues on OD-SSB SCell operation LG Electronics France discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505113](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505113.zip) Discussion on On-Demand SSB OPPO discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505168](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505168.zip) Consideration on on-demand SSB SCell operation CATT discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505254](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505254.zip) On-demand SSB SCell Operation Samsung discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505276](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505276.zip) Some details on OD-SSB for NES cell Quectel discussion

[R2-2505315](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505315.zip) Remaining open issues on OD-SSB Xiaomi discussion Netw\_Energy\_NR\_enh-Core

[R2-2505338](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505338.zip) Remaining issues of On-demand SSB SCell operation vivo discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505498](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505498.zip) Remaining issues on on-demand SSB for SCell Apple discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505506](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505506.zip) Remaining issues on on-demand SSB SCell operation Fujitsu discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505526](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505526.zip) Discussion on on-demand SSB SCell operation NTT DOCOMO, INC. discussion Rel-19

[R2-2505566](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505566.zip) Remaining issues on OD-SSB Sharp discussion

[R2-2505790](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505790.zip) Remaining issues for On demand SSB InterDigital discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505845](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505845.zip) Discussion on remaining issues of on-demand SSB? Qualcomm Incorporated discussion

[R2-2505943](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505943.zip) Discussion on open issues of on-demand SSB for Scell CMCC discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505989](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505989.zip) Remaining issues of on demand SSB SCell operation ZTE Corporation, Sanechips discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2506050](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506050.zip) Discussion on on-demand SSB SCell operation for NES Huawei, HiSilicon discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2506089](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506089.zip) On demand SSB handling Nokia, Nokia Shanghai Bell discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2506112](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506112.zip) Discussion on on-demand SSB for NES Ericsson discussion Rel-19 Netw\_Energy\_NR\_enh-Core

### 8.5.3 On-demand SIB1

Remaining essential open issues including whether to support SUL in OD-SIB1 cell, stage-3 identified open issues if needed, etc.

[R2-2505110](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505110.zip) Discussion on on-demand SIB1 Xiaomi discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505157](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505157.zip) Discussion on on-demand SIB1 Transsion Holdings discussion Rel-19

[R2-2505169](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505169.zip) Consideration on on-demand SIB1 CATT discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505253](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505253.zip) On-demand SIB1 Samsung discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505339](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505339.zip) Remaining issues of On-demand SIB1 vivo discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505499](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505499.zip) Remaining issues on on-demand SIB1 Apple discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505507](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505507.zip) Remaining issues on on-demand SIB1 procedure Fujitsu discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505509](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505509.zip) Remaining open issues on OD-SIB1 request Sharp discussion Rel-19

[R2-2505527](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505527.zip) Discussion on on-demand SIB1 NTT DOCOMO, INC. discussion Rel-19

[R2-2505562](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505562.zip) Discussion on remaining issues of on-demand SIB1 operation for NES Huawei, HiSilicon discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505644](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505644.zip) Discussion on the remaining open issues for OD-SIB1 ITRI, Acer Incorporated discussion Netw\_Energy\_NR\_enh-Core

[R2-2505656](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505656.zip) On-demand SIB1 request on SUL Sony discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505749](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505749.zip) Consideration on on-demand SIB1 OPPO discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505766](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505766.zip) Discussion on on-demand SIB1 for NES Ericsson discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505846](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505846.zip) Discussion on remaining issues of on-demand SIB1 Qualcomm Incorporated discussion

[R2-2505944](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505944.zip) Discussion on open issues of OD-SIB1 CMCC discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505978](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505978.zip) Remaining issues on OD-SIB1 operation LG Electronics Inc. discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505990](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505990.zip) Remaining issues of on demand SIB1 ZTE Corporation, Sanechips discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2506008](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506008.zip) Remaining essential open issues including whether to support SUL in OD-SIB1 cell. NEC discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2506063](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506063.zip) Discussion on on-demand SIB1 HONOR discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2506090](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506090.zip) On demand SIB1 handling Nokia, Nokia Shanghai Bell discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2506170](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506170.zip) Discussion on Additional Aspects of OD-SIB1 CEWiT discussion

### 8.5.4 Adaptation of common signal/channel transmissions

Remaining essential open issues including down-selection of solutions on how to disable RACH adaptation for MSG1 repetition, stage-3 identified open issues if needed, etc.

[R2-2505099](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505099.zip) Remaining issues on common signal and channel transmissions adaptation LG Electronics Inc. discussion Rel-19

[R2-2505170](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505170.zip) Adaptation of Common signal channel transmissions CATT discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505255](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505255.zip) Adaptation of common signal channel transmissions Samsung discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505275](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505275.zip) Discussion on adaptation of common signal channel transmission OPPO discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505316](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505316.zip) Remaining open issues on common channel adaptation Xiaomi discussion Netw\_Energy\_NR\_enh-Core

[R2-2505340](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505340.zip) Remaining issues of common signal adaptation vivo discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505500](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505500.zip) Remaining issues on common signal transmission adaptation Apple discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505508](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505508.zip) Remaining issues on adaptation of common signal/channel Fujitsu discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505528](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505528.zip) Discussion on adaptation of common signal and channel NTT DOCOMO, INC. discussion Rel-19

[R2-2505789](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505789.zip) Remaining issues for time domain adaptation of common signalling and channels InterDigital discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2505847](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505847.zip) Discussion on remaining issues for RACH adaptation Qualcomm Incorporated discussion

[R2-2505991](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505991.zip) Adaptation of common signal/channel transmissions ZTE Corporation, Sanechips discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2506051](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506051.zip) Discussion on adaptation of common signals/channels transmissions Huawei, HiSilicon discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2506064](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506064.zip) Discussion on adaptation of common signal/channel transmissions HONOR discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2506091](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506091.zip) Adaptation of common signals Nokia, Nokia Shanghai Bell discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2506095](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506095.zip) Adaptation of common signal/channel transmissions for NES Ericsson discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2506097](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506097.zip) Joint utilization of paging and RA resource adaptations Ericsson, Nokia, Nokia Shanghai Bell, InterDigital, NEC discussion Rel-19 Netw\_Energy\_NR\_enh-Core

## 8.6 Mobility Enhancement Ph4

(NR\_Mob\_Ph4-Core; leading WG: RAN2; REL-19; WID: [RP-242356](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_105/Docs/RP-242356.zip))

Time budget: 2 TU

Tdoc Limitation: 3 tdocs

### 8.6.1 Organizational

Incoming LS, WI rapporteur inputs, CR rapporteur inputs (including post email discussion [POST130][110], [111], [120], summary of identified stage-3 open issues that need online discussion and rapporteur’s suggestions if needed).

[R2-2505012](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505012.zip) LS on frequency location of CSI-RS resources for CSI acquisition in LTM (R1-2504828; contact: Fujitsu) RAN1 LS in Rel-19 NR\_Mob\_Ph4-Core To:RAN4 Cc:RAN2

[R2-2505065](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505065.zip) Reply LS on security handling for inter-CU LTM in non-DC cases (S3-252398; contact: Huawei) SA3 LS in Rel-19 NR\_Mob\_Ph4-Core To:RAN3 Cc:RAN2

[R2-2505162](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505162.zip) Draft 306 running CR for UE capability for Mob Ph4 CATT draftCR Rel-19 38.306 18.6.0 NR\_Mob\_Ph4-Core

[R2-2505163](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505163.zip) Draft 331 running CR for UE capability for Mob Ph4 CATT draftCR Rel-19 38.331 18.6.0 NR\_Mob\_Ph4-Core

[R2-2505164](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505164.zip) Report of [POST130][120][MOB] CATT discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505291](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505291.zip) Introduction of NR mobility enhancements Phase 4 in TS 37.340 China Telecom CR Rel-19 37.340 18.6.0 0419 - B NR\_Mob\_Ph4-Core

[R2-2505397](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505397.zip) Introduction of NR mobility enhancements Phase 4 in MAC vivo (Rapporteur) CR Rel-19 38.321 18.6.0 2098 - B NR\_Mob\_Ph4-Core

[R2-2505398](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505398.zip) Discussion summary and list of MAC open issue for Mob Ph4 vivo discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505453](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505453.zip) Introduction of NR mobility enhancements Phase 4 in TS 38.300 Apple Inc CR Rel-19 38.300 18.6.0 1011 - B NR\_Mob\_Ph4-Core

=> Revised in [R2-2506195](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506195.zip)

[R2-2506195](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506195.zip) Introduction of NR mobility enhancements Phase 4 in TS 38.300 Apple Inc CR Rel-19 38.300 18.6.0 1011 1 B NR\_Mob\_Ph4-Core [R2-2505453](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505453.zip)

[R2-2505815](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505815.zip) Introduction of RRC changes for mobility enhancements phase 4 Ericsson CR Rel-19 38.331 18.6.0 5443 - B NR\_Mob\_Ph4-Core

[R2-2505816](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505816.zip) List of open issues for mobility ph4 Ericsson discussion Rel-19 NR\_Mob\_Ph4-Core

### 8.6.2 Inter-CU LTM

Remaining essential open issues including handling of target cell’s SP CSI-RS resources after cell switch, stage-3 identified open issues if needed, etc.

[R2-2505158](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505158.zip) UE capability for fast recovery for inter-CU LTM MediaTek Inc. discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505165](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505165.zip) Discussion on Inter-CU LTM CATT discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505277](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505277.zip) Remaining issues of inter-CU LTM Xiaomi discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505311](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505311.zip) Remaining issues on inter-CU LTM ETRI discussion Rel-19

[R2-2505399](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505399.zip) Discussion on inter-CU LTM vivo discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505455](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505455.zip) Remaining issues of Inter-CU LTM Samsung discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505517](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505517.zip) Discussion on open issues for inter-CU LTM OPPO discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505546](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505546.zip) Discussion on inter-CU LTM Qualcomm Incorporated discussion

[R2-2505583](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505583.zip) Remaining issues on inter-CU LTM LG Electronics Inc. discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505657](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505657.zip) LTM CG Resource consumption for the target cells Sony discussion Rel-19 NR\_Mob\_Ph4

[R2-2505730](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505730.zip) Remaining issues of Inter-CU LTM Rakuten Mobile, Inc discussion Rel-19

[R2-2505786](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505786.zip) Discussion on open issues of inter-CU LTM Ofinno discussion Rel-19

[R2-2505869](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505869.zip) How to include the NCC value in the Enhanced Cell Switch Command MAC CE Ericsson discussion NR\_Mob\_Ph4-Core

[R2-2505870](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505870.zip) On remaining open issues for Inter-CU LTM and DC-LTM Nokia discussion

[R2-2505893](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505893.zip) Inter-CU LTM Huawei, HiSilicon discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2506022](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506022.zip) Remaining issues and solutions on inter-CU LTM Sharp discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2506113](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506113.zip) Discussion on SP CSI-RS for target cell NTT DOCOMO, INC. discussion Rel-19

[R2-2506139](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506139.zip) Discussion on inter-CU LTM ZTE Corporation, Sanechips discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2506158](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506158.zip) Discussion on inter-CU LTM DENSO CORPORATION discussion Rel-19 NR\_Mob\_Ph4-Core

### 8.6.3 L1 event triggered measurement reporting

Remaining essential open issues includingpost email discussion [POST130][117] and conclusion on the coexistence with mTRP, stage-3 identified open issues if needed, etc.

[R2-2505117](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505117.zip) Discussion on L1 event-triggered measurement reporting Huawei, HiSilicon discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505135](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505135.zip) Remaining issues of L1 event triggered measurement reporting Xiaomi discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505159](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505159.zip) Remaining issues on event triggered L1 MR MediaTek Inc. discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505166](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505166.zip) L1 event triggered measurement reporting CATT discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505180](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505180.zip) Discussion on L1 event triggered measurement reporting Transsion Holdings discussion Rel-19

[R2-2505348](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505348.zip) Discussions on L1 event triggered measurement reporting Fujitsu discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505400](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505400.zip) Discussion on LTM measurement event evaluation and reporting vivo discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505456](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505456.zip) Remaining Issues of L1 Event Triggered Measurement Report Samsung discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505482](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505482.zip) Remaining issues of LTM measurement Apple discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505518](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505518.zip) Open issues for L1 event triggered measurement reporting OPPO discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505544](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505544.zip) Discussion on L1 event-triggered measurement reporting Qualcomm Incorporated discussion

[R2-2505548](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505548.zip) Discussion on L1 event triggered measurement reporting for LTM KDDI Corporation discussion Rel-19

[R2-2505717](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505717.zip) Final View on Measurement Reporting Enhancements for Rel-19 LTM Nokia discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505719](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505719.zip) Report from [POST130][117][MOB] (Nokia) Nokia discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505731](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505731.zip) Remaining issues of L1 event triggered measurement reporting Rakuten Mobile, Inc discussion Rel-19

[R2-2505764](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505764.zip) Discussion on triggering of MR MAC CE for leaving beam LG Electronics Inc. discussion NR\_Mob\_Ph4-Core

[R2-2505787](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505787.zip) Remaining issues for L1 event triggered measurement report Ofinno discussion Rel-19

[R2-2505868](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505868.zip) Handling of SP CSI-RS resources of target cell after LTM cell switch Ericsson discussion NR\_Mob\_Ph4-Core

[R2-2505926](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505926.zip) Leftover for L1 measurement and report Lenovo discussion NR\_Mob\_Ph4-Core

[R2-2505966](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505966.zip) Remaining issues of L1 event triggered measurement reporting CMCC discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505974](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505974.zip) Remaining issues of event-triggered L1 measurement reporting for LTM Kyocera discussion Rel-19

[R2-2506023](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506023.zip) Discussion on issues for supporting L1 event triggered measurement reporting Sharp discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2506065](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506065.zip) Discussion on measurement event evaluation and report HONOR discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2506140](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506140.zip) Discussion on L1 event triggered measurement reporting ZTE Corporation, Sanechips discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2506149](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506149.zip) Remaining Issues of L1 Event Triggered Measurement Report Samsung discussion

### 8.6.4 Conditional intra-CU LTM

Remaining essential open issues including stage-3 identified open issues if needed, etc.

[R2-2505098](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_131\\Docs\\R2-2505098.zip) Discussion on Conditional Intra CU LTM Lekha Wireless Solutions discussion Rel-19

[R2-2505104](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505104.zip) Discussion on remaining open issues of conditional intra-CU LTM Transsion Holdings discussion

[R2-2505160](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505160.zip) Remaining issues in conditional LTM MediaTek Inc. discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505167](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505167.zip) Discussion on Conditional Intra-CU LTM CATT discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505278](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505278.zip) Remaining issues of conditional LTM Xiaomi discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505312](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505312.zip) Remaining issues on conditional LTM ETRI discussion Rel-19

[R2-2505349](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505349.zip) Discussion on MAC open issues for Conditional intra-CU LTM Fujitsu discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505360](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505360.zip) Issue in Fast LTM Recovery after Conditional LTM Failure Fujitsu, NTT DOCOMO, InterDigital discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505401](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505401.zip) Discussion on conditional LTM vivo discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505483](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505483.zip) Remaining issues of conditional LTM Apple discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505519](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505519.zip) Open issues for conditional LTM OPPO discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505545](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505545.zip) Discussion on conditional intra-CU LTM Qualcomm Incorporated discussion

[R2-2505584](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505584.zip) Remaining issues on CLTM LG Electronics Inc. discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505620](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505620.zip) Remaining Open issues for CLTM NEC discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505641](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505641.zip) Discussion on early TA for conditional LTM ITRI discussion NR\_Mob\_Ph4-Core

[R2-2505696](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505696.zip) Remaining issues for CLTM Lenovo discussion Rel-19

[R2-2505729](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505729.zip) Remaining issues of Conditional LTM Rakuten Mobile, Inc discussion Rel-19

[R2-2505733](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505733.zip) Introduction of Hybrid CHO/LTM Handover Mechanism Jio Platforms discussion Rel-19

[R2-2505788](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505788.zip) Discussion on remaining issues of CLTM Ofinno discussion Rel-19

[R2-2505867](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505867.zip) L2 Reset Coordination for Conditional LTM Ericsson discussion NR\_Mob\_Ph4-Core

[R2-2505894](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505894.zip) Intra-CU conditional LTM Huawei, HiSilicon discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2505945](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505945.zip) Discussion on open issue of conditional LTM CMCC discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2506010](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506010.zip) Remaining issues of Conditional intra-CU LTM Kyocera discussion

[R2-2506024](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506024.zip) Discussion on issues for supporting conditional LTM Sharp discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2506032](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506032.zip) Discussion on remaining issue for C-LTM ASUSTeK discussion Rel-19 38.321 NR\_Mob\_Ph4-Core

[R2-2506066](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506066.zip) Discussion on conditional LTM HONOR discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2506132](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506132.zip) Considerations on conditional LTM Nokia discussion Rel-19 NR\_Mob\_Ph4

[R2-2506141](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506141.zip) Discussion on conditional intra-CU LTM ZTE Corporation, Sanechips discussion Rel-19 NR\_Mob\_Ph4-Core

## 8.7 XR Enhancements Ph3

(NR\_XR\_Ph3-Core; leading WG: RAN2; REL-19; WID: RP-250107)

Time budget: 2 TU

Tdoc Limitation: 3 tdocs

### 8.7.1 Organizational

LS, rapporteur input, workplan, running CRs, open issues lists etc.

[R2-2505039](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505039.zip) LS on uplink rate control (R3-253927; contact: Nokia) RAN3 LS in Rel-19 NR\_XR\_Ph3-Core To:RAN2

[R2-2505047](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505047.zip) LS on UE assistance information (R4-2508312; contact: Nokia) RAN4 LS in Rel-19 NR\_XR\_Ph3-Core To:RAN2 Cc:RAN1

[R2-2505061](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505061.zip) Reply LS on RTP retransmission (S2-2505975; contact: InterDigital) SA2 LS in Rel-19 5G\_RTP\_Ph2, XRM\_Ph2 To:SA4 Cc:RAN2

[R2-2505069](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505069.zip) Introduction of XR enhancements Qualcomm Incorporated CR Rel-19 38.321 18.6.0 2102 - B NR\_XR\_Ph3-Core

[R2-2505070](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505070.zip) List of open issues in MAC Qualcomm Incorporated discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505119](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505119.zip) Introduction of R19 XR enhancements for RRC spec Huawei, HiSilicon CR Rel-19 38.331 18.6.0 5395 - B NR\_XR\_Ph3-Core

[R2-2505120](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505120.zip) Summary of [POST130][506][XR] RRC running CR (Huawei) Huawei, HiSilicon discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505136](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505136.zip) Draft 38.306 CR for Rel-19 XR UE capabilities Xiaomi draftCR Rel-19 38.306 18.6.0 B NR\_XR\_Ph3-Core

[R2-2505137](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505137.zip) Draft 38.331 CR for Rel-19 XR UE capabilities Xiaomi draftCR Rel-19 38.331 18.6.0 B NR\_XR\_Ph3-Core

[R2-2505138](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505138.zip) Open issues of Rel-19 XR UE capabilities Xiaomi discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505279](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505279.zip) Introduction of XR Enhancements Phase 3 Nokia CR Rel-19 38.300 18.6.0 1007 - B NR\_XR\_Ph3-Core

[R2-2505329](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505329.zip) Rapporteur Inputs Nokia, Qualcomm (Rapporteurs) discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505402](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505402.zip) Introduction of R19 XR enhancements for RLC spec. vivo CR Rel-19 38.322 18.2.0 0065 - B NR\_XR\_Ph3-Core

[R2-2505403](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505403.zip) Summary of RLC open issue list for R19 XR vivo discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505438](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505438.zip) Introduction of R19 XR enhancements for PDCP spec. LG Electronics Inc. CR Rel-19 38.323 18.5.0 0149 - B NR\_XR\_Ph3-Core

[R2-2505439](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505439.zip) Summary of [POST130][507][XR] PDCP running CR and open issues (LGE) LG Electronics Inc. (Rapporteur) discussion Rel-19 NR\_XR\_Ph3-Core

### 8.7.2 Multi-modality support

**No contributions are expected for this AI**

### 8.7.3 RRM measurement gaps/restrictions related enhancements

Remaining issues for this AI are expected to be covered by [POST130][506][XR] RRC running CR (Huawei) and no contributions are expected.

[R2-2505658](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505658.zip) UE Assistance Information (UAI) for recommended gap cancellation ratio Sony discussion Rel-19 NR\_XR\_Ph3

[R2-2505975](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505975.zip) Discussion on UAI and Measurement Gaps ETRI discussion Rel-19

### 8.7.4 Scheduling enhancements

Remaining open issues related to LCP and DSR enhancements.

[R2-2505071](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505071.zip) Discussion on DSR enhancements Qualcomm Incorporated discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505171](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505171.zip) Consideration on Scheduling Enhancement CATT discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505260](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505260.zip) Scheduling Enhancements for XR Ofinno discussion Rel-19

[R2-2505272](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505272.zip) Leftover issues on scheduling enhancements Sharp discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505273](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505273.zip) Removing Non-delay-reporting RLC SDU from RLC specification Sharp, Ericsson discussion

[R2-2505274](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505274.zip) Discussion on scheduling enhancement for XR OPPO discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505290](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505290.zip) Remaining issues on scheduling enhancement Xiaomi Communications discussion

[R2-2505372](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505372.zip) Scheduling enhancements for XR ZTE Corporation, Sanechips discussion

[R2-2505404](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505404.zip) Remaining issues on DSR enhancements for XR vivo discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505444](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505444.zip) Remaining Issues of DSR Enhancements for Rel-19 XR Apple discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505458](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505458.zip) Remaining issues on scheduling enhancement for XR LG Electronics Inc. discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505547](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505547.zip) Scheduling Enhancements for XR Nokia, Nokia Shanghai Bell discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505619](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505619.zip) Remaining Issues on DSR enhancements ETRI discussion Rel-19

[R2-2505638](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505638.zip) Remaining issues on LCP and DSR NEC discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505646](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505646.zip) Remaining open issues of DSR enhancements InterDigital discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505678](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505678.zip) Discussion on open issues for scheduling enhancements Samsung discussion Rel-19

[R2-2505756](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505756.zip) Remaining issues on LCP and DSR enhancements Huawei, HiSilicon discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505970](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505970.zip) Remaining open issues on scheduling enhancement for XR CMCC discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2506067](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506067.zip) Discussion on DSR enhancements HONOR discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2506115](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506115.zip) Discussion on XR DSR enhancements III discussion

[R2-2506148](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506148.zip) Discussion on DSR enhancements Ericsson discussion Rel-19 NR\_XR\_Ph3-Core

### 8.7.5 RLC enhancements

Remaining open issues related to RLC enhancements.

[R2-2505072](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505072.zip) Discussion on RLC enhancements Qualcomm Incorporated discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505139](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505139.zip) RLC AM retransmission enhancements Xiaomi discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505172](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505172.zip) Remaining issues on XR-specific RLC Enhancement CATT discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505261](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505261.zip) RLC Enhancements for XR Ofinno discussion Rel-19

[R2-2505271](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505271.zip) Leftover issues on RLC enhancements Sharp discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505328](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505328.zip) RLC Enhancements Nokia, Nokia Shanghai Bell discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505344](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505344.zip) Discussion on RLC re-transmission related enhancements OPPO discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505373](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505373.zip) RLC enhancements for XR ZTE Corporation, Sanechips discussion

[R2-2505405](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505405.zip) Discussion on RLC enhancement for XR vivo discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505445](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505445.zip) Remaining Issues of RLC-AM Enhancements for Rel-19 XR Apple discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505505](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505505.zip) Discussion on RLC AM enhancements Huawei, HiSilicon discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505586](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505586.zip) remaining open issues for RLC enhancements Lenovo discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505643](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505643.zip) Discussion on RLC Enhancements for Unnecessary Retransmissions Avoidance ITRI discussion NR\_XR\_Ph3-Core

[R2-2505647](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505647.zip) Discussion on RLC enhancements InterDigital discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505659](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505659.zip) Timely retransmissions for RLC AM Sony, Canon discussion Rel-19 NR\_XR\_Ph3

[R2-2505677](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505677.zip) Discussion on open issues for RLC enhancements Samsung discussion Rel-19

[R2-2505705](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505705.zip) Clarification on RLC AM NEC, Fujitsu discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505804](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505804.zip) Remaining open issues on RLC enhancements for XR LG Electronics Inc. discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505882](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505882.zip) Remaining Open Issues on RLC Enhancements Ericsson discussion Rel-19

[R2-2505955](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505955.zip) Discussion on the open issue of RLC enhancements CMCC discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2506001](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506001.zip) Discussion on RLC enhancements DENSO CORPORATION discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2506068](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506068.zip) Discussion on RLC enhancements HONOR discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2506189](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506189.zip) On remaining issue on RLC enhancements NTT DOCOMO INC.. discussion Rel-19

### 8.7.6 XR rate control

Remaining open issues related to XR rate control.

[R2-2505073](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505073.zip) Discussion on XR rate control Qualcomm Incorporated discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505118](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505118.zip) Discussion on XR rate control Huawei, HiSilicon discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505140](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505140.zip) XR rate control Xiaomi discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505173](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505173.zip) Discussion on XR Rate Control CATT discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505262](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505262.zip) UL Rate Control for XR Ofinno discussion Rel-19

[R2-2505350](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505350.zip) Discussions on XR rate control Fujitsu discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505374](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505374.zip) XR Rate control details ZTE Corporation, Sanechips discussion

[R2-2505406](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505406.zip) Discussion on XR rate control vivo discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505446](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505446.zip) Remaining Issues of UL Rate Control for Rel-19 XR Apple discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505558](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505558.zip) Discussion on UL rate control for Rel-19 XR Samsung discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505578](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505578.zip) Concluding XR rate control for Rel-19 Nokia, Nokia Shanghai Bell discussion NR\_XR\_Ph3-Core

[R2-2505587](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505587.zip) Remaining open issues for XR Rate Control Lenovo discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505639](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505639.zip) Uplink rate control for XR NEC discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505648](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505648.zip) Discussion on UL congestion signaling InterDigital discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505750](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505750.zip) Discussion on XR Rate Control OPPO discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505805](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505805.zip) Remaining open issues on rate control signaling for XR LG Electronics Inc. discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2505883](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505883.zip) Remaining Issues on XR Rate Control Ericsson discussion Rel-19

[R2-2505971](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505971.zip) Remaining open issues on rate control for XR CMCC discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2506069](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506069.zip) Discussion on XR rate control HONOR discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2506130](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506130.zip) Remaining issues of XR rate control ETRI discussion Rel-19

[R2-2506191](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506191.zip) On remaining issue on XR UL rate control NTT DOCOMO INC.. discussion Rel-19

## 8.8 NTN for NR Ph3

(NR\_NTN\_Ph3-Core; leading WG: RAN2; REL-19; WID: RP-243300)

LTE\_TN\_NR\_NTN\_mob, leading WG: RAN2, Rel-19 WID: [RP-240924](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_104/Docs/RP-240924.zip))

Time budget: 2 TU

Tdoc Limitation: 3 tdocs

[R2-2505744](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505744.zip) Clarify SMTC2-LP offset assumption for NTN (align with SMTC/SMTC4list) Jio Platforms CR Rel-19 38.331 18.6.0 5435 - D NR\_NTN\_Ph3-Core

[R2-2505747](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505747.zip) Clarify UE use of SIBXX (ISA) to gate MCCH acquisition for MBS broadcast in NTN Jio Platforms Limited CR Rel-19 38.300 18.6.0 1014 - B NR\_NTN\_Ph3-Core

[R2-2505748](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505748.zip) ISA-aided frequency (de)prioritisation for MBS broadcast in NTN Jio Platforms CR Rel-19 38.304 18.4.0 0443 - B NR\_NTN\_Ph3-Core Withdrawn

[R2-2506054](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506054.zip) ISA-aided frequency (de)prioritisation for MBS broadcast in NTN (RRC\_IDLE/INACTIVE) Jio Platforms Limited CR Rel-19 38.304 18.4.0 0445 - B NR\_NTN\_Ph3-Core

### 8.8.1 Organizational

LS, Rapporteur input, including workplan, running CRs, open issues lists, etc.

Rapporteur inputs do not count towards the tdoc limitation.

Including the outcome of the following email discussion:

[Post130][301][R19 NR NTN] Stage2 CR (Thales)

[Post130][302][R19 NR NTN] RRC CR (Ericsson)

[Post130][303][R19 NR NTN] 38.304 CR (ZTE)

[Post130][304][R19 NR NTN] capability CR (Apple)

For the LTE\_TN\_NR\_NTN\_mob WI, including endorsed draft CRs from the WI spec rapporteurs.

[R2-2505023](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505023.zip) LS on NR-NTN TP for TS 38.300 (NR\_NTN\_Ph3; contact: Thales) RAN1 LS in Rel-19 NR\_NTN\_Ph3 To:RAN2

[R2-2505024](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505024.zip) LS on Msg4 PDSCH repetition (R1-2504936; contact: Thales) RAN1 LS in Rel-19 NR\_NTN\_Ph3 To:RAN2

[R2-2505050](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505050.zip) Reply LS on SMTC enhancements (R4-2508433; contact: Xiaomi) RAN4 LS in Rel-19 NR\_NTN\_Ph3-Core To:RAN2

[R2-2505067](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505067.zip) Reply on Inclusion of NTN intended service area in the Service Announcement (S4-251099; contact: Ericsson) SA4 LS in Rel-19 NR\_NTN\_Ph3-Core To:RAN2 Cc:SA2

[R2-2505147](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505147.zip) Introduction of stage 2 for LTE TN to NR NTN idle mode mobility Samsung CR Rel-19 36.300 18.5.0 1412 5 B LTE\_TN\_NR\_NTN\_mob [R2-2504096](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504096.zip) Withdrawn

[R2-2505233](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505233.zip) Introduction of LTE TN to NR NTN IDLE mode mobility CATT CR Rel-19 36.331 18.6.0 5141 - B LTE\_TN\_NR\_NTN\_mob Withdrawn

[R2-2505281](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505281.zip) Introduction of Rel1-9 NR NTN in 38.304 ZTE Corporation, Sanechips CR Rel-19 38.304 18.4.0 0441 - B NR\_NTN\_Ph3-Core

[R2-2505282](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505282.zip) Introduction of less than 5MHz in NTN ZTE Corporation, Xiaomi, Sanechips CR Rel-19 38.331 18.6.0 5389 1 B NR\_IoT\_NTN\_req\_test\_enh [R2-2504779](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504779.zip)

[R2-2505283](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505283.zip) Introduce UE capability signalling for NTN less than 5MHz ZTE Corporation, Xiaomi, Sanechips CR Rel-19 38.306 18.6.0 1307 2 B NR\_IoT\_NTN\_req\_test\_enh [R2-2504774](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504774.zip)

[R2-2505389](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505389.zip) Introduction of LTE TN to NR NTN Mobility UE Capability vivo CR Rel-19 36.306 18.5.0 1918 - B LTE\_TN\_NR\_NTN\_mob-Core

[R2-2505489](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505489.zip) Draft CR for Rel-19 NR NTN UE capabilities Apple draftCR Rel-19 38.331 18.6.0 B NR\_NTN\_Ph3-Core

[R2-2505490](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505490.zip) Draft CR for Rel-19 NR NTN UE capabilities Apple draftCR Rel-19 38.306 18.6.0 B NR\_NTN\_Ph3-Core

[R2-2505825](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505825.zip) Remaining RRC open issues for NR NTN Rel-19 Ericsson discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505827](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505827.zip) Inclusion of the ISA in the Service Announcement Ericsson discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505828](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505828.zip) Introduction of NTN Phase 3 enhancements Ericsson draftCR Rel-19 38.331 18.6.0 B NR\_NTN\_Ph3-Core

[R2-2506137](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506137.zip) Introduction of stage 2 for LTE TN to NR NTN idle mode mobility Samsung CR Rel-19 36.300 18.5.0 1412 6 B LTE\_TN\_NR\_NTN\_mob [R2-2504096](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504096.zip)

[R2-2506144](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506144.zip) Introduction of LTE TN to NR NTN IDLE mode mobility CATT CR Rel-19 36.331 18.6.0 5065 6 B LTE\_TN\_NR\_NTN\_mob-Core [R2-2504530](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504530.zip)

[R2-2506171](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506171.zip) Stage 2 Running CR for NR NTN phase 3 THALES (Rapporteur) CR Rel-19 38.300 18.6.0 1023 - B NR\_NTN\_Ph3-Core

[R2-2506175](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506175.zip) k-Mac extension for NR NTN THALES, Samsung CR Rel-19 38.331 18.6.0 5463 - F NR\_NTN\_Ph3-Core

### 8.8.2 Downlink coverage enhancements

Contributions should focus on remaining open issues related to RAN2 aspects of DL coverage enhancements due to extended SIB periodicity (up to 160ms), e.g. possible SMTC impacts (while no contributions are expected on cell level / beam level DTX/DRX mechanism).

[R2-2505078](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505078.zip) Remaining Issues on SMTC Enhancements for NTN vivo discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505079](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505079.zip) Remaining Issues on Repetition Enhancements for NTN vivo discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505225](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505225.zip) Discussion on link level enhancement CATT discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505226](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505226.zip) Discussion on potential SMTC enhancements CATT discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505284](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505284.zip) Consideration on remaining issues on SMTC enhancements ZTE Corporation, Sanechips discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505285](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505285.zip) Consideration on Msg4 PDSCH repetition ZTE Corporation, Sanechips discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505293](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505293.zip) Remaining consideration on NR NTN downlink coverage enhancements DENSO CORPORATION discussion NR\_NTN\_Ph3-Core

[R2-2505351](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505351.zip) Discussions on downlink coverage enhancement Fujitsu discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505421](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505421.zip) Open issues on Downlink Coverage Enhancement Samsung discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505491](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505491.zip) SMTC enhancement in NTN Apple discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505492](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505492.zip) Msg4 PDSCH repetition in NTN Apple discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505532](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505532.zip) Discussion on beam hopping with multiple SMTC offsets Qualcomm Incorporated discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505533](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505533.zip) Msg4 PDSCH repetition capability indication Qualcomm Incorporated discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505608](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505608.zip) Discussion on DL coverage enhancement for NTN OPPO discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505635](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505635.zip) Msg3 indication on support of Msg4 PDSCH repetition Nokia, Nokia Shanghai Bell discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505636](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505636.zip) Discussion on Remaining Issues of DL coverage enhancement Beijing Xiaomi Mobile Software discussion Rel-19

[R2-2505642](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505642.zip) Discussions on supporting multiple SMTC periodicities for inter-frequency neighbour cells ITRI discussion NR\_NTN\_Ph3-Core

[R2-2505688](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505688.zip) Some remaining issues for DL-CE in NTN Lenovo discussion Rel-19

[R2-2505707](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505707.zip) Clarification on downlink coverage enhancement NEC discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505925](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505925.zip) Remaining issues on Downlink coverage enhancements Nokia, Nokia Shanghai Bell discussion NR\_NTN\_Ph3-Core

[R2-2505953](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505953.zip) Discussion on DL coverage enhancements due to extended SSB periodicity CMCC discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505985](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505985.zip) Downlink coverage enhancement for NTN InterDigital, Inc. discussion Rel-19

[R2-2506013](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506013.zip) Open Issues for NR NTN DL Coverage Enhancements in Rel-19 ETRI discussion Rel-19

[R2-2506014](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506014.zip) Discussion on Downlink Coverage Enhancements CSCN, ZTE Corporation, Sanechips, Huawei, HiSilicon, CATT discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2506018](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506018.zip) Discussion on Downlink Coverage Enhancements Sharp discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2506052](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506052.zip) Discussion on DL coverage enhancements Huawei, HiSilicon discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2506150](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506150.zip) Details on DL CE in NR NTN NERCDTV discussion Rel-19

[R2-2506153](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506153.zip) DL coverage enhancements Ericsson discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2506154](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506154.zip) Discussion on Reply LS on SMTC enhancements Ericsson discussion Rel-19 NR\_NTN\_Ph3-Core

### 8.8.3 Uplink Capacity/Throughput Enhancement

Contributions can be submitted on the possible RAN2 aspects of the agreements reached in RAN1.

[R2-2505436](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505436.zip) Discussion on Uplink Capacity Enhancements Huawei, HiSilicon discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505922](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505922.zip) On OCC applicability to RACH-less handovers Samsung discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505956](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505956.zip) Remaining issues on uplink capacity and throughput enhancement for NR NTN CMCC discussion Rel-19 NR\_NTN\_Ph3-Core

### 8.8.4 Support of Broadcast service

Contributions should address the remaining open issues related to the signaling of the intended service area of a broadcast service.

[R2-2505080](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505080.zip) Remaining Issues on MBS Broadcast Provision in NTN vivo discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505149](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505149.zip) Remaining issues on the support of broadcast service in NTN ETRI discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505227](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505227.zip) Further discussion on support of broadcast service in NR NTN CATT discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505286](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505286.zip) Consideration on remaining issues on broadcast service enhancements ZTE Corporation, Sanechips discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505352](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505352.zip) Discussions on supporting broadcast service Fujitsu, Ericsson discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505422](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505422.zip) Open issues on Broadcast service area Samsung discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505572](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505572.zip) Discussion on providing MBS service area in NTN network OPPO discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505669](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505669.zip) The remaning issue of MBS in NTN China Telecommunications discussion

[R2-2505689](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505689.zip) Some remaining issues for MBS and ETWS broadcast Lenovo discussion Rel-19

[R2-2505716](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505716.zip) Remaining Issues for MBS in NTN Nokia, Nokia Shanghai Bell discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505767](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505767.zip) Remaining open issues for MBS service continuity over NTN Continental Automotive discussion

[R2-2505822](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505822.zip) Support for broadcast services in NR NTN Ericsson discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505895](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505895.zip) Discussion on MBS broadcast over NTN Huawei, HiSilicon discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505957](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505957.zip) Remaining issues on broadcast service for NR NTN CMCC discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505979](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505979.zip) Discussion on the remaining issues on the MBS Xiaomi discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2506017](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506017.zip) Remaining issues on intended service area Sharp discussion Rel-19 NR\_NTN\_Ph3-Core

### 8.8.5 Support of regenerative payload

Contributions, if any, should focus on the needed updates for Stage 2 description and on whether any other existing essential features (not considered so far) would be affected - and potentially need any modifications - in a regenerative payload architecture.

[R2-2505660](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505660.zip) Satellite switch with re-sync in regenerative payload Sony discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505706](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505706.zip) Stage 2 updates for regenerative payload NEC discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505879](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505879.zip) Remaining issues on support of regenerative payload ETRI, Korea University discussion Rel-19 NR\_NTN\_Ph3-Core

### 8.8.6 LTE to NR NTN mobility

Contributions, if any, should focus on any possible missing aspects for the support of idle mode mobility between LTE and NR NTN.

[R2-2505609](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505609.zip) Discussion on dedicated priority via RRCConnectionRelease OPPO discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505980](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505980.zip) Discussion on the smtc in the CarrierInfoNR-r19 Xiaomi discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2505986](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505986.zip) Discussion on LTE to NR NTN mobility InterDigital, Inc. discussion Rel-19

## 8.9 IoT NTN Ph3

(IoT\_NTN\_Ph3-Core; leading WG: RAN2; REL-19; WID: RP-243278)

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

### 8.9.1 Organizational

LS, Rapporteur input, including workplan, running CRs, open issues lists, etc.

Rapporteur inputs do not count towards the tdoc limitation.

Including the outcome of the following email discussion:

[Post130][305][R19 IoT NTN] Stage2 CR (Ericsson)

[Post130][306][R19 IoT NTN] RRC CR (Huawei)

[Post130][307][R19 IoT NTN] MAC CR (Mediatek)

[Post130][308][R19 IoT NTN] 36.304 CR (Nokia)

[Post130][309][R19 IoT NTN] capability CR (Qualcomm)

[R2-2505004](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505004.zip) Reply LS on S&F mode indications to NAS (C1-254119; contact: CICT Mobile) CT1 LS in Rel-19 5GSAT\_Ph3\_ARCH, IoT\_NTN\_Ph3-Core To:RAN2 Cc:SA2

[R2-2505021](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505021.zip) Reply LS on CB Msg3 EDT for IoT NTN Ph3 (R1-2504905; contact: MediaTek) RAN1 LS in Rel-19 IoT\_NTN\_Ph3 To:RAN2

[R2-2505026](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505026.zip) Reply LS on CB Msg3 EDT for IoT NTN Ph3 (R1-2504959; contact: MediaTek) RAN1 LS in Rel-19 IoT\_NTN\_Ph3 To:RAN2

[R2-2505056](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505056.zip) Reply LS on stage 1 requirements for the support for PWS over satellite NGRAN in Rel-17 (S2-2505538; contact: Samsung) SA2 LS in Rel-19 IoT\_NTN\_Ph3-Core To:RAN2, CT1 Cc:SA3, RAN3, SA1

[R2-2505145](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505145.zip) Introduction of IoT NTN phase 3 Ericsson CR Rel-19 36.300 18.5.0 1425 - B IoT\_NTN\_Ph3-Core

[R2-2505201](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505201.zip) Introduction of IoT NTN enhancements phase 3 MediaTek Inc. CR Rel-19 36.321 18.4.0 1591 - B IoT\_NTN\_Ph3-Core [R2-2504525](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504525.zip)

[R2-2505246](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505246.zip) Introduction of IoT NTN Ph3 Huawei, HiSilicon CR Rel-19 36.331 18.6.0 5137 - B IoT\_NTN\_Ph3-Core

[R2-2505247](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505247.zip) RRC open issue list for IoT NTN Huawei, HiSilicon discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505249](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505249.zip) Running CR for IoT-NTN Rel-19 Idle mode procedures Nokia Solutions & Networks (I) CR Rel-19 36.304 18.4.0 0882 - B IoT\_NTN\_Ph3-Core

[R2-2505540](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505540.zip) UE capability Running CR for Rel-19 IoT NTN Qualcomm Inc. CR Rel-19 36.306 18.5.0 1912 1 B IoT\_NTN\_Ph3-Core [R2-2504321](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504321.zip)

[R2-2505541](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505541.zip) UE capability draft RRC CR for Rel-19 IoT NTN Qualcomm Incorporated draftCR Rel-19 36.331 18.6.0 IoT\_NTN\_Ph3-Core

[R2-2505542](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505542.zip) Open issues on Rel-19 IoT NTN UE capabilities Qualcomm Incorporated discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505555](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505555.zip) Remaining MAC open issues in IoT NTN MediaTek Inc. discussion Rel-19 IoT\_NTN\_Ph3-Core [R2-2504526](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504526.zip)

[R2-2505872](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505872.zip) Rapporteur Summary TS36.304 Open Issues Nokia , Nokia Shanghai Bells discussion

[R2-2506174](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506174.zip) k-Mac extension for IoT NTN THALES, Samsung CR Rel-19 36.331 18.6.0 5153 - F IoT\_NTN\_Ph3-Core

[R2-2506185](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506185.zip) IoT NTN phase 3 open issues in Stage 2 Ericsson discussion Rel-19 IoT\_NTN\_Ph3-Core

### 8.9.2 Support of Store & Forward

Contributions should focus on remaining open issues related to possible impacts to the radio interface.

[R2-2505081](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505081.zip) Remaining Issues on S&F Operation vivo discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505105](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505105.zip) Discussion on Store and Forward operation Xiaomi discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505146](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505146.zip) Store & Forward: Remaining Neighbour Cell Issues PANASONIC discussion

[R2-2505178](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505178.zip) Discussion on support of Store&Forward Transsion Holdings discussion Rel-19

[R2-2505228](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505228.zip) Discussion on cell reselection enhancement based on the S&F monitoring list CATT, Samsung, Google, Huawei, Thales, Sateliot discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505229](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505229.zip) Discussion on relaxation of IDLE mode task based on the S&F monitoring list CATT, Samsung, Google, Thales discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505230](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505230.zip) Discussion on leftover issues of S&F operation CATT discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505257](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505257.zip) Remaining issues for S&F operation ZTE Corporation, Sanechips discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505294](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505294.zip) Remaining consideration on Store & Forward operation DENSO CORPORATION discussion IoT\_NTN\_Ph3-Core

[R2-2505370](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505370.zip) Leftover issues on the satellite S&F operation Google discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505437](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505437.zip) Further consideration on Store and Forward Huawei, HiSilicon, China Telecom discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505494](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505494.zip) Remaining issues in S&F operation Apple discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505550](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505550.zip) Discussion on Store & Forward satellite operation OPPO discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505567](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505567.zip) RAN2 impact on S&F mode MediaTek Inc. discussion IoT\_NTN\_Ph3-Core [R2-2504527](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504527.zip)

[R2-2505690](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505690.zip) Some remaining issues for S&F operation mode and transition time Lenovo discussion Rel-19

[R2-2505798](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505798.zip) Discussion on Paging and Mode Switching Toyota ITC discussion Rel-19 IoT\_NTN\_Ph3-Core [R2-2504097](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504097.zip)

[R2-2505823](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505823.zip) Support for store and forward in IoT NTN Ericsson discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505871](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505871.zip) Open issues for SF operation Nokia , Nokia Shanghai Bells discussion

[R2-2505878](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505878.zip) Remaining issues on Store and Forward satellite operation ETRI, Korea University discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505916](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505916.zip) Open issues on Store and Forward operation Samsung discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505928](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505928.zip) Remaining issues for Store & Forward satellite operation SHARP Corporation discussion

[R2-2505962](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505962.zip) Discussion on Store and Forward remaining issues CMCC discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2506033](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506033.zip) Discussion on usage of time information for S&F ASUSTeK discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2506070](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506070.zip) Discussion on the Store and Forward satellite operation HONOR discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2506151](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506151.zip) On cell (re)selection and idle mode task relaxation for S&F Satellite operation Sateliot, Thales, Novamint discussion Rel-19 [R2-2504617](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504617.zip)

[R2-2506152](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506152.zip) On Satellite ID aspects for S&F Satellite operation Sateliot, Thales, Novamint, CATT, Samsung, Ericsson, Nordic discussion Rel-19 [R2-2504617](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504617.zip)

[R2-2506156](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506156.zip) Store and Forward open issues Interdigital, Inc. discussion Rel-19 IoT\_NTN\_Ph3-Core

### 8.9.3 Uplink Capacity Enhancement

Contributions should focus on remaining open issues related to the enhancements to reduce the necessary uplink and downlink signaling to complete an EDT transaction (Msg3 transmission without msg1/RAR; efficient delivery of msg4 / RRCEarlyDataComplete).

[R2-2505082](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505082.zip) Remaining Issues on CB-Msg3 EDT Mechanism vivo discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505106](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505106.zip) Discussion on uplink capacity enhancements for IoT NTN Xiaomi discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505179](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505179.zip) Discussion on uplink capacity enhancement Transsion Holdings discussion Rel-19

[R2-2505231](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505231.zip) Discussion on open issues for CB-Msg3 EDT CATT discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505258](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505258.zip) Remaining issues for CB-msg3-EDT ZTE Corporation, Sanechips discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505369](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505369.zip) Leftover issues on CB-Msg3-EDT Google discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505493](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505493.zip) Remaining issues in CB-Msg3 Apple discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505536](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505536.zip) Support of OCC Qualcomm Incorporated, European Space Agency, German Aerospace Center discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505537](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505537.zip) CB-Msg3-EDT and Msg4 multicast Qualcomm Incorporated discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505551](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505551.zip) Discussion on CB-Msg3 EDT and Msg4 enhancement OPPO discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505571](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505571.zip) Discussion on CB-Msg3 procedure MediaTek Inc. discussion IoT\_NTN\_Ph3-Core [R2-2504528](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504528.zip)

[R2-2505632](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505632.zip) Remaining issues on UL capacity enhancement for IoT NTN Nokia, Nokia Shanghai Bell discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505691](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505691.zip) EDT for uplink capacity enhancement in NTN Lenovo discussion Rel-19

[R2-2505736](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505736.zip) Further consideration on UL capacity enhancement Huawei, HiSilicon discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505917](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505917.zip) On open issues for CB-Msg3-EDT Samsung discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505958](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505958.zip) Discussion on remaining issues of uplink capacity enhancement for IoT-NTN CMCC discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2506157](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506157.zip) Efficient delivery (reduced overhead) of msg4 / RRCEarlyDataComplete Interdigital, Inc. discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2506168](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506168.zip) Support of OCC with CB UL in IoT NTN Aalyria, Qualcomm Incorporated discussion Rel-19 Withdrawn

[R2-2506184](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506184.zip) UL capacity enhancements for IoT NTN Ericsson discussion Rel-19 IoT\_NTN\_Ph3-Core

### 8.9.4 Support of PWS

Contributions should focus on remaining open issues related to the introduction of support for broadcast of PWS messages for NB-IoT, re-using the LTE mechanisms.

[R2-2505083](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505083.zip) Remaining Issues on PWS Support for NB-IoT vivo discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505107](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505107.zip) PWS support for NB-IoT over NTN Xiaomi discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505259](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505259.zip) Remaining issues for PWS support ZTE Corporation, Sanechips discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505538](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505538.zip) Discussion on PWS in NB-IoT NTN Qualcomm Incorporated discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505552](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505552.zip) Discussion on PWS for NB-IoT OPPO discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505563](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505563.zip) Remaining issues on PWS support for NB-IoT Huawei, HiSilicon, China Telecom discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505568](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505568.zip) Remaining open issues of PWS for NB-IoT MediaTek Inc. discussion IoT\_NTN\_Ph3-Core

[R2-2505633](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505633.zip) On support of inter-cell PWS reception for NB-IoT NTN Nokia, Nokia Shanghai Bell, Google, Huawei discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505692](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505692.zip) Further considerations on PWS broadcast support in IoT NTN Lenovo discussion Rel-19

[R2-2505824](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505824.zip) Enhancements to support PWS in NB-IoT NTN Ericsson discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505918](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505918.zip) Open issues on PWS for NB-IoT NTN Samsung discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2505959](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505959.zip) Remaining issues on support of PWS CMCC discussion Rel-19 IoT\_NTN\_Ph3-Core

## 8.10 SON/MDT Ph4

(NR\_ENDC\_SON\_MDT\_Ph4-Core; leading WG: RAN3; REL-19; WID: [RP-234038](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_102/Docs/RP-234038.zip))

Time budget: 0.5 TU

Tdoc Limitation: 2 tdocs

### 8.10.1 Organizational

LS, Rapporteur input, including workplan, etc.

[R2-2505038](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505038.zip) LS on support of MRO for S-CPAC (R3-253886; contact: Samsung) RAN3 LS in Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core To:RAN2

[R2-2505041](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505041.zip) Reply to LS on SON for LTM (R3-253944; contact: Samsung) RAN3 LS in Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core To:RAN2

[R2-2505206](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505206.zip) Summary of [Post130][603][SONMDT] Running capability CR (CATT) CATT discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2505207](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505207.zip) Introduction of SONMDT UE Capabilities CATT draftCR Rel-19 38.331 18.6.0 B NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2505208](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505208.zip) Introduction of SONMDT UE Capabilities CATT draftCR Rel-19 38.306 18.6.0 B NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2505209](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505209.zip) Introduction of SONMDT UE Capabilities CATT CR Rel-19 36.306 18.5.0 1915 - B NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2505832](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505832.zip) Introduction of SONMDT features Ericsson, ZTE CR Rel-19 38.331 18.6.0 5446 - B NR\_ENDC\_SON\_MDT\_Ph4-Core

=> Revised in [R2-2506402](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506402.zip)

[R2-2506402](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506402.zip) Introduction of SONMDT features Ericsson, ZTE CR Rel-19 38.331 18.6.0 5446 1 B NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2505833](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505833.zip) Open Issues for NR RRC SONMDT features Ericsson, ZTE discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2506081](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506081.zip) Introduction of R19 SONMDT features in TS 36.331 Huawei, HiSilicon CR Rel-19 36.331 18.6.0 5150 - B NR\_ENDC\_SON\_MDT\_Ph4-Core

### 8.10.2 MRO enhancements for Rel-18 mobility features

LTM has 1st priority. CHO with candidate SCGs has 2nd priority

Subsequent CPAC is paused until if/when we get a RAN3 LS on the subject

[R2-2505210](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505210.zip) MRO Enhancements for CHO with Candidate SCGs CATT discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2505211](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505211.zip) MRO Enhancements for LTM CATT discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2505295](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505295.zip) [Open issue RRC-1] Correlation of SHR and SPR vivo discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2505631](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505631.zip) Remaining open issues for MOB MRO LG Electronics Inc. discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2505685](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505685.zip) Discussion on MRO enhancements for mobility Lenovo discussion Rel-19

[R2-2505724](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505724.zip) MRO enhancements for Rel-18 mobility features (RRC-1, RRC-2, RRC-9) Nokia discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2505754](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505754.zip) Correlation Indication and other issues of CHO with Candidate SCG(s) Samsung discussion

[R2-2505755](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505755.zip) MRO for CHO with Candidate SCG(s) and CHO only configuration Samsung discussion

[R2-2505801](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505801.zip) Discussion on open issues for MRO ZTE Corporation, Sanechips discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2505834](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505834.zip) MRO for CHO with candidate SCG Ericsson discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2505940](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505940.zip) MRO enhancements for CHO with candidate SCGs CMCC, Huawei, HiSilicon, CATT, Ericsson discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2506041](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506041.zip) Open issues on MRO enhancements for mobility Qualcomm Incorporated discussion NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2506082](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506082.zip) Discussion on MRO for mobility Huawei, HiSilicon discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2506142](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506142.zip) Discussion on Rel-19 SONMDT open issues Xiaomi discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

### 8.10.3 Other

RACH optimization for SDT focus on RSRP and data volume in SON reports, and existing failure causes.

MHI Enhancement for SCG Deactivation/Activation.

SON/MDT for Slicing

SON/MDT for NTN

[R2-2505725](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505725.zip) SON/MDT enhancements for network slicing (RRC-3), MHI and NTN Nokia discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2505802](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505802.zip) Discussion on other leftover issues ZTE Corporation, Sanechips discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2505835](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505835.zip) Discussion on SON-MDT enhancements for Slicing and NTN Ericsson discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2506042](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506042.zip) Open issues on NTN SONMDT Qualcomm Incorporated discussion NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2506083](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506083.zip) Discussion on SONMDT for others Huawei, HiSilicon discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2506143](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506143.zip) Discussion on other aspects of Rel-19 SONMDT Xiaomi 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-251874)

Time budget: 0.5 TU

Tdoc Limitation: 2 tdocs

### 8.11.1 Organizational

Incoming LS, Rapporteur input, including workplan, running CRs, email discussion summary, open issue list(s), etc..

[R2-2505015](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505015.zip) Reply LS on simultaneous configuration of SBFD and DC (R1-2504858; contact: Xiaomi) RAN1 LS in Rel-19 NR\_duplex\_evo-Core To:RAN2 Cc:RAN3, RAN4

[R2-2505030](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505030.zip) LS on TP for TS38.300 on Rel-19 SBFD (R1-2505081; contact: Huawei) RAN1 LS in Rel-19 NR\_duplex\_evo-Core To:RAN2 Cc:RAN3

[R2-2505088](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505088.zip) Introduction of SBFD in TS 38300 CATT CR Rel-19 38.300 18.6.0 1008 - B NR\_duplex\_evo-Core [R2-2503422](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2503422.zip)

[R2-2505363](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505363.zip) Introduction of Rel-19 Evolution of NR duplex operation (SBFD) Huawei, HiSilicon CR Rel-19 38.331 18.6.0 5414 - B NR\_duplex\_evo-Core

[R2-2505364](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505364.zip) Summary of [Post130][216][SBFD] Running CR for 38.331 Huawei, HiSilicon discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505549](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505549.zip) Introduction of Rel-19 Evolution of NR duplex operation (SBFD) for MAC spec Samsung CR Rel-19 38.321 18.6.0 2105 - B NR\_duplex\_evo-Core Withdrawn

[R2-2505560](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505560.zip) Summary of the SBFD open issues in MAC Samsung discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505575](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505575.zip) Introduction of Rel-19 Evolution of NR duplex operation (SBFD) for MAC spec Samsung CR Rel-19 38.321 18.6.0 2106 - B 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.

[R2-2505089](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505089.zip) Leftover Issues on Random Access in SBFD CATT discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505126](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505126.zip) Remaining issues of RA for SBFD NEC discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505141](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505141.zip) Discussion on RACH in SBFD Xiaomi discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505243](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505243.zip) Power ramping issue on the RO type fallback OPPO, ZTE Corporation, Sharp, NEC, NTT DOCOMO INC., Qualcomm Incorporated, CATT discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505244](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505244.zip) Clarification on the CFRA for SBFD RO OPPO discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505365](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505365.zip) Discussion on MAC open issues for random access in SBFD Huawei, HiSilicon discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505459](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505459.zip) Remaining issues on Random Access procedure for SBFD LG Electronics Inc. discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505495](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505495.zip) Open issues for RACH in SBFD Apple discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505559](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505559.zip) Discussions on the open issues for Random Access Samsung discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505590](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505590.zip) Discussion on random access procedure in SBFD ZTE Corporation discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505591](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505591.zip) Discussion on the co-existence of SBFD and LTM ZTE Corporation, OPPO, Interdigital, LG, Apple, Charter, Nokia discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505661](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505661.zip) Remaining issues for Random Access in SBFD Operation Sony discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505666](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505666.zip) SBFD RA remaining aspects Ericsson discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505751](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505751.zip) Random Access Operation of SBFD Nokia discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505820](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505820.zip) Views on random access for SBFD Qualcomm Incorporated discussion NR\_duplex\_evo-Core

[R2-2505904](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505904.zip) Remaining issues on RACH aspect in SBFD InterDigital, Inc. discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505929](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505929.zip) Discussion on SBFD RA open issues Sharp discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505952](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505952.zip) Discussion on random access in SBFD CMCC discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505982](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505982.zip) Remaining issues on RACH procedure for SBFD vivo 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.

[R2-2505090](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505090.zip) Leftover Issues on other aspects in SBFD CATT discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505142](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505142.zip) Other aspects of SBFD Xiaomi discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505366](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505366.zip) Discussion on other aspects of SBFD Huawei, HiSilicon discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505592](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505592.zip) Discussion on multi-carrier and measurements in SBFD ZTE Corporation discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505667](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505667.zip) DC and CSI-RS measurements in SBFD Ericsson discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505821](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505821.zip) Other aspects of SBFD Qualcomm Incorporated discussion NR\_duplex\_evo-Core

[R2-2505905](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505905.zip) Discussion on other aspect in SBFD InterDigital, Inc. discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505930](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505930.zip) Discussion on SBFD other open issue Sharp discussion Rel-19 NR\_duplex\_evo-Core

[R2-2505983](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505983.zip) SBFD other aspects vivo discussion Rel-19 NR\_duplex\_evo-Core

[R2-2506092](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506092.zip) Other aspects of SBFD Nokia discussion Rel-19 NR\_duplex\_evo-Core Withdrawn

[R2-2506131](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506131.zip) Other Aspects of SBFD Nokia discussion Rel-19 NR\_duplex\_evo-Core

=> Revised in [R2-2506166](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506166.zip)

[R2-2506166](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506166.zip) Other Aspects of SBFD Nokia discussion Rel-19 NR\_duplex\_evo-Core [R2-2506131](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506131.zip)

## 8.12 NR MIMO Phase 5

(NR\_MIMO\_Ph5-Core; leading WG: RAN1; REL-19; WID: [RP-242394](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_105/Docs/RP-242394.zip))

Time budget: 0.5 TU

Tdoc Limitation: 2 tdocs

### 8.12.1 Organizational

LSs and rapporteur input, including workplan, running CRs, email discussion summary, open issue list(s), etc.

[R2-2505027](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505027.zip) LS on Draft CR on TS38.300 for Rel-19 MIMO (R1-2505008; contact: Samsung) RAN1 LS in Rel-19 NR\_MIMO\_Ph5 To:RAN2

[R2-2505423](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505423.zip) Introduction of MIMO Samsung (Rapporteur) CR Rel-19 38.321 18.6.0 2100 - B NR\_MIMO\_Ph5-Core

[R2-2505424](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505424.zip) Report of MAC open issues for MIMO Samsung discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2505806](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505806.zip) Introduction of MIMO Phase 5 Ericsson CR Rel-19 38.331 18.6.0 5441 - B NR\_MIMO\_Ph5-Core

[R2-2505807](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505807.zip) Open issues for MIMO on 38.331 Ericsson discussion

[R2-2505948](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505948.zip) Work Plan for Rel-19 on NR MIMO Phase 5 CMCC, Samsung, MediaTek Work Plan Rel-19 NR\_MIMO\_Ph5-Core

[R2-2505949](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505949.zip) Running CR for Rel-19 MIMO Phase 5 CMCC CR Rel-19 38.300 18.6.0 1021 - B NR\_MIMO\_Ph5-Core

### 8.12.2 Asymmetric DL sTRP/UL mTRP

Remaining issues for asymmetric DL sTRP/UL mTRP

[R2-2505242](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505242.zip) Clarification on the coexistence between LTM and UL-only TRP OPPO discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2505267](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505267.zip) Enhancements for Asymmetric DL sTRP and UL mTRP Ofinno discussion Rel-19

[R2-2505361](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505361.zip) Discussion on Asymmetric DL sTRP UL mTRP CATT discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2505425](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505425.zip) RRC parameters for two-TA operation Samsung discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2505585](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505585.zip) Discussion on open issues for asymmetric DL sTRPUL mTRP vivo discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2505862](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505862.zip) Asymmetric DL/UL mTRP impact from MIMO ph. 5 Ericsson discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2505891](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505891.zip) Remaining issues on Asymmetric DL sTRP/UL mTRP Huawei, HiSilicon discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2505901](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505901.zip) Remaining issues on asymmetric DL sTRP/UL mTRP Nokia discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2505946](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505946.zip) Discussion on Asymmetric DL sTRP/UL mTRP CMCC discussion Rel-19 NR\_MIMO\_Ph5-Core

### 8.12.3Others

Remaining issues for UE-initiated reporting, and other issues if not covered by the previous agenda items.

[R2-2505241](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505241.zip) Discussion on the remaining issues of UE-initiated beam report OPPO discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2505268](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505268.zip) Enhancements for UE-initiated Beam Reporting Ofinno discussion Rel-19

[R2-2505362](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505362.zip) Discussion on UE initiated beam reporting CATT discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2505407](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505407.zip) Discussion on MAC and RRC open issues for UEI BMR vivo discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2505426](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505426.zip) Open issues on UE-initiated CSI Reporting Samsung discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2505464](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505464.zip) Discussion on UEI beam reporting impact LG Electronics Inc. discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2505484](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505484.zip) Remaining issues of UE initiated beam reporting Apple discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2505694](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505694.zip) Remaining issues on UEI report Lenovo discussion Rel-19

[R2-2505808](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505808.zip) Remaining aspects from other NR MIMO Ph.5 objectives Ericsson discussion

[R2-2505850](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505850.zip) Discussion on remaining issues for UE initiated beam report Qualcomm Incorporated discussion

[R2-2505892](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505892.zip) UE-initiated/event-driven beam management Huawei, HiSilicon discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2505902](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505902.zip) Other MIMO issues Nokia discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2505947](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505947.zip) Discussion on other issues of NR MIMO Phase 5 CMCC discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2505998](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505998.zip) Consideration on the Remaining MAC Issues of UEIBM ZTE Corporation discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2505999](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505999.zip) Consideration on the Remaining Asn.1 Issues ZTE Corporation discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2506034](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506034.zip) Discussion on RRC impacts for MIMO phase 5 ASUSTeK discussion Rel-19 38.331 NR\_MIMO\_Ph5-Core

[R2-2506035](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506035.zip) Discussion on MAC open issues for MIMO phase 5 ASUSTeK discussion Rel-19 38.321 NR\_MIMO\_Ph5-Core

## 8.13 NR sidelink multi-hop relay

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

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

### 8.13.1 Organizational

LSs and rapporteur input, including workplan, etc.

Including outcomes of email discussions on running CRs

[R2-2505353](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505353.zip) Introduction of NR sidelink multi-hop relay in TS 38.351 OPPO CR Rel-19 38.351 18.4.0 0041 - B NR\_SL\_relay\_multihop-Core

[R2-2505354](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505354.zip) SRAP open issues for NR sidelink multi-hop relay OPPO other Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2505427](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505427.zip) Introduction of NR Sidelink Multi-hop Relay InterDigital France R&D, SAS CR Rel-19 38.321 18.6.0 2101 - B NR\_SL\_relay\_multihop-Core

[R2-2505431](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505431.zip) Introduction of NR sidelink multi-hop relay in TS 38.331 Huawei, HiSilicon draftCR Rel-19 38.331 18.6.0 F NR\_SL\_relay\_multihop-Core Withdrawn

[R2-2505432](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505432.zip) Open issues for Multi hop Sidelink Relay in TS 38.331 Huawei, HiSilicon discussion Rel-19 38.331 NR\_SL\_relay\_multihop-Core

[R2-2505621](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505621.zip) Introduction of NR sidelink multi-hop U2N relay in TS 38.300 LG Electronics Inc. draftCR Rel-19 38.300 18.6.0 NR\_SL\_relay\_multihop

[R2-2505714](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505714.zip) Introduction of NR sidelink multi-hop relay in TS 38.331 Huawei, HiSilicon CR Rel-19 38.331 18.6.0 5429 - B NR\_SL\_relay\_multihop-Core

[R2-2505771](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505771.zip) Summary on [Post130][401][Relay] Rel-19 relay capability Samsung discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2505772](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505772.zip) Introduction of multi-hop sidelink relay capability Samsung CR Rel-19 38.306 18.6.0 1334 - B NR\_SL\_relay\_multihop-Core

[R2-2505796](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505796.zip) Introduction of multi-hop U2N relay in TS 38.323 Ericsson CR Rel-19 38.323 18.5.0 0150 - B NR\_SL\_relay\_multihop

[R2-2506047](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506047.zip) Introduction of multi-hop U2N relay in TS 38.304 MediaTek Inc. CR Rel-19 38.304 18.4.0 0444 - B NR\_SL\_relay\_multihop-Core

### 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.

[R2-2505085](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505085.zip) (RRC-5/11/12) Notification message handling for intermediate relay UE vivo discussion Rel-19

[R2-2505100](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505100.zip) Discussion on Relay discovery and (re)selection ZTE Corporation, Sanechips discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2505174](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505174.zip) Discussion on Multi-hop Discovery and (Re)selection CATT discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2505341](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505341.zip) Discovery and relay (re)selection for multi-hop U2N relay OPPO discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2505418](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505418.zip) Open Issues on Discovery and Relay (Re)Selection for Multi-hop U2N Relays InterDigital discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2505433](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505433.zip) Relay discovery and (re)selection for multi-hop Relay Huawei, HiSilicon discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2505450](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505450.zip) Discusison on Remaining issue on relay discovery and reselection Apple discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2505616](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505616.zip) Discussion on discovery and relay reselection for multi-hop U2N relay LG Electronics Inc. discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2505662](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505662.zip) Multi-hop relay selection/re-selection Sony discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2505697](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505697.zip) Discussion on notification message Lenovo discussion Rel-19

[R2-2505732](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505732.zip) Discovery (Model-B) forwarding thresholds for multi-hop U2N relay Jio Platforms Limited CR Rel-19 38.331 18.6.0 5431 - B NR\_SL\_relay\_multihop

[R2-2505773](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505773.zip) Discussion on remaining issues of relay discovery and (re)selection Samsung discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2505795](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505795.zip) Discussion on relay discovery and relay (re)selection Ericsson discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2505844](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505844.zip) Relay reselection and discovery under multihop relay Kyocera discussion

[R2-2505932](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505932.zip) Feasibility of Including RRC State Information through RRC Container in Discovery Messages for L2 Multi-hop U2N Relay NIST discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2506019](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506019.zip) Remaining issues and solutions on Relay discovery and (re)selection for multi-hop relay Sharp discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2506036](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506036.zip) Discussion on remaining issues on notification message ASUSTeK discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2506043](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506043.zip) Open issues on relay discovery and (re)selection Qualcomm Incorporated discussion NR\_SL\_relay\_multihop-Core

[R2-2506044](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506044.zip) Ensure L2 Multi-hop U2N relay operation conditions Qualcomm Incorporated discussion NR\_SL\_relay\_multihop-Core

[R2-2506165](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506165.zip) Relay (re)selection in multi-hop Relay TOYOTA Info Technology Center discussion Rel-19

### 8.13.3 Control Plane Procedures and SRAP impact

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

[R2-2505086](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505086.zip) (SRAP-1/RRC-13) Discussion on SRAP configuration and timer extension in multi-hop relay vivo discussion Rel-19

[R2-2505101](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505101.zip) Discussion on paging for multi-hop relay ZTE Corporation, Sanechips discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2505102](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505102.zip) Discussion on Reflective Bearer mapping of SL relay ZTE Corporation, Sanechips, Ericsson, Apple, Nokia discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2505127](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505127.zip) Remaining issues for Multi-hop Relay NEC discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2505175](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505175.zip) Discussion on the Control Plane Procedures CATT discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2505342](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505342.zip) SRAP configuration for multi-hop U2N Relay OPPO discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2505343](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505343.zip) Control plane procedures of multi-hop U2N relay OPPO discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2505419](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505419.zip) Remaining Issues on Control Plane for Multi-Hop U2N Relays InterDigital discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2505434](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505434.zip) Control plane procedures for multi-hop relay Huawei, HiSilicon discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2505451](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505451.zip) Discusison on Remaining UP and CP issues for multi-hop U2N relay Apple discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2505617](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505617.zip) Remaining issues on control plane procedure for SL relay KT Corp. discussion

[R2-2505618](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505618.zip) Discussion on the control plane procedure for multi-hop U2N relay LG Electronics Inc. discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2505698](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505698.zip) Passing the SFN-DFN offset in multi-hop scenario Lenovo discussion Rel-19

[R2-2505726](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505726.zip) Fast failover via pre-configured egress candidate list for multi-hop L2 U2N relay Jio Platforms Limited CR Rel-19 38.331 18.6.0 5430 - B NR\_SL\_relay\_multihop

[R2-2505759](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505759.zip) Discussion on control plane procedures for multi-hop SL Relay ZTE Corporation, Sanechips discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2505774](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505774.zip) Discussion on remaining issues of MH SL relay control plane procedures Samsung discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2505775](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505775.zip) Outstanding issues related to MH SRAP design Samsung R&D Institute UK discussion

[R2-2505794](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505794.zip) Discussion on control plane procedures Ericsson discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2505927](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505927.zip) On SFN DFN offset and time sensitive applications Nokia discussion NR\_SL\_relay\_multihop

[R2-2506020](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506020.zip) Remaining issues and solutions on C-plane procedure for multi-hop relay Sharp discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2506037](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506037.zip) Missing Intermediate U2N Relay UE behaviours upon sidelink radio link failure ASUSTeK discussion Rel-19 38.331 NR\_SL\_relay\_multihop

=> Revised in [R2-2506199](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506199.zip)

[R2-2506199](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506199.zip) Missing Intermediate U2N Relay UE behaviours upon sidelink radio link failure ASUSTeK discussion Rel-19 38.331 NR\_SL\_relay\_multihop

### 8.13.4 Service continuity

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

[R2-2505087](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505087.zip) (RRC-14) Reporting of Target Relay UEs for scenario C and D vivo discussion Rel-19

[R2-2505176](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505176.zip) Intra-gNB Service Continuity for Multi-hop U2N Relay CATT discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2505435](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505435.zip) Discussion on service continuity for Multi-hop Relay Huawei, HiSilicon discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2505797](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505797.zip) Service Continuity for Multi-Hop Relays Ericsson discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2506021](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506021.zip) Remaining issues and solutions on service continuity for multi-hop relay Sharp discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2506045](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506045.zip) Service continuity discussion Qualcomm Incorporated discussion NR\_SL\_relay\_multihop-Core

## 8.14 Additional topological enhancements

(NR\_WAB\_5GFemto; leading WG: RAN3; REL-19; WID RP-243009)

Time budget: 0 TU

Tdoc Limitation: 0 tdocs

Work on this WI will only be triggered by LS from RAN3 so work on this WI is not expected to start RAN2#127bis or RAN2#128.

No contributions expected for this meeting

[R2-2505031](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505031.zip) Reply LS on NR Femto node shared by PLMN and PNI-NPN (R3-252337; contact: LGE) RAN3 LS in Rel-19 5G\_Femto, NR\_WAB\_5GFemto-Core, eNPN To:SA2 Cc:RAN2

[R2-2505055](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505055.zip) Reply LS on FS\_VMR\_Ph2 solution impacts to RAN (Additional ULI) (S2-2504110; contact: Qualcomm) SA2 LS in Rel-19 VMR\_Ph2 To:RAN3 Cc:RAN2

## 8.15 NavIC L1 SPS A-GNSS support

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

Time budget: 0 TU

Tdoc Limitation: 1 tdoc

[R2-2505720](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505720.zip) Introduction of NavIC L1 SPS A-GNSS in NR Stage 2 specification Ericsson, Reliance Jio, ISRO, MediaTek Inc., CEWiT, Huawei CR Rel-19 38.305 18.6.0 0179 2 B LCS\_NAVIC\_L1\_SPS\_NR\_LTE-Core [R2-2504298](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504298.zip)

[R2-2505721](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505721.zip) Introduction of NavIC L1 SPS A-GNSS in LTE Stage 2 specification Ericsson, Reliance Jio, ISRO, MediaTek Inc., CEWiT, Huawei CR Rel-19 36.305 18.0.0 0120 2 B LCS\_NAVIC\_L1\_SPS\_NR\_LTE-Core [R2-2504299](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504299.zip)

[R2-2505722](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505722.zip) Introduction of NavIC L1 SPS A-GNSS in LPP Ericsson, Reliance Jio, ISRO, MediaTek Inc., CEWiT, Huawei CR Rel-19 37.355 18.5.0 0532 5 B LCS\_NAVIC\_L1\_SPS\_NR\_LTE-Core [R2-2504893](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504893.zip)

[R2-2505776](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505776.zip) Missing Capabilities for SSR Orbit/Clock Corrections Set2 Qualcomm Incorporated discussion

## 8.16 BDS B2b in A-GNSS

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

Time budget: 0 TU

Tdoc Limitation: 1 tdoc

[R2-2505094](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505094.zip) Introduction of B2b signal in BDS system in A-GNSS CAICT, CATT, CMCC, China Telecome, China Unicom, Ericsson, Huawei, HiSilicon, Lenovo, OPPO, vivo, Xiaomi, ZTE, MediaTek Inc, Qualcomm Incorporated CR Rel-19 37.355 18.5.0 0545 2 B LCS\_BDS\_B2b\_LTE\_NR-Core [R2-2501435](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2501435.zip)

[R2-2505095](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505095.zip) Introduction of BDS B2b in A-GNSS CAICT, CATT, CMCC, China Telecome, China Unicom, Ericsson, Huawei, HiSilicon, Lenovo, OPPO, vivo, Xiaomi, ZTE CR Rel-19 36.305 18.0.0 0121 1 B LCS\_BDS\_B2b\_LTE\_NR-Core [R2-2410158](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2410158.zip)

[R2-2505096](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505096.zip) Introduction of BDS B2b in A-GNSS for TS 38305 CAICT, CATT, CMCC, China Telecome, China Unicom, Ericsson, Huawei, HiSilicon, Lenovo, OPPO, vivo, Xiaomi, ZTE CR Rel-19 38.305 18.6.0 0180 1 B LCS\_BDS\_B2b\_LTE\_NR-Core [R2-2410159](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2410159.zip)

## 8.17 IoT-NTN TDD mode

(IoT\_NTN\_TDD; leading WG: RAN1; REL-19; WID RP-243293)

Time budget: 0.5 TU

Tdoc Limitation: 1 tdoc

Including the outcome of the following email discussion:

[Post130][310][IoT NTN TDD] Stage2 CR (Iridium)

[Post130][311][IoT NTN TDD] RRC CR (Huawei)

[Post130][312][IoT NTN TDD] MAC CR (Toyota)

[Post130][313][IoT NTN TDD] 36.304 CR (Xiaomi)

[Post130][314][IoT NTN TDD] capability CR (Samsung)

[R2-2505018](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505018.zip) LS on TP for 36.300 for IOT NTN TDD mode (R1-2504883; contact: Qualcomm) RAN1 LS in Rel-19 IoT\_NTN\_TDD-Core To:RAN2

[R2-2505109](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505109.zip) Discussion on support of IoT-NTN TDD mode Xiaomi discussion Rel-19 IoT\_NTN\_TDD

[R2-2505111](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505111.zip) Introduction of IoT NTN TDD mode Xiaomi CR Rel-19 36.304 18.4.0 0883 - B IoT\_NTN\_TDD-Core

[R2-2505143](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505143.zip) DraftCR 36300 IoT NTN TDD Iridium Satellite LLC draftCR Rel-19 36.300 18.5.0 B IoT\_NTN\_TDD-Core Withdrawn

[R2-2505144](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505144.zip) Final aspects on loT NTN TDD mode Iridium Satellite LLC discussion Rel-19 IoT\_NTN\_TDD

[R2-2505148](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505148.zip) Introduction of capabilities for IoT NTN TDD Samsung CR Rel-19 36.306 18.5.0 1914 - B IoT\_NTN\_TDD-Core

[R2-2505232](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505232.zip) Discussion on support of NB-IoT NTN TDD CATT discussion Rel-19 IoT\_NTN\_TDD

[R2-2505248](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505248.zip) Introduction of IoT NTN TDD mode Huawei, HiSilicon CR Rel-19 36.331 18.6.0 5138 - B IoT\_NTN\_TDD-Core

[R2-2505250](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505250.zip) Introduction of IoT NTN TDD mode TOYOTA Info Technology Center CR Rel-19 36.321 18.4.0 1592 - B IoT\_NTN\_TDD-Core

[R2-2505256](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505256.zip) Stage 2 CR for Introduction of IoT NTN TDD mode Iridium Satellite LLC CR Rel-19 36.300 18.5.0 1426 - B IoT\_NTN\_TDD-Core

[R2-2505287](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505287.zip) Remaining issues for IoT NTN TDD ZTE Corporation, Sanechips discussion Rel-19 IoT\_NTN\_TDD

[R2-2505385](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505385.zip) Report of [Post130][314][IoT NTN TDD] capability CR Samsung discussion

[R2-2505539](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505539.zip) Discussion on new NB-IoT NTN TDD mode Qualcomm Incorporated discussion Rel-19 IoT\_NTN\_TDD

[R2-2505553](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505553.zip) Discussion on IoT NTN TDD mode OPPO discussion Rel-19 IoT\_NTN\_TDD

[R2-2505634](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505634.zip) Remaining issues on support of TDD mode for IoT-NTN Nokia, Nokia Shanghai Bell discussion Rel-19 IoT\_NTN\_TDD

[R2-2505701](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505701.zip) On early implementation of the IoT-NTN TDD mode Nordic Semiconductor, Iridium, Thales discussion Rel-19 IoT\_NTN\_TDD

[R2-2505738](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505738.zip) Remaining issues of IoT NTN TDD Huawei, HiSilicon discussion Rel-19 IoT\_NTN\_TDD

[R2-2505919](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505919.zip) On open issues for IoT NTN TDD Samsung discussion Rel-19 IoT\_NTN\_TDD

[R2-2505960](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505960.zip) Remaining issues on support of IoT-NTN TDD mode CMCC discussion Rel-19 IoT\_NTN\_TDD

[R2-2506176](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506176.zip) Remaining issues for IoT-NTN TDD mode THALES discussion Rel-19 IoT\_NTN\_TDD

## 8.18 LTE-based 5G Broadcast

(LTE\_terr\_bcast\_Ph2; leading WG: RAN1; REL-19; WID RP-250794)

Time budget: 0.25 TU

Tdoc Limitation: 1 tdoc

### 8.18.1 Organizational

Incoming LS, rapporteur input, running CRs, etc.

[R2-2505022](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505022.zip) LS on RAN2 aspects for LTE-based 5G Broadcast Phase 2 (R1-2504922; contact: EBU) RAN1 LS in Rel-19 LTE\_terr\_bcast\_Ph2 To:RAN2

[R2-2505411](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505411.zip) Introduction of LTE-based 5G Broadcast Phase 2 Qualcomm Incorporated, EBU CR Rel-19 36.331 18.6.0 5143 - B LTE\_terr\_bcast\_Ph2-Core

[R2-2505412](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505412.zip) [POST130][510][LTE Broadcast] RRC Open Issues Qualcomm Incorporated, EBU report Rel-19 LTE\_terr\_bcast\_Ph2-Core

[R2-2505554](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505554.zip) [POST130][511][LTE Broadcast] MAC Open Issues Samsung report

[R2-2505556](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505556.zip) Introduction of LTE-based 5G Broadcast Phase 2 Samsung CR Rel-19 36.321 18.4.0 1593 - B LTE\_terr\_bcast\_Ph2-Core

[R2-2505740](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505740.zip) Introduction of LTE-based 5G Broadcast Phase 2 Huawei, HiSilicon CR Rel-19 36.306 18.5.0 1920 - B LTE\_terr\_bcast\_Ph2

[R2-2505741](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505741.zip) Introduction of LTE-based 5G Broadcast Phase 2 Huawei, HiSilicon, Qualcomm Incorporated CR Rel-19 36.331 18.6.0 5144 - B LTE\_terr\_bcast\_Ph2

[R2-2505799](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505799.zip) Introduction of LTE-based 5G Broadcast Phase 2 ZTE Corporation, Sanechips CR Rel-19 36.300 18.5.0 1428 - B LTE\_terr\_bcast\_Ph2-Core

### 8.18.2 Other

RAN2 signalling impacts to support time-frequency interleavers.

[R2-2505413](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505413.zip) Views on RRC and MAC Open Issues Qualcomm Incorporated discussion Rel-19 LTE\_terr\_bcast\_Ph2-Core

[R2-2505557](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505557.zip) Way forward on remaining issues for RRC and MAC Samsung discussion Rel-19

[R2-2505739](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505739.zip) Discussion on time-frequency interleavers for MBMS Huawei, HiSilicon discussion Rel-19 LTE\_terr\_bcast\_Ph2

[R2-2505800](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505800.zip) Open issues in MAC layer on supporting TFI ZTE Corporation, Sanechips discussion Rel-19 LTE\_terr\_bcast\_Ph2

## 8.19 TEI19

Time budget: 1 TU

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

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

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

### 8.19.1 RAN2-led

**[UAV]**

[R2-2505220](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505220.zip) Discussion on TEI19 UAV mobility enhancements CATT, NTT DOCOMO, LG Electronics Inc., Kyocera, LGU+, China Telecom, NEC, SK Telecom, Qualcomm Incorporated, CMCC, Ericsson, Nokia discussion Rel-19 TEI19

handover.

*Proposal 1: One indication is introduced in SIB2 to inform whether the serving frequency is UAV dedicated frequency, and another per frequency indication is introduced in SIB4 to inform it is a UAV dedicated frequency.*

*Proposal 2: UAV UE may consider the UAV dedicated frequency to be the highest priority for cell reselection. Optionally, an altitude range can be configured by network and only when a UAV UE is within this altitude range, it may prioritize UAV frequency for cell reselection.*

*Proposal 3: for the idle/inactive UE, ssb-ToMeasureAltitudeBasedList is configured in SIB2 and SIB4 (for each frequency).*

*Proposal 4: If ssb-ToMeasureAltitudeBasedList is configured in SIB2 or SIB4, when the idle/inactive UE is within an altitude range indicated by altitudeRange, it may prioritize the measurements on the SSB(s) configured in ssb-ToMeasure-r18 (if present). Otherwise (i.e., the idle/inactive UE is within an altitude range indicated by altitudeRange and ssb-ToMeasure-r18 is absent) it measures on all SS-blocks. When the idle/inactive UE is outside all the altitude ranges indicated by altitudeRange (if any), ssb-ToMeasure (without suffix) applies.*

- Docomo supports this as there is internal demand for cell reselection enhancement.

*Proposal 5: Define the following altitude-based CHO trigger events for UAV*

*- condEvenA3H1, condEventA3H2, condEvenA5H1, condEventA5H2*

On conditional handover

- Samsung doesn’t think CHO enhancements is necessary. Interdigital thinks the spec changes are small and it does have some benefits. Samsung thinks that whats important is the technical benefit. The network can provide the command on time as the communication on time. Interidigital thinks that the fact the network knows where the UAV is an andvantage for using CHO. Nokia thinks that there is a use case..

- Qualcomm agrees it may not strictly necessary but it is beneficial.

- Huawei doesn’t see the need but will go with the majority.

* Cell reselection and CHO enhancement will be address in TEI19

**Agreements**

1 One indication is introduced in SIB2 to inform whether the serving frequency is UAV dedicated frequency, and another per frequency indication is introduced in SIB4 to inform it is a UAV dedicated frequency.

2 UAV UE may consider the UAV dedicated frequency to be the highest priority for cell reselection. Optionally, an altitude range can be configured by network and only when a UAV UE is within this altitude range, it may prioritize UAV frequency for cell reselection.

*3* for the idle/inactive UE, ssb-ToMeasureAltitudeBasedList is configured in SIB2 and SIB4 (for each frequency).

*4* If ssb-ToMeasureAltitudeBasedList is configured in SIB2 or SIB4, when the idle/inactive UE is within an altitude range indicated by altitudeRange, it may prioritize the measurements on the SSB(s) configured in ssb-ToMeasure-r18 (if present). Otherwise (i.e., the idle/inactive UE is within an altitude range indicated by altitudeRange and ssb-ToMeasure-r18 is absent) it measures on all SS-blocks. When the idle/inactive UE is outside all the altitude ranges indicated by altitudeRange (if any), ssb-ToMeasure (without suffix) applies.

5 Define the following altitude-based CHO trigger events for UAV

- condEvenA3H1, condEventA3H2, condEvenA5H1, condEventA5H2

[R2-2505221](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505221.zip) Introduction of UAV mobility enhancements [UAV\_Mobility] CATT, NTT DOCOMO, LG Electronics Inc., Kyocera, LGU+, China Telecom, NEC, SK Telecom, Qualcomm Incorporated, Ericsson, Nokia CR Rel-19 38.300 18.6.0 1004 - B TEI19

[R2-2505222](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505222.zip) Introduction of UAV mobility enhancements [UAV\_Mobility] CATT, NTT DOCOMO, LG Electronics Inc., Kyocera, LGU+, China Telecom, NEC, SK Telecom, Qualcomm Incorporated, Ericsson, Nokia CR Rel-19 38.304 18.4.0 0439 - B TEI19

[R2-2505223](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505223.zip) Introduction of UAV mobility enhancements [UAV\_Mobility] CATT, NTT DOCOMO, LG Electronics Inc., Kyocera, LGU+, China Telecom, NEC, SK Telecom, Qualcomm Incorporated, Ericsson, Nokia CR Rel-19 38.306 18.6.0 1319 - B TEI19

[R2-2505224](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505224.zip) Introduction of UAV mobility enhancements [UAV\_Mobility] CATT, NTT DOCOMO, LG Electronics Inc., Kyocera, LGU+, China Telecom, NEC, SK Telecom, Qualcomm Incorporated, Ericsson, Nokia CR Rel-19 38.331 18.6.0 5399 - B TEI19

* [AT131][012][TEI19] UAV CRs (CATT)

Intended outcome: Agree to UAV CRs by email

Deadline: Thursday

R2-2506461 Introduction of UAV mobility enhancements [UAV\_Mobility] CATT, NTT DOCOMO, LG Electronics Inc., Kyocera, LGU+, China Telecom, NEC, SK Telecom, Qualcomm Incorporated, Ericsson, Nokia CR Rel-19 38.300 18.6.0 1004 1 B TEI19 R2-2505221

R2-2506462 Introduction of UAV mobility enhancements [UAV\_Mobility] CATT, NTT DOCOMO, LG Electronics Inc., Kyocera, LGU+, China Telecom, NEC, SK Telecom, Qualcomm Incorporated, Ericsson, Nokia CR Rel-19 38.304 18.4.0 0439 1 B TEI19 R2-2505222

R2-2506463 Introduction of UAV mobility enhancements [UAV\_Mobility] CATT, NTT DOCOMO, LG Electronics Inc., Kyocera, LGU+, China Telecom, NEC, SK Telecom, Qualcomm Incorporated, Ericsson, Nokia CR Rel-19 38.306 18.6.0 1319 1 B TEI19 R2-2505223

R2-2506464 Introduction of UAV mobility enhancements [UAV\_Mobility] CATT, NTT DOCOMO, LG Electronics Inc., Kyocera, LGU+, China Telecom, NEC, SK Telecom, Qualcomm Incorporated, Ericsson, Nokia CR Rel-19 38.331 18.6.0 5399 1 B TEI19 R2-2505224

**[Per band capability for paging]**

[R2-2505454](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505454.zip) Introduction of band specific capability for paging [Per\_Band\_Paging\_Cap] Huawei, Nokia, Xiaomi, Ericsson CR Rel-19 38.331 18.6.0 5417 - B TEI19

* The CR is agreed

**[Early CSI acquisition]**

[R2-2505598](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505598.zip) Support early CSI acquisition for L3 Handover Huawei, HiSilicon, China Unicom, Sony, Turkcell, NTT Docomo INC., Meta, Ericsson, Reliance Jio, Vodafone, ZTE Corporation, BT Plc., Deutsche Telekom, Vivo, LG Electronics Inc., Xiaomi, NEC discussion Rel-19

*Proposal 1: RAN2 adapts the following framework for early CSI acquisition and CSI reporting for L3 handovers:*

*1) CSI-RS configuration provided in handover command (details as in Section 2.3.2 and 5.1).*

*2) Measures CSI-RS upon reception of handover command.*

*3) CSI reporting re-uses LTM solution framework.*

*Proposal 2: If RAN2 agrees to support early CSI acquisition for L3 handover, send an LS to RAN1 informing RAN2 agreement and potential TP to RAN1.*

*Observation 2: As UE does not hold the transmission of the 1st PUSCH after receiving handover command, there is no impact to RAN4.*

[R2-2505604](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505604.zip) Support early CSI acquisition for L3 handover [EarlyCSI\_L3HO] Huawei, HiSilicon, China Unicom, Sony, Turkcell, NTT Docomo INC., Meta, Ericsson, Reliance Jio, Vodafone, ZTE Corporation, BT Plc., Deutsche Telekom, Vivo, LG Electronics Inc., Xiaomi, NEC CR Rel-19 38.331 18.6.0 5426 - B TEI19

- Qualcomm indicates that the field description is normally captured in RAN1. Ericsson agrees and we need to ensure that RAN1 does the work properly.

- MEdiatek thinks that this is a RAN1 feature so RAN1 should discuss first. Huawei doesn’t think this is a RAN1 issue.

- Nokia is supportive concerned about RAN4 and RAN1 issues that need to be first resolved for LTM. If that is resolved then it doesn’t mean that it can automatically be re-used. Huawei thinks that the framework is agreed and that is enough for us to move forward. There is no RAN4 impacts.

- Vivo thinks it can be simple and we just bring a CR in RAN1.

- Apple doesn’t think we can agree on what are RAN1/RAN4.

- ZTE agrees there are minor RAN1 impacts but we don’t need RAN1 to evaluate the feasibility. The only difference is how you get it.

- Samsung doesn’t agree with this issue and it should be triggered by RAN1. Qualcomm also think this is RAN1 domain.

* Prepare offline a RAN2 CR (how it would like). Wait for some RAN1/RAN4 progress on LTM related issues and identify whether we can assume that those solutions can be used.
* Prepare an LS to RAN1 and cc RAN4 to indicate intention on RAN2 solution, provide the RAN2 CR (how it would look like). Provide the identified impacts to RAN1 and ask if this is ok.
* [AT131][011][TEI19] Early CSI (Huawei)

Intended outcome: Agree to RAN1 LS by email (R2-2506504)

Deadline: Friday

[R2-2506449](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506449.zip) Report of [AT131][011][TEI19] Early CSI (Huawei) Huawei, HiSilicon discussion Rel-19 TEI19

[R2-2506452](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506452.zip) [Draft] LS on early CSI acquisition for L3 handover Huawei, HiSilicon LS out Rel-19 TEI19 To:RAN1 Cc:RAN4

* Indicate that RAN2 has assumed no RAN4 work

[R2-2506450](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506450.zip) Support early CSI acquisition for L3 handover [EarlyCSI\_L3HO] Huawei, HiSilicon, China Unicom, Sony, Turkcell, NTT Docomo INC., Meta, Ericsson, Reliance Jio, Vodafone, ZTE Corporation, BT Plc., Deutsche Telekom, Vivo, LG Electronics Inc., Xiaomi, NEC CR Rel-19 38.331 18.6.0 5426 1 B TEI19 R2-2505604

* The CR is technically correct
* RAN2 assumes there is no RAN4 work
* The CR is postponed pending RAN1 confirmation and will be discussed next meeting

R2-2506451 Introduction of UE capability to support early CSI acquisition for L3 handover [EarlyCSI\_L3HO] Huawei, HiSilicon, China Unicom, Sony, Turkcell, NTT Docomo INC., Meta, Ericsson, Reliance Jio, Vodafone, ZTE Corporation, BT Plc., Deutsche Telekom, Vivo, LG Electronics Inc., Xiaomi, NEC CR Rel-19 38.306 18.6.0 1333 1 B TEI19 R2-2505612

[R2-2505612](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505612.zip) Introduction of UE capability to support early CSI acquisition for L3 handover [EarlyCSI\_L3HO] Huawei, HiSilicon, China Unicom, Sony, Turkcell, NTT Docomo INC., Meta, Ericsson, Reliance Jio, Vodafone, ZTE Corporation, BT Plc., Deutsche Telekom, Vivo, LG Electronics Inc., Xiaomi, NEC CR Rel-19 38.306 18.6.0 1333 - B TEI19

**[LTM]**

[R2-2505663](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505663.zip) LTM CG Resource consumption for the target cells Sony discussion Rel-19 TEI19

*Proposal 1: RAN2 to discuss how minimize the configured grant resource consumption for the candidate target cells.*

- Apple thinks that this is up to the network. If there is anything for the network to do, that is more RAN3. Xiaomi has the same understanding as Apple and this was not pursued in the running CR and this should be up to network implementation.

- Ericsson thinks that the intention is not to use the CG until the cell switch. This is not of a TEI but rather a clarification in R18.

- Vivo has similar view as Sony. If we leave it to network implementation it may cause HO delay.

- Qualcomm thinks we should focus on UE action, the UE can’t use the CG resource until the switch. It should be already clear, but if needed we can clarify in chair notes for Rel-18.

- ZTE thinks that the UE will only apply the configuration after the LTM command so this problem won’t happen. Nokia, Lenovo, Interdigital agrees with ZTE it is not a RAN2 topic and the resources won’t be used anyways until the received command.

*Proposal 2: CG resources of the target cell should be activated only after the serving cell receives L1 measurement report from the UE and the serving cell makes the decision to issue the LTM command to the UE for the target cell. The activation message should be sent from the serving cell to the target cell only.*

*Proposal 3: Target cell should activate CG resources after receiving CELL SWITCH NOTIFICATION message from the source cell.*

*Proposal 4: Add a note in the spec that it is up to network implementation the order of step 14 and 15 where step 15 can be earlier than step 14.*

* Not supported as TEI
* Noted

[R2-2505817](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505817.zip) Introducing SR resources in LTM cell switch MAC CE [LTM\_enh\_SR] Ericsson, Telia Company, Verizon, T-Mobile USA, NTT Docomo, Turkcell, InterDigital, Charter Communications, MediaTek Inc., BT Plc., Vodafone, Continental Automotive, Rakuten Mobile, China Mobile, Nokia, Qualcomm Incorporated, AT&T, LG Electronics discussion Rel-19 TEI19

=> Revised in [R2-2506196](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506196.zip)

[R2-2506196](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506196.zip) Introducing SR resources in LTM cell switch MAC CE [LTM\_enh\_SR] Ericsson, Telia Company, Verizon, T-Mobile USA, NTT Docomo, Turkcell, InterDigital, Charter Communications, MediaTek Inc., BT Plc., Vodafone, Continental Automotive, Rakuten Mobile, China Mobile, Nokia, Qualcomm Incorporated, AT&T, LG Electronics discussion Rel-19 TEI19

- Samsung thinks that this is not needed. In LTM we have multiple solution and we can use CG. Ericsson thinks that it is true but CG is very costly. Network doesn’t know which candidate will be used. With pre-scheduling we can waste resources as we have to send the grant multiple time.

- Xiaomi also not sure this is needed as it is network implementation. Ericsson thinks that Xiaomi is not a network vendor and the reality is not as simple.

- Lenovo thinks that there is no delay. Ericsson explains that the DU doesn’t know the UE implementation. There is no RAN4 requirements when the UE starts monitoring the PDCCH.

- CATT doesn’t think this enhancement is necessary.

- Huawei isn’t interested in the problem but understand that there may be some network implementation considerations. If we want to do this we need to specify more things for UE behaviour.

- Sony has some sympathy and support.

* Agree with the intention of the network indicating which SR resources to use within a DU. Review and CRs in the next meeting
* [POST131][009][TEI19] LTM Cell Switch (Ericsson)

Intended outcome: Review updated CRs after plenary

Deadline: Long

**Mobility state parameters**

[R2-2506114](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506114.zip) Discussion on MobilityStateParameters in RRC\_CONNECTED KDDI Corporation (TTC) discussion

*Proposal 1: RAN2 should discuss whether to introduce the same functionality as LTE in NR, which changes the values of mobility-related parameters (e.g., timeToTrigger) based on the UE's mobility state and delivers mobilityStateParameters in RRCReconfiguration.*

- Apple points out that we had this discussion in NR and we agreed it was not needed. KDDI thinks that after we implemented NR we noticed it was mistake. Huawei thinks that it make sense so we should go back to discussion to understand why it was not introduced.

- Ericsson doesn’t think the number of HO is a good indication of mobility state.

- ZTE thinks from implementation perspective this would be useful in the field especially for high speed scenarios.

- Qualcomm remembers that the counting is not very reliable, but the scenario that KDDI is bringing may be a relevant scenario and should be considered.

* Consider the enhancements and discuss possible solution/way to address it

*Proposal 2:　RAN2 should discuss the release from which to introduce the functionality.*

*Proposal 3:　RAN2 should discuss additional candidate solutions for NR Mobility State evaluation method.*

* Noted

[R2-2505693](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505693.zip) Discussion on PL offset in the case of LTM Lenovo discussion Rel-19

*Proposal 1: Support sDCI mTRP 2TA with PL offset for Rel-18LTM cell switch.*

*Proposal 2: To support the cell of asymmetric DL sTRP and UL mTRP with PL offset as a target cell in the case of LTM cell switch, the PL offset value should be indicated in the LTM cell switch command.*

- Oppo thinks this was discussed in MIMO session last meeting. Vivo agrees we haven’t concluded this.

- Ericsson thinks we can do this as part of review of MIMO, as MIMO isn’t concluded yet. We can wait until MIMO.

* Discussion is postponed and should take place in MIMO first. In October during ASN.1 review cross-WI discussion we may discuss whether the feature can be extended to LTM
* Noted

**[SR to RA fallback]**

[R2-2505884](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505884.zip) Scheduling Request (SR) to RACH Fallback Enhancements Ericsson discussion Rel-19

* Not supported in R19
* Noted

**[PDCCH\_Usage]**

[R2-2505963](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505963.zip) Introducing PDCCH CCE Usage for L2M [PDCCH\_Usage] CMCC, Huawei, Ericsson, ZTE, CATT, Nokia CR Rel-19 38.314 18.0.0 0035 2 B TEI19 [R2-2504664](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504664.zip)

* The CR is agreed

**[Cell DTX/DRX]**

[R2-2506049](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506049.zip) Discussion on UE assistance information for cell DTX/DRX Huawei, HiSilicon, China Telecom, NTT DOCOMO, Deutsche Telekom, KT Corporation, LG Uplus, Orange, Turkcell, SK Telecom, China Unicom, CMCC, Sharp, TCL, HONOR, ZTE Corporation, Sanechips, Google, Fraunhofer IIS, Fraunhofer HHI, CEWiT, CAICT, Apple, OPPO, CATT discussion Rel-19 TEI19

=> Revised in [R2-2506198](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506198.zip)

[R2-2506198](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506198.zip) Discussion on UE assistance information for cell DTX/DRX Huawei, HiSilicon, China Telecom, NTT DOCOMO, Deutsche Telekom, KT Corporation, LG Uplus, Orange, Turkcell, SK Telecom, China Unicom, CMCC, Sharp, TCL, HONOR, ZTE Corporation, Sanechips, Google, Fraunhofer IIS, Fraunhofer HHI, CEWiT, CAICT, Apple, OPPO, CATT, TIM discussion Rel-19 TEI19

*Proposal 1: UE indicates to the network that the configured cell DTX/DRX does not suit UE services. RAN2 to down-select from the following:*

*Option 1: Introduce a 1-bit indication in UAI, indicating the UE prefers not to operate under the current cell DTX/DRX configuration;*

*- Option 1-a: 1-bit indication as above, with an optional recommendation from UE of cell DTX/DRX configuration;*

*Option 2: Clarify in the spec that DRX-Preference-r16 can also be used by the network for cell DTX/DRX configuration.*

- Docomo supports this proposal as this helps energy consumption from network perspective.

- Nokia doesn’t share the enthusiasm as we can use normal QoE procedure to let the network control UE behaviour. Huawei explains that this is for OTT services that the network doesn’t understand what type of service it is and that no one pays for it.

- Xiaomi agrees with intention but DRX preference report is sufficient. Huawei thinks that this is option 2, but we need to clarify so after dtx/drx is configured and it is sending a preference it is also sending a preference for dtx/drx. LG shares the view with Xiaomi.

- ZTE agrees and prefers option 1, and using DRX preference without clarification it will be confusing to the network.

- Ericsson thinks that I can report unhappy but it doesn’t mean the network will make the UE happy, so this can go for a while. Huawei assumes that there is always a coverage cell and if it wants it can handover these unhappy UEs that cell.

- BT doesn’t see why we need to use this. Huawei explains that it is for OTT services.

- Vivo thinks that option 1 doesn’t exactly work so option 2 would work better.

- Ericsson thinks that the DRX preference for r16 would work implicitly. Huawei is explaining that we just need to clarify for implementers that this can also be used and also only the long cycle would need to be sent.

* UE indicates to the network that the configured cell DTX/DRX does not suit UE services. Clarify in the spec that DRX-Preference-r16 can also be used by the network for cell DTX/DRX configuration.
* Don’t need to capture how the NW will use this indication
* [POST131][019][TEI19] NES UE Caps CR (Huawei)

Intended outcome: update and agree to CRs by email

Deadline: short

[R2-2506454](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506454.zip) Introduction of UE assistance information for cell DTX/DRX [UAI-cellDTRX] Huawei, HiSilicon CR Rel-19 38.331 18.6.0 5474 - B TEI19

- Xiaomi is concerned that this feature may not function well may not be able to differentiate for which purpose the UE reported this preference and may not be able to properly configure the UE.

* Clarify in a NOTE: If DRX preference contains only long DRX cycle and shorter than configured CELL DTX/DRX cycle it implies preference for CELL DTX/DRX.
* Optional with capability signaling. Huawei will provide CR in POST email discussion.
* Revised in R2-2506482

[CB]

[R2-2506482](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_131\\Docs\\R2-2506482.zip) Introduction of UE assistance information for cell DTX/DRX [UAI-cellDTRX] Huawei, HiSilicon CR Rel-19 38.331 18.6.0 5474 1 B TEI19

* The CR is agreed

**To be treated in positioning session**

[R2-2505840](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505840.zip) UE request for equalIntegerAmbiguityLevel assistance data [GNSS-EqualIntegerAmbiguity] AT&T, Ericsson, Huawei, CATT, Samsung, ZTE Corporation, Nokia, Deutsche Telekom CR Rel-19 37.355 18.5.0 0557 1 B TEI19 [R2-2504306](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504306.zip)

**[Periodic AD]**

[R2-2505321](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505321.zip) Introduction of periodic AD for NR integrity service alert [IntegrityPeriodicAD] Huawei, HiSilicon, Ericsson, Vivo CR Rel-19 37.355 18.5.0 0558 - B TEI19

[R2-2505322](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505322.zip) Introduction of periodic delivery of NR integrity service alert [IntegrityPeriodicAD] Huawei, HiSilicon, Ericsson, VIVO CR Rel-19 38.305 18.6.0 0192 - B TEI19

=> Revised in [R2-2505676](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505676.zip)

[R2-2505676](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505676.zip) Correction on the periodic AD of NR integrity service alert [IntegrityPeriodicAD] Huawei, HiSilicon, Ericsson, Vivo CR Rel-19 38.305 18.6.0 0192 1 B TEI19 [R2-2505322](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505322.zip)

**To be treated in NTN breakout session**

**[LTE operation via satellite]**

[R2-2505452](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505452.zip) Indication to the UE on the LTE operation via satellite Apple discussion Rel-19 TEI19

**EUTRAN to NB-IoT NTN mobility**

[R2-2505084](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505084.zip) Introduction of E-UTRAN to NB-IoT NTN Mobility UE Capability [EUTRAN-to-NBIoTNTN] vivo, Samsung, Google, THALES, MediaTek Inc., Aalyria CR Rel-19 36.306 18.5.0 1917 - B TEI19

[R2-2505367](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505367.zip) Introduction of NB-IoT satellite information in E-UTRAN [EUTRAN-to-NBIoTNTN] Google, Samsung, vivo, THALES, MediaTek Inc., Aalyria CR Rel-19 36.331 18.6.0 5140 - B TEI19

[R2-2505368](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505368.zip) Introduction of NB-IoT satellite information in E-UTRAN [EUTRAN-to-NBIoTNTN] Google, Samsung, vivo, THALES, MediaTek Inc., Aalyria CR Rel-19 36.300 18.5.0 1427 - B TEI19

**Redirection from NR TN to NR NTN (and from IoT TN to IoT NTN)**

[R2-2505920](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505920.zip) Draft CR Introduction of redirection from NR TN to NR NTN to 38.331 Samsung draftCR Rel-19 38.331 18.6.0 B TEI19

[R2-2506426](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506426.zip) Introduction of redirection from NR TN to NR NTN to 38.331 [NR-TN-NTN-redir] Samsung CR Rel-19 38.331 18.6.0 5469 - B TEI19

=> Revised in [R2-506433](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-506433.zip)

[R2-2506433](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506433.zip) Introduction of redirection from NR TN to NR NTN to 38.331 [NR-TN-NTN-redir] Samsung CR Rel-19 38.331 18.6.0 5469 1 B TEI19

[R2-2505921](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505921.zip) Draft CR Introduction of redirection from NR TN to NR NTN to 38.306 Samsung draftCR Rel-19 38.306 18.6.0 B TEI19

[R2-2506427](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506427.zip) Introduction of redirection from NR TN to NR NTN to 38.306 [NR-TN-NTN-redir] Samsung CR Rel-19 38.306 18.6.0 1348 B TEI19

[R2-2506428](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506428.zip) Introduction of redirection from NR TN to NR NTN to 36.331 [NR-TN-NTN-redir] Samsung, Ericsson, Google CR Rel-19 36.331 18.6.0 5156 B TEI19

[R2-2506429](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506429.zip) Introduction of redirection from NR TN to NR NTN to 36.306 [NR-TN-NTN-redir] Samsung CR Rel-19 36.306 18.5.0 1925 - B TEI19

[R2-2505954](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505954.zip) Discussion on redirection from TN to IoT NTN and NR NTN CMCC discussion Rel-19 TEI19.

**NB-IoT NTN to NR NTN Cell Selection**

[R2-2506098](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506098.zip) NB-IoT NTN to NR NTN Cell Selection EchoStar, Qualcomm, Aalyria, Terrestar, Skylo, Sateliot CR Rel-19 36.331 18.6.0 5151 - B IoT\_NTN\_enh-Core

[R2-2506099](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506099.zip) Asisstance for inter-RAT cell-selection from NB-IoT NTN to NR-NTN EchoStar, Qualcomm, Aalyria, Terrestar, Skylo, Sateliot CR Rel-19 36.306 18.5.0 1923 - B IoT\_NTN\_enh-Core

[R2-2506100](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506100.zip) NR-NTN to NB-IoT NTN Cell Selection EchoStar, Qualcomm, Aalyria, Terrestar, Skylo CR Rel-19 38.331 18.6.0 5455 - B NR\_NTN\_enh-Core

[R2-2506101](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506101.zip) Asisstance for inter-RAT cell-selection from NR NTN to NB-IoT NTN EchoStar, Qualcomm, Aalyria, Terrestar, Skylo, Sateliot CR Rel-19 38.306 18.6.0 1340 - B NR\_NTN\_enh-Core

**Redirection for NB-IoT NTN to NR-NTN**

[R2-2506178](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506178.zip) Introduction of RRC Release with Redirection for NB-IoT NTN to NR-NTN Aalyria discussion Rel-19 IoT\_NTN\_Ph3, IoT\_NTN\_Ph3-Core

[R2-2506179](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506179.zip) CR to TS 36.331 - Introduction of RRC Release with Redirection for NB-IoT NTN to NR-NTN Aalyria CR Rel-19 36.331 18.6.0 5154 - B IoT\_NTN\_enh-Core, TEI19

**Satellite Switch with Resynchronization support for IoT NTN**

[R2-2505933](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505933.zip) TEI19] Introduction of Satellite Switch with Resynchronization support for IoT NTN Skylo Technologies, Lockheed Martin, EchoStar, Sateliot discussion Rel-19

[R2-2505934](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505934.zip) SatSwitchwithReSync support for NB-IoT NTN Skylo Technologies, Lockheed Martin, EchoStar, Sateliot CR Rel-19 36.300 18.5.0 1429 - B IoT\_NTN\_Ph3-Core

[R2-2505938](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505938.zip) SatSwitchwithReSync support for IoT NTN Skylo Technologies, Lockheed Martin, EchoStar, Sateliot CR Rel-19 36.321 18.4.0 1594 - B IoT\_NTN\_Ph3-Core

[R2-2505939](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505939.zip) SatSwitchwithReSync support for IoT NTN Skylo Technologies, Lockheed Martin, EchoStar, Sateliot CR Rel-19 36.331 18.6.0 5149 - B IoT\_NTN\_Ph3-Core

**other**

[R2-2506015](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506015.zip) Discussion on measurement events for inter-frequency scenarios with overlapping coverage in NR NTN CSCN, ZTE Corporation, Sanechips, Huawei, HiSilicon, CATT discussion Rel-19 TEI19

### 8.19.2 Other WG-led

Positioning breakout session

[R2-2505032](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505032.zip) Reply LS on non-RedCap UE UL SRS frequency hopping for positioning (R3-253749; contact: ZTE) RAN3 LS in Rel-19 TEI19 To:RAN1, RAN2

[R2-2505594](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505594.zip) Introduction of UE capability for SRS frequency hopping for non-RedCap UE in 37355 [Pos\_SRSHop] ZTE Corporation CR Rel-19 37.355 18.5.0 0553 1 B TEI19 [R2-2503877](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2503877.zip)

[R2-2505595](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505595.zip) Introduction on the SRS frequency hopping for non-RedCap UE in 38331 [Pos\_SRSHop] ZTE Corporation, Ericsson CR Rel-19 38.331 18.6.0 5290 2 B TEI19 [R2-2503878](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2503878.zip)

[R2-2505063](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505063.zip) Response to Reply LS on paging capability loss issue (S2-2506087; contact: Vodafone) SA2 LS in Rel-19 NR\_LPWUS-Core, TEI19 To:RAN2, RAN3 Cc:RAN, CT1

- Vivo and Xiaomi think that there was misunderstanding from SA2. There is no intention for all networks to upgrade to Rel-19.

- Nokia also agrees there was a misunderstanding.

- CATT thinks that RAN3 will discuss this issue so we can wait for RAN3. Qualcomm agrees.

1. Noted

* [AT131][013][TEI19] Paging capability (Vivo)

Intended outcome: Conclude on need to have response to SA2, after RAN3 conclusion, and agree what RAN2 to indicate to SA2 (e.g. including misunderstanding).

Deadline: Thursday

[CB]

[R2-2506016](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506016.zip) Discussion on SA2 reply LS on paging capability loss issue vivo discussion Rel-19 NR\_LPWUS-Core, TEI19

Proposal 1: Reply LS to SA2 to clarify the RAN2 discussion situation:

- The “container” is newly introduced from Rel-19. All the gNBs before Rel-19 cannot support this “container”, which means that there may be paging capability miss issue.

o RAN2 common understanding is to rely on network implementation to handle it (e.g. upgraded to support the ASN.1 from Rel-19) or not to address it.

- Regarding the network from Rel-19, if operators want to support the related features in one area, e.g. LP-WUS, new version of gNBs from Rel-19 in this area should support this “container”; while for old version of gNB before Rel-19 (including Rel-19 gNB not supporting Rel-19 “container”) in this area:

o if they are not upgraded to support Rel-19 “container”, there may be paging capability miss issue in this area only when the UE camps on this kind of gNB during the initial registration or TAU procedure and reports capability via this gNB.

o if they are upgraded to support Rel-19 “container” (by implementation, only need to be upgraded to support the ASN.1 from Rel-19), there will no paging capability miss issue.

Proposal 2: RAN2 to consider the draft reply LS in Annex.

* Noted

[R2-2506503](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506503.zip)

* Wait to respond to SA2 after we have the full solution
* Noted

TXSwitch\_R19

[R2-2505333](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505333.zip) Introduction of 3Tx UL switching [TxSwitch\_R19] MediaTek Inc., Ericsson, T-Mobile USA CR Rel-19 38.331 18.6.0 5411 - B TEI19

[R2-2505334](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505334.zip) Introduction of 3Tx UL switching [TxSwitch\_R19] MediaTek Inc., Ericsson, T-Mobile USA CR Rel-19 38.331 18.6.0 5412 - B TEI19 Withdrawn

[R2-2505335](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505335.zip) Introduction of 3Tx UL switching [TxSwitch\_R19] MediaTek Inc., Ericsson, T-Mobile USA CR Rel-19 38.306 18.6.0 1324 - B TEI19 Withdrawn

[R2-2505579](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505579.zip) Introduction of 3Tx UL switching [TxSwitch\_R19] MediaTek Inc., Ericsson, T-Mobile USA draftCR Rel-19 38.331 18.6.0 B TEI19

[R2-2505580](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505580.zip) Introduction of 3Tx UL switching [TxSwitch\_R19] MediaTek Inc., Ericsson, T-Mobile USA draftCR Rel-19 38.306 18.6.0 B TEI19

* [POST131][042][TEI19] TXSwitch (Mediatek)

Intended outcome: agree and endorse CRs

Deadline: short and UE capability part Thursday

[R2-2506190](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506190.zip) Support for MINT in EPS (MINT\_Ph2) Google discussion Rel-19

- Lenovo indicates that CT1 is only starting work this meeting so we should wait for progress and wait for their LS. Qualcomm agrees with Lenovo.

* Postponed waiting for CT1 progress

[R2-2506192](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506192.zip) Introduction of MINT in EPS Google CR Rel-19 36.331 18.6.0 5155 - B TEI19

[R2-2506193](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506193.zip) Introduction of MINT in EPS Google CR Rel-19 36.306 18.5.0 1924 - B TEI19

[R2-2506194](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506194.zip) Introduction of MINT in EPS Google CR Rel-19 36.300 18.5.0 1431 - B TEI19

[R2-2505723](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505723.zip) ProSe support in NPN [ProSe\_NPN] Nokia, ZTECorporation, Sanechips, LGE, Philips CR Rel-19 38.300 18.6.0 0957 1 B TEI19 [R2-2500362](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2500362.zip)

1. The CR is agreed

[R2-2505758](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505758.zip) ProSe support in NPN [ProSe\_NPN] ZTE Corporation, Sanechips, Nokia, LGE, Philips CR Rel-19 38.331 18.6.0 5209 1 B TEI19 [R2-2500422](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2500422.zip)

1. The CR is agreed

[R2-2505133](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505133.zip) SR triggered SSSG switching [SRTrig\_SSSGSwitch] Ericsson, Qualcomm Incorporated CR Rel-19 38.331 18.6.0 5396 - B TEI19

- Huawei is concerned that if we changed the parameters then RAN1 has to update this specs. Ericsson thinks that we shouldn’t add parameters that already exists and RAN1 should update their specs. Xiaomi thinks that it looks reasonable.

=> Add RAN1 CRs in other specs impacted

=> Qualcomm will take a CR to RAN1 directly to fix the misalignment

=> The CR is agreed in [R2-2506412](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506412.zip)

[R2-2506412](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506412.zip) SR triggered SSSG switching [SRTrig\_SSSGSwitch] Ericsson, Qualcomm Incorporated CR Rel-19 38.331 18.6.0 5396 1 B TEI19

=> Agreed

[R2-2505134](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505134.zip) 32 HARQ process numbers for TN in FR1 and F[R2-1](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-1.zip) [TN32HARQ] Ericsson, ZTE CR Rel-19 38.331 18.6.0 5397 - B TEI19

[R2-2505332](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505332.zip) Introduction of 32 HARQ processes to TN [TN32HARQ] Huawei, HiSilicon CR Rel-19 38.331 18.6.0 5410 - B TEI19

Discussions

- Huawei thinks that RAN1 agreed to separate parameters to not confuse with the legacy IEs that were introduced for NTN. Ericsson thinks that they aren’t only for NTN.

- CATT agrees with Huawei’s approach.

* [AT131][031][TEI19] 32HARQ CR (Huawei)

Intended outcome: agree to CR by email

Deadline: Thursday

R2-2506471 Introduction of 32 HARQ processes to TN [TN32HARQ] Huawei, HiSilicon CR Rel-19 38.331 18.6.0 5410 1 B TEI19 R2-2505332

To be treated in LTE MBS breakout session

[R2-2505330](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505330.zip) Introduction of CAS muting in LTE-based 5G broadcast [5GB\_CASMuting] Huawei, HiSilicon, Qualcomm Incorporated, EBU CR Rel-19 36.306 18.5.0 1916 - B TEI19

[R2-2505331](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505331.zip) Introduction of CAS muting in LTE-based 5G broadcast [5GB\_CASMuting] Huawei, HiSilicon, Qualcomm Incorporated, EBU CR Rel-19 36.331 18.6.0 5139 - B TEI19

## 8.20 NR Others

Tdoc limit: 2

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-19 specific WIs/SIs that has no RAN WI.

Additional tdocs on top of limit can be allowed for co-sourced contribution with 3 or more companies

### 8.20.1 RAN4

[R2-2506472](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506472.zip)

To be discussed in breakout

[R2-2505046](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505046.zip) Reply LS to RAN2 on Signalling for 7 MHz Channel Bandwidth (R4-2508088; contact: T-Mobile) RAN4 LS in Rel-19 NR\_FR1\_7MHz\_BW-Core To:RAN2 Cc:RAN3

[R2-2505384](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505384.zip) Introduction of 7MHz channel bandwidth T-Mobile USA, Ericsson CR Rel-18 38.331 18.6.0 5308 1 A TEI18, NR\_FR1\_7MHz\_BW-Core [R2-2502572](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2502572.zip)

[R2-2505386](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505386.zip) Introduction of 7MHz channel bandwidth Ericsson, T-Mobile CR Rel-17 38.331 17.13.0 5307 1 B TEI17, NR\_FR1\_7MHz\_BW-Core [R2-2502571](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2502571.zip)

[R2-2505387](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505387.zip) Introduction of 7MHz channel bandwidth Ericsson, T-Mobile CR Rel-18 38.306 18.6.0 1258 1 A TEI18, NR\_FR1\_7MHz\_BW-Core [R2-2502570](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2502570.zip)

[R2-2505388](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505388.zip) Introduction of 7MHz channel bandwidth Ericsson, T-Mobile CR Rel-17 38.306 17.13.0 1257 1 B TEI17, NR\_FR1\_7MHz\_BW-Core [R2-2502569](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2502569.zip)

[R2-2505048](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505048.zip) LS on UE signaling design for NR ATG enh (R4-2508329; contact: CMCC) RAN4 LS in Rel-19 NR\_ATG\_enh To:RAN2

[R2-2505205](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505205.zip) Introduction of Rx BSF optimization for NR RRM Ph5 CATT, Ericsson, Apple, ZTE Corporation draftCR Rel-19 38.331 18.6.0 B NR\_RRM\_Ph5-Core

[R2-2505303](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505303.zip) Discussion on DL MIMO layer capability for 6Rx UE Xiaomi, Intel Corporation, Oppo, Ericsson, Nokia, Qualcomm Incorporated, ZTE, Sanechips, CATT, T-mobile USA, CHTTL discussion Rel-19 NR\_ENDC\_RF\_Ph4 [R2-2503446](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2503446.zip)

[R2-2505304](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505304.zip) Introduction of 6 DL MIMO layer Xiaomi CR Rel-19 38.306 18.6.0 1320 - B NR\_ENDC\_RF\_Ph4 [R2-2503447](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2503447.zip) Withdrawn

[R2-2505305](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505305.zip) Introduction of 6 DL MIMO layer Xiaomi CR Rel-19 38.331 18.6.0 5402 - B NR\_ENDC\_RF\_Ph4 [R2-2503448](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2503448.zip) Withdrawn

[R2-2505485](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505485.zip) Introduction of CSSF optimization for NR RRM Ph5 (Alt1) Apple CR Rel-19 38.331 18.6.0 5419 - B NR\_RRM\_Ph5-Core

[R2-2505486](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505486.zip) Introduction of CSSF optimization for NR RRM Ph5 (Alt2) Apple CR Rel-19 38.331 18.6.0 5420 - B NR\_RRM\_Ph5-Core

[R2-2505610](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505610.zip) Introduction of 6 DL MIMO layer Xiaomi, Intel Corporation, Oppo, Ericsson, Nokia, Qualcomm Incorporated, ZTE, Sanechips, CATT, T-mobile USA, CHTTL draftCR Rel-19 38.306 18.6.0 B NR\_ENDC\_RF\_Ph4 [R2-2503447](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2503447.zip)

[R2-2505611](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505611.zip) Introduction of 6 DL MIMO layer Xiaomi, Intel Corporation, Oppo, Ericsson, Nokia, Qualcomm Incorporated, ZTE, Sanechips, CATT, T-mobile USA, CHTTL draftCR Rel-19 38.331 18.6.0 B NR\_ENDC\_RF\_Ph4 [R2-2503448](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2503448.zip)

[R2-2505622](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505622.zip) Corrections on simultaneous Rx-Tx capability for TDD-SDL band combination Huawei, HiSilicon, Ericsson CR Rel-15 38.306 15.28.0 1310 1 F LTE\_NR\_R19\_Simult\_RxTx [R2-2504734](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504734.zip)

[R2-2505623](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505623.zip) Corrections on simultaneous Rx-Tx capability for TDD-SDL band combination Huawei, HiSilicon, Ericsson CR Rel-16 38.306 16.21.0 1311 1 A LTE\_NR\_R19\_Simult\_RxTx [R2-2504735](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504735.zip)

[R2-2505624](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505624.zip) Corrections on simultaneous Rx-Tx capability for TDD-SDL band combination Huawei, HiSilicon, Ericsson CR Rel-17 38.306 17.13.0 1312 1 A LTE\_NR\_R19\_Simult\_RxTx [R2-2504736](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504736.zip)

[R2-2505625](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505625.zip) Corrections on simultaneous Rx-Tx capability for TDD-SDL band combination Huawei, HiSilicon, Ericsson CR Rel-18 38.306 18.6.0 1313 1 A LTE\_NR\_R19\_Simult\_RxTx [R2-2504737](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504737.zip)

[R2-2505761](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505761.zip) Discussion on ATG LS Ericsson discussion Rel-19 NR\_ATG\_enh-Core

[R2-2505903](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505903.zip) Discussion on 7 MHz channel bandwidth capabilities Nokia discussion Rel-19 NR\_FR1\_7MHz\_BW-Core

[R2-2505961](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505961.zip) Discussion on RAN4 LS on UE signaling design for NR ATG enh CMCC discussion Rel-19 NR\_ATG\_enh

[R2-2506000](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506000.zip) Consideration on the 7M Channel Bandwidth Reporting ZTE Corporation discussion Rel-19 NR\_FR1\_7MHz\_BW-Core

[R2-2506002](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506002.zip) Introduction of signaling support for intra-band non-collocated EN-DC/NR-CA deployment Phase 2: new receiver type(s) KDDI, OPPO, Apple, Ericsson, Huawei, HiSilicon, ZTE, Qualcomm Incorporated, Samsung draftCR Rel-19 38.331 18.6.0 NonCol\_intraB\_ENDC\_NR\_CA\_Ph2-Core

[R2-2506003](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506003.zip) Introduction of signaling support for intra-band non-collocated EN-DC/NR-CA deployment Phase 2: new receiver type(s) KDDI, OPPO, Apple, Ericsson, Huawei, HiSilicon, ZTE, Qualcomm Incorporated, Samsung draftCR Rel-19 38.306 18.6.0 NonCol\_intraB\_ENDC\_NR\_CA\_Ph2-Core

[R2-2506009](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506009.zip) Introduction of signaling support for intra-band non-collocated EN-DC/NR-CA deployment Phase 2: new receiver type(s) KDDI, OPPO, Apple, Ericsson, Huawei, HiSilicon, ZTE, Qualcomm Incorporated, Samsung draftCR Rel-19 38.331 18.6.0 NonCol\_intraB\_ENDC\_NR\_CA\_Ph2-Core

[R2-2506093](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506093.zip) Fast Beam Sweeping Factor Nokia discussion Rel-19 NR\_RRM\_Ph5-Core

[R2-2506110](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506110.zip) Introduction of UE capability on 6 DL MIMO layers Huawei, HiSilicon, Samsung, MediaTek Inc., Apple CR Rel-19 38.331 18.6.0 5458 - B NR\_ENDC\_RF\_Ph4 Withdrawn

[R2-2506111](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506111.zip) Introduction of UE capability on 6 DL MIMO layers Huawei, HiSilicon, Samsung, MediaTek Inc., Apple CR Rel-19 38.306 18.6.0 1341 - B NR\_ENDC\_RF\_Ph4 Withdrawn

[R2-2506187](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506187.zip) Introduction of UE capability on 6 DL MIMO layers Huawei, HiSilicon, Samsung, MediaTek Inc., Apple draftCR Rel-19 38.331 18.6.0 B NR\_ENDC\_RF\_Ph4

[R2-2506188](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506188.zip) Introduction of UE capability on 6 DL MIMO layers Huawei, HiSilicon, Samsung, MediaTek Inc., Apple draftCR Rel-19 38.306 18.6.0 B NR\_ENDC\_RF\_Ph4

### 8.20.2 Other WGs

[R2-2505017](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505017.zip) LS on Low NR band carrier aggregation via switching (R1-2504869; conact: Apple) RAN1 LS in Rel-19 NR\_LBCA\_Sw To:RAN2, RAN4

[R2-2505487](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505487.zip) Introduction of low NR band carrier aggregation via switching Apple, Telus, Nokia CR Rel-19 38.331 18.6.0 5421 - B NR\_LBCA\_Sw

[R2-2505488](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505488.zip) Introduction of low NR band carrier aggregation via switching Apple, Telus, Nokia (Rapporteur) CR Rel-19 38.300 18.6.0 1012 - B NR\_LBCA\_Sw

[R2-2505016](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505016.zip) LS on TS38.300 TP for Multi-carrier enhancements in Rel-19 (R1-2504861; contact: Lenovo) RAN1 LS in Rel-19 NR\_MC\_enh2 To:RAN2

[R2-2505251](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505251.zip) Stage 2 CR for Rel-19 Multi-carrier enhancements Lenovo CR Rel-19 38.300 18.6.0 1005 - B NR\_MC\_enh2

[R2-2505252](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505252.zip) Introduction of Rel-19 Multi-carrier enhancements Lenovo CR Rel-19 38.331 18.6.0 5400 - B NR\_MC\_enh2

[R2-2505292](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2505292.zip) Introduction of number of UEs in RRC\_INACTIVE state with data transmission China Telecom, Huawei, HiSilicon, ZTE Corporation, Sanechips, CATT, Ericsson, Nokia CR Rel-19 38.314 18.0.0 0034 4 B PM\_KPI\_5G\_Ph4 [R2-2504742](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2504742.zip)

# 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

[R2-2506201](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_131\\Docs\\R2-2506201.zip) Report from session on R18 SL, R18/19 MOB, and R19 NES Vice Chairman (Samsung) Report

## 9.2 Session on Rel-18 MIMO, Rel-19 MIMO, LPWUS, SBFD, NR Others

[R2-2506202](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_131\\Docs\\R2-2506202.zip) Report from session on Rel-18 MIMO, Rel-19 MIMO, LPWUS, SBFD, NR Others Vice Chairman (CATT) Report

## 9.3 Session on NR NTN and IoT NTN

[R2-2506203](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_131\\Docs\\R2-2506203.zip) Report from session on NR NTN and IoT NTN Session chair (ZTE) Report

## 9.4 Session on positioning and sidelink relay

[R2-2506204](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_131\\Docs\\R2-2506204.zip) Report from session on positioning and sidelink relay Session chair (MediaTek) Report

## 9.5 Session on R19 XR and LTE-based 5G Broadcast

[R2-2506205](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_131\\Docs\\R2-2506205.zip) Report from session on R19 XR and LTE Broadcast Session chair (Huawei) Report

## 9.6 Session on maintenance and SON/MDT

[R2-2506206](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_131\Docs\R2-2506206.zip) Report from session on maintenance and SON/MDT Session chair (Ericsson) Report