3GPP TSG-RAN WG2 Meeting #128 [R2-24xxxx](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-24xxxx.zip)

Orlando, USA, Nov. 18th – 22nd , 2024

Source: RAN2 Chair (InterDigital)

Title: Agenda

# 1 Opening of the meeting

## 1.1 Call for IPR

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

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

## 1.2 Network usage conditions

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

## 1.3 Other

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

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

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

# 2 General

## 2.1 Approval of the agenda

[R2-2409501](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409501.zip) Agenda for RAN2#128 Chairman agenda

* Approved

## 2.2 Approval of the report of the previous meeting

[R2-2409502](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409502.zip) RAN2#127bis 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.

During the work on NR UE caps:

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

- In WI-specific Rel-18 Agenda Items: RAN2 features/corrections are handled per WI and agreed as individual CRs

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.

Tdoc request/submission for RAN2#128 deadlines:

* Tdoc Submission deadline: Nov. 8th, 1000 UTC

## 2.5 Others

[R2-2409503](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409503.zip) RAN2 Handbook MCC discussion

* Noted

[R2-2409711](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409711.zip) Reply LS on RAN3 vs RAN2 Basketball Match OPPO LS out Rel-19 To:RAN3

* The LS is approved

[R2-2409712](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409712.zip) Report on RAN2 Basketball team OPPO discussion

* Noted

[R2-2410130](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410130.zip) Clarification on providing impact analysis in CR coversheet Lenovo discussion

[R2-2410464](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410464.zip) Discussion on CR coversheet update Ericsson discussion

Proposal 1 Information on “Impacted 5G architecture options” is not required for a CR coversheet containing impact analysis.

Discussion

- Samsung thinks that we should only omit if we the CR applies to all architecture options otherwise it should be there. If we omit then it is not friendly to implementation.

- Vodafone thinks it is not useful as delegates either just click all options or don’t do it accurately.

- Huawei thinks it is better to keep it and there are cases that we didn’t indicate NR-DC architecture only.

- ZTE also thinks that this is useful. But we should have some improvement but not change it now.

- Qualcomm thinks it was useful before but not much gain now. If we keep it we should review what we have included and what we should include.

- Mediatek would support to keep it but improve it.

* Can consider further improvements on architecture options on CRs.

**Agreement**

* Confirm that for stage 2/stage 3 CRs that are submitted towards frozen releases and have impacts to 5G architecture options, the impact analysis statement should include the “Impacted 5G architecture options”, “Impacted functionality” and “Interoperability”.

# 3 Incoming liaisons

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

# 4 EUTRA Rel-17 and earlier

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

## 4.1 EUTRA corrections Rel-17 and earlier

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

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

(LTE TEI17)

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

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

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

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

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

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

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

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

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

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

[R2-2410559](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410559.zip) Addition of reference to 38.304 for Qoffsettemp handling Nokia CR Rel-15 36.331 15.23.0 5077 - F TEI12

[R2-2410560](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410560.zip) Addition of reference to 38.304 for Qoffsettemp handling Nokia CR Rel-16 36.331 16.17.0 5078 - A TEI12

[R2-2410561](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410561.zip) Addition of reference to 38.304 for Qoffsettemp handling Nokia CR Rel-17 36.331 17.10.0 5079 - A TEI12

[R2-2410562](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410562.zip) Addition of reference to 38.304 for Qoffsettemp handling Nokia CR Rel-18 36.331 18.3.1 5080 - A TEI12

### 4.1.0 In-principle agreed CRs

[R2-2409946](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409946.zip) Correction to NR Beam Reporting in LTE RRC Apple, ZTE Corporation CR Rel-18 36.331 18.3.1 5069 - F NR\_newRAT-Core

=> Revised in [R2-2410891](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410891.zip)

[R2-2410891](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410891.zip) Correction to NR Beam Reporting in LTE RRC Apple, ZTE Corporation CR Rel-18 36.331 18.3.1 5069 1 F NR\_newRAT-Core

### 4.1.1 Other

[R2-2409878](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409878.zip) Minor Corrections on TS36.331 vivo CR Rel-18 36.331 18.3.1 5066 - A LTE\_eMTC5-Core

[R2-2409879](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409879.zip) Minor Corrections on TS36.331 vivo CR Rel-17 36.331 17.10.0 5067 - A LTE\_eMTC5-Core

[R2-2409880](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409880.zip) Minor Corrections on TS36.331 vivo CR Rel-16 36.331 16.17.0 5068 - F LTE\_eMTC5-Core

[R2-2410026](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410026.zip) Correction on SI Reception in IoT-NTN vivo CR Rel-17 36.331 17.10.0 5070 - F LTE\_NBIOT\_eMTC\_NTN

[R2-2410027](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410027.zip) Correction on SI Reception in IoT-NTN vivo CR Rel-18 36.331 18.3.1 5071 - A LTE\_NBIOT\_eMTC\_NTN

[R2-2410547](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410547.zip) Alignment of highProrityAccess cause in RRC Establishment and Resume Peraton Labs CR Rel-18 36.300 18.3.0 1413 - F NR\_newRAT-Core

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

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

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

Tdoc Limitation: 1 tdocs

## 4.3 Positioning corrections Rel-16 and earlier

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

Tdoc Limitation: 1 tdoc

### 4.3.0 In-principle agreed CRs

### 4.3.1 Other

[R2-2410232](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2410232.zip) Correction on broadcast of assistance data-r15 Huawei, HiSilicon CR Rel-15 36.331 15.23.0 5072 - F LCS\_LTE\_acc\_enh-Core

[R2-2410233](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410233.zip) Correction on broadcast of assistance data-r16 Huawei, HiSilicon CR Rel-16 36.331 16.17.0 5073 - A LCS\_LTE\_acc\_enh-Core

[R2-2410234](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410234.zip) Correction on broadcast of assistance data-r17 Huawei, HiSilicon CR Rel-17 36.331 17.10.0 5074 - A LCS\_LTE\_acc\_enh-Core

[R2-2410235](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410235.zip) Correction on broadcast of assistance data-r18 Huawei, HiSilicon CR Rel-18 36.331 18.3.1 5075 - A LCS\_LTE\_acc\_enh-Core

# 5 NR Rel-15 and Rel-16

Essential corrections only.

Tdoc Limitation: 2 tdocs in total for all sub agenda items NOTE: some agenda items have additional Tdoc limits.

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

## 5.1 Common

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(NR TEI16)

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

### 5.1.1 Stage 2 and Organisational

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

[R2-2409814](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409814.zip) Maximum number of configured CCs Nokia, Nokia Shanghai Bell CR Rel-15 38.300 15.18.0 0926 - F NR\_newRAT-Core

[R2-2409815](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409815.zip) Maximum number of configured CCs Nokia, Nokia Shanghai Bell CR Rel-16 38.300 16.17.0 0927 - A NR\_newRAT-Core

[R2-2409816](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409816.zip) Maximum number of configured CCs Nokia, Nokia Shanghai Bell CR Rel-17 38.300 17.10.0 0928 - A NR\_newRAT-Core

[R2-2409817](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409817.zip) Maximum number of configured CCs Nokia, Nokia Shanghai Bell CR Rel-18 38.300 18.3.0 0929 - A NR\_newRAT-Core

[R2-2410451](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410451.zip) Clarification on support of BFD-BFR on PSCell Ericsson CR Rel-15 38.300 15.18.0 0933 - F NR\_newRAT-Core

[R2-2410452](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410452.zip) Clarification on support of BFD-BFR on PSCell Ericsson CR Rel-16 38.300 16.17.0 0934 - A NR\_newRAT-Core

[R2-2410453](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410453.zip) Clarification on support of BFD-BFR on PSCell Ericsson CR Rel-17 38.300 17.10.0 0935 - A NR\_newRAT-Core

[R2-2410454](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410454.zip) Clarification on support of BFD-BFR on PSCell Ericsson CR Rel-18 38.300 18.3.0 0936 - A NR\_newRAT-Core

#### 5.1.1.0 In-principle agreed CRs

[R2-2410419](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410419.zip) Gap requirement for CSI-RS based measurements and inter-RAT measurements Huawei, HiSilicon, ZTE Corporation, Ericsson, Samsung, CATT, Apple, Nokia, Nokia Shanghai Bell, LG Electronics Inc., OPPO CR Rel-16 38.300 16.17.0 0906 1 F NR\_newRAT-Core [R2-2408234](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408234.zip)

=> Revised in [R2-2410900](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410900.zip)

[R2-2410900](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410900.zip) Gap requirement for CSI-RS based measurements and inter-RAT measurements Huawei, HiSilicon, ZTE Corporation, Ericsson, Samsung, CATT, Apple, Nokia, Nokia Shanghai Bell, LG Electronics Inc., OPPO CR Rel-16 38.300 16.17.0 0906 3 F NR\_newRAT-Core, TEI16, SRVCC\_NR\_to\_UMTS-Core

[R2-2410420](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410420.zip) Gap requirement for CSI-RS based measurements and inter-RAT measurements Huawei, HiSilicon, ZTE Corporation, Ericsson, Samsung, CATT, Apple, Nokia, Nokia Shanghai Bell, LG Electronics Inc., OPPO CR Rel-17 38.300 17.10.0 0907 1 A NR\_newRAT-Core [R2-2408235](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408235.zip)

=> Revised in [R2-2410901](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410901.zip)

[R2-2410901](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410901.zip) Gap requirement for CSI-RS based measurements and inter-RAT measurements Huawei, HiSilicon, ZTE Corporation, Ericsson, Samsung, CATT, Apple, Nokia, Nokia Shanghai Bell, LG Electronics Inc., OPPO CR Rel-17 38.300 17.10.0 0907 2 A NR\_newRAT-Core, TEI16, SRVCC\_NR\_to\_UMTS-Core

[R2-2410421](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410421.zip) Gap requirement for CSI-RS based measurements and inter-RAT measurements (R18) Huawei, HiSilicon, ZTE Corporation, Ericsson, Samsung, CATT, Apple, Nokia, Nokia Shanghai Bell, LG Electronics Inc., OPPO CR Rel-18 38.300 18.3.0 0906 2 A NR\_newRAT-Core [R2-2408234](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408234.zip) Withdrawn

[R2-2410431](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410431.zip) Gap requirement for CSI-RS based measurements and inter-RAT measurements Huawei, HiSilicon, ZTE Corporation, Ericsson, Samsung, CATT, Apple, Nokia, Nokia Shanghai Bell, LG Electronics Inc., OPPO CR Rel-18 38.300 18.3.0 0908 1 A NR\_newRAT-Core [R2-2408236](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408236.zip)

=> Revised in [R2-2410902](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410902.zip)

[R2-2410902](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410902.zip) Gap requirement for CSI-RS based measurements and inter-RAT measurements Huawei, HiSilicon, ZTE Corporation, Ericsson, Samsung, CATT, Apple, Nokia, Nokia Shanghai Bell, LG Electronics Inc., OPPO CR Rel-18 38.300 18.3.0 0908 2 A NR\_newRAT-Core, TEI16, SRVCC\_NR\_to\_UMTS-Core

#### 5.1.1.1 Other

[R2-2409997](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409997.zip) Miscellaneous non-controversial corrections Set XXIII Ericsson CR Rel-15 38.331 15.27.0 5127 - F NR\_newRAT-Core

[R2-2409998](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409998.zip) Miscellaneous non-controversial corrections Set XXIII Ericsson CR Rel-16 38.331 16.18.0 5128 - F NR\_newRAT-Core, TEI16

### 5.1.2 User Plane corrections

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

#### 5.1.2.0 In-principle agreed CRs5.1.2.1 MAC

[R2-2409552](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409552.zip) Correction to available UL-SCH resources in SR triggering Samsung (Rapporteur), Ericsson, Spreadtrum CR Rel-16 38.321 16.17.0 1962 1 F NR\_2step\_RACH-Core [R2-2409079](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409079.zip)

* CR is updated with architecture option
* CR is agreed with the changes above in R2-2411086

[R2-2409553](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409553.zip) Correction to available UL-SCH resources in SR triggering Samsung (Rapporteur), Ericsson, Spreadtrum CR Rel-17 38.321 17.10.0 1963 1 A NR\_2step\_RACH-Core [R2-2409080](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409080.zip)

* CR is updated with architecture option
* CR is agreed with the changes above in R2-2411087

[R2-2409554](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409554.zip) Correction to available UL-SCH resources in SR triggering Samsung (Rapporteur), Ericsson, Spreadtrum CR Rel-18 38.321 18.3.0 1964 1 A NR\_2step\_RACH-Core [R2-2409081](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409081.zip)

* CR is updated with architecture option
* CR is agreed with the changes above in R2-2411088

#### 5.1.2.2 RLC PDCP SDAP BAP

#### 5.1.2.3 Other

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

### 5.1.3 Control Plane corrections

[R2-2410563](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2410563.zip) Correction on deprioritisationTimer Nokia, MediaTek Inc., LG Electronics Inc. CR Rel-15 38.331 15.27.0 5167 - F NR\_newRAT-Core

[R2-2410564](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410564.zip) Correction on deprioritisationTimer Nokia, MediaTek Inc., LG Electronics Inc. CR Rel-16 38.331 16.18.0 5168 - A NR\_newRAT-Core

[R2-2410565](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410565.zip) Correction on deprioritisationTimer Nokia CR Rel-17 38.331 17.10.0 5169 - A NR\_newRAT-Core

[R2-2410566](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410566.zip) Correction on deprioritisationTimer Nokia CR Rel-18 38.331 18.3.0 5170 - A NR\_newRAT-Core

#### 5.1.3.0 In-principle agreed CRs

[R2-2409642](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409642.zip) Correction on IE SRS-CarrierSwitching CATT, Vivo, China Telecom, China Unicom, Nokia, ZTE Corporation, CMCC, Ericsson CR Rel-15 38.331 15.27.0 4893 3 F NR\_newRAT-Core [R2-2409285](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409285.zip)

[R2-2409643](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409643.zip) Correction on IE SRS-CarrierSwitching CATT, Vivo, China Telecom, China Unicom, Nokia, ZTE Corporation, Ericsson CR Rel-16 38.331 16.18.0 4894 3 A NR\_newRAT-Core [R2-2409286](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409286.zip)

[R2-2409644](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409644.zip) Correction on IE SRS-CarrierSwitching CATT, Vivo, China Telecom, China Unicom, Nokia, ZTE Corporation, Ericsson CR Rel-17 38.331 17.10.0 4895 3 A NR\_newRAT-Core [R2-2409287](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409287.zip)

[R2-2409645](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409645.zip) Correction on IE SRS-CarrierSwitching CATT, Vivo, China Telecom, China Unicom, Nokia, ZTE Corporation, Ericsson CR Rel-18 38.331 18.3.0 4896 3 A NR\_newRAT-Core [R2-2409288](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409288.zip)

[R2-2410058](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410058.zip) Correction to Relaxed measurement LG Electronics, Nokia, Samsung, Ericsson CR Rel-16 38.304 16.10.0 0412 3 F NR\_UE\_pow\_sav-Core [R2-2409282](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409282.zip) Revised

[R2-2410059](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410059.zip) Correction to Relaxed measurement LG Electronics, Nokia, Samsung, Ericsson CR Rel-17 38.304 17.9.0 0413 3 A NR\_UE\_pow\_sav-Core [R2-2409283](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409283.zip) Revised

[R2-2410060](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410060.zip) Correction to Relaxed measurement LG Electronics, Nokia, Samsung, Ericsson CR Rel-18 38.304 18.3.0 0414 3 A NR\_UE\_pow\_sav-Core [R2-2409284](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409284.zip) Revised

[R2-2410203](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410203.zip) Correction to missing NR-DC parameters branches Ericsson CR Rel-16 38.331 16.18.0 5089 1 F NR\_newRAT-Core, TEI16 [R2-2409292](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409292.zip)

[R2-2410204](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410204.zip) Correction to missing NR-DC parameters branches Ericsson CR Rel-17 38.331 17.10.0 5090 1 A NR\_newRAT-Core, TEI16 [R2-2409293](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409293.zip)

[R2-2410205](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410205.zip) Correction to missing NR-DC parameters branches Ericsson CR Rel-18 38.331 18.3.0 5091 1 A NR\_newRAT-Core, TEI16 [R2-2409294](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409294.zip)

[R2-2410829](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410829.zip) Corrections on parallelTx capabilities for inter-band and intra-band Huawei, HiSilicon, Ericsson, Nokia, Nokia Shanghai Bell CR Rel-15 38.306 15.26.0 1170 1 F NR\_newRAT-Core [R2-2408469](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408469.zip)

[R2-2410830](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410830.zip) Corrections on parallelTx capabilities for inter-band and intra-band Huawei, HiSilicon, Ericsson, Nokia, Nokia Shanghai Bell CR Rel-16 38.306 16.18.0 1171 1 A NR\_newRAT-Core [R2-2408470](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408470.zip)

[R2-2410831](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410831.zip) Corrections on parallelTx capabilities for inter-band and intra-band Huawei, HiSilicon, Ericsson, Nokia, Nokia Shanghai Bell CR Rel-17 38.306 17.10.0 1172 1 A NR\_newRAT-Core [R2-2408471](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408471.zip)

[R2-2410832](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410832.zip) Corrections on parallelTx capabilities for inter-band and intra-band Huawei, HiSilicon, Ericsson, Nokia, Nokia Shanghai Bell CR Rel-18 38.306 18.3.0 1173 1 A NR\_newRAT-Core [R2-2408472](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408472.zip)

[R2-2410885](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410885.zip) Correction to Relaxed measurement LG Electronics, Nokia, Samsung, Ericsson CR Rel-16 38.304 16.10.0 0412 4 F NR\_UE\_pow\_sav-Core [R2-2410058](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410058.zip)

[R2-2410886](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410886.zip) Correction to Relaxed measurement LG Electronics, Nokia, Samsung, Ericsson CR Rel-17 38.304 17.9.0 0413 4 A NR\_UE\_pow\_sav-Core [R2-2410059](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410059.zip)

[R2-2410887](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410887.zip) Correction to Relaxed measurement LG Electronics, Nokia, Samsung, Ericsson CR Rel-18 38.304 18.3.0 0414 4 A NR\_UE\_pow\_sav-Core [R2-2410060](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410060.zip)

#### 5.1.3.1 NR RRC

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

[R2-2409928](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409928.zip) Correction on SI request in RRC\_CONNECTED LG Electronics Inc. CR Rel-16 38.331 16.18.0 5122 - F TEI16

[R2-2409929](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409929.zip) Correction on SI request in RRC\_CONNECTED LG Electronics Inc. CR Rel-17 38.331 17.10.0 5123 - A TEI16

[R2-2409930](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409930.zip) Correction on SI request in RRC\_CONNECTED LG Electronics Inc. CR Rel-18 38.331 18.3.0 5124 - A TEI16

[R2-2410074](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410074.zip) Correction on protection of RRC messages ZTE Corporation, Sanechips CR Rel-16 38.331 16.18.0 5141 - F NR\_IAB-Core, NR\_SON\_MDT-Core

[R2-2410075](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410075.zip) Correction on protection of RRC messages ZTE Corporation, Sanechips CR Rel-17 38.331 17.10.0 5142 - A NR\_IAB-Core, NR\_SON\_MDT-Core

[R2-2410076](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410076.zip) Correction on protection of RRC messages ZTE Corporation, Sanechips CR Rel-18 38.331 18.3.0 5143 - A NR\_IAB-Core, NR\_SON\_MDT-Core

[R2-2410356](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410356.zip) Corrections to smtc configuration ZTE Corporation, Sanechips CR Rel-15 38.331 15.27.0 5155 - F NR\_newRAT-Core

[R2-2410357](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410357.zip) Corrections to smtc configuration ZTE Corporation, Sanechips CR Rel-16 38.331 16.18.0 5156 - A NR\_newRAT-Core

[R2-2410358](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410358.zip) Corrections to smtc configuration ZTE Corporation, Sanechips CR Rel-17 38.331 17.10.0 5157 - A NR\_newRAT-Core

[R2-2410359](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410359.zip) Corrections to smtc configuration ZTE Corporation, Sanechips CR Rel-18 38.331 18.3.0 5158 - A NR\_newRAT-Core

[R2-2410746](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410746.zip) Correction to PNI-NPN identity Huawei, HiSilicon, CATT CR Rel-16 38.331 16.18.0 5182 - F NG\_RAN\_PRN-Core

[R2-2410747](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410747.zip) Correction to PNI-NPN identity Huawei, HiSilicon, CATT CR Rel-17 38.331 17.10.0 5183 - A NG\_RAN\_PRN-Core

[R2-2410748](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410748.zip) Correction to PNI-NPN identity Huawei, HiSilicon, CATT CR Rel-18 38.331 18.3.0 5184 - A NG\_RAN\_PRN-Core

#### 5.1.3.2 UE capabilities

UE cap corrections 38306, 38331

[R2-2410052](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2410052.zip) Clarification on inter-band handover enhancements capabilities Qualcomm Inc., OPPO CR Rel-16 38.306 16.18.0 1186 3 F NR\_Mob\_enh-Core R2-2409289

R2-2410053R2-2410053 Clarification on inter-band handover enhancements capabilities Qualcomm Inc., OPPO CR Rel-17 38.306 17.10.0 1187 4 A NR\_Mob\_enh-Core, NR\_NTN\_solutions-Core R2-2409290R2-2409290

[R2-2410054](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410054.zip) Clarification on inter-band handover enhancements capabilities Qualcomm Inc., OPPO CR Rel-18 38.306 18.3.0 1188 4 A NR\_NTN\_enh-Core, NR\_ATG-Core, Netw\_Energy\_NR-Core R2-2409291

[R2-2410666](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410666.zip) Correction to maximum data rate calculation Nokia CR Rel-15 38.306 15.26.0 1213 - F NR\_newRAT-Core

[R2-2410667](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410667.zip) Correction to maximum data rate calculation Nokia CR Rel-16 38.306 16.18.0 1214 - A NR\_newRAT-Core

[R2-2410668](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410668.zip) Correction to maximum data rate calculation Nokia CR Rel-17 38.306 17.10.0 1215 - A NR\_newRAT-Core, NR\_DL1024QAM\_FR1-Core

[R2-2410669](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410669.zip) Correction to maximum data rate calculation Nokia CR Rel-18 38.306 18.3.0 1216 - A NR\_newRAT-Core, NR\_DL1024QAM\_FR1-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.

## 5.2 NR V2X

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

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

Tdoc Limitation: 1 tdocs

### 5.2.0 In-principle agreed CRs

[R2-2409684](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409684.zip) RRC correction on sl-X-Overhead field description of SL-ResourcePool Philips International B.V. CR Rel-16 38.331 16.18.0 5058 2 F 5G\_V2X\_NRSL-Core [R2-2409366](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409366.zip)

[R2-2409685](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409685.zip) RRC correction on sl-X-Overhead field description of SL-ResourcePool Philips International B.V. CR Rel-17 38.331 17.10.0 5059 2 A 5G\_V2X\_NRSL-Core [R2-2409367](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409367.zip)

[R2-2409686](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409686.zip) RRC correction on sl-X-Overhead field description of SL-ResourcePool Philips International B.V. CR Rel-18 38.331 18.3.0 5060 2 A 5G\_V2X\_NRSL-Core [R2-2409368](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409368.zip)

[R2-2410077](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410077.zip) Correction on intra-UE prioritization ZTE Corporation, Sanechips CR Rel-16 38.321 16.17.0 1974 1 F 5G\_V2X\_NRSL-Core [R2-2409363](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409363.zip)

[R2-2410078](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410078.zip) Correction on intra-UE prioritization ZTE Corporation, Sanechips CR Rel-17 38.321 17.10.0 1975 1 A 5G\_V2X\_NRSL-Core [R2-2409364](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409364.zip)

[R2-2410079](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410079.zip) Correction on intra-UE prioritization ZTE Corporation, Sanechips CR Rel-18 38.321 18.3.0 1976 1 A 5G\_V2X\_NRSL-Core [R2-2409365](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409365.zip)

### 5.2.1 Other

## 5.3 NR Positioning Support

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

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

(NR TEI16 Positioning)

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

Tdoc Limitation: 1 tdoc

### 5.3.0 In-principle agreed CRs

[R2-2409562](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409562.zip) Correction on GNSS-AlmanacSupport and GNSS-UTC-ModelSupport in A-GNSS positioning ZTE Corporation CR Rel-16 37.355 16.13.0 0516 1 F NR\_pos-Core [R2-2408213](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408213.zip)

=> Revised in [R2-2410906](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410906.zip)

[R2-2410906](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410906.zip) Correction on GNSS-AlmanacSupport and GNSS-UTC-ModelSupport in A-GNSS positioning ZTE Corporation CR Rel-16 37.355 16.13.0 0516 2 F LCS\_NAVIC-Core

[R2-2409563](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409563.zip) Correction on GNSS-AlmanacSupport and GNSS-UTC-ModelSupport in A-GNSS positioning ZTE Corporation CR Rel-17 37.355 17.8.0 0517 1 A NR\_pos-Core [R2-2408214](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408214.zip)

=> Revised in [R2-2410907](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410907.zip)

[R2-2410907](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410907.zip) Correction on GNSS-AlmanacSupport and GNSS-UTC-ModelSupport in A-GNSS positioning ZTE Corporation CR Rel-17 37.355 17.8.0 0517 2 A LCS\_NAVIC-Core

[R2-2409564](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409564.zip) Correction on GNSS-AlmanacSupport and GNSS-UTC-ModelSupport in A-GNSS positioning ZTE Corporation CR Rel-18 37.355 18.3.0 0518 1 A NR\_pos-Core [R2-2408215](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408215.zip)

=> Revised in [R2-2410908](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410908.zip)

[R2-2410908](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410908.zip) Correction on GNSS-AlmanacSupport and GNSS-UTC-ModelSupport in A-GNSS positioning ZTE Corporation CR Rel-18 37.355 18.3.0 0518 2 A LCS\_NAVIC-Core

### 5.3.1 Other

[R2-2409714](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409714.zip) Correction on NavIC almanac set IE, and field descriptions under KlobucharModelParamater, UTC-ModelSet2, and GNSS-SystemTime. Reliance Jio, MediaTek, Ericsson, Qualcomm Incorporated, CEWiT CR Rel-16 37.355 16.13.0 0531 - F LCS\_NAVIC-Core

[R2-2410024](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410024.zip) Correction on NavIC L5 almanac set IE, and field descriptions under KlobucharModelParamater, UTC-ModelSet2, and GNSS-SystemTime Reliance Jio, MediaTek, Ericsson, Qualcomm Incorporated, CEWiT CR Rel-17 37.355 17.8.0 0533 - A LCS\_NAVIC-Core

[R2-2410025](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410025.zip) Correction on NavIC almanac set IE, and field descriptions under KlobucharModelParamater, UTC-ModelSet2, and GNSS-SystemTime. Reliance Jio, MediaTek, Ericsson, Qualcomm Incorporated, CEWiT CR Rel-18 37.355 18.3.0 0534 - A LCS\_NAVIC-Core

[R2-2410236](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410236.zip) Corection to high accuracy extended uncerntainty in QoS-r16 Huawei, HiSilicon CR Rel-16 37.355 16.13.0 0537 - F TEI16 Revised

[R2-2410237](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410237.zip) Correction to high accuracy extended uncertainty in LCS QoS Huawei, HiSilicon CR Rel-17 37.355 17.8.0 0538 - A TEI16

[R2-2410238](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410238.zip) Correction to high accuracy extended uncertainty in LCS QoS Huawei, HiSilicon CR Rel-18 37.355 18.3.0 0539 - A TEI16

[R2-2410817](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410817.zip) Correction to high accuracy extended uncertainty in LCS QoS Huawei, HiSilicon CR Rel-16 37.355 16.13.0 0537 1 F TEI16 [R2-2410236](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410236.zip)

[R2-2410821](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410821.zip) Presence of ValueTag and ExpirationTime when posSIBs are segmented Ericsson CR Rel-15 37.355 15.3.0 0541 - F NR\_pos-Core Revised

[R2-2410822](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410822.zip) Presence of ValueTag and ExpirationTime when posSIBs are segmented Ericsson CR Rel-16 37.355 16.13.0 0542 - A NR\_newRAT-Core

=> Revised in [R2-2411062](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411062.zip)

[R2-2411062](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411062.zip) Presence of ValueTag and ExpirationTime when posSIBs are segmented Ericsson CR Rel-16 37.355 16.13.0 0542 1 A NR\_newRAT-Core

[R2-2410823](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410823.zip) Presence of ValueTag and ExpirationTime when posSIBs are segmented Ericsson CR Rel-17 37.355 17.8.0 0543 - A NR\_newRAT-Core

=> Revised in [R2-2411063](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411063.zip)

[R2-2411063](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411063.zip) Presence of ValueTag and ExpirationTime when posSIBs are segmented Ericsson CR Rel-17 37.355 17.8.0 0543 1 A NR\_newRAT-Core

[R2-2410824](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410824.zip) Presence of ValueTag and ExpirationTime when posSIBs are segmented Ericsson CR Rel-18 37.355 18.3.0 0544 - F NR\_newRAT-Core Revised

[R2-2410869](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410869.zip) Presence of ValueTag and ExpirationTime when posSIBs are segmented Ericsson CR Rel-18 37.355 18.3.0 0544 1 A NR\_newRAT-Core [R2-2410824](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410824.zip)

=> Revised in [R2-2411064](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411064.zip)

[R2-2411064](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411064.zip) Presence of ValueTag and ExpirationTime when posSIBs are segmented Ericsson CR Rel-18 37.355 18.3.0 0544 2 A NR\_newRAT-Core

[R2-2410873](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410873.zip) Presence of ValueTag and ExpirationTime when posSIBs are segmented Ericsson CR Rel-15 37.355 15.3.0 0541 1 F NR\_newRAT-Core [R2-2410821](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410821.zip)

=> Revised in [R2-2411065](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411065.zip)

[R2-2411065](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411065.zip) Presence of ValueTag and ExpirationTime when posSIBs are segmented Ericsson CR Rel-15 37.355 15.3.0 0541 2 F NR\_newRAT-Core

# 6 NR Rel-17

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

Tdoc limitation: 4 Tdocs

## 6.1 Common

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

PRACH partitioning items

(NR TEI17)

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

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

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

[R2-2410874](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2410874.zip) Discussion on RAN1 LS on waveform determination for PUSCH scheduled by fallbackRAR UL grant and MsgA PUSCH Ericsson discussion Rel-17 NR\_cov\_enh-Core

### 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)

[R2-2409515](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409515.zip) LS on waveform determination for PUSCH scheduled by fallbackRAR UL grant and MsgA PUSCH (R1-2409301; contact: CATT) RAN1 LS in Rel-17 NR\_redcap-Core, NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_slice-Core To:RAN2

[R2-2409602](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409602.zip) Contact company’s input on RAN1 LS in [R2-2409515](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409515.zip) CATT discussion NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_redcap-Core, NR\_slice-Core

[R2-2409603](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409603.zip) CR on the usage of msg3-transmitPrecoder CATT CR Rel-17 38.331 17.10.0 5099 - F NR\_redcap-Core, NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_slice-Core

[R2-2409604](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409604.zip) CR on the usage of msg3-transmitPrecoder CATT CR Rel-18 38.331 18.3.0 5100 - A NR\_redcap-Core, NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_slice-Core

#### 6.1.1.0 In-principle agreed CRs

[R2-2409600](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409600.zip) Correction on location based measurements in NR NTN CATT, Nokia, Nokia Shanghai Bell CR Rel-17 38.300 17.10.0 0909 1 F NR\_NTN\_solutions-Core [R2-2408366](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408366.zip)

[R2-2409601](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409601.zip) Correction on location based measurements in NR NTN CATT, Nokia, Nokia Shanghai Bell CR Rel-18 38.300 18.3.0 0910 1 A NR\_NTN\_solutions-Core [R2-2408367](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408367.zip)

[R2-2409806](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409806.zip) Clarification on MII usage Samsung, Nokia CR Rel-17 38.300 17.10.0 0924 1 F NR\_MBS-Core [R2-2409276](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409276.zip)

[R2-2409807](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409807.zip) Clarification on MII usage Samsung, Nokia CR Rel-18 38.300 18.3.0 0925 1 A NR\_MBS-Core [R2-2409277](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409277.zip)

#### 6.1.1.1 Other

[R2-2409999](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409999.zip) Miscellaneous non-controversial corrections Set XXIII Ericsson CR Rel-17 38.331 17.10.0 5082 1 F NR\_newRAT-Core, TEI17 [R2-2409124](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409124.zip)

[R2-2410131](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410131.zip) Miscellaneous corrections on stage 2 description of QMC Lenovo CR Rel-17 38.300 17.10.0 0930 - F NR\_QoE-Core

[R2-2410807](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410807.zip) Correction on TDD support in NTN Huawei, HiSilicon CR Rel-17 38.300 17.10.0 0942 - F NR\_NTN\_solutions-Core

[R2-2410808](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410808.zip) Correction on TDD support in NTN Huawei, HiSilicon CR Rel-18 38.300 18.3.0 0943 - A NR\_NTN\_solutions-Core

[R2-2410818](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410818.zip) Discussion on RAN1 LS on waveform determination LG Electronics Inc. discussion Rel-17 NR\_redcap-Core, NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_slice-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).

#### 6.1.2.0 In-principle agreed CRs

[R2-2409609](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409609.zip) Correction on PHR for mTRP PUSCH repetition LG Electronics Inc., MediaTek Inc., CATT, Ericsson CR Rel-17 38.321 17.10.0 1892 4 F NR\_FeMIMO-Core [R2-2409043](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409043.zip)

[R2-2411068](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411068.zip) Correction on PHR for mTRP PUSCH repetition LG Electronics Inc., MediaTek Inc., CATT, Ericsson CR Rel-17 38.321 17.10.0 1892 5 F NR\_FeMIMO-Core

* Add architecture option
* The CR is agreed in R2-2411095

[R2-2409610](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409610.zip) Correction on PHR for mTRP PUSCH repetition (R17) LG Electronics Inc., MediaTek Inc., CATT, Ericsson CR Rel-17 38.331 17.10.0 5068 1 F NR\_FeMIMO-Core [R2-2409044](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409044.zip)

[R2-2411069](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411069.zip) Correction on PHR for mTRP PUSCH repetition (R17) LG Electronics Inc., MediaTek Inc., CATT, Ericsson CR Rel-17 38.331 17.10.0 5068 2 F NR\_FeMIMO-Core

* Add architecture option
* The CR is agreed in R2-2411096

[R2-2409611](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409611.zip) Correction on PHR for mTRP PUSCH repetition LG Electronics Inc., MediaTek Inc., CATT, Ericsson CR Rel-17 38.306 17.10.0 1190 1 F NR\_FeMIMO-Core [R2-2409045](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409045.zip)

[R2-2411070](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411070.zip) Correction on PHR for mTRP PUSCH repetition LG Electronics Inc., MediaTek Inc., CATT, Ericsson CR Rel-17 38.306 17.10.0 1190 2 F NR\_FeMIMO-Core

* Add architecture option
* The CR is agreed in R2-2411097

[R2-2409612](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409612.zip) Correction on PHR for mTRP PUSCH repetition (R18) LG Electronics Inc., MediaTek Inc., CATT, Ericsson CR Rel-18 38.321 18.3.0 1893 3 A NR\_FeMIMO-Core [R2-2409046](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409046.zip)

[R2-2411071](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411071.zip) Correction on PHR for mTRP PUSCH repetition (R18) LG Electronics Inc., MediaTek Inc., CATT, Ericsson CR Rel-18 38.321 18.3.0 1893 4 A NR\_FeMIMO-Core

* Add architecture option
* The CR is agreed in R2-2411098

[R2-2409613](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409613.zip) Correction on PHR for mTRP PUSCH repetition (R18) LG Electronics Inc., MediaTek Inc., CATT, Ericsson CR Rel-18 38.331 18.3.0 5069 1 A NR\_FeMIMO-Core [R2-2409047](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409047.zip)

[R2-2411072](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411072.zip) Correction on PHR for mTRP PUSCH repetition (R18) LG Electronics Inc., MediaTek Inc., CATT, Ericsson CR Rel-18 38.331 18.3.0 5069 2 A NR\_FeMIMO-Core

* Add architecture option
* The CR is agreed in R2-2411099

[R2-2409614](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409614.zip) Correction on PHR for mTRP PUSCH repetition (R18) LG Electronics Inc., MediaTek Inc., CATT, Ericsson CR Rel-18 38.306 18.3.0 1191 1 A NR\_FeMIMO-Core [R2-2409048](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409048.zip)

[R2-2411073](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411073.zip) Correction on PHR for mTRP PUSCH repetition (R18) LG Electronics Inc., MediaTek Inc., CATT, Ericsson CR Rel-18 38.306 18.3.0 1191 2 A NR\_FeMIMO-Core

* Add architecture option
* The CR is agreed in R2-2411100

[R2-2409698](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409698.zip) Corrections to validity of configured uplink grant for SDT Samsung, LG Electronics, Sony CR Rel-17 38.321 17.10.0 1956 2 F NR\_SmallData\_INACTIVE-Core [R2-2409220](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409220.zip)

* Add architecture option
* The CR is agreed in R2-2411095

[R2-2409804](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409804.zip) Correction on HARQ process Samsung, Ericsson, Nokia, LG Electronics Inc., Qualcomm Incorporated, Apple, ZTE, CATT CR Rel-17 38.321 17.10.0 1937 1 F NR\_NTN\_solutions-Core, NR\_MBS-Core [R2-2408467](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408467.zip)

* The CR is agreed

[R2-2409805](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409805.zip) Correction on HARQ process Samsung, Ericsson, Nokia, LG Electronics Inc., Qualcomm Incorporated, Apple, ZTE, CATT CR Rel-18 38.321 18.3.0 1938 1 A NR\_NTN\_solutions-Core, NR\_MBS-Core [R2-2408468](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408468.zip)

* The CR is agreed

[R2-2410455](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410455.zip) Correction on use of recommended of IAB-MT beam indication Ericsson, Samsung CR Rel-17 38.321 17.10.0 1901 3 F NR\_IAB\_enh-Core [R2-2409219](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409219.zip)

* The CR is agreed

[R2-2410456](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410456.zip) Correction on use of recommended of IAB-MT beam indication Ericsson, Samsung CR Rel-18 38.321 18.3.0 1902 2 A NR\_IAB\_enh-Core [R2-2408814](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408814.zip)

* The CR is agreed

[R2-2410511](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410511.zip) PHR for serving cells configured with multiple TRP PUSCH repetition in NR-DC Huawei, HiSilicon CR Rel-17 38.321 17.10.0 2005 - F NR\_FeMIMO-Core

- Ericsson and Qualcomm support the CR

* Remove “is configured” from text
* The CR is agreed in R2-2411091 with change above

[R2-2410512](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410512.zip) PHR for serving cells configured with multiple TRP PUSCH repetition in NR-DC Huawei, HiSilicon CR Rel-18 38.321 18.3.0 2006 - A NR\_FeMIMO-Core

* Remove “is configured” from text
* The CR is agreed in R2-2411092 with change above

#### 6.1.2.1 Other

[R2-2409605](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409605.zip) Discussion on remaining issues for one-shot HARQ Feedback in NR NTN CATT discussion

*Proposal 1: RAN2 confirms that one-shot HARQ feedback feature can be supported in NR NTN since Rel-17 (based on RAN1 specification and related RAN1-introduced UE capabilities).*

[R2-2410879](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410879.zip) NTN DRX Timer Handling and URLLC One-Shot HARQ Feedback Sharp discussion Rel-17 NR\_NTN\_solutions-Core, NR\_IIOT\_URLLC\_enh-Core

Proposal 1 RAN2 to down-select one option for this issue:

a. Specify that one-shot HARQ feedback is not supported when downlinkHARQ-FeedbackDisabled is configured.

b. Fix the problem with TP in Section 5.

Discussion

- Qualcomm indicates that RAN1 didn’t agree and are concerned with the changes as it shouldn’t introduce NBC changes. Can only agree if we make it clear that only PDCCH indicates one shot feedback.

- CATT indicates that RAN1 explicitly agreed. Sharp agrees with the observation but whether we change the RAN2 spec is another discussion, so it may be late to make any change.

- Vivo thinks that we never had a discussion whether there is a motivation for this and if we do any changes it will cause some backward compatibility issue. We can do this in TEI if needed.

- LG and Ericsson agrees with CATT. We can fix the problem from Rel-18. There is currently no restriction.

- CATT asks what is the consequence if we don’t support it in RAN2 but RAN1 accepts it.

* Discuss offline if there is a way to support this in a BC way and if it is acceptable
* [AT128][006][UP] NTN and on shot feedback (CATT)

Intended outcome: discuss how to capture it in a BC way and agree to CR (if agreable)

Deadline: Thursday

[R2-2411117](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411117.zip) Report of [AT128][006][UP] NTN and one shot feedback (CATT) CATT discussion NR\_NTN\_solutions-Core

* No new UE capability is introduced
* Noted

R2-2411118 Correction on HARQ-RTT-TimerDL-NTN in NR NTN CATT, LG Electronics Inc., Sharp CR Rel-17 38.321 17.10.0 2019 - F NR\_NTN\_solutions-Core

[NBC CR]

* The CR is agreed

R2-2411119 Correction on HARQ-RTT-TimerDL-NTN in NR NTN CATT, LG Electronics Inc., Sharp CR Rel-18 38.321 18.3.0 2020 - A NR\_NTN\_solutions-Core

* The CR is agreed

[R2-2409699](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409699.zip) Corrections to validity of configured uplink grant for SDT Samsung, LG Electronics, Sony CR Rel-18 38.321 18.3.0 1979 - A NR\_SmallData\_INACTIVE-Core

* The CR is agreed

[R2-2409832](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409832.zip) Correction on the field name of candidate beam list in BFR MAC CE Samsung CR Rel-17 38.321 17.10.0 1980 - F NR\_FeMIMO-Core

- Huawei and Nokia think that this is more of an editorial so we should soften the impact analysis.

* Update impact analysis to soften it given it is editorial
* The CR is agreed in R2-2411089 with change above

[R2-2409833](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409833.zip) Correction on the field name of candidate beam list in BFR MAC CE Samsung CR Rel-18 38.321 18.3.0 1981 - A NR\_FeMIMO-Core

* Update impact analysis to soften it given it is editorial
* The CR is agreed in R2-2411090 with change above

[R2-2410195](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410195.zip) CR on TCI state indication of CORESET#0 OPPO CR Rel-17 38.321 17.10.0 1994 - F NR\_FeMIMO-Core

- Nokia, Huawei agrees with intention but he change is incomplete and doesn’t include the unified TCI framework. Oppo thinks this is not applicable to it so it was intentionally omitted.

* Update variables in italics font

=> Revised in R2-2411173

[R2-2411173](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410195.zip) CR on TCI state indication of CORESET#0 OPPO CR Rel-17 38.321 17.10.0 1994 1 F NR\_FeMIMO-Core

* Companies should have a quick chat between RAN1 and RAN2 delegates
* The CR is revised [R2-2411214](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2411214.zip)
* The CR is postponed

R2-2411214

* Remove tracked changes from cover page
* The CR is agreed with changes above in R2-2411216

[R2-2410196](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410196.zip) CR on TCI state indication of CORESET#0 OPPO CR Rel-18 38.321 18.3.0 1995 - A NR\_FeMIMO-Core

=> Revised in R2-2411174

[R2-2411174](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410196.zip) CR on TCI state indication of CORESET#0 OPPO CR Rel-18 38.321 18.3.0 1995 1 A NR\_FeMIMO-Core

* The CR is revised R2-2411215

R2-2411215

* Remove tracked changes from cover page
* The CR is agreed with changes above in R2-2411217

[R2-2410720](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410720.zip) Correction on drx HARQ RTT timer in NTN LG Electronics Inc. CR Rel-17 38.321 17.10.0 1967 1 F NR\_NTN\_solutions-Core [R2-2409123](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409123.zip)

* Not treated

[R2-2410722](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410722.zip) Correction on drx HARQ RTT timer in NTN LG Electronics Inc. CR Rel-18 38.321 18.3.0 1966 1 A NR\_NTN\_solutions-Core [R2-2409121](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409121.zip)

### 6.1.3 Control Plane corrections

#### 6.1.3.0 In-principle agreed CRs

[R2-2409808](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409808.zip) Clarification on determining about to start sessions Samsung, Nokia CR Rel-17 38.331 17.10.0 5092 1 F NR\_MBS-Core [R2-2409278](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409278.zip)

[R2-2409809](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409809.zip) Clarification on determining about to start sessions Samsung, Nokia CR Rel-18 38.331 18.3.0 5093 1 A NR\_MBS-Core [R2-2409279](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409279.zip)

[R2-2409914](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409914.zip) Correction to unified TCI signalling MediaTek Inc. CR Rel-17 38.331 17.10.0 4997 1 F NR\_FeMIMO-Core [R2-2408323](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408323.zip)

[R2-2409915](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409915.zip) Correction to unified TCI signalling MediaTek Inc. CR Rel-18 38.331 18.3.0 4998 1 A NR\_FeMIMO-Core [R2-2408324](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408324.zip)

[R2-2409919](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409919.zip) Correction on UE behavior of setting failedPSCellId NTTDOCOMO, INC. CR Rel-17 38.331 17.10.0 5009 1 F NR\_ENDC\_SON\_MDT\_enh-Core R2-2408440

[R2-2409920](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409920.zip) Correction on UE behavior of setting failedPSCellId NTTDOCOMO, INC. CR Rel-18 38.331 18.3.0 5010 1 A NR\_ENDC\_SON\_MDT\_enh-Core [R2-2408441](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408441.zip)

[R2-2409932](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409932.zip) Clarification of MeasurementTimingConfiguration use Vodafone,Ericsson,Nokia CR Rel-18 38.331 18.3.0 5016 1 F NR\_BWP\_wor-Core [R2-2408506](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408506.zip)

=> Revised in [R2-2410893](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410893.zip)

[R2-2410893](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410893.zip) Clarification of MeasurementTimingConfiguration use Vodafone,Ericsson,Nokia CR Rel-18 38.331 18.3.0 5016 2 F NR\_BWP\_wor-Core

[R2-2410360](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410360.zip) Corrections on measurement gap configuration ZTE Corporation, Sanechips CR Rel-17 38.331 17.10.0 5024 1 F NR\_NTN\_solutions-Core, NR\_redcap-Core [R2-2408651](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408651.zip)

=> Revised in [R2-2410917](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410917.zip)

[R2-2410917](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410917.zip) Corrections on measurement gap configuration ZTE Corporation, Sanechips CR Rel-17 38.331 17.10.0 5024 2 F NR\_NTN\_solutions-Core, NR\_redcap-Core

[R2-2410361](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410361.zip) Corrections on measurement gap configuration ZTE Corporation, Sanechips CR Rel-18 38.331 18.3.0 5025 1 A NR\_NTN\_solutions-Core, NR\_redcap-Core [R2-2408652](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408652.zip)

[R2-2410417](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410417.zip) Corrections to NR NTN (R17) Huawei, HiSilicon, CMCC, Sequans Communications CR Rel-17 38.331 17.10.0 5075 2 F NR\_NTN\_solutions-Core [R2-2409238](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409238.zip)

[R2-2410418](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410418.zip) Corrections to NR NTN (R18) Huawei, HiSilicon, CMCC, Sequans Communications CR Rel-18 38.331 18.3.0 5076 2 A NR\_NTN\_solutions-Core [R2-2409240](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409240.zip)

[R2-2410533](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410533.zip) Correction for CFRA configuration due to PRACH partitioning Huawei, HiSilicon, ZTE Corporation, Ericsson, Mediatek CR Rel-17 38.331 17.10.0 4899 2 F NR\_redcap-Core, NR\_slice-Core [R2-2408730](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408730.zip)

[R2-2410534](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410534.zip) Correction for CFRA configuration due to PRACH partitioning Huawei, HiSilicon, ZTE Corporation, Ericsson, Mediatek CR Rel-18 38.331 18.3.0 4900 2 A NR\_redcap-Core, NR\_redcap\_enh-Core, NR\_slice-Core [R2-2408731](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408731.zip)

[R2-2410650](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410650.zip) Correction on IE perRAInfoList for SCGFailureInformation Huawei, HiSilicon CR Rel-17 38.331 17.10.0 5044 2 F NR\_ENDC\_SON\_MDT\_enh-Core [R2-2409298](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409298.zip)

[R2-2410651](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410651.zip) Correction on IE perRAInfoList for SCGFailureInformation Huawei, HiSilicon CR Rel-18 38.331 18.3.0 5045 2 A NR\_ENDC\_SON\_MDT\_enh-Core [R2-2409299](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409299.zip)

[R2-2410835](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410835.zip) Correction on UE capabilities for TCI state indication Huawei, HiSilicon CR Rel-17 38.331 17.10.0 5014 2 F NR\_FeMIMO-Core [R2-2409309](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409309.zip)

[R2-2410836](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410836.zip) Correction on UE capabilities for TCI state indication Huawei, HiSilicon CR Rel-18 38.331 18.3.0 5015 2 A NR\_FeMIMO-Core [R2-2409310](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409310.zip)

[R2-2410837](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410837.zip) Correction on UE capabilities for TCI state indication Huawei, HiSilicon CR Rel-17 38.306 17.10.0 1175 2 F NR\_FeMIMO-Core [R2-2409311](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409311.zip)

[R2-2410838](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410838.zip) Correction on UE capabilities for TCI state indication Huawei, HiSilicon CR Rel-18 38.306 18.3.0 1176 2 A NR\_FeMIMO-Core [R2-2409312](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409312.zip)

=> Revised in [R2-2410909](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410909.zip)

[R2-2410909](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410909.zip) Correction on UE capabilities for TCI state indication Huawei, HiSilicon CR Rel-18 38.306 18.3.0 1176 3 A NR\_FeMIMO-Core

#### 6.1.3.1 NR RRC

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

[R2-2409662](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409662.zip) Correction of field description si-broadcastStatus and posSI-broadcast status to reflect maxSI message (Rel-17) Xiaomi, Ericsson, LG electronics, Philips International B.V., Qualcomm Incorporated, ZTE Corporation CR Rel-17 38.331 17.10.0 5107 - F TEI17

[R2-2409663](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409663.zip) Correction of field description si-broadcastStatus and posSI-broadcast status to reflect maxSI message (Rel-18) Xiaomi, Ericsson, LG electronics, Philips International B.V., Qualcomm Incorporated, ZTE Corporation CR Rel-18 38.331 18.3.0 5108 - A TEI18

[R2-2409664](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409664.zip) Clarification for IDC solutions of logged MDT (Rel-17) Xiaomi, CMCC CR Rel-17 38.331 17.10.0 5109 - F NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2409665](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409665.zip) Clarification for IDC solutions of logged MDT (Rel-18) Xiaomi, CMCC CR Rel-18 38.331 18.3.0 5110 - A NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2409775](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409775.zip) Correction on the pre-condition for conditional reconfiguration for CPA vivo CR Rel-17 38.331 17.10.0 5115 - F LTE\_NR\_DC\_enh2-Core

[R2-2409776](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409776.zip) Correction on the pre-condition for conditional reconfiguration for CPA, S-CPAC and LTM configuration vivo CR Rel-18 38.331 18.3.0 5116 - F LTE\_NR\_DC\_enh2-Core, NR\_Mob\_enh2-Core

[R2-2409781](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409781.zip) Corrections on UL polarization parameters in NR NTN CATT CR Rel-17 38.331 17.10.0 5117 - F NR\_NTN\_solutions-Core

[R2-2409782](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409782.zip) Corrections on UL polarization parameters in NR NTN CATT CR Rel-18 38.331 18.3.0 5118 - A NR\_NTN\_solutions-Core

[R2-2410028](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410028.zip) Correction on NTN in FR1-NTN Bands vivo CR Rel-17 38.331 17.10.0 5132 - F NR\_NTN\_solutions-Core

[R2-2410029](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410029.zip) Correction on NTN in FR1-NTN Bands vivo CR Rel-18 38.331 18.3.0 5133 - A NR\_NTN\_solutions-Core

[R2-2410043](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410043.zip) Correction on handling successHO-Config during full configuration Samsung, Ericsson CR Rel-17 38.331 17.10.0 5136 - F NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2410157](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410157.zip) Correction for RA resource information in RA-report Sharp, Ericsson, Lenovo CR Rel-17 38.331 17.10.0 5144 - F NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2410162](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410162.zip) Correction for RA resource information in RA-report Sharp, Ericsson, Lenovo CR Rel-18 38.331 18.3.0 5145 - A NR\_ENDC\_SON\_MDT\_enh2-Core

[R2-2410253](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410253.zip) Maximum number of SI messages Nokia, Nokia Shanghai Bell discussion Rel-17 TEI17

[R2-2410362](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410362.zip) Corrections to NTN SMTC configuration ZTE Corporation, Sanechips CR Rel-17 38.331 17.10.0 5159 - F NR\_NTN\_solutions-Core

[R2-2410363](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410363.zip) Corrections to NTN SMTC configuration ZTE Corporation, Sanechips CR Rel-18 38.331 18.3.0 5160 - A NR\_NTN\_solutions-Core

[R2-2410767](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410767.zip) Correction on PSCell mobility history information Samsung, ZTE Corporation, Sanechips, Ericsson CR Rel-17 38.331 17.10.0 5186 - F NR\_ENDC\_SON\_MDT\_enh-Core

[R2-2410775](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410775.zip) Correction on PSCell mobility history information Samsung, ZTE Corporation, Sanechips, Ericsson CR Rel-18 38.331 18.3.0 5188 - A NR\_ENDC\_SON\_MDT\_enh-Core

#### 6.1.3.2 UE capabilities

UE cap corrections 38306, 38331.

[R2-2409749](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409749.zip) Network signalling of maximum number of UL segments - RRC processing delay Qualcomm Incorporated discussion Rel-17 TEI17

[R2-2409750](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409750.zip) Introduction of network signalling of maximum number of UL segments [Max-RRC-SegUL] Qualcomm Incorporated CR Rel-17 38.331 17.10.0 5004 2 B TEI17 [R2-2409300](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409300.zip)

[R2-2409751](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409751.zip) Introduction of network signalling of maximum number of UL segments [Max-RRC-SegUL] Qualcomm Incorporated CR Rel-18 38.331 18.3.0 5113 - A TEI17

[R2-2409752](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409752.zip) Introduction of network signalling of maximum number of UL segments [Max-RRC-SegUL] Qualcomm Incorporated CR Rel-17 38.306 17.10.0 1202 - B TEI17 [R2-2409301](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409301.zip)

[R2-2409753](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409753.zip) Introduction of network signalling of maximum number of UL segments [Max-RRC-SegUL] Qualcomm Incorporated CR Rel-18 38.306 18.3.0 1203 - A TEI17

[R2-2409862](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409862.zip) RRC processing time for NW signalled UL segments Samsung discussion Rel-17 TEI17

[R2-2409992](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409992.zip) Mandatory support of Enhanced channel raster by RedCap UE Ericsson CR Rel-17 38.306 17.10.0 1157 2 F NR\_redcap-Core [R2-2409295](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409295.zip)

[R2-2409993](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409993.zip) Mandatory support of Enhanced channel raster by (e)RedCap UE Ericsson CR Rel-18 38.306 18.3.0 1158 2 F NR\_redcap-Core [R2-2409296](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409296.zip)

=> Revised in [R2-2410905](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410905.zip)

[R2-2410905](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410905.zip) Mandatory support of Enhanced channel raster by (e)RedCap UE Ericsson CR Rel-18 38.306 18.3.0 1158 3 F NR\_redcap-Core

[R2-2410030](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410030.zip) Correction on Capability Reporting in FR1-NTN Bands vivo CR Rel-17 38.306 17.10.0 1207 - F NR\_NTN\_solutions-Core

[R2-2410031](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410031.zip) Correction on Capability Reporting in FR1-NTN Bands vivo CR Rel-18 38.306 18.3.0 1208 - A NR\_NTN\_solutions-Core

[R2-2410348](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410348.zip) Discussion on segmented UE capability Huawei, HiSilicon discussion Rel-17 TEI17

#### 6.1.3.3 Other

Including idle and inactive behaviour specified in 38.304 or 36.304.

[R2-2410557](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2410557.zip) Correction on emergency call back when eDRX is configured in RRC\_INACTIVE Nokia CR Rel-17 38.304 17.9.0 0423 - F NR\_redcap-Core

[R2-2410558](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410558.zip) Correction on emergency call back when eDRX is configured in RRC\_INACTIVE Nokia CR Rel-18 38.304 18.3.0 0424 - A NR\_redcap-Core

[R2-2410772](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410772.zip) On eDRX Operation with Emergency Services ZTE Corporation discussion Rel-17 NR\_redcap-Core

## 6.2 NR Sidelink relay

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

### 6.2.0 In-principle agreed CRs

[R2-2409757](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409757.zip) Miscellaneous CR for Rel-17 SL relay Huawei, HiSilicon, Philips International B.V., OPPO CR Rel-17 38.331 17.10.0 5086 1 F NR\_SL\_relay-Core [R2-2409260](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409260.zip)

[R2-2409758](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409758.zip) Miscellaneous CR for Rel-17 SL relay Huawei, HiSilicon, Philips International B.V., OPPO CR Rel-18 38.331 18.3.0 5087 1 A NR\_SL\_relay-Core [R2-2409261](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409261.zip)

[R2-2409850](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409850.zip) Clarification on the L2 U2N Remote UE Measurement CATT CR Rel-17 38.331 17.10.0 4977 1 F NR\_SL\_relay-Core [R2-2407996](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2407996.zip)

=> Revised in [R2-2410903](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410903.zip)

[R2-2410903](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410903.zip) Clarification on the L2 U2N Remote UE Measurement CATT CR Rel-17 38.331 17.10.0 4977 2 F NR\_SL\_relay-Core

[R2-2409851](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409851.zip) Clarification on the L2 U2N Remote UE Measurement CATT CR Rel-18 38.331 18.3.0 4978 1 A NR\_SL\_relay-Core [R2-2407997](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2407997.zip)

=> Revised in [R2-2410904](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410904.zip)

[R2-2410904](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410904.zip) Clarification on the L2 U2N Remote UE Measurement CATT CR Rel-18 38.331 18.3.0 4978 2 A NR\_SL\_relay-Core

### 6.2.1 Other

[R2-2410579](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2410579.zip) RRC correction on SidelinkUEInformationNR for NR sidelink relay communication transmission Philips International B.V., NEC CR Rel-17 38.331 17.10.0 5171 - F NR\_SL\_relay-Core

[R2-2410580](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410580.zip) RRC correction on SidelinkUEInformationNR for NR sidelink relay communication transmission Philips International B.V., NEC CR Rel-18 38.331 18.3.0 5172 - A NR\_SL\_relay-Core

## 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))

### 6.3.0 In-principle agreed CRs

[R2-2410220](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410220.zip) Correction to MAC for R17 POS-r17 Huawei, HiSilicon CR Rel-17 38.321 17.10.0 1998 - F NR\_pos\_enh-Core

[R2-2410221](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410221.zip) Correction to MAC for R17 POS Huawei, HiSilicon CR Rel-18 38.321 18.3.0 1999 - A NR\_pos\_enh-Core

### 6.3.1 Other

[R2-2409565](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409565.zip) Correction on spatial relation info in SP SRS activation deactivation MAC CE (R17) ZTE Corporation, Ericsson CR Rel-17 38.321 17.10.0 1977 - F NR\_pos\_enh-Core

[R2-2409566](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409566.zip) Correction on spatial relation info in SP SRS activation deactivation MAC CE (R18) ZTE Corporation, Ericsson CR Rel-18 38.321 18.3.0 1978 - A NR\_pos\_enh-Core

[R2-2409607](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409607.zip) Correction on spatial relation info in SRS configuration (R17) ZTE Corporation, Ericsson CR Rel-17 38.331 17.10.0 5101 - F NR\_pos\_enh-Core

[R2-2409608](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409608.zip) Correction on spatial relation info in SRS configuration (R18) ZTE Corporation, Ericsson CR Rel-18 38.331 18.3.0 5102 - A NR\_pos\_enh-Core

[R2-2409628](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409628.zip) Corrections on the NOTE in the description of dl-PRS-MeasRRC-Inactive CATT CR Rel-17 37.355 17.8.0 0529 - F NR\_pos\_enh-Core

[R2-2409629](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409629.zip) Corrections on the NOTE in the description of dl-PRS-MeasRRC-Inactive CATT CR Rel-18 37.355 18.3.0 0530 - A NR\_pos\_enh-Core

[R2-2410222](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410222.zip) Correction to PRS priority subset for DL-AoD-r17 Huawei, HiSilicon CR Rel-17 37.355 17.8.0 0535 - F NR\_pos\_enh-Core

[R2-2410223](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410223.zip) Correction to PRS priority subset for DL-AoD-r18 Huawei, HiSilicon CR Rel-18 37.355 18.3.0 0536 - A NR\_pos\_enh-Core

[R2-2410825](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410825.zip) Correction of SRS type for TA alignment Ericsson CR Rel-17 38.321 17.10.0 2014 - F NR\_pos\_enh-Core

[R2-2410826](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410826.zip) Correction of SRS type for TA alignment Ericsson CR Rel-18 38.321 18.3.0 2015 - A NR\_pos\_enh-Core

## 6.6 NR Sidelink enhancements

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

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

### 6.6.0 In-principle agreed CRs

[R2-2409743](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409743.zip) Misc RRC corrections for SL enhancements Huawei, HiSilicon CR Rel-17 38.331 17.10.0 5001 1 F NR\_SL\_enh-Core [R2-2408361](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408361.zip)

[R2-2409744](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409744.zip) Misc RRC corrections for SL enhancements Huawei, HiSilicon CR Rel-18 38.331 18.3.0 5002 1 A NR\_SL\_enh-Core [R2-2408362](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408362.zip)

[R2-2410126](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410126.zip) Correction to random resource selection for sidelink Ericsson CR Rel-17 38.321 17.10.0 1944 2 F NR\_SL\_enh-Core [R2-2409369](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409369.zip)

[R2-2410127](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410127.zip) Correction to random resource selection for sidelink Ericsson CR Rel-18 38.321 18.3.0 1945 2 A NR\_SL\_enh-Core [R2-2409370](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409370.zip)

### 6.6.1 Other

[R2-2409509](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409509.zip) Reply LS on IUC Scheme-2 and Random Selection (R1-2409174; contact: OPPO) RAN1 LS in Rel-17 NR\_SL\_enh-Core To:RAN2

[R2-2409551](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409551.zip) Discussion on R1 LS Reply (R1-2409174) OPPO discussion Rel-17 NR\_SL\_enh-Core

[R2-2409961](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409961.zip) Correction on SL DRX procedure Apple CR Rel-17 38.321 17.10.0 1982 - F NR\_SL\_enh-Core

[R2-2409962](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409962.zip) Correction on SL DRX procedure Apple CR Rel-18 38.321 18.3.0 1983 - A NR\_SL\_enh-Core

[R2-2410070](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410070.zip) Correction on SL DRX parameters ZTE Corporation, Sanechips, Huawei, HiSilicon, Ericsson, Nokia, ASUSTeK, Apple, OPPO, LG CR Rel-17 38.331 17.10.0 5139 - F NR\_SL\_enh-Core

[R2-2410071](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410071.zip) Correction on SL DRX parameters ZTE Corporation, Sanechips, Huawei, HiSilicon, Ericsson, Nokia, ASUSTeK, Apple, OPPO, LG CR Rel-18 38.331 18.3.0 5140 - A NR\_SL\_enh-Core

[R2-2410080](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410080.zip) Correction on unit of SL DRX timer ZTE Corporation, Sanechips, Huawei, HiSilicon, Ericsson, Nokia, ASUSTeK, Apple, OPPO, LG CR Rel-17 38.321 17.10.0 1940 1 F NR\_SL\_enh-Core [R2-2408539](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408539.zip)

[R2-2410081](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410081.zip) Correction on unit of SL DRX timer ZTE Corporation, Sanechips, Huawei, HiSilicon, Ericsson, Nokia, ASUSTeK, Apple, OPPO, LG CR Rel-18 38.321 18.3.0 1941 1 A NR\_SL\_enh-Core [R2-2408540](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408540.zip)

[R2-2410128](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410128.zip) Correction to MAC on resource selection Ericsson CR Rel-17 38.321 17.10.0 1986 - F NR\_SL\_enh-Core

[R2-2410129](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410129.zip) Correction to MAC on resource selection Ericsson CR Rel-18 38.321 18.3.0 1987 - A NR\_SL\_enh-Core

[R2-2410171](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410171.zip) Clarification on terminologies for SL IUC ASUSTeK CR Rel-17 38.321 17.10.0 1988 - F NR\_SL\_enh-Core

[R2-2410172](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410172.zip) Clarification on terminologies for SL IUC ASUSTeK CR Rel-18 38.321 18.3.0 1989 - A NR\_SL\_enh-Core

[R2-2410711](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410711.zip) Correction on IUC LG Electronics Inc. CR Rel-17 38.321 17.10.0 2010 - F NR\_SL\_enh-Core

[R2-2410712](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410712.zip) Correction on IUC LG Electronics Inc. CR Rel-18 38.321 18.3.0 2011 - A NR\_SL\_enh-Core

# 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.

### 7.0.0 In-principle agreed CR

*Only in-principle agreed CRs that haven’t been modified should be submitted in this AI. If an in-principle agreed CR has been modified it should be submitted under corresponding sub-AI.*

**SON/MTD**

[R2-2409646](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409646.zip) Miscellaneous corrections for Rel-18 SON/MDT CATT, Samsung, Ericsson CR Rel-18 38.331 18.3.0 4986 2 F NR\_ENDC\_SON\_MDT\_enh2-Core [R2-2409281](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409281.zip)

* The CR is agreed

[R2-2410652](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410652.zip) Miscellaneous corrections on R18 SONMDT for 36.331 Huawei, HiSilicon CR Rel-18 38.331 18.3.0 5177 - F NR\_ENDC\_SON\_MDT\_enh2-Core [R2-2408842](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408842.zip) Withdrawn

[R2-2410698](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410698.zip) Miscellaneous corrections on R18 SONMDT for 36.331 Huawei, HiSilicon CR Rel-18 36.331 18.3.1 5063 1 F NR\_ENDC\_SON\_MDT\_enh2-Core [R2-2408842](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408842.zip)

* The CR is agreed

**XR**

[R2-2409810](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409810.zip) Correction for stored SDUs handling when a t-Reordering expires Samsung CR Rel-18 38.323 18.3.0 0142 1 F NR\_XR\_enh-Core [R2-2408481](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408481.zip)

* The CR is agreed

[R2-2410396](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410396.zip) stage 2 Correction on additional buffer size table NEC, Nokia (Rapporteur) CR Rel-18 38.300 18.3.0 0932 - F NR\_XR\_enh-Core Withdrawn

[R2-2410532](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410532.zip) Clarification for UE capability on UL traffic information Huawei, HiSilicon CR Rel-18 38.306 18.3.0 1182 1 F NR\_XR\_enh-Core [R2-2408729](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408729.zip)

* The CR is agreed

[R2-2410859](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410859.zip) Stage 2 correction on additional buffer size table NEC, Nokia (Rapporteur) CR Rel-18 38.300 18.3.0 0917 2 F NR\_XR\_enh-Core [R2-2409381](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409381.zip)

* The CR is agreed

**CG-SDT**

[R2-2410226](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410226.zip) Rapporteur CR for MT-SDT and CG-SDT enhancement [CG-SDTenh] Huawei, HiSilicon CR Rel-18 38.321 18.3.0 2001 - F TEI18, NR\_MT\_SDT-Core

* The CR is agreed

**QoE**

[R2-2410262](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410262.zip) Correction of Enhancement on NR QoE management and optimizations for diverse services Ericsson, ZTE CR Rel-18 38.331 18.3.0 5154 - F NR\_QoE\_enh-Core Withdrawn

[R2-2410307](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410307.zip) Correction on QoE measurements release at successful handover from LTE/5GC to NR Nokia, Nokia Shanghai Bell, Ericsson CR Rel-18 36.331 18.3.1 5062 1 F NR\_QoE\_enh-Core [R2-2408833](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408833.zip)

=> Revised in [R2-2410919](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410919.zip)

[R2-2410919](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410919.zip) Correction on QoE measurements release at successful handover from LTE/5GC to NR Nokia, Nokia Shanghai Bell, Ericsson CR Rel-18 36.331 18.3.1 5062 2 F NR\_QoE\_enh-Core

* The CR is agreed

[R2-2410424](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410424.zip) Correction of Enhancement on NR QoE management and optimizations for diverse services Ericsson, ZTE CR Rel-18 38.331 18.3.0 5030 1 F NR\_QoE\_enh-Core [R2-2408745](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408745.zip)

=> Revised in [R2-2410920](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410920.zip)

[R2-2410920](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410920.zip) Correction of Enhancement on NR QoE management and optimizations for diverse services Ericsson, ZTE CR Rel-18 38.331 18.3.0 5030 2 F NR\_QoE\_enh-Core

* The CR is agreed

[R2-2410653](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410653.zip) Correction on priority-based QoE measurements in TS 38.300 Huawei, HiSilicon, China Unicom, Nokia, Ericsson, ZTE, Apple CR Rel-18 38.300 18.3.0 0919 2 F NR\_QoE\_enh-Core [R2-2409274](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409274.zip)

- The sentence should be placed at the end and should be improved

* Move sentence at the end and work offline for wording improvement
* [AT128][003][QoE] Update to R2-2410653 (Huawei)

Intended outcome: agree by email

Deadline: Thursday

R2-2411161 Correction on priority-based QoE measurements in TS 38.300 Huawei, HiSilicon, China Unicom, Nokia, Ericsson, ZTE, Apple CR Rel-18 38.300 18.3.0 0919 3 F NR\_QoE\_enh-Core

**eRedCap**

[R2-2410349](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410349.zip) Corrections on capabilities for eRedCap Huawei, HiSilicon, LG Electronics Inc., Intel Corporation CR Rel-18 38.306 18.3.0 1166 2 F NR\_redcap\_enh-Core [R2-2409395](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409395.zip)

* The CR is agreed

**FRx/xDD differentiation**

[R2-2410368](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410368.zip) Guidelines on implementing FRx/xDD differentiation in per UE capability Huawei, HiSilicon CR Rel-18 38.306 18.3.0 1211 - F NR\_newRAT-Core, TEI18

[R2-2410369](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410369.zip) Guidelines on implementing FRx/xDD differentiation in per UE capability Huawei, HiSilicon CR Rel-18 38.331 18.3.0 5162 - F NR\_newRAT-Core, TEI18

=> Revised in [R2-2410899](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410899.zip)

[R2-2410899](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410899.zip) Guidelines on implementing FRx/xDD differentiation in per UE capability Huawei, HiSilicon CR Rel-18 38.331 18.3.0 5162 1 F NR\_newRAT-Core, TEI18

* Start it from Rel-17 and Rel-18 becomes a shadow CR

R2-2411081 Guidelines on implementing FRx/xDD differentiation in per UE capability Huawei, HiSilicon CR Rel-17 38.306 17.10.0 1219 - F NR\_newRAT-Core, TEI17

* The CR is agreed

R2-2411082 Guidelines on implementing FRx/xDD differentiation in per UE capability Huawei, HiSilicon CR Rel-18 38.306 18.3.0 1211 1 A NR\_newRAT-Core, TEI17

* The CR is agreed

R2-2411083 Guidelines on implementing FRx/xDD differentiation in per UE capability Huawei, HiSilicon CR Rel-17 38.331 17.10.0 5195 - F NR\_newRAT-Core, TEI17

* The CR is agreed

R2-2411084 Guidelines on implementing FRx/xDD differentiation in per UE capability Huawei, HiSilicon CR Rel-18 38.331 18.3.0 5162 2 A NR\_newRAT-Core, TEI17

* The CR is agreed

**IDC**

[R2-2410585](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410585.zip) Correction on the idc-TDM-AssistanceConfig Huawei, HiSilicon, Xiaomi, Nokia, Intel Corporation, Ericsson, Apple, Samsung CR Rel-18 38.331 18.3.0 5062 1 F NR\_IDC\_enh-Core [R2-2408937](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408937.zip)

* The CR is NBC and the NBC sentence needs to be added
* The CR is agreed with the functional NBC sentence added in R2-2411080

**MBS**

[R2-2410615](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410615.zip) Paging clarification for MBS SHARP Corporation CR Rel-18 38.331 18.3.0 5097 1 F NR\_MBS\_enh-Core [R2-2409275](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409275.zip)

* The CR is agreed

[R2-2410811](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410811.zip) Rapporteur correction on multicast MCCH Huawei, HiSilicon, Samsung, CATT CR Rel-18 38.331 18.3.0 5190 - F NR\_MBS\_enh-Core

=> Revised in [R2-2410896](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410896.zip)

[R2-2410896](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410896.zip) Rapporteur correction on multicast MCCH Huawei, HiSilicon, Samsung, CATT CR Rel-18 38.331 18.3.0 5190 1 F NR\_MBS\_enh-Core

* The CR is agreed

[R2-2410812](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410812.zip) Correction on multicast reception in RRC\_INACTIVE upon paging Huawei, HiSilicon, Nokia, CATT, Ericsson, Samsung, Apple, ZTE CR Rel-18 38.331 18.3.0 5191 - F NR\_MBS\_enh-Core

* The CR is agreed

**MUSIM**

[R2-2410773](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410773.zip) Correction to the musim-AffectedBandsList and musim-AvoidedBandsList ZTE Corporation CR Rel-18 38.331 18.3.0 5006 2 F NR\_DualTxRx\_MUSIM-Core [R2-2409223](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409223.zip)

=> Revised in [R2-2410910](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410910.zip)

[R2-2410910](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410910.zip) Correction to the musim-AffectedBandsList and musim-AvoidedBandsList ZTE Corporation CR Rel-18 38.331 18.3.0 5006 3 F NR\_DualTxRx\_MUSIM-Core

* The CR is agreed

**CE**

[R2-2409811](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409811.zip) Clarifications on DPC field in PHR MAC CE Samsung CR Rel-18 38.321 18.3.0 1957 1 F NR\_cov\_enh2-Core [R2-2408972](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408972.zip)

* The CR is agreed

### 7.0.1 UE Capabilities

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

[R2-2409506](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409506.zip) LS on higher layer parameters for DCI format 2\_3 (R1-2407534; contact: CATT) RAN1 LS in Rel-16 NR\_newRAT-Core, TEI16 To:RAN2

* Noted

**UE feature list**

[R2-2409507](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409507.zip) LS on Rel-18 RAN1 UE features list for NR after RAN1#118bis (R1-2409045; contact: NTT DOCOMO, AT&T) RAN1 LS in Rel-18 TEI18, NR\_MIMO\_evo\_DL\_UL, NR\_pos\_enh2, Netw\_Energy\_NR, NR\_netcon\_repeater, NR\_NTN\_enh, NR\_Mob\_enh2, NR\_SL\_enh2, NR\_redcap\_enh, NR\_MC\_enh, NR\_XR\_enh, NR\_FR1\_lessthan\_5MHz\_BW, NR\_DSS\_enh, NR\_BWP\_wor, NR\_cov\_enh2 To:RAN2 Cc:RAN4

* Noted

[R2-2409917](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409917.zip) Miscellaneous updates and Introduction of DPC UE capabilities for Rel-18 WIs Intel Corporation CR Rel-18 38.306 18.3.0 1205 - B NR\_MIMO\_evo\_DL\_UL-Core, Netw\_Energy\_NR, NR\_Mob\_enh2, NR\_MC\_enh, NR\_netcon\_repeater-Core, NR\_cov\_enh2

=> Revised in [R2-2410894](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410894.zip)

[R2-2410894](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410894.zip) Miscellaneous updates for Rel-18 WIs Intel Corporation CR Rel-18 38.306 18.3.0 1205 1 F NR\_MIMO\_evo\_DL\_UL-Core, Netw\_Energy\_NR, NR\_Mob\_enh2, NR\_MC\_enh, NR\_netcon\_repeater-Core

- Lenovo would prefer to not have the NOTE2 as note but rather same level as previous text.

- Intel indicates that we should wait for positioning

* Wait for positioning and mobility session to agree and update accordingly
* [POST128][002][UE Cap] UE capability CR (Intel)

Intended outcome: agree to CR

Deadline: short

[R2-2409918](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409918.zip) Miscellaneous updates and Introduction of DPC UE capabilities for Rel-18 WIs Intel Corporation CR Rel-18 38.331 18.3.0 5120 - B NR\_Mob\_enh2, NR\_cov\_enh2

=> Revised in [R2-2410895](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410895.zip)

[R2-2410895](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410895.zip) Miscellaneous updates for Rel-18 WIs Intel Corporation CR Rel-18 38.331 18.3.0 5120 1 F NR\_Mob\_enh2

* Need to add impact analysis
* Review the CR in the email discussion [002]

### 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: 6*

#### 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*

**Rapporteur CR**

[R2-2410225](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410225.zip) Rapporteur MAC CR for RACH-less HO and LTM [RACH-lessHO] Huawei, HiSilicon, Qualcomm CR Rel-18 38.321 18.3.0 2000 - F TEI18, NR\_Mob\_enh2-Core, NR\_NTN\_enh-Core, NR\_mobile\_IAB-Core Late

* Withdrawn

**Other CRs**

[R2-2410415](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410415.zip) Correction on RACH-less handover procedure in TS38.321 [RACH-lessHO] CATT, Samsung, InterDigital CR Rel-18 38.321 18.3.0 2003 - F TEI18, NR\_NTN\_enh-Core, NR\_mobile\_IAB-Core

- LG agrees with the understanding but there is no change needed as if the first if is met it will not go to else if. Qualcomm agrees with LG.

- CATT thinks that there may be a ambiguity how to handle subsequent transmission. Interdigital was convinced by CATT and if there is confusion we should clarify.

* RAN2 confirms the understanding that if the initial transmission of RACH-less handover has not been performed according to clause 5.4.1 and 5.33 (i.e. the "else" case w.r.t. the "after the initial transmission of RACH-less handover has been performed according to clause 5.4.1 and 5.33" part in the first "1> if" condition).

[R2-2411178](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410415.zip) Correction on RACH-less handover procedure in TS38.321 [RACH-lessHO] CATT, Samsung, InterDigital, Ericsson, Qualcomm Incorporated, LG Electronics Inc., Huawei, HiSilicon, vivo CR Rel-18 38.321 18.3.0 2003 1 F TEI18, NR\_NTN\_enh-Core, NR\_mobile\_IAB-Core

* The CR is agreed

[R2-2410855](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410855.zip) Correction on RACH-less handover fallback [RACH-lessHO] Huawei, HiSilicon, Samsung, CATT, LG Electronics, Nokia, Nokia Shanghai Bell, Ericsson CR Rel-18 38.321 18.3.0 1972 2 F NR\_mobile\_IAB-Core, NR\_NTN\_enh-Core, TEI18 [R2-2409406](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409406.zip)

* Update with architecture option
* The CR is agreed in R2-2411093 with change above

[R2-2410745](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410745.zip) Correction on RACH-less handover fallback [RACH-lessHO] Huawei, HiSilicon, Samsung, CATT, LG Electronics, Nokia, Nokia Shanghai Bell, Ericsson CR Rel-18 38.331 18.3.0 5181 - F NR\_mobile\_IAB-Core, NR\_NTN\_enh-Core, TEI18 [R2-2409406](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409406.zip) Withdrawn

#### 7.0.2.2 NR network-controlled repeaters

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

[R2-2410726](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410726.zip) Clarification on NCR-MT Mandatory features Google CR Rel-18 38.306 18.3.0 1217 - F NR\_Mob\_enh2-Core, NR\_netcon\_repeater-Core

- Huawei and ZTE Agree with intention but since handover is listed, it would cover LTM. Samsung agrees and we should stop these types of CRs.

- Google asks if it is clear that LTM is handover and should be clarified in stage 2. ZTE clarifies it is a method for handover. LG is not sure if LTM covers handover across the specifications. Xiaomi indicates that in 9.2.3.1 of 38.300 it mentions it is a handover.

* The CR is not pursued

[R2-2410809](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410809.zip) Correction on the NCR-MT capability Huawei, HiSilicon CR Rel-18 38.306 18.3.0 1218 - F NR\_netcon\_repeater-Core

- ZTE disagrees, this capability was introduced so it knows whether NAS is done in SRB1 or SRB2 and we have same IAB capability without this restriction. If none capabilities are signalled then SRB1 is used for NAS.

- Huawei thinks that SRB2 is mandatory. ZTE explains that SRB2 is not mandatory and that’s why we introduced this capability.

- Qualcomm agrees with ZTE and we followed the IAB framework.

- ZTE thinks that we need to check if we need to do similar change for IAB

* The CR is postponed

#### 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) )

[R2-2410207](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410207.zip) Correction on Band Selection and Cell Barring for Aerial UEs Ericsson CR Rel-18 38.331 18.3.0 5149 - F NR\_UAV-Core

- LG agrees with first change but second change can cause a problem and is not needed. Nokia agrees.

- Nokia and qualcomm agree with intention but further check is needed

- Samsung ask if it is possible for the UE to not support any bands in the aerial list. Qualcomm explains that the intention is that the UE has to support one of them if they are included. But if it doesn’t include a list you can depend on legacy list. Nokia thinks that Ns values were optional.

- Samsung asks what happens if the Ns value of one frequency is not supported by the UE but there is a second frequency that doesn’t have Ns value list. Qualcomm thinks that if the UE supports that frequency but there is no Ns the UE would pick that frequency. Samsung then indicates that the proposed text is not capturing properly.

* [AT128][007][UAV] Cell barring (Ericsson)

Intended outcome: Agree to CR

Deadline: Thursday

R2-2411120 Correction on Band Selection and Cell Barring for Aerial UEs Ericsson CR Rel-18 38.331 18.3.0 5149 1 F NR\_UAV-Core

* Update CR to remove changes on changes
* The CR is agreed in R2-2411202 with changes above

#### 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))

[R2-2409545](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409545.zip) Correction on MT-SDT Capability for NR-NTN Case vivo, ZTE Corporation, Sanechips, Huawei, HiSilicon, Ericsson CR Rel-18 38.306 18.3.0 1201 - F NR\_MT\_SDT-Core, NR\_NTN\_solutions-Core

* The CR is agreed

[R2-2410227](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410227.zip) Correction to RRC for CG-SDT enhancement [CG-SDTenh] Huawei, HiSilicon CR Rel-18 38.331 18.3.0 5152 - F TEI18, NR\_MT\_SDT-Core

* Update the CR with some ASN.1 comments and agree by email
* [AT128][011][SDT] CG-SDT CR (Huawei)

Intended outcome: review updates and agree by email

Deadline: Thursday

#### 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))

[R2-2409813](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409813.zip) Miscellaneous corrections on BAP for IAB Huawei, HiSilicon (Rapporteur) CR Rel-18 38.340 18.1.0 0040 - D NR\_mobile\_IAB-Core

* The CR is agreed

#### 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))

[R2-2410611](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410611.zip) Clarification on the definition of eRedCap UEs Ericsson, Sequans Communications CR Rel-18 38.306 18.3.0 1197 1 F NR\_redcap\_enh-Core [R2-2409205](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409205.zip)

- Huawei thinks that we can just capture - TR 38.822 [24] as well as capabilities specified in this specification remain applicable for eRedCap UEs same as redcap ~~other~~ UEs, unless indicated otherwise. Ericsson is concerned that the aspect related to MIMO part is not exactly the same.

- Vivo agree with the CR and if we make Huawei’s change it implies that Rel-18 UE will have to support all the Rel-17 features. Apple agrees

- LG would like to follow original intention of CR.

* The CR is agreed

#### 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))

**LS**

[R2-2409513](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409513.zip) LS on the time period for R18 preamble repetition (R1-2409262; contct: Huawei) RAN1 LS in Rel-18 NR\_cov\_enh2-Core To:RAN2

* Noted

[R2-2410617](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410617.zip) Discussion on LS from RAN1 on the time period for R18 preamble repetition Huawei, HiSilicon discussion Rel-18 NR\_cov\_enh2-Core

* Noted

FFS the level of details and how we provide it in the LS

Discussion

- ZTE would like to provide more details in the LS. Huawei thinks that the details in ZTE LS is not relevant to RAN1 LS. LG thinks we can provide some level of details for some use case. Ericsson and Vivo thinks we should just answer RAN1 question at high level. Vivo thinks that RAN2 guys can internally share with RAN1 colleagues.

Proposal 4: For Q3, RAN2 confirms that in Case #2, a UE capable of msg1-repetition but incapable of RedCap will not consider the RACH resource and parameters indicated by feature combination msg1-repetition-r18+redCap-r17 according to the current RAN2 specifications.

Proposal 5: For Q4, RAN2 confirms that in Case #2, a UE capable of msg1-repetition and RedCap will not consider the RACH resource and parameters indicated by feature combination msg1-repetition-r18 according to the current RAN2 specifications.

Proposal 6: For Q5, RAN2 confirms that only the RACH resource and parameters corresponding to repetition numbers indicated for the sets of PRACH resources selected by the UE are considered as “configured” to the UE while all parameter repetition numbers indicated for all the other sets of PRACH resources as “not configured”.

[R2-2410447](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410447.zip) Discussion on RAN1 LS on time period in Msg1 repetition ZTE Corporation discussion Rel-18 NR\_cov\_enh2-Core

* Noted

[R2-2410543](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410543.zip) Discussion on RAN1 LS on time period Ericsson discussion Rel-18 NR\_cov\_enh2-Core

* Noted

[R2-2410819](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410819.zip) Discussion on RAN1 LS on the time period for R18 preamble repetition LG Electronics Inc. discussion Rel-18 NR\_cov\_enh2-Core

* Noted

**Agreements**

1. For Q0, RAN2 confirms that Case#1 is not precluded, i.e. Repetition number n2 and n4 are configured in one RACH-ConfigCommon, while n8 is configured in another RACH-ConfigCommon.
2. For Q1, RAN2 confirms that Case#2 is not precluded. Repetition number n2 and n4 are associated to one feature combination(i.e. msg1-repetition-r18), n8 is associated to another feature combination(i.e. msg1-repetition-r18+redCap-r17).

3 For Q2, RAN2 confirms that Case#1-Rev is not precluded

* [AT128][008][CE] Response LS to RAN1 (Huawei)

Intended outcome: Agreed answers and LS

Deadline: 10-17-24

R2-2411167 Summary of [AT128][008][CE] Response LS to RAN1 (Huawei) Huawei discussion Rel-18 NR\_cov\_enh2-Core

* For Q3-Q5, from RAN2 perspective, the text “all the configured number of preamble repetitions” in Case#2 can be interpreted as Interpretation 1-2 in the RAN1 LS.
* Noted

R2-2411168 Reply LS on the time period for R18 preamble repetition Huawei LS out Rel-18 NR\_cov\_enh2-Core To:RAN1

* The LS is approved

#### 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))

**Rapporteur CR**

[R2-2410301](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410301.zip) Network energy savings for NR rapporteur RRC CR Huawei, HiSilicon CR Rel-18 38.331 18.3.0 5011 1 F Netw\_Energy\_NR-Core [R2-2408443](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408443.zip)

* Add architecture options
* The CR is agreed in R2-2411094 with change above

**Correction CRs**

[R2-2410531](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410531.zip) Cell DRX MPS exemption in RA Peraton Labs CR Rel-18 38.321 18.3.0 2007 - F Netw\_Energy\_NR-Core

- ZTE explains that we clarified in stage 2 so the change is not needed.

- Interdigital explains that in WI we didn’t make exceptions for high priority scheduling requests which is in the same category so we should follow what we agreed.

- Huawei thinks that in stage 2 we explain network behaviour and in stage 3 we explain UE behavior. We had this discussion in the past and we deliberately left out MPS as it is a priority service.

- Apple also doesn’t think we need stage 3.

- Peraton would like to have a discussion on this as they think that this can be categorized as public safety. Huawei explains that in SA1 it is not defined as public safety and MPS is not in this category. Peraton agrees it is not public safety but it is a public safety related service. ZTE explains that it is not RAN2 job to clarify, and it should be first specified in SA1.

- Qualcomm has some sympathy since it is related to government services but the problem is that it is not a correction but rather a new feature.

- Xiaomi also thinks that this is a new function and if we consider Priority ID 1 then we should consider Priority ID 2

- LG agrees that we don’t need the change as we agreed to not handle priority services.

- Interdigital thinks that we have some tools as you can send RACH even if you are in DRX.

After CB

- ZTE thinks that we can use same wording as in stage 2, for example if UE initiates public related services. Apple thinks that we shouldn’t use public service wording as it is not clear in stage 3.

* RAN2 assumes that MPS and MCS are public safety related services.
* Update the CR to capture both MPS and MCS

R2-2411209 Cell DRX MPS exemption in RA Peraton Labs CR Rel-18 38.321 18.3.0 2007 1 F Netw\_Energy\_NR-Core

* The CR is agreed

[R2-2410169](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410169.zip) Miscellaneous corrections for NES ZTE Corporation, Sanechips CR Rel-18 38.331 18.3.0 5146 - F Netw\_Energy\_NR-Core

- Huawei thinks that the definition of scrambling ID is already captured in RAN1 so we don’t need that part. The rest is good. LG agrees with Huawei.

- Xiaomi thinks that RE to EPRE is not related to Rel-18 NES, this is from Rel-15. ZTE thinks that the power offset is related to NES, but if we want to make the RE to EPRE change for rel-15 it can be considered. Huawei thinks that at least for Rel-18 RAN1 indicates that the is EPRE, so we can agree to that.

* Remove definition of definition scrambling ID
* Add architecture option
* The CR is agreed with the changes above in R2-2411104

SSB-Less

[R2-2409693](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409693.zip) Measurements on the carrier of SSB-less SCell NEC discussion Rel-18

*Proposal-1: Adopt the same handling of servingCellMO configuration for both R18 inter-band SSB-less and R15 intra-band contiguous SSB-less SCell operation.*

*Proposal-2: Capture “For both inter-band and intra-band SSB-less SCell(s), this field is not present” in the conditional presence of servingCellMO of the IE structure BWP-DownlinkDedicated and ServingCellConfig. (see Text proposal in Annex).*

*Proposal-3: P1 and P2 can be checked according to concurrent RAN4 discussions during the upcoming meeting.*

* Noted

[R2-2410259](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410259.zip) SSBLess handling Nokia discussion Rel-18 Netw\_Energy\_NR-Core

*Proposal 1:In the MO indicated by ServingCellMO, network may configure ssbFrequency to indicate a carrier frequency for the SSB-less SCell so that UE can determine measurement as intra-frequency or inter-frequency measurement based on the ssbFrequency.*

* Noted
* Wait for next meeting to make decision

#### 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

[R2-2409647](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409647.zip) Corrections on SPR configuration release and logging PSCell identity CATT CR Rel-18 38.331 18.3.0 5105 - F NR\_ENDC\_SON\_MDT\_enh2-Core

[R2-2409648](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409648.zip) Corrections on RA Report retrieval CATT CR Rel-18 37.340 18.3.0 0405 - F NR\_ENDC\_SON\_MDT\_enh2-Core

[R2-2409986](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409986.zip) NR-U related RA information in SCGFailureInformation Nokia CR Rel-18 38.331 18.3.0 5126 - F NR\_ENDC\_SON\_MDT\_enh2-Core

[R2-2410045](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410045.zip) Correction on Inter-RAT SHR Samsung CR Rel-18 38.331 18.3.0 5137 - F NR\_ENDC\_SON\_MDT\_enh2-Core

[R2-2410057](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410057.zip) Correction on logging RSSI measurements in RLF report and SHR Samsung CR Rel-18 38.331 18.3.0 5138 - 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))

[R2-2409994](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409994.zip) Clarification of UE capability restrictions in MUSIM Ericsson, Samsung, Xiaomi, LG Electronics Inc., Vivo CR Rel-18 38.300 18.3.0 0920 2 F NR\_DualTxRx\_MUSIM-Core [R2-2409224](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409224.zip)

* Include NE-DC and NR-DC in architecture option
* Update CR number to correct one
* The CR will be update to merge content of [R2-2410350](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410350.zip)

R2-2411105 Clarification of UE capability restrictions in MUSIM Ericsson, Huawei, HiSilicon, Samsung, Xiaomi, LG Electronics Inc., Vivo CR Rel-18 38.300 18.3.0 0920 3 F NR\_DualTxRx\_MUSIM-Core

[R2-2410350](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410350.zip) Corrections for MUSIM in 38.300 Huawei, HiSilicon, Samsung, vivo CR Rel-18 38.300 18.3.0 0931 - F NR\_DualTxRx\_MUSIM-Core

* The CR will be merged with [R2-2409994](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409994.zip)
* [AT128][009][MUSIM] 38.300 CR (Ericsson)

Intended outcome: merge two CRs, review and agree by email

Deadline: Thursday

#### 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

[R2-2409510](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409510.zip) LS on TDD UL/DL Configuration for Two TA (R1-2409179; contact: Ericsson) RAN1 LS in Rel-18 NR\_MIMO\_evo\_DL\_UL-Core To:RAN2

[R2-2409715](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409715.zip) Correction on simultaneousU-TCI-UpdateListx CATT, Ericsson CR Rel-18 38.331 18.3.0 5111 - F NR\_MIMO\_evo\_DL\_UL-Core

[R2-2410173](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410173.zip) Discussion on supporting 8Tx in MAC specification ASUSTeK discussion Rel-18 NR\_MIMO\_evo\_DL\_UL-Core

[R2-2410174](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410174.zip) Correction on supporting 8Tx in MAC specification ASUSTeK CR Rel-18 38.321 18.3.0 1990 - F NR\_MIMO\_evo\_DL\_UL-Core

[R2-2410175](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410175.zip) Correction on PHR for MIMO ASUSTeK CR Rel-18 38.321 18.3.0 1991 - F NR\_MIMO\_evo\_DL\_UL-Core

[R2-2410397](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410397.zip) On LS on TDD UL/DL Configuration for Two TA Ericsson discussion Rel-18 NR\_MIMO\_evo\_DL\_UL-Core

[R2-2410528](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410528.zip) Correction on PHR for MIMO STx2P multi-panel scheme Samsung, LG, Huawei, CATT, Ericsson CR Rel-18 38.321 18.3.0 1959 1 F NR\_MIMO\_evo\_DL\_UL-Core [R2-2409024](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409024.zip)

[R2-2410624](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410624.zip) Harmonization of 8Tx in MAC specification ZTE Corporation discussion Rel-18 NR\_MIMO\_evo\_DL\_UL-Core

=> Revised in [R2-2411076](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411076.zip)

[R2-2411076](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411076.zip) Harmonization of 8Tx in MAC specification ZTE Corporation discussion Rel-18 NR\_MIMO\_evo\_DL\_UL-Core

[R2-2410625](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410625.zip) Clarification to 38.321 on R17 PHR MAC CE for mTRP PUSCH Repetition ZTE Corporation CR Rel-18 38.321 18.3.0 2008 - 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))

To be treated in breakout session

[R2-2409599](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409599.zip) Correction on Group Paging Handling CATT, CBN CR Rel-18 38.331 18.3.0 5129 - F NR\_MBS\_enh-Core Withdrawn

[R2-2409756](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409756.zip) Misc correction on NR MBS enhancement ZTE Corporation, Sanechips CR Rel-18 38.331 18.3.0 5114 - F NR\_MBS\_enh-Core

[R2-2409939](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409939.zip) Clarification on group paging procedure Samsung CR Rel-18 38.331 18.3.0 5134 - F NR\_MBS\_enh-Core

[R2-2410254](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410254.zip) Multicast reception after reselection to cell with MCCH Nokia, Samsung, Ericsson, ZTE CR Rel-18 38.331 18.3.0 5153 - F NR\_MBS\_enh-Core

[R2-2410630](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410630.zip) Correction on applying of PTM configuration in Paging procedure SHARP Corporation CR Rel-18 38.331 18.3.0 5176 - F NR\_MBS\_enh-Core

[R2-2410876](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410876.zip) Correction on Group Paging Handling CATT, CBN, China Broadnet CR Rel-18 38.331 18.3.0 5194 - F NR\_MBS\_enh-Core

#### 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))

To be treated in breakout session

[R2-2410654](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410654.zip) Correction on UE behaviours when reporting SRB is modified Huawei, HiSilicon CR Rel-18 38.331 18.3.0 5178 - F NR\_QoE\_enh-Core

[R2-2410659](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410659.zip) Miscellaneous correction on QoE measurement Samsung CR Rel-18 38.331 18.3.0 5179 - F NR\_QoE\_enh-Core

#### 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))

[R2-2410249](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410249.zip) Correction to multi-PUSCH configured grant Huawei, HiSilicon, Qualcomm, Apple, vivo, Nokia, Nokia Shanghai Bell CR Rel-18 38.321 18.3.0 2002 - F NR\_XR\_enh-Core

* Move impact analysis to summary section
* The CR is agreed in R2-2411106

[R2-2411067](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411067.zip) Correction on DSR cancellation CMCC draftCR Rel-18 38.321 18.3.0 F NR\_XR\_enh-Core

- Lenovo doesn’t think the network dynamically changes the threshold, so this is more of an optimization. LG also thinks this is an optimization and not needed.

- Qualcomm agrees with the intention but the change should be restricted to case when triggering threshold becomes larger.

- Huawei doesn’t think it is need, if it is changed then then network will miss a DSR. Nokia, Ericsson agrees with Huawei and LG and think it is a corner cases.

- Lenovo explains that only concequence of not agreeing to this CR is an additional MAC CE DSR so it is not a bit problem.

* Missing impact analysis
* The CR is not pursued

[R2-2410729](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410729.zip) Correction for Delay Critical Indication from PDCP to RLC Samsung, LG Electronics Inc., Nokia, Huawei, HiSilicon, Ericsson CR Rel-18 38.323 18.3.0 0144 - F NR\_XR\_enh-Core

- Huawei thinks that ‘if’ should be ‘when’. Qualcomm agrees as these triggers are event triggered. Samsung indicates that the intention was to align with legacy text as much as possible.

* Update CR from ‘if’ to ‘when’ and add architecture
* The CR is agreed in R2-2411107 with changes above

[R2-2409852](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409852.zip) Further Discussion on the SN Gap Report CATT discussion Rel-18 NR\_XR\_enh-Core

*Proposal 1: RAN2 to confirm which of the following two options is the correct understanding:*

*- Option 1: The discarded PDCP SDU included in the PDCP SN gap report should not include the PDCP SDU(s) which have been delivered to lower layer by RLC.*

*- Option 2: The discarded PDCP SDU included in the PDCP SN gap report can include in the PDCP SDU(s) which have been delivered to lower layer by RLC.*

*Proposal 2: If Option 1 is selected in Proposal 1, suggest RAN2 to discuss whether specification modification is needed or not.*

*Proposal 3: If Option 2 is selected in Proposal 1, no specification effort is needed.*

- CATT thinks that we should confirm option 2

- Nokia thinks that the understanding should be option 1. Vivo thinks that option 1 the receiver would have to wait so it will incur delays.

- LG thinks its option 2 as it was the original intention. Huawei thinks it is 2.

* Come back next meeting
* Noted

#### 7.0.2.17 Others

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

**Corrections CRs**

[R2-2410000](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410000.zip) Miscellaneous non-controversial corrections Set XXIII Ericsson CR Rel-18 38.331 18.3.0 5083 1 F NR\_newRAT-Core, TEI18 [R2-2409125](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409125.zip)

* Update based on further corrections from this meeting
* [POST128][004][RRC] Rapporteur correction (Ericsson)

Intended outcome: Review and agree to all CRs from R15 (if applicable), R16, R17, and 18

Deadline: short

[R2-2410116](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410116.zip) Correction on UE receiver features China Telecom draftCR Rel-18 38.306 18.3.0 F NR\_demod\_enh3-Core

- Huawei indicates that current wording is from RAN4 feature list and they don’t use that wording on type 1 and type 2.

* Need a CR number and increase rev. 0 (CR 1223) and architecture option
* The CR is agreed in R2-2411203 with changes above

[R2-2410457](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410457.zip) Coexistence of NCR and CPAC with (e)RedCap Ericsson, ZTE Corporation CR Rel-18 38.300 18.3.0 0937 - F NR\_Mob\_enh2-Core, NR\_netcon\_repeater, NR\_redcap\_enh-Core

- Huawei doesn’t think this is needed as it is clear in 306. Ericsson thinks that we need be consistent.

- ZTE thinks that we should be aligned with IAB and since we have the description for IAB we should add NCR. Samsung thinks we should add NCR.

- Samsung and ZTE Think we should remove the CPC and CPA so we don’t get further clarification CR

- Nokia asks what about LTM. Ericsson has another CR

* Further alignment on this restriction for €redcap capability is not encouraged for Rel-18
* The CR is agreed

[R2-2410696](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410696.zip) Transmit operation of SR and SN gap report Nokia, Nokia Shanghai Bell CR Rel-18 38.323 18.3.0 0143 - F NR\_SL\_enh2-Core, NR\_XR\_enh-Core

- Oppo and Huawei thinks the change is not needed

- LG thinks the first change is not agreeable as it causes a problem

- Second change may be need if we have gap reporting for SL.

* The Tdoc number and architecture options are missing
* The CR is postponed

[R2-2410758](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410758.zip) Clarification on SIBs validity Google Korea LLC CR Rel-18 38.331 18.3.0 5185 - F NR\_SL\_enh-Core, NR\_UE\_pow\_sav\_enh-Core, TEI18, NR\_pos\_enh2

- Mediatek explains that the added SIBs are segmented and those segments are discarded during cell reselections. But it doesn’t mean that the SIBs can’t be used again. Ericsson agrees and that sentence is for the SIBs that are not under value tag control and the new ones added are. Samsung also agrees with Ericsson and mediatek

* The CR is not pursued

[R2-2410219](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410219.zip) Correction to co-existence of multi-PUSCH CG and CG-SDTenh [CG-SDTenh] Huawei, HiSilicon CR Rel-18 38.321 18.3.0 1997 - F NR\_XR\_enh-Core, TEI18 Revised

[R2-2410820](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410820.zip) Correction to co-existence of multi-PUSCH CG and CG-SDTenh [CG-SDTenh] Huawei, HiSIlicon CR Rel-18 38.321 18.3.0 1997 1 F TEI18, NR\_XR\_enh-Core [R2-2410219](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410219.zip)

- ZTE, Nokia and Ericsson thinks nothing is broken but if we make a change we should indicate in RRC that these two shouldn’t be configured together.

- Samsung supports the CR and the two features shouldn’t be configured together. LG agreed and we copied the text and this is the root cause of the problem.

- Huawei thinks that if we don’t expect them to be configured together it should be clear.

- Nokia is not sure what is the issue if they are configured together.

- ZTE agrees but there are other features that shouldn’t be configured together so don’t want to see other CRs.

- Apple has no strong view but if it is clear that they shouldn’t be configured together.

* The CR is agreed
* RAN2 confirms that CG-SDT periodicity extension and multi-PUSCH CG are not be configured together.

*LTM + (e)RedCap*

[R2-2410446](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410446.zip) On supporting LTM for (e)RedCap UEs ZTE Corporation discussion Rel-18 NR\_Mob\_enh2-Core, NR\_redcap-Core, NR\_redcap\_enh-Core

*Proposal 1 RAN2 confirms that LTM can be supported for (e)RedCap UEs, no spec change is foreseen.*

* Noted

[R2-2410458](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410458.zip) Coexistence of LTM with RedCap Ericsson discussion Rel-18 NR\_Mob\_enh2-Core, NR\_redcap\_enh-Core

*Proposal 1 RAN2 to confirm that LTM can be used for (e)RedCap UEs by clarify the following:*

*a. If the SSB frequency within the LTM-SSB-Config IE is the same as the SSB frequency within the NonCellDefiningSSB IE, this means the SSB is a NCD-SSB.*

*b. If an additional RACH resources are configured, the UE shall use such resources only when performing an LTM cell switch procedure, and if CFRA resources are not provided within the LTM cell switch MAC CE.*

* Noted

Discussion

- Ericsson indicates that from RAN2 point of view it can work even if RAN4 doesn’t have any requirement. Apple agrees.

- Vivo agrees but we can agree with Huawei’s CR.

- Xiaomi is not sure this can be supported if there is no RAN4 requirement. ZTE thinks this is not an issue as RAN4 can have some requirement in the future.

- Qualcomm asks if we checked that it works given the per band capability. ZTE thinks that for this case all existing capabilities are applicable for this use case.

**Agreement**

* RAN2 confirms that MCG LTM can be supported for (e)RedCap UEs in current specification, no spec change is foreseen in order to support the scenario. It is up to RAN4 when and whether requirements for this use case are ever introduced.

[R2-2410516](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410516.zip) Correction to LTM MAC CE based CFRA with MSG1 repetition Huawei, HiSilicon CR Rel-18 38.321 18.3.0 1969 1 F NR\_Mob\_enh2-Core, NR\_cov\_enh2-Core, NR\_redcap-Core, NR\_redcap\_enh-Core [R2-2409139](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409139.zip)

- ZTE thinks that nothing is broken with current specification. ZTE thinks that if we were to do a change the first change in NOTE1 from Vivo is better.

- Ericsson thinks that we can just update NOTE1 to include all these considerations.

[R2-2409777](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409777.zip) Coexistence of (e)RedCap UEs and LTM and other MAC corrections vivo discussion Rel-18 NR\_Mob\_enh2-Core, NR\_redcap\_enh-Core, NR\_redcap-Core

* Merge the two CRs and identify wording improvements by combining the content of NOTE2 and 3 in NOTE 1.
* [AT128][005][RedCapLTM] CR (Huawei)

Intended outcome: Agree to CR by email

Deadline: Thursday

[R2-2409923](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409923.zip) Clarification on LTM capabilities Google CR Rel-18 38.306 18.3.0 1183 1 F NR\_redcap-Core, NR\_Mob\_enh2-Core, NR\_redcap\_enh-Core [R2-2408756](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408756.zip)

- ZTE indicates that we agree to not add more clarification and MR DC covers this case.

- Qualcomm thinks that in the context of MR DC it is not clear whether it cover NR DCs in our specifications. So for 306 we should include NR DC. ZTE thinks that this is clear in the stage 2 but if we want to make this clear we should add this clarification at the higher lever of the 306 to cover all cases. Vivo thinks that we need to check one by one. Samsung thinks in RRC specification it is quite clear.

* The CR is not pursued

## 7.1 Expanded and improved NR positioning

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

Time budget: 0 TU

Tdoc Limitation: 2 tdocs

Minor and editorial issues should be coordinated with the appropriate spec rapporteur and submitted by rapporteur company together with any additional corrections the rapporteur company may have. Larger issues can be discussed based on contributions/individual CRs.

### 7.1.0 In-principle agreed CRs

Contributions agreed in principle at RAN2#127bis.

[R2-2409567](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409567.zip) Correction on assistance data transfer in SL positioning for stage-2 ZTE Corporation CR Rel-18 38.305 18.3.0 0175 2 F NR\_pos\_enh2 [R2-2409259](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409259.zip)

[R2-2409618](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409618.zip) Corrections of location time stamp, RSTD and RTOA report CATT CR Rel-18 38.355 18.3.0 0008 3 F NR\_pos\_enh2-Core [R2-2409268](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409268.zip)

[R2-2409683](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409683.zip) RRC correction on NR sidelink positioning Philips International B.V., Ericsson CR Rel-18 38.331 18.3.0 4940 2 F NR\_pos\_enh2-Core [R2-2408864](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408864.zip)

[R2-2409916](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409916.zip) Miscellaneous corrections to SLPP specification Intel Corporation CR Rel-18 38.355 18.3.0 0011 1 D NR\_pos\_enh2-Core [R2-2409254](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409254.zip)

[R2-2410214](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410214.zip) Rapporteur CR to MAC spec for R18 Positioning Huawei, HiSilicon, ASUSTek CR Rel-18 38.321 18.3.0 1996 - F NR\_pos\_enh2

[R2-2410215](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410215.zip) Rapporteur CR to IDLE mode procedure for R18 Positioning Huawei, HiSilicon, Phillips CR Rel-18 38.304 18.3.0 0422 - F NR\_pos\_enh2

[R2-2410217](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410217.zip) Correction on SLPP Huawei, HiSilicon CR Rel-18 38.355 18.3.0 0014 - F NR\_pos\_enh2

[R2-2410494](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410494.zip) Miscellaneous RRC Positioning Correction Ericsson CR Rel-18 38.331 18.3.0 5061 1 F NR\_pos\_enh2-Core [R2-2408935](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408935.zip)

=> Revised in [R2-2411061](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411061.zip)

[R2-2411061](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411061.zip) Miscellaneous RRC Positioning Correction Ericsson CR Rel-18 38.331 18.3.0 5061 2 F NR\_pos\_enh2-Core

[R2-2410495](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410495.zip) Correction of misplaced else condition of SL Positioning clause Ericsson CR Rel-18 38.321 18.3.0 1971 1 F NR\_pos\_enh2-Core [R2-2409158](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409158.zip)

[R2-2410644](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410644.zip) Clarification on the maximum number of other UEs in sidelink positioning vivo CR Rel-18 38.305 18.3.0 0178 1 F NR\_pos\_enh2-Core [R2-2409251](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409251.zip)

### 7.1.1 Organizational

Including incoming LSs and rapporteur inputs.

[R2-2409508](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409508.zip) Reply LS on CSI-RS and SRS for spatial relation (R1-2409097; contact: ZTE) RAN1 LS in Rel-18 NR\_pos\_enh2-Core To:RAN2

### 7.1.2 Stage 2

Impact to 38.300, 37.340, and 38.305.

This agenda item may be handled at lower priority.

[R2-2410497](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2410497.zip) Miscellaneous corrections for Positioning Ericsson CR Rel-18 38.300 18.3.0 0938 - F NR\_pos\_enh2-Core

### 7.1.3 SLPP corrections

Impact to 38.355.

[R2-2409568](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409568.zip) Correction on tx timestamp request in SL-RTT ZTE Corporation CR Rel-18 38.355 18.3.0 0012 - F NR\_pos\_enh2

[R2-2409826](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409826.zip) Clarification on SLPP session ID existence in SLPP messages between target UE and LMF vivo discussion Rel-18 NR\_pos\_enh2-Core

[R2-2410132](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410132.zip) Corrections on capabilities for FG R1 41-1-19a and 41-1-19b in IE CommonSL-PRS-MethodsIEsProvideCapabilities Lenovo CR Rel-18 38.355 18.3.0 0013 - F NR\_pos\_enh2

[R2-2410218](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410218.zip) Discussion on the issues in GAD in SLPP Huawei, HiSilicon discussion Rel-18 NR\_pos\_enh2

### 7.1.4 LPP corrections

Impact to 37.355.

[R2-2409619](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409619.zip) Correction of nr-DL-PRS-RSCPD-ReportingRRC-Inactive in NR-DL-TDOA-MeasurementCapability CATT CR Rel-18 37.355 18.3.0 0528 - F NR\_pos\_enh2-Core

[R2-2410401](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410401.zip) Correction for the UE capability on PosSRS-BWA-RRC-Inactive Xiaomi CR Rel-18 37.355 18.3.0 0540 - F NR\_pos\_enh2-Core

### 7.1.5 RRC corrections

Impact to 38.331 and 38.306.

[R2-2409569](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409569.zip) Correction on the dedicated pool interest frequency request in SUI ZTE Corporation CR Rel-18 38.331 18.3.0 5098 - F NR\_pos\_enh2

[R2-2409620](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409620.zip) Clarification on the activation mechanism of srs-PosConfigOrActivationReq CATT, Ericsson CR Rel-18 38.331 18.3.0 5103 - F NR\_pos\_enh2-Core

[R2-2409639](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409639.zip) Correction on NW restriction for dedicated SL-PRS resource pool vivo, Ericsson CR Rel-18 38.331 18.3.0 5104 - F NR\_pos\_enh2-Core

[R2-2409656](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409656.zip) Correction for UE indicating its preference TX/RX frequencies for sidelink positioning in SUI vivo CR Rel-18 38.331 18.3.0 5106 - F NR\_pos\_enh2-Core

[R2-2410216](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410216.zip) Correction for positioning SRS CA in RRC\_INACTIVE Huawei, HiSilicon, Ericsson, Samsung CR Rel-18 38.331 18.3.0 5150 - F NR\_pos\_enh2

[R2-2410224](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410224.zip) Correction to sidelinkUEInformation for SL POS Huawei, HiSilicon CR Rel-18 38.331 18.3.0 5151 - F NR\_pos\_enh2

[R2-2410498](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410498.zip) Sidelink RRC Positioning Correction Ericsson, vivo CR Rel-18 38.331 18.3.0 5165 - F NR\_pos\_enh2-Core

[R2-2410584](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410584.zip) RRC correction on NR sidelink positioning Philips International B.V. CR Rel-18 38.331 18.3.0 5174 - F NR\_pos\_enh2-Core

### 7.1.6 MAC corrections

Impact to 38.321.

[R2-2410176](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2410176.zip) Correction on prioritization between SR and SL-PRS transmission ASUSTeK CR Rel-18 38.321 18.3.0 1992 - F NR\_pos\_enh2

### 7.1.7 Corrections to other specifications

Impact to any specifications not identified above.

[R2-2410133](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2410133.zip) Correction on the capability description for posSRS-BWA-RRC-Inactive-r18 (FG R1 41-4-8) Lenovo discussion Rel-18 NR\_pos\_enh2

[R2-2410402](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410402.zip) Correction for the UE capability on PosSRS-BWA-RRC-Inactive Xiaomi CR Rel-18 38.306 18.3.0 1212 - F NR\_pos\_enh2-Core

## 7.2 Further NR mobility enhancements

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

Time budget: 0 TU)

Tdoc Limitation: 2 tdocs.

[R2-2410055](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2410055.zip) Clarification on inter-band LTM capabilities Qualcomm Inc., OPPO CR Rel-18 38.306 18.3.0 1209 - F NR\_Mob\_enh2-Core

### 7.2.1 Organizational

Including incoming LSs and rapporteur inputs.

### 7.2.2 In-principle agreed CRs

[R2-2409936](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409936.zip) Misc state 2 corrections for LTM mobility Vodafone, Ericsson, Nokia, ZTE CR Rel-18 38.300 18.3.0 0911 2 F NR\_Mob\_enh2-Core [R2-2409355](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409355.zip)

[R2-2410459](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410459.zip) Misc RRC corrections for feMob Ericsson CR Rel-18 38.331 18.3.0 5096 1 F NR\_Mob\_enh2-Core [R2-2409353](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409353.zip)

[R2-2410514](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410514.zip) Miscellaneous corrections for LTM Huawei, HiSilicon CR Rel-18 38.321 18.3.0 1968 2 F NR\_Mob\_enh2-Core [R2-2409361](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409361.zip)

[R2-2410801](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410801.zip) Corrections for mobility enhancements in stage-2 ZTE Corporation, Ericsson CR Rel-18 37.340 18.3.0 0404 2 F NR\_Mob\_enh2-Core [R2-2409357](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409357.zip)

### 7.2.3 Others

Including all corrections. Minor and editorial issues should be coordinated with the CR rapporteur. A contribution can include multiple TPs. Note RRC CR and MAC CR rapporteurs’ summary and suggestion (based on the submitted contributions) may be provided. Agreed changes may be merged into a single or multiple CRs containing similar issues.

[R2-2409900](file:///C:\\Users\\panidx\\OneDrive%20-%20InterDigital%20Communications,%20Inc\\Documents\\3GPP%20RAN\\TSGR2_128\\Docs\\R2-2409900.zip) Corrections on remaining LTM RRC issues MediaTek Inc. CR Rel-18 38.331 18.3.0 5119 - F NR\_Mob\_enh2-Core

[R2-2409922](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409922.zip) Clarification on conditional, DAPS and LTM candidate configurations Google CR Rel-18 38.331 18.3.0 5121 - F NR\_Mob\_enh-Core, NR\_Mob\_enh2-Core

[R2-2410018](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410018.zip) Correction on the field description of ltm-UE-MeasuredTA-ID CATT CR Rel-18 38.331 18.3.0 5130 - F NR\_Mob\_enh2-Core

[R2-2410019](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410019.zip) Correction on the field description of ltm-NoResetID CATT CR Rel-18 38.331 18.3.0 5131 - F NR\_Mob\_enh2-Core

[R2-2410063](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410063.zip) Remaining issues on L2 reset for LTM NEC discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2410117](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410117.zip) Correction on LTM UE capability based on the LS from RAN1 MediaTek Inc. discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2410442](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410442.zip) Miscellaneous Rel-18 LTM Aspects and Corrections Nokia discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2410449](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410449.zip) Stage 2 TP for simultaneous execution of CHO and SCG LTM Lenovo discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2410460](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410460.zip) Issues on capabilities for LTM Ericsson discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2410461](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410461.zip) Remaining issues on LTM Ericsson discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2410462](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410462.zip) Summary of RRC proposals for feMob Ericsson discussion Rel-18 NR\_Mob\_enh2-Core Late

[R2-2410513](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410513.zip) LTM UE capabilities for inter-frequency L1 measurements Huawei, HiSilicon discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2410515](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410515.zip) Further MAC corrections Huawei, HiSilicon discussion NR\_Mob\_enh2-Core

[R2-2410517](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410517.zip) MAC CR rapporteur summary Huawei, HiSilicon discussion Rel-18 NR\_Mob\_enh2-Core Late

[R2-2410628](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410628.zip) Clarification to 38.321 on RACH Initiation for RACH based LTM ZTE Corporation CR Rel-18 38.321 18.3.0 2009 - F NR\_Mob\_enh2-Core

[R2-2410707](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410707.zip) Miscellaneous corrections for SCPAC Nokia discussion

[R2-2410737](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410737.zip) Restrictions on simultaneous conditional, DAPS and LTM candidate configurations Google CR Rel-18 38.300 18.3.0 0941 - F NR\_Mob\_enh-Core, NR\_Mob\_enh2-Core

[R2-2410802](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410802.zip) Correction for mobility enhancements in stage-2 ZTE Corporation, Ericsson CR Rel-18 37.340 18.3.0 0406 - F NR\_Mob\_enh2-Core

## 7.3 IoT NTN enhancements

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

Time budget: 0 TU

Tdoc Limitation: 1 tdocs

### 7.3.0 In-principle agreed CRs

Contributions agreed in principle at RAN2#127bis.

[R2-2409589](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409589.zip) Corrections on location based measurements and need code for IoT NTN CATT CR Rel-18 36.331 18.3.1 5052 2 F IoT\_NTN\_enh-Core [R2-2409233](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409233.zip)

[R2-2410056](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410056.zip) Applicability of optional UE Capabilities for NB-IoT Qualcomm Inc. CR Rel-18 36.306 18.3.0 1894 2 F IoT\_NTN\_enh-Core [R2-2409232](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409232.zip)

[R2-2410422](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410422.zip) Miscellaneous corrections to TS 36.331 for IoT NTN Huawei, HiSilicon CR Rel-18 36.331 18.3.0 5054 1 F IoT\_NTN\_enh-Core [R2-2408342](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408342.zip)

[R2-2410488](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410488.zip) Corrections on distance-based measurements during T-service for IoT NTN Samsung CR Rel-18 36.304 18.2.0 0877 - F IoT\_NTN\_enh-Core Withdrawn

[R2-2410810](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410810.zip) Correction on measurement Huawei, HiSilicon CR Rel-18 36.300 18.3.0 1414 - F IoT\_NTN\_enh-Core

[R2-2410860](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410860.zip) Corrections on distance-based measurements during T-Service for IoT NTN Samsung CR Rel-18 36.304 18.2.0 0876 1 F IoT\_NTN\_enh-Core [R2-2409235](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409235.zip)

[R2-2410867](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410867.zip) IoT NTN UE capabilities correction for GNSS and HARQ enhancements Ericsson CR Rel-18 36.306 18.3.0 1902 - F IoT\_NTN\_enh-Core

[R2-2410884](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410884.zip) IoT NTN Stage 2 correction to eMTC CHO Ericsson (Rapporteur) CR Rel-18 36.300 18.3.0 1409 1 F IoT\_NTN\_enh-Core [R2-2409178](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409178.zip)

### 7.3.1 Organizational

LSs, rapporteur inputs.

Editorials/clarifications should not be included in any tdoc but sent to the WI spec rapporteurs

[R2-2409518](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409518.zip) Reply LS on UE Location Information for NB-IoT NTN (R3-245819; contact: Nokia) RAN3 LS in Rel-18 IoT\_NTN\_enh To:SA2 Cc:RAN2, CT1, SA1, SA3-LI

### 7.3.2 Corrections

Corrections for all specifications.

[R2-2409543](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409543.zip) Correction on UE Location Information for IoT-NTN vivo, Ericsson, Nokia, Nokia Shanghai Bell CR Rel-18 36.300 18.3.0 1410 - F IoT\_NTN\_enh-Core

[R2-2409590](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409590.zip) Corrections on the reference of satellite ID Huawei, HiSilicon, Apple CR Rel-18 36.300 18.3.0 1411 - F IoT\_NTN\_enh-Core

[R2-2409947](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409947.zip) UE feature for SIB33(-NB) reception in RRC\_IDLE state in a TN cell Apple, Qualcomm Incorporated, Samsung, Huawei, HiSilicon, Ericsson, CATT, MediaTek Inc. CR Rel-18 36.306 18.3.0 1901 - F IoT\_NTN\_enh-Core

[R2-2410308](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410308.zip) Correction on SIB33(-NB) for IoT NTN Nokia, Nokia Shanghai Bell CR Rel-18 36.331 18.3.1 5076 - F IoT\_NTN\_enh-Core

[R2-2410480](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410480.zip) Clarification on TN-NTN mobility for IoT NTN ZTE Corporation, Sanechips discussion Rel-18 IoT\_NTN\_enh-Core

[R2-2410481](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410481.zip) Various corrections for IoT NTN Rel-18 Samsung discussion Rel-18 IoT\_NTN\_enh-Core

[R2-2410857](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410857.zip) Scope and uniqueness of satelliteId Nordic Semiconductor, Samsung discussion Rel-18

=> Revised in [R2-2410892](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410892.zip)

[R2-2410892](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410892.zip) Scope and uniqueness of satelliteId Nordic Semiconductor, Samsung discussion Rel-18

[R2-2410866](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410866.zip) Correction to satellite ID in system infromation Ericsson, Samsung CR Rel-18 36.331 18.3.0 5081 - F IoT\_NTN\_enh-Core

## 7.4 NR NTN enhancements

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

Time budget: 0 TU

Tdoc Limitation: 1 tdocs

### 7.4.0 In-principle agreed CRs

Contributions agreed in principle at RAN2#127bis.

[R2-2410541](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410541.zip) Miscellaneous corrections to NR NTN Samsung CR Rel-18 38.300 18.3.0 0922 2 F NR\_NTN\_enh-Core [R2-2409244](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409244.zip)

### 7.4.1 Organizational

LSs, rapporteur inputs.

Editorials/clarifications should not be included in any tdoc but sent to the WI spec rapporteurs

[R2-2409505](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409505.zip) LS on F[R2-NTN](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-NTN.zip) inclusion to specifications (R1-2407406; contact: vivo) RAN1 LS in Rel-18 NR\_NTN\_enh-Core To:RAN2, RAN4

### 7.4.2 Corrections

Corrections for all specifications.

[R2-2409544](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409544.zip) Correction on NTN in FR2 bands vivo, ZTE Corporation, Sanechips CR Rel-18 38.306 18.3.0 1200 - F NR\_NTN\_enh-Core

[R2-2409606](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409606.zip) Correction on coexistence between CHO and satellite switching with re-synchronization CATT, Nokia, Nokia Shanghai Bell, Ericsson CR Rel-18 38.300 18.3.0 0903 1 F NR\_NTN\_enh-Core [R2-2407968](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2407968.zip)

[R2-2409948](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409948.zip) UE feature for SIB19 reception in RRC\_IDLE/RRC\_INACTIVE state in a TN cell Apple, Qualcomm Incorporated, Samsung, Huawei, HiSilicon, CATT, MediaTek Inc. CR Rel-18 38.306 18.3.0 1206 - F NR\_NTN\_enh-Core

[R2-2410364](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410364.zip) Miscellaneous corrections on NTN in FR2 bands ZTE Corporation, Vivo, Sanechips CR Rel-18 38.331 18.3.0 5161 - F NR\_NTN\_enh-Core

[R2-2410438](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410438.zip) Various Corrections and Open Points for Rel-18 NTN Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_NTN\_enh-Core

[R2-2410527](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410527.zip) Discussion on some corrections Samsung discussion Rel-18 NR\_NTN\_enh-Core

[R2-2410642](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410642.zip) Correction on RACH-less HO in NR-NTN vivo, Samsung, Nokia, Nokia Shanghai Bell, THALES, Huawei, HiSilicon, CATT CR Rel-18 38.300 18.3.0 0904 1 F NR\_NTN\_enh-Core [R2-2408013](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408013.zip)

[R2-2410750](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410750.zip) Remaining issues on SMTC Huawei, HiSilicon discussion Rel-18 NR\_NTN\_enh-Core

[R2-2410865](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410865.zip) Clarification of reference location within the MO for NR NTN Rel-18 Ericsson CR Rel-18 38.331 18.3.0 5193 - F NR\_NTN\_enh-Core

[R2-2410878](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410878.zip) Remaining open issues of satellite switch with resync Sequans Communications discussion Rel-18 NR\_NTN\_enh-Core

## 7.5 Enhanced NR Sidelink Relay

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

Time budget: 0TU

Tdoc Limitation: 1 tdoc

1 additional tdoc on top of the limit is allowed for co-sourced contribution with 3 or more companies.

Minor and editorial issues should be coordinated with the appropriate spec rapporteur and submitted by rapporteur company together with any additional corrections the rapporteur company may have. Larger issues can be discussed based on contributions/individual CRs.

### 7.5.0 In-principle agreed CRs

Contributions agreed in principle at RAN2#127bis.

[R2-2409631](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409631.zip) Corrections on security for L2 U2U relay vivo CR Rel-18 38.323 18.3.0 0141 1 F NR\_SL\_relay\_enh-Core [R2-2408374](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408374.zip)

=> Revised in [R2-2410918](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410918.zip)

[R2-2410918](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410918.zip) Corrections on security for L2 U2U relay vivo CR Rel-18 38.323 18.3.0 0141 2 F NR\_SL\_relay\_enh-Core [R2-2408374](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408374.zip)

[R2-2409682](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409682.zip) RRC correction on NR SL U2U relay operation Philips International B.V. CR Rel-18 38.331 18.3.0 5048 2 F NR\_SL\_relay\_enh-Core [R2-2409263](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409263.zip)

[R2-2409735](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409735.zip) Clarification for ul-DataSplitThreshold setting in multi-path relay OPPO CR Rel-18 38.331 18.3.0 5081 1 F NR\_SL\_relay\_enh-Core [R2-2409118](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409118.zip)

[R2-2409759](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409759.zip) Miscellaneous CR for Rel-18 SL relay enhancement Huawei, HiSilicon CR Rel-18 38.331 18.3.0 4994 2 F NR\_SL\_relay\_enh-Core [R2-2409262](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409262.zip)

[R2-2409760](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409760.zip) Correction to error handling for U2U operation Huawei, HiSilicon CR Rel-18 38.351 18.2.0 0037 2 F NR\_SL\_relay\_enh-Core [R2-2409264](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409264.zip)

### 7.5.1 Organizational

Including incoming LSs and rapporteur inputs.

### 7.5.2 Stage 2 corrections

Impact to 38.300.

[R2-2410197](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2410197.zip) U2U Relays, Local ID Assignment Ericsson discussion Rel-18 [R2-2408879](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408879.zip)

### 7.5.3 Control plane corrections (including UE capabilities)

Impact to 38.331, 38.304, and 38.306.

[R2-2409853](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409853.zip) Clarification on the Terminology of Peer UE CATT discussion Rel-18 NR\_SL\_relay\_enh-Core

[R2-2409960](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409960.zip) Corrections on RRC SRAP configuration for L2 U2U Apple, ZTE CR Rel-18 38.331 18.3.0 5125 - F NR\_SL\_relay\_enh-Core

[R2-2410614](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410614.zip) Corrections for U2U relay measurements ZTE Corporation, Sanechips, Huawei, Hisilicon, OPPO, CATT, Apple CR Rel-18 38.331 18.3.0 5175 - F NR\_SL\_relay\_enh-Core

### 7.5.4 User plane corrections (including SRAP)

Impact to 38.351, 38.321, 38.322, and 38.323.

[R2-2410586](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2410586.zip) RLC correction for multi-path relay with N3C Huawei, HiSilicon CR Rel-18 38.322 18.1.0 0063 - F NR\_SL\_relay\_enh-Core

## 7.6 NR Sidelink evolution

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

Time budget: 0 TU

Tdoc Limitation: 1 tdocs

1 additional tdoc on top of limited can be allowed for co-sourced contribution with 3 or more companies

### 7.6.1 Organizational

Including incoming LSs and rapporteur inputs.

### 7.6.2 In-principle agreed CRs

[R2-2409549](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409549.zip) Co-configuration of random/partial-sensing resource selection and Co-Ex OPPO CR Rel-18 38.331 18.3.0 4976 1 F NR\_SL\_enh2 [R2-2407972](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2407972.zip)

[R2-2409729](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409729.zip) TP for SL enhancemen in TS 38.321 NEC Corporation discussion NR\_SL\_enh2-Core

[R2-2410721](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410721.zip) Correction on Co-channel coexistence for LTE sidelink and NR sidelink LG Electronics Inc. CR Rel-18 38.321 18.3.0 2013 - F NR\_SL\_enh2 Withdrawn

[R2-2410723](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410723.zip) Correction on MCSt LG Electronics Inc. CR Rel-18 38.321 18.3.0 1943 2 F NR\_SL\_enh2 [R2-2409371](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409371.zip)

[R2-2410724](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410724.zip) MAC correction for resource selection of MCSt LG CR Rel-18 38.321 18.3.0 1973 1 F NR\_SL\_enh2 [R2-2409351](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409351.zip)

[R2-2410727](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410727.zip) Correction on Co-channel coexistence for LTE sidelink and NR sidelink LG Electronics Inc. CR Rel-18 38.321 18.3.0 1942 1 F NR\_SL\_enh2 [R2-2408637](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408637.zip)

### 7.6.3 Others

Including corrections to all specifications.Minor and editorial issues should be coordinated with the CR rapporteur.

[R2-2410001](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2410001.zip) Correction on carrier selection for SL evolution Huawei, HiSilicon, LG Electronics Inc., Apple, Nokia CR Rel-18 38.321 18.3.0 1936 1 F NR\_SL\_enh2-Core [R2-2408363](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408363.zip)

[R2-2410072](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410072.zip) Correction on carrier selection for IUC ZTE Corporation, Sanechips, Ericsson, Apple, Nokia CR Rel-18 38.321 18.3.0 1984 - F NR\_SL\_enh2-Core

[R2-2410073](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410073.zip) Correction on MCSt ZTE Corporation, Sanechips CR Rel-18 38.321 18.3.0 1985 - F NR\_SL\_enh2-Core

[R2-2410147](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410147.zip) discussion on remaining issue of resource selection for MCSt Ericsson discussion Rel-18 NR\_SL\_enh2

[R2-2410177](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410177.zip) Correction on SL IUC timer for SL CA ASUSTeK CR Rel-18 38.321 18.3.0 1993 - F NR\_SL\_enh2

[R2-2410583](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410583.zip) RRC correction on SidelinkUEInformationNR for NR sidelink transmission Philips International B.V., NEC CR Rel-18 38.331 18.3.0 5173 - F NR\_SL\_enh2-Core

[R2-2410612](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410612.zip) Stage 2 Corrections on MCSt InterDigital Inc, Apple CR Rel-18 38.300 18.3.0 0939 - F NR\_SL\_enh2

[R2-2410714](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410714.zip) MAC corrections on Release-18 Sidelink evolution LG Electronics Inc. CR Rel-18 38.321 18.3.0 2012 - F NR\_SL\_enh2

## 7.7 TEI18

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

Time budget: 1 TU

Tdoc limitation: 1

### 7.7.0 In-principle agreed CRs

[R2-2410536](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2410536.zip) Correction for cell barring for 2Rx XR UE [2Rx\_XR\_Device] Huawei, HiSilicon, Xiaomi, Ericsson, LGE, ZTE Corporation CR Rel-18 38.331 18.3.0 4851 2 F TEI18 [R2-2408733](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408733.zip)

=> Revised in [R2-2411075](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411075.zip)

[R2-2411075](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411075.zip) Correction for cell barring for 2Rx XR UE [2Rx\_XR\_Device] Huawei, HiSilicon, Xiaomi, Ericsson, LGE, ZTE Corporation CR Rel-18 38.331 18.3.0 4851 3 F TEI18

* The CR is agreed

[R2-2410833](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410833.zip) Introduction of new capability for intra-band EN-DC channel spacing [Intra-Band\_EN-DC\_Channelspacing] Huawei, HiSilicon CR Rel-18 38.331 18.3.0 5013 1 B TEI18 [R2-2408474](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408474.zip)

* The CR is agreed

[R2-2410834](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410834.zip) Introduction of new capability for intra-band EN-DC channel spacing [Intra-Band\_EN-DC\_Channelspacing] Huawei, HiSilicon CR Rel-18 38.306 18.3.0 1174 2 B TEI18 [R2-2409399](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409399.zip)

* The CR is agreed

### 7.7.1 TEI proposals by Other Groups

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

### 7.7.2 TEI proposals by RAN2

Items initiated in RAN2 for NR and LTE.

Contributions should focus only critical issues/corrections for already agreed TEI-18 topics.

**CG-SDT**

[R2-2410535](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410535.zip) Correction for Paging monitoring during SDT [CG-SDT-Enh] Huawei, HiSilicon, LG Electronics Inc., ZTE Corporation, Sanechips, MediaTek Inc. CR Rel-18 38.331 18.3.0 4901 2 F TEI18 [R2-2408732](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408732.zip)

* Update with architecture option
* The CR is agreed in R2-2411108 with change above

**Cell barring**

[R2-2409747](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409747.zip) Clarifications on cell barring behaviour Qualcomm Incorporated, Huawei, ZTE, Ericsson, LG Electronics Inc., Nokia, Samsung, Vivo CR Rel-18 38.331 18.3.0 5112 - F TEI18

* Highlight network side functional change related to 2RX
* Missing TEI identifiers in title
* Add TEI18 in WI code
* The CR is agreed in R2-2411109 with changes above

[R2-2409748](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409748.zip) Clarifications on cell barring behaviour Qualcomm Incorporated, Huawei, ZTE, Ericsson, LG Electronics Inc., Nokia, Samsung, Vivo CR Rel-18 38.304 18.3.0 0421 - F TEI18

* Highlight network side functional change related to 2RX
* Missing TEI identifiers
* Add TEI18 in WI code
* The CR is agreed in R2-2411110 with changes above

[R2-2410537](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410537.zip) Corrections on the conditional presence of barring exemption for emergency call [EM\_Call\_Exemption] Huawei, HiSilicon CR Rel-18 38.331 18.3.0 5166 - F TEI18

- Ericsson has been supporting this for a long time, but brings up a new issue for the case of home PLMN.

- ZTE doesn’t think this change is needed, we are overspecifying and the network can handle it.

- Huawei didn’t want to go into all the PLMN cases and just specified a general thing.

- Qualcomm also doesn’t agree to CR expect adding 2RX in front of XR.

- Samsung, Apple agrees with ZTE and Qualcomm and we can leave it to network implementation.

- Apple indicates that this parameter was added with something else in mind so overloading may bring backward compatible issues. Huawei thinks that for this feature to be implementable there should be reassurance that the network behavior is clearly defined, if network supports this new field should be broadcast.

- Companies think it quite obvious and no further CRs are expected.

* Add the 2RX infront of XR in the em barring field in R2-2411109
* The CR is not pursued

**2XR**

[R2-2410206](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410206.zip) Correction on the 2RxXR and Aerial UEs [2Rx\_XR\_Device] Ericsson, Samsung, Qualcomm Inc. CR Rel-18 38.331 18.3.0 5148 - F NR\_UAV-Core, NR\_XR\_enh-Core

- Qualcomm wonders if this should be combined with UAV CR. Samsung wonders if it makes sense to merge as the other one doesn’t impact UAV. Huawei agrees with Qualcomm.

- Huawei agrees with CR.

- ZTE explains that we have previously covered different changes for different WI by clarifying in cover page and also using different tracked changes.

* The CR is merged in R2-2411202

**Measurement report**

[R2-2410463](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410463.zip) Correction on reporting the best cell change [meas\_report\_enh] Ericsson CR Rel-18 38.331 18.3.0 5163 - F TEI18

- Huawei understands that according to sorting order it means from highest to lowest.

- Samsung thinks that we can just change from first to best for the first bullet point.

* The CR is not pursued

[R2-2410192](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410192.zip) Enhancement to measurement report OPPO CR Rel-18 38.331 18.3.0 5147 - F TEI18

* Missing TEI identifier

- Samsung thinks that if the network is smart it will set it properly only if report on leave is set to true.

* The CR is not pursued

## 7.8 R18 Other

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

Impacts from Other RAN WGs and TSGs that has no separate TU budget in RAN2. LS ins for Rel-18 specific WIs/SIs that has no RAN WI.

Clarification CRs should be discussed with spec rapporteurs of the topic prior to submission.

Time budget: 1 TU

Tdoc Limitation: 2

### 7.8.0 In-principle agreed CRs

[R2-2410041](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410041.zip) Correction on SPR content determination Google CR Rel-18 38.331 18.3.0 5135 - F NR\_ENDC\_SON\_MDT\_enh2-Core

* The CR is agreed

[R2-2410487](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410487.zip) Clarification on SCS of Timing Advance Report MAC CE for ATG Samsung, Qualcomm Inc., Huawei, HiSilicon, CMCC, CATT CR Rel-18 38.321 18.3.0 2004 - F NR\_ATG-Core Withdrawn

[R2-2410664](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410664.zip) Supporting R17 early implementation of R18 measurement gap enhancements Nokia, Nokia Shanghai Bell, Ericsson, ZTE Corporation, BT Plc., Telecom Italia, CATT, Samsung CR Rel-18 36.331 18.3.1 5064 1 F NR\_MG\_enh2-Core [R2-2408976](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408976.zip)

* The CR is agreed

[R2-2410851](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410851.zip) Correction on UE capability for multi-carrier enhancements NTT DOCOMO, INC., Huawei, HiSilicon CR Rel-18 38.306 18.3.0 1199 1 F NR\_MC\_enh-Core [R2-2409403](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409403.zip)

=> Revised in [R2-2410897](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410897.zip)

[R2-2410897](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410897.zip) Correction on UE capability for multi-carrier enhancements NTT DOCOMO, INC., Huawei, HiSilicon CR Rel-18 38.306 18.3.0 1199 2 F NR\_MC\_enh-Core

* The CR is agreed

[R2-2410852](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410852.zip) Correction on UE capability for multi-carrier enhancements NTT DOCOMO, INC., Huawei, HiSilicon CR Rel-18 38.331 18.3.0 5095 1 F NR\_MC\_enh-Core [R2-2409404](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409404.zip)

=> Revised in [R2-2410898](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410898.zip)

[R2-2410898](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410898.zip) Correction on UE capability for multi-carrier enhancements NTT DOCOMO, INC., Huawei, HiSilicon CR Rel-18 38.331 18.3.0 5095 2 F NR\_MC\_enh-Core

=> Revised in [R2-2411074](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411074.zip)

[R2-2411074](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411074.zip) Correction on UE capability for multi-carrier enhancements NTT DOCOMO, INC., Huawei, HiSilicon CR Rel-18 38.331 18.3.0 5095 3 F NR\_MC\_enh-Core

* The CR is agreed

[R2-2410872](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410872.zip) Clarification on SCS for Timing Advance Report MAC CE for ATG Samsung, Qualcomm Inc., Huawei, HiSilicon, CMCC, CATT CR Rel-18 38.321 18.3.0 1954 1 F NR\_ATG-Core [R2-2408807](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408807.zip)

* Update with architecture option
* The CR is agreed in R2-2411111 with changes above

### 7.8.1 RAN4 led items

Including outcome of [POST127bis][011][less5MHz] 331 CR (ZTE)

Including incoming LS from RAN4 R4-2417119. Input can be provided and will count towards tdoc limit.

**Less than 5MHz**

[R2-2410768](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410768.zip) Report of [Post127bis][011][less5MHz] 331 CR (ZTE) ZTE Corporation discussion Rel-18 NR\_FR1\_lessthan\_5MHz\_BW-Core

Proposal 2: On the per band capabilities, considering the different mandatory types and the spec complexity, the options 2 would be taken as the baseline for the potential CR (Annex 1).

 Option 2: Do not indicate the 3M in the channelBWs-DL/UL but keep the support3MHz-ChannelBW-Asymmetric-r18/ support3MHz-ChannelBW-Symmetric-r18;

Proposal 3: Extend supportedMinBandwidthDL/UL-r17 to include 3MHz

[R2-2409523](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409523.zip) LS on Rel-19 NR channel BW less than 5MHz for FR1 (R4-2417119; contact: Intel) RAN4 LS in Rel-19 NR\_FR1\_lessthan\_5MHz\_BW\_Ph2 To:RAN2

* Noted

[R2-2409654](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409654.zip) Discussion on UE capability on less than 5MHz (LS R4-2417119) CATT discussion Rel-19 NR\_FR1\_lessthan\_5MHz\_BW\_Ph2

* Noted

[R2-2410260](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410260.zip) Less than 5Mhz and carrier configuration Nokia discussion Rel-18 NR\_FR1\_lessthan\_5MHz\_BW

* Wait for RAN4 response

[R2-2410769](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410769.zip) Correction on the Less than 5M Bandwidth ZTE Corporation, vivo CR Rel-18 38.331 18.3.0 5187 - F NR\_FR1\_lessthan\_5MHz\_BW-Core

* The CR is updated and reviewed over email.

ZTE Extend the supportedBandwidthDL/UL to include 3MHz.

CATT To declare the support of less than 5 MHz bandwidth operation in the CA/DC band combination, make the following updates for UE capability signaling:

Add support3MHz-ChannelBW-Symmetric-r18 and support12PRB-CORESET0-r18 in FeatureSetDownlinkPerCC.

Add support3MHz-ChannelBW-Asymmetric-r18 in FeatureSetUplinkPerCC.

- Qualcomm agrees with CATTs proposals, as it is cleaner and easier. ZTE wants to clarify that for the other Asymetric case we use the legacy mechanism.

- Ericsson thinks that this now messy as we have legacy signaling and supports ZTE. Nokia, Huawei, Samsung has the same view as Ericsson and ZTE and doesn’t see the reason to introduce new mechanism.

- Tmobile has two other channel BWs (6 and 7MHz BWs proposed) in RAN4 so wants to make sure we are consistent with how we add channel BWs. Is the approach forward compatible? Qualcomm thinks it is forward compatible for less than 5, but not sure about between 5 and 10. Samsung thinks this is also dependent on RAN4, if requirements are similar than we can use same framework. ZTE thinks that in current CR we now we only have 1 spare bits, so we may want to consider having 3 spare bits if we want to make it forward compatible. .

**Agreements**

1. Extend the supportedBandwidthDL/UL to include 3MHz.
2. On the per band capabilities, do not indicate the 3M in the channelBWs-DL/UL but keep the support3MHz-ChannelBW-Asymmetric-r18/ support3MHz-ChannelBW-Symmetric-r18;
3. Extend supportedMinBandwidthDL/UL-r17 to include 3MHz
4. Remove the single carrier restriction in the field description of *support5MHz-ChannelBW-20PRB-CORESET0-r18* and *support12PRB-CORESET0-GSCN-41637-r18*.

* [AT128][012][less5MHz] UE capabilities (ZTE)

Intended outcome: Capture agreements in CR, look at forward compatibility and agree to CR

Deadline: Thursday

R2-2411163 Correction on the Less than 5M Bandwidth ZTE Corporation, vivo CR Rel-18 38.331 18.3.0 5187 1 F NR\_FR1\_lessthan\_5MHz\_BW-Core

* The CR is agreed

R2-2411164 Correction on the Less than 5M Bandwidth ZTE Corporation CR Rel-18 38.306 18.3.0 1220 - F NR\_FR1\_lessthan\_5MHz\_BW-Core

* The CR is agreed

**NR\_BWP\_wor-Core**

[R2-2409778](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409778.zip) Correction on UE capability on ncd-SSB-BWP-Wor-r18 vivo, Qualcomm Incorporated, Guangdong Genius CR Rel-18 38.306 18.3.0 1204 - F NR\_BWP\_wor-Core

R2-2411153 Correction on UE capability on ncd-SSB-BWP-Wor-r18 vivo, Qualcomm Incorporated, Guangdong Genius CR Rel-18 38.306 18.3.0 1204 1 F NR\_BWP\_wor-Core

* Agree to address the issue but need to discuss further how to solve it in the best way
* The CR is postponed
* [POST128][023][NR Other] NR\_BWP (Vivo)

Intended outcome: Agree how to capture the intention of the CR

Deadline: long email

[R2-2410839](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410839.zip) Correction on BWP operation without bandwidth restriction Huawei, HiSilicon, ZTE Corporation, Ericsson CR Rel-18 38.306 18.3.0 1177 1 F NR\_BWP\_wor [R2-2408480](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408480.zip)

* The CR is agreed

**ATG**

[R2-2410302](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410302.zip) Clarification of offsetThresholdTA-r18 for NR ATG Huawei, HiSilicon, CATT, Nokia, Nokia Shanghai Bell, LG Electronics Inc. CR Rel-18 38.331 18.3.0 4882 2 F NR\_ATG-Core [R2-2408444](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408444.zip)

[R2-2410486](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410486.zip) Correction on SCS applied for TAR offset threshold for ATG Samsung, ZTE, Qualcomm Inc., Ericsson CR Rel-18 38.331 18.3.0 5164 - F NR\_ATG-Core

[R2-2410803](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410803.zip) Alternative solution for clarification on the unit of offsetThresholdTA-r18 for ATG ZTE Corporation CR Rel-18 38.331 18.3.0 5189 - F NR\_ATG-Core

- Huawei is not fine with this as it changes network behaviour. Samsung prefers this one over Huawei’s CR.

- Huawei and Qualcomm would like to send an LS to ask a question, that we are deciding between active and initial BWP and what was the intention from RAN4. ZTE and Samsung don’t think an LS helps much.

* [AT128][013][ATG] offline (ZTE)

Intended outcome: WF

Deadline: Thursday

[R2-2411180](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410803.zip) Clarification on the unit of offsetThresholdTA-r18 for ATG ZTE Corporation CR Rel-18 38.331 18.3.0 5189 1 F NR\_ATG-Core

- Qualcomm sees a risk of mismatch if network doesn’t include active bandwidth part in the same message.

* The CR is agreed

[R2-2410148](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410148.zip) Correction on HST FR2 Ericsson CR Rel-18 38.306 18.3.0 1210 - F NR\_HST\_FR2\_enh

- Huawei thinks the spec is clear if you look at the definition of PC6 this is already clear. Nokia agrees

* The CR is not pursued

**NR\_MG\_enh2**

[R2-2410665](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410665.zip) Supporting R17 early implementation of R18 measurement gap enhancements Nokia, Nokia Shanghai Bell, Ericsson, ZTE Corporation, BT Plc., Telecom Italia, CATT, Samsung CR Rel-18 38.331 18.3.0 5065 1 F NR\_MG\_enh2-Core [R2-2408977](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408977.zip)

* The CR is agreed

[R2-2410749](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410749.zip) Simultaneous reception of EUTRAN data and NR SSB with different numerology Huawei, HiSilicon discussion Rel-18 NR\_MG\_enh2

* Verify that the terminology use is consistent with other sections
* The CRs will be submitted and approved by email discussion
* Noted
* [AT128][024][NR others] NR\_MG\_enh (Huawei)

Intended outcome: agree to CRs by email

Deadline: Friday

R2-2411210 Capability on simultaneous reception of EUTRAN data and NR SSB with different numerology Huawei, HiSilicon CR Rel-18 36.331 18.3.1 5082 - F NR\_MG\_enh2-Core

R2-2411211 Capability on simultaneous reception of EUTRAN data and NR SSB with different numerology Huawei, HiSilicon CR Rel-18 36.306 18.3.0 1903 - F NR\_MG\_enh2-Core

### 7.8.2 RAN1 led items

[R2-2410845](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2410845.zip) Correction on applicable BWP for multi-cell scheduling NTT DOCOMO, INC., Nokia, Samsung, Huawei CR Rel-18 38.331 18.3.0 5077 1 F NR\_MC\_enh-Core [R2-2409100](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409100.zip)

* The CR is agreed

[R2-2410848](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410848.zip) Discussion on applicable BWP for Multi-cell scheduling NTT DOCOMO, INC., Nokia, Samsung discussion Rel-18

* RAN2 understands the entries for non-scheduled cells in a row of TCI-DCI-1-3 are interpreted based on the respective current active BWPs on non-scheduled cell.

### 7.8.3 Other

RAN3, SA2, SA3, CT1 led items and others, e.g. eNPN, Slicing, NTN self evaluation issues, etc.

[R2-2410496](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410496.zip) Introduction of LCS User Plane Ericsson, Intel Corporation, Huawei, HiSilicon, ZTE Corporation, vivo, Qualcomm Incorporated, Samsung, CATT CR Rel-18 38.305 18.3.0 0159 5 F TEI18 [R2-2403538](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2403538.zip)

=> Revised in [R2-2411066](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411066.zip)

[R2-2411066](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411066.zip) Introduction of LCS User Plane Ericsson, Intel Corporation, Huawei, HiSilicon, ZTE Corporation, vivo, Qualcomm Incorporated, Samsung, CATT CR Rel-18 38.305 18.3.0 0159 6 F TEI18

# 8 Rel-19

## 8.0 General

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

## 8.1 AI/ML for NR air interface

(NR\_AIML\_air-Core; leading WG: RAN1; REL-19; WID: [RP-242399](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_105/Docs/RP-242399.zip))

Time budget: 2.5 TU

Tdoc Limitation: 3 tdocs

### 8.1.1 Organizational

LS, Rapporteur input, including workplan, etc.

[R2-2409527](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409527.zip) Reply LS on AIML data collection (S2-2411191; contact: InterDigital) SA2 LS in Rel-19 NR\_AIML\_air To:RAN2, RAN3 Cc:SA, RAN, SA3, SA5

* Noted

[R2-2409531](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409531.zip) LS on AI/ML Model transfer/delivery to UE (S5-246292; contact: NEC) SA5 LS in Rel-19 FS\_AIML\_MGT\_Ph2 To:RAN2, RAN1 Cc:RAN, SA, RAN3

* Noted

[R2-2409532](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409532.zip) Reply LS on AIML Data Collection (S5-246299; contact Nokia) SA5 LS in Rel-18 FS\_AIML\_MGT\_Ph2 To:RAN2 Cc:RAN, RAN1, RAN3, SA, SA2, SA3

* Noted

R2-2411077 Reply LS on AIML data collection (S3-245138; contact: Samsung) SA3 LS in Rel-19 NR\_AIML\_air To:RAN Cc:RAN2, SA, SA1, SA2, SA5

R2-2411177 Reply LS on AIML data collection (R3-247801; contact: ZTE) RAN3 LS in Rel-19 NR\_AIML\_air, NR\_AIML\_air-Core To:SA2 Cc:RAN2, SA, RAN, SA3, SA5

### 8.1.2 Functionality based LCM

Contributions should focus on general understanding of LCM procedure (except for data collection and model transfer/delivery), what is required to enable the UE to perform different steps of the LCM procedure, what is the granularity of functionality, dependencies with RAN1 and what is needed from RAN1 to progress in RAN2

Contributions should be submitted in 8.1.2.x and aspects related to data collections should be submitted in data collection section

Two-sided model discussions are out of scope of this AI

Model identification is out of scope of this AI and will not be discussed in RAN2#128 given further RAN1 progress is required.

#### 8.1.2.1 LCM for NW-sided model for Beam Management use case

LCM related to NW-sided model for beam management use case only

No contributions expected for this meeting, waiting for further RAN1 progress

#### 8.1.2.2 LCM for UE-sided model for Beam Management use case

Including functionality identification, additional conditions and further reporting of applicable functionalities. Contributions should focus on issues not dependent on RAN1 (i.e. on questions we sent to RAN1) and issues we haven’t yet discussed (e.g. necessary signalling/protocols to configure the UE for training, etc)

**Functionality Applicability**

Applicability reporting triggers

[R2-2409864](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409864.zip) Discussion on LCM for UE-sided model for BM Xiaomi discussion

*Proposal 5: UE shall trigger the report upon candidate functionality applicability change, i.e. applicable to non-applicable or non-applicable to applicable. The candidate functionality is configured by NW.*

* Noted

[R2-2410578](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410578.zip) LCM for UE-side models for beam management Ericsson discussion

*Proposal 14: When a change in applicability of an AI functionality occurs, the UE report includes both active and inactive functionalities, according to RAN1 definition of “active”.*

* Noted

Discussion

- Qualcomm would like to refer to CSI report config and the UE should report CSI report config.

- Apple thinks it should be a “may” and not a shall as this is a UAI. Nokia thinks for this UAI it should be a shall as the network needs to know. Huawei has been reading UAI carefully and there are cases it is a may and there are cases of shall. Qualcomm thinks that going from non-applicable to applicable is not essential so it can be a may, but the other way around it can be a shall.

- Apple thinks RAN1 is still discussingthe different option, either CSI report config or parameters. Vivo agrees that we wait for RAN1.

- LG thinks we need to wait further RAN1 input and not introduce new terminology and agree with Ericssons proposal.

- CATT asks what is active/inactive definition and we should use applicable/non-applicable.

- Samsung thinks that RAN1 doesn’t have this definition of functionality configured by the network, so we should just capture functionality configured by the network.

- Samsung thinks that we should have the same format for UAI whether it is after step 3 or step 5.

* When a functionality configured by the network to be reported via UAI, becomes from non-applicable to applicable, the UE can reports it to the network.
* FFS detailed design

Handling of nonapplicable functionalities

[R2-2410040](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410040.zip) Discussion on LCM for UE-sided model for BM Google discussion Rel-19 NR\_AIML\_air-Core

Proposal 10: The UE autonomously deactivates the activated functionality when it becomes non-applicable and reports the non-applicability of the activated functionality to NW.

* Noted

[R2-2409736](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409736.zip) LCM for UE-sided model for BM LG Electronics discussion Rel-19 NR\_AIML\_air-Core

Proposal 3. UE is allowed to report applicable functionality when active functionality becomes non-applicable. NW is responsible for deactivating activated functionality when it recognizes that it is non-applicable

* Noted

Discussion

- Nokia agrees with LG as it is not clear what the network would do if the UE would just stop. There would be sufficient time for the network to react. Ericsson agrees

- Samsung thinks that UAI shouldn’t impact activation/deactivation status.

- Huawei thikns that we should follow the CSI reporting mechanism, no autonomous behavior.

- Lenovo thinks that it is wasteful for the UE to continue and report bad results.

- ZTE Thinks it is not acceptable for the UE to stop the model as the network doesn’t know how to schedule the UE.

- Qualcomm would prefer the autonomous but if it is not then the network should deactivate.

- Apple thinks that there are cases where it won’t work at all (i.e. the UE is still downloading the model). Qualcomm indicates that if it doesn’t have a model it shouldn’t have reported as applicable at all.

- Vivo asks if this is applicable to monitoring.

- Intergitital thinks that it is important that the UE shall send the report. Nokia agrees and the UE should it ahead of time. Ericsson agrees and it is important for the network to get it. Qualcomm doesn’t want to make it a shall, the UE will do it anyways as it impacts performance.

* When a functionality becomes non-applicable the UE doesn’t autonomously deactivate. NW is expected to deactivate active functionality when it receives report from UE that it is non-applicable.

[R2-2410276](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410276.zip) LCM for UE sided model in beam management Lenovo discussion Rel-19

*Proposal 7: When receiving an AI functionality activation command from gNB, if the concerned AI functionality is currently non-applicable, UE will not activate the AI functionality.*

- Huawei thinks this is a very rare change.

Implicit vs. explicity signaling of non-applicability

[R2-2409943](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409943.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 10: No need to introduce explicit non-applicable functionality reporting, i.e. rely on NW to identify the functionality which becomes non-applicable by comparing UE’s latest reporting with its last reporting.

* Noted

[R2-2410550](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410550.zip) LCM for UE-sided model for Beam Management use case InterDigital discussion Rel-19 NR\_AIML\_air-Core

Proposal 4: UE can explicitly report which AI/ML functionality(ies) are “non-applicable”.

Proposal 6: UE indicates the reason an AI/ML functionality is non-applicable.

* Noted

[R2-2410604](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410604.zip) Considerations on LCM for UE-sided model in Beam Management use case Kyocera discussion

Proposal 5: RAN2 should agree that if non-applicable reporting includes supplementary information, explicit reporting can be used; otherwise, implicit reporting can be used.

* Noted

Discussions on implicit vs. explicit

- Interdigital thinks that we can achieve a unified framework with explicit.

- Kyocera thinks that this should be stage 3 discussion and explicit.

- Xiaomi supports interdigital proposal and it should report the report the reason so the network knows.

- Vivo doesn’t thinks it is necessary as the network becomes aware that the network has changes.

- CATT, LG share the apple view, implicit and only report applicable. The network can activate the applicable functionality.

- Oppo thinks what is important is how the network will use the information and this will depend on RAN1 LS.

- Ericsson thinks it is important to report explicitly non-applicable functionalities and it should know the reason. ZTE would like to know how the network will use this information.

- Nokia thinks that we should report both and we can revisit if later we have a problem with size.

- Samsung thinks that whats important is to know what is applicable and non-applicable, how it is signalled is stage 3. For inference we don’t see the need for the reason but for training we can discuss.

- Huawei thinks that number of applicable of functionalities is not very large so it is not a big issue with overhead. Reason don’t see a motivation yet.

- CMCC doesn’t see a need to report explicit non-applicable functionalities.

- Interdigital thinks that it is very important that the network knows which are non-applicable so it can deactivate.

- Qualcomm thinks we can discuss explicit, but we don’t need to know the reason, as they promise they will deactivate it. Ericsson thinks it can be used for training.

- Docomo supports explicit indication. The reason is valid for network, if it knows the reason it can send a new configuration.

- Lenovo thinks that this depends also on RAN1, if it is parameters then the meaning will be a bit different.

- Ericsson thinks explicit is very useful as this provides a clear indication on the functionalities that changed. Interdigital thinks that upon change of functionality we can explicitly indicate which functionality change and the new state.

- ZTE thinks that the explicit indication is only useful if we indicate the reason.

* FFS whether the UE reports explicitly “non-applicable” functionality when there is a change of applicability.

Content of applicability reporting message

[R2-2410142](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410142.zip) Discussion on LCM for UE-sided model for Beam Management Spreadtrum, UNISOC discussion Rel-19

Proposal 1: RAN2 waits for RAN1 conclusion on applicability reporting content.

**Functionality Management during mobility**

Suppport for LCM during mobility

[R2-2410592](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410592.zip) LCM for UE-side Beam Management Nokia Corporation discussion Rel-19 NR\_AIML\_air-Core

Proposal 12: RAN2 to discuss whether applicable configuration reporting to a target cell is supported during handover.

* Noted

Applicability reporting and inference configuration during mobility

[R2-2410578](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410578.zip) LCM for UE-side models for beam management Ericsson discussion

Proposal 6: Applicable functionality reporting at handover is supported with the same RRC procedure that will be specified within a cell, as a baseline, i.e. the NW-side additional conditions and/or the inference configuration related to the target gNB are transmitted by the target gNB as part of the HO command, and the UE in response transmits the applicability report (either in RRCReconfigurationComplete or in UAI) to the target gNB after completing the handover.

* Noted

[R2-2410626](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410626.zip) On LCM for UE-sided model for Beam Management ZTE Corporation discussion Rel-19 NR\_AIML\_air-Core

Proposal 8: RAN2 to consider following options regarding the applicability reporting and inference configuration during mobility:

 Option 1: Target cell requests applicability reporting during or after handover.

 Option 2: Source cell transfers source cell’s applicability information to target cell to assist inference configuration in target cell.

 Option 3: Source cell requests applicability reporting for target cell with target cell’s network-side additional conditions.

Proposal 9: If option 3 is adopted, RAN2 to decide whether UAI message can be used to convey applicability reporting for neighbor cell.

Discussion

- LG thinks that we can consider the option 1 as baseline, and there is no motivation for option 3 and no advantage compared to Ericsson’s proposal.

- Xiaomi also thinks that option 1 should be baseline, but option 2 is quite straight forward, and option 3 don’t support.

- Apple thinks that option 2 is already supported as we transfer the UAI to target cell and it would be useful for target cell to understand. Oppo also agrees that option 1 is the baseline.

- Qualcomm would like to ensure that none of this impacts the HO message and we don’t need to report this in RRCReconfiguration complete.

- Ericsson thinks that option 2 is not necessarily supported already. And there is no motivation to do option 2 or 3.

- Samsung explains that with the existing framework we can support mobility without needed anything new.

- Lenovo thinks there is motivation to have option 2.

- Mediatek thinks that for option 2 to work we need very strong assumptions and option 3 would incur huge overhead to exchange information

- Huawei thinks that with internode messaging we can do option 3 without RAN3.

- Ericsson explains that as long as UAI of source cell without new information is forwarded to target cell it is ok. Qualcomm thinks that certain information like associated ID are cell specific in addition to some other parameters and this brings complexity. Oppo thinks that the ID is maintained by OAM so the target cell can identify the associated ID. Qualcomm thinks that it is not possible to generalize the associated ID. ZTE thinks that this can be guaranteed by network implementation.

- Mediatek that further we need to consider also whether CSI configuration and inference configuration would be common.

- Huawei thinks that UAI to target cell comes for free and whether the network can understand the configuration and UAI information it’s up to the network.

* Applicable functionality reporting at handover is supported with the same RRC procedure that will be specified within a cell, as a baseline, i.e. the NW-side additional conditions and/or the inference configuration related to the target gNB are transmitted by the target gNB as part of the HO command, and the UE in response transmits the applicability report (either in RRCReconfigurationComplete or in UAI) to the target gNB after completing the handover.
* Source cell UAI (as is) can be sent from source cell to target cell using existing signaling. No further optimizations will be considered in RAN2 related to UAI.

**Data Collection and Training**

Details on data collection configuration

[R2-2409716](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409716.zip) Discussion on LCM for UE-sided model for BM use case CATT discussion Rel-19 NR\_AIML\_air-Core

*Proposal 9: For BM use case for UE-side model, data collection related configuration(s) (e.g., measurement resources configuration) and associated ID can be included in training data collection configuration.*

- Nokia wants to avoid having a limitation that a measurement is only associated with one ID. It can be associated to multiple ID. Apple thinks that it can provide multiple associated ID.

- Nokia doesn’t understand why the associated ID Is needed. Oppo explains that the UE needs to know for applicability purposes.

* Noted
* For BM use case for UE-side model, data collection related configuration(s) (e.g., measurement resources configuration) and associated ID(s) can be included in training data collection configuration.

Data collection configuration and initiation

[R2-2409870](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409870.zip) Further Discussion on LCM for UE-side Model MediaTek Inc. discussion

Proposal 3: RAN2 consider the following two alternatives for data collection configuration and initiation for UE-side model training:

• Alternative 1-UE request over the air interface: The UE sends a request for data collection configuration and initiation. The network then provides the data collection configuration and initiates the data collection procedure based on the UE's request.

• Alternative 2- Server request over network interfaces: The server for data collection for UE-side model training server sends the request and coordinates with the network on the data collection policy. The network then provides the data collection configuration and initiates the data collection procedure towards the UE based on the server's coordination.

* Noted

[R2-2409546](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409546.zip) LCM for UE-sided model for Beam Management use case OPPO discussion Rel-19 NR\_AIML\_air-Core

Proposal 7: Do not consider data collection initiation based on UE request in R19, i.e. it’s up to NW to decide when to initiate data collection for training purpose in R19.

* Noted

Discussion

- LG doesn’t understand why alternative 2 is needed. Samsung thinks it is reasonable to look at both options, but if we want to minimize alt. 1 is preferable and Alt. 2 would depend SA2 discussion.

- Lenovo thinks that alternative 1 is preferable as we are discussing UE sided model.

- Ericsson agrees with Mediatek, Samsung, Lenovo.

- Vivo thinks alternative 1 baseline but we shouldn’t exclude alternative 2.

- Qualcomm thinks that alternative 1 needs to be adapted as the OTT server is not aware of UE conditions like power etc.

- Tmobile thinks that this is dependent on architecture. Samsung and qualcomm explain that this is a UE.

* Noted
* For data collection configuration UE-side model training, the UE can send a request for data collection. FFS what the request contains. The network can provide the data collection configuration.

Network control of data collection

[R2-2410626](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410626.zip) On LCM for UE-sided model for Beam Management ZTE Corporation discussion Rel-19 NR\_AIML\_air-Core

Proposal 7: RAN 2 to consider following methods for network control of the initiation and configuration for data collection:

 The network can decide when to start/stop the data collection.

 The network can configure whether UE is allowed to initiate request for data collection.

 The network can decide whether to accept UE’s request for data collection.

- Samsung would like to ensure that there should be a way that the UE tell the network that it can’t do it even if it receives the configuration. Qualcomm thinks that the UE will ultimately chose if it can do the data collection based on available resources and power. There is no need for additional confirmation. Nokia thinks this is not acceptable that the UE ignores. Verizon thinks that it would be useful to get an indication from the UE when it can’t collect data based on received configuration.

* 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.
    - The network can decide whether to accept UE’s request for data collection.

**Agreements**

1. When a functionality configured by the network to be reported via UAI, becomes from non-applicable to applicable, the UE can reports it to the network. FFS detailed design
2. When a functionality becomes non-applicable the UE doesn’t autonomously deactivate. NW is expected to deactivate active functionality when it receives report from UE that it is non-applicable.
3. FFS whether the UE reports explicitly “non-applicable” functionality when there is a change of applicability. Verify this aligns with RAN1 configuration design
4. For BM use case for UE-side model, data collection related configuration(s) (e.g., measurement resources configuration) and associated ID(s) can be included in training data collection configuration.
5. For data collection configuration UE-side model training, the UE can send a request for data collection. FFS what the request contains.
6. The network can provide the data collection configuration (at any point in time), with or without UE request.
7. 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.
8. FFS whether an indication from UE to network is needed when UE can’t perform data collection based on received configuration

**Performance Monitoring**

[R2-2410492](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410492.zip) Discussion on LCM for UE-sided model for Beam Management use case Huawei, HiSilicon discussion Rel-19 NR\_AIML\_air-Core

Proposal 11: RAN2 waits for RAN1 detail progress related to performance monitoring for the UE-side AI/ML model for BM-Case1 and BM-Case2.

[R2-2409834](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409834.zip) Discussion on LCM for UE-sided Model for Beam Management Use Case Fujitsu discussion Rel-19 NR\_AIML\_air-Core

Proposal 1 RAN2 starts at least the following discussions while waiting for further RAN1 input.

 Mechanism to trigger the performance monitoring procedure.

 Potential signaling to complete the performance monitoring procedure.

Not treated

[R2-2409704](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409704.zip) Discussion on LCM for UE-sided model for Beam Management vivo discussion NR\_AIML\_air-Core

[R2-2409727](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409727.zip) Discussion on LCM for UE sided model NEC Corporation discussion NR\_AIML\_air-Core

[R2-2409831](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409831.zip) Discussion on LCM for UE-sided model for beam management Samsung discussion Rel-19 NR\_AIML\_air-Core

[R2-2409908](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409908.zip) On LCM for UE-sided Models for Beam Management Qualcomm Incorporated discussion Rel-19

[R2-2410101](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410101.zip) LCM for UE-sided model for BM China Telecom discussion Rel-19 NR\_AIML\_air-Core

[R2-2410342](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410342.zip) Discussion on LCM for UE-sided model for BM CMCC discussion Rel-19 NR\_AIML\_air-Core

[R2-2410450](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410450.zip) On LCM for UE-sided model for Beam Management Use Case SHARP Corporation discussion

[R2-2410554](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410554.zip) Discussion on UE-sided model for Beam Management Jio discussion Rel-19 NR\_AIML\_air-Core Late

[R2-2410581](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410581.zip) LCM for UE-side model (beam management) Futurewei Technologies discussion Rel-19

[R2-2410751](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410751.zip) Discussion on LCM for UE-sided model for beam management use case TCL discussion

#### 8.1.2.3 LCM for Positioning use case

Contributions should focus on LCM for UE-sided model, but can discuss NW-sided model and should focus on 1st priority positioning use cases. Aspects related to data collection should be covered in 8.1.3

**LCM procedure for AI/ML positioning**

Support for Proactive and Reactive applicability reporting

[R2-2409944](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409944.zip) Further discussion on LCM procedure of AI/ML based positioning Apple discussion Rel-19 NR\_AIML\_air-Core

Proposal 4: On applicable functionality reporting in step 4, support both reactive reporting (i.e. solicited information transfer as response to LPP RequestCapabilities) and proactive reporting (i.e. unsolicited information transfer).

[R2-2409824](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409824.zip) Discussion on LCM for POS use case Samsung discussion Rel-19 NR\_AIML\_air-Core

Proposal. 5: For POS Case 1, RAN2 confirm that the existing unsolicited UE capability report mechanism in LPP can support UE to report the applicable functionality in both “proactive” and “reactive” manner without further enhancement.

- Proactive case: When the applicability change due to UE’s internal condition, UE can send an unsolicited LPP ProvideCapabilities message to LMF .

- Reactive case: If the applicability changes based on the configuration in LPP ProvideAssistanceData message in step 3, UE can send an unsolicited LPP ProvideCapabilities message to LMF ~~upon reception of ProvidAssistanceData message.~~

Discussion

- Qualcomm and Vivo is not sure why we need the proposal from apple as this is already the case.

- Qualcomm thinks Samsung’s proposal is ok but we shouldn’t cause dependencies.

- Nokia as what is configuration provideassistancedata

**Agreements**

1 For POS Case 1, RAN2 confirm that the existing unsolicited UE capability report mechanism in LPP can support UE to report the applicable functionality in both “proactive” and “reactive” as a baseline.

- Proactive case: When the applicability change, UE can send an unsolicited LPP ProvideCapabilities message to LMF .

- Reactive case: If the applicability changes based on the configuration in LPP ProvideAssistanceData message in step 3, UE can send an unsolicited LPP ProvideCapabilities message to LMF. Configuration details are FFS

NW control of unsolicited LPP provide capability message (for applicability reporting)

[R2-2410475](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410475.zip) LCM for positioning use case Qualcomm Incorporated discussion

Proposal 3: There is no need to explicitly control the UE sending unsolicited LPP provide capabilities (e.g., at Step 4 in Figure 3). This NW control is implicit in a LPP positioning session.

* Noted

[R2-2410553](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410553.zip) LCM for positioning use case Nokia discussion Rel-19 NR\_AIML\_air-Core

Proposal 2: RAN2 to agree LMF shall be able to control whether UE can send unsolicited LPP Provide Capabilities for reporting of applicable functionalities. A flag in Step 1 LPP Request Capabilities controls whether UE is allowed to send unsolicited LPP Provide Capabilities for reporting of applicable functionalities. Signalling details FFS.

* Noted

Discussion

- Apple, Xiaomi, Huawei, CATT supports Qualcomm and this is similar to legacy positions.

- Ericsson thinks we need to understand the reason for this applicability reporting. The LMF needs to understand so it can decided whether it uses LMF positioning. IF the UE reports it is just overhead. We also don’t know what the applicability reporting is and the signalling overhead. CeWit agrees with Nokia and Ericsson and there should be some control for applicability report.

- Interdigital thinks that we can put the control on proactive reporting but no control when it can use unsolicited reporting if it is reactive reporting. Nokia clarifies that the intention was to only control it for applicable reporting not for all UEs.

- Vivo doesn’t think explicit is needed.

- Qualcomm asks what is the use case to not allow the UE to send. Nokia thinks that the network can chose to only to the reactive case and it is an implementation. Interdigital agrees with Qualcomm that doesn’t make sense to disable the unsolicited.

- Ericsson thinks that the network could have decided to not go ahead with AI ML. But once it has decided to do AI ML then it should configure it.

- Apple thinks we should follow legacy way.

Details of inference measurement reporting

[R2-2409717](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409717.zip) Consideration on LCM for Positioning use case CATT discussion Rel-19 NR\_AIML\_air-Core

*Proposal 5: For PoS case 1, RAN2 to discuss whether an explicit indicator or a new field of predicted UE location is needed to assist the LMF to identify the predicted/measured result.*

- Nokia, Ericsson, thinks there is no need to differentiate.

- Samsung supports the proposal. In legacy it can indicate which positioning method is used and we should have something similar.

- Vivo thinks we should postpone the discussion.

* Noted

[R2-2410277](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410277.zip) LCM for AIML based positioning with UE-sided model Lenovo discussion Rel-19

*Proposal 6 If the AIML based positioning method becomes non-applicable when LMF requests UE location estimation, RAN2 discusses the following two options:*

*a. Option 1: UE cannot perform the AIML based positioning, and reply an LPP Error message to LMF indicating the AIML functionality is currently not applicable, or*

*b. Option 2: UE can be configured with a default non-AIML based positioning method, and UE will fallback to the default non-AIML based positioning and still provide the estimated UE location.*

- Samsung thinks that LPP Error message should be LPP Providelocationinformation with error cause.

- Qualcomm thinks that this is discussing fallback and this is what we do today and we can do the same here. Option 1 is the baseline. Nokia agrees and it depends on AI positioning methods.

- Ericsson thinks that both Option 1 and 2 can co-exist. Interdigital agrees.

- Huawei asks if option 2 the UE is allowed to fall back.

- ZTE supports both option and it should be under network control.

* As a baseline, If the AIML based positioning method becomes non-applicable when LMF requests UE location estimation, UE cannot perform the AIML based positioning, and reply with LPP Providelocationinformation message with error cause. FFS if other fallback options are considered
* Noted

**Functionality management**

Functionality (De)activation

[R2-2409705](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409705.zip) Discussion on RAN2 issues of AI/ML enhanced positioning vivo discussion NR\_AIML\_air-Core

Proposal 5. Functionality management (e.g., activation/deactivation) is realized implicitly by whether LMF requesting UE for location information with the positioning method related to the AI functionality, i.e., UE considers the functionality is activated when the corresponding method is requested for UE to provide location estimate.

Who (de)activates positioning functionality?

[R2-2409570](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409570.zip) Discussion on LCM for positioning use case ZTE Corporation discussion Rel-19 NR\_AIML\_air-Core

Proposal 1: For AI/ML positioning use case 1 and 2a, RAN2 to consider the following approaches for functionality-LCM:

 LMF activates/deactivates the functionality

 LMF allows UE to activate/deactivate the functionality

**Data Collection and Training**

Consistency between training and inference

[R2-2409835](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409835.zip) Discussion on LCM for Positioning Use Case Fujitsu discussion Rel-19 NR\_AIML\_air-Core

Proposal 3 For the NW-side models of positioning use cases, no extra specification effort needed for NW-side additional condition used at least for consistency between model training and inference.

Ground truth

[R2-2410673](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410673.zip) Discussion on LCM for positioning CMCC discussion Rel-19 NR\_AIML\_air-Core

Proposal 2: At least ground truth label and its related data (e.g. time stamp) should be provided by LMF via signaling ProvideAssistanceData.

Request for DL PRS for training data collection

[R2-2410277](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410277.zip) LCM for AIML based positioning with UE-sided model Lenovo discussion Rel-19

Proposal 1 The legacy LPP Assistance Data Transfer procedure (via RequestAssistanceData/ ProvideAssistanceData messages) is taken as the baseline for UE to request DL PRS configuration from LMF for training data collection.

Proposal 2 The legacy LPP Assistance Data Delivery procedure (via ProvideAssistanceData messages) is taken as the baseline for LMF to proactively provide DL PRS configuration to UE for training data collection.

Request for assistance data for model training (second priority)

[R2-2409570](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409570.zip) Discussion on LCM for positioning use case ZTE Corporation discussion Rel-19 NR\_AIML\_air-Core

Proposal 9: UE can request some specific assistance data that will have impact on model training, e.g.:

 UE requests the number of TRPs that the UE wants to receive DL-PRS from;

 UE requests the area of TRPs that the UE wants to receive DL-PRS from;

 UE requests the number of PRUs that the UE wants to receive the corresponding measurement and labels from.

**Topics with possible RAN1 impact**

New vs. existing AI/ML positioning method

[R2-2409705](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409705.zip) Discussion on RAN2 issues of AI/ML enhanced positioning vivo discussion NR\_AIML\_air-Core

Proposal 1: Introduce AI/ML based positioning as a new positioning method for a clear signaling structure and forward compatibility.

[R2-2409717](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409717.zip) Consideration on LCM for Positioning use case CATT discussion Rel-19 NR\_AIML\_air-Core

Proposal 2: Consider AI/ML positioning of UE-side model as enhancements based on the existing positioning methods, e.g. DL-TDOA, DL-AoD, Multi-RTT.

[R2-2410499](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410499.zip) LCM For Positioning Ericsson discussion Rel-19 NR\_AIML\_air-Core

Proposal 2: Wait for RAN1 to provide the Assistance data parameter list before deciding on new method or existing method.

Use of associated ID in AI/ML positioning

[R2-2410475](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410475.zip) LCM for positioning use case Qualcomm Incorporated discussion

Proposal 6: RAN2 assumes that any "Network-side Additional Conditions" for the positioning use case are the LPP Assistance Data elements, possibly with some enhancements, if needed. An "Associated ID" to identify "Network-side Additional Conditions" is not needed.

Granularity of AI/ML functionality

[R2-2410658](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410658.zip) Discussion on LCM for Positioning use case Huawei, HiSilicon discussion Rel-19 NR\_AIML\_air-Core

Proposal 1: For the UE-sided model for positioning, it is proposed that RAN2 discuss the following two options for the supported functionality category:

(1) sub-use cases, e.g. Case 1

(2) a combination of sub-use cases and the input/output-related information

Details related to performance monitoring

[R2-2410475](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410475.zip) LCM for positioning use case Qualcomm Incorporated discussion

Proposal 10: For UE-sided models (Case 1/2a) the model performance monitoring (and associated model performance monitoring metric calculation in label-based model monitoring) is performed at the UE and/or "server for data collection for UE-side model training".

[R2-2409835](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409835.zip) Discussion on LCM for Positioning Use Case Fujitsu discussion Rel-19 NR\_AIML\_air-Core

Proposal 8 For positioning case 1, even if UE can calculate the monitoring metrics and make preliminary decisions of the monitoring results, final confirmation from LMF is preferred.

[R2-2409791](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409791.zip) LCM for Positioning use case NEC discussion

Proposal-4: For model performance monitoring for Position use case for UE sided model, wait for RAN1 and RAN3 progress.

[R2-2410553](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410553.zip) LCM for positioning use case Nokia discussion Rel-19 NR\_AIML\_air-Core

Proposal 6: Send LS to RAN1 to ask RAN1 to:

a) Prioritize the selection of monitoring metric calculation entity or entities before discussing various LPP signalling options for support of metric calculation,

b) Clarify requirements for performance monitoring for UE and LMF,

c) Clarify whether the new measurements like CIR, PDP and DP are applicable for any of the existing legacy positioning methods and whether any of the existing legacy measurements not reported as intermediate output of model are applicable for an AI/ML model-based positioning method.

Not treated

[R2-2409907](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409907.zip) Association of measurements and ground truth labels for positioning use-cases Fraunhofer IIS, Fraunhofer HHI discussion

[R2-2410502](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410502.zip) LCM for Positioning use case Interdigital Inc. discussion Rel-19 NR\_AIML\_air-Core

[R2-2410637](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410637.zip) Discussion on the LCM for AI positioning Xiaomi discussion

[R2-2410778](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410778.zip) Discussion on Functionality-based LCM for Positioning Use Case CEWiT discussion Rel-19 NR\_AIML\_air-Core

### 8.1.3 NW side data collection

Contributions should focus on the mechanisms and principles identified for data collection for network side model training during rel-18. Contributions should discusss type of data required to be collected for NW sided model and UE sided model (common to NW sided and different). Question to RAN1 should also be identified.

**Logging conditions/events:**

[R2-2410538](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410538.zip) Discussion on NW-sided data collection for training Huawei, HiSilicon discussion Rel-19 NR\_AIML\_air-Core

Proposal 6: Event-triggered data logging based on radio condition is NOT supported

* Noted

[R2-2409945](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409945.zip) Remaining issues on NW-sided data collection Apple discussion Rel-19 NR\_AIML\_air-Core

Proposal 8: Support the following two radio condition based event triggered logging:

• Event X1: when L3 serving cell measurement becomes better than absolute threshold (similar to A1).

• Event X2: when L3 serving cell measurement becomes worse than absolute threshold (similar to A2).

* Noted

[R2-2409547](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409547.zip) Data Collection for Network Side BM Model Training OPPO discussion Rel-19 NR\_AIML\_air-Core

Proposal 5: During the period that radio condition-based logging event fulfills, UE performs data logging periodically.

Proposal 6: For periodic logging or event-triggered periodic logging, data logging interval is configured by the network, the value range of data logging interval is pending on RAN1 inputs.

* Noted

[R2-2409909](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409909.zip) On Network Side Data Collection Qualcomm Incorporated discussion Rel-19

Proposal 4: RAN2 is requested to consider at least the following events for training data collection for network-side model training,

* Event 1. Based on the number of samples to be collected and reported across different beams, UE triggers the measurement collection and logging if a beam becomes the top-1 beam and the logged number of measurements is less than the configured value.
* Event 2. Based on the change of the top-1 beam: UE is configured to log the measurement when the top-1 beam changes. UE can additionally be configured with the number of samples to be logged and its periodicity
* Noted

Discussion

Options

1. Event-triggered data logging based on radio condition is NOT supported
2. L3 serving cell measurement based (e.g. X1/X2 similar to A1/A2)
3. Beam based events (e.g. beam becomes top-1 beam and number of measurements is less than configured value)
4. L1 beam level measurement

- Huawei explains that there is not good motivation or any good event that makes sense for AI/ML, the models have to generalize well for the whole cell.

- Apple indicates that L3 measurement allows the UE to log event based on cell edge/cell center. Huawei indicates that this is for network based, so do we expect the network to know whether the UE is in cell edge or cell center. Ericsson thinks that it doesn’t imply that the network has to have different models, it is just to allow the network to get more measurements in cell edge or cell center to allow for better generalization. We anyways have the periodic ones for general measurements.

- ZTE thinks that both L3 and L1 beam measurements can be useful.

- Nokia doesn’t think that L3 measurements will serve the purpose as we are collecting L1 measurements. The reason for these event based is to have a complete data set. Apple thinks that the network can do the post-prossesing.

- Nokia asks how the UE knows and how it triggers it. Apple thinks the beam proposal is too complex.

- Xiaomi thinks that this avoids the UE collecting too much data if the network is only interested in a subset of data.

- Qualcomm thinks 3 and 4 are the same. Qualcomm is concerned that there may not be a good correlation between l1 and l3 event.

- LG thinks that the UE is in connected state so it is aware of the UE measurements.

- CATT asks if the UE is only going to do logging in certain area. Ericsson explains that this co-exists with periodic logging so the UE can log in more than the specific area.

- ZTE explains that this discussion is about who does the filtering of the data. It is better for the UE to do it so we don’t waste air interface resources.

- CMCC thought that this would save UE power and the operator should be able to chose whether we configure the event or not.

- Huawei thinks the network can filter so not sure how much we save vs. the complexity

- Ericsson is also suggesting to based on RLF timers. Oppo is not sure how RLF is linked to beam management. Lenovo thinks that we consider the cell edge scenario (e.g. based on L3 measurements) already covers RLF. LG agrees that option 1 covers RLF.

* Focus on the following three radio condition event based logging

1. L3 serving cell measurement based (e.g. X1/X2 similar to A1/A2)
2. Beam based events (e.g. beam becomes top-1 beam and number of measurements is less than configured value)
3. L1 beam level measurement

* [POST128][019][AI PHY] NW side data collection (Nokia)

Intended outcome: Discuss the motivation and specification complexity for the three radio conditions.

Deadline: Long

**Starting/Stopping of logging:**

[R2-2410343](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2410343.zip) Discussion on NW side data collection CMCC discussion Rel-19 NR\_AIML\_air-Core

*Proposal 6: The UE starts the data collection immediately upon reception of the measurement configuration.*

*Discussion on the dynamic activation/deactivation is not supported.*

- LG thinks that this depends on the type of CSI reporting and can only be restricted to periodic CSI measurement. ZTE thinks that we agreed that RRC configuration has the enablement flag. Apple doesn’t think it makes sense to have dynamic as it is not time critical.

- Ericsson for periodic we shouldn’t have dynamic, but for semi-persistent there is already for a mechanism to activate the measurements. Huawei thinks that for training we don’t need aperiodic.

- Qualcomm and Lenovo think that dynamic is necessary.

- LG thinks that RAN1 has considered all types of CS-RS for training.

* Measurements on aperiodic CSI resources are not reported for NW sided data collection.
* Noted

[R2-2409547](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409547.zip) Data Collection for Network Side BM Model Training OPPO discussion Rel-19 NR\_AIML\_air-Core

Proposal 7: Data logging duration parameter is introduced in data collection configuration; UE performs data logging during the configured logging duration.

Proposal 8: If data logging duration is introduced, UE shall stop data logging when one of the following conditions fulfills:

* after the expiry of the logging duration timer; or
* logging duration timer is still running but data logging memory is full.

*Proposal 9: Power state issue is not considered for training data collection procedure in R19*

- Qualcomm asks what is meant by this, that the UE doesn’t stop when there is no power or that it doesn’t report to the network. Oppo thinks that this refers to triggers and reporting.

* Noted

[R2-2409836](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409836.zip) Discussion on NW side Data Collection Fujitsu discussion Rel-19 NR\_AIML\_air-Core

Proposal 8 UE can stop data logging automatically if low power state is detected.

* Noted

[R2-2410627](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410627.zip) Further Considerations on NW side data collection ZTE Corporation discussion Rel-19 NR\_AIML\_air-Core

Proposal 7: UE resumes the data logging if the event (e.g. buffer limitation, power state, etc) that causes the suspending of data logging is no longer existed.

* Noted

Discussion on duration

- Xiaomi, Qualcomm, LG, ZTE, etc thinks that duration is not needed

* Duration is not supported

Discussion on power state

- Xiaomi thinks this is necessary and important. Nokia thinks that it is difficult to define threshold and we shouldn’t allow the UE to take any actions, it should all be network configuration.

- LG doesn’t think this is an AI ML issues.

- ZTE also thinks that it is difficult to determine UE power state. The network should configure a threshold (e.g. 20%/40%). Apple explains that different UEs have different powers.

- Apple thinks that there is a high impact to UE in terms of power, so it should be prioritized, and the UE should suspend the buffer.

- Ericsson thinks that the procedures don’t last for long time so it is unlikely that there are impacts.

- CATT thinks it is valid, but we shouldn’t configure anything, but the network should be made aware of the UE stopping.

- Huawei understands UEs concerns and it’s ok to stop collection when in power state, but the UE should follow the configuration. The UE should at least report the low power state and the network should de-configure. Samsung also supports the proposal from Huawei and it should be up to the network to release the configuration. Lenovo thinks that the UE will stop when the memory is full but it should at least tell the network. We don’t need to specify the reason. Huawei agrees that memory full it is important for the network to know. Maybe the UE should tell the network a bit earlier before the buffer is full.

- AT&T thinks that there can other reasons why the UE stops. Qualcomm agrees. Apple thinks the UE should stop is out of coverage

- Ericsson thinks another reason is that the events are not fulfilled.

- Mediatek is concerned that if the UE battery is drained it should stop. Qualcomm agrees. Oppo thinks that the UE can report low power before it runs out of power.

**Agreements on NW side data collection**

1. Data collection is controlled by the network. The UE will not autonomously stop when low power state is detected.
2. The UE reports to the network when the power state is low. We will not specify how the UE determines low power state. The network should de-configure the data collection (this can be captured in stage 2).
3. The UE reports to the network when buffer is or may become full. FFS when it reports (before and/or after).
4. The UE can report the reason for triggering of indication for the status (e.g. low power state, low memory). FFS how this is signalled and if the reporting can be part of availability indication.

**Availability indication (signaling):**

[R2-2409706](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409706.zip) Discussion on NW side data collection vivo discussion NR\_AIML\_air-Core

Proposal 4. The availability indication of logged data can be sent to network via the following messages:

- UEAssistanceInformation, if configured to provide availability indication of logged data

- RRCReconfigurationComplete

- UEInformationResponse

[R2-2409737](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409737.zip) NW side data collection LG Electronics discussion Rel-19 NR\_AIML\_air-Core

Proposal 10. Available indication is transmitted via UAI. No need additional reason for triggering of availability indication

**Availability indication (triggering):**

[R2-2410343](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410343.zip) Discussion on NW side data collection CMCC discussion Rel-19 NR\_AIML\_air-Core

Proposal 2: Availability indication can be triggered when the AS buffer is full or the power state of the UE is low.

[R2-2409945](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409945.zip) Remaining issues on NW-sided data collection Apple discussion Rel-19 NR\_AIML\_air-Core

Proposal 11: Support both NW triggered availability reporting and UE initiated availability reporting:

1) NW triggered: reporting as response to NW request via various RRC complete messages.

2) UE initiated: it is up to UE implementation when to report via UAI message.

[R2-2409830](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409830.zip) Disuccsion on NW side data collection Samsung discussion Rel-19 NR\_AIML\_air-Core

Proposal 3. UE indicates the availability indication via UAI, when the size of logged data exceeds a threshold which is configured by NW.

**Availability indication (content):**

[R2-2409706](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2409706.zip) Discussion on NW side data collection vivo discussion NR\_AIML\_air-Core

Proposal 3: A single bit indication would be sufficient for UE to indicate to NW that UE has available logged data. No additional information is needed.

[R2-2410278](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410278.zip) Data Collection for NW-sided model training Lenovo discussion Rel-19

Proposal 8: Upon the trigger of the data report, UE will send an availability indication together with data size information for gNB to fetch the logged data with enough radio resource reserved.

[R2-2409865](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409865.zip) Discussion on NW side data collection Xiaomi discussion

Proposal 11: UE indicates the data power state low or reaching buffer limit in the data availability indication.

**Sending of large data:**

[R2-2410503](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410503.zip) NW side data collection Interdigital Inc. discussion Rel-19 NR\_AIML\_air-Core

Proposal 8: If the UE cannot fit all the logged data into one UEInformationResponse message, it will include an indication that more logged data is available in the UEInformationResponse message. The name/type of the IE/field is FFS.

[R2-2410846](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410846.zip) NW-side data collection for beam management and positioning Ericsson discussion

Proposal 14: In case all the collected data do not fit into a single RRC message, RAN2 to discuss the following options:

* In each transmitted RRC message, the UE indicates to the gNB that there are still collected data available for transmission, and then the gNB further requests the UE to transmit the next RRC message (via UEInformationRequest/Response) (similar to logged MDT).
* The gNB indicates (i.e. in the UEInformationRequest) the amount of collected data the UE should transmit in the following RRC UEInformationResponse messages, or the amount of RRC UEInformationResponse messages the UE should transmit, without any further request from the gNB.
* The gNB indicates (i.e. in the UEInformationRequest) that all the remaining collected data should be transmitted by the UE in the following RRC UEInformationResponse messages without any further request from the gNB.

Proposal 15: The UE indicates in the availability indication how many data or RRC samples are available for transmission.

**Data collection configuration:**

[R2-2409881](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409881.zip) Further Discussion on Data collection for Network Side Model Training MediaTek Inc. discussion

Proposal 1: In RRC\_CONNECTED state (incl. handover), the UE maintains only one logged measurement configuration for data collection for network-side model training. When the network provides a new logged measurement configuration, it completely replaces any previously configured logged measurement configuration.

[R2-2410538](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410538.zip) Discussion on NW-sided data collection for training Huawei, HiSilicon discussion Rel-19 NR\_AIML\_air-Core

Proposal 3: The NW can configure one data collection configuration per use case, i.e. multiple configurations for the same use case are not supported.

Proposal 4: Dynamic activation/deactivation of the data collection configuration is not supported (i.e. it is sufficient to rely on RRC signaling).

[R2-2409909](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409909.zip) On Network Side Data Collection Qualcomm Incorporated discussion Rel-19

Proposal 1: The training data collection configuration consists of

- Measurement targets (i.e., CSI resources or resource sets for measurements), and

- Logging configuration (e.g., periodicity, events for logging measurements).

Proposal 2: The CSI framework is used for configuring measurement targets (i.e., CSI resource or resource sets) for training data collections.

Proposal 5: The UE can be configured with multiple CSI resources or resource sets for training data collection.

Proposal 6: Dynamic activation/deactivation of training data collection and logging should be used to randomize the training data collection and logging, following semi-persistent and aperiodic CSI reporting as the reference.

[R2-2410627](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2410627.zip) Further Considerations on NW side data collection ZTE Corporation discussion Rel-19 NR\_AIML\_air-Core

[Proposal 1: As same as immediate MDT, The OAM/gNB Centric data collection for beam management is based on the L3 measurement framework (e.g. MeasObjectNR and reportConfigNR).](#_Toc2946)

[Proposal 2: For NW side data collection for beam management, the RS resources for data collection are configured in a MeasObjectNR, and the reporting related configuration for data collection are configured in the reportConfigNR associated with a same MeasId that is linked to the MeasobjectNR.](#_Toc12894)

[Proposal 3: For NW side data collection for beam management, at most one measurement configuration can be configured to the UE for each serving cell. Multiple configurations can be provided to the UE for multiple serving cells.](#_Toc8371)

Proposal 4: For NW side data collection for beam management, the dynamic activation/deactivation of logging data/measurement is not supported in Rel-19.

Handling during HO and state transition:

[R2-2410846](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410846.zip) NW-side data collection for beam management and positioning Ericsson discussion

Proposal 18 For Rel.19, as baseline, RAN2 assumes that the UE discards/clears the AIML collected data at mobility events (e.g. handover to a different gNB than the source gNB, RLF/HOF, RRC state transitions).

[R2-2409737](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409737.zip) NW side data collection LG Electronics discussion Rel-19 NR\_AIML\_air-Core

Proposal 12. UE retains logged data during HO

Proposal 13. UE indicates that logged data is available during HO (i.e., in RRCReconfigurationComplete message)

Proposal 14. UE retains logged data when transitioning to RRC idle/inactive

Proposal 15. UE indicates that logged data is available and when transitioning to RRC connected state (i.e., in RRCSetupComplete /RRCResumeComplete message)

Not treated

[R2-2409548](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409548.zip) Data Collection for Positioning Model Training OPPO discussion Rel-19 NR\_AIML\_air-Core

[R2-2409653](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409653.zip) Consideration on NW side data collection CATT discussion Rel-19 NR\_AIML\_air-Core

[R2-2409905](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409905.zip) AIML PHY NW-side data collection NEC discussion Rel-19 NR\_AIML\_air-Core

[R2-2410069](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410069.zip) Discussion on NW-side Data Collection SHARP Corporation discussion

[R2-2410102](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410102.zip) Discussion on NW-side data collection for AI/ML based beam management China Telecom discussion Rel-19 NR\_AIML\_air-Core

[R2-2410143](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410143.zip) Discussion on NW-side data collection Spreadtrum, UNISOC discussion Rel-19

[R2-2410425](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410425.zip) Data Collection for Training of NW-side ML Models Nokia discussion Rel-19 NR\_AIML\_air-Core

[R2-2410489](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410489.zip) Some aspects for NW side data collection Sony discussion Rel-19 NR\_AIML\_air-Core

[R2-2410582](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410582.zip) NW-side data collection Futurewei Technologies discussion Rel-19

### 8.1.4 UE side data collection

*Including outcome of [POST127bis][020][AI PHY] Reply LS to SA2/SA5 (InterDigital/Nokia)*

*No other contributions are expected for this AI. Waiting for response from SA WGs. Type of data required to be collected for UE sided model can be discussed in contributions in 8.1.3*

[R2-2410504](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410504.zip) Summary of [POST127bis][020][AI PHY] Reply LS to SA2\_SA5 (InterDigital\_Nokia) Interdigital Inc., Nokia discussion Rel-19 NR\_AIML\_air-Core Late

*Proposal 1: Respond to SA2’s Q1 as below:*

* *There is no conclusion/agreement in RAN2 regarding NG-RAN’s involvement in enabling UE data collection controllability.*

- Tmobile, Mediatek think that there is some NG-RAN to be done for 1b, 2, and 3, but the extent of involvement is FFS. 1a is not in the scope of the discussion. Ericsson thinks not matter if we do UP or CP we will have NG-RAN – so for user plane it would involve UP establishment and CP is control plane establishment.

- Qualcomm thinks that we can’t just say NG-RAN involvement but we have to be more concrete with what the involvement is.

- LG asks whether the involvement is for data transfer or data collection. Oppo thinks that both data collection and transfer should be in scope, so we can for sure explain that configuration for data collection will always have NG-RAN. And we should differentiate the UL and DL for the involvement. Interdigital explains that from the LS the question is referring to both transfer and data collection. They don’t need to know all the details. Nokia has similar understanding.

- Samsung, and Apple thinks that the question is only for controllability of data transfer so would like to keep the original agreement.

- Samsung thinks that we are talking about controllability. Nokia explains that for CP there is not solution that would involve NG-RAN. But UP we are not sure as we don’t know how it would work. Huawei thinks that for NAS approach this would be transparent for NG-RAN.

- Qualcomm we should add that RAN2 hasn’t agreed whether it is NG-RAN is the network entity that enforces controllability. Interdigital thinks that they are not asking whether NG-RAN is the main controlling entity. Qualcomm thinks it would be good to indicate this to them as they need this information for their design.

- Vivo thinks that only for option 3 there is NG-RAN

- China Mobile think that NG-RAN is always involved but whether it is transparent or not is not concluded.

- Samsung would like to explain the different steps between data collection and transfer and they are not linked. Qualcomm thinks that there are use cases where we don’t need a configuration from the network. Lenovo thinks we should explain the difference between the two, UE measurements are part of data collections.

* Confirm the answers for SA2 are related to 1b, 2, and 3.
* For data collection, we can copy our agreements that there is NG-RAN involvement for configuration between UE and NG-RAN
* For data transfer, RAN hasn’t studied/concluded NG-RAN involvement extensively as those discussions depend on SA2 potential solutions
* Explain what is meant by data collection and data transfer. Try to explain that data transfer can happen at any point in time as long as there are collected data available in the UE or explain that configuration may not always be needed.
* Respond to SA2’s Q2 as below:
* SA2 can assume that **for data collection** the gNB is involved in providing radio measurement configuration (if needed) for beam management use case and LMF is involved in providing radio PRS measurement configuration (if needed). However, RAN2 has not agreed that the gNB/LMF is in charge of “initiating, terminating and fully managing data transfer”.
* Respond to SA2’s Q3 as below:
* RAN2 has not evaluated/analyzed the impact on UE’s normal operation due to the full controllability of the data collection process.
* Respond to SA2’s Q4 as below:
* Standardized data refers to data whose format/content is explicitly defined in 3GPP specifications, allowing the network to understand its content and meaning.
* Respond to SA2’s Q5 as below:
* Roaming considerations are outside the scope of RAN2.
* Respond to SA2’s Q6 as below:
* As stated in the LS sent from RAN, visibility of data content signifies that the MNO will be able to be aware of, access, and comprehend the content of the collected/reported data without the need of SLA. Thus, full visibility allows the MNO to verify/match the data specified/configured to be collected and the data that is being reported.
* Respond to SA5’s question “Is the “Server for data collection for UE-side model training” controlled by operators?” as below:
* The controllability requirement is referring to the controlling of the data collection/transfer process. Whether the server for UE side model training is controlled by the MNO or not is outside the scope of RAN2.
* Respond to SA5’s question “What standardized data is to be collected?” as below:
* No final agreement has been made in RAN WGs regarding the standardized data to be collected. Some examples can be found in R1-2310681.

[R2-2410505](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410505.zip) [Draft] Reply LS to SA2 on AIML data collection, Interdigital LS out Rel-19 NR\_AIML\_air-Core To:SA2 Cc:RAN3, SA3, SA5 Late

* [AT128][014][AIML] LS response to SA2 (Interdigital)

Intended outcome: Approve LS response

Deadline: Tuesday

R2-2411116 [Draft] Reply LS to SA2 on AIML data collection Interdigital LS out Rel-19 NR\_AIML\_air-Core To:SA2 Cc: RAN3, SA3, SA5

* RAN2 wants to clarify the following for the discussion of the *UE side data collection for UE side model training*:
* -        *Data collection* refers to the UE collecting data that involves the UE performing measurements (e.g., radio measurements).
* -        *Data transfer* refers to the sending/transfer of the collected data from the UE to Server for data collection for UE-side model training/OTT server (as capture in Table 7.2.1.3.2-1) in TR38.843.
* SA2 can assume that the NG-RAN is involved in providing radio measurement configuration (if needed) for the UE side data collection at least for the beam management use case, as captured in the following agreement in RAN2-127bis:
* Data collection initiation and configuration for data collection is under network control.  FFS how the NW determines whether data collection should be initiated (e.g., via UE requests (UE directly or UE server))
* Data transfer can happen at any point in time under network control if there is collected data available in the UE. Furthermore, for data transfer, RAN2 hasn’t studied/concluded on level of NG-RAN involvement.
* RAN2 will continue the discussion on data collection configuration and RAN2 will appreciate SA2/SA5 input on the data transfer process.
* These agreements will be captured in the final draft LS [R2-2411151](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411151.zip) and uploaded in email discussion. final LS will be approved in

R2-2411151 [Draft] Reply LS to SA2 on AIML data collection Interdigital LS out Rel-19 NR\_AIML\_air-Core To:SA2 Cc: RAN3, SA3, SA5

SA2 can assume that the gNB is involved in providing radio measurement configuration (if needed) for beam management use case and LMF is involved in providing ~~radio~~ PRS measurement configuration (if needed). However, RAN2 has not agreed that the gNB/LMF is in charge of “initiating, terminating and fully managing data transfer”.

* The LS is approved in R2-2411152 with the change above “removal of radio”

[R2-2410506](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410506.zip) [Draft] Reply LS to SA5 on AIML data collection, Nokia LS out Rel-19 NR\_AIML\_air-Core To:SA5 Cc:RAN3, SA2, SA3 Late

- Tmobile and AT&T would like to say that the entity is controlled by MNO. Nokia thinks that this is more of an SA2 decision. Interdigital explains that the answer is only saying it is out of RAN2 scope, but we are not saying that it is not under control. Ericsson thought that it was under MNO control that’s why we came up with this new terminology, it was to differentiate from OTT. Qualcomm thinks that this is something that SA2 can decide.

- Mediatek agrees with Ericsson. Oppo explains that in our RAN2 table the server is within the MNO. If it is not in the MNO than why is not controlled by MNO.

* Update question 1: The controllability requirement is referring to the controlling of the data collection/transfer process without an SLA. RAN2 has assumed when discussing the solutions captured in the TR that the server for data collection for UE-side model training is within the MNO. RAN2 assumes that if it is in the MNO it will also be controlled by the MNO.
* The LS is approved in R2-2411114 with the change above

### 8.1.5 Model transfer/delivery

*Only contributions originating from operators on requirements for 1-sided and 2-sided models are expected for RAN2#128. Non-operator companies are not expected to submit contributions (but are encouraged to collaborate with operators).*

*(reference: RAN1 identified collaboration levels from the TR)*

|  |  |  |  |
| --- | --- | --- | --- |
| ***y*** | *model delivery (if needed) over-the-top.* | *Outside 3GPP Network* | *UE-side / NW-side / neutral site* |
| ***z1*** | *model transfer in proprietary format.* | *3GPP Network* | *UE-side / neutral site* |
| ***~~z2~~*** | *~~model transfer in proprietary format.~~* | *~~3GPP Network~~* | *~~NW-side~~* |
| ***~~z3~~*** | *~~model transfer in open format.~~* | *~~3GPP Network~~* | *~~UE-side / neutral site~~* |
| ***z4*** | *model transfer in open format of a known model structure at UE, i.e., an exact model structure as has been previously identified between NW and UE and for which the UE has explicitly indicated its support.* | *3GPP Network* | *NW-side* |

**Not treated**

[R2-2410344](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410344.zip) Discussion on AIML model transfer delivery CMCC, NTT Docomo, China Unicom, CATT, Apple discussion Rel-19 NR\_AIML\_air-Core

*Discussion on one-sided model*

Proposal 1: There is no requirements on controllability or visibility for UE-sided model transfer/delivery case y, since the model trained in OTT server can be sent to the UE directly from OTT-server (transparent to 3GPP).

Observation 2: RAN2 focuses on functionality-based LCM during R19 discussion, the network doesn’t be aware of which model is used at UE side.

Proposal 3: It is proposed to de-prioritize case z1 for one-sided model transfer/delivery, since there is no strong requirement on visibility and controllability for UE-sided model transfer/delivery from the perspective of operator.

*Discussion on two-sided model*

Observation 3: RAN1 focuses on case z4 for two-sided model transfer/delivery, where NW transfers the parameters to the UE for the supported known model structure.

Proposal 4: For two-sided model, controllability and visibility are required for model transfer/delivery case z4, considering the following aspects:

* + The CSI generation part at UE side and the CSI reconstruction part at NW side should be aligned for good model performance
  + The whole model is trained at NW and the CSI generation part is sent to UE
  + The model is open format and the structure is known at UE side, NW transfers the parameters of the model to UE

[R2-2410601](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410601.zip) Requirements for Model Transfer/Delivery T-Mobile USA Inc., Nokia discussion Rel-19 NR\_AIML\_air-Core

Proposal 1: Adopt the following list of requirements for model transfer/delivery.

* Model transfer/delivery traffic should be differentiated from other user traffic.
* Model transfer/delivery traffic should be transferred at a different priority than user traffic.
* There should be a guarantee that models are transferred securely, in a NW-aware manner, such that untrusted models cannot be downloaded.
* Model transfer/delivery is initiated by the UE.
* Models need to be addressable such that the UE can request the transfer/delivery of a specific one.
* The NW is in control of if and when to transfer / deliver a model to the UE.

Proposal 2: Adopt the following assumptions for discussion about model transfer/delivery.

* UE’s can only store a very limited set of trained models.
* Trained models could be per gNB, per UE hardware/software, per morphology.
* For beam management trained models are applicable to a small number of sites, e.g., cell, gNB, or area, etc.
* gNB can evaluate current conditions to determine whether to transfer a model, e.g., if a UE is at the cell edge, based on cell load, etc.

[R2-2410103](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410103.zip) Discussion on model transfer/delivery China Telecom discussion Rel-19 NR\_AIML\_air-Core

Proposal 1: RAN2 discussion on model transfer/delivery shall focus on a two-sided model with a known model structure.

Proposal 2: RAN2 should wait for further input from RAN1 on operation of model transfer/delivery for case y and z1.

Proposal 3: RAN2 should wait for further progress from RAN1 on model transfer/delivery for one-sided model.

[R2-2410853](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410853.zip) Operators views on the AI\_ML model delivery options BT plc, Turkcell, Deutsche Telekom discussion Rel-19 [R2-2410529](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410529.zip)

Proposal 3: MNO has visibility of the model standardized data to keep the control over the network for one-sided and two-sided models

Proposal 4: Only the MNO has control over the model delivery/transfer and control over the AI/ML model activation/deactivation

Proposal 5: Data used to train models needs to be visible to MNO

Proposal 8: RAN2 to postpone the UP and/or CP donwselection to transfer/deliver the AI/ML model until it is decided the entity(ies) to transfer the model

[~~R2-2410529~~](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410529.zip) ~~Operators views on the AI\_ML model delivery options BT plc, Turkcell discussion Rel-19 Revised~~

## 8.2 Ambient IoT

(FS\_Ambient\_IoT\_solutions,leading WG: RAN1; REL-19; SID: [RP-240826](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_103/Docs/RP-240826.zip))

Time budget: 2.5 TU

Tdoc Limitation: 4 tdocs

### 8.2.1 Organizational

LS, Rapporteur input, including workplan, etc.

[R2-2409511](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409511.zip) Reply LS to RAN2 on data block sizes for Ambient IoT (R1-2409250; contact: MediaTek) RAN1 LS in Rel-19 FS\_AmbientIoT, FS\_Ambient\_IoT\_solutions To:RAN2 Cc:SA2 Withdrawn

[R2-2409526](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409526.zip) LS on security aspects of Ambient IoT (S2-2411049; contact: OPPO) SA2 LS in Rel-19 FS\_AmbientIoT To:SA3 Cc:RAN2

* Noted

[R2-2411078](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411078.zip)

* Noted

[R2-2409812](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409812.zip) TP for TR 38.769 update Huawei, CMCC, T-Mobile USA pCR Rel-19 38.769 1.0.0 FS\_Ambient\_IoT\_solutions

* Endorsed and will be further updated with meeting agreements
* [POST128][015][AIoT] TP for TR (Huawei)

Intended outcome: agreable TP to send to RAN1 and accompanying LS

Deadline: Dec. 1st

Discussions on completions of SI from RAN2 perspective

- Ericsson thinks that there are aspects that have high dependencies on other WGs and we should take those into account and possibly revisit assumptions. We should at least capture dependencies as guidance in the RAN plenary.

- Nokia also thinks that we should list the open issues and dependencies that will impact future design.

- Vodafone thinks that obviously we have some open issues and dependencies, but it doesn’t make sense to list them as we don’t know all the aspects that will change our assumptions. So from RAN2 perspective we can decide that it is finished.

- CMCC points out that SA2 have already concluded on their architecture so we have candidate solutions for normative work. SA3 has also concluded on NAS encryption and that doesn’t impact RAN2, so no need to list open issues. We can proceed with completion from RAN2 perspective.

- Spreadtrum thinks we should consider all the decisions of WGs.

- ZTE agrees that from RAN2 perspective we have addresses all issues and there are no open issues. Of course there is dependencies but this is the case for all Wis. Interdigital agrees with ZTE. The TR will include all the topics and what will need to be worked further in WI.

- Huawei indicates that all agreements touch the dependencies and they just impact decision on which option and not feasibility. We can consider the study item complete. Vivo, Apple, CATT, Samsung, Xiaomi, Docomo and Williot agrees.

- Ericsson thinks that we should do something like RAN1 in the conclusion. Samsung thinks that it is totally different as from RAN2 point of view we addressed all issues.

- Huawei – first part we list what we have studied and we can recommend basic functions, paging, RACH, and data transmissions. Ericsson thinks that’s fine but we have impact from other WGs. Huawei reminds everyone that we have had many TRs and we have never done this.

- Vodafone wants to avoid that add new things we haven’t discussed

Agreements

* From RAN2 point of view, the SI is considered complete
* The TR will capture in corresponding subsection any impact and/or dependencies from other WGs when applicable.
* The TR will recommend that RAN2 will have to support paging, RACH, data transmission functionality in MAC. RAN2 has discussed topology 1 and topology 2 and has concluded it is feasible, from RAN2 perspective. RAN2 will discuss in WI phase any additional impacts from other WGs.

### 8.2.2 Functionality aspects

Contributions should focus on the functionalities required for A-IoT devices, remaining aspects of AS ID for study phase, segmentation, information visible to reader if any other, protocol stack, etc.?

**Protocol Stack**

[R2-2409897](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409897.zip) A-IoT functionalities Huawei, HiSilicon discussion Rel-19

Proposal 1: For A-IoT air interface protocol stack, there is no other L2 AS layer (i.e. A-IoT MAC layer only).

- Ericsson thinks that there are some functionalities that may need another layer to not increase complexity in MAC.

* Noted
* RAN2 assumes that there is no other L2 AS layer (i.e. A-IoT MAC layer only). There is no CP/UP protocol stack differentiation on AIoT interfaces.

**AS ID – which entity assigns it**

[R2-2409783](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409783.zip) A-IoT functionality ZTE Corporation, Sanechips discussion

Proposal 7: The random number included in MSG1 (RN16) is used as the AS ID for scheduling subsequent A-IoT messages .

* Noted

[R2-2410311](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410311.zip) Remaining issues on study of AIoT functionalities NTT DOCOMO, INC. discussion Rel-19

Proposal 2. “AS ID” is generated by A-IoT reader and allocated to each A-IoT device via Msg2 in 3-step CBRA, success indication in 2-step CBRA and CFRA.

* Noted

Discussion

- Apple thinks that random ID shouldn’t be kept for a long time as it increases chances of collision for other users, and it should be decided by the reader.

- Samsung agrees to ZTE’s proposal and use 16 bits. It should be long enough to avoid collisions and we can capture two directions in the TR.

- CMCC supports reader assigned ID and it is reader decision.

- Huawei thinks we need to determine whether collision needs to be handle by the reader. WE can capture a third option, where it is up to the reader whether it continues to use the random ID or assigns a new one.

- Vivo thinks that this is for scheduling purposes.

- Mediatek doesn’t see any complexity with doing this, the reader assigns a new ID and it drops the previous one and stores the new.

* Capture the option that it is up to the reader whether to use the random ID as AS ID or assigns a new AS ID. FFS what message is used
* Capture in the TR that to down-select we need to consider which message need to consider whether we need the reader to handle the collision.

**AS ID – when is it released by the device**

[R2-2409707](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409707.zip) Discussion on functionality aspects for Ambient IoT vivo discussion FS\_Ambient\_IoT\_solutions

Proposal 1. The AS ID can be maintained at device and reader side, and released on a timer expiry or explicit indication from reader.

[R2-2409703](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409703.zip) Ambient IoT ID management and implications for energy status indication MediaTek Inc. discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 4: The stored AS ID at the device may be assumed valid for the availability time implied by the device’s energy status indication.

**Segmentation – Segment Indication**

[R2-2410193](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410193.zip) Functionality aspects for A-IoT Ericsson discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 5 The device sends a 1-bit indication indicating whether the current transmission is the last segment or not.

[R2-2410672](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410672.zip) Discussion on functionality for A-IoT CMCC discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 6: Simple message size indicator can be considered for last segment indicator.

* Segmentation indication will be discussed in WI phase.

**Segmentation – Retransmission**

[R2-2410672](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410672.zip) Discussion on functionality for A-IoT CMCC discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 2: Support optional explicit R2D failure/success feedback indication for D2R segments.

[R2-2410423](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410423.zip) Functionality aspects of AIoT Nokia France discussion Rel-19

Proposal 6: D2R segmentation operates on wait-and-stop basis in D2R with mandatory acknowledgement feedback. FFS feedback details.

[R2-2409963](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409963.zip) Functional Aspects of Ambient IoT Apple discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 10 Not support ACK/NACK-based segment retransmission.

Discussion

- Samsung is not sure how the UE knows whether it was successful or not. Huawei thinks that it can be based on message size. Samsung thinks that it is a flavour of explicit indication. Apple thinks that it can solved by reader just scheduling a resource for the next segment.

- Qualcomm thinks that there may be feedback and it can be implicit or explicit.

- ZTE thinks that we should have the same protocol as msg3 and msg5.

* If segmentation is supported, it is beneficial for the reader to be able to trigger a re-transmission of a segment. FFS how this is done.

Agreements

1. RAN2 assumes that there is no other L2 AS layer (i.e. A-IoT MAC layer only). There is no CP/UP protocol stack differentiation on AIoT interfaces.
2. Capture the option that it is up to the reader whether to use the random ID as AS ID or assigns a new AS ID. FFS what message is used
3. Capture in the TR that to down-select we need to consider which message need to consider whether we need the reader to handle the collision.
4. Segmentation indication will be discussed in WI phase.
5. If segmentation is supported, it is beneficial for the reader to be able to trigger a re-transmission of a segment. FFS how this is done.

**Visibility Discussion**

[R2-2409707](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409707.zip) Discussion on functionality aspects for Ambient IoT vivo discussion FS\_Ambient\_IoT\_solutions

*Proposal 8. The reader executes the AS procedure in response to the service request from CN based on the necessary information derived from the received service request, wherein the necessary information may comprise:*

*— command type information, e.g. read/write/disable.*

*— periodicity to execute the service request.*

*— QoS requirement (e.g. e2e latency and target successful inventory ratio).*

- Docomo thinks that RAN2 can only agree if it is beneficial not necessary. The QoS shouldn’t be sent as the reader can’t guarantee QoS.

- Xiaomi thinks that QoS would be useful as the reader can take into account for scheduling point of view. LG thinks QoS needs to be discussed in SA2.

- Qualcomm thinks they are all useful but the real question is whether they can be provided to the reader.

- Interdigital thinks that the first two will depend on the LS and we should consider QoS.

- ZTE explains that we need to decide what is absolutely necessary and what is beneficial and ask SA2. Thinks that command type is necessary. If the reader doesn’t know if this is inventory or command then the reader wouldn’t know how to behave subsequently.

- Huawei thinks that we need to wait for message size LS. The periodicity and QoS is really based on SA2 discussion.

- CATT is not sure if command type is necessary. CMCC thinks it is necessary for the reader to know for resource allocation purposes.

- Apple doesn’t think anything is absolutely necessary but they may be beneficial.

- Samsung sees some benefits on QoS for resource allocation from reader side and ask SA2.

- Vodafone thinks that in general we should ask for command type.

- Nokia would like to ask SA2 if there is any requirement on time from a radio access procedure.

- Ericsson thinks that command type is highly important and we would schedule accordingly.

- CATT thinks

**Agreements on visibility**

* The reader needs to know whether a response is expected and expected D2R message size. FFS how the reader gets this information. Wait for SA2 LS response on expected D2R message size to resolve the FFS. FFS if command type is explicit, if it can be inferred from expected D2R message size if available.
* Ask SA2 if they can provide information that RAN2 agreed on some information that are useful for the reader and ask whether they can be provided (e.g. service type). Ask SA2 if there are requirements from SA2 perspective (e.g. on latency of completion time of procedure)
* Noted
* [POST128][020][AIoT] LS to SA2 on information usefulness (ZTE)

Intended outcome: LS to SA2

Deadline: 4 weeks

**Other Use Cases/Scenarios – Lean Inventory**

[R2-2410416](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410416.zip) Lean Inventory procedure/counting of devices VODAFONE discussion Rel-19

Proposal 2: It is proposed to call the procedure for counting (and proximity) reasons a lean inventory/counting procedure and it is proposed to support A-IOT lean inventory procedure within the A-IOT study item and include it into TP 38.769.

Proposal 1: It is proposed to confirm that MSG2 is optional message which does not need to be sent by the reader/ received by the device all the time.

Proposal 3: It is proposed to introduce a discrimination (e.g. service type or cause values) within A-IoT paging to let the device know what kind of inventory procedure is expected to be performed.

- Lenovo thinks that this can be done by reader implementation by not sending message 2, which was already agreed last minute.

- Apple thinks this is a new use case and we should ask SA1 and SA2 and there are some security issue, as there may unauthenticated devices that respond. Vodafone doesn’t thinks there is a security issue as there are no personalized IDs.

- Samsung doesn’t want to call this lean or counting, it is just an inventory command. And it is up to reader whether it sends msg 2 and we just need to understand whether the device needs to know.

- Qualcomm thinks it would be good to agree to proposal 1 even though implicitly agreed last meeting.

- Ericsson thinks that we haven’t discussed decide device behavior. One solution is that the UE sends the response and assumes it is successful, the other one is you assume you were not successful and expect msg 2.

- ZTE explains that we agreed that the device behavior is that it listens all the time. So the device will anyways keep monitoring for paging so the device doesn’t need to know. Nokia thinks that if the device knows it can not maintain the context. MEdiatek thinks that if we tell the device don’t expect msg2 then the device will no longer respond to subsequent paging. The device will be confused.

- LG thinks that the device should always know whether there is a msg2 is received. Samsung thinks that the gain of knowing is very small.

Agreements on new lean/counting scenario

* We will not capture a new use case in the TR. RAN2 confirms that this use case can be done via reader implementation, as per previous agreement that it is up to the reader whether MSG2 is transmitted. FFS if the device needs to be aware whether msg2 will be transmitted.

**Other Use Cases/Scenarios – Bistatic**

[R2-2410134](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410134.zip) Considerations on functionality aspects for Ambient IoT Lenovo discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 6: Consider studying how to signal the expected D2R response and the frequency to an intermediate UE to support bistatic mode of operation for D2T2-A1 scenario.

- Huawei thinks that RAN plenary agreed to not study

* RAN2 did not study this scenario in the study item
* Noted

[R2-2409621](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409621.zip) Discussion on the Functionality Aspects for Ambient IoT CATT discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2409702](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409702.zip) Ambient IoT coverage, energy, TB size, and all sorts of other things MediaTek Inc. discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2409837](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409837.zip) Discussions on Functionality Aspect of Ambient IoT Fujitsu discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410002](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410002.zip) Functionality for Ambient IOT InterDigital discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410016](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410016.zip) Discussion on A-IOT functionality aspects Xiaomi discussion

[R2-2410096](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410096.zip) Discussion on functionality for Ambient IoT China Telecom discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410124](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410124.zip) Discussion on AIoT functionalities OPPO discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410137](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410137.zip) Discussion on the functionalities required for Ambient IoT Spreadtrum, UNISOC discussion Rel-19

[R2-2410300](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410300.zip) Discussion on Ambient IoT segmentation functionality Panasonic discussion Rel-19

[R2-2410353](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410353.zip) Ambient-IoT Functionality Aspects NEC discussion Rel-19

[R2-2410370](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410370.zip) A-IoT functionalities ETRI discussion Rel-19

[R2-2410374](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410374.zip) Considerations on functionality aspects for Ambient IoT Sony discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410477](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410477.zip) Views on Functionality Aspects of Ambient IoT Qualcomm Incorporated discussion FS\_Ambient\_IoT\_solutions

[R2-2410493](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410493.zip) Discussion on remaining aspects of AS ID Continental Automotive discussion

[R2-2410572](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410572.zip) Discussions on Energy Status Indication for Ambient IoT Futurewei discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410573](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410573.zip) Further discussions on AS ID for Ambient IoT devices Futurewei discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410594](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410594.zip) Discussion on functionality aspects of ambient IoT LG Electronics Inc. discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410603](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410603.zip) Use cases for one-bit energy status report in AIoT SHARP Corporation discussion

[R2-2410620](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410620.zip) Discussion on functionality for ambient IoT Google Ireland Limited discussion FS\_Ambient\_IoT\_solutions

[R2-2410646](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410646.zip) Remaining issues of functionalities for Ambient IoT Kyocera discussion Rel-19

[R2-2410679](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410679.zip) Discussion on functionality aspects for A-IoT HONOR discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410753](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410753.zip) Discussions on functionalities required for AIoT Samsung discussion Rel-19 FS\_Ambient\_IoT\_solutions

### 8.2.3 A-IoT Paging

Contributions should focus on paging aspects and content required for Ambient IoT for the different identified procedures (i.e. inventory, inventory + command, command only), including monitoring of DL message, device unavailability due to energy harvesting (based on RAN1 progress).

**Multiple/Subsequent Paging from the same Reader**

[R2-2409892](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409892.zip) Discussion on paging procedure for Ambient IoT OPPO discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 1: include an ID identifying the CN request in the A-IOT paging message to avoid A-IOT device making duplicated responding to A-IOT paging messages corresponding to the same CN request.

* Noted

[R2-2409622](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409622.zip) Discussion on Paging for Ambient IoT CATT discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 1: Introduce a service ID in the paging message to assist device to distinguish the subsequent paging messages. The paging messages associated with the same service ID belong to the same service request from CN.

Proposal 2: The service ID in the paging messages over the A-IoT interface does not rely on the session ID/transaction ID between CN and reader (i.e., based on the candidate solutions of SA2). It can be independently generated by reader with a short format, e.g., 2 bits.

* Noted

Discussion

- Xiaomi thinks this is stage 3 and the agreements we made are enough for now. Docomo agrees with the proposals on indicated ID.

- LG thinks that maybe we can capture in the TR how many bits are needed to avoid duplication. Interdigital agrees that we need an ID and the question is whether it is the reader or the CN that provides the ID.

* An ID in paging message is beneficial to avoid duplicated response for same service request. FFS whether ID is generated by the reader or CN. FFS on the ID size.

**Paging from different Readers**

[R2-2409708](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409708.zip) Discussion on AIoT Paging vivo discussion FS\_Ambient\_IoT\_solutions

Proposal 2. RAN2 to support the scenario that one A-IoT device can be required to respond to A-IoT paging messages associated with the same service from different readers.

- CATT thinks that RAN3 has agreed that this is possible but it is up to reader and CN to resolve this issue by giving different service IDs, there is no RAN2 impact. Lenovo thinks it should be supported

- Xiaomi doesn’t think we should support this scenario. SA2 and rAN3 didn’t reach a conclusion on this. Oppo agrees that it is too early.

- Interdigital explains that RAN3 is using it for localization of devices to understand that to which reader the device will respond to.

Proposal 3. RAN2 to discuss the following ways to fulfil the need of responses to multiple readers:

- Option 1: including reader ID in A-IoT paging message;

- Option 2: including an indication in A-IoT paging message, to indicate that UE should respond to the current A-IoT paging message regardless of whether access successes;

- Option 3: CN implementation to group the responses from different readers for the same service with no further enhancement in A-IoT paging message.

* Capture the scenario that different readers may page the same device for same service request. RAN2 will wait for further progress from WGs and discuss this in WI phase.
* Noted

**Service Type in the Paging Message**

[R2-2409898](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409898.zip) A-IoT paging Huawei, HiSilicon discussion Rel-19

Proposal 1: There is no need to include service/command type as the explicit AS layer information in A-IoT paging message.

* Noted

[R2-2409838](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409838.zip) Discussions on AIoT paging Fujitsu discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 3: Paging type, e.g., for inventory-only, command-only or inventory and command is included in the (subsequent) A-IoT paging message.

* Noted

[R2-2409687](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409687.zip) Remaining issues of AIoT Paging ZTE Corporation, Sanechips discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 4a: In order to let device know that that it needs to wait for the subsequent command data after successfully completing Msg3 transmission (e.g., in command only or inventory + command cases), it’s suggested to introduce indication about “having subsequent data” in paging message.

Proposal 4b: In order to let device know that it may need to wait for more time for the subsequent command data (e.g., in inventory + command cases), another indication about “expected waiting time for subsequent data” can also be considered.

* Noted

*Discussion on service type/command type on paging*

- Apple, Vivo, Lenovo, Oppo, Docomo, Xiaomi, LG, Samsung doesn’t see a need to put the type in the paging as there is no need to tell the UE to wait. CATT agrees with Apple and has a concerns as there may be subsequent data that is transparent data.

- Vodafone that a code point in paging message would be good for future proofness. For service type it is not useful, but there may be some reason in future.

- CMCC think the benefit to include is for scheduling the CN can provide the information to reader but not need to provide for the device.

- Oppo thinks that anyways the UE will monitor for a determined time.

- Interdigital, Qualcomm thinks it is too early to exclude this. One example the device can use the information to store the AS ID.

- Ericsson thinks that command type is ok, but service type information is not the only way to do it, so we should keep it open.

- ZTE explains that this is useful for the device to know which ID it has to monitor. Agree that the device listens to the ID but it may need to know whether it is paging or AS ID. Qualcomm thinks that some will be encrypted.

- Mediatek thinks the futureproofness has some merit but it is difficult to know what to futureproof for. Thinks that ZTE has a point but we don’t know enough about paging.

- Nokia agrees with ZTE and the UE should know whether more messages are coming.

* Whether we include further information in paging message to indicate service type/command type or to indicate that further subsequent messages are coming can be discussed in WI phase once we understand more the paging design and AS ID.

**Decision on Contention-Based vs Contention-Free**

[R2-2409964](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409964.zip) Discussion on Ambient IoT Paging Apple discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 8 D2R resource indicated in Paging message is by default shared resource, unless explicitly indicated as contention-free resource.

* Noted

[R2-2410605](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410605.zip) Discussion on DL messages for Ambient IoT UEs Ericsson discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 1 There is no need to indicate explicitly whether a device should respond to the paging message with contention free or contention-based RA.

* Noted

[R2-2410404](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410404.zip) Paging procedures for Ambient IoT Nokia discussion FS\_Ambient\_IoT\_solutions [R2-2408698](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408698.zip)

Proposal 13: To simplify signaling, RAN2 to agrees that

- an AIoT paging of a single-device means “Contention-free access”,

- an AIoT paging of a device group or all devices means “Contention-based random access”.

- An AIoT paging of multiple device IDs (if supported) means “Contention-free access”.

* Noted

Discussion

- Huawei indicates that this also depends on whether we decide to have a unified CFRA and CBRA. MEdiatek is not sure what the device would do differently even if it receives this indication. ZTE agrees and think we should agree that we don’t need to provide an indication and we should try to unify the scheduling.

- Samsung thinks that we are not sure what we will include in the resource schedule so it is too early.

- CATT agrees with apple’s proposal but we need to define what is meant by CFRA.

- Oppo thinks implicit method is better.

- Xiaomi supports ericsson proposals.

- Docomo thinks that this is not needed for unified design but may be if not.

* Wait for WI phase

**Paging Message Contents for Contention-Free**

[R2-2409892](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409892.zip) Discussion on paging procedure for Ambient IoT OPPO discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 7: to trigger A-IOT devices to find their correct access occasions in A-IOT CFRA procedure, three options of different kind of information can be discussed to be embedded in the A-IOT paging message:

1. One-to-one mapping relationship between the A-IOT device ID and the access occasion index.

2. Mask ID defining the group of targeted A-IOT devices and the ID for the initial access occasion and indication of the ascending or descending order of the IDs for the subsequent access occasions

3. modulo operation related parameters such as the divisor and lists of targeted A-IOT devices.

* Noted

**Agreements on paging**

1. An ID in paging message is beneficial to avoid duplicated response for same service request. FFS whether ID is generated by the reader or CN. FFS on the ID size.
2. Capture the scenario that different readers may page the same device for same service request. We will discuss this in WI phase (if in scope of WI) and consider progress from all the WGs
3. Whether we include further information in paging message to indicate service type/command type or to indicate that further subsequent messages are coming can be discussed in WI phase once we understand more the paging design and AS ID.

**Paging Monitoring**

[R2-2410575](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410575.zip) Further discussions on Ambient IoT paging Futurewei discussion Rel-19 FS\_Ambient\_IoT\_solutions

*Proposal 4. The reader may further include information in the A-IoT paging message to indicate, or for unintended devices to estimate, how long the current paging round may be, e.g., the number of total access rounds to be scheduled in the current paging round or an estimated duration for the current paging round to be completed.*

- Nokia thinks it is easier to have a mechanism to release as it is very hard to predict duration. Qualcomm thinks that this does help saving power for devices but how we do this would require further discussions.

- LG thinks that RAN1 is discussing how to perform energy harvesting and there is no consensus.

- Samsung indicates that RAN1 has agreed to include this in second prioritized issues.

Noted

[R2-2409578](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409578.zip) Discussion on A-IOT paging procedure Xiaomi discussion Rel-19 Withdrawn

[R2-2409583](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409583.zip) Discussion on A-IOT paging procedure Xiaomi discussion Rel-19

[R2-2409739](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409739.zip) Discussion on ambient IoT paging LG Electronics Inc. discussion FS\_Ambient\_IoT\_solutions

[R2-2409884](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409884.zip) Discussion on Paging for A-IoT Transsion Holdings discussion Rel-19

[R2-2410003](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410003.zip) Paging Related Aspects for Ambient IOT InterDigital discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410068](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410068.zip) New and retransmitted A-IoT paging indication and device behaviors Sharp discussion

[R2-2410125](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410125.zip) Ambient-IoT Paging NEC discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410140](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410140.zip) Discussion on paging procedure of AIoT Spreadtrum, UNISOC discussion Rel-19

[R2-2410178](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410178.zip) Discussion on Ambient IoT paging message with multiple IDs ASUSTeK discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410264](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410264.zip) Discussion on paging procedure for Ambient IoT Lenovo discussion Rel-19

[R2-2410295](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410295.zip) Discussion on A-IoT paging Panasonic discussion Rel-19

[R2-2410312](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410312.zip) Discussion on RA type indication in AIoT paging NTT DOCOMO, INC. discussion Rel-19

[R2-2410334](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410334.zip) Discussion on A-IoT paging CMCC discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410375](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410375.zip) Considerations on paging for Ambient IoT Sony discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410551](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410551.zip) Ambient IoT Paging Qualcomm Incorporated discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410616](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410616.zip) Ambient IoT device paging TCL discussion Rel-19 Withdrawn

[R2-2410645](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410645.zip) Remaining issues of A-IoT paging for Ambient IoT Kyocera discussion Rel-19

[R2-2410680](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410680.zip) Discussion on A-IoT Paging HONOR discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410693](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410693.zip) Further discussions on Ambient IoT Paging China Telecom discussion

[R2-2410754](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410754.zip) Discussion on A-IoT paging Samsung discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410766](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410766.zip) Discussion on paging procedure for ambient IoT Google Ireland Limited discussion FS\_Ambient\_IoT\_solutions

[R2-2410779](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410779.zip) Discussion on A-IOT paging procedure CEWiT discussion Rel-19 FS\_Ambient\_IoT\_solutions

### 8.2.4 A-IoT Random Access

*Contributions should focus on possible design unification for RA types and/or need for down selection for RA types (2step, 3step, CFRA) in SI/WI phase, Msg3 (re)-transmission failure handling, failure/success feedback indication for following D2R data, re-access, and any additional aspects related to CFRA and CBRA procedures, etc.*

**Down-select 3-step CBRA or 2-step CBRA**

[R2-2410403](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410403.zip) CBRA type down-selection Vodafone, Huawei, CMCC, Telit Communications S.p.A., CATT, Nokia discussion Rel-19

Proposal 1: RAN2 to down-select 3step CBRA only between 2step and 3step RACH

* Noted

[R2-2409738](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409738.zip) Discussion on random access aspects for Ambient IoT LG Electronics Inc. discussion FS\_Ambient\_IoT\_solutions

Proposal 7. Only 2-step CBRA procedure should be introduced for A-IOT.

* Noted

[R2-2409965](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409965.zip) Discussion on Random Access for Ambient IoT Apple discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 6 RAN2 agree that both 2-step RACH and 3-step RACH can be supported in a unified way.

* Noted

**Unified design for 3-step CBRA and 2-step CBRA**

[R2-2410351](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410351.zip) A-IoT random access procedure Huawei, HiSilicon discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 7: RAN2 to discuss the following down-selection:

WF1: Only support 3-step CBRA.

WF2: Agree on the unified CBRA solution, i.e., Msg1 optionally includes data.

A-IoT Msg1: random ID is mandatory, and whether to also include the optional upper layer data is controlled by reader;

A-IoT Msg2 echoes the random ID for contention resolution.

* Noted

Discussion

- Docomo supports Vodafone’s proposal as we have to careful about resources and there may be more than 1000 devices. ZTE thinks that this is up to the reader, there are use cases for 2step and the cost of devices would be lower for device with 2-step.

- ZTE thinks that we can unify and if it is not possible to unify. Unification is very simple as per Huawei’s paper.

- Lenovo, Vivo, and NEC agrees with unified approach.

- CATT that the 2step and 3 step are different and it would introduce complexity.

- CMCC that only if the number of devices is low 2step RA is better, and this is not time critical. Vodafone thikns that amount of collisions is not that small.

- Mediatek is not sure whether we can unify and it is not that easy to unify from device perspective.

- Ericsson thinks it is better to capture both and leave it for future discussion. Qualcomm agrees.

- Oppo should support both. Interdigital also thinks we should support both and unify. There are cases where we have fixed number of devices and we would at least give benefit in terms of amount of energy wasted during the procedure.

- LG thinks a device shouldn’t support both. Xiaomi thinks we should downselect but can unify CBRA and CFRA.

- ZTE, Sony, Samsung Qualcomm and Ericsson thinks we shouldn’t make a decision yet as we have use cases for both RA procedures and we can decide later. This also depends on the WI scope and timeline.

* Capture the unified solution in the TR and capture advantage and disadvantage of the solutions. This requires that devices would support both forms.
* FFS recommendation on whether we have 3step only or we have unified solution.

**Unified design for CBRA and CFRA**

[R2-2409700](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409700.zip) Device support of ambient IoT random access procedures MediaTek Inc. discussion Rel-19 FS\_Ambient\_IoT\_solutions

*Proposal 2: From the device perspective, CBRA and CFRA procedures should be unified by defining a single resource-selection algorithm.*

- LG asks what is single resource-selection? Mediatek explains that the device just follows the same resource selection regardless.

* Noted

[R2-2409623](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409623.zip) Discussion on the Random Access for Ambient IoT CATT discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 1: Unified procedure for CBRA and CFRA is not considered in A-IoT.

* Noted

Discussion

- CATT Thinks unifying would require the UE to send the random ID if we unify. ZTE agrees with mediatek and it is very easy to unify. That means random ID is always included regardless of whether it is CBRA and CFRA.

- Interdigital agrees for signalling perspective but from a procedural perspective it is not possible.

- Xiaomi thinks we should also unify the procedure

- Apple doesn’t understand why the device uses random ID and we shouldn’t introduce something unnecessary CFRA. CMCC, Vivo agrees with Apple

- Qualcomm thinks it doesn’t work, as the reader has no idea that the contention free resources are being used. The UE should only use the ID provided by the reader and the UE has to echo the ID. ZTE thinks that CFRA resources shouldn’t collide between readers.

* Capture in TR as one option for unification for CBRA and CFRA. For this option random ID is always included in msg1 is defined. Capture disadvantage of reader doesn’t know whether the intended device is responding on the given resources.

**MSG3 retransmission**

[R2-2409965](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409965.zip) Discussion on Random Access for Ambient IoT Apple discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 1 For reader which fails to receive Msg 3, support A-IoT reader to re-transmit Msg 2, w/o explicit providing success/failure feedback indication.

* Noted

[R2-2410004](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410004.zip) Random Access Procedure for Ambient IOT InterDigital discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 6a: A device re-transmits MSG3 upon receiving an explicit R2D failure indication for MSG3 failure.

* Noted

Discussion

- LG, Xiaomi, Oppo, think the reader re-transmits msg2 if it fails to receive msg3.

- Interdigital explains that we shouldn’t re-send the same msg2 if that msg2 contains multiple ID

- LG asks if the consequence is that the UE is expected to keep monitoring for msg2 and everytime it receives it msg2 it should send message 3. Samsung confirms and RAN1 has defined a timer. Vodafone asks if this would require storing random ID and why don’t we just repeat the paging.

- Nokia thinks that we should maybe capture both options including explicit feedback.

- Mediatek wonders how long will the device need to remember the ID. Samsung thinks that this can be discussed in WI phase.

* RAN2 assumes, A-IoT reader can send a Msg2 transmission to a specific device for the random ID, if it doesn’t receive msg3 from that ID
* If msg2 contains multiple devices, re-transmitted Msg2 will only include the random IDs of failed devices (if supported).

**Explicit feedback indication for D2R data**

[R2-2410351](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410351.zip) A-IoT random access procedure Huawei, HiSilicon discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 3: The "R2D failure/success feedback indication" also applies to "following D2R data" after the random access procedure for re-access purpose.

* Noted

[R2-2409965](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409965.zip) Discussion on Random Access for Ambient IoT Apple discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 3 Explicit failure/success feedback indication is not supported for follow-up D2R data.

* Noted

Discussion

**-** Vivo thinks that we should have a successful indication.

**-** Mediatek, ZTE, Lenovo, Samsung, LG, CMCC, Vivo, Qualcomm, Ericsson agrees with Huawei and there is value so the device know. ZTE thinks that only message 1 is contention based and everything else should be unified from msg3 onwards.

**-** Huawei thinks that Apple’s assumption that the message will succeed after several tries is not always true. The reader should be able to stop the transmission. Apple thinks that we already agreed to not have RLC. Huawei explains that this indication is for re-access purposes.

**-** Samsung thinks that if we don’t have HARQ there is no way to know so support Huawei.

**-** Xiaomi thinks that we need explicit for success but not for failure.

* The "R2D failure/success feedback indication" also applies to "following D2R data" after the random access procedure for re-access purpose.

**Implicit success consideration**

[R2-2410265](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410265.zip) Discussion on random access for Ambient IoT Lenovo discussion Rel-19

Proposal 11: Implicit success indication of Msg3/D2R message can be used in following case:

Case 3: Implicit ACK when Msg3/D2R message reception success and there is the subsequent R2D message target to the device.

* Noted

**Re-access mechanism**

[R2-2409582](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409582.zip) Discussion on access procedure for ambient IOT Xiaomi discussion Rel-19

Proposal 24: The following 3 options for re-access trigger are supported in SI phase and captured in TR. Down selection will be done in WI:

Option 1: The devices in the current round are triggered to re-access, i.e., re-access in same round.

Option 2: The devices in the previous round are triggered to re-access, i.e., re-access in different round.

Option 3: The devices are triggered to re-access based on paging retransmission.

* Noted

[R2-2409839](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409839.zip) Discussions on AIoT Random Access Fujitsu discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 4: Support re-access in the same access round (Option 1). Dedicate access occasions for re-access in the end of the same access round may be used for re-access by the A-IoT devices which experienced access failure in the previous access occasions**.**

* Noted

[R2-2409623](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409623.zip) Discussion on the Random Access for Ambient IoT CATT discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 7: It’s up to reader to optionally adjust the number of access occasions and provide the particular access occasions for re-access purpose by the A-IoT paging.

* Noted

Discussion

- Vivo thinks that option 2 and 3 should be considered. Option 1 will lower the fairness to other devices.

- Huawei thinks that the only discussion if we need option 2 as option 3 is already in the TR and assumed as baseline. Lenovo thinks that option 1 and 2 should also be included. Nokia is fine.

* Capture the following option in TR: The devices can be triggered by R2D message to re-access before subsequent paging retransmissions.

**Agreements**

1. For 2 step and 3step CBRA, capture the unified solution in the TR and capture advantage and disadvantage of the solutions. This requires that devices would support both forms.
2. FFS recommendation on whether we have 3step only or we have unified solution for 2step and 3step CBRA.
3. Capture in TR as one option for unification for CBRA and CFRA. For this option random ID is always included in msg1. Capture disadvantage of reader doesn’t know whether the intended device is responding on the given resources.
4. RAN2 assumes, A-IoT reader can send a Msg2 transmission to a specific device for the random ID, if it doesn’t receive msg3 from that ID
5. If msg2 contains multiple devices, re-transmitted Msg2 will only include the random IDs of failed devices (if supported).
6. The "R2D failure/success feedback indication" also applies to "following D2R data" after the random access procedure for re-access purpose
7. Capture the following option in TR: The devices can be triggered by R2D message to re-access before subsequent paging retransmissions.

Not treated

[R2-2409577](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409577.zip) Discussion on access procedure for ambient IOT Xiaomi discussion Rel-19 Withdrawn

[R2-2409709](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409709.zip) Random Access Procedure for AIoT Device vivo discussion FS\_Ambient\_IoT\_solutions

[R2-2409784](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409784.zip) Unified random-access procedure for A-IoT ZTE Corporation, Sanechips discussion

[R2-2409792](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409792.zip) Random Access for Ambient IoT device NEC discussion

[R2-2409885](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409885.zip) Discussion on Random Access for A-IoT Transsion Holdings discussion Rel-19

[R2-2409890](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409890.zip) Discussion on D2R failure/success indication in A-IoT SHARP Corporation discussion FS\_Ambient\_IoT\_solutions

[R2-2409895](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409895.zip) random access for AIoT OPPO discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410097](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410097.zip) Random access procedure for A-IoT China Telecom discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410138](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410138.zip) Discussion on random access of Ambient IoT Spreadtrum, UNISOC discussion Rel-19

[R2-2410152](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410152.zip) Discussion on UL multiple access Ericsson discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410261](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410261.zip) Study the A-IoT Random Access Procedure Tejas Network Limited discussion

[R2-2410313](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410313.zip) Remaining issues on study of AIoT random access NTT DOCOMO, INC. discussion Rel-19

[R2-2410315](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410315.zip) Further discussion on ambient IoT random access CMCC discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410376](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410376.zip) Considerations on random access aspects for Ambient IoT Sony discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410414](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410414.zip) Open issues on random access for AIoT Nokia discussion FS\_Ambient\_IoT\_solutions

[R2-2410476](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410476.zip) Views on Random Access Aspects of Ambient IoT Qualcomm Incorporated discussion FS\_Ambient\_IoT\_solutions

[R2-2410576](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410576.zip) Issues with previous agreement on Msg2 in 2-step CBRA Futurewei discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410593](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410593.zip) Discussion on Ambient IoT random access KT Corp. discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410629](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410629.zip) Discussion on random access for ambient IoT Google Ireland Limited discussion FS\_Ambient\_IoT\_solutions

[R2-2410681](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410681.zip) Discussion on A-IoT random access HONOR discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410719](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410719.zip) Further discussion on Ambient IoT random access Samsung discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410780](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410780.zip) Discussion on random access for Ambient IoT CEWiT discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410868](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410868.zip) Handling of Msg2 for 2step CBRA Philips International B.V. discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410890](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410890.zip) A-IoT Random Access - failure/success feedback indication for following D2R data Wiliot LTD discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410890](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410890.zip) A-IoT Random Access - failure/success feedback indication for following D2R data Wiliot LTD discussion Rel-19 FS\_Ambient\_IoT\_solutions

### 8.2.5 Topology 2 considerations

*Contributions should focus on study phase topology 2 related aspects between gNB and reader, including validity of resources and reader behavior, any impacts based on architecture discussions in SA2/RAN3, etc.*

**Cell(s) where resources are valid**

[R2-2409624](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409624.zip) Discussion on Topology 2 for Ambient IoT CATT discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 3: Do not support resource validity across multiple cells in the first release and only support the configured A-IoT interface resource is valid within the serving cell which configures resource for the UE reader.

* Noted

[R2-2409742](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409742.zip) Considerations on TP2 related aspects between BS and UE reader Xiaomi discussion Rel-19

Proposal 4: If the resource validity can be extended to multiple cells, the intra-gNB cells can be considered.

* Noted

*Discussion*

- CMCC, Lenovo, ZTE agrees with CATT, it is an optimization and it not efficient way to utilizes resources. Spreadtrum also support CATT. ZTE thinks that this not just inefficient but it is also wasteful.

- Qualcomm thinks that there are use cases with multiple readers across multiple cells. Vodafone thinks that if ew had time it could make sense for a reader that is in cell edge and it has high probability of handover, but we don’t have time so let’s start simple.

* Resource validity across multiple cells is not supported in the initial release.

**Need for a validity timer**

[R2-2409710](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409710.zip) Discussion on Topology 2 related aspects vivo discussion FS\_Ambient\_IoT\_solutions

Proposal 1. The AIoT radio resource is applicable within a predefined or configured time period. The UE reader starts/restarts the validity timer upon reception of the (re-)configured AIoT radio resources.

* Noted

[R2-2409966](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409966.zip) Remaining open issues in Topology 2 Apple discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 1 RAN2 to discuss whether to define a validity timer for A-IoT radio resources; the timer is started when RLF occurs, when the timer expires the UE reader releases the configured A-IoT radio resources.

* Noted

[R2-2410335](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410335.zip) Discussions on topology 2 for A-IoT CMCC discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 10: Timer-based validity mechanism is not supported, otherwise it may cause interference to other intermediate UEs and it is difficult to deciding the length of the timer.

* Noted

Discussion

- Qualcomm agrees with configured timer in vivo’s paper and doesn’t agree with RLF only. Ericsson thinks that this is only for out of coverage otherwise you rely on explicit signaling. For temporary out of coverage agree with CMCC

- Interdigital supports for having a timer that can be used for temp out of coverage case. Explicit signaling can be use to release the resource and RLF wouldn’t be a reasonable solution.

- Oppo prefers timer based solution and doesn’t understand interference problem caused by RLF as the UE may not leave the coverage.

- Xiaomi, Spreadtrum doesn’t want to support as we have to define when to stop and when to start.

- MEdiatek agrees with vivo, and we have two ways, either the UE keeps requesting or having a timer the UE can use the resources during this time. Timer is simpler mechanism and doesn’t understand complexity and interference for a relatively short timer. Samsung thinks that whether the UE keeps requesting is not yet discussed.

- CATT asks if the time is shared between the NW and the UE. Vivo explains that the timer is between the UE and the NW so it is within the synchronized system. Mediatek thinks that the device doesn’t need to know the timer.

- ZTE thinks we are entering stage 3 details. We configure some resource and a time the resource is available and whow the time is controlled can be stage 3.

- Vodafone thinks thit is is a static UE reader. Mediatek thinks that we can’t make that assumption.

- Huawei agrees that somehow the network needs to control the time, and the one reason the timer may be needed is for temporary out of coverage. And baseline should be the explicit network configuration

- Samsung doesn’t think this is a critical issue and we should keep it simple.

- Apple asks which state we are talking about. ZTE thinks that it doesn’t matter, we just need to give a time frequency resource to use and it can be used in any state, it comes in dedicated signaling.

- CMCC thinks that RLF are usually caused by late HO and anyways the UE can’t use those resources and this is why interference will happen. The time varies for many cases including receiving response etc, so it is not easy to determine this time in advance.

- LG for normal operation the network can control the frequency and time and during temporary out of failure we can use the resources for a short time.

- Interdigital thinks that if we provide the UE with resources valid for a certain amount of time it handles all the cases like temporary out of coverage with one solution.

- Ericsson thinks that we are discussing whether we should do something for temp out of coverage scenario, and we can do timer, resource configuration, or just suspend the resources.

- Oppo thinks that we can make it an exceptional cases.

- Qualcomm explains that we can go with configuration or resource and time as long as they are valid in any RRC state of the reader.

- ETRI has similar view as CMCC.

- Nokia thinks timer based is the simplest way to enable the reader to complete the procedure without interaction with gNB all the time. Mediatek agrees that there seems to be no reason for the reader to go back and forth to the gNB for each message, and it is more efficient to use persistently.

- CATT supports timer.

- Huawei wonders if we have time to do all the scenarios and this is the last meeting to study.

- Samsung thinks that resource validity is under network control and we don’t need to capture all options in the TR.

- ZTE thinks we can just capture Timer is implicit or explicit in the configuration

* Include in the TR the resource validity is under network control. CB which option we include.
* [AT128][016][AIoT] Resource validity (Interdigital)

Intended outcome: Which options to capture for validity, how to handle temp out of connection, and whether resources are valid across states.

Deadline: 10-17-24

[R2-2411179](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411179.zip) Conclusion of  [AT128][016][AIoT] Resource validity InterDigital discussion Rel-19 FS\_Ambient\_IoT\_solutions

* Noted

|  |
| --- |
| **Agreements**   1. Resource validity across multiple cells is not supported in the initial release. 2. Include in the TR the resource validity is under network control. CB which option we include. 3. We will capture the following options in the TR for resource validity in different cases when the resources are allocated semi-statically by the network:   Reader UE performing AIOT operation in RRC\_CONNECTED (downselection or support of both options will be decided in the WI phase):   * Option 1: UE receives resources in dedicated signalling. The resources remain valid until the network releases them explicitly (understanding is this would be supported by RRC reconfiguration) * Option 2: UE receives resources in dedicated signalling along with a time period in which they can be used. The resources remain valid for that time period.   Reader UE performing AIOT operation in RRC\_INACTIVE (downselection or support of both options will be decided in the WI phase):   * Option 1: UE receives resources in dedicated signalling before moving to RRC\_INACTIVE. The resources remain valid until the network releases them explicitly. * Option 2: UE receives resources and a time period in dedicated signalling before moving to RRC\_INACTIVE. The resources remain valid for that period of time.   Reader UE performing AIOT operation in RRC\_CONNECTED and upon “temporary out of connection” during the operation. (downselection between the following options will be performed in the WI phase)   * Option 1: Resources remain valid at the reader for a time period (FFS whether the same time period as in RRC\_CONNECTED options or a different time period. FFS whether the time period is related to the ongoing AIOT operation). * Option 2: Resources are temporarily invalid at the reader during the “temporary out of connection” condition but may become valid again if the UE recovers from the condition.   If reader UE supports AIOT operation in RRC\_IDLE, options of RRC\_INACTIVE are candidates. –  - Support of RRC\_IDLE (other than in temporary out of connection) is down-prioritized. During WI can consider it if feasible with minimum spec impact  For all options  The resources remain valid only in the same cell for which the resources were configured. |

**Validity based on Explicit Signalling**

[R2-2410083](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410083.zip) Validity of resources and reader behavior in Topology 2 NEC discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 4: To properly terminate the validity duration, RAN2 agree to further study necessary assistance information (e.g., the A-IoT resource termination indication) from the UE reader to the NW.

Proposal 5: On the UE reader behavior of termination of the validity duration, RAN2 agree to capture the following option to the TR:

The UE reader terminates the validity of resources upon receiving the termination command of the resource validity via dedicated signaling/MAC CE/DCI.

**“Temporary Out of Connection” Scenario**

[R2-2410151](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410151.zip) On Topology 2 Ericsson discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 8 Temporarily Out of Connection” means the connection to the serving cell becomes unstable or the intermediate UE may lose/release RRC connection to serving cell soon but still stays in RRC connected. Examples of temporarily out of connection include (but not limited to) following cases/events:

a. The intermediate UE detects physical layer problems and the RLF timer (i.e., T310) is still running. In this case, the number of out of sync instances has reached a configured number (e.g., N310).

b. The intermediate UE is performing (conditional) HO and the HO timer (e.g., T304) is still running.

c. The intermediate UE is performing RRC reestablishment and the reestablishment timer (i.e., T301 or T311) is still running.

**Recovery from “Temporary Out of Connection” Scenarios**

[R2-2410005](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410005.zip) Topology 2 for Ambient IOT InterDigital discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 9: An intermediate UE suspends an ongoing AIOT operation during cell reselection following RLF and can continue the operation if it has valid resources after recovery.

[R2-2410595](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410595.zip) Discussion on topology 2 considerations of ambient IoT LG Electronics Inc. discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 2. A-IoT radio resource is valid and used for the on-going A-IoT procedure when the UE-reader is in a temporary out of connection scenario (e.g., RLF and handover cases).

**Support of IDLE/INACTIVE**

[R2-2410552](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410552.zip) Further aspects of Topology 2 Qualcomm Incorporated discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 5: UE Reader can be in any RRC State while performing R2D/D2R activities. Consequently, the UE reader in any RRC state can collect AIoT data from the AIoT device(s).

[R2-2410005](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410005.zip) Topology 2 for Ambient IOT InterDigital discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 11: The intermediate UE can be moved to RRC\_INACTIVE after receiving initiation of an AIOT service if it has received valid resources from the gNB.

Proposal 12: Performing or continuing an AIOT operation after the UE is released to RRC\_IDLE is not supported.

**Reader Selection**

[R2-2409688](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409688.zip) Remaining issues of AIoT TP2 ZTE Corporation, Sanechips discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 4a: As the base station may have more up-to-date information on the connection existence or radio situation of a UE, or even UE’s preference, it should also allow the base station to involve the UE reader selection.

Proposal 4b: The information about whether a UE has been authorized to act as reader may need to be passed from the CN to the base station or reported by the UE to the base station.

* Noted

[R2-2410098](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410098.zip) Discussion on Topology 2 related aspects for Ambient IoT China Telecom discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 7: For the selection of UE reader, RAN2 leave it for RAN3/SA2 decision in the study phase.

* Noted

Discussion

- ZTE, Ericsson, CMCC, thinks that there may reasons that gNB has more information on UE readers. gNB has more interference information as well, like beam.

- ZTE suggests that from RAN2 perspective gNB can be involved in reader selection. Apple is not sure how it would work in practice. Huawei explains that there are two options, the CN provides candidates and gNB decides or the CN decides. ZTE is just saying that from radio perspective it make sense for gNB to be involved.

- Lenovo prefers to leave it to other WGs for now.

- Qualcomm thinks that the CN selectes the reader but the gNB can determine that it may not work. CMCC explains that gNB has more information on the location and coverage of readers.

* From RAN2 perspective, at least for RRC based architecture, there may be radio related reasons for gNB to be involved in reader selection.
* Whether the gNB or CN selects the reader, and/or what information is shared between gNB and CN is up to RAN3/SA2

**Resource Allocation Granularity (may depend on Architecture discussions)**

[R2-2410647](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410647.zip) Remaining issues on Topology 2 aspects of Ambient IoT Kyocera discussion Rel-19

Proposal 2 RAN2 should agree that the dynamic grant-like and configured grant-like resource allocations for Ambient IoT communications are supported.

[R2-2410266](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410266.zip) Considerations on Topology 2 for Ambient IoT Lenovo discussion Rel-19

Proposal 7: RAN2 is suggested to consider following A-IoT air interface resource allocation methods by the serving gNB and option 1 is preferred.

 Option 1: the serving gNB allocates resource pool for the whole A-IoT procedure for specific I-UE.

 Option 2: the serving gNB allocates resource for specific A-IoT message/procedure for specific I-UE.

**Information Obtained by the gNB for allocation (may depend on Architecture discussions)**

[R2-2409701](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409701.zip) Ambient IoT resource allocation for topology 2 MediaTek Inc. discussion Rel-19 FS\_Ambient\_IoT\_solutions

Proposal 2: An AIoT resource allocation from the gNB is sent in response to a request from the UE reader and consists of a set of radio resources and validity criteria that determine when the resources may be used.

* Noted

[R2-2409899](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409899.zip) A-IoT Topology 2 aspects Huawei, HiSilicon discussion Rel-19

Proposal 4a: For UP/NAS based solution, the BS can allocate radio resources to UE readers based on UE request or indication from CN, which is subject to final decision on the architecture option (left to normative work).

Proposal 4b: For RRC based solution, BS can directly configure the dedicated radio resources based on service request from CN.

* Noted

Discussion

- ZTE CN and reader directly then you need request from UE to gNB. If it is terminated in the gNB the gNB.

- Ericsson and Qualcomm thinks that option 2 on it’s own may not always work as the CN doesn’t have enough information on needed resource grants.

**Agreements**

Capture the following options:

1. An AIoT resource allocation from the gNB is sent in response to a request from the UE reader and consists of a set of radio resources and validity criteria (if applicable)
2. BS can directly configure a set of radio resources and validity criteria (if applicable) based on service request from CN.
3. These two options can co-exist

[R2-2409840](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409840.zip) Discussions on topology 2 related aspects Fujitsu discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2409894](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409894.zip) Discussion on topology 2 for Ambient IOT OPPO discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410083](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410083.zip) Validity of resources and reader behavior in Topology 2 NEC discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410141](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410141.zip) Discussion on Topology 2 issues Spreadtrum, UNISOC discussion Rel-19

[R2-2410179](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410179.zip) Consideration on information and scenario in Topology 2 ASUSTeK discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410251](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410251.zip) Discussion on topology 2 for A-IoT KT Corp. discussion

[R2-2410371](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410371.zip) Discussion on ‘temporary out of connection’ in Topology 2 ETRI discussion Rel-19

[R2-2410467](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410467.zip) RAN2 Aspects for AIoT Operation in Topology 2 Nokia discussion

[R2-2410682](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410682.zip) Consideration on resource configuration for Topology 2 HONOR discussion Rel-19 FS\_Ambient\_IoT\_solutions

[R2-2410760](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410760.zip) Considerations on Topology 2 for Ambient IoT TCL discussion

[R2-2410805](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410805.zip) Discussion on Topology 2 related aspects 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: 2 tdocs*

8.3.1 Organizational

*LS, Rapporteur input, including workplan, etc.*

[R2-2410186](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410186.zip) Text proposal of 38.744 OPPO pCR Rel-19 38.744 0.0.5 FS\_NR\_AIML\_Mob

* The TR endorsed

Prioritization for February (RLF, Event prediction, System level performance (for event prediction), Generalization)

- Companies would like to downprioritize RLF. Apple thinks that RLF is more important than useless generalization. Huawei thinks generalization for UE speeds is useful.

- Ericsson thinks that event prediction, generalation, and system level can be second step. Qualcomm agrees.

- Huawei thinks that event prediction and system level are important, and generalization is lower priority.

* For february meeting, RLF simulations are not expected.
* [POST128][021][AI Mob] Templates for simulations (Mediatek/Oppo)

Intended outcome:

1. agree to updated and new templates. Companies should update their simulation results in the new template (Mediatek)

2. agree principles on how to capture observations from simulations (Oppo)

Deadline: Jan. 15th

* + 1. RRM measurement prediction

8.3.2.1 Simulation results

*Contributions should focus on simulation results and observations on the agreed on prioritized scenarios and agreed assumptions. Further input on remaining issues related to RRM measurement prediction.*

*Any simulation results on non-prioritized scenarios should be clearly captured in separate section indicating “new scenarios”*

**Temporal case A/B (Scenarios 2/4) simulation results:**

[R2-2410339](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410339.zip) Simulation results for RRM measurement prediction CMCC discussion Rel-19 FS\_NR\_AIML\_Mob

*Case B: to compare the RSRP difference at different MRRT with the same UE speed*

*Observation 2: With the same UE speed, the prediction accuracy for intra-frequency temporal domain case B reduces as the increase of MRRT.*

*Observation 3: When the MRRT is up to 2/3 and above, the average RSRP difference is more than 1dB, and even up to 2.133dB with MRRT is 4/5.*

- Ericsson doesn’t see that large difference so we can have a general observation. Apple asks in general how do we capture the numbers given the large variance between companies. Oppo thinks that we can follow RAN1 example.

*Observation 5: With the increase of prediction window, the prediction accuracy of the last value at the end of the prediction window deteriorates seriously.*

Case A: to compare the RSRP difference at different Observation window vs Prediction window with the same UE speed

*Observation 7: The prediction accuracy of the last value does not deteriorate obviously compared with the Average RSRP difference when OW and PW have the same length, even if the UE speed is up to 90km/h.*

Observation 8: Keeping OW and PW have the close length is helpful to ensure the prediction accuracy for intra-frequency temporal domain case A.

* Noted

[R2-2410799](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410799.zip) Evaluation on RRM measurement prediction ZTE Corporation discussion Rel-19 FS\_NR\_AIML\_Mob

*Observation 1: Regarding temporal domain prediction case B, with the same MRRT, different skipping pattern can provide different prediction performance.*

- Vivo thinks that we can go even further and say that skipping pattern example 2 has better performance.

Observation 2: Regarding temporal domain prediction case B, filtering option 2 and filtering option 3 provide similar prediction performance, where

Filtering option 2: L3 filtering is based on the L1 filtered result if the last L3 filtered result is from prediction;

Filtering option 3: L3 filtering is based on the L1 filtered result and the L3 filtered result from last actual measurement.

Proposal 1: For temporal domain prediction case B, suggest companies to report the adopted skipping pattern when providing simulation results.

* Noted

**Inter-frequency prediction (Scenario 3)**

[R2-2409823](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409823.zip) Discussion on the simulation results for RRM measurement prediction Samsung discussion Rel-19 FS\_NR\_AIML\_Mob

*Observation 11: For the inter-frequency prediction, the evaluation results show a high inter-frequency correlation between the L3 cell-level RSRP of the two co-located cells. The correlation coefficient is observed as 0.899, 0.902, 0.918 for each of UE speed 30, 60, 120km/h, respectively.*

*Observation 12: For the inter-frequency prediction, the average L3 RSRP difference is observed as 4.144, 3.907, 3.61 dB with the correlation coefficient of 0.899, 0.902, 0.918, respectively.*

*Observation 13: For the inter-frequency prediction, the evaluation results show that higher correlation coefficient between two frequency layers results in higher prediction accuracy.*

*Observation 14: Despite the high correlation between the L3 RSRP of the two cells in different freq., the L3 RSRP difference in inter-frequency prediction is a bit larger compared to the values in other cases (i.e., temporal domain prediction Case A&B).*

- ZTE doesn’t think that this is a common observation from companies, it varies quite a bit. Huawei also doesn’t show the same observation.

* Noted

[R2-2409866](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409866.zip) Discussion on RRM prediction simulation result Xiaomi discussion

Case 3 simulation result

*Observation 1: Cluster as input can improve the prediction accuracy than single cell as input.*

*Observation 2: More cells in cluster as input can improve the prediction accuracy.*

*-* Ericsson thinks that for bad cells it is easy to predict that the value will be bad, and this may cause adding lots of bad cells in the clusters. Apple agrees and not sure if it brings much and increased number of cells will increase model complexity.

- Xiaomi explains that maximum is 7 cells in the cluster, but agree that if we add more than the gain won’t be much.

- Mediatek thinks that the more good cells will improve performance but it will increase complexity.

- Oppo thinks we should make it clear that while it improves performance but should capture that it comes with complexity cost.

- Ericsson thinks that we need to follow the RAN4 requirements that the UE can only measure up to 4 cells in a different frequency. Oppo and InterDigital thinks that we are measuring the serving cells frequency to predict another frequency. Ericsson explains that we can take measurement on another non-frequency layer to predict another frequency. Huawei doesn’t think this was the intention of inter-frequency prediction.

*Observation 3: Addition of historic measurement results as input can provide prediction accuracy gain.*

- Oppo disagrees with this observation. Vivo thinks that non-AI approach provides quite good results.

*Observation 4: The addition of UE location can provide significant gain only when the number of cells in cluster is small.*

- Apple wonders if we should study how UE location improves the accuracy, as this is more general. Mediatek thinks that it is tricky as in a real system UE location information is proprietary. ZTE indicates that we never agreed to have UE location as an input.

**Agreements/Observations to be captured in TR**

1. The prediction accuracy for intra-frequency temporal domain case B reduces as MRRT increases.
2. For temporal domain case B, with the same MRRT, different skipping pattern can provide different prediction performance. Companies may report the adopted skipping pattern when providing simulation results. Companies are not required to run new simulations but can clarify in the spreadsheet. We can capture in the TR how the skipping patter affects the performance.
3. For the inter-frequency prediction, the evaluation results show that the higher the correlation coefficient is between two frequency layers, the higher the prediction accuracy. FFS on observations on low correlations.
4. For inter-frequency, cluster as input (i.e. measurements from different cells as inputs )can improve the prediction accuracy than single cell as input. For temporal domain, the gains are unclear. RAN2 will focus on frequency domain for cluster based approach.
5. In cluster approach the model takes measurements from more than one cell as inputs.

**Benchmarking with Non-AI ML/simple AI models:**

[R2-2410187](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410187.zip) Discussion on simulation result of RRM measurement prediction OPPO discussion Rel-19 FS\_NR\_AIML\_Mob

Observation 1: For FR1 intra-frequency temporal domain case B, when PW is short, the performance between AI and sample-and-hold is not significant. However, when PW becomes larger, AI outperforms sample-and-hold. The observed AI gain ranges from 21% to 37%.

Observation 2: For FR1 intra-frequency temporal domain case B, the increase of MRRT results in a decrease in AI gain.

Observation 3: For FR1 intra-frequency temporal domain case B, the increase of UE speed results in a decrease in AI gain.

[R2-2409868](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409868.zip) Simulation Results for AIML RRM Prediction and Remaining Issues MediaTek Inc. discussion

Observation 3: In frequency domain prediction cases, cell-based approaches achieve limited gain compared to the non-AI approach without the help of neighbor cell measurement. The cluster-based approach outperforms cell-based approaches across all sub-use cases.

Observation 8: For intra-frequency temporal domain case A, AI can provide ~20% gain (in terms of L3 cell RSRP difference) compared to the non-AI approach, i.e., sample and hold. The improvement is more significant in the high UE speed case, e.g., 120km/hr, than in the low UE speed cases, e.g., 60km/hr.

Discussion

- Apple asks why only sample and hold. Mediatek explains that sample and hold is very simple. Apple thinks that there are very simple model like linear regression, and this may show that the gains may be small. Docomo thinks that sample and hold is easier to align and with any other approaches we need to align the assumptions. Apple explains that it is only 3 parameters.

- Oppo thinks that we can capture the observations and explain what non-AI approach is used. Docomo explains that we can follow the RAN1 approach, define two non-AI benchmarks. Nokia agrees that we can agree on two approaches, sample and hold. Samsung is ok to use sample and hold but this is only applicable to temporal domain.

**Agreements/observations**

1. Companies can compare results with non-AI approaches. Temporal domain, sample and hold, and frequency domain, pathloss offset. Companies can consider other simple models (e.g. ARIMA).
2. For FR1 intra-frequency temporal domain case B, when PW is short, the performance between AI and sample-and-hold is not significant. However, when PW becomes larger, AI outperforms sample-and-hold.
3. In frequency domain prediction cases (2GHz and 4GHz), cell-based approaches achieve limited gain compared to pathloss offset without the help of neighbor cell measurement. The cluster-based shows better performance compared to pathloss offset.
4. For intra-frequency temporal domain case A, AI can provide gains (in terms of L3 cell RSRP difference) compared to sample and hold. The gain improves with UE speed.

**Other aspects:**

[R2-2410020](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410020.zip) Simulation results on the RRM measurement prediction and discussions NTT DOCOMO, INC. discussion

Proposal 2

Evaluate the RRM measurement prediction in serving and Top-K neighboring cells, where K=[1,2,… ].

Note: It is up to companies to choose the cell-common, cell-specific, or cluster-based approach.

RAN2 selects one of the following options for the RSRP difference report.

* Opt.1: Separately report for serving and neighboring. The RSRP is averaged across neighboring when K > 1.
* Opt.2: Averaged across all K + 1 cells.
* Opt.3: Report the RSRP differences averaged across the Top-M (M=1,2,…,K) cells at the prediction time instance.
* Other approaches.

[R2-2409868](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409868.zip) Simulation Results for AIML RRM Prediction and Remaining Issues MediaTek Inc. discussion

Clarification of average RSRP difference

Proposal 2: Companies can report how to derive the average L3 cell-level RSRP difference. Specifically, do we consider neighbor cells and what is the scope of the “average”?

* Option 1: We consider neighbor cells prediction, the “average” refers to the average of all cells including the serving cell and neighboring cells.
* Option 2: We only consider serving cell prediction, the “average” refers to the average of the serving cell.

Other option

Proposal 3: RAN2 consider “average” to be the average of all cells, including the serving cell and all other neighbor cells as the baseline method to derive the average L3 cell-level RSRP difference.

[R2-2410187](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410187.zip) Discussion on simulation result of RRM measurement prediction OPPO discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 1: RAN2 can capture the performance results in the following structure:

RRM prediction

* Basic performance for scenario 2
* Basic performance for scenario 3
* Basic performance for scenario 4
* Basic performance for scenario 6
* Generalization performance

Summary of performance results

Proposal 2: Under basic performance for scenarios 2, 3, 4 and 6, using separate sub-sections for sub cases 1, 2, and 3, e.g.,

Basic performance for scenario 2

* Sub case 1
* Sub case 2
* Sub case 3

Proposal 3: Within each sub case, capture the following sub-bullets on performance results:

* For scenario 2: (A) MRRT, (B) UE speed
* For scenario 3: No sub-bullet
* For scenario 4: (A) observation window : prediction window, (B) UE speed
* For scenario 6: No sub-bullet

[R2-2409651](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409651.zip) Simulation results of RRM Measurement Prediction CATT, Turkcell discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2409667](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409667.zip) Updated simulation results for RRM measurement prediction vivo discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2409823](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409823.zip) Discussion on the simulation results for RRM measurement prediction Samsung discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2409866](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409866.zip) Discussion on RRM prediction simulation result Xiaomi discussion

[R2-2409868](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409868.zip) Simulation Results for AIML RRM Prediction and Remaining Issues MediaTek Inc. discussion

[R2-2409971](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409971.zip) Cluster-based approach, UE-sided vs. network-sided models, etc. Apple discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2410020](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410020.zip) Simulation results on the RRM measurement prediction and discussions NTT DOCOMO, INC. discussion

[R2-2410144](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410144.zip) Simulation results on RRM measurement prediction Spreadtrum, UNISOC, BUPT discussion Rel-19

[R2-2410187](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410187.zip) Discussion on simulation result of RRM measurement prediction OPPO discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2410339](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410339.zip) Simulation results for RRM measurement prediction CMCC discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2410474](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410474.zip) Simulation results for temporal, inter-frequency and spatial domain RRM measurement predictions Ericsson discussion FS\_NR\_AIML\_Mob

[R2-2410507](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410507.zip) Simulation results for RRM measurement predictions Interdigital Inc. discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2410539](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410539.zip) Simulation results for RRM measurement prediction Huawei, HiSilicon discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2410678](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410678.zip) Simulation and evaluation of RRM measurement prediction Indian Institute of Tech (M), IIT Kanpur discussion Rel-19

[R2-2410781](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410781.zip) Simulation results for RRM Measurement Prediction CEWiT discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2410796](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410796.zip) On the RRM measurement prediction aspects Nokia discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2410799](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410799.zip) Evaluation on RRM measurement prediction ZTE Corporation discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2410037](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410037.zip) Discussion on cluster based RRM measurement prediction BJTU discussion

[R2-2410744](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410744.zip) AI-ML based Inter-frequency measurement prediction Rakuten Mobile, Inc discussion Rel-19

[R2-2410774](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410774.zip) Simulation results for RRM measurement prediction Qualcomm Incorporated discussion Rel-19

8.3.5 Other

*Including outcome* *[POST127bis][022][AI mobility] Simulation Assumption of measurement event/RLF prediction and SLS (OPPO)*

*Contributions on simulations assumptions, including controversial aspects of email discussion or on aspects not covered in email discussion related to simulation assumptions for RLF, Event prediction, and system performance evaluation*

*Contributions on aspects and assumptions related to generalization study for RRM prediction*

**Model Generalization (definition/scenarios):**

[R2-2410023](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410023.zip) Discussions on evaluation methodology of AI/ML for mobility NTT DOCOMO, INC. discussion

Proposal 1

• Reuse the evaluation methodology in TR38.843 for generalization study, i.e., the generalization performance is evaluated with the following 3 cases,

* *Generalization Case #1 (GC#1):* The AI/ML model is trained using the dataset with Configuration #B and tested using the dataset with Configuration #B.
* Note: GC#1 is the baseline for the generalization evaluations.
* *Generalization Case #2 (GC#2):* The AI/ML model is trained using the dataset with Configuration #A but tested using the dataset with Configuration #B.
* *Generalization Case #3 (GC#3):* The AI/ML model is trained using mixed datasets with both configurations and tested using the dataset with Configuration #B.

- Vivo thinks that RAN1 also adds scenario. Oppo explains that this is a principle and configuration can be anything. MEdiatek agrees with the principles.

- Mediatek thinks we should start with case 1 to minimize simulation efforts.

- Xiaomi thinks that case 1 is mandatory but we need to chose either 2 or 3.

Proposal 2

• Use the intermediate KPIs for the generalization study. The relative performance of intermediate KPIs between GC#2/#3 and GC#1 is used.

- Samsung thinks that case number 2 can be optional. Apple suggests that we allow both and companies can chose whether we compare with 2 or 3. Qualcomm thinks at least case 2 is necessary for generalization. Nokia agrees with Qualcomm.

- Ericsson is not sure that case 3 is generalization, so case 2 is needed. Interdigital agrees and doing case 3 might incur a lot of simulations.

- ZTE thinks that case 3 is easier for simulations. Oppo thinks that we can simplify case 2 by having less combination.

* Noted

[R2-2409829](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409829.zip) Discussion on Generalization Issues for AI/ML Mobility Samsung discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 1: RAN2 to prioritize generalization issues on RRM measurement prediction while deprioritizing generalization issues on measurement/RLF/HOF event prediction.

Proposal 2: RAN2 to study generalization issue on RRM measurement prediction in temporal domain with different UE speeds.

Discussion

- Xiaomi thinks that we should evaluate other things in addition to UE speeds

- Apple thinks UE speed is the least interesting thing to study, we should study against different cells and configuration. Qualcomm agrees UE speed is not interesting, we should look at parameters, instead cells which are complicated.

- Interdigital thinks that we should be careful on what we agree to generalize and we should focus on parameters we have already done simulations for it is easier, but we should be careful not to introduce too many new scenarios/parameters.

- Vivo thinks we should consider other thinks like scenarios

- Qualcomm thinks we should also consider inter-frequency domain. ZTE is fine to prioritize but also interested for inter-frequency. Huawei thinks that this is still temporal domain.

- Huawie indicates that UE speed is still important to verify wether we can generalize

* Noted

|  |
| --- |
| **Agreements**   1. Reuse the evaluation methodology in TR38.843 for generalization study, i.e., the generalization performance is evaluated with the following cases,  * *Baseline:* The AI/ML model is trained using the dataset with Configuration #B and tested using the dataset with Configuration #B. * *Generalization Case #1 (GC#1):* The AI/ML model is trained using the dataset with Configuration #A but tested using the dataset with Configuration #B. * *Generalization Case #2 (GC#2):* The AI/ML model is trained using mixed datasets with both configurations and tested using the dataset with Configuration #B.   2 Companies can choose which case they compare with and should report it with simulation results.  3 Generalization issues on RRM measurement prediction are prioritized.  4 Start the study with generalization issue with RRM measurement prediction in temporal domain. Companies can chose to study frequency domain prediction cases and report what they have simulated. |

**Model Generalization (parameters/settings to be generalized):**

[R2-2410188](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410188.zip) Discussion on generalization study of AI mobility OPPO discussion Rel-19 FS\_NR\_AIML\_Mob

*Proposal 2: RAN2 focus on generalization over UE speed*

*Proposal 4: The simulation assumption of FR1 temporal domain case B is reused for generalization study with 3 UE speeds i.e. 30Km/h, 60Km/h and 90Km/h*

*Proposal 5: The simulation assumption of FR2 temporal domain case A is reused for generalization study with 3 UE speeds i.e. 60Km/h, 90Km/h and 120Km/h*

- Apple reminds every one that there is zero standardization impact for UE speed. Samsung thinks that if UE speeds can’t be generalized then it can be precluded from NW sided model cases.

- ZTE thinks this simulation assumptions should also apply to frequency domain. Xiaomi doesn’t think UE speed should be study for frequency domain. Samsung agrees, UE speed doesn’t have much impact on the frequency domain so this study is not necessary.

- Nokia thought that FR2 we would do lower speed. Vivo explains that for FR2 the study goal is related to measurement reductions.

* [AT128][017][AI mob]Simulation assumptions ()

Intended outcome: Generalization combinations for UE speed

Deadline: 10-17-24

* Study generalization over UE speeds
* The simulation assumption of FR1 temporal domain case B is reused for generalization study with 3 UE speeds i.e. 30Km/h, 60Km/h and 90Km/h. FFS on combinations
* The simulation assumption of FR2 temporal domain case A is reused for generalization study with 3 UE speeds i.e. 60Km/h, 90Km/h and 120Km/h. FFS on combinations

[R2-2411175](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2411175.zip) Summary of [AT128][017][AI mob]Simulation assumptions (OPPO) OPPO discussion Rel-19 FS\_NR\_AIML\_Mob

Agreements for generalization

1 Between GC#1 and GC#2, RAN2 focus on GC#2

2 simulation combination for FR1 generalization study:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Training @Dataset: 30km/h | Training @Dataset: 60km/h | Training @Dataset: 90km/h | Inference @30km/h | Inference @60km/h | Inference @90km/h |
| Baseline | Yes |  |  | Yes |  |  |
| GC#1 | Yes |  |  |  | Yes | Yes |
| GC#2 | Yes | Yes | Yes | Yes |  |  |
| Baseline |  | Yes |  |  | Yes |  |
| GC#1 |  | Yes |  | Yes |  | Yes |
| GC#2 | Yes | Yes | Yes |  | Yes |  |
| Baseline |  |  | Yes |  |  | Yes |
| GC#1 |  |  | Yes | Yes | Yes |  |
| GC#2 | Yes | Yes | Yes |  |  | Yes |

2a simulation combination for FR2 generalization study:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Training @Dataset: 60km/h | Training @Dataset: 90km/h | Training @Dataset: 120km/h | Inference @60km/h | Inference @90km/h | Inference @120km/h |
| Baseline | Yes |  |  | Yes |  |  |
| GC#1 | Yes |  |  |  | Yes | Yes |
| GC#2 | Yes | Yes | Yes | Yes |  |  |
| Baseline |  | Yes |  |  | Yes |  |
| GC#1 |  | Yes |  | Yes |  | Yes |
| GC#2 | Yes | Yes | Yes |  | Yes |  |
| Baseline |  |  | Yes |  |  | Yes |
| GC#1 |  |  | Yes | Yes | Yes |  |
| GC#2 | Yes | Yes | Yes |  |  | Yes |

**Agreements on measurements events**

1 Agreed values for Case A. NOTE1 indirect prediction only

|  |  |  |
| --- | --- | --- |
| Parameters | baseline value | Note |
| A3 event offset (db) | 2 | Open for 3db |
| TTT (ms) | 320 | Open for one shorter value |
| UE speed (km/h) | 90 | Open for 60 and 120km/h |
| OW length (ms, note1) | N/A | Up to implementation |
| PW length (ms, note1) | 400 | Open for more values |
| Max ETD (ms, note1) | 80 | Open for more values |

2 Agreed values for Case B. NOTE1 indirect prediction only

|  |  |  |
| --- | --- | --- |
| Parameters | baseline value | Note |
| A3 event offset (db) | 2 | Open for 3db |
| TTT (ms) | 320 | Open for one shorter value |
| UE speed (km/h) | 30 | Open for 60 and 90km/h |
| OW length (ms,note1) | N/A | Up to implementation |
| PW length (ms,note1) | 200 (non-sliding)  40ms (sliding) | Open for more values |
| Max ETD (ms, note1) | 80 | Open for more values |
| MRRT | 50% | Open for more values |

3 Company can report which filtering options is being used for the input L3 RSRP of sub-use case 2: option 1, option 2, option 3.

4 to capture the 3 options into TR

**Agreements on RLF predictions**

1 Agree to following values (NOTE1 indirect only)

|  |  |
| --- | --- |
| Parameter | Value |
| Qin threshold | -6db |
| Qout threshold | -8db |
| Sample rate (TIndication\_interval) | 20ms (FR2)/40ms(FR1) |
| Qin evaluation period | 100ms |
| Qout evaluation period | 200ms |
| T310 | 1000ms |
| N310 | 1 |
| N311 | 1 |
| Max ETD (ms, note1) | 80ms |
| PW length (ms,note1) | 400 |
| OW length (ms, note1) | Up to implementation |

2 The beam transmission pattern is synchronized across the site/cells i.e., at any given time the transmitted beam index is the same across the site/cells.

**For System level simulation**

1 For measurement event prediction for temporal domain case B:

UE reports when A3 event is satisfied with actual measurements and predicted results. And handover command will be received after handover preparation.

Remove T0 from the picture



**2** For measurement event prediction for temporal domain case A, company focus on option 2 or option 3.

**Option 2:** network transmit handover command purely based on actual measurement event regardless whether an actual measurement result(@t2) is earlier or later than predicted measurement event((@t1))

 

**Option 3**: For AI mobility, HO preparation starts when an event is predicted to happen (i.e., t0), and HO command is sent when A3 entering conditions are met based on actual/real measurement and an event is predicted to be met for the duration of TTT.



**3** Handover Preparation time is 40ms and handover execution time: 40ms

**4** RAN2 focus on indirect prediction methodology.

**Agreements on direct prediction for RLF and event predictions**

**1** The time window for direct prediction goes for interpretation 2



**2** For direct prediction, following values are agreed and company can report probability threshold for corresponding case (other values are allowed)

|  |  |  |
| --- | --- | --- |
|  | Measurement event prediction | RLF prediction |
| Time window length (Interpretation 2) | PW length as indirect case  (FR1:200ms; FR2:400ms) | PW length as indirect case  FR1/FR2: 400ms |

[R2-2410263](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410263.zip) Discussion on generalization aspects Ericsson discussion Rel-19 FS\_NR\_AIML\_Mob

*Proposal 7 For generalization evaluation over carrier frequencies:*

* *Training dataset is 0,8 GHz and 4 GHz, and inference dataset is 2 GHz.*
* *Training dataset is 2 GHz and inference dataset is 4 GHz.*
* *Training dataset is 4 GHz and inference dataset is 2 GHz.*

- Apple thinks this is even less interesting that UE speed. Qualcomm sees some value in the case where we can see if we can generalize over different frequencies so we don’t need multiple measurement gaps.

- Docomo indicates that for operators this would be important for frequencies in different bands. Mediatek thinks that one issue is which bands we select for simulations. Docomo thinks we can consider a larger one.

- Nokia asks why we need three frequencies, as it is not aligned with agreed case 2. Oppo agrees and if we should follow existing simulation assumptions and just focus on 2GHz and 4GHz. Xiaomi agrees we should limit to two for temporal domain.

- Samsung also has some interest on studying different frequencies so we would need a new frequency.

- Huawei doesn’t think it is a big deal to have different models for two frequencies.

- Oppo points out that we have only agreed to 2 and 4GHz, and introducing new frequencies would require more work and simulations.

* Companies that would like to study inter-frequency generalization can start with input 2GHz and output 4GHz, and 4GHz to 2GHz. FFS if we introduce a third frequency.

Proposal 8 For generalization evaluation over cell size:

* Training dataset is small cells, and inference dataset is large cells.
* Training dataset is large cells and inference dataset is small cells.

- Mediatek asks if we are referring to Umi, or power. Ericsson was thinking urban macro, UMa Umi

- Xiaomi thinks that RAN1 has studying this and similar performance is expected and we should prioritize mobility parameters.

- Vivo thinks that gNB heights and ISD should be considered.

- Samsung asks if this is for temporal domain. Ericsson confirms. Samung thins the simplest solution is to use ISD value.

- Apple thinks we should study this and look at list of parameters we can play with.

- ZTE thinks that this is the one that will require the most time and it is not the highest priority.

- Qualcomm thinks that we can’t expect generalization between urban macro and micro as they have very different propagation models.

- Ericsson wonders whether the UE knows the gNB height and ISD. Huawei indicates that is the point, if the model does well across different height/ISD then the UE doesn’t need to know. We should agree to a small subset. Qualcomm thinks we should also include the power.

- Mediatek thinks that we need generalization to determine what input is needed for LCM

* Study model generalization across different cell configurations (e.g. ISD, gNB height, power, beam pattern, etc). FFS which parameters we prioritize.
* [Post128][018][AI Mob] generalization (Apple)

Intended outcome: Discuss parameters for different cell configuration and attempt to prioritize 1 parameters and not more than 2 values per parameter. Can do 2 max values if really reneed. for

Deadline: 3 weeks

**Email discussion ([POST127bis][022][AI mobility] Simulation Assumption of measurement event/RLF prediction and SLS (OPPO):**

[R2-2410190](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410190.zip) Summary of [POST127bis][022][AI mobility] Simulation Assumptions (OPPO) Hangzhou Mengyuxiang discussion Rel-19

Proposals ready for agreement:

Proposals on measurement event prediction:

**Agreements**

1 Agree to listed 4 definitions of indirect measurement event prediction

*Indirect measurement event prediction for temporal domain case A:*

In indirect measurement event prediction, future measurement result(s) is predicted by a RRM measurement prediction model for intra-frequency temporal domain case A at first. Afterwards, predicted and optionally actual historical measurement result(s) are used to derive whether a measurement event at one future time instance occurs, without further involvement of an AI/ML model.

*Indirect measurement event prediction for temporal domain case B:*

In indirect measurement event prediction, measurement result(s) is predicted by a RRM measurement prediction model for intra-frequency temporal domain case B at first. Afterwards, predicted and optionally actual historical measurement result(s) are used to derive whether a measurement event at one time instance occurs, without further involvement of an AI/ML model.

*Indirect measurement event prediction for frequency domain:*

In indirect measurement event prediction, measurement result(s) is predicted by a RRM measurement prediction model in frequency domain at first. Afterwards, predicted and optional actual historical measurement result(s) of serving cell are used to derive whether a measurement event at one time instance occurs, without further involvement of an AI/ML model.

*Indirect measurement event prediction for spatial domain:*

In indirect measurement event prediction, measurement result(s) is predicted by a RRM measurement prediction model in spatial domain at first. Afterwards, predicted measurement result(s) and actual measurement results are used to derive whether a measurement event at one time instance occurs, without further involvement of an AI/ML model

2 The input of model for RRM measurement prediction can be reused as baseline for corresponding direct measurement event prediction. Additional input(s) is also allowed.

3 For intra-frequency temporal domain case B indirect measurement event prediction is taken as baseline. Direct prediction is optional.

4 To agree following definition for true event prediction, false event detection and missed event detection for indirect measurement event prediction

Counter n3(true event prediction): it increases by 1 when a real event occurs around a predicted event with ETD, whose range is [0, maximum ETD] or vice versa

Counter n1(false event detection): it increases by 1 when no real event occurs around a predicted event with ETD, whose range is [0, maximum ETD]

Counter n2(missed event detection): it increases by 1 when no event is predicted around a real event with ETD, whose range is [0, maximum ETD]

5 To agree following definition for true event prediction, false event detection and missed event detection for direct measurement event prediction

Counter n3’ (true event prediction): it increases by 1 when a real event occurs within the occurrence window of predicted event whose possibility is higher than a predefined threshold

Counter n1’ (false event detection): it increases by 1 when no real event occurs within the occurrence window of predicted event whose possibility is higher than a predefined threshold

Counter n2’ (missed event detection): it increases by 1 when a real event occurs, but it doesn’t fall in the occurrence window of any predicted event whose possibility is higher than a predefined threshold

6 Agree following definition of F1 score:

F1 score = 2\*Precision\*Recall/(Precision + Recall) Formula\_3 (13/14)

7 In addition to F1 score, precision and recall in following formula are optional metrics to report. (12/14)

Precision = n3/(n1+n3) Formula\_1

Recall =n3/(n2+n3) Formula\_2

*Note: for direct prediction, the counter should be n1’,n2’,n3’*

**Agreements on RLF prediction:**

1 To agree following indirect RLF prediction definition:

The future L1 SINR results are predicted based on actual L1 SINR results of the serving cell by following same way of intra-frequency temporal domain case A. Afterwards, RLF event at one time instance is determined based on predicted and optionally actual L1 SINR results within T310 duration, without further AI/ML models. As baseline L1 SINR refers to raw L1 SINR without L1 filtering.

2 Reuse agreed metrics for measurement event prediction for RLF prediction for both indirect and direct prediction respectively

3 Table 5.1-1 in TR 38.744 is taken as baseline simulation assumption for RLF prediction for both FR1 and FR2

4 It is assumed that all cells are fully loaded for interference modelling and no resource scheduler is needed

5 Interference in simulation comes from co-site cells and surrounding 6 sites of serving cell, i.e., interference comes from 20 cells

6 The beam with highest L1 RSRP of the serving cell is taken as serving beam, which is taken as the serving signal of RLM

*Interference in simulation comes from co-site cells and surrounding 6 sites of serving cell, i.e., interference comes from 20 cells*

- Qualcomm we don’t need to model the interference as the processing gain will supress the interference. Xiaomi thinks it is necessary. Docomo thinks that the comments from qualcomm makes sense. Oppo explains that we don’t model procedures and processing. If the gain is 10dB will you ever have RLF?

**Agreements on SLS :**

1 As for handover model it is proposed to agree for both temporal domain case A and case B:

Network start with handover preparation once a predicted measurement event is received. A handover command will be transmitted at least after preparation is completed. After that one fixed execution time is assumed.

3 To reuse HO failure model and corresponding metrics i.e. HO failure rate, total number of HO attempts per UE per second from 36.839

4 The agreed parameters in section 2.1.3 for measurement event prediction can be reused for SLS

5 The agreed parameters in table 2.2.2-1 i.e. all but last 3 parameters can be reused for both FR2 temporal domain case A and FR1 temporal domain case B in SLS

6 Interference model in section 2.2.3 is reused for SLS

*As for simulation based on temporal domain case B, agree following approach:*

*If a predicted A3 event at t1 is reported at t0 (t0<=t1) then HO command is transmitted at t3, where t3=t0+max(HO prep time, t1-t0).*

- Samsung and Xiaomi thinks we should be able to report at t1. Interdigital thinks that it should be when the command is assumed to be received (rather than when it is transmitted)

**Agreements on inter-frequency prediction :**

To use Pearson correlation coefficient for correlation coefficient calculation (14/14)

**Proposals need further discussion:**

**Proposals on measurement event prediction:**

Proposal 9: To agree the baseline value for the listed parameters for intra-frequency temporal domain case A and open for more values for some of the parameters as indicated in the table below:

|  |  |  |  |
| --- | --- | --- | --- |
| Parameters |  | baseline value | Note |
| A3 event offset (db) |  | 2 |  |
| TTT (ms) |  | 320 | Open for one shorter value |
| UE speed (km/h) |  | 90 | Open for 30 , 60 and 120km/h |
| OW length (ms) |  | N/A | Up to implementation |
| PW length (ms) |  | 400 | open for more values |
| Max ETD (ms, note1) |  | 80 | Open for more vlaues |
| Event occurrence Window Length (ms, note 2) |  | N/A | Up to conclusion under question 2 |
| Probability threshold (%, note 2) |  | 80% | Open for more values |

*Note1: parameters for indirect prediction*

*Note2: parameters for direct prediction*

Proposal 10: To agree the baseline value for the listed parameter for intra-frequency temporal domain case B and open for more values for some of the parameters as indicated in the table below:

|  |  |  |
| --- | --- | --- |
| Parameters | baseline value | Note |
| A3 event offset (db) | 2 |  |
| TTT (ms) | 320 | Open for one shorter value |
| UE speed (km/h) | 30 | Open for 60 and 90km/h |
| OW length (ms) | N/A | Up to implementation |
| PW length (ms) | N/A | Up to implementation |
| Max ETD (ms, note1) | 40 | Open for more values |

Proposal 11: For intra-frequency temporal domain case B, RAN2 is invited to discuss whether MRRT=50% could be baseline value

Proposal 12: For intra-frequency temporal domain case B company can report following filtering options for input L3 RSRP measurement in sub-use case 2:

Filtering option 1: L3 filtering is based on its L1 filtered result and the immediate last skipped measurement result ;

Filtering option 2: L3 filtering is based on its L1 filtered result i.e. no L3 filtering if the immediate last result is skipped;

Filtering option 3: L3 filtering is based on the L1 filtered result and last actual measurement result i.e. the skipped result(s) in between is ignored.

For indirect prediction, the skipped result refers to predicted L3 RSRP measurement result previously by the RRM measurement prediction model

For direct prediction, the skipped result refers to skipped L1 measurement result

**Proposals on SLS :**

Proposal 25: As for simulation base on temporal domain case A, RAN2 conclude one of the two options to decide exactly when to transmit handover command:

Option 1: if there is an actual measurement event occurring (@ t2) before the predicted measurement event (@t1), then network will transmit handover command based on actual measurement event ,or otherwise on predicted measurement event(@t1).

Option 2: network transmit handover command purely based on actual measurement event regardless whether an actual measurement result(@t2) is earlier or later than predicted measurement event((@t1))

**Proposals on RLF prediction:**

Proposal 18: To agree on following parameter for RLF prediction:

|  |  |
| --- | --- |
| Parameter | Value |
| Qin threshold | -6db |
| Qout threshold | -8db |
| Sample rate (TIndication\_interval) | 20ms(FR2)/40ms(FR1) |
| Qin evaluation period | 100ms |
| Qout evaluation period | 200ms |
| T310 | 1000ms |
| N310 | 1 |
| N311 | 1 |
| Max ETD (ms, note1) | 20ms(FR2)/40ms(FR1) |
| Event occurrence Window Length (ms, note 2) | Under discussion in question 13 |
| Probability threshold (%, note 2) | 80% |

Proposal 23: RAN discuss the number of beams for fixed beam pattern of FR1 e.g. 1 and of FR2 e.g. 4. The detail beam pattern can be left for company implementation.

Proposal 14: To discuss how to interpret event occurrence window of direct prediction approach for both measurement event and RLF prediction

Proposal 15: To conclude definition of direct RLF prediction after question 13 is concluded.

Proposal 4: To conclude the definition of direct measurement event prediction once issue in question 2 and 3 are resolved

**System level simulation/evaluation:**

[R2-2410800](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410800.zip) Discussion on generalization aspects and simulation assumption ZTE Corporation discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 7: Suggest to adopt the following handover model in the system level simulation for temporal domain case A: assuming a predicted A3 event at future t1 is reported at t0 and one potential real A3 event is triggered at t2:

If handover preparation time >= t1– t0, handover commend is sent at t0 + handover preparation time;

Else (if handover preparation time < t1-t0), the handover command is sent at t1 or t2 (depends on which one comes first).

[R2-2410540](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410540.zip) Discussion on simulation assumptions and generalization Huawei, HiSilicon discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 1: For AI mobility, HO preparation starts when an event is predicted to happen (i.e., t0), and HO command is sent when A3 entering conditions are met based on actual/real measurement and an event is predicted to be met for the duration of TTT. Using the timing from the figures: HO command is sent at t3, where t3=t0+max(HO prep time, t1-t0-TTT), provided that entering conditions of the event are met based on real/actual measurement at t3.

[R2-2409867](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409867.zip) Simulation assumptions on event/RLF/SLS and model generalization Xiaomi discussion

Proposal 6: RAN2 agree following HO modelling for case A and event prediction,

1. NW can start the HO preparation after receiving the event prediction.
2. After prediction, UE would still perform measurement to evaluate A3 event and eventually trigger MR if event is fulfilled.
3. Upon receiving the real MR, NW sends HO command if HO preparation is finished. Otherwise, NW sends HO command after HO preparation is finished.

Proposal 7: For case B, the HO modelling in [1] can be reused. The MR event is evaluated based on both real and predicted measurement results.

**Measurement event/RLF prediction:**

[R2-2410797](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410797.zip) On the remaining simulation assumptions and model generalization aspects Nokia, Nokia Shanghai Bell discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 1: The selection of the probability threshold that is used in the classification evaluation is left for each company to choose.

[R2-2409869](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409869.zip) Simulation Assumptions of SLS, measurement event prediction, RLF prediction and generalzatiion study MediaTek Inc. discussion

Proposal 4: For measurement event prediction, RAN2 consider the following option for obtaining ground-truth with HO:

Consider the switch of the serving cell and neighbour cell during data processing to record all events and ultimately derive the metrics.

Proposal 5: For measurement event prediction, RAN2 consider the following options for obtaining the ground-truth without HO:

* Option1: Switch the serving cell to the strongest one at the event condition is met.
* Option 2: Fixed serving cell and reset TTT at the event condition is met.
* Option 3: Terminate the trajectory when the event condition is met.

Proposal 6: The time window is interpretated to include a prediction window and a tolerance window. The prediction window is the time window for model inference output. The tolerance window is the time window used to derive the intermediate KPI (i.e., F1 score) based on the output of prediction window.

Proposal 9: For direct measurement event prediction, with the highest probability time instance higher than certain threshold in prediction window, the tolerance window can be used to determine the True event prediction”, “Missed event prediction”, and “False event prediction” to derive the F1 score

[R2-2409972](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409972.zip) Model generalization, RLF evaluation assumptions, etc. Apple discussion Rel-19 FS\_NR\_AIML\_Mob

Proposal 1: to consider F-2 score (which gives more weight to recall rather than precision and is therefore a more suitable metric for scenarios where false negative is more important than false positive).

Proposal 2: give more weight to missed event detection/false negative KPIs when evaluating measurement event and RLF prediction algorithms (compared to other metrics, i.e. F1-score and false event detection/false positive).

Proposal 3: consider a threshold lower than 50%, for example three values can be considered: 30%, 40%, 50% (this is much simpler). Alternatively, consider classification threshold as a hyper parameter for optimization and allow companies to evaluate different values (this may have non-insignificant evaluation burden).

Proposal 5: Prediction Window is defined as a time window, characterized by start time t1 and end time t2, within which an event is predicted to occur with a certain probability. The event may be RLF or A3 measurement event, or indeed any other event. This is applicable to both direct and indirect prediction methods.

[R2-2410190](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410190.zip) Summary of [POST127bis][022][AI mobility] Simulation Assumptions (OPPO) Hangzhou Mengyuxiang discussion Rel-19

[R2-2409652](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409652.zip) Discussion on generalization for RRM prediction CATT, Turkcell discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2409668](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409668.zip) Discussion on generalization study for RRM prediction vivo discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2409795](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409795.zip) Simulation assumption for Measurement event prediction NEC discussion

[R2-2409829](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409829.zip) Discussion on Generalization Issues for AI/ML Mobility Samsung discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2409867](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409867.zip) Simulation assumptions on event/RLF/SLS and model generalization Xiaomi discussion

[R2-2409869](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409869.zip) Simulation Assumptions of SLS, measurement event prediction, RLF prediction and generalzatiion study MediaTek Inc. discussion

[R2-2409972](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409972.zip) Model generalization, RLF evaluation assumptions, etc. Apple discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2409991](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409991.zip) Simulation assumptions and methodology for Measurement Event prediction, RLF prediction, and SLS Qualcomm Incorporated discussion Rel-19

[R2-2410023](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410023.zip) Discussions on evaluation methodology of AI/ML for mobility NTT DOCOMO, INC. discussion

[R2-2410084](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410084.zip) Other aspects for RRM measurement prediction Lenovo discussion

[R2-2410188](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410188.zip) Discussion on generalization study of AI mobility OPPO discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2410263](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410263.zip) Discussion on generalization aspects Ericsson discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2410345](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410345.zip) Discussion on other aspects of simulation assumption CMCC discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2410508](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410508.zip) Generalization of AIML models for RRM measurement prediction Interdigital Inc. discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2410522](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410522.zip) Discussion on RRM measurement predictions and prediction-based mobility events Sharp discussion Rel-19

[R2-2410540](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410540.zip) Discussion on simulation assumptions and generalization Huawei, HiSilicon discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2410697](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410697.zip) Discussion on simulation assumptions for RLF prediction KDDI Corporation discussion Rel-19

[R2-2410797](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410797.zip) On the remaining simulation assumptions and model generalization aspects Nokia, Nokia Shanghai Bell discussion Rel-19 FS\_NR\_AIML\_Mob

[R2-2410800](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410800.zip) Discussion on generalization aspects and simulation assumption ZTE Corporation discussion Rel-19 FS\_NR\_AIML\_Mob

## 8.4 Low-power wake-up signal and receiver for NR (LP-WUS/WUR)

(NR\_LPWUS-Core; leading WG: RAN1; REL-19; WID [RP-241824](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_105/Docs/RP-241824.zip))

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

### 8.4.1 Organizational

LS, Rapporteur input, including workplan, etc.

[R2-2409989](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409989.zip) On LR and MR operating frequencies and the answer to RAN1 LS VODAFONE,VIVO, Deutsche Telekom discussion Rel-19

[R2-2409990](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409990.zip) DRAFT Reply LS to [R2-2409157](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409157.zip)/R1-2407559 VODAFONE Group Plc LS out Rel-19 To:RAN Plenary, RAN1 Cc:RAN4

### 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

[R2-2409718](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409718.zip) LP-WUS in RRC\_IDLE/INACTIVE CATT discussion Rel-19 NR\_LPWUS-Core

[R2-2409761](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409761.zip) Discussion on LP-WUS WUR in RRC\_IDLE INACTIVE vivo discussion Rel-19 NR\_LPWUS-Core

[R2-2409871](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409871.zip) General considerations on the procedure for RRC\_IDLE\_INACTIVE Xiaomi Communications discussion

[R2-2409902](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409902.zip) LP-WUS in RRC\_IDLE INACTIVE NEC discussion Rel-19 NR\_LPWUS-Core

[R2-2409921](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409921.zip) Discussion on procedure and configuration of LP-WUS in RRC\_IDLE/INACTIVE Huawei, HiSilicon discussion Rel-19

[R2-2409924](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409924.zip) LP-WUS operation in RRC\_IDLE and RRC\_INACTIVE LG Electronics Inc. discussion Rel-19 NR\_LPWUS-Core

[R2-2409949](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409949.zip) Procedure and configuration of LP-WUS in RRC\_IDLE/INACTIVE Apple discussion Rel-19 NR\_LPWUS-Core

[R2-2410085](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410085.zip) LP-WUS in Idle and Inactive Ericsson discussion Rel-19 NR\_LPWUS-Core [R2-2409058](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409058.zip)

[R2-2410119](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410119.zip) Discussion on LP-WUS procedure and configuration OPPO discussion Rel-19 NR\_LPWUS-Core

[R2-2410166](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410166.zip) Procedure and configuration of LP-WUS for IDLE and INACTIVE mode ZTE Corporation, Sanechips discussion Rel-19 NR\_LPWUS-Core

[R2-2410377](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410377.zip) RAN2 aspects on LP-WUS/WUR in RRC Idle/Inactive mode Sony discussion Rel-19 NR\_LPWUS-Core

[R2-2410412](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410412.zip) Discussion on IDLE/INACTIVE procedures for LP-WUS Tejas Network Limited discussion Rel-19

[R2-2410509](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410509.zip) Discussion on LP-WUS operation in RRC\_IDLE/INACTIVE modes InterDigital, Inc. discussion Rel-19 NR\_LPWUS-Core

[R2-2410555](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410555.zip) LP-WUS in IDLE and INACTIVE Nokia discussion Rel-19 NR\_LPWUS-Core

[R2-2410606](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410606.zip) Procedure and Configuration of LP-WUS in RRC Idle Inactive Mode Samsung discussion Rel-19

[R2-2410632](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410632.zip) Discussion on LP-WUS in RRC\_IDLE and RRC\_INACTIVE Sharp discussion Rel-19

[R2-2410670](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410670.zip) Further considerations on LP-WUS operation in IDLE INACTIVE mode CMCC discussion Rel-19 NR\_LPWUS-Core

[R2-2410683](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410683.zip) Discussion on LP-WUS in RRC\_IDLE/INACTIVE HONOR discussion Rel-19 NR\_LPWUS-Core

[R2-2410730](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410730.zip) LP-WUS operation in IDLE/Inactive state Qualcomm Incorporated discussion NR\_LPWUS-Core

[R2-2410798](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410798.zip) Procedure and Configuration of LP-WUS in RRC Idle/ Inactive Lenovo discussion NR\_LPWUS-Core

[R2-2410841](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410841.zip) Discussion on LP-WUS for IDLE/INACTIVE state NTT DOCOMO, INC. discussion Rel-19

[R2-2410858](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410858.zip) On LP-WUS paging monitoring considerations Nordic Semiconductor discussion Rel-19 Late

### 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

[R2-2409592](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409592.zip) Further discussion on the criteria for RRM measurement relaxation and offloading Huawei, HiSilicon discussion Rel-19 NR\_LPWUS-Core

[R2-2409719](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409719.zip) RRM Relaxation and Offloading in RRC\_IDLE/INACTIVE CATT discussion Rel-19 NR\_LPWUS-Core

[R2-2409762](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409762.zip) Discussion on RRM measurement relaxation and offloading in RRC\_IDLE/INACTIVE vivo discussion Rel-19 NR\_LPWUS-Core

[R2-2409872](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409872.zip) Discussion on RRM measurement relaxation for RRC\_IDLE\_INACTIVE Xiaomi Communications discussion

[R2-2409903](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409903.zip) LP-WUS measurement relaxation and offloading NEC discussion Rel-19 NR\_LPWUS-Core

[R2-2409925](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409925.zip) RRM relaxation and RRM offloading LG Electronics Inc. discussion Rel-19 NR\_LPWUS-Core

[R2-2409950](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409950.zip) RRM measurement relaxation and offloading in RRC\_IDLE/INACTIVE Apple discussion Rel-19 NR\_LPWUS-Core

[R2-2410086](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410086.zip) LP-WUS and RRM measurements Ericsson discussion Rel-19 NR\_LPWUS-Core [R2-2409059](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409059.zip)

[R2-2410120](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410120.zip) Discussion on RRM measurement in RRC IDLE and INACTIVE OPPO discussion Rel-19 NR\_LPWUS-Core

[R2-2410167](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410167.zip) RRM measurement relaxation and offloading in RRC\_IDLE and RRC\_INACTIVE mode ZTE Corporation, Sanechips discussion Rel-19 NR\_LPWUS-Core

[R2-2410273](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410273.zip) RRM measurement relaxation and offloading in RRC\_IDLE/INACTIVE Lenovo discussion Rel-19

[R2-2410341](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410341.zip) Discussion on RRM measurement relaxation and offloading in RRC\_IDLE INACTIVE CMCC discussion Rel-19 NR\_LPWUS-Core

[R2-2410378](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410378.zip) Discussion on RRM aspects for LP-WUS/WUR Sony discussion Rel-19 NR\_LPWUS-Core

[R2-2410510](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410510.zip) Discussion on RRM measurement relaxation and offloading InterDigital, Inc. discussion Rel-19 NR\_LPWUS-Core

[R2-2410556](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410556.zip) RRM measurement relaxation in RRC\_IDLE/INACTIVE Nokia discussion Rel-19 NR\_LPWUS-Core

[R2-2410607](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410607.zip) RRM measurement relaxation and offloading in RRC Idle Inactive Mode Samsung discussion Rel-19

[R2-2410633](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410633.zip) Discussion on RRM measurement relaxation and offloading Sharp discussion Rel-19

[R2-2410694](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410694.zip) RRM measurement relaxation and offloading in RRC\_IDLE/INACTIVE China Telecom discussion

[R2-2410732](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410732.zip) 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.

[R2-2409588](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409588.zip) Discussing on LP-WUS monitoring in Connected mode Xiaomi discussion Rel-19 NR\_LPWUS-Core

[R2-2409713](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409713.zip) LP-WUS operation for RRC\_CONNECTED Mode LG Electronics Inc. discussion Rel-19 NR\_LPWUS-Core

[R2-2409720](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409720.zip) Analysis on LP-WUS for RRC\_CONNECTED Mode CATT discussion Rel-19 NR\_LPWUS-Core

[R2-2409763](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409763.zip) Discussion on LP-WUS WUR in RRC\_Connected vivo discussion Rel-19 NR\_LPWUS-Core

[R2-2409883](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409883.zip) LP-WUS in RRC\_CONNECTED Nokia, Nokia Shanghai Bell discussion

[R2-2409904](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409904.zip) LP-WUS in RRC\_CONNECTED NEC discussion Rel-19 NR\_LPWUS-Core

[R2-2409951](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409951.zip) Procedures for LP-WUS in RRC\_CONNECTED Apple discussion Rel-19 NR\_LPWUS-Core

[R2-2410087](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410087.zip) LP-WUS in Connected Ericsson discussion Rel-19 NR\_LPWUS-Core [R2-2409060](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409060.zip)

[R2-2410099](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410099.zip) LP-WUS in CONNECTED mode China Telecom discussion Rel-19 NR\_LPWUS-Core

[R2-2410121](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410121.zip) Discussion on LP-WUS in RRC\_CONNECTED OPPO discussion Rel-19 NR\_LPWUS-Core

[R2-2410168](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410168.zip) Procedures for LP-WUS in RRC\_CONNECTED ZTE Corporation, Sanechips discussion Rel-19 NR\_LPWUS-Core

[R2-2410319](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410319.zip) Discussion on LP-WUS operation in CONNECTED mode CMCC discussion Rel-19 NR\_LPWUS-Core

[R2-2410352](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410352.zip) Discussion on LP-WUS for RRC\_CONNECTED mode Huawei, HiSilicon discussion Rel-19 NR\_LPWUS-Core

[R2-2410379](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410379.zip) Considerations on LP-WUS/WUR in RRC Connected mode Sony discussion Rel-19 NR\_LPWUS-Core

[R2-2410405](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410405.zip) LP-WUS in CONNECTED mode InterDigital discussion Rel-19 NR\_LPWUS-Core

[R2-2410413](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410413.zip) Discussion on CONNECTED mode procedures for LP-WUS Tejas Network Limited discussion Rel-19

[R2-2410608](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410608.zip) Procedures for LP-WUS in RRC Connected Mode Samsung discussion Rel-19

[R2-2410634](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410634.zip) Discussion on LP-WUS in RRC\_CONNECTED Sharp discussion Rel-19

[R2-2410731](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410731.zip) LP-WUS operation in CONNECTED state Qualcomm Incorporated discussion NR\_LPWUS-Core

[R2-2410814](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410814.zip) LP-WUS in RRC Connected Mode Lenovo 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

Including incoming LSs and rapporteur inputs.

[R2-2409520](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409520.zip) LS on SSB adaptation (R4-2416911; contact: Apple) RAN4 LS in Rel-19 Netw\_Energy\_NR\_enh-Core To:RAN2 Cc:RAN1

[R2-2409521](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409521.zip) LS on SSB relation in On-demand SSB and SSB adaptation on Scell (R4-2416913; contact: Ericsson) RAN4 LS in Rel-19 Netw\_Energy\_NR\_enh-Core To:RAN1 Cc:RAN2

### 8.5.2 On-demand SSB SCell operation

Remaining open issues on L3 measurement from RAN2#127b, including L3 measurement framework, whether always-on SSB and/or OD-SSB are measured in case 2, etc. Further details of OD-SSB MAC CE (dependent on RAN1 progress).

[R2-2409550](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409550.zip) Discussion on On-Demand SSB OPPO discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2409596](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409596.zip) Consideration on on-demand SSB SCell operation CATT discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2409696](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409696.zip) On-demand SSB SCell Operation Samsung discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2409926](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409926.zip) On-demand SSB SCell operation LG Electronics Inc. discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2409940](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409940.zip) Discussion on on-demand SSB for SCell Apple discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410014](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410014.zip) Discussion on on-demand SSB SCell operation Sharp discussion Rel-19

[R2-2410015](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410015.zip) Discussion on on-demand SSB Xiaomi discussion

[R2-2410061](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410061.zip) Further discussion on On-demand SSB for SCell NEC discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410145](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410145.zip) Discussion on on-demand SSB SCell operation Fujitsu discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410163](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410163.zip) On-demand SSB SCell operation in connected mode ZTE Corporation, Sanechips discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410255](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410255.zip) On demand SSB handling Nokia, Nokia Shanghai Bell discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410284](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410284.zip) Issues on the procedure of on-demand SSB SCell operation Lenovo discussion Rel-19

[R2-2410320](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410320.zip) Discussion on On demand SSB for Scell CMCC discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410380](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410380.zip) On-demand SSB Scell operation discussion Sony discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410398](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410398.zip) Discussion on on-demand SSB for NES Ericsson discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410426](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410426.zip) Discussion on On-demand SSB SCell Operation Qualcomm Incorporated discussion

[R2-2410432](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410432.zip) Discussion on on-demand SSB SCell operation for NES Huawei, HiSilicon discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410472](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410472.zip) On demand SSB transmission for SCell InterDigital discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410600](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410600.zip) Discussion on on-demand SSB SCell operation NTT DOCOMO INC. discussion Rel-19

[R2-2410788](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410788.zip) Remaining issues of on-demand SSB SCell operation vivo discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410849](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410849.zip) Discussion on OD-SSB Rakuten Mobile, Inc discussion Rel-19

### 8.5.3 On-demand SIB1

Remaining open issues or further details of OD-SIB1, e.g. access restriction, UE behaviours related to OD-SIB1 request and failure case, how to allow NES UE to reselect to cells that are prevented from legacy UEs, UL WUS configuration details (if anything is missed from RAN2 point of view), etc.

[R2-2409575](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409575.zip) Discussion on on-demand SIB1 Xiaomi discussion Rel-19 Withdrawn

[R2-2409580](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409580.zip) Discussion on on-demand SIB1 Xiaomi discussion Rel-19

[R2-2409597](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409597.zip) Consideration on on-demand SIB1 CATT discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2409695](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409695.zip) On-demand SIB1 Samsung discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2409820](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409820.zip) Discussion on the issues for OD-SIB1 Google Ireland Limited discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2409927](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409927.zip) On-demand transmission of SIB1 LG Electronics Inc. discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2409941](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409941.zip) Discussion on on-demand SIB1 Apple discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410009](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410009.zip) Discussion on On-demand SIB1 WUS provisioning, UE behaviour, and barring NEC Telecom MODUS Ltd. discussion

[R2-2410042](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410042.zip) Discussion on Ondemand-SIB1 KDDI Corporation discussion Rel-19

[R2-2410100](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410100.zip) Discussion on OD-SIB1 China Telecom discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410146](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410146.zip) Discussion on on-demand SIB1 procedure for NES Fujitsu discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410164](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410164.zip) Remaining issues of on-demand SIB1 in idle and inactive mode ZTE Corporation, Sanechips discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410170](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410170.zip) On-demand SIB1 for Idle/Inactive mode UEs III discussion Rel-19 Netw\_Energy\_NR\_enh

[R2-2410239](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410239.zip) Consideration on on-demand SIB1 OPPO discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410256](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410256.zip) On demand SIB1 handling Nokia, Nokia Shanghai Bell discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410303](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410303.zip) Discussion on on-demand SIB1 operation for NES Huawei, HiSilicon discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410321](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410321.zip) Discussion on on-demand SIB1 CMCC discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410381](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410381.zip) WUS configuration details for on-demand SIB1 Sony discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410391](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410391.zip) Cell barring in on-demand SIB1 cells Sony discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410400](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410400.zip) Discussion on on-demand SIB1 for NES Ericsson discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410411](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410411.zip) Barring and SIB1-less case 2 Vodafone, Deutsche Telekom, Xiaomi discussion Rel-19

[R2-2410427](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410427.zip) Discussion on On-demand SIB1 Qualcomm Incorporated discussion

[R2-2410469](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410469.zip) Case 2 and remaining essential issues Lenovo discussion Netw\_Energy\_NR\_enh-Core

[R2-2410470](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410470.zip) On-demand SIB1 request and reception InterDigital discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410602](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410602.zip) Discussion on on-demand SIB1 NTT DOCOMO INC. discussion Rel-19

[R2-2410738](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410738.zip) Discussion on on-demand SIB1 for NES Rakuten Mobile, Inc discussion Rel-19

[R2-2410776](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410776.zip) Discussion on On-demand SIB1 for NES Fraunhofer IIS, Fraunhofer HHI discussion Rel-19

[R2-2410789](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410789.zip) Discussion on on-demand SIB1 for RRC IDLE and INACTIVE UE vivo discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410842](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410842.zip) Considerations on OD-SIB1 feature Deutsche Telekom, Vodafone, Lenovo, Fraunhofer IIS discussion Rel-19

### 8.5.4 Adaptation of common signal/channel transmissions

Further details of paging adaptation option-b, high-level discussion on SSB adaptation and RACH adaptation highlighting RAN2 spec impacts and RAN1 progress, etc.

[R2-2409576](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409576.zip) Discussion on common signal adaptation Xiaomi discussion Rel-19 Withdrawn

[R2-2409581](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409581.zip) Discussion on common signal adaptation Xiaomi discussion Rel-19

[R2-2409598](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409598.zip) Adaptation of Common signal channel transmissions CATT discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2409679](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409679.zip) Discussion on adaptation of common signal/channel transmissions OPPO discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2409692](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409692.zip) Discussion on common signal and channel adaptation LG Electronics Inc. discussion Rel-19 Netw\_Energy\_NR\_enh

[R2-2409697](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409697.zip) Adaptation of common signal channel transmissions Samsung discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2409841](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409841.zip) Adaptation of common signal or channel Fujitsu discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2409942](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409942.zip) Discussion on common signal transmission adaptation Apple discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410010](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410010.zip) PRACH and paging adaptation for NES NEC Telecom MODUS Ltd. discussion

[R2-2410165](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410165.zip) Consideration on common signal/channel transmissions ZTE Corporation, Sanechips discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410257](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410257.zip) Common signal aspects of NES WI Nokia, Nokia Shanghai Bell discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410285](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410285.zip) Discussion on the adaptation transmissions for NES operation Lenovo discussion Rel-19

[R2-2410322](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410322.zip) Discussion on SSB adaptation CMCC discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410428](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410428.zip) Discussion on Adaptation of Common Signal/Channel Transmissions Qualcomm Incorporated discussion

[R2-2410433](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410433.zip) Discussion on adaptation of common signals/channels transmissions Huawei, HiSilicon discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410471](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410471.zip) Time domain adaptation of common signalling and channels InterDigital discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410610](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410610.zip) Adaptation of common signal/channel transmissions for NES Ericsson discussion Rel-19 Netw\_Energy\_NR\_enh-Core

[R2-2410741](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410741.zip) Adaptation of paging signal/channel transmissions III discussion

[R2-2410743](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410743.zip) Discussion on RACH adaptation SHARP Corporation discussion Rel-19

[R2-2410790](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410790.zip) Discussion on adaptation of common signal transmissions vivo 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

Including incoming LSs, WI rapporteur inputs, stage 2 running CR to be endorsed, etc.

[R2-2409514](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409514.zip) LS on the support of semi-persistent CSI-RS resource for LTM candidate cells (R1-2409283; contact: Fujitsu) RAN1 LS in Rel-19 NR\_Mob\_Ph4-Core To:RAN3 Cc:RAN2

[R2-2409534](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409534.zip) Reply LS on security handling for inter-CU LTM in non-DC cases (S3-244316; contact: Samsung) SA3 LS in Rel-19 NR\_Mob\_Ph4-Core To:RAN2 Cc:RAN3

[R2-2409535](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409535.zip) Reply LS on security key update of inter-CU SCG LTM (S3-244317; contact: Xiaomi) SA3 LS in Rel-19 NR\_Mob\_Ph4-Core To:RAN2 Cc:RAN3

[R2-2409979](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409979.zip) Introduction of NR mobility enhancements Phase 4 in TS 38.300 Apple draftCR Rel-19 38.300 18.3.0 B NR\_Mob\_Ph4-Core

[R2-2410112](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410112.zip) Introduction of NR mobility enhancements Phase 4 in TS 37.340 China Telecom draftCR Rel-19 37.340 18.3.0 B NR\_Mob\_Ph4-Core

### 8.6.2 Inter-CU LTM

Remaining open issues or details for inter-CU LTM (SA) and inter-CU LTM in DC (including wether to support SCG addition when an inter-CU MCG LTM cell switch is executed, further scenario or issue clarification on the coexistence of intra-MN/inter-MN MCG LTM and inter-SN/intra-SN SCG LTM, R19 set ID for DC, etc.)

[R2-2409593](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409593.zip) Discussion on Inter-CU LTM CATT discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2409616](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409616.zip) Discussion on remaining issues of inter-CU LTM LG Electronics Inc. discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2409764](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409764.zip) Discussion on inter-CU LTM vivo discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2409863](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409863.zip) Discussion on Inter CU LTM Lekha Wireless Solutions discussion Rel-19

[R2-2409873](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409873.zip) Discussion on open issues for inter-CU LTM OPPO discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2409886](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409886.zip) Further discussion on remaining issues of inter-CU LTM cell switch Transsion Holdings discussion Rel-19

[R2-2409973](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409973.zip) Important issues in Inter-CU LTM Apple discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2409980](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409980.zip) Important issues in Inter-CU LTM Apple discussion Rel-19 NR\_Mob\_Ph4-Core Withdrawn

[R2-2410012](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410012.zip) Further Discussion on inter -CU LTM ETRI discussion Rel-19

[R2-2410021](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410021.zip) Discussion on inter-CU LTM Xiaomi discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410035](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410035.zip) Discussion on inter-CU LTM in non-DC and DC cases Fujitsu discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410113](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410113.zip) Discussion on inter-CU LTM China Telecom discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410118](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410118.zip) Leftover issues on Inter-CU LTM MediaTek Inc. discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410228](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410228.zip) Discussion on reference configuration for inter-CU LTM ITRI discussion NR\_Mob\_Ph4-Core

[R2-2410242](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410242.zip) Discussion on inter-CU LTM NEC discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410279](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410279.zip) Remaining issues for Inter-CU LTM Lenovo discussion Rel-19

[R2-2410323](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410323.zip) Discussion on Inter-CU LTM CMCC discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410382](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410382.zip) LTM for Inter-CU Sony discussion Rel-19 NR\_Mob\_Ph4

[R2-2410443](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410443.zip) Dsicussion on Inter-CU LTM ZTE Corporation discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410466](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410466.zip) On remaining issues for Inter-CU LTM Nokia discussion

[R2-2410518](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410518.zip) Inter-CU LTM Huawei, HiSilicon discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410530](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410530.zip) Security handling for Inter-CU LTM Qualcomm Incorporated discussion

[R2-2410544](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410544.zip) Security handling and DC aspects for inter-CU LTM Ericsson discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410598](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410598.zip) Discussion on Inter-CU LTM InterDigital, Inc. discussion Rel-19

[R2-2410660](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410660.zip) Potential issue on coexistence of inter-MN LTM and intra-SN LTM Kyocera discussion Rel-19

[R2-2410690](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410690.zip) Further discussion on inter-CU LTM HONOR discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410703](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410703.zip) Discussion on issues for supporting inter-CU LTM Sharp discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410742](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410742.zip) Discussion on Inter-CU LTM Rakuten Mobile, Inc discussion Rel-19

[R2-2410752](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410752.zip) Further Considerations to Support Inter-CU LTM Samsung discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410763](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410763.zip) LTM in DC scenarios Rakuten Mobile, Inc discussion

[R2-2410856](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410856.zip) Discussion on inter-CU LTM DENSO CORPORATION discussion Rel-19 NR\_Mob\_Ph4-Core

### 8.6.3 L1 event triggered measurement reporting

Remaining open issues or details for L1 event triggered measurement reporting (including TTT operation, e.g. granularity of TTT operation for a candidate cell, whether to reset TTT on current beam changing, measurement RS type alignment, more details of MR MAC CE, e.g. whether N beams should satisfy the event or not, beam identification, etc.)

[R2-2409594](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409594.zip) L1 event triggered measurement reporting CATT discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2409630](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409630.zip) Event LTM triggered measurement report LG Electronics Inc. discussion NR\_Mob\_Ph4-Core

[R2-2409657](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409657.zip) Discussion on event triggered L1 MR MediaTek Inc. discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2409659](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409659.zip) Remaining issues of L1 event triggered measurement reporting Xiaomi discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2409765](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409765.zip) Discussion on LTM measurement event evaluation and reporting vivo discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2409802](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409802.zip) Event triggered L1 measurement reporting for LTM. Interdigital, Inc. discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2409842](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409842.zip) Discussions on event triggered L1 measurement reporting Fujitsu discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2409874](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409874.zip) Open issues for event triggered L1 measurement reporting OPPO discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2409887](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409887.zip) Discussion on L1 event triggered measurement reporting Transsion Holdings discussion Rel-19

[R2-2409952](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409952.zip) LTM event triggered measurement reporting Apple discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2409987](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409987.zip) L1 event-triggered measurement reporting for LTM Qualcomm Incorporated discussion

[R2-2410062](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410062.zip) Further details of L1 event triggered measurement reporting NEC discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410114](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410114.zip) Discussion on L1 event triggered measurement reporting China Telecom discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410153](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410153.zip) Discussion on L1 event-triggered measurement reporting Huawei, HiSilicon discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410180](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410180.zip) Discussion on L1 measurement reporting for LTM ASUSTeK discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410244](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410244.zip) Discussion on event triggered L1 report Huawei, HiSilicon discussion Rel-19 NR\_Mob\_Ph4-Core Withdrawn

[R2-2410280](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410280.zip) Event based L1 measurement report Lenovo discussion Rel-19

[R2-2410306](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410306.zip) L1 measurement event configuration and reporting Panasonic discussion Rel-19

[R2-2410340](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410340.zip) Discussion on L1 event triggered measurement reporting CMCC discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410399](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410399.zip) Discussion on L1 event triggered measurement reporting Rakuten Mobile, Inc discussion Rel-19

[R2-2410441](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410441.zip) On L1 Measurement Reporting Enhancements for Rel-19 LTM Nokia discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410444](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410444.zip) Discussion on L1 event triggered measurement reporting ZTE Corporation discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410545](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410545.zip) Event definition and MAC CE content for L1 event-triggered measurements Ericsson discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410567](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410567.zip) Discussion on L1 event triggered measurement Jio discussion

[R2-2410571](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410571.zip) Open issues for L1 event triggered measurement reporting Fraunhofer HHI, Fraunhofer IIS discussion

[R2-2410621](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410621.zip) Support of Event Triggered L1 Measurement Report Samsung discussion Rel-19 NR\_Mob\_Ph4-Core

=> Revised in [R2-2410888](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410888.zip)

[R2-2410888](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410888.zip) Support of Event Triggered L1 Measurement Report Samsung discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410648](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410648.zip) Details of event-triggered L1 measurement reporting for LTM Kyocera discussion Rel-19

[R2-2410663](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410663.zip) Discussion on LTM measurement reporting configuration Baicells discussion

[R2-2410688](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410688.zip) Discussion on measurement event evaluation and report HONOR discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410702](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410702.zip) L1 event triggered measurement reporting Sharp discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410708](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410708.zip) Discussion on L1 event triggered measurement reporting KDDI Corporation discussion Rel-19

[R2-2410710](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410710.zip) Discussion on event triggered L1 measurement reporting ITL discussion Rel-19 NR\_Mob\_Ph4

### 8.6.4 Conditional intra-CU LTM

Further details of each phase (C-LTM preparation, early sync, evaluation and execution, and completion phases), highlighting what new delta should be really required compared to LTM (e.g. why LTM way cannot be also applied, etc.)

[R2-2409595](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409595.zip) Discussion on Conditional Intra-CU LTM CATT discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2409617](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409617.zip) Discussion on conditional LTM LG Electronics Inc. discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2409658](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409658.zip) Further discussion on Conditional LTM MediaTek Inc. discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2409766](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409766.zip) Discussion on conditional LTM vivo discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2409803](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409803.zip) Conditional LTM. Interdigital, Inc. discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2409843](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409843.zip) Discussion on conditional Intra-CU LTM Fujitsu discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2409875](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409875.zip) Discussion on conditional LTM OPPO discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2409888](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409888.zip) Further discussion on supporting intra-CU conditional LTM Transsion Holdings discussion Rel-19

[R2-2409953](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409953.zip) Conditional Intra-CU LTM Topics Apple discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2409988](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409988.zip) Conditional intra-CU LTM Qualcomm Incorporated discussion

[R2-2410013](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410013.zip) Discussion on conditional intra-CU LTM ETRI discussion Rel-19

[R2-2410022](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410022.zip) Discussion on conditional LTM Xiaomi discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410044](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410044.zip) Discussion on Conditional Intra CU LTM Lekha Wireless Solutions discussion Rel-19

[R2-2410064](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410064.zip) Discussion on conditional intra-CU LTM NEC discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410115](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410115.zip) Discussion on conditional intra-CU LTM China Telecom discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410136](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410136.zip) Discussion on conditional intra-CU LTM Spreadtrum, UNISOC discussion Rel-19

[R2-2410230](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410230.zip) Discussion on early TA acquisition for conditional intra-CU LTM ITRI discussion NR\_Mob\_Ph4-Core

[R2-2410252](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410252.zip) Discussion on Conditional LTM KT Corp. discussion

[R2-2410324](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410324.zip) Discussion on Conditional LTM CMCC discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410389](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410389.zip) Conditional Intra-CU LTM Sony discussion Rel-19 NR\_Mob\_Ph4

[R2-2410445](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410445.zip) Discussion on conditional intra-CU LTM ZTE Corporation discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410448](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410448.zip) Conditional LTM Scenarios and remaining points Lenovo discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410465](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410465.zip) Discussion on conditional intra-CU LTM Panasonic discussion Rel-19

[R2-2410519](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410519.zip) Intra-CU conditional LTM Huawei, HiSilicon discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410546](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410546.zip) Further considerations for conditional LTM Ericsson discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410622](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410622.zip) Support of Conditional Intra-CU LTM Samsung discussion Rel-19 NR\_Mob\_Ph4-Core

=> Revised in [R2-2410889](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410889.zip)

[R2-2410889](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410889.zip) Support of Conditional Intra-CU LTM Samsung discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410661](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410661.zip) Discussion on Conditional Intra-CU LTM Kyocera discussion Rel-19

[R2-2410689](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410689.zip) Discussion on conditional LTM HONOR discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410695](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410695.zip) Discussion on Conditional intra-CU LTM NTT DOCOMO, INC. discussion Rel-19

[R2-2410701](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410701.zip) Discussion on conditional LTM Sharp discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410709](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410709.zip) Discussion on Conditional LTM ITL discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410782](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410782.zip) Discussion on Conditional LTM CEWiT discussion Rel-19 NR\_Mob\_Ph4-Core

[R2-2410795](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410795.zip) On conditional LTM Nokia discussion Rel-19 NR\_Mob\_Ph4

## 8.7 XR Enhancements Ph3

(NR\_XR\_Ph3-Core; leading WG: RAN2; REL-19; WID: [RP-241771](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_105/Docs/RP-241771.zip))

Time budget: 2 TU

Tdoc Limitation: 5 tdocs

### 8.7.1 Organizational

LS, Rapporteur input, workplan, etc.

Incoming LS from SA2 in S2-2411253 will be discussed based on the input from the contact company.

[R2-2409517](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409517.zip) Reply LS on multi-modality awareness at RAN (R3-245682; contact: Nokia) RAN3 LS in Rel-19 NR\_XR\_Ph3-Core, XRM\_Ph2 To:SA2 Cc:RAN2, SA4, RAN

[R2-2409525](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409525.zip) Reply LS on Application-Layer FEC Awareness at RAN (S2-2410999; contact: Qualcomm) SA2 LS in Rel-19 XRM\_Ph2 To:RAN2 Cc:SA4

[R2-2409533](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409533.zip) LS for PDU Set Information Marking Support without QoS parameters (S2-2411253; contact: vivo) SA2 LS in Rel-19 XRM\_Ph2 To:RAN2, RAN3

[R2-2409560](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409560.zip) Reply LS on Application-Layer FEC Awareness at RAN Qualcomm Incorporated LS out Rel-19 NR\_XR\_Ph3-Core To:SA2 Cc:SA4

[R2-2409767](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409767.zip) Discussion on SA2 LSs on XRM and FEC vivo discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409818](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409818.zip) Rapporteur Inputs Nokia, Qualcomm (Rapporteurs) discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410491](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410491.zip) Discussion on LS from SA2 on PDU Set information Sony discussion Rel-19 NR\_XR\_Ph3

### 8.7.2 Multi-modality support

**No contributions are expected for this AI for RAN2#128**

### 8.7.3 RRM measurement gaps/restrictions related enhancements

Objective: Specify enhancements to enable transmission/reception in gaps/restrictions that are caused by RRM measurements (from inter-frequency RRM measurement gaps, or intra-frequency measurements, or other scheduling restrictions etc).

Focus on RAN2 impacts from solutions considered by RAN1/RAN4.

[R2-2409555](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409555.zip) Discussion on measurement gap cancelation Qualcomm Incorporated discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409722](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409722.zip) Discussion on RRM measurement gaps/restrictions related enhancements Hanbat National University discussion Rel-19 Withdrawn

[R2-2409734](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409734.zip) Discussion on Measurement Gap enhancements OPPO discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409768](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409768.zip) Discussion on RRM measurement gaps enhancements vivo discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409785](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409785.zip) Measurement gap skipping for XR ZTE Corporation, Sanechips discussion

[R2-2409825](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409825.zip) Discussion on RRM measurement gaps enhancements of XR traffic Xiaomi Communications discussion

[R2-2409844](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409844.zip) Discussions on measurement gap related enhancements Fujitsu discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409854](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409854.zip) Consideration on Enabling TX RX for XR during RRM Measurements CATT discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409912](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409912.zip) Discussion on MG enhancement for XR LG Electronics Inc. discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409955](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409955.zip) Views on Enhancements Relating to RRM Measurement Gaps Apple discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410082](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410082.zip) Impacts on DSR and DRX from MG skipping NEC discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410089](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410089.zip) RAN2 Issues on Gap Enhancements Sharp discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410095](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410095.zip) Enabling TX/RX for XR during measurement gaps/restrictions Lenovo discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410154](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410154.zip) Discussion on RRM enhancements for XR Huawei, HiSilicon discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410198](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410198.zip) RRM Measurement Gap/Restrictions Ericsson discussion Rel-19

[R2-2410209](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410209.zip) RRM measurement gaps/restrictions related enhancements Nokia, Nokia Shanghai Bell discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410245](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410245.zip) Discussion on RRM enhancements for XR Huawei, HiSilicon discussion Rel-19 NR\_XR\_Ph3-Core Withdrawn

[R2-2410338](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410338.zip) RRC-based MG skipping solution CMCC, Qualcomm, Google discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410387](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410387.zip) Discussion on enabling TX/RX for XR during RRM measurements Sony discussion Rel-19 NR\_XR\_Ph3

[R2-2410406](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410406.zip) RRM measurement gap related enhancements for XR InterDigital discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410577](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410577.zip) RRM Measurement Gaps/Restrictions related enhancements for XR Google Ireland Limited discussion

[R2-2410718](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410718.zip) Discussion on RRM measurement gaps/restrictions enhancements for Rel-19 XR Samsung discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410740](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410740.zip) Discussion on XR RRM measurement gaps/restrictions related enhancements III discussion NR\_XR\_Ph3-Core

[R2-2410761](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410761.zip) Discussion on RRM measurement for XR enhancements Hanbat National University discussion Rel-19

[R2-2410783](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410783.zip) Discussion on RRM Measurement Gaps/Restrictions Enhancements Meta discussion

### 8.7.4 Scheduling enhancements

[R2-2410390](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410390.zip) UL scheduling enhancements for Multi-modal traffic flows Sony discussion Rel-19 NR\_XR\_Ph3

#### 8.7.4.1 LCP enhancements

Objective: Specify Enhancements for support of UL scheduling to enable high XR capacity while meeting delay requirements/avoiding too late PDUs, as follows [RAN2]:

* Specify additional Logical Channel priority handling using delay/deadline information of packets;

Further details of handling of the additional priority for LCH.

[R2-2409556](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409556.zip) Discussion on LCP enhancements Qualcomm Incorporated discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409677](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409677.zip) Discussion on LCP enhancements for XR OPPO discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409769](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409769.zip) Remaining issues on LCP enhancements for XR vivo discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409786](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409786.zip) LCP enhancements for XR ZTE Corporation, Sanechips discussion

[R2-2409790](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409790.zip) Discussion on Logical channel priority CANON Research Centre France discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409828](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409828.zip) Discussion on LCP enhancements of XR traffic Xiaomi Communications discussion

[R2-2409845](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409845.zip) Discussions on enhancements for LCH priority-adjusted data Fujitsu discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409855](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409855.zip) Consideration on LCP Enhancement CATT discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409910](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409910.zip) Discussion on LCP enhancement for XR LG Electronics Inc. discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409956](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409956.zip) On Priority Switching during LCP Procedure Apple discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410038](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410038.zip) Discussion on how to apply additional priority for delay-aware LCP TCL discussion

[R2-2410090](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410090.zip) Details of LCP Enhancements Sharp discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410094](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410094.zip) Enhanced Logical channel prioritization for XR Lenovo discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410194](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410194.zip) Considerations on LCP enhancements for XR NEC Corporation discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410208](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410208.zip) Discussion on LCP enhancements for XR DENSO CORPORATION discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410210](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410210.zip) LCP Enhancements for XR Nokia, Nokia Shanghai Bell discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410316](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410316.zip) Consideration on fairness in delay-aware LCP for XR CMCC, Qualcomm Incorporated discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410373](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410373.zip) Discussion on additional priority based LCP enhancements in XR Huawei, HiSilicon discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410407](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410407.zip) LCP enhancements for XR InterDigital discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410435](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410435.zip) Discussion on Leftover Issues for Additional LCH Priority China Telecom discussion

[R2-2410500](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410500.zip) LCP enhancements Ericsson discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410692](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410692.zip) Remaining issue for LCP enhancement MediaTek Inc. discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410784](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410784.zip) Discussion on LCP Enhancements for XR Meta discussion

[R2-2410844](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410844.zip) Further Discussion on additional LCP handling ETRI discussion

[R2-2410850](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410850.zip) LCP enhancements for Rel-19 XR – outstanding issues Samsung R&D Institute UK discussion

#### 8.7.4.2 DSR enhancements

Objective: Specify enhanced DSR (Delay Status Report) reporting with multiple pairs of remaining time and buffer size for a LCG.

Including aspects such as need of thresholds configuration constraints (including analysis of impact on DSR triggering/cancellation etc.), inclusion of non-delay critical data, MAC CE design, interworking with legacy DSR etc.

[R2-2409557](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409557.zip) Discussion on DSR enhancements Qualcomm Incorporated discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409678](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409678.zip) Discussion on DSR enhancements for XR OPPO discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409770](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409770.zip) Remaining issues on DSR enhancements for XR vivo discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409787](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409787.zip) DSR enhancements for XR ZTE Corporation, Sanechips discussion

[R2-2409797](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409797.zip) Discussion on Delay status report CANON Research Centre France discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409827](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409827.zip) Discussion on DSR enhancements of XR traffic Xiaomi Communications discussion

[R2-2409846](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409846.zip) Discussions on DSR enhancements Fujitsu discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409856](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409856.zip) Consideration on DSR Enhancement CATT discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409911](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409911.zip) Discussion on DSR enhancement for XR LG Electronics Inc. discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409957](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409957.zip) Views on DSR Enhancements Apple discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410091](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410091.zip) Details of DSR Enhancements Sharp discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410189](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410189.zip) Considerations on DSR enhancements for XR NEC Corporation discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410211](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410211.zip) DSR Enhancements for XR Nokia, Nokia Shanghai Bell discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410212](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410212.zip) Discussion on DSR enhancements for XR DENSO CORPORATION discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410229](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410229.zip) Discussion on enhanced DSR for XR ITRI discussion NR\_XR\_Ph3-Core

[R2-2410286](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410286.zip) Enhanced delay status reporting for XR Lenovo discussion Rel-19

[R2-2410317](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410317.zip) Further consideratio on DSR enhancment CMCC discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410372](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410372.zip) Discussion on DSR enhancements in XR Huawei, HiSilicon discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410408](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410408.zip) DSR enhancements for UL scheduling InterDigital discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410436](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410436.zip) Discussion on Leftover Issues for DSR Enhancement China Telecom discussion

[R2-2410501](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410501.zip) DSR enhancements Ericsson discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410684](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410684.zip) Discussion on DSR enhancements HONOR discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410717](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410717.zip) DSR enhancements for Rel-19 XR Samsung discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410728](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410728.zip) Further discussion on DSR enhancement TCL discussion Rel-19

[R2-2410762](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410762.zip) Discussion on XR DSR enhancements III discussion NR\_XR\_Ph3-Core

[R2-2410785](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410785.zip) Discussion on DSR Enhancements for XR Meta discussion

[R2-2410843](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410843.zip) Further Discussion on DSR enhancements ETRI discussion

### 8.7.5 RLC enhancements

Objective: RLC re-transmission related enhancements for operation of RLC Acknowledged Mode (AM) with small packet delay budget.

Including aspects such as:

* how to avoid unnecessary retransmissions, e.g. details of the combined approach
* how to ensure timely RLC retransmissions for XR, e.g.
  + what kind of enhancements are needed, e.g. autonomous retransmission, retransmission based on enhanced polling
  + details and pros and cons of different solutions (including impact on capacity and packet delay)
* discussion on the LS from SA2 in S2-2410999

[R2-2409558](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409558.zip) Discussion on RLC enhancements Qualcomm Incorporated discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409561](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409561.zip) Discussion on AL-FEC awareness at RAN Qualcomm Incorporated, China Telecom, Huawei, HiSilicon, Lenovo, Nokia, Nokia Shanghai Bell, Xiaomi discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409636](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409636.zip) RLC AM retransmission enhancements Xiaomi discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409733](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409733.zip) Discussion on RLC re-transmission related enhancements OPPO discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409740](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409740.zip) Further details of RLC enhancements for XR LG Electronics Inc. discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409771](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409771.zip) Discussion on RLC enhancement for XR vivo discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409788](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409788.zip) RLC enhancements for XR ZTE Corporation, Sanechips discussion

[R2-2409798](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409798.zip) Discussion on RLC AM Enhancements CANON Research Centre France discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409819](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409819.zip) RLC enhancements Nokia discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409847](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409847.zip) Discussions on RLC enhancements Fujitsu discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409857](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409857.zip) Consideration on XR-specific RLC Enhancement CATT discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409882](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409882.zip) RLC Enhancements for XR Samsung discussion Rel-19

[R2-2409958](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409958.zip) Discussions on Fast RLC Retransmission Apple discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410036](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410036.zip) Discussion on Reply LS to SA2 on Application-Layer FEC Awareness TCL discussion

[R2-2410092](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410092.zip) Issues on RLC Enhancements Sharp discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410135](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410135.zip) Discussion on timely RLC retransmission(s) Spreadtrum, UNISOC discussion Rel-19

[R2-2410155](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410155.zip) Discussion on RLC AM enhancements Huawei, HiSilicon discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410199](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410199.zip) More Discussions on RLC AM Enhancements Ericsson discussion Rel-19

[R2-2410246](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410246.zip) Discussion on RLC AM enhancements Huawei, HiSilicon discussion Rel-19 NR\_XR\_Ph3-Core Withdrawn

[R2-2410287](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410287.zip) AM RLC enhancement Lenovo discussion Rel-19

[R2-2410337](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410337.zip) Discussion on the RLC enhancements for XR and RAN2 impacts on the SA2 LS CMCC discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410383](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410383.zip) RLC AM enhancements Sony discussion Rel-19 NR\_XR\_Ph3

[R2-2410393](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410393.zip) RLC AM enhancement NEC discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410409](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410409.zip) Discussion on RLC enhancements InterDigital discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410437](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410437.zip) Discussion on RLC AM Enhancements China Telecom discussion

[R2-2410685](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410685.zip) Discussion on RLC enhancements HONOR discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410777](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410777.zip) RLC AM enhancements with small packet delay budget MediaTek Inc. discussion Rel-19 38.322 NR\_XR\_enh-Core

[R2-2410786](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410786.zip) Discussion on RLC AM Enhancements for XR Meta discussion

### 8.7.6 XR rate control

Objective: Specify uplink congestion signaling [RAN2]:

* Specify in MAC layer XR rate control signaling over downlink per QoS flow/per DRB to enable faster source rate adaption to uplink congestion

Including aspects such as: per DRB or per flow indication (including analysis of the impact on QoS enforcement, interworking with L4S etc.), bit rate values indication enhancements, indication/assistance from UE to gNB etc.

[R2-2409559](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409559.zip) Discussion on XR rate control Qualcomm Incorporated discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409637](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409637.zip) XR rate control Xiaomi discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409741](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409741.zip) Rate control signaling for XR LG Electronics Inc. discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409772](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409772.zip) Discussion on XR rate control vivo discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409789](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409789.zip) Data rate control for XR applications ZTE Corporation, Sanechips discussion

[R2-2409858](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409858.zip) Discussion on XR Rate Control CATT discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2409901](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409901.zip) XR Rate Control Lenovo discussion NR\_XR\_Ph3-Core

[R2-2409959](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409959.zip) Views on MAC Signalling for XR Rate Control Apple discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410039](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410039.zip) XR rate control Nokia, Nokia Shanghai Bell discussion NR\_XR\_Ph3-Core

[R2-2410093](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410093.zip) XR Rate Control Enhancements Sharp discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410156](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410156.zip) Discussion on XR rate control Huawei, HiSilicon discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410191](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410191.zip) Uplink rate control for XR NEC Corporation discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410200](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410200.zip) More on XR Rate Control Ericsson discussion Rel-19

[R2-2410240](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410240.zip) Discussion on XR rate control OPPO discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410247](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410247.zip) Discussion on XR rate control Huawei, HiSilicon discussion Rel-19 NR\_XR\_Ph3-Core Withdrawn

[R2-2410318](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410318.zip) Further consideration on XR rate control CMCC discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410410](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410410.zip) Discussion on UL congestion signaling InterDigital discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410490](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410490.zip) Recommended bit rate based XR rate control Sony discussion Rel-19 NR\_XR\_Ph3

[R2-2410686](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410686.zip) Discussion on XR rate control HONOR discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410716](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410716.zip) Discussion on UL rate control for Rel-19 XR Samsung discussion Rel-19 NR\_XR\_Ph3-Core

[R2-2410739](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410739.zip) Discussion on Rate Control for XR China Telecom discussion

[R2-2410787](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410787.zip) Discussion on RAN Awareness and UL Rate Control for XR Meta discussion

[R2-2410877](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410877.zip) Uplink congestion control signalling MediaTek Inc. discussion Rel-19 38.321 NR\_XR\_enh-Core

## 8.8 NTN for NR Ph3

(NR\_NTN\_Ph3-Core; leading WG: RAN2; REL-19; WID: [RP-241789](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_105/Docs/RP-241789.zip))

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

### 8.8.1 Organizational

LS, Rapporteur input, including workplan, etc.

For the LTE\_TN\_NR\_NTN\_mob WI, including endorsed draft CRs from the WI spec rapporteurs.

Rapporteur inputs do not count towards the tdoc limitation.

[R2-2409512](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409512.zip) Reply LS on common TA in a regenerative payload scenario (R1-2409258; contact: CMCC) RAN1 LS in Rel-19 NR\_NTN\_Ph3-Core To:RAN2 Cc:RAN4

[R2-2409519](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409519.zip) LS on Supporting MBS broadcast service for NR NTN (R3-245844; contact: Xiaomi) RAN3 LS in Rel-19 NR\_NTN\_Ph3-Core To:RAN2, SA2, CT4

[R2-2409522](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409522.zip) Reply LS on common TA in a regenerative payload scenario (R4-2416920; contact: CMCC) RAN4 LS in Rel-19 NR\_NTN\_Ph3-Core To:RAN2 Cc:RAN1

[R2-2409536](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409536.zip) Introduction of LTE TN to NR NTN Mobility UE Capability vivo CR Rel-19 36.306 18.3.0 1900 - B LTE\_TN\_NR\_NTN\_mob-Core

[R2-2409669](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409669.zip) Introduction of LTE TN to NR NTN IDLE mode mobility CATT CR Rel-19 36.331 18.3.1 5065 - B LTE\_TN\_NR\_NTN\_mob [R2-2407963](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2407963.zip) Late

[R2-2409938](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409938.zip) Introduction of stage 2 for LTE to NR NTN idle mode mobility Samsung CR Rel-19 36.300 18.3.0 1412 - B LTE\_TN\_NR\_NTN\_mob

[R2-2410638](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410638.zip) Discussion on the reply LS to RAN3 on supporting MBS broadcast service for NR NTN Xiaomi discussion

[R2-2410861](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410861.zip) Running RRC CR for NR NTN phase 3 Ericsson CR Rel-19 38.331 18.3.0 5192 - B NR\_NTN\_Ph3-Core

### 8.8.2 Downlink coverage enhancements

Contributions should focus on RAN2 aspects of DL coverage enhancements (e.g. cell level / beam level DTX/DRX mechanism, etc.).

[R2-2409666](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409666.zip) Discussion on downlink coverage enhancements LG Electronics Inc. discussion

[R2-2409671](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409671.zip) Further discussion on downlink coverage enhancements CATT discussion

[R2-2409821](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409821.zip) Discussion on the DL coverage enhancement at system level Google Ireland Limited discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2409848](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409848.zip) Discussions on cell DTX during satellite dynamic power sharing Fujitsu discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2409978](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409978.zip) DL coverage enhancement in NTN Apple discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410048](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410048.zip) Discussion on cell DTX Qualcomm Incorporated discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410066](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410066.zip) Discussion on DL coverage enhancement Xiaomi discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410107](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410107.zip) NR NTN coverage enhancement China Telecom discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410122](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410122.zip) Discussion on DL coverage enhancement for NTN OPPO discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410213](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410213.zip) Discussion on NTN downlink coverage enhancement Nokia discussion NR\_NTN\_Ph3-Core [R2-2408699](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408699.zip)

[R2-2410267](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410267.zip) Cell barring and reselection for NTN DL-CE Lenovo discussion Rel-19

[R2-2410293](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410293.zip) Consideration on downlink coverage enhancement NEC Corporation discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410365](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410365.zip) Consideration on downlink coverage enhancements ZTE Corporation, Sanechips discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410386](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410386.zip) SMTC impacts due to NTN downlink coverage enhancements Sony discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410525](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410525.zip) Discussion on Downlink Coverage Enhancement Samsung discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410549](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410549.zip) Downlink coverage enhancement for NTN InterDigital discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410671](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410671.zip) RAN2 Impact on DL coverage enhancements CMCC discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410677](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410677.zip) NTN DL coverage enhancements NERCDTV discussion

[R2-2410691](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410691.zip) Discussions on downlink coverage enhancement HONOR discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410699](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410699.zip) Discussion on Downlink Coverage Enhancements Sharp discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410715](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410715.zip) Discussion on downlink coverage enhancements in NR NTN ETRI, Korea University discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410804](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410804.zip) Downlink coverage enhancement SMTC impacts Sequans Communications discussion Rel-19 NR\_NTN\_Ph3-Core [R2-2408970](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408970.zip)

[R2-2410806](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410806.zip) Downlink coverage enhancement access control Sequans Communications discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410870](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410870.zip) Discussion on RAN2 Aspects for system-level Downlink Coverage enhancements THALES discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410881](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410881.zip) DL coverage enhancements Ericsson discussion Rel-19 IoT\_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.

[R2-2410067](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410067.zip) Discussion on uplink capacity enhancement Xiaomi discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410330](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410330.zip) Discussion on uplink capacity/throughput enhancement for NR NTN CMCC discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410367](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410367.zip) Consideration on NTN miscellaneous issues ZTE Corporation, Sanechips discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410434](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410434.zip) Discussion on Uplink Capacity Enhancements Huawei, HiSilicon, Turkcell discussion Rel-19 NR\_NTN\_Ph3-Core

### 8.8.4 Support of Broadcast service

Contributions should address the signaling of the intended service area of a broadcast service.

[R2-2409537](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409537.zip) Further Discussion on MBS Broadcast Service Area Provision vivo discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2409538](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409538.zip) Discussion on MBS Broadcast Service Continuity in NTN vivo discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2409615](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409615.zip) Discussion on support of broadcast service in NTN LG Electronics France discussion Rel-19 38.331 NR\_NTN\_Ph3

[R2-2409670](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409670.zip) Further discussion on support of broadcast service in NR NTN CATT, CBN discussion

[R2-2409849](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409849.zip) Discussions on supporting broadcast intended to serve partial cell Fujitsu discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2409893](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409893.zip) Discussion on providing MBS service area in NTN network OPPO discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2409977](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409977.zip) Intended broadcast service area provision over NTN Apple discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410011](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410011.zip) Discussion on intended service area signalling NEC discussion

[R2-2410046](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410046.zip) Signaling of MBS broadcast service area information Qualcomm Incorporated discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410108](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410108.zip) Broadcast service area information in NR NTN China Telecom discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410231](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410231.zip) Discussions on configuration of intended service areas ITRI discussion NR\_NTN\_Ph3-Core

[R2-2410268](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410268.zip) NTN broadcast service area indication and service continuity Lenovo discussion Rel-19

[R2-2410331](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410331.zip) Considerations on broadcast service for NR NTN CMCC discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410366](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410366.zip) Consideration on broadcast service enhancements ZTE Corporation, Sanechips discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410440](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410440.zip) On the Open Points for Supporting MBS in Rel-19 NR NTN Nokia, Nokia Shanghai Bell discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410521](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410521.zip) Discussion on MBS broadcast over NTN Huawei, HiSilicon, Turkcell discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410526](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410526.zip) Discussion on MBS Broadcast Service Intended Area Samsung discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410597](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410597.zip) Support for broadcast service in non-terrestrial networks InterDigital, Inc. discussion Rel-19

[R2-2410639](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410639.zip) Discussion on the support of broadcast service Xiaomi discussion

[R2-2410662](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410662.zip) Further Discussion on Support of MBS Broadcasting over NTN TCL discussion

[R2-2410700](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410700.zip) Discussion on UE behaviours within intended service area Sharp discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410713](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410713.zip) Discussion on the support of broadcast service in NR-NTN ETRI discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410764](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410764.zip) Further considerations on intended broadcast service area provision Continental Automotive discussion Rel-19

[R2-2410862](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410862.zip) Support for broadcast services in NR NTN Ericsson discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410871](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410871.zip) Discussion on MBS Broadcast service area signaling THALES discussion Rel-19 NR\_NTN\_Ph3-Core [R2-2408488](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408488.zip)

### 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.

[R2-2409981](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409981.zip) Regenerative payload for NTN for NR Ph3 TOYOTA Info Technology Center discussion

[R2-2410123](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410123.zip) Discussion on satellite switch with resynch for regenerative payload OPPO discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410269](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410269.zip) UE location verification in NTN regenerative architecture Lenovo discussion Rel-19

[R2-2410384](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410384.zip) Satellite switch with re-sync in regenerative payload Sony discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410590](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410590.zip) Discussion on regenerative payload Huawei, HiSilicon, Turkcell discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410649](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410649.zip) Discussion on regenerative payload Fujitsu Limited discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410880](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410880.zip) Regenerative payload Ericsson discussion Rel-19 IoT\_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.

[R2-2409539](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409539.zip) Discussion on Redirection from E-UTRA TN to NR-NTN vivo discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2409672](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409672.zip) Discussion on remaing issue for LTE TN to NR NTN IDLE mode mobility CATT discussion

[R2-2409982](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409982.zip) Improvements\_to\_LTE-TN-to-NTN\_mobility PANASONIC discussion Rel-19

[R2-2410047](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410047.zip) Frequency priorities and redirection from LTE to NR NTN Qualcomm Incorporated discussion Rel-19 LTE\_TN\_NR\_NTN\_mob

[R2-2410109](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410109.zip) Remaining issue for NTN mobility redirection China Telecom discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410394](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410394.zip) Clarification on NR Satellite Info Provision NEC discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410439](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410439.zip) On LTE TN to NR NTN reselection using redirection in Release message Nokia, Nokia Shanghai Bell discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410485](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410485.zip) Further issues on E-UTRAN to NR NTN idle mode mobility Samsung discussion Rel-19 NR\_NTN\_Ph3-Core

[R2-2410640](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410640.zip) Discussion on the NR NTN frequency configured by the RRC connection release message Xiaomi discussion

## 8.9 IoT NTN Ph3

(IoT\_NTN\_Ph3-Core; leading WG: RAN2; REL-19; WID: [RP-242397](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_105/Docs/RP-242397.zip))

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

### 8.9.1 Organizational

LS, Rapporteur input, including workplan, etc.

Rapporteur inputs do not count towards the tdoc limitation.

[R2-2409524](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409524.zip) Reply LS on Support of Regenerative-based Satellite Access (S2-2410918; contact: Qualcomm) SA2 LS in Rel-19 NR\_NTN\_Ph3-Core, 5GSAT\_Ph3\_ARCH To:RAN3, RAN Cc:RAN2

[R2-2409529](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409529.zip) Reply LS on FS\_5GSAT\_Ph3\_ARCH conclusions (S2-2411250; contact: Sateliot) SA2 LS in Rel-19 5GSAT\_Ph3\_ARCH To:SA3 Cc:RAN2, SA3-LI

[R2-2409530](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409530.zip) Reply LS on FS\_5GSAT\_Ph3\_ARCH conclusions (s3i240703; contact: Tridea Works) SA3-LI LS in Rel-18 5GSAT\_Ph3\_ARCH To:SA2 Cc:RAN2, SA3

[R2-2410813](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410813.zip) RRC Runing CR for IoT NTN Huawei, HiSilicon draftCR Rel-19 36.331 18.3.1 B IoT\_NTN\_Ph3-Core

[R2-2410883](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410883.zip) Draft Introduction of IoT NTN phase 3 Ericsson draftCR Rel-19 36.300 18.3.0 B IoT\_NTN\_Ph3-Core

### 8.9.2 Support of Store & Forward

Contributions should focus on possible impacts to the radio interface.

[R2-2409540](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409540.zip) Further Discussion on S&F Operation vivo discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2409585](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409585.zip) Discussion on Store and Forward operation Xiaomi discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2409674](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409674.zip) Discussion on RAN2 impacts due to the satellite ID list from MME in S&F operation CATT discussion

[R2-2409676](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409676.zip) Considerations on S&F operation from device perspective Telit Communications S.p.A., Novamint, Sateliot, Thales discussion Rel-19 [R2-2408244](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408244.zip)

[R2-2409689](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409689.zip) Further consideration on S&F operation in IoT NTN ZTE Corporation, Sanechips discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2409799](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409799.zip) Support of Store and Forward. Interdigital, Inc. discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2409822](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409822.zip) Discussion on the S&F operation indication Google Ireland Limited discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2409876](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409876.zip) Discussion on Store & Forward satellite operation OPPO discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2409889](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409889.zip) Discussion on support of Store&Forward Transsion Holdings discussion Rel-19

[R2-2409935](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409935.zip) Discussion on Store & Forward operation DENSO CORPORATION discussion IoT\_NTN\_Ph3-Core

[R2-2409976](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409976.zip) Support of S&F operation in IoT NTN Apple discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410049](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410049.zip) Discussion on S&F mode operation Qualcomm Incorporated discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410110](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410110.zip) Further discussion of IoT NTN Store & Forward China Telecom discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410181](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410181.zip) Discussion on assistance information for S&F ASUSTeK discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410270](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410270.zip) Further considerations on S&F operation Lenovo discussion Rel-19

[R2-2410314](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410314.zip) Discussion on Support of Store & Forward TOYOTA Info Technology Center discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410346](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410346.zip) Discussion on IoT NTN Store and Forward CMCC discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410395](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410395.zip) Radio Interface Aspect of S&F NEC discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410468](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410468.zip) Radio Interface Impacts of SF operation Nokia, Nokia Shanghai Bell discussion

[R2-2410482](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410482.zip) Discussion on Store and Forward operation Samsung discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410591](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410591.zip) Further consideration on Store and Forward Huawei, HiSilicon, Turkcell discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410596](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410596.zip) Considerations on multi-satellite for S&F Satellite operation NOVAMINT, Sateliot, Thales discussion

[R2-2410599](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410599.zip) Suspend/resume procedure for Store and Forward satellite operation SHARP Corporation discussion

[R2-2410636](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410636.zip) RAN2 impact on S&F mode MediaTek Inc. discussion IoT\_NTN\_Ph3-Core [R2-2408622](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408622.zip)

[R2-2410687](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410687.zip) Discussion on the Store and Forward satellite operation HONOR discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410765](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410765.zip) Further considerations on S&F operations Continental Automotive discussion Rel-19

[R2-2410854](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410854.zip) Support of Store & Forward Sequans Communications discussion Rel-19 IoT\_NTN\_Ph3-Core [R2-2408971](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408971.zip)

[R2-2410863](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410863.zip) Support for store and forward in IoT NTN Ericsson discussion Rel-19 IoT\_NTN\_Ph3-Core

### 8.9.3 Uplink Capacity Enhancement

Contributions should focus on the possible enhancements to reduce the necessary uplink and downlink signaling to complete an EDT transaction (Msg3 transmission without msg1/RAR; efficient delivery of msg4 / RRCEarlyDataComplete).

[R2-2409541](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409541.zip) Discussion on CB-Msg3 Mechanism vivo discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2409586](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409586.zip) Discussion on uplink capacity enhancements for IoT NTN Xiaomi discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2409591](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409591.zip) Discussion on the RAN2 solutions for uplink capacity enhancement Huawei, HiSilicon discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2409673](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409673.zip) Further consideration on UL capacity enhancements CATT discussion

[R2-2409690](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409690.zip) Further consideration on UL capacity enhancements in IoT NTN ZTE Corporation, Sanechips discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2409800](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409800.zip) EDT/PUR enhancements. Interdigital, Inc. discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2409877](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409877.zip) Discussion on CB-msg3 EDT and msg4 enhancement OPPO discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2409937](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409937.zip) Further considerations on retransmission and finite buffer for DSA NTU discussion Rel-19

[R2-2409975](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409975.zip) Uplink capacity enhancement in IoT NTN Apple discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410050](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410050.zip) CB-Msg3 and Msg4 enhancements Qualcomm Incorporated discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410111](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410111.zip) Contention-based Msg3-EDT in IoT NTN China Telecom discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410271](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410271.zip) EDT for uplink capacity enhancement in NTN Lenovo discussion Rel-19

[R2-2410291](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410291.zip) Consideration on UL capacity enhancement for IoT-NTN NEC Corporation discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410296](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410296.zip) Discussion on the use of an implicit pointer for locating DSA replicas for EDT of CB-Msg3 DLR, ESA discussion Withdrawn

[R2-2410309](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410309.zip) Further discussion on UL capacity enhancement for IoT NTN Nokia, Nokia Shanghai Bell discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410332](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410332.zip) Considerations on uplink capacity enhancement for IoT-NTN CMCC discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410347](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410347.zip) Discussion on Uplink Capacity Enhancement TOYOTA Info Technology Center discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410483](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410483.zip) Procedures for contention-based Msg3 Samsung discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410641](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410641.zip) Discussion on enhanced EDT MediaTek Inc. discussion IoT\_NTN\_Ph3-Core [R2-2408623](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408623.zip)

[R2-2410725](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410725.zip) Discussion on EDT Enhancements for IOT NTN Skylo Technologies discussion Rel-19

[R2-2410875](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410875.zip) Implicit pointer for locating DSA replicas for EDT of CB-Msg3 DLR, ESA, Inmarsat, Viasat discussion

[R2-2410882](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410882.zip) UL capacity enhancements for IoT NTN Ericsson discussion Rel-19 IoT\_NTN\_Ph3-Core Late

### 8.9.4 Support of PWS

Contributions should focus on the introduction of support for broadcast of PWS messages for NB-IoT, re-using the LTE mechanisms.

[R2-2409542](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409542.zip) Further Discussion on PWS Support for NB-IoT vivo discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2409587](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409587.zip) PWS support for NB-IoT over NTN Xiaomi discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2409675](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409675.zip) Support of PWS for NB-IoT NTN UE CATT discussion

[R2-2409691](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409691.zip) Further consideration on PWS support for NB-IoT over NTN ZTE Corporation, Sanechips discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2409801](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409801.zip) Support of PWS. Interdigital, Inc. discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2409896](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409896.zip) Discussion on supporting PWS in IOT-NTN network OPPO discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410051](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410051.zip) Discussion on PWS in NB-IoT NTN Qualcomm Incorporated discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410272](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410272.zip) PWS broadcast support for NB-IoT in NTN Lenovo discussion Rel-19

[R2-2410289](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410289.zip) Discussion on PWS for NB-IoT Google discussion Rel-19

[R2-2410292](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410292.zip) Consideration on PWS broadcast for NB-IoT NEC Corporation discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410304](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410304.zip) Further considerations on PWS support for NB-IoT Huawei, HiSilicon, Turkcell discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410310](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410310.zip) Further discussion on support of PWS Nokia, Nokia Shanghai Bell discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410333](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410333.zip) Support of PWS messages for NB-IoT CMCC discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410484](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410484.zip) Impact of PWS signalling for NB-IoT Samsung discussion Rel-19 IoT\_NTN\_Ph3-Core

[R2-2410643](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410643.zip) Discussion on supporting PWS for NB-IoT MediaTek Inc. discussion IoT\_NTN\_Ph3-Core [R2-2408624](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2408624.zip)

[R2-2410864](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410864.zip) Support for PWS in NB-IoT NTN Ericsson 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.

### 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

[R2-2409635](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409635.zip) MRO enhancements for Rel-18 mobility features Samsung discussion

[R2-2409650](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409650.zip) Discussion on MRO Enhancements for Rel-18 Mobility CATT discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2409754](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409754.zip) Further considerations on MRO ZTE Corporation, Sanechips discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2409779](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409779.zip) MRO for MOB DCCA LG Electronics discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core [R2-2409041](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409041.zip)

[R2-2409780](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409780.zip) MRO for MOB LTM LG Electronics discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2409933](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409933.zip) Discussion on MRO enhancement for LTM China Unicom discussion NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2409934](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409934.zip) Discussion on MRO enhancement for CHO with candidate SCGs China Unicom discussion NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2409970](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409970.zip) SON for LTM Apple discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2409983](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409983.zip) MRO for CHO with candidate SCG Nokia discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2409984](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409984.zip) MRO for LTM Nokia discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2410065](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410065.zip) MRO for Rel-18 mobility NEC discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2410182](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410182.zip) Discussion on random access report for LTM ASUSTeK discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2410274](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410274.zip) Discussion on MRO for R18 mobility Lenovo discussion Rel-19

[R2-2410328](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410328.zip) MRO enhancements for CHO with candidate SCGs CMCC discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2410329](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410329.zip) MRO enhancements for LTM CMCC discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2410473](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410473.zip) SON support for MRO Ericsson discussion NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2410635](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410635.zip) SON enhancement for CHO with candidate SCG SHARP Corporation discussion

[R2-2410656](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410656.zip) Discussion on MRO enhancements for Rel-18 mobility Huawei, HiSilicon discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2410733](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410733.zip) MRO enhancement for SON and MDT Qualcomm Incorporated discussion NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2410757](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410757.zip) Configuring UE based TA acquisition for LTM Rakuten Mobile, Inc discussion Rel-19

[R2-2410815](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410815.zip) MRO for Rel-18 mobility features vivo discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

### 8.10.3 SON/MDT for Slicing

No contributions are expected and this AI will not be treated in RAN2#128 unless we get an LS from RAN3 on the subject

### 8.10.4 SON/MDT for NTN

No contributions are expected and this AI will not be treated in RAN2#128 unless we get an LS from RAN3 on the subject

### 8.10.5 Leftovers from Rel-18

RACH optimization for SDT focus on RSRP and data volume in SON reports, and existing failure causes.

MHI Enhancement for SCG Deactivation/Activation will not be treated in RAN2#128 unless we get an LS from RAN3 on the subject

[R2-2409649](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409649.zip) Considerations on R18 leftovers for SDT CATT discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2409655](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409655.zip) Reporting failure cause for SDT Samsung discussion

[R2-2409755](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409755.zip) Consideration on RAN3 agreed RA report content ZTE Corporation, Sanechips discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2410275](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410275.zip) Discussion on RACH optimization for SDT Lenovo discussion Rel-19

[R2-2410657](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410657.zip) Discussion on support of the Rel-18 leftovers Huawei, HiSilicon discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2410816](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410816.zip) RACH optimization for SDT vivo discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

[R2-2410847](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410847.zip) On Rel.18 leftovers Ericsson discussion

## 8.11 Evolution of NR duplex operation: Sub-band full duplex (SBFD)

(NR\_duplex\_evo-Core; leading WG: RAN1; REL-19; WID: [RP‑241614](https://www.3gpp.org/ftp/meetings_3gpp_sync/ran/docs/RP-241614.zip))

Time budget: 0.5 TU

Tdoc Limitation: 2 tdocs

### 8.11.1 Organizational

Incoming LS, Rapporteur input, including workplan, etc..

### 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.

[R2-2409571](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409571.zip) Discussion on random access procedure in SBFD ZTE Corporation discussion Rel-19 NR\_duplex\_evo-Core

[R2-2409579](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409579.zip) Discussion on RACH in SBFD Xiaomi discussion Rel-19 Withdrawn

[R2-2409584](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409584.zip) Discussion on RACH in SBFD Xiaomi discussion Rel-19

[R2-2409625](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409625.zip) Consideration on Random Access in SBFD symbols CATT discussion Rel-19 NR\_duplex\_evo-Core

[R2-2409680](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409680.zip) SBFD RACH configuration for initial random access Charter Communications, Inc discussion

[R2-2409745](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409745.zip) Impacts on the random access by the evolution of duplex operation Huawei, HiSilicon discussion Rel-19 NR\_duplex\_evo-Core

[R2-2409794](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409794.zip) Random Access for SBFD Operation NEC discussion

[R2-2409913](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409913.zip) Discussion on Random Access in SBFD LG Electronics Inc. discussion Rel-19 NR\_duplex\_evo-Core

[R2-2409974](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409974.zip) Detailed design for RACH in SBFD Apple discussion Rel-19 NR\_duplex\_evo-Core

[R2-2409995](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409995.zip) SBFD RA aspects Ericsson discussion Rel-19 NR\_duplex\_evo-Core

[R2-2410088](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410088.zip) RA Aspects for SBFD Sharp discussion Rel-19 NR\_duplex\_evo-Core

[R2-2410241](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410241.zip) Random Access Operation of SBFD Nokia Corporation discussion Rel-19 NR\_duplex\_evo-Core

[R2-2410336](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410336.zip) Discussion on random access in SBFD CMCC discussion Rel-19 NR\_duplex\_evo-Core

[R2-2410385](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410385.zip) Random access for SBFD Operation Sony discussion Rel-19 NR\_duplex\_evo-Core

[R2-2410478](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410478.zip) Views on random access for SBFD Qualcomm Incorporated discussion NR\_duplex\_evo-Core

[R2-2410574](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410574.zip) Random Access in Sub-Band Full Duplex Google Ireland Limited discussion

[R2-2410609](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410609.zip) Random access in SBFD Samsung discussion Rel-19

[R2-2410791](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410791.zip) Discussion on random access procedure in SBFD vivo discussion Rel-19 NR\_duplex\_evo-Core

[R2-2410794](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410794.zip) Discussion on random access in SBFD Fujitsu Limited 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.

[R2-2409572](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409572.zip) Discussion on CLI measurement in SBFD ZTE Corporation discussion Rel-19 NR\_duplex\_evo-Core

[R2-2409626](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409626.zip) Discussion on other aspects for SBFD CATT discussion Rel-19 NR\_duplex\_evo-Core

[R2-2409638](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409638.zip) Other aspects of SBFD Xiaomi discussion Rel-19 NR\_duplex\_evo-Core

[R2-2409681](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409681.zip) SBFD-aware UE capability indication Charter Communications, Inc discussion

[R2-2409746](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409746.zip) Other impacts by the evolution of duplex operation Huawei, HiSilicon discussion Rel-19 NR\_duplex\_evo-Core

[R2-2409793](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409793.zip) Selection of SBFD Cell NEC discussion

[R2-2409996](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409996.zip) Non-RA aspects for subband full duplex (SBFD) operation Ericsson discussion Rel-19 NR\_duplex\_evo-Core

[R2-2410258](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410258.zip) Other aspects of SBFD Nokia discussion Rel-19 NR\_duplex\_evo-Core

[R2-2410479](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410479.zip) Other aspects of SBFD Qualcomm Incorporated discussion NR\_duplex\_evo-Core

[R2-2410623](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410623.zip) Support of Cross Link Interference in SBFD Samsung discussion Rel-19 NR\_duplex\_evo-Core

[R2-2410792](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410792.zip) Discussion on other aspects in SBFD vivo discussion Rel-19 NR\_duplex\_evo-Core

## 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, etc.

[R2-2410325](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410325.zip) Work Plan for Rel-19 on NR MIMO Phase 5 CMCC Work Plan Rel-19 NR\_MIMO\_Ph5-Core

### 8.12.2 Asymmetric DL sTRP/UL mTRP

To identify RRC/MAC aspects that need to be discussed for asymmetric DL sTRP/UL mTRP

[R2-2409640](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409640.zip) Consideration on Asymmetric DL sTRP/UL mTRP LG Electronics Inc. discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2409661](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409661.zip) Discussion on asymmetric DL sTRP and UL mTRP Xiaomi discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2409721](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409721.zip) Discussion on RRC and MAC Impacts for Asymmetric DL sTRP/UL mTRP CATT discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2409773](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409773.zip) Discussion on MAC CE impact for asymmetric DL sTRP/UL mTRP scenarios vivo discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2409954](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409954.zip) RAN2 Impacts for Rel-19 NR MIMO Apple discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2410248](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410248.zip) RAN2 Aspects of Asymmetric DL sTRP/UL mTRP Nokia Corporation discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2410294](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410294.zip) Asymmetric DL/UL mTRP user plane impact from MIMO ph. 5 Ericsson discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2410326](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410326.zip) Discussion on asymmetric DL sTRP and UL mTRP CMCC discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2410388](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410388.zip) Enhancement for Asymmetric DL sTRP/UL mTRP Sony discussion Rel-19 NR\_MIMO\_Ph5

[R2-2410429](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410429.zip) Discussion on UL only mTRP Qualcomm Incorporated discussion

[R2-2410520](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410520.zip) Discussion on Asymmetric DL sTRP/UL mTRP Huawei, HiSilicon discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2410523](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410523.zip) Discussion on Asymmetric DL sTRP/UL mTRP Samsung discussion Rel-19 NR\_MIMO\_Ph5

[R2-2410770](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410770.zip) Consideration on the PL Offset MAC CE for R19 MIMO ZTE Corporation discussion Rel-19 NR\_MIMO\_Ph5-Core

### 8.12.3Others

To identify R2 impact on other objectives

[R2-2409641](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409641.zip) Impact from UEI beam reporting LG Electronics Inc. discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2409660](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409660.zip) Discussion on the modelling of the UE-initiated beam report Xiaomi discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2409774](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409774.zip) Discussion on UE-initiated/event-driven beam management vivo discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2409891](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409891.zip) Discussion on UE-initiated/event-driven beam management SHARP Corporation discussion NR\_MIMO\_evo\_DL\_UL-Core

[R2-2410202](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410202.zip) Impacts from other NR MIMO Phase 5 objectives Ericsson discussion

[R2-2410250](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410250.zip) RAN2 Aspects of the NR MIMO Nokia Corporation discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2410327](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410327.zip) Discussion on UE-initiated/event-driven beam management CMCC discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2410355](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410355.zip) Discussion on MAC CE impact of Rel-19 MIMO NEC discussion

[R2-2410430](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410430.zip) Discussion on UE initiated beam reporting Qualcomm Incorporated discussion

[R2-2410524](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410524.zip) Discussion on UE-initiated Beam Reporting and CSI enhancement Samsung discussion Rel-19 NR\_MIMO\_Ph5

[R2-2410618](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410618.zip) Enhancements for UE-initiated/event-driven beam management Huawei, HiSilicon discussion Rel-19 NR\_MIMO\_Ph5-Core

[R2-2410771](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410771.zip) Consideration on the UEIBM for R19 MIMO ZTE Corporation discussion Rel-19 NR\_MIMO\_Ph5-Core

## 8.13 NR sidelink multi-hop relay

(NR\_SL\_relay\_enh2; leading WG: RAN2; REL-19; WID: [RP-242349](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_105/Docs/RP-242349.zip))

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

### 8.13.1 Organizational

LSs and rapporteur input, including workplan, etc.

### 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.

[R2-2409632](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409632.zip) Discussion on topology and intermediate relay UE (re)selection vivo discussion Rel-19

[R2-2409728](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409728.zip) Discussion on multi-hop U2N relay discovery and relay selection NEC Corporation discussion NR\_SL\_relay\_multihop-Core

[R2-2409730](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409730.zip) Discovery and relay (re)selection for multi-hop U2N relay OPPO discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2409859](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409859.zip) Discussion on Multi-hop Discovery and (Re)selection CATT discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2409906](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409906.zip) Discussion on relay discovery and (re)selection for NR sidelink multi-hop relay TOYOTA InfoTechnology Center discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2409967](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409967.zip) Relay discovery and selection for Multi-hop UE-to-NW Relay Apple discussion Rel-19 DUMMY

[R2-2410007](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410007.zip) Discovery and Relay (Re)Selection for Multi-hop U2N Relays InterDigital discussion Rel-19

[R2-2410032](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410032.zip) Discussion on multi-hop Relay discovery and (re)selection ZTE Corporation, Sanechips discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2410104](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410104.zip) Multi-hop relay discovery and reselection China Telecom discussion Rel-19 DUMMY

[R2-2410150](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410150.zip) discussion on discovery and relay (re)selection Ericsson discussion Rel-19

[R2-2410183](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410183.zip) Remaining issues on multi-hop U2N Relay Discovery message forwarding ASUSTeK discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2410281](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410281.zip) Relay (re)selection in Multi-hop relay Lenovo discussion Rel-19

[R2-2410288](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410288.zip) Relay discovery aspects for multi-hop relay Nokia discussion NR\_SL\_relay\_multihop

[R2-2410298](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410298.zip) Discussion on the discovery and relay (re)selection for multi-hop U2N relay LG Electronics Inc. discussion Rel-19

[R2-2410305](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410305.zip) Report of [POST127][401][Relay] MH relay discovery and (re)selection LG Electronics Inc. discussion Rel-19

[R2-2410392](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410392.zip) Multi-hop relay selection/re-selection Sony discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2410570](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410570.zip) Discovery and (re)selection under multihop relay Kyocera discussion

[R2-2410587](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410587.zip) Relay discovery and (re)selection for multi-hop Relay Huawei, HiSilicon discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2410619](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410619.zip) Relay discovery and (re)selection TCL discussion Rel-19

[R2-2410704](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410704.zip) discussion on Relay discovery and (re)selection for multi-hop relay Sharp discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2410734](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410734.zip) Discovery and Relay (re)selection for multi-hop U2N relay Qualcomm Incorporated discussion NR\_SL\_relay\_multihop-Core

[R2-2410827](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410827.zip) Considerations on relay discovery and (re)selection Samsung discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2410840](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410840.zip) Relay discovery and (re)selection TCL 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.

[R2-2409633](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409633.zip) Discussion on CP and SRAP impact for Approach 1 vivo discussion Rel-19

[R2-2409732](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409732.zip) Control plane procedures of multi-hop U2N relay OPPO discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2409796](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409796.zip) CP and SRAP for Multi-hop Relay NEC discussion

[R2-2409860](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409860.zip) Discussion on the Control Plane Procedures CATT discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2409968](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409968.zip) Discussion on End-to-End Connection Setup Approaches for Multi-hop UE-to-NW Relay Apple discussion Rel-19 DUMMY

[R2-2409969](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409969.zip) Discussion on SRAP for Multi-hop Layer-2 U2N Relay Apple discussion Rel-19 DUMMY

[R2-2410006](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410006.zip) Report of [Post127][402][Relay] Multi-hop relay control plane InterDigital discussion Rel-19

[R2-2410008](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410008.zip) Control Plane Aspects for Multi-hop U2N Relays InterDigital discussion Rel-19

[R2-2410033](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410033.zip) Discussion on control plane procedures for multi-hop SL relay ZTE Corporation, Sanechips discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2410105](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410105.zip) Discussion on control plane aspects for NR sidelink multi-hop relay China Telecom discussion Rel-19 DUMMY

[R2-2410139](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410139.zip) Discussion on control plane and QoS handling for NR sidelink multi-hop relay Spreadtrum, UNISOC discussion Rel-19

[R2-2410149](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410149.zip) discussion on control plane procedure Ericsson discussion Rel-19

[R2-2410184](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410184.zip) Remaining issues on SRB0 message forwarding in multi-hop U2N Relay ASUSTeK discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2410282](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410282.zip) Control plane in Multi-hop relay Lenovo discussion Rel-19

[R2-2410290](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410290.zip) SRAP impacts on MH relay Nokia discussion NR\_SL\_relay\_multihop

[R2-2410297](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410297.zip) Discussion on the control plane procedure for multi-hop U2N relay LG Electronics Inc. discussion Rel-19

[R2-2410569](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410569.zip) Control Plane under multihop L2 U2N relaying Kyocera discussion

[R2-2410588](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410588.zip) Control plane procedures for multi-hop relay Huawei, HiSilicon discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2410631](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410631.zip) On approach 1 Nokia discussion NR\_SL\_relay\_multihop-Core

[R2-2410705](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410705.zip) discussion on C-plane procedure for multi-hop relay Sharp discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2410735](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410735.zip) Control procedure for multi-hop L2 based U2N relay Qualcomm Incorporated discussion NR\_SL\_relay\_multihop-Core

[R2-2410756](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410756.zip) Consideration on CP and UP issues for multi-hop SL relay Samsung discussion Rel-19 NR\_SL\_relay\_multihop-Core

### 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.

[R2-2409634](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409634.zip) Discussion on Service continuity for multi-hop relay vivo discussion Rel-19

[R2-2409731](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409731.zip) Service continuity of multi-hop U2N relay OPPO discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2409861](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409861.zip) Intra-gNB Service Continuity for Multi-hop U2N Relay CATT discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2410034](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410034.zip) Discussion on service continuity for multi-hop SL relay ZTE Corporation, Sanechips discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2410106](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410106.zip) Discussion on service continuity for multi-hop relay China Telecom discussion Rel-19 DUMMY

[R2-2410185](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410185.zip) Discussion on measurement report for multi-hop U2N Relay ASUSTeK discussion Rel-19 NR\_SL\_relay\_multihop

[R2-2410201](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410201.zip) Service Continuity for Multi-Hop Relays Ericsson discussion Rel-19

[R2-2410283](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410283.zip) Service continuity for Multi-hop system Lenovo discussion Rel-19

[R2-2410299](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410299.zip) Discussion on service continuity for multi-hop U2N relay LG Electronics Inc. discussion Rel-19

[R2-2410354](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410354.zip) Considerations on Service Continuity of Multi-hop Relay NEC discussion Rel-19

[R2-2410589](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410589.zip) Discussion on service continuity for Multi-hop Relay Huawei, HiSilicon discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2410706](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410706.zip) discussion on service continuity for multi-hop relay Sharp discussion Rel-19 NR\_SL\_relay\_multihop-Core

[R2-2410736](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410736.zip) Consideration on multi-hop U2N relay service continuity Qualcomm Incorporated discussion NR\_SL\_relay\_multihop-Core

[R2-2410828](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410828.zip) Initial considerations on service continuity Samsung discussion Rel-19 NR\_SL\_relay\_multihop-Core

## 8.14 Additional topological enhancements

(NR\_WAB\_5GFemto; leading WG: RAN3; REL-19; WID [RP-242395](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_105/Docs/RP-242395.zip))

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

[R2-2409516](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409516.zip) Reply LS on Support of UE move between CAG cell of 5G Femto and CSG cell (R3-244830; contact: Ericsson) RAN3 LS in Rel-19 FS\_NR\_WAB\_5GFemto To:SA2 Cc:RAN2

[R2-2409528](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409528.zip) Reply LS on Clarification regarding definition of 5G NR femto ownership (S2-2411241; contact: LGE) SA2 LS in Rel-19 FS\_5G\_Femto\_Sec, 5G\_Femto To:SA3 Cc:RAN2, RAN3

## 8.15 NavIC L1 SPS A-GNSS support

(LCS\_NAVIC\_L1\_SPS\_NR\_LTE-Core; leading WG: RAN2; REL-19; WID [RP-242414](https://www.3gpp.org/ftp/meetings_3gpp_sync/ran/docs/RP-241264.zip))

Time budget: 0.5 TU

Tdoc Limitation: 1 tdoc

[R2-2409573](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409573.zip) Introduction of NavIC in A-GNSS positioning ZTE Corporation discussion Rel-19 LCS\_NAVIC\_L1\_SPS\_NR\_LTE-Core

[R2-2409723](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409723.zip) Discussion on Introduction of NavIC L1 SPS support to A-GNSS positioning Reliance Jio, CEWiT discussion Rel-19 LCS\_NAVIC\_L1\_SPS\_NR\_LTE-Core

[R2-2409724](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409724.zip) Introduction of NavIC L1 SPS A-GNSS in LTE Stage 2 specification Reliance Jio, CEWiT, Ericsson, Huawei CR Rel-19 36.305 18.0.0 0120 - B LCS\_NAVIC\_L1\_SPS\_NR\_LTE-Core

[R2-2409725](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409725.zip) Introduction of NavIC L1 SPS A-GNSS in NR Stage 2 specification Reliance Jio, CEWiT, Ericsson, Huawei CR Rel-19 38.305 18.3.0 0179 - B LCS\_NAVIC\_L1\_SPS\_NR\_LTE-Core

[R2-2409726](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409726.zip) Introduction of NavIC L1 SPS A-GNSS in LPP Reliance Jio, ISRO, CEWiT, MediaTek, Ericsson CR Rel-19 37.355 18.3.0 0532 - B LCS\_NAVIC\_L1\_SPS\_NR\_LTE-Core

[R2-2410161](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410161.zip) Discussion on the support of NavIC L1 SPS Huawei, HiSilicon discussion Rel-19 LCS\_NAVIC\_L1\_SPS\_NR\_LTE-Core

[R2-2410243](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410243.zip) A-GNSS support for NavIC L1 SPS NEC discussion Rel-19 LCS\_NAVIC\_L1\_SPS\_NR\_LTE-Core

## 8.16 BDS B2b in A-GNSS

(BDS\_B2b; leading WG: RAN2; REL-19; WID [RP-242413](https://www.3gpp.org/ftp/meetings_3gpp_sync/ran/docs/RP-241264.zip))

Time budget: 0.25 TU

Tdoc Limitation: 1 tdoc

[R2-2409574](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409574.zip) Introduction of BDS B2b in A-GNSS positioning ZTE Corporation discussion Rel-19 LCS\_BDS\_B2b\_LTE\_NR-Core

[R2-2409627](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409627.zip) Introduction of B2b signal in BDS system in A-GNSS CATT, CAICT, Ericsson, Huawei, HiSilicon draftCR Rel-19 37.355 18.3.0 B LCS\_BDS\_B2b\_LTE\_NR-Core

[R2-2410158](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410158.zip) Introduction of BDS B2b in A-GNSS for TS 36305 Huawei, HiSilicon, CAICT, CATT, Ericsson CR Rel-19 36.305 18.0.0 0121 - B LCS\_BDS\_B2b\_LTE\_NR

[R2-2410159](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410159.zip) Introduction of BDS B2b in A-GNSS for TS 38305 Huawei, HiSilicon, CAICT, CATT, Ericsson CR Rel-19 38.305 18.3.0 0180 - B LCS\_BDS\_B2b\_LTE\_NR

[R2-2410160](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410160.zip) Discussion on the remaining issues for BDS B2b Huawei, HiSilicon discussion Rel-19 LCS\_BDS\_B2b\_LTE\_NR

## 8.17 IoT-NTN TDD mode

(IoT\_NTN\_TDD; leading WG: RAN1; REL-19; WID RP-242415)

Time budget: 0.5 TU

Tdoc Limitation: 0 tdoc

No contributions are expected for this meeting. The agenda is open only for possible discussions based on urgent LSs, if any.

[R2-2409694](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409694.zip) Work plan for WID: introduction of IoT-NTN TDD mode Iridium Satellite LLC Work Plan Rel-19 Late

## 8.18 TEI19

Time budget: 1 TU

Tdoc Limitation: 1 tdoc

Companies are encouraged to submit co-sourced contributions, which will have priority for discussion in RAN2#128. Tdoc limit applies to all contributions and primary co-sourcing company (if co-sourced).

Including incoming LS from CT1 C1-245500. No input expected in this meeting.

[R2-2409504](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409504.zip) LS on the potential impact on RAN2 specifications due to supporting ProSe in NPN (C1-245500; contact: Nokia) CT1 LS in Rel-19 TEI19\_ProSe\_NPN To:RAN2 Cc:SA2

* Noted

[R2-2409985](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409985.zip) Support of ProSe in NPN (CT1 LS [R2-2409504](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409504.zip)/C1-245500) Nokia discussion Rel-19 TEI19

* Noted

[R2-2410017](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410017.zip) Discussion on support of NPN for ProSe ZTE Corporation, Sanechips discussion Rel-19 TEI19\_ProSe\_NPN

* Noted

Discussion

- Chair indicates that this is a cross-TSG TEI19. Nokia and ZTE explain that the RAN changes are only wording modifications and wouldn’t make sense to have a WI for this.

[R2-2409931](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2409931.zip) Enhancement for resolving throughput degradation during handover China Unicom, Huawei, HiSilicon, Sony, Turkcell, NTT Docomo, Meta discussion

*Observation 1: Channel State Information (CSI) of the target cannot easily be reported as soon as the necessary measurements are performed, which delays setting an efficient MCS on the target side, resulting in a DL data rate drop after cell switch, which will affect real-time services.*

*Observation 2: Due to the improper setting of MCS on the target side, all handover techniques will result in throughput degradation.*

*Proposal 1: RAN2 specify a general solution to resolve the throughput degradation issue that exists in all handovers.*

*Proposal 2: UE indicating that the CSI measurement results are ready via a MAC CE can be a possible solution for resolving the throughput degradation issue.*

- Qualcomm thinks that for LTM they will do it before the handover and Huawei is proposing it after the HO. Qualcomm ask if we plan to keep RAN4 requirements or relax them.

- LG asks if this can handled by the network just sending CSI request repeatedly. Huawei thinks would waste resources.

- Apple thinks that the problem statement can be resolved by what LTM is doing. The discussion is happening in RAN1 and they have discussed that alternative 3 may not be feasible. Huawei explains that it doesn’t cover legacy handovers.

- Ericsson doesn’t think this is a problem and the network can just be conservate in MCS setting, but it can be useful for initial CA. We can agree with the intention but first check what LTM is doing and whether we need to do anything.

- Mediatek agrees with this, but it should be part of mobility objectives.

- Samsung thinks that do this we would need to add further neighbor measurements requirements and this wouldn’t be a TEI19.

- ZTE agrees with intention.

* Wait for further progress in LTM. This doesn’t imply that RAN1 LTM should consider this case. Understand the level of impacts and whether it could be TEI19 topic.
* Noted

[R2-2410542](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410542.zip) Quality Indication in Msg3 for SDT Ericsson discussion Rel-19 TEI19

*Observation 1 MT-SDT operation over initial BWP restricts DL MT-SDT transmissions to the bandwidth of CORESET 0 in RRC\_INACTIVE state.*

*Observation 2 MT-SDT BWP restriction with no DL quality feedback results in smaller, more conservative TB allocations in the downlink at low MCS values. For larger data volumes, smaller TBS translate to a higher number of subsequent transmissions.*

*Proposal 1 RAN2 addresses the BWP restriction in MT-SDT by introducing a Channel Quality Indication (CQI) in Msg3 or MsgA.*

*Option 1: Remove the CORESET 0 restriction for DL BWP for SDT from/after first DL MT-SDT data*

*Option 2: Introduce Channel Quality Indication (CQI) in Message 3 or MsgA*

- ZTE has sympathy on the problem statement but not sure about the solution, we should just remove the restriction. The CQI solution is not addressing the problem identified.

- Qualcomm thinks that removing the BWP restriction is not a good choice. If we don’t reports CQI in msg3 it will impact RAN4 as well.

- LG thinks that the BWP restriction is the root cause and we should remove it. Nokia agrees.

- Sony explains that a similar issues was identified in MBS and we agreed to expand coreset 0, introduce CFR. We can reuse that solution.

* RAN2 will address this issue. FFS the exact solution
* Noted

[R2-2410548](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410548.zip) Terminating Non-MPS Subscribed UE Handling Peraton Labs discussion Rel-18 38.300 TEI19

*Proposal 1: The gNB remembers the priority nature of the page for a non-MPS subscribed UE and treats the page response with priority.*

*Proposal 2: Discuss and agree to the attached CR.*

- LG agrees with observations. Asks if the solution in proposal 1 would work for all the cases. Peraton labs explains that the requests includes the UE ID so the gNB should be aware.

- ZTE thinks that there are cases where only partial UE ID is provided

- NEC thinks that this sounds more like a RAN3 discussion. Ericsson also agrees this is a more of ARN3 issue.

- Ericsson thinks that there are ways of solving this in RAN2, similar to what we did in MUSIM. In paging the network tells the UE the purposes of paging (e.g. MPS purposes) and when it comes back it includes the MPS indication. Peraton labs indicates that this is not an acceptable solution as they don’t want to indicate over the air this indication. Nokia also agrees not the best idea to expose the data. Ericsson thinks that we expose this in UL and why it is not ok to expose the DL.

- Ericsson thinks that we can’t mandate the gNB to do something as there may be other implementation dependent mechanisms to resolve this.

* Discuss offline to understand whether this should be discussed in RAN2/RAN3.
* Come back next meeting
* Noted

[R2-2410613](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410613.zip) PDCP SN Gap reporting at mobility Nokia discussion Rel-19

*Proposal 1: As part of PDCP entity re-establishment, for AM DRBs configured by upper layers to send a PDCP SN gap report in the uplink, the transmitting PDCP entity shall re-transmit any previously (prior to the PDCP entity re-establishment) transmitted PDCP SN Gap report(s) for which the successful delivery has not been confirmed by lower layers.*

*Proposal 2: RAN2 adopt the Text proposal in Annex implementing Proposal 1.*

- LG reminds everything that SN gap reporting saves up to 2 reordering timer, and this would take longer to set up so there is no point to do this.

- Nokia asks why is HO case different than normal operation. LG explains it is because it takes time to do the HO.

- Futurewei asks if this is a retransmission of the previous copy. Nokia thinks if more are discarged it will reflect the latest status.

- Ericsson has same understanding as LG.

* Noted

[R2-2410655](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410655.zip) Discussion on the issue of ANR reporting of HSDN cells [ANR\_HSDN] "Huawei, HiSilicon, CMCC, China Unicom, China Telecom, CATT, NTT DoCoMo" discussion Rel-19 TEI19

Proposal 1: It is proposed RAN2 to discuss the solutions for solving the issue of ANR reporting of HSDN cells:

- allow the UE to report HSDN indication for the neighbouring cell via CGI reporting procedure. The neighbouring cells can be intra-frequency or inter-frequency cells

- for this solution, introduce a new UE capability bit (optional with signalling)

Proposal 2: This feature is for both NR and LTE specifications.

- Ericsson is not sure the issue is valid, and even if it is valid there are network solution. Anyways ANR is led by RAN3 so we should check with RAN3. Huawei thinks that ANR is specified in RAN2 There are problems with network solution, if the Xn interface is not supported.

- CMCC explains that ANR ais deployed in the network and this is a problem we should addresss.

- ZTE thinks that we have both a UE based solution and NW based solution. NW based solution would be deployed faster.

- Samsung thinks in most cases the network knows whether the neighboring cell supports HSDN, and even if doesn’t know there is no problem with HO procedure. It is better to have a Network based solution if we want solve the issue.

- Samsung asks how the serving cell creates the neighbor cell list without exchanging information with neighbour cells.

- Qualcomm thinks that we have this information in the UE so it come for free to support it.

* Continue discussion until next meeting
* Noted

[R2-2410674](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410674.zip) Discussion on UE aggregation enhancement CMCC, ZTE, Media Tek Inc., vivo, CATT discussion Rel-19 TEI19

*Proposal 1: RAN2 is suggested to support multiple indirect paths for multi-path relay via N3C.*

- ZTE sees benefits but we have limitation for UE aggregation in Rel-18 that we would like to remove.

- Huawei supports this.

- Qualcomm asks what is the maximum additional relay you want to have and have we don’t a full specification analysis as there will be impact to PDCP as well.

- Apple thinks that there a lot of impacts not captured in RRC and there are MAC impact and there is a limit and we have to design new MAC CE.

- Samsung is concerned that there is impact to RAN3 specifications. CMCC explains that we limit the scenario to only intra gNB. Samsung thinks may be impact to F1 interface as well when considering CU and DU split.

- Ericsson thinks that we should first clarify the scope and then do an analysis

* More detailed scope and spec analysis expected for next meeting
* Noted

[R2-2410675](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410675.zip) Corrections to TS 38.331 on SL Relay enhancement CMCC, Media Tek Inc., CATT CR Rel-19 38.331 18.3.0 5180 - B TEI19

* Not treated

[R2-2410676](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410676.zip) Corrections to TS 38.300 on SL Relay enhancement CMCC, Media Tek Inc., CATT CR Rel-19 38.300 18.3.0 0940 - B TEI19

* Not treated

To be treated in NTN break out session

[R2-2410793](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410793.zip) Inclusion of the NB-IoT satellite information in E-UTRAN Google, Samsung, MediaTek Inc. discussion Rel-19

# 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

[R2-2410911](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2410911.zip) Report from session on V2X/SL, R19 NES and MOB Vice Chairman (Samsung) report

* LS R2-2411135 is updated and approved in R2-2411219
* The report is approved

## 9.2 Session on R18 MIMOevo, R18 MUSIM, and R19 LP-WUS

[R2-2410912](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2410912.zip) Rel-18 MIMO, Rel-19 MIMO, LPWUS, and SBFD Vice Chairman (CATT) report

* The report is approved

## 9.3 Session on NR NTN and IoT NTN

[R2-2410913](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2410913.zip) Report from session on NR NTN and IoT NTN Session chair (ZTE) report

- Ericsson asks if the LS on RACHless HO was Rel-18 and whether it was a correction. Nokia explains this is Rel-18 correction for NTN only.

* The report is approved

## 9.4 Session on positioning and sidelink relay

[R2-2410914](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2410914.zip) Report from session on positioning and sidelink relay Session chair (MediaTek) report

=> The report is approved

[R2-2410985](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202411%20-%20RAN2_128,%20Orlando\Extracts\R2-2410985.docx) Correction on spatial relation info in SP SRS activation deactivation MAC CE (R17) ZTE Corporation, Ericsson CR Rel-17 38.321 17.10.0 1977 - F NR\_pos\_enh-Cor

* The CR is postponed

[R2-2410986](file:///C:\Users\mtk16923\Documents\3GPP%20Meetings\202411%20-%20RAN2_128,%20Orlando\Extracts\R2-2410986.docx) Correction on spatial relation info in SP SRS activation deactivation MAC CE (R18) ZTE Corporation, Ericsson CR Rel-18 38.321 18.3.0 1978 - A NR\_pos\_enh-Core

* The CR is postponed

## 9.5 Session on R18 MBS, R18 QoE and R19 XR

[R2-2410915](C:\\Users\\panidx\\OneDrive - InterDigital Communications, Inc\\Documents\\3GPP RAN\\TSGR2_128\\Docs\\R2-2410915.zip) Report from session on R18 MBS, R18 QoE and R19 XR Session chair (Huawei) report

* The report is approved

1. The following LS needs online discussion and approval during the RAN2 Main session:

[R2-2411002](file:///D:\3GPP\TSGR2\TSGR2_128\Inbox\R2-2411002.zip) Reply LS on Application-Layer FEC Awareness at RAN RAN2 LS out Rel-19 NR\_XR\_Ph3-Core, XRM\_Ph2 To:SA2 Cc:SA4

- Meta indicates that the LS asks about feasibility but we respond about usefulness. Qualcomm explains that we didn’t discuss feasibility. Mediatek indicates that there was no consensus. Huawei, Lenovo, Nokia, Apple, Xiaomi, LG, Vivo, Samsung, Sharp, Mediatek thinks that the LS truly reflects the agreement of RAN2 and we didn’t conclude on feasibility.

- Vivo indicates that from SA2 colleagues this is enough for SA2 colleagues.

* The LS is approved

1. The following agreement was flagged and proposed to be removed by Ericsson using [AT128][500] thread, after the online discussions on R19 XR already took place:

* Rate indication from gNB to the UE on a per QoS flow level is supported. FFS the details, e.g. if: 1) flows are indicated by MAC CE or 2) by RRC while MAC CE is per DRB.

- Ericsson indicates that after the agreement there were some impactes identified to other WGs. So suggest to send an LS to SA2/SA4 and RAN3, provide the agreement and ask if there are any issues. Nokia agrees as usually if we find inter-WG impacts we need to ask.

- Meta doesn’t want to send the LS. We should keep agreement and discuss next meeting.

- LG is ok to send the LS but not the rever the agreement. Samsung doesn’t see a reason to delay the LS if companies would like an LS.

- Lenovo also agrees to send the LS.

- Qualcomm as rapporteur thinks that if we need to send nand LS it should be now as they are concerned whether it can be completed on time.

- Meta is objecting

- Ericsson thinks that if we don’t send an LS then we have to revert the agreement.

- ZTE thinks that we can’t stop ourselves from working other WGs. MEdiatek thinks that we are trying to solve a difficult topic so we can just ask for feedback.

- Session chair would ike to keep the the agreement and this is a compromise and is happy with the conclusion. We can continue working with this agreement as an assumption and only if we get reply with concerns.

* Keep the agreement as is. Send an LS to SA4, RAN3 ccSA2 where we simply put the agreement we reached and ask if they have any feedback (if any).

R2-2411218

## 9.6 Session on maintenance and SON/MDT

[R2-2410916](file:///C:\Users\panidx\OneDrive%20-%20InterDigital%20Communications,%20Inc\Documents\3GPP%20RAN\TSGR2_128\Docs\R2-2410916.zip) Report from session on maintenance and SON/MDT Session chair (Ericsson) report

* The reports is approved
* [POST128][105][MOB] (Apple)

**Scope:** Update 38.300 running CR capturing all RAN2 agreements.

**Intended outcome:** 38.300 running CR in R2-24010927, to be endorsed.

**Deadline: Short email discussion**

* [POST128][106][MOB] (China Telecom)

**Scope:** Update 37.340 running CR capturing all RAN2 agreements.

**Intended outcome:** 37.340 running CR in R2-24010928, to be endorsed.

**Deadline: Short email discussion**

* [POST128][117][MOB] (Lenovo)

**Scope:** Prepare LS to RAN4 and RAN3 to take the RAN2 agreements (including C-LTM based on L3 measurements, and possible other agreements from inter-CU LTM and L1-event driven MR) into account for their jobs.

**Intended outcome:** LS in R2-2411134, to be approved.

**Deadline: Short email discussion**

* [POST128][107][MOB] (Ericsson)

**Scope:** For inter-CU LTM and C-LTM parts, prepare 38.331 running CR capturing all RAN2 agreements, identify stage 3 issues (possibly with rapporteur’s suggestion) that need to be discussed, and discuss them.

**Intended outcome:** 38.331 running CR, to be endorsed next meeting, and discussion summary.

**Deadline: Long email discussion**

* [POST128][108][MOB] (Huawei)

**Scope:** For L1 event-driven MR, prepare 38.331 running CR capturing all RAN2 agreements, identify stage 3 issues (possibly with rapporteur’s suggestion) that need to be discussed, and discuss them.

**Intended outcome:** 38.331 running CR, to be endorsed next meeting, and discussion summary.

**Deadline: Long email discussion**

* [POST128][109][MOB] (Vivo)

**Scope:** Prepare 38.321 running CR capturing all RAN2 agreements, identify stage 3 issues (possibly with rapporteur’s suggestion) that need to be discussed, and discuss them.

**Intended outcome:** 38.321 running CR, to be endorsed next meeting, and discussion summary.

**Deadline: Long email discussion**

* [POST128][006][MIMOevo] LS on 8Tx 2TB (Samsung)

Intended outcome: Approve the LS

Deadline: short

* [POST128][007][MIMOevo] LS on differentiation of sDCI mTRP, mDCI mTRP and sTRP (CATT)

Intended outcome: Approve the LS

Deadline: short

* [POST128][008][MIMOevo] RRC CR on TDD UL/DL Configuration for Two TA (Ericsson)

Intended outcome: Agree the CR

Deadline: short

* [Post128][401][Relay] Control plane baseline solution (InterDigital)

Scope: Develop the baseline control plane procedures for connection establishment, and paging/system information forwarding, towards a stage 3 development stage.

Intended outcome: Report to RAN2#129

Deadline: Long

* [Post128][402][POS] BDS B2b stage 3 CR check (CATT)

Scope: Check and update the CR in R2-2409627.

Intended outcome: Agreeable CR

Deadline: Long

* [Post128][403][POS] NavIC L1 stage 3 CR check (Reliance Jio)

Scope: Check the CR in R2-2409726 and update if necessary.

Intended outcome: Agreeable CR

Deadline: Long

* [Post128][404][POS] LS to RAN1 on SL-PRS resource pool configuration (vivo)

Scope: Draft an LS to RAN1 inquiring as to the intention of the agreement quoted in R2-2409639, to clarify whether the restriction should be documented as a network or UE behaviour.

Intended outcome: Approved LS

Deadline: Short (not for RP)

* [Post128][405][Relay] Check of late AIP stage 2 CR on Rel-18 relay (LG)

Scope: Check the AIP CR in R2-2411185 and confirm that it can be agreed.

Intended outcome: Agreed CR

Deadline: Short (for RP)

Post email discussion

* [POST128][601][Maint] CRs for maximum number of UL segments (Qualcomm)

Scope:

* + - Produce agreeable CR for NR and LTE

      Intended outcome:

* + - Agreed CRs

     Deadline:

* + - Short
* [POST128][602][Maint] LS on emergency services and eDRX (ZTE)

Scope:

* + - Produce approvable LS

      Intended outcome:

* + - Approved LS in R2-2411041 (ZTE)

     Deadline:

* + - Short
* [Post128][301][R19 IoT NTN] LS to SA2 on Satellite IDs for S&F (CATT)

Scope: Draft a LS to SA2 on satellite IDs based on the outcome of the discussion on R2-2410974

Intended outcome: Approved LS

Deadline: short

## List of AT-meeting offline discussions

* [AT128][500] Organizational – Session on R18 MBS, R18 QoE and R19 XR

Scope:

* + - Share plans and list of ongoing email discussions for the session on R18 MBS, R18 QoE and R19 XR
    - Share meeting notes and agreements for review and endorsement
* [AT128][501][XR] Reply LS on PDU set (vivo) 🡪 Closed

Scope: Reply LS

Intended outcome: Reply LS in R2-2411001

Deadline: For offline approval on Friday 2024-11-22 09:00

* [AT128][502][XR] Reply LS on AL-FEC (QCM)

Scope: Reply LS to SA2

Intended outcome: Reply LS to SA2 in R2-2411002

Deadline: LS for offline approval: Friday 2024-11-22 09:00

* [AT128][503][QoE] QoE reporting SRB change issue (Huawei) 🡪 Closed

Scope: Discuss the FFS and stage-2 CR

Intended outcome: Agreeable proposal and stage-2 CR

Deadline: Report and CR ready for discussion during CB session on Thursday

* [AT128][505][MBS] Update R2-2410254 (Nokia) 🡪 Closed

Scope: Update R2-2410254 and make final review

Intended outcome: Agreeable CR in R2-2411004

Deadline: CR ready for offline agreement: Friday 2024-11-22 09:00