3GPP TSG-RAN WG2 Meeting #116 electronic R2-2111292

Online, November 1-12, 2021

**Agenda item: 10.2**

**Source: Vice Chairman (ZTE Corporation)**

**Title: Report from Break-out session on R17 NTN, REDCAP and CE**

**Document for: Approval**

General

Recording of voice or video at meetings is not used in 3GPP. This applies also to this e-Meeting. At this e-Meeting, no specific actions are taken to prevent the recording of web conferences. Companies that have concerns related to recordings, if any, may express those by email in the main meeting organizational thread [AT116-e][000]

Organizational

1. All organization emails and notes will be shared over the following email discussion throughout the meeting:

* [116-e][100] ****Organizational - NTN, REDCAP and CE session (RAN2 VC)****

Scope:

* + - Share plans for the meeting and list of ongoing email discussions for the sessions related to NTN, REDCAP and CE
    - Share meetings notes and agreements for review and endorsement

Schedule/Plan

WEEK 1:

|  |  |  |  |
| --- | --- | --- | --- |
| **Time Zone UTC** | **Web Conference R2 - Main** | **Web Conference R2 - BO1** | **Web Conference R2 - BO2** |
| **Monday** |  |  |  |
| 12:05-12:15 | Rel17 Planning (TS creation, UE caps, RRC parameters, running CRs, need for coord etc) |
| 12:15-13:05 | NR17 Measurement Gap Enh (Johan) | NR16 Pos (Nathan) | NR17 NTN, non-pos aspects (Sergio)  [8.10.1]  [8.10.2] |
| 13:05-14:25 | NR15 NR16 Main session (Johan) | NR17 Multi-SIM (Tero) | NR17 NTN (Sergio)  [8.10.3.3] only SMTC/gaps  [8.10.3.1]  [8.10.3.2] |
| 14:25-15:45 | NR17 TEI (Johan) | NR17 SL enh (Kyeongin) | LTE17 IoT (Brian) |
| **Tuesday** |  |  |  |
| 12:15-13:05 | NR17 QoE (Johan) | NR17 RAN Slicing (Tero) | NR17 Small Data Enh (Diana) |
| 13:05-14:25 | NR17 eIAB (Johan) | NR16 V2X (Kyeongin) | NR17 Small Data Enh (Diana) |
| 14:25-15:45 | NR17 ePowSav (Johan) | NR17 SL enh (Kyeongin)  15:15: NR17 NTN (Sergio) | NR17 DCCA (Tero) |
| **Wednesd** |  |  |  |
| 12:15-13:05 | NR17 eNPN (Johan) | 12:15-13:35: NR17 RedCap (Sergio)  [8.12.1]  [8.12.2.2] outcome of [offline-104]  [8.12.2.1]  [8.12.3.1] outcome of [offline-105] | NR17 SL Relay (Nathan) |
| 13:05-14:25 | NR17 Multicast (Johan) | 13:35-14:25: NR17 CovEnh (Sergio) | NR17 Pos (Nathan) |
| 14:25-15:45 | NR17 Multicast (Johan) | NR17 SONMDT (HuNan) | NR17 IIOT URLLC (Diana) |
| **Thursday** |  |  |  |
| 04:30-05:30 | NR17 feMIMO (Johan) | NR17 SL Relay (Nathan) | LTE16e IoT (Emre, Brian) |
| **Friday** |  |  |  |
| 04:30-05:30 | NR17 Other (Johan) | NR17 SL Relay (Nathan) | LTE All releases Misc (Tero) |

WEEK 2:

|  |  |  |  |
| --- | --- | --- | --- |
| **Time Zone UTC** | **Web Conference R2 - Main** | **Web Conference R2 - BO1** | **Web Conference R2 - BO2** |
| **Monday** |  |  |  |
| 12:45-13:35 | NR17 IoT NTN (Johan) | NR17 up to 71 GHz (Tero) | NR16 SONMDT (HuNan) |
| 13:35-14:55 | NR17 Other (Johan) | CB Tero | CB Kyeongin |
| 14:55-16:15 | NR15 NR16 Main session  CB Measurement Gap Enh (Johan) | NR17 RACH indication / partitioning (Diana) | NR17 Pos (Nathan) |
| **Tuesday** |  |  |  |
| 12:45-13:35 | CB eNPN, QoE, (Johan) | CB Sergio  NR17 NTN | CB Nathan |
| 13:35-14:55 | CB eIAB, TEI (Johan) | CB Tero | CB Brian Emre |
| 14:55-16:15 | CB Multicast, IoT NTN (Johan) | CB Diana | CB Kyeongin |
| **Wednesd** |  |  |  |
| 05:00-06:00 | CB ePowsav, feMIMO (Johan) | CB Sergio  NR17 RedCap  NR17 CovEnh | CB TBD Kyeongin |
| **Thursday** |  |  |  |
| 05:00-06:00 | CB NR16 NR15 (Johan) | CB HuNan | CB Nathan |
| **Friday** |  |  |  |
| 05:00-06:00 | CB TBD (Johan) | CB Sergio DianaTBD | CB TBD |

List and status of offline email discussions

NOTE: No offline email discussions will be kicked off before Monday Nov 1st, 07:00 UTC

* [AT116-e][101][NTN] Other MAC aspects (Interdigital)

[placeholder for a possible offline to be kicked off after the Monday GTW session]

* [AT116-e][102][NTN] Idle mode aspects (Intel)

[placeholder for a possible offline to be kicked off after the Monday GTW session]

* [AT116-e][103][NTN] SMTC/gaps (Nokia)

[placeholder for a possible offline to be kicked off after the Monday GTW session]

* [AT116-e][104][RedCap] NCD-SSB (Ericsson)

Initial scope: Discuss incoming LS in [R2-2110727](file:///C:\Data\3GPP\Extracts\R2-2110727_R1-2110600.docx) and related company contributions

Initial intended outcome: Summary of the offline discussion with e.g.:

* + - List of proposals for agreement (if any)
    - List of proposals that require online discussions

Initial deadline (for companies' feedback): Wednesday 2021-11-03 0500 UTC

Initial deadline (for rapporteur's summary in R2-2111334): Wednesday 2021-11-03 09:00 UTC

Status: Ongoing

* [AT116-e][105][RedCap] eDRX cycles aspects (Apple)

Initial scope: Discuss proposals in AI 8.12.3.1 (skipping those on INACTIVE eDRX >10.24sec and on pure ASN.1 aspects)

Initial intended outcome: Summary of the offline discussion with e.g.:

* + - List of proposals for agreement (if any)
    - List of proposals that require online discussions
    - List of proposals that should not be pursued (if any)

Initial deadline (for companies' feedback): Tuesday 2021-11-02 2000 UTC

Initial deadline (for rapporteur's summary in R2-2111335): Wednesday 2021-11-03 00:00 UTC

Proposals marked "for agreement" in R2-2111335 not challenged until Wednesday 2021-11-03 1100 UTC will be declared as agreed via email by the session chair (for the rest the discussion might continue online during the CB session).

Status: Ongoing

## 8.10 NR Non-Terrestrial Networks (NTN)

(NR\_NTN\_solutions-Core; leading WG: RAN2; REL-17; WID: [RP-211557](file:///C:\Data\3GPP\archive\RAN\RAN%2392\Tdocs\RP-211557.zip))

Time budget: 1.5 TU

Tdoc Limitation: 5 tdocs

Email max expectation: 5 threads

### 8.10.1 Organizational

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

Including outcome of:

[Post115-e][101][NTN] Stage 2 running CR (Thales)

[Post115-e][103][NTN] RRC running CR (Ericsson)

[Post115-e][104][NTN] MAC running CR (Interdigital)

[Post115-e][105][NTN] 38.304 running CR (ZTE)

incoming LSs

* extended NAS supervision timers

[R2-2109307](file:///C:\Data\3GPP\Extracts\R2-2109307_C1-215074.doc) LS on extended NAS supervision timers at satellite access (C1-215074; contact: Ericsson) CT1 LS in Rel-17 5GSAT\_ARCH-CT To:RAN2 Cc:RAN2

* TA pre-compensation and TA reporting

[R2-2109312](file:///C:\Data\3GPP\Extracts\R2-2109312_R1-2108410.docx) Reply LS on TA pre-compensation (R1-2108410; contact: OPPO) RAN1 LS in Rel-17 NR\_NTN\_solutions-Core To:RAN2

[R2-2111221](file:///C:\Data\3GPP\Extracts\R2-2111221_R1-2110663.docx) LS on UE TA reporting (R1-2110663; contact: Ericsson) RAN1 LS in Rel-17 NR\_NTN\_solutions To:RAN2

* UE location aspects

[R2-2109373](file:///C:\Data\3GPP\Extracts\R2-2109373_S2-2106651.docx) LS Response to Reply LS on UE location aspects in NTN (S2-2106651; contact: Qualcomm) SA2 LS in Rel-17 5GSAT\_ARCH To:RAN3, RAN2, CT1

[R2-2109815](file:///C:\Data\3GPP\Extracts\R2-2109815_C1-216250.doc) Reply LS on UE location aspects in NTN (C1-216250; contact: Nokia) CT1 LS in Rel-17 5GSAT\_ARCH To:SA2 Cc:RAN2, RAN3

* Noted

running CRs

[R2-2109586](file:///C:\Data\3GPP\Extracts\R2-2109586_Stg2%20Running%20CR_NR-NTN_v30.docx) [Post115-e][101][NTN] Stage 2 running CR (Thales) THALES draftCR Rel-17 38.300 16.7.0 NR\_NTN\_solutions

[R2-2110466](file:///C:\Data\3GPP\Extracts\R2-2110466_Stage-3%20running%20304%20CR%20for%20NTN.docx) Stage-3 running 304 CR for NTN ZTE corporation, Sanechips draftCR Rel-17 38.304 16.6.0 B NR\_NTN\_solutions-Core

[R2-2110710](file:///C:\Data\3GPP\RAN2\Docs\R2-2110710.zip) Stage-3 running RRC CR for NTN Rel-17 Ericsson draftCR Rel-16 38.331 16.6.0 NR\_NTN\_solutions-Core Late

[R2-2110864](file:///C:\Data\3GPP\RAN2\Docs\R2-2110864.zip) Stage 3 NTN running CR for 38.321 - RAN2#116e InterDigital draftCR Rel-17 38.321 16.6.0 NR\_NTN\_solutions-Core Late

[R2-2110863](file:///C:\Data\3GPP\Extracts\R2-2110863%20(R17%20NTN%20WI%20AI%208.10.1)%20MAC%20Open%20Issues_116e.docx) MAC open issues in NTN - RAN2#116e InterDigital discussion Rel-17 NR\_NTN\_solutions-Core

### 8.10.2 User Plane

#### 8.10.2.1 RACH aspects

[R2-2109498](file:///C:\Data\3GPP\Extracts\R2-2109498%20-%20Discussion%20on%20RACH%20and%20TA%20report%20in%20NTN.doc) Discussion on RACH and TA report in NTN OPPO discussion Rel-17 NR\_NTN\_solutions-Core

p1. RAN2 discuss where to provide K\_mac value in SIB, e.g. in SIB1, or in the NTN-specific SIB carrying satellite ephemeris.

p2. Use UE location information combined with RSRP for RA type selection in NTN.

p3. RAN2 discuss the logical channel priority for the new TA Report MAC CE.

p4. SR can be triggered if TA reporting has been triggered but there is no available UL-SCH resources, or if the UL-SCH resources cannot accommodate the TA report MAC CE plus its subheader as a result of LCP.

p5. A report MAC CE can be mapped to one SR configuration, which is configured by RRC using a new parameter, e.g. schedulingRequestID-TA-Report-r17.

p6. Include UE-specific TA (i.e.) in the new TA Report MAC CE.

[R2-2110019](file:///C:\Data\3GPP\Extracts\R2-2110019%20%20RACH%20Type%20selection%20and%20TA%20report.doc) RACH Type selection and TA report Xiaomi discussion Rel-17

Proposal 1 QoS/LCH based RA type selection for connected mode is implemented without specification impact.

Proposal 2 QoS/LCH based RA type selection for idle/inactive mode is not considered in Rel-17.

Proposal 3 Location/Distance based RA type selection together with RSRP are supported for both idle/inactive and connected mode.

Proposal 4 During RACH, TA report MAC CE can either be included in MsgA/Msg3, or Msg5, depending on the UL grant size for Msg3 or MsgA PUSCH resource size.

Proposal 5 RAN2 to agree “If the reported content of information about UE specific TA is TA pre-compensation value in connected mode, MAC CE is used to report”.

Proposal 6 In connected mode, TA report MAC CE can be sent during RACH (i.e. in MsgA/Msg3/Msg5) if it is triggered based on the trigger condition configuration, regardless of the enable/disable configuration of TA report during RACH in SI.

Proposal 7 Do not support TA report MAC CE triggering SR/RACH procedure.

Proposal 8 The logical channel priority of TA report MAC CE is higher than MAC CE for SL-BSR prioritized and lower than LBT failure MAC CE.

Proposal 9 Reserved LCID instead of eLCID is used for TA report MAC CE.

Proposal 10 The size of TA report MAC CE is limited within 1 byte.

Proposal 11 Network request based TA report is supported.

Proposal 12 Periodic TA report is not supported.

Proposal 13 For TA report using RRC, reuse existing signalling method(potential enhancement are not precluded) i.e., by configuring includeCommonLocationInfo in the corresponding reportConfig.

Proposal 14 Send LS to SA3 to ask whether user consent for NTN TA report purpose reuse the user consent for NTN LCS purpose.

Proposal 15 if the gNB has user consent to obtain UE location for NTN TA report purpose, reporting of finer location information/full GNSS coordinates in RRC\_CONNECTED can be supported after AS security is enabled.

Proposal 16 When UE needs to report UE location for TA report purpose, UE acquires location information to report if location information is not available.

Proposal 17 If gNB has no user consent for NTN TA report purpose, UE specific TA is used for TA report.

[R2-2110733](file:///C:\Data\3GPP\Extracts\R2-2110733%20Remaining%20issues%20on%20TA%20report.doc) Remaining issues on TA report ZTE Corporation, Sanechips discussion Rel-17

Proposal 1: For connected UE, TA can be configured to report via RACH procedure if timeAlignmentTimer is stopped.

Proposal 2: The same indication used for TA report via RACH in idle/inactive state is used for enabling TA report via RACH in connected state.

Proposal 3: TA reported via RACH procedure is Full TA, i.e, T\_TA (applied TA for UL transmission) as defined in the UE’s TA formula: T\_TA=(N\_TA+N\_(TA,UE-specific)+N\_(TA,common)+N\_(TA,offset) )×T\_c

Proposal 4: Msg3 is used for TA report via 4stepRACH if enabled by NW.

Proposal 5: Enhancements is needed to allow inclusion of TA information without extending message size.

Proposal 6: It is kindly asked RAN2 to further discuss enhancement on RACH at least based on the alternatives listed below:

Option 1: CCCH with cut-off UE identity

Option 2: 64-bit CCCH is always configured in NTN when TA report is enabled

Option 3: Additional Msg3 for TA report in 4stepRACH

Proposal 7: The priority of TA report MAC CE is right below C-RNTI MAC CE or data from UL-CCCH.

Proposal 8: A variable (e.g., UE\_REPORTED\_TA) is defined in MAC entity to store the last successfully reported TA.

Proposal 9: UE initializes the variable defined for TA report (e.g., UE\_REPORTED\_TA) each time configuration for event triggered TA report is received or updated.

Proposal 10: When event triggered TA is configured, UE reports full TA using RRC signalling in a first report, and reports delta TA in subsequent TA report using MAC CE.

Proposal 11: TA report via PDCCH ordered RACH is supported in NTN.

[R2-2109551](file:///C:\Data\3GPP\Extracts\R2-2109551%20Discussion%20on%20UE-specific%20%20TA%20information%20reporting%20in%20NTN.docx) Discussion on UE-specific TA information reporting in NTN CATT discussion Rel-17 NR\_NTN\_solutions-Core Revised

[R2-2109660](file:///C:\Data\3GPP\Extracts\R2-2109660%20Further%20consideration%20on%20TA%20reporting.doc) Further consideration on TA reporting Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110044](file:///C:\Data\3GPP\Extracts\._R2-2110044%20UE%20Reported%20UE%20Specific%20TA%20Pre-Compensation.docx) UE Reported UE Specific TA Pre-Compensation Apple discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110125](file:///C:\Data\3GPP\Extracts\R2-2110125%20TA%20report%20%20procedure.doc) TA report procedure Spreadtrum Communications discussion Rel-17

[R2-2110703](file:///C:\Data\3GPP\Extracts\R2-2110703%20Reporting%20information%20about%20UE%20specific%20TA%20and%20RA%20Type%20Selection.docx) Reporting information about UE specific TA and RA Type Selection Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110765](file:///C:\Data\3GPP\Extracts\R2-2110765_TA%20reporting%20Remaining%20issues.docx) TA reporting Remaining issues NEC Telecom MODUS Ltd. discussion

[R2-2110774](file:///C:\Data\3GPP\Extracts\R2-2110774.docx) Further considerations on TA report Samsung Research America discussion NR\_NTN\_solutions-Core

[R2-2110941](file:///C:\Data\3GPP\Extracts\R2-2110941.docx) Additional criterion for RA type selection Samsung Research America discussion

[R2-2110952](file:///C:\Data\3GPP\Extracts\R2-2110952%20-%20Reporting%20information%20about%20UE%20specific%20TA%20pre-compensation%20in%20NTNs.docx) Reporting information about UE specific TA pre-compensation in NTNs Ericsson discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2111005](file:///C:\Data\3GPP\Extracts\R2-2111005%20Discussion%20on%20LCH-based%20RA%20type%20selection.docx) Discussion on LCH-based RA type selection ASUSTeK discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2111006](file:///C:\Data\3GPP\Extracts\R2-2111006%20Discussion%20on%20issue%20of%20restarting%20contention%20resolution%20timer.docx) Discussion on issue of restarting contention resolution timer ASUSTeK discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2111140](file:///C:\Data\3GPP\Extracts\R2-2111140_Discussion%20on%20RACH%20and%20TA%20report%20aspects.docx) Discussion on RACH and TA report aspects LG Electronics Inc. discussion NR\_NTN\_solutions-Core

[R2-2111207](file:///C:\Data\3GPP\Extracts\R2-2111207%20%20Discussion%20on%20UE-specific%20%20TA%20information%20reporting%20in%20NTN.docx) Discussion on UE-specific TA information reporting in NTN CATT discussion Rel-17 NR\_NTN\_solutions-Core [R2-2109551](file:///C:\Data\3GPP\Extracts\R2-2109551%20Discussion%20on%20UE-specific%20%20TA%20information%20reporting%20in%20NTN.docx)

withdrawn

R2-2110018 RACH Type selection and TA report Xiaomi discussion Rel-17 Late

#### 8.10.2.2 Other MAC aspects

[R2-2111331](file:///C:\Data\3GPP\RAN2\Inbox\R2-2111331.zip) [101][NTN] Summary on remaining aspects of timers, HARQ, and LCP including CG/SPS aspects in AI 8.10.2.2 ​Interdigital discussion Rel-17 NR\_NTN\_solutions-Core

* Possibly agreeable

Proposal 4: An extended sr-ProhibitTimer in NTN shall include values less than UE-gNB RTT (as in legacy), with details FFS.

Proposal 9: RAN2 to confirm that RRC parameter “allowedHARQ-DRX-LCP” is included in LogicalChannelConfig.

Proposal 13: configuredGrantTimer can be extended in NTN. FFS details of when extension is applicable and method of extention.

Proposal 15: The ConfiguredGrantConfiguration shall allow for up to 32 in nrofHARQ-Processes, and up to 31 in harq-ProcID-Offset and harq-ProcID-Offset2.

Proposal 16: The SPS-Config shall allow up to 32 for nrofHARQ-Processes, and up to 31 in harq-ProcID-Offset.

Proposal 17: HARQ feedback shall always be sent for SPS deactivation (i.e. regardless of HARQ feedback enabled/disabled).

* Needs further discussion

Proposal 1: RAN2 to discuss the following options to support reception of blind UL retransmission grant for HARQ process(es) configured with HARQ mode B:

1) Rely on UE being in DRX Active Time via other means (e.g. Inactivity Timer);

2) Start drx-RetransmissionTimerUL at the end of PUSCH transmission;

3) Start drx-RetransmissionTimerUL at offset indicated by NW after the end of PUSCH transmission.

Proposal 2: RAN2 to discuss the following options to support reception of blind retransmission for HARQ process(es) configured with disabled HARQ feedback:

1) Rely on UE being in DRX Active Time via other means (e.g. Inactivity Timer);

2) Start drx-RetransmissionTimerDL in the first symbol after the end of the reception of the last PDSCH or slot-aggregated PDSCH;

3) Start drx-RetransmissionTimerDL in the first symbol after the end of the reception of the last PDSCH or slot-aggregated PDSCH plus X (X = T\_proc,1);

4) Start drx-RetransmissionTimerDL with offset indicated by NW after the end of the reception of the last PDSCH.

Proposal 3: For HARQ process(es) not configured with DL HARQ feedback enabled/disabled, RAN2 to discuss the following options for drx-HARQ-RTT-TimerDL behaviour:

1) drx-HARQ-RTT-TimerDL is extended by UE-gNB RTT;

2) drx-HARQ-RTT-TimerDL is not changed (i.e. legacy behaviour applies).

Proposal 5: RAN2 to discuss if UE ignores HARQ process configuration (e.g. configured HARQ mode) for the case of a PUSCH transmission scheduled by RAR.

Proposal 6: RAN2 to discuss if uplinkHARQ-DRX-LCP-Mode-r17 is configured, a HARQ process may be mapped to:

1) ‘HARQ mode A’ or ‘HARQ mode B’;

2) ‘HARQ mode A’, ‘HARQ mode B’, or ‘Legacy’.

Proposal 7: RAN2 to discuss valid LCH to HARQ process mapping configurations.

Proposal 8: RAN2 to discuss whether RRC parameter uplinkHARQ-DRX-Mode is included in 1) MAC-CellGroupConfig; or 2) PUSCH-ServingCellConfig

Proposal 10: RAN2 to discuss the following options for configuring enabled/disabled DL HARQ feedback for SPS:

1) DL HARQ feedback is enabled/disabled per HARQ process (as in DG);

2) DL HARQ feedback is enabled/disabled per SPS configuration.

Proposal 11: RAN2 to discuss the following options for configuration of HARQ mode for configured grant:

1) HARQ mode is configured per CG;

2) Signalling of HARQ mode for DG (i.e. per HARQ process) also applies to CG and NW implementation guarantees that the calculated HARQ processes for configured grant have the same HARQ mode;

3) Signalling of HARQ mode for DG (i.e. per HARQ process) also applies to CG and CG is mapped to the HARQ processes with the same HARQ mode.

Proposal 12: RAN2 to discuss whether new LCP restriction introduced for dynamic grant also applies to configured grant.

Proposal 14: RAN2 to discuss whether a UL HARQ mode is associated with configuredGrantTimer configuration (i.e., configuredGrantTimer configured = HARQ mode A and configuredGrantTimer NOT configured = HARQ mode B).

[R2-2109499](file:///C:\Data\3GPP\Extracts\R2-2109499%20-%20Discussion%20on%20HARQ%20related%20aspects%20in%20NTN.doc) Discussion on HARQ related aspects in NTN OPPO discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2109552](file:///C:\Data\3GPP\Extracts\R2-2109552%20Co-existence%20issue%20of%20BSR%20over%20CG%20and%20BSR%20over%202-step%20RA.docx) Co-existence issue of BSR over CG and BSR over 2-step RA CATT discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2109631](file:///C:\Data\3GPP\Extracts\R2-2109631%20Remaining%20issue%20on%20disabling%20uplink%20HARQ%20retransmission.docx) Remaining issue on disabling uplink HARQ retransmission MediaTek Inc. discussion

* Revised in [R2-2111267](file:///C:\Data\3GPP\RAN2\Docs\R2-2111267.zip)

[R2-2111267](file:///C:\Data\3GPP\RAN2\Docs\R2-2111267.zip) Remaining issue on disabling uplink HARQ retransmission MediaTek Inc. discussion

[R2-2109632](file:///C:\Data\3GPP\Extracts\R2-2109632%20Round%20trip%20delay%20offset%20for%20configured%20grant%20timer.docx) Round trip delay offset for configured grant timers MediaTek Inc. discussion [R2-2108319](file:///C:\Data\3GPP\archive\RAN2\RAN2%23115\Tdocs\R2-2108319.zip)

[R2-2109661](file:///C:\Data\3GPP\Extracts\R2-2109661%20Further%20consideration%20on%20LCP%20and%20HARQ.doc) Further consideration on LCP and HARQ Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

R2-2109922 On Updating SR-Prohibit Timer in NR-NTN MediaTek Inc. discussion Late

[R2-2109968](file:///C:\Data\3GPP\Extracts\R2-2109968%20SPS%20CG.doc) HARQ process for SPS and CG Qualcomm Incorporated discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110017](file:///C:\Data\3GPP\Extracts\R2-2110017%20%20Remaining%20issues%20related%20to%20HARQ%20retransmission%20state.doc) Remaining issues related to HARQ retransmission state Xiaomi discussion Rel-17

[R2-2110045](file:///C:\Data\3GPP\Extracts\._R2-2110045%20NTN%20HARQ%20Management.docx) NTN HARQ Management Apple discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110126](file:///C:\Data\3GPP\Extracts\R2-2110126%20Discussion%20on%20HARQ%20and%20LCP%20remaining%20issues.doc) Discussion on HARQ and LCP remaining issues Spreadtrum Communications discussion Rel-17

[R2-2110308](file:///C:\Data\3GPP\Extracts\R2-2110308%20Remaining%20UP%20issues%20for%20NR%20NTN.docx) Remaining UP issues for NR NTN Lenovo, Motorola Mobility discussion Rel-17

[R2-2110354](file:///C:\Data\3GPP\Extracts\R2-2110354.doc) CG enhancements in NTN Sony discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110704](file:///C:\Data\3GPP\Extracts\R2-2110704%20Discussion%20on%20UL%20scheduling,%20DRX%20and%20other%20MAC%20aspects.docx) Discussion on UL scheduling, DRX and other MAC aspects Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110734](file:///C:\Data\3GPP\Extracts\R2-2110734%20Remaining%20issues%20on%20HARQ%20aspects.doc) Remaining issues on HARQ aspects ZTE Corporation, Sanechips discussion Rel-17

[R2-2110859](file:///C:\Data\3GPP\Extracts\R2-2110859%20(R17%20NTN%20WI%20AI%208.10.2.2)%20Remaining%20UP%20open%20issues.docx) Remaining MAC open issues in NTN InterDigital discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110926](file:///C:\Data\3GPP\Extracts\R2-2110926_Updating%20SR-Prohibit%20Timer.docx) Updating SR-Prohibit Timer MediaTek Inc. discussion

[R2-2110951](file:///C:\Data\3GPP\Extracts\R2-2110951%20-%20On%20configured%20scheduling%20DRX%20LCP%20HARQ%20and%20SR%20BSR%20in%20NTNs.docx) On configured scheduling, DRX, LCP, HARQ and SR/BSR in NTNs Ericsson discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2111044](file:///C:\Data\3GPP\Extracts\R2-2111044%20Remaining%20Issue%20on%20LCP%20Restrictions%20and%20CG%20Impact%20in%20NTN.docx) Remaining Issue on LCP Restrictions and CG Impact in NTN CMCC discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2111139](file:///C:\Data\3GPP\Extracts\R2-2111139_Discussion%20on%20other%20MAC%20aspects_r2.DOCX) Discussion on other MAC aspects LG Electronics Inc. discussion NR\_NTN\_solutions-Core

[R2-2111151](file:///C:\Data\3GPP\Extracts\R2-2111151.docx) Retransmission timer for HARQ state B ITL discussion Rel-17

[R2-2111154](file:///C:\Data\3GPP\Extracts\R2-2111154.docx) HARQ State A/B for CG aspects ITL discussion Rel-17

#### 8.10.2.3 RLC and PDCP aspects

[R2-2110548](file:///C:\Data\3GPP\Extracts\R2-2110548%20Consequences%20of%20long%20propagation%20delays%20on%20RLC.docx) Consequences of long propagation delays on RLC Interdigital, Inc. discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110766](file:///C:\Data\3GPP\Extracts\R2-2110766_RLC%20t-Reassembly%20timer.docx) RLC t-Reassembly timer NEC Telecom MODUS Ltd. discussion

[R2-2110925](file:///C:\Data\3GPP\Extracts\R2-2110925_On%20RLC%20t-Reassembly%20for%20NTN.docx) On RLC t-Reassembly for NTN Sequans Communications discussion Rel-17 NR\_NTN\_solutions-Core [R2-2108460](file:///C:\Data\3GPP\archive\RAN2\RAN2%23115\Tdocs\R2-2108460.zip)

[R2-2110950](file:///C:\Data\3GPP\Extracts\R2-2110950%20-%20On%20RLC%20and%20PDCP%20for%20NTNs.docx) On RLC and PDCP for NTNs Ericsson discussion Rel-17 NR\_NTN\_solutions-Core

### 8.10.3 Control Plane

#### 8.10.3.1General aspects

Including Earth fixed/moving beams related issues, TAC update and LCS aspects

extended NAS supervision timers

[R2-2110388](file:///C:\Data\3GPP\Extracts\R2-2110388%20Discussion%20on%20reply%20LS%20to%20CT1%20on%20extended%20NAs%20supervision%20timers%20at%20satellite%20access.docx) Discussion on reply LS to CT1 on extended NAs supervision timers at satellite access Ericsson discussion NR\_NTN\_solutions-Core

[R2-2110386](file:///C:\Data\3GPP\Extracts\R2-2110386%20Draft%20reply%20LS%20to%20CT1%20on%20extended%20NAS%20supervision%20timers%20at%20satellite%20access.doc) DRAFT Reply LS on extended NAS supervision timers at satellite access Ericsson LS out Rel-17 NR\_NTN\_solutions-Core, 5GSAT\_ARCH-CT To:CT1 Cc:RAN3, SA2

[R2-2109500](file:///C:\Data\3GPP\Extracts\R2-2109500%20NTN%20T300.doc) Discussion on T300’s extension in NTN OPPO discussion Rel-17 NR\_NTN\_solutions-Core

TAC update

[R2-2109973](file:///C:\Data\3GPP\Extracts\R2-2109973%20Discussion%20on%20UE%20reporting%20of%20selected%20TAI.docx) Discussion on UE reporting of selected TAI vivo, Nokia, Nokia Shanghai Bell, Ericsson discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110528](file:///C:\Data\3GPP\Extracts\R2-2110528.doc) Further considerations on TAC selection in NTN Samsung R&D Institute UK discussion

[R2-2109587](file:///C:\Data\3GPP\Extracts\R2-2109587%20NTN%20TAC%20validity%20timer_v03.docx) Validity timer of a broadcasted TAC THALES, Ericsson discussion Rel-17 NR\_NTN\_solutions

[R2-2109975](file:///C:\Data\3GPP\Extracts\R2-2109975%20Discussion%20on%20the%20remaining%20issue%20on%20TAC%20update.docx) Discussion on the remaining issue on TAC update vivo discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110127](file:///C:\Data\3GPP\Extracts\R2-2110127%20Discussion%20on%20stop%20serving%20time%20of%20NTN%20cell.doc) Discussion on stop serving time of NTN cell Spreadtrum Communications discussion Rel-17

[R2-2110136](file:///C:\Data\3GPP\Extracts\R2-2110136%20Discussion%20on%20TAC%20update%20in%20NTN.doc) Discussion on TAC update in NTN Spreadtrum Communications discussion Rel-17

[R2-2110467](file:///C:\Data\3GPP\Extracts\R2-2110467_UE%20location%20report%20and%20TAC%20in%20NTN.docx) UE location report and TAC in NTN ZTE corporation, Sanechips discussion Rel-17 NR\_NTN\_solutions-Core

UE capability

[R2-2109636](file:///C:\Data\3GPP\Extracts\R2-2109636%20Consideration%20on%20RAN2-determined%20NTN%20UE%20capabilities.docx) Consideration on RAN2-determined NTN UE capabilities Intel Corporation discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2109974](file:///C:\Data\3GPP\Extracts\R2-2109974%20Discussion%20on%20UE%20capability%20for%20Rel-17%20NTN.docx) Discussion on UE capability for Rel-17 NR NTN vivo discussion Rel-17 NR\_NTN\_solutions-Core

UE locations aspects

[R2-2109553](file:///C:\Data\3GPP\Extracts\R2-2109553%20Discussion%20on%20UE%20coarse%20location%20information%20report%20in%20NTN.docx) Discussion on UE coarse location information report in NTN CATT discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2109969](file:///C:\Data\3GPP\Extracts\R2-2109969%20Coarse%20location.docx) Coarse UE location report in RRC\_CONNECTED Qualcomm Incorporated discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110355](file:///C:\Data\3GPP\Extracts\R2-2110355.doc) Event triggered location reporting in NTN Sony discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110614](file:///C:\Data\3GPP\Extracts\R2-2110614_Final%20views%20on%20location%20aspects%20for%20Rel-17%20NTN.docx) Final views on location aspects for Rel-17 NTN Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2111007](file:///C:\Data\3GPP\Extracts\R2-2111007%20Discussion%20on%20event%20triggered%20based%20UE%20location%20report.docx) Discussion on event triggered based UE location report ASUSTeK discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2111043](file:///C:\Data\3GPP\Extracts\R2-2111043%20Discussion%20on%20UE%20Coarse%20Location%20Information%20Report%20in%20NTN.docx) Discussion on UE Coarse Location Information Report in NTN CMCC discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2111110](file:///C:\Data\3GPP\Extracts\R2-2111110%20Discussion%20on%20UE%20location%20reporting%20in%20NTN.doc) Discussion on UE location reporting in NTN Xiaomi discussion

#### 8.10.3.2 Idle/Inactive mode

Idle/inactive mode specific issues.

cell selection / reselection

[R2-2111332](file:///C:\Data\3GPP\RAN2\Inbox\R2-2111332.zip) [102][NTN] Summary of cell (re)selection aspects in AI 8.10.3.2 Intel discussion Rel-17 NR\_NTN\_solutions-Core

Easy agreements:

Proposal 1: RAN2 to agree:

Location assisted cell reselection, with the distance between UE and the reference location of the cell (serving cell and/or neighbor cell) taken into account, is supported for quasi-earth fixed cell. FFS on how UE performs location acquisition.

Proposal 6: For quasi-earth fixed cell, UE should perform neighbour cell measurements if the distance between UE and serving cell reference location is larger than a threshold.

For further discussion:

Proposal 2: regarding how UE performs location acquisition, RAN2 to further discuss the following options:

Option 1: location acquisition will not be triggered at UE side only for location assisted cell reselection;

Option 2: it depends on UE implementation to perform location acquisition for cell reselection;

Option 3: UE tracks the location intermittently or periodically instead of continuously tracking for cell reselection.

Proposal 3: RAN2 to discuss how to apply distance based cell reselection for quasi-earth fixed cell:

Option 1: only neighbour cells with distance shorter than a threshold will be considered during cell reselection;

Option 2: distance based ranking is used together with legacy R criteria.

Proposal 4: For quasi-earth fixed cell, the cell stop time of neighbor cell(s) is broadcast.

Proposal 5: if P4 is agreed, RAN2 to further discuss about the usage of remaining serving time in cell reselection:

Option 1: only neighbour cells with remaining serving time longer than a threshold will be considered during cell reselection;

Option 2: remaining serving time based ranking is used together with legacy R criteria;

Option 3: remaining serving time is used as supplementary condition, e.g. a UE selects the second-best ranked cell if the selected cell has cell stop time that is too near.

Proposal 7: RAN2 to discuss whether to broadcast the reference location of the cell (serving cell and/or neighbor cell) for earth moving cell.

Proposal 8: RAN2 to discuss whether to provide the information of the next candidate cell(s) to UE.

[R2-2109501](file:///C:\Data\3GPP\Extracts\R2-2109501%20NTN%20Idle%20inactive%20mode%20procedures.doc) Discussion on idle/inactive mode procedures in NTN OPPO discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2109554](file:///C:\Data\3GPP\Extracts\R2-2109554%20Further%20Discussion%20on%20the%20Leftover%20Issues%20of%20IDLE_INACTIVE.docx) Further Discussion on the Leftover Issues of IDLE/INACTIVE CATT discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2109637](file:///C:\Data\3GPP\Extracts\R2-2109637%20Discussion%20on%20enhancements%20to%20cell%20reselection.docx) Discussion on enhancements to cell reselection Intel Corporation discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2109765](file:///C:\Data\3GPP\Extracts\R2-2109765%20Cell%20selection%20and%20reselection%20enhancements%20for%20NTN.doc) Cell selection and reselection enhancements for NTN China Telecom discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2109970](file:///C:\Data\3GPP\Extracts\R2-2109970%20Idle%20mode.docx) Enhancement to cell selection and reselection Qualcomm Incorporated discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2109976](file:///C:\Data\3GPP\Extracts\R2-2109976%20Remaining%20issues%20on%20cell%20reselection%20for%20NTN.docx) Remaining issues on cell reselection for NTN vivo discussion Rel-17 NR\_NTN\_solutions-Core

moved here from 8.10.3.1

[R2-2110043](file:///C:\Data\3GPP\Extracts\._R2-2110043%20NTN%20Ephemeris%20Definition%20and%20Signaling.docx) NTN Ephemeris definition and signaling Apple discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110046](file:///C:\Data\3GPP\Extracts\._R2-2110046%20NTN%20Cell%20Selection%20And%20Cell%20Reselection.docx) NTN Cell Selection and Cell Reselection Apple discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110228](file:///C:\Data\3GPP\Extracts\R2-2110228%20Remaining%20issues%20in%20NTN%20idle%20mode.DOC) Remaining issues in NTN idle mode LG Electronics Inc. discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110265](file:///C:\Data\3GPP\Extracts\R2-2110265 Discussion on cell reselection.docx) Discussion on cell reselection CMCC discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110275](file:///C:\Data\3GPP\Extracts\R2-2110275%20Discussion%20on%20cell%20reselection.doc) Discussion on cell reselection Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

moved here from 8.10.3.1

[R2-2110309](file:///C:\Data\3GPP\Extracts\R2-2110309%20Considerations%20on%20ephemeris%20provision%20for%20NTN%20(Revision%20of%20R2-2107910).docx) Considerations on ephemeris provision for NTN Lenovo, Motorola Mobility discussion Rel-17

[R2-2110356](file:///C:\Data\3GPP\Extracts\R2-2110356.doc) Idle mode enhancement in NTN Sony discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110468](file:///C:\Data\3GPP\Extracts\R2-2110468_Consideration%20on%20the%20system%20information%20and%20idle%20mode%20mobility%20for%20intra-NTN%20and%20TN-NTN%20case.docx) Consideration on the system information and idle mode mobility for intra-NTN and TN-NTN case ZTE corporation, Sanechips discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110769](file:///C:\Data\3GPP\Extracts\R2-2110769_Time%20and%20Location-assisted%20cell%20reselection.docx) Time and Location-assisted cell reselection NEC Telecom MODUS Ltd. discussion

[R2-2110862](file:///C:\Data\3GPP\Extracts\R2-2110862%20(R17%20NTN%20WI%20AI%208.10.3.2)%20Cell%20reselection.docx) Cell reselection for earth moving cells InterDigital discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110943](file:///C:\Data\3GPP\Extracts\R2-2110943.docx) Further considerations on idle/inactive behaviours Samsung Research America discussion

[R2-2111111](file:///C:\Data\3GPP\Extracts\R2-2111111%20Cell%20selection%20and%20reselection%20enhancements%20for%20NTN.doc) Cell selection and reselection enhancements for NTN Xiaomi discussion

NTN-TN mobility

[R2-2109639](file:///C:\Data\3GPP\Extracts\R2-2109639%20Discussion%20on%20TN%20prioritization%20over%20NTN%20for%20idle%20mode.docx) Discussion on TN prioritization over NTN for idle mode Intel Corporation discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110211](file:///C:\Data\3GPP\Extracts\R2-2110211%20NTN-TN%20Mobility%20Enhancement%20in%20IDLE%20and%20INACTIVE%20State.docx) NTN-TN Mobility Enhancement in IDLE and INACTIVE State FGI, Asia Pacific Telecom discussion

[R2-2110768](file:///C:\Data\3GPP\Extracts\R2-2110768_NTN%20to%20TN%20in%20Idle%20or%20Inactive%20mode%20mobility.docx) NTN to TN mobility in Idle or Inactive mode NEC Telecom MODUS Ltd. discussion

R2-2110375 Idle mode aspects for NTN Ericsson discussion NR\_NTN\_solutions-Core Late

#### 8.10.3.3 Connected mode

Connected mode specific issues.

SMTC/gaps

[R2-2111333](file:///C:\Data\3GPP\RAN2\Inbox\R2-2111333.zip) [103][NTN] Summary of SMTC/gaps aspects in AI 8.10.3.3 Nokia discussion Rel-17 NR\_NTN\_solutions-Core

Proposal for agreement:

Proposal 7: Configured SMTCs for NTN neighbour measurements cannot be activated/deactivated.

Proposals for discussion:

Proposal 1: RAN2 is asked to decide if NTN assistance information for SMTC/MG configuration is in the form of a propagation delay or UE location reporting.

Proposal 2: If propagation delay related assistance information for SMTC/MG configuration is supported, RAN2 decides how it is implemented (using SFTD, propagation delay, propagation delay difference, delay modulo periodicity in milliseconds or other option).

Proposal 3: RAN2 is asked to consider if/how neighbour cell ephemeris information and feeder link delay component needs to be considered for propagation delay estimation.

Proposal 4: RAN2 is asked to decide if the assistance information reporting is event-triggered, e.g. based on UE’s location or time window shift by more than a NW-configurable threshold.

Proposal 5: RAN2 is asked to decide if the UE can apply e.g. a shift of the time window, or switch to another configuration provided earlier by the NW, based on the configurable event trigger.

Proposal 6: RAN2 is asked to consider supporting UE-based SMTC adjustment scheme which may be actually quite similar to NW-based approach, so a small specification effort on top of NW-based approach is foreseen.

Proposal 8: RAN2 is asked to decide if the UE is capable/can use all configured SMTCs in parallel or needs to use one at a time and report/switch to another only if the event triggers.

Proposal 9: RAN2 is asked to decide if a single smtc per MO principle is kept, but up to 4 periodicityAndOffset parameters per smtc are allowed.

Proposal 10: RAN2 is asked to decide if multiple gaps or multiple gap patterns can be configured for NTN UE and how many are needed.

Proposal 11: RAN2 is asked to discuss how to ensure the gaps are aligned with SMTC windows for all SMTC durations.

Proposal 12: RAN2 is asked to decide which SMTC-related decisions can be also adopted for measurement gaps.

[R2-2109502](file:///C:\Data\3GPP\Extracts\R2-2109502%20NTN%20connected%20mode%20mobility.doc) Discussion on mobility management for connected mode UE in NTN OPPO discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2109634](file:///C:\Data\3GPP\Extracts\R2-2109634%20Efficient%20Configuration%20of%20SMTC%20and%20Measurement%20Gaps%20in%20NR-NTN.....docx) Efficient Configuration of SMTC and Measurement Gaps in NR-NTN MediaTek Inc. discussion [R2-2108326](file:///C:\Data\3GPP\archive\RAN2\RAN2%23115\Tdocs\R2-2108326.zip)

[R2-2109638](file:///C:\Data\3GPP\Extracts\R2-2109638%20Discussion%20on%20remaining%20issues%20on%20SMTC.docx) Discussion on remaining issues on SMTC Intel Corporation discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2109972](file:///C:\Data\3GPP\Extracts\R2-2109972%20SMTC%20and%20MG.doc) SMTC and MG enhancements Qualcomm Incorporated discussion Rel-17 NR\_NTN\_solutions-Core [R2-2107566](file:///C:\Data\3GPP\archive\RAN2\RAN2%23115\Tdocs\R2-2107566.zip)

[R2-2110267](file:///C:\Data\3GPP\Extracts\R2-2110267%20Further%20discussion%20on%20SMTC%20and%20measurement%20Gap%20configuration%20for%20NTN.docx) Further discussion on SMTC and measurement Gap configuration for NTN CMCC discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110277](file:///C:\Data\3GPP\Extracts\R2-2110277%20Discussion%20on%20SMTC%20and%20measurement%20gap%20configuration.doc) Discussion on SMTC and measurement gap configuration Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110310](file:///C:\Data\3GPP\Extracts\R2-2110310%20UE%20assistance%20for%20measurement%20gap%20and%20SMTC%20configuration%20in%20NTN%20(Revision%20of%20R2-2107911).docx) UE assistance for measurement gap and SMTC configuration in NTN Lenovo, Motorola Mobility discussion Rel-17

[R2-2110340](file:///C:\Data\3GPP\Extracts\R2-2110340%20Connected%20mode%20aspects%20for%20NTN.docx) Connected mode aspects for NTN Ericsson discussion NR\_NTN\_solutions-Core

[R2-2110357](file:///C:\Data\3GPP\Extracts\R2-2110357.docx) SMTC enhancement in NTN Sony discussion Rel-17 NR\_NTN\_solutions-Core [R2-2108067](file:///C:\Data\3GPP\archive\RAN2\RAN2%23115\Tdocs\R2-2108067.zip)

[R2-2110384](file:///C:\Data\3GPP\Extracts\R2-2110384%20SMTC%20and%20measurement%20gap%20enhancements.doc) SMTC and measurement gap enhancements LG Electronics Inc. discussion Rel-17

[R2-2110469](file:///C:\Data\3GPP\Extracts\R2-2110469_Consideration%20on%20CHO%20and%20measurements.docx) Consideration on CHO and measurements ZTE corporation, Sanechips discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110613](file:///C:\Data\3GPP\Extracts\R2-2110613_Final%20views%20on%20SMTC%20and%20measurement%20gaps%20for%20Rel-17%20NTN.docx) Final views on SMTC and measurement gaps for Rel-17 NTN Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_NTN\_solutions-Core [R2-2107521](file:///C:\Data\3GPP\archive\RAN2\RAN2%23115\Tdocs\R2-2107521.zip)

[R2-2110815](file:///C:\Data\3GPP\Extracts\R2-2110815.docx) Measurements and handover Samsung Research America discussion NR\_NTN\_solutions-Core

[R2-2111166](file:///C:\Data\3GPP\Extracts\R2-2111166%20%20Remaining%20Issues%20on%20SMTC.docx) Remaining Issues on SMTC and measurement Gap configuration for NTN Rakuten Mobile, Inc discussion Rel-17

[R2-2111028](file:///C:\Data\3GPP\Extracts\R2-2111028%20Discussion%20on%20connected%20mode%20aspects%20for%20NTN.docx) Discussion on connected mode aspects for NTN Xiaomi Communications discussion

[R2-2109555](file:///C:\Data\3GPP\Extracts\R2-2109555.docx) Futher discussion on NTN mobility aspect CATT discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2109635](file:///C:\Data\3GPP\Extracts\R2-2109635%20-%20Mobility%20for%20TN-NTN%20scenarios.docx) Mobility for NTN-TN scenarios MediaTek Inc. discussion [R2-2108329](file:///C:\Data\3GPP\archive\RAN2\RAN2%23115\Tdocs\R2-2108329.zip)

[R2-2109971](file:///C:\Data\3GPP\Extracts\R2-2109971%20CHO.doc) Open issues in CHO Qualcomm Incorporated discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2109977](file:///C:\Data\3GPP\Extracts\R2-2109977%20Remaining%20issues%20on%20connected%20mode%20mobility%20for%20NTN.docx) Remaining issues on connected mode mobility for NTN vivo discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110229](file:///C:\Data\3GPP\Extracts\R2-2110229%20Remaining%20issues%20in%20NTN%20CHO.DOC) Remaining issues in NTN CHO LG Electronics Inc. discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110266](file:///C:\Data\3GPP\Extracts\R2-2110266%20Further%20discussion%20on%20intra-NTN%20mobility.docx) Further discussion on intra-NTN mobility CMCC discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110276](file:///C:\Data\3GPP\Extracts\R2-2110276%20Discussion%20on%20CHO%20in%20NTN.DOC) Discussion on CHO in NTN Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110283](file:///C:\Data\3GPP\Extracts\R2-2110283_NTN_CHO.doc) Discussion on signaling and data transmission issues of NTN CHO ITRI discussion NR\_NTN\_solutions-Core

[R2-2110311](file:///C:\Data\3GPP\Extracts\R2-2110311%20Connected%20mobility%20for%20NT-NTN%20continuity.docx) Connected mobility for NTN/TN continuity Lenovo, Motorola Mobility discussion Rel-17

[R2-2110312](file:///C:\Data\3GPP\Extracts\R2-2110312%20Remaining%20issues%20for%20CHO%20in%20NTN%20v1.0.doc) Remaining issues for CHO in NTN Lenovo, Motorola Mobility discussion Rel-17

[R2-2110358](file:///C:\Data\3GPP\Extracts\R2-2110358.docx) Signaling storm during HOs Sony discussion Rel-17 NR\_NTN\_solutions-Core [R2-2108065](file:///C:\Data\3GPP\archive\RAN2\RAN2%23115\Tdocs\R2-2108065.zip)

[R2-2110612](file:///C:\Data\3GPP\Extracts\R2-2110612_More%20thoughts%20on%20mobility%20in%20Rel-17%20NTN.docx) More thoughts on mobility in Rel-17 NTN Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110860](file:///C:\Data\3GPP\Extracts\R2-2110860%20(R17%20NTN%20WI%20AI%208.10.3.3)%20Location%20Reporting.docx) UE location reporting in NTN InterDigital discussion Rel-17 NR\_NTN\_solutions-Core

[R2-2110861](file:///C:\Data\3GPP\Extracts\R2-2110861%20(R17%20NTN%20WI%20AI%208.10.3.3)%20TA%20reporting%20in%20CONN.docx) UE-specific TA reporting in connected mode InterDigital discussion Rel-17 NR\_NTN\_solutions-Core

## 8.12 Reduced Capability

(NR\_redcap-Core; leading WG: RAN1; REL-17; WID: [RP-211574](file:///C:\Data\3GPP\archive\RAN\RAN%2392\Tdocs\RP-211574.zip))

Time budget: 1 TU

Tdoc Limitation: 4 tdocs

Email max expectation: 4 threads

### 8.12.1 Organizational

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

Including outcome of:

[Post115-e][106][RedCap] Running CRs (Ericsson)

[Post115-e][107][RedCap] Stage 2 Running CR (Nokia)

[Post115-e][108][RedCap] 38.306 Running CR (Intel)

[Post115-e][109][RedCap] MAC running CR (vivo)

Incoming LSs

[R2-2110727](file:///C:\Data\3GPP\Extracts\R2-2110727_R1-2110600.docx) LS on use of NCD-SSB instead of CD-SSB for RedCap UE (R1-2110600; contact: Ericsson) RAN1 LS in Rel-17 NR\_redcap-Core To:RAN2, RAN4

* Initially discussed in offline 104

[R2-2109305](file:///C:\Data\3GPP\Extracts\R2-2109305_C1-214961.doc) Reply LS on lower bound for eDRX cycle length (C1-214961; contact: Qualcomm) CT1 LS in Rel-17 NR\_redcap-Core To:RAN2 Cc:SA2, RAN3

[R2-2109325](file:///C:\Data\3GPP\Extracts\R2-2109325_R1-2108631.docx) LS on RAN1 agreements on RAN2-led features for RedCap (R1-2108631; contact: NTT DOCOMO) RAN1 LS in Rel-17 NR\_redcap-Core To:RAN2

[R2-2109378](file:///C:\Data\3GPP\Extracts\R2-2109378_S2-2106978.docx) Reply LS on introducing extended DRX for RedCap UEs (S2-2106978; contact: Qualcomm) SA2 LS in Rel-17 NR\_redcap-Core To:RAN2, RAN3, CT1

[R2-2111215](file:///C:\Data\3GPP\Extracts\R2-2111215_R1-2110638.docx) Reply LS on L2 buffer size reduction (R1-2110638; contact: Intel) RAN1 LS in Rel-17 NR\_redcap-Core To:RAN2

[R2-2111233](file:///C:\Data\3GPP\RAN2\Docs\R2-2111233.zip) LS on introducing NR RedCap Indication (S2-2107853; contact: Ericsson) SA2 LS in Rel-17 ARCH\_NR\_REDCAP To:RAN2, RAN3, CT4, SA5 Cc:CT1

[R2-2109342](file:///C:\Data\3GPP\Extracts\R2-2109342_R3-214422.docx) Reply LS on the coordination between gNBs on the supporting of RedCap UEs (R3-214422; contact: Ericsson) RAN3 LS in Rel-17 NR\_redcap-Core To:RAN2

[R2-2111102](file:///C:\Data\3GPP\Extracts\R2-2111102%20-%20%5bDraft%5d%20LS%20reply%20on%20the%20coordination%20between%20gNBs%20supporting%20RedCap%20UEs.docx) [Draft] LS reply on the coordination between gNBs supporting RedCap UEs Ericsson LS out NR\_redcap-Core To:RAN3

Running CRs

[R2-2110821](file:///C:\Data\3GPP\Extracts\R2-2110821%20-%20Running%20RedCap%20CR%20for%2038300.docx) Running 38300 CR for RedCap Nokia, Nokia Shanghai Bell draftCR Rel-17 38.300 16.7.0 B NR\_redcap-Core

[R2-2109666](file:///C:\Data\3GPP\Extracts\R2-2109666_EmailDisc-108-38.306%20Running%20CR%20(Intel)_P2-Summary.docx) Email discussion report on [108][RedCap] 38.306 Running CR (Intel) Intel Corporation discussion Rel-17 NR\_redcap

[R2-2109667](file:///C:\Data\3GPP\Extracts\R2-2109667%20-%20108-Running%2038.331%20CR%20on%20Capbilities_v00.docx) Email discussion [108]Running 38.331 CR for the RedCap WI on capablities Intel Corporation draftCR Rel-17 38.331 16.6.0 B NR\_redcap

[R2-2109668](file:///C:\Data\3GPP\Extracts\R2-2109668%20-%20108-Running%2038.306%20CR%20on%20Capbilities_v02_Rapp.docx) Email discussion [108]Running 38.306 CR for the RedCap WI on capablities Intel Corporation draftCR Rel-17 38.306 16.6.0 B NR\_redcap

[R2-2111095](file:///C:\Data\3GPP\RAN2\Docs\R2-2111095.zip) Running 38.304 CR for the RedCap WI Ericsson draftCR Rel-17 38.304 16.6.0 B NR\_redcap-Core Late

[R2-2111097](file:///C:\Data\3GPP\RAN2\Docs\R2-2111097.zip) Running 38.331 CR for the RedCap WI Ericsson draftCR Rel-17 38.331 16.6.0 B NR\_redcap-Core Late

[R2-2109740](file:///C:\Data\3GPP\Extracts\R2-2109740_Email%20discussion%20%5b109%5d%20Running%20MAC%20CR%20for%20RedCap.docx) Email discussion [109] Running MAC CR for RedCap vivo (Rapporteur) draftCR Rel-17 38.321 16.6.0 NR\_redcap-Core

### 8.12.2 Framework for reduced capabilities

No contribution is expected to this agenda item but directly to the sub-agenda items.

#### 8.12.2.1 Definition of RedCap UE type and reduced capabilities

[R2-2109446](file:///C:\Data\3GPP\Extracts\R2-2109446%20Support%20for%20fallback%20operation%20for%20RedCap%20UEs.docx) Support for fallback operation by RedCap UEs Qualcomm Incorporated discussion Rel-17 FS\_NR\_redcap

[R2-2109576](file:///C:\Data\3GPP\Extracts\R2-2109576%20Definition%20and%20reduced%20capabilities%20for%20RedCap%20UE,%20and%20NCD-SSB%20related%20LS.doc) Definition and reduced capabilities for RedCap UE, and NCD-SSB related LS Huawei, HiSilicon discussion Rel-17 NR\_redcap-Core

[R2-2109669](file:///C:\Data\3GPP\Extracts\R2-2109669%20Open%20issues%20on%20RedCap%20capabilities.docx) Open issues on RedCap capabilities Intel Corporation discussion Rel-17 NR\_redcap

[R2-2110093](file:///C:\Data\3GPP\Extracts\R2-2110093_Redcap-8DRB.docx) Optional support of more than 8 DRB for RedCap Apple, Facebook Inc. discussion Rel-17 NR\_redcap-Core

[R2-2110134](file:///C:\Data\3GPP\Extracts\R2-2110134%20Discussion%20on%20L2%20buffer%20size%20reduction%20for%20Redcap%20UE.doc) Discussion on L2 buffer size reduction for Redcap UE Spreadtrum Communications discussion Rel-17

[R2-2110709](file:///C:\Data\3GPP\Extracts\R2-2110709%20Discussion%20on%20reduced%20capabilities.docx) Discussion on reduced capabilities LG Electronics UK discussion Rel-17

[R2-2110771](file:///C:\Data\3GPP\Extracts\R2-2110771%20-%20Definition%20of%20RedCap%20and%20capabilities.docx) Definition of RedCap UE and discussion on capabilities Ericsson discussion

[R2-2110881](file:///C:\Data\3GPP\Extracts\R2-2110881%20RedCap.docx) Discussion on L2 buffer size reduction Sierra Wireless. S.A. discussion

#### 8.12.2.2 Identification, access and camping restrictions

Early identification of RedCap UEs (e.g. details of msg3 early identification). Common Aspects related to RACH partitioning (due to msg1 early identification) shall be submitted to 8.18.

System information indication for camping restrictions.

NCD-SSB

[R2-2109448](file:///C:\Data\3GPP\Extracts\R2-2109448%20Draft%20reply%20LS%20on%20use%20of%20NCD-SSB%20instead%20of%20CD-SSB%20for%20RedCap%20UEs.docx) Reply LS on use of NCD-SSB instead of CD-SSB for RedCap UE Qualcomm Incorporated LS out Rel-17 NR\_redcap-Core To:RAN1, RAN4

[R2-2109451](file:///C:\Data\3GPP\Extracts\R2-2109451%20NCD-SSB%20and%20RedCap-specific%20BWPs.docx) NCD-SSB and RedCap-specific BWPs Qualcomm Incorporated discussion Rel-17 FS\_NR\_redcap

[R2-2109741](file:///C:\Data\3GPP\Extracts\R2-2109741_Discussion%20on%20NCD%20SSB%20and%20UE%20type%20for%20RedCap%20UEs.doc) Discussion on NCD SSB and UE type for RedCap UEs vivo, Guangdong Genius discussion Rel-17 NR\_redcap-Core

Moved here from 8.12.2.1

[R2-2110773](file:///C:\Data\3GPP\RAN2\Docs\R2-2110773.zip) Use of NCD-SSB instead of CD-SSB for RedCap UEs Ericsson discussion Late

[R2-2110095](file:///C:\Data\3GPP\RAN2\Docs\R2-2110095.zip) Making ND-SSB work for RedCap in Rel-17 Apple discussion Rel-17 NR\_redcap-Core Late

* [AT116-e][104][RedCap] NCD-SSB (Ericsson)

Initial scope: Discuss incoming LS in [R2-2110727](file:///C:\Data\3GPP\Extracts\R2-2110727_R1-2110600.docx) and related company contributions

Initial intended outcome: Summary of the offline discussion with e.g.:

* + - List of proposals for agreement (if any)
    - List of proposals that require online discussions

Initial deadline (for companies' feedback): Wednesday 2021-11-03 0500 UTC

Initial deadline (for rapporteur's summary in R2-2111334): Wednesday 2021-11-03 09:00 UTC

R2-2111334 [offline-104] NCD-SSB Ericsson discussion Rel-17 NR\_redcap-Core

[R2-2109447](file:///C:\Data\3GPP\Extracts\R2-2109447%20Reply%20to%20RAN3%20LS%20on%20gNB%20coordination%20for%20RedCap%20UEs.docx) Reply LS to RAN3 on the coordination between gNBs on the supporting RedCap UEs Qualcomm Incorporated LS out Rel-17 NR\_redcap-Core To:RAN3

[R2-2109494](file:///C:\Data\3GPP\Extracts\R2-2109494%20RedCap%20early%20identfication.doc) Discussion on early identification and access restrictions OPPO discussion Rel-17 NR\_redcap-Core

[R2-2109536](file:///C:\Data\3GPP\Extracts\R2-2109536_Cell%20barring%20aspects%20and%20early%20indication%20in%20Msg3_MsgA.doc) Cell barring aspects and early indication in Msg3\_MsgA Samsung Electronics Co., Ltd discussion Rel-17 NR\_redcap-Core

[R2-2109577](file:///C:\Data\3GPP\Extracts\R2-2109577%20Identification%20and%20access%20restriction%20of%20RedCap%20UE.docx) Identification and access restriction of RedCap UE Huawei, HiSilicon discussion Rel-17 NR\_redcap-Core

[R2-2109646](file:///C:\Data\3GPP\Extracts\R2-2109646.docx) Neighbour cell information and cell (re)selection for RedCap UE DENSO CORPORATION discussion Rel-17 NR\_redcap-Core

[R2-2109670](file:///C:\Data\3GPP\Extracts\R2-2109670%20Early%20identification%20and%20camping%20restrictions%20for%20RedCap%20UE.docx) Early identification and camping restrictions for RedCap UE Intel Corporation discussion Rel-17 NR\_redcap

[R2-2109698](file:///C:\Data\3GPP\Extracts\R2-2109698.docx) Discussion on the remaining issues of early identification CATT discussion Rel-17 NR\_redcap-Core

[R2-2109723](file:///C:\Data\3GPP\Extracts\R2-2109723.docx) Discussion on potential interference issues in networks partially supporting RedCap UE cell selection/re-selection NEC Corporation discussion

[R2-2109742](file:///C:\Data\3GPP\Extracts\R2-2109742_Identification%20and%20access%20restrictions%20for%20RedCap%20UEs.docx) Identification and access restrictions for RedCap UEs vivo, Guangdong Genius discussion Rel-17 NR\_redcap-Core

[R2-2109752](file:///C:\Data\3GPP\Extracts\R2-2109752%20Camping%20restrictions%20of%20RedCap%20UE.doc) Camping restrictions of RedCap UE Fujitsu discussion Rel-17 NR\_redcap-Core [R2-2107652](file:///C:\Data\3GPP\archive\RAN2\RAN2%23115\Tdocs\R2-2107652.zip)

[R2-2109819](file:///C:\Data\3GPP\Extracts\R2-2109819%20%20Discussion%20on%20UE%20access%20restrictions%20for%20Redcap%20devices.doc) Discussion on UE access restrictions for Redcap devices Beijing Xiaomi Mobile Softwar discussion

[R2-2109820](file:///C:\Data\3GPP\Extracts\R2-2109820%20%20Discussion%20on%20early%20Identification%20for%20Redcap%20devices.doc) Discussion on early Identification for Redcap devices Beijing Xiaomi Mobile Softwar discussion

[R2-2109897](file:///C:\Data\3GPP\Extracts\R2-2109897%20Identification,%20access%20and%20camping%20restrictions%20for%20RedCap%20UE.docx) Identification, access and camping restrictions for RedCap UE ZTE Corporation, Sanechips discussion Rel-17 NR\_redcap-Core

[R2-2110094](file:///C:\Data\3GPP\Extracts\R2-2110094_Redcap-RAR.docx) RA-RNTI overlap in RedCap and it’s impact on unified RACH work Apple discussion Rel-17 NR\_redcap-Core

[R2-2110096](file:///C:\Data\3GPP\Extracts\R2-2110096%20System%20information%20indiction%20for%20camping%20restrictions%20of%20Redcap%20UE.docx) System information indication for camping restrictions of RedCap UE China Telecommunications discussion Rel-17

[R2-2110135](file:///C:\Data\3GPP\Extracts\R2-2110135%20Discussion%20on%20the%20open%20issues%20of%20early%20indication%20for%20RedCap%20UE.doc) Discussion on the open issues of early indication for RedCap UE Spreadtrum Communications discussion Rel-17

[R2-2110202](file:///C:\Data\3GPP\Extracts\R2-2110202_Access%20restriction%20for%20RedCap%20UE.docx) Access Restriction for RedCap UE NTT DOCOMO INC. discussion Rel-17

[R2-2110535](file:///C:\Data\3GPP\Extracts\R2-2110535%20Discussion%20on%20access%20restrictions%20and%20early%20identification.docx) Discussion on access restrictions and early identification CMCC discussion Rel-17 NR\_redcap-Core

[R2-2110536](file:///C:\Data\3GPP\Extracts\R2-2110536%20dicussion%20on%20RAN3%20LS.docx) Discussion on RAN3 LS CMCC discussion Rel-17 NR\_redcap-Core

[R2-2110537](file:///C:\Data\3GPP\Extracts\._R2-2110537%20(R17%20RedCap%20WI%20AI%208.12.2.2)%20Corrections%20for%20cellBarred%20in%20MIB%20handling%20for%20RedCap%20UE.doc) Corrections for cellBarred in MIB handling for RedCap UE InterDigital, Europe, Ltd. discussion Rel-17

[R2-2110585](file:///C:\Data\3GPP\Extracts\R2-2110585%20Discussion%20on%20SI%20indication%20for%20camping%20restrictions%20for%20RedCap%20UEs.docx) Discussion on SI indication for camping restrictions for RedCap UEs LG Electronics UK discussion Rel-17

[R2-2110659](file:///C:\Data\3GPP\Extracts\R2-2110659.docx) Network behaviour for RedCap Msg3 and cell barring BT plc discussion Rel-17

[R2-2110664](file:///C:\Data\3GPP\Extracts\R2-2110664_AC.docx) Access restrictions for RedCap NEC discussion Rel-17 NR\_redcap-Core

[R2-2110793](file:///C:\Data\3GPP\Extracts\R2-2110793%20On%20RedCap%20UE%20behavior%20when%20missing%20essential%20system%20information.docx) On RedCap UE behaviors when missing essential system information Futurewei Technologies discussion Rel-17 NR\_redcap-Core

[R2-2110811](file:///C:\Data\3GPP\Extracts\R2-2110811%20RedCap%20UE%20early%20identification.docx) REDCAP UE early identification Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_redcap-Core

[R2-2110880](file:///C:\Data\3GPP\Extracts\R2-2110880%20RedCap.docx) Early identification and camping restrictions for RedCap UE Sierra Wireless. S.A. discussion

[R2-2111100](file:///C:\Data\3GPP\Extracts\R2-2111100%20%20-%20Discussion%20on%20the%20coordination%20between%20gNBs%20supporting%20RedCap%20UEs.docx) Discussion on the coordination between gNBs supporting RedCap UEs Ericsson discussion NR\_redcap-Core

[R2-2111098](file:///C:\Data\3GPP\Extracts\R2-2111098%20-%20Early%20indication%20and%20access%20restriction%20for%20RedCap%20UEs.docx) Early indication & access restriction for RedCap UEs Ericsson discussion NR\_redcap-Core

[R2-2111150](file:///C:\Data\3GPP\Extracts\R2-2111150_KDDI_redcap.docx) System Information and supporting for RedCap UEs KDDI Corporation discussion Rel-17

R2-2110804 On the use of NCD-SSB instead of CD-SSB for RedCap UE MediaTek Inc. discussion Rel-17 NR\_redcap-Core Late

### 8.12.3 UE power saving and battery lifetime enhancement

No contribution is expected to this agenda item but directly to the sub-agenda items.

#### 8.12.3.1 eDRX cycles

Extended DRX enhancements for RRC Inactive and Idle.

* [AT116-e][105][RedCap] eDRX cycles aspects (Apple)

Initial scope: Discuss proposals in AI 8.12.3.1 (skipping those on INACTIVE eDRX >10.24sec and on pure ASN.1 aspects)

Initial intended outcome: Summary of the offline discussion with e.g.:

* + - List of proposals for agreement (if any)
    - List of proposals that require online discussions
    - List of proposals that should not be pursued (if any)

Initial deadline (for companies' feedback): Tuesday 2021-11-02 2000 UTC

Initial deadline (for rapporteur's summary in R2-2111335): Wednesday 2021-11-03 00:00 UTC

Proposals marked "for agreement" in R2-2111335 not challenged until Wednesday 2021-11-03 1100 UTC will be declared as agreed via email by the session chair (for the rest the discussion might continue online during the CB session).

R2-2111335 [offline-105] eDRX cycles Apple discussion Rel-17 NR\_redcap-Core

[R2-2109449](file:///C:\Data\3GPP\Extracts\R2-2109449%20Remaining%20issues%20on%20eDRX.docx) Remaining issues on eDRX Qualcomm Incorporated discussion Rel-17 FS\_NR\_redcap

[R2-2109495](file:///C:\Data\3GPP\Extracts\R2-2109495%20-%20Discussion%20on%20eDRX%20for%20RedCap%20UEs.doc) Discussion on eDRX for RedCap Ues OPPO discussion Rel-17 NR\_redcap-Core

[R2-2109537](file:///C:\Data\3GPP\Extracts\R2-2109537_UE_ID%20for%20extended%20DRX%20cycle%20and%20SI%20update%20aspects.doc) UE\_ID for extended DRX cycle and SI update aspects Samsung Electronics Co., Ltd discussion Rel-17 NR\_redcap-Core

[R2-2109578](file:///C:\Data\3GPP\Extracts\R2-2109578%20eDRX%20for%20RedCap%20UE.docx) eDRX for RedCap UE Huawei, HiSilicon discussion Rel-17 NR\_redcap-Core

[R2-2109649](file:///C:\Data\3GPP\Extracts\R2-2109649%20%20Discussion%20on%20e-DRX%20for%20Redcap%20Devices.doc) Discussion on e-DRX for Redcap Devices Beijing Xiaomi Mobile Softwar discussion

[R2-2109671](file:///C:\Data\3GPP\Extracts\R2-2109671_NR-eDRX.docx) Leftover issues for eDRX Intel Corporation discussion Rel-17 NR\_redcap

[R2-2109699](file:///C:\Data\3GPP\Extracts\R2-2109699.doc) Further Discussion on eDRX for NR RRC Inactive and Idle CATT discussion Rel-17 NR\_redcap-Core

[R2-2109743](file:///C:\Data\3GPP\Extracts\R2-2109743_Discussion%20on%20eDRX%20for%20RedCap%20UEs.doc) Discussion on eDRX for RedCap UEs vivo, Guangdong Genius discussion Rel-17 NR\_redcap-Core

[R2-2109898](file:///C:\Data\3GPP\Extracts\R2-2109898%20Discussion%20on%20eDRX%20for%20RedCap%20UEs.docx) Discussion on eDRX for RedCap UE ZTE Corporation, Sanechips discussion Rel-17 NR\_redcap-Core

[R2-2110151](file:///C:\Data\3GPP\Extracts\R2-2110151_PTW_start.docx) Leftover issues on derivation of PTW\_start DENSO CORPORATION discussion Rel-17 NR\_redcap-Core

[R2-2110331](file:///C:\Data\3GPP\Extracts\R2-2110331.docx) Consideration on eDRX for RedCap UE Lenovo, Motorola Mobility discussion Rel-17

[R2-2110584](file:///C:\Data\3GPP\Extracts\R2-2110584%20Discussion%20on%20eDRX%20for%20RRC_INACTIVE.docx) Discussion on eDRX for RRC\_IDLE and RRC\_INACTIVE LG Electronics UK discussion Rel-17

[R2-2110755](file:///C:\Data\3GPP\Extracts\R2-2110755%20Remaining%20issues%20for%20eDRX.DOCX) Remaining issues for eDRX MediaTek Inc. discussion Rel-17 NR\_redcap-Core

[R2-2111099](file:///C:\Data\3GPP\Extracts\R2-2111099%20-%20Extended%20DRX%20for%20Reduced%20Capability%20UEs.docx) Extended DRX for Reduced Capability UEs Ericsson discussion NR\_redcap-Core

[R2-2111129](file:///C:\Data\3GPP\Extracts\R2-2111129.doc) Remaining issues in paging monitoring Samsung discussion Rel-17

#### 8.12.3.2 RRM relaxations

Measurement-based stationarity criterion and related not-at-cell-edge criterion, for RRC Inactive, Idle and Connected.

[R2-2109450](file:///C:\Data\3GPP\Extracts\R2-2109450%20Remaining%20issues%20on%20RRM%20relaxations.docx) Remaining issues on RRM relaxation Qualcomm Incorporated discussion Rel-17 FS\_NR\_redcap

[R2-2109496](file:///C:\Data\3GPP\Extracts\R2-2109496%20-%20Discussion%20on%20RRM%20relax%20%20for%20RRC%20idle.doc) Discussion on RRM relax for RRC idle OPPO discussion Rel-17 NR\_redcap-Core

[R2-2109497](file:///C:\Data\3GPP\Extracts\R2-2109497%20-%20Discussion%20on%20RRM%20relax%20%20for%20RRC%20connected.doc) Discussion on RRM relax for RRC connected OPPO discussion Rel-17 NR\_redcap-Core

[R2-2109575](file:///C:\Data\3GPP\Extracts\R2-2109575.docx) NR-REDCAP stationarity relaxations in case of RRC\_CONNECTED THALES discussion

[R2-2109579](file:///C:\Data\3GPP\Extracts\R2-2109579%20RRM%20measurement%20relaxation%20for%20RedCap%20UE.doc) RRM measurement relaxation for RedCap UE Huawei, HiSilicon discussion Rel-17 NR\_redcap-Core

[R2-2109588](file:///C:\Data\3GPP\Extracts\R2-2109588_On%20the%20efficient%20RRM%20relaxation%20on%20RRC%20Connected%20mode.docx) On the efficient RRM relaxation on RRC connected mode Fraunhofer IIS, Fraunhofer HHI discussion Rel-17 [R2-2107145](file:///C:\Data\3GPP\archive\RAN2\RAN2%23115\Tdocs\R2-2107145.zip)

[R2-2109672](file:///C:\Data\3GPP\Extracts\R2-2109672%20RRM%20measurement%20relaxation%20for%20RedCap%20UE%20in%20RRC_CONNECTED.docx) RRM measurement relaxation for RedCap UE in RRC\_CONNECTED Intel Corporation discussion Rel-17 NR\_redcap

[R2-2109700](file:///C:\Data\3GPP\Extracts\R2-2109700.doc) Further Discussion on RRM relaxations CATT discussion Rel-17 NR\_redcap-Core

[R2-2109744](file:///C:\Data\3GPP\Extracts\R2-2109744_RRM%20relaxation%20for%20neighboring%20cell%20for%20RedCap%20UEs.docx) RRM relaxation for neighboring cell for RedCap UEs vivo, Guangdong Genius discussion Rel-17 NR\_redcap-Core

[R2-2109893](file:///C:\Data\3GPP\Extracts\R2-2109893%20Further%20discussion%20on%20RRM%20relaxation%20for%20RedCap%20UE.docx) Further discussion on RRM relaxation for RedCap UE ZTE Corporation, Sanechips discussion Rel-17 NR\_redcap-Core

[R2-2110105](file:///C:\Data\3GPP\Extracts\R2-2110105%20RRM%20relaxation%20criterion%20of%20RedCap.docx) RRM relaxation criterion of RedCap UE China Telecommunications discussion Rel-17

[R2-2110193](file:///C:\Data\3GPP\Extracts\R2-2110193%20Discussion%20on%20RRM%20measurement%20relaxation%20for%20redcap.docx) Discussion on RRM measurement relaxation for redcap Xiaomi Communications discussion Rel-17 NR\_redcap-Core

[R2-2110230](file:///C:\Data\3GPP\Extracts\R2-2110230%20Remaining%20issues%20in%20RRM%20relaxation.DOC) Remaining issues in RRM relaxation LG Electronics Inc. discussion Rel-17 NR\_redcap-Core

[R2-2110287](file:///C:\Data\3GPP\Extracts\R2-2110287%20RRM%20relaxation%20for%20RedCap%20UEs.docx) RRM relaxation for RedCap UEs SHARP Corporation discussion [R2-2107873](file:///C:\Data\3GPP\archive\RAN2\RAN2%23115\Tdocs\R2-2107873.zip)

[R2-2110564](file:///C:\Data\3GPP\Extracts\R2-2110564%20-%20Details%20on%20RRM%20relaxation.docx) Details on RRM relaxation Ericsson discussion Rel-17 NR\_redcap-Core

[R2-2110816](file:///C:\Data\3GPP\Extracts\R2-2110816%20On%20RRM%20relaxation%20for%20REDCAP%20UE.docx) On RRM relaxations for REDCAP Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_redcap-Core

[R2-2110817](file:///C:\Data\3GPP\Extracts\R2-2110817%20On%20RRM%20relaxation%20in%20CONNECTED.docx) On RRM relaxations in CONNECTED Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_redcap-Core

[R2-2111130](file:///C:\Data\3GPP\Extracts\R2-2111130.doc) RRM measurement relaxation in RedCap Samsung discussion Rel-17

## 8.19 Coverage Enhancements

(NR\_cov\_enh-Core; leading WG: RAN1; REL-17; WID: [RP-211566](file:///C:\Data\3GPP\archive\RAN\RAN%2392\Tdocs\RP-211566.zip))

Time budget: 0.5

Tdoc Limitation: 1 tdoc

Common aspects related to RACH indication (in MSG1) / RACH partitioning shall be submitted to 8.18

### 8.19.1 Organizational

Rapporteur input, incoming LS etc.

[R2-2111210](file:///C:\Data\3GPP\Extracts\R2-2111210_R1-2110585.docx) Reply LS on Msg3 repetition in coverage enhancement (R1-2110585; contact: ZTE) RAN1 LS in Rel-17 NR\_cov\_enh-Core To:RAN2

### 8.19.2 General

RAN2 impact tech proposals.

[R2-2109443](file:///C:\Data\3GPP\Extracts\R2-2109443%20Further%20Discussion%20on%20RAN2%20Impacts%20of%20Msg3%20Repetition.docx) Further Discussion on RAN2 Impacts of Msg3 Repetition vivo discussion Rel-17 NR\_cov\_enh-Core

[R2-2109456](file:///C:\Data\3GPP\Extracts\R2-2109456%20RAN2%20aspects%20of%20coverage%20enhancements.docx) RAN2 aspects of coverage enhancements Qualcomm Incorporated discussion Rel-17 NR\_cov\_enh-Core

[R2-2109503](file:///C:\Data\3GPP\Extracts\R2-2109503%20CR%20timer_CE.doc) Discussion on CE’s impact on the start of ra-ContentionResolutionTimer OPPO discussion Rel-17 NR\_cov\_enh-Core

[R2-2109530](file:///C:\Data\3GPP\Extracts\R2-2109530_MAC%20Aspects%20of%20UL%20Coverage%20Enhancements.doc) MAC Aspects of UL Coverage Enhancements Samsung Electronics Co., Ltd discussion Rel-17 NR\_cov\_enh-Core

[R2-2109877](file:///C:\Data\3GPP\Extracts\R2-2109877.docx) RAN2 aspects of Msg3 PUSCH repetition Intel Corporation discussion Rel-17 NR\_cov\_enh-Core

[R2-2109894](file:///C:\Data\3GPP\Extracts\R2-2109894%20Consideration%20on%20Msg3%20repetition%20in%20CE.docx) Consideration on Msg3 repetition in CE ZTE Corporation, Sanechips discussion Rel-17 NR\_cov\_enh-Core

[R2-2110038](file:///C:\Data\3GPP\Extracts\R2-2110038_%20RAN2%20impacts%20RAN2%20impact%20of%20coverage%20enhancements.doc) RAN2 impact of coverage enhancements Apple discussion Rel-17 NR\_cov\_enh-Core

[R2-2110192](file:///C:\Data\3GPP\Extracts\R2-2110192.docx) Considerations on requesting Msg3 repetition NEC Corporation discussion Rel-17 NR\_cov\_enh-Core

[R2-2110440](file:///C:\Data\3GPP\Extracts\R2-2110440%20Analysis%20on%20Type%20A%20PUSCH%20repetitions%20for%20Msg3.docx) Analysis on Type A PUSCH repetitions for Msg3 CATT discussion Rel-17 NR\_cov\_enh-Core

[R2-2110814](file:///C:\Data\3GPP\Extracts\R2-2110814%20RAN2%20aspects%20for%20Coverage%20Enhancement.docx) RAN2 aspects for Coverage Enhancement Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_cov\_enh-Core

[R2-2110833](file:///C:\Data\3GPP\Extracts\R2-2110833%20On%20Type%20A%20PUSCH%20msg3%20repetitions.docx) On Type A PUSCH repetitions for Msg3 Ericsson discussion Rel-17 NR\_cov\_enh

[R2-2111026](file:///C:\Data\3GPP\Extracts\R2-2111026%20Further%20discussions%20on%20RAN2%20support%20of%20Msg3%20PUSCH%20repetition.docx) Further discussions on RAN2 support of Msg3 PUSCH repetition Huawei, HiSilicon discussion Rel-17 NR\_cov\_enh-Core

[R2-2111160](file:///C:\Data\3GPP\Extracts\R2-2111160%20Discussion%20on%20Msg3%20PUSCH%20repetion.docx) Discussion on Msg3 PUSCH repetion LG Electronics Inc. discussion Rel-17 NR\_cov\_enh-Core

## Summary

Agreed CRs

TBD

Approved LSs out

TBD

[POST115-e] Email discussions

Short

TBD

Long

TBD