3GPP TSG-RAN WG2 Meeting #109 electronic draftR2-2001667

**24 Feb – 6 Mar 2020**

Agenda Item: 8.7

Source: Session Chair (Huawei)

Title: draft Report NB-IoT breakout session

Document for: Approval

**Time Schedule**Please refer to the latest schedule in the RAN2 inbox.

**Note**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 organisational thread [AT109e][000].

# NB-IoT Session e-mail list

Email discussions xyz range: [300]-[399].

* [AT109e][300] RAN2 109-e Organizational NB-IoT (Session Chair)

Status: Started

Scope: Comments to session notes. Kick-off and management of email discussions for NB-IoT session. Coordination issues. Other organisational issues and announcements.

Intended outcome: Approval of Report from NB-IoT session.

Deadline: 06-03-2020, 12:00 CET

* [AT109e][301][NBIOT R14] Clarification on polling bit for RRCConnectionRelease (Huawei)

Status: Not Started

Scope: Discuss and review the CRs

Intended outcome: Agreeable CRs, or decision to e.g. postpone/not agree.

Deadline: 06-03-2020, 12:00 CET

* [AT109e][302][NBIOT R13] Handling of UE Radio Capability for Paging in NB-IoT and eMTC (Huawei)

Status: Not Started

Scope: Discuss and review the CRs

Intended outcome: Agreeable CRs, or decision to e.g. postpone/not agree.

Deadline: 06-03-2020, 12:00 CET

* [AT109e][303][NBIOT R15] System support for Wake Up Signal (Huawei)

Status: Not Started

Scope: Discuss and review the CRs

Intended outcome: Agreeable CRs, or decision to e.g. postpone/not agree.

Deadline: 06-03-2020, 12:00 CET

* [AT109e][304][NBIOT R16] NRS presence on non-anchor paging carrier (Huawei)

Status: Not Started

Scope: Discuss and review the CRs

Intended outcome: Endorsed TP for main CRs, or decision to e.g. postpone/not agree.

Deadline: 06-03-2020, 12:00 CET

## 4.1 NB-IoT corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session. Common NB-IoT/eMTC parts treated jointly with 4.2.

[R2-2000617](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000617.zip) Clarification on polling bit for RRCConnectionRelease Huawei, HiSilicon CR Rel-14 36.322 14.1.0 0143 - F NB\_IOTenh-Core

[R2-2000618](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000618.zip) Clarification on polling bit for RRCConnectionRelease Huawei, HiSilicon CR Rel-15 36.322 15.3.0 0144 - A NB\_IOTenh-Core

* [AT109e][301][NBIOT R14] Clarification on polling bit for RRCConnectionRelease (Huawei)

Status: Not Started

Scope: Discuss and review the CRs

Intended outcome: Agreeable CRs, or decision to e.g. postpone/not agree.

Deadline: 06-03-2020, 12:00 CET

[R2-2000632](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000632.zip) Handling of UE Radio Capability for Paging in NB-IoT and eMTC Huawei, HiSilicon CR Rel-13 36.300 13.13.0 1260 - F NB\_IOT-Core, LTE\_MTCe2\_L1-Core

[R2-2000633](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000633.zip) Handling of UE Radio Capability for Paging in NB-IoT and eMTC Huawei, HiSilicon CR Rel-14 36.300 14.11.0 1261 - F NB\_IOT-Core, LTE\_MTCe2\_L1-Core, NB\_IOTenh-Core

[R2-2000634](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000634.zip) Handling of UE Radio Capability for Paging in NB-IoT and eMTC Huawei, HiSilicon CR Rel-15 36.300 15.8.0 1262 - A NB\_IOT-Core, LTE\_MTCe2\_L1-Core, NB\_IOTenh-Core

[R2-2000635](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000635.zip) Handling of UE Radio Capability for Paging in NB-IoT and eMTC Huawei, HiSilicon CR Rel-16 36.300 16.0.0 1263 - A NB\_IOT-Core, LTE\_MTCe2\_L1-Core, NB\_IOTenh-Core

* [AT109e][302][NBIOT R13] Handling of UE Radio Capability for Paging in NB-IoT and eMTC (Huawei)

Status: Not Started

Scope: Discuss and review the CRs

Intended outcome: Agreeable CRs, or decision to e.g. postpone/not agree.

Deadline: 06-03-2020, 12:00 CET

[R2-2000638](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000638.zip) System support for Wake Up Signal Huawei, HiSilicon CR Rel-15 36.304 15.5.0 0779 - F NB\_IOTenh2-Core, LTE\_eMTC4-Core

[R2-2000809](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000809.zip) System support for Wake Up Signal Huawei, HiSilicon CR Rel-15 36.300 15.8.0 1264 - F NB\_IOTenh2-Core, LTE\_eMTC4-Core

[R2-2000810](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000810.zip) System support for Wake Up Signal Huawei, HiSilicon CR Rel-16 36.300 16.0.0 1265 - A NB\_IOTenh2-Core, LTE\_eMTC4-Core

* [AT109e][303][NBIOT R15] System support for Wake Up Signal (Huawei)

Status: Not Started

Scope: Discuss and review the CRs

Intended outcome: Agreeable CRs, or decision to e.g. postpone/not agree.

Deadline: 06-03-2020, 12:00 CET

Withdrawn

R2-2000637 System support for Wake Up Signal Huawei, HiSilicon CR Rel-15 36.331 15.8.0 4193 - F NB\_IOTenh2-Core, LTE\_eMTC4-Core Withdrawn

## 7.2 Additional enhancements for NB-IoT

(NB\_IOTenh3-Core; leading WG: RAN1; REL-16; started: Jun 18; target; Mar 20; WID: RP-192313)

Time budget: 2.5 TU

Documents in this agenda item will be handled in a break out session

Some sub-items in 7.1 and 7.2 may be treated jointly.

### 7.2.1 Organisational

Including incoming LSs, draft TS, rapporteur inputs, etc

[R2-2000049](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000049.zip) Reply LS on UAC for NB-IOT (S1-193592; contact: Qualcomm) SA1 LS in Rel-16 SMARTER\_Ph2 To:RAN2 Cc:CT1, SA2, RAN3

[R2-2000058](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000058.zip) Reply LS on Rel-16 NB-IoT enhancements (S2-1912763; contact: Huawei) SA2 LS in Rel-16 NB\_IOTenh3 To:RAN, CT, RAN2, CT1, RAN3 Cc:SA

[R2-2000064](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000064.zip) Reply LS on 5G-S-TMSI Truncation Procedure (S2-2001248; contact: Qualcomm) SA2 LS in Rel-16 5G\_CIoT To:SA3, RAN2, CT1 Cc:CT4

[R2-2000068](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000068.zip) Reply LS on assistance indication for WUS (S2-2001578; contact: Huawei) SA2 LS in Rel-16 NB\_IOTenh3-Core, LTE\_eMTC5-Core To:CT1, RAN2, RAN3

[R2-2000072](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000072.zip) Reply LS to SA2 on 5G-S-TMSI Truncation Procedure (S3-194482; contact: Huawei) SA3 LS in Rel-16 5G\_CIoT To:SA2 Cc:RAN2, CT4, CT1, RAN3

[R2-2000088](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000088.zip) Reply LS on assistance indication for WUS (S2-2001732; contact: Huawei) SA2 LS in Rel-16 NB\_IOTenh3-Core, LTE\_eMTC5-Core To:CT1, RAN2, RAN3

[R2-2000092](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000092.zip) Reply LS on assistance indication for WUS (C1-199008; contact: Huawei) CT1 LS in Rel-16 NB\_IOTenh3-Core, LTE\_eMTC5-Core To:CT1 Cc:SA2, RAN2, RAN3

CRs

[R2-2000647](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000647.zip) Miscellaneous for NB-IoT and eMTC RRC CRs Huawei, HiSilicon discussion Rel-16 NB\_IOTenh3-Core, LTE\_eMTC5-Core

[R2-2000304](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000304.zip) Introduction of additional enhancements for NB-IoT Qualcomm Incorporated CR Rel-16 38.300 16.0.0 0176 3 B NB\_IOTenh3-Core R2-1916570

[R2-2000619](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000619.zip) Introduction of additional enhancements for NB-IoT in TS 36.300 Huawei CR Rel-16 36.300 16.0.0 1259 - B NB\_IOTenh3-Core

[R2-2000620](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000620.zip) Introduction of additional enhancements for NB-IoT in TS 36.331 Huawei CR Rel-16 36.331 15.8.0 4192 - B NB\_IOTenh3-Core

[R2-2000621](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000621.zip) Introduction of additional enhancements for NB-IoT in TS 36.302 Huawei CR Rel-16 36.302 15.2.0 1202 - B NB\_IOTenh3-Core

[R2-2000622](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000622.zip) UE capabilities, TDD/FDD differentiation and 5GC applicability for NB-IoT Huawei, HiSilicon discussion Rel-16 NB\_IOTenh3-Core

[R2-2000930](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000930.zip) Introduction of Rel-16 additional enhancements NB-IoT in TS 36.306 BlackBerry UK Limited CR Rel-16 36.306 15.7.0 1731 - B LTE\_eMTC5-Core, NB\_IOTenh3-Core

[R2-2000983](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000983.zip) Running CR on 36.321 for NB-IoT Ericsson CR Rel-16 36.321 15.8.0 1466 - B NB\_IOTenh3-Core

[R2-2002090](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2002090.zip) Introduction of additional enhancements for NB-IoT Nokia CR Rel-16 36.304 15.5.0 0783 B NB\_IOTenh3\_ Core Late

Withdrawn

[R2-2000394](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000394.zip) Introduction of Rel-16 additional enhancements NB-IoT: running 36.306 CR BlackBerry UK Limited draftCR Rel-16 36.306 15.7.0 B LTE\_eMTC5-Core, NB\_IOTenh3-Core Withdrawn

[R2-2001161](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001161.zip) Introduction of additional enhancements for NB-IoT in Rel-16 in TS36.304 Nokia Solutions & Networks (I) draftCR Rel-16 36.304 15.5.0 B NB\_IOTenh4\_LTE\_eMTC6-Core Withdrawn

### 7.2.2 Mobile-terminated (MT) early data transmission (EDT)

Mobile-terminated Early Data transmission for NB-IoT is treated jointly with MTC under AI 7.1.2. Do not use this AI for any item that can be discussed jointly.

### 7.2.3 UE-group wake-up signal (WUS)

UE group wake Up signal for MTC and NB-IoT is treated jointly under this Agenda Item.

Including outcome of the email discussion [108#94][NB-IoT/eMTC R16] Finalise the WUS signalling (Qualcomm)

This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponing of some items to next meeting. A web conference will be used for handling some of the discussions in this AI.

Reports/Summaries

[R2-2000306](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000306.zip) Report of Email Discussion 108#94 Finalise the WUS signalling Qualcomm Incorporated report Rel-16 NB\_IOTenh3-Core

[R2-2000308](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000308.zip) Summary of WUS contributions to RAN2#109e. Qualcomm Incorporated report Late

Others

[R2-2000307](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000307.zip) Text proposal for WUS description in TS 36.304 Qualcomm Incorporated discussion

[R2-2000639](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000639.zip) Remaining issues for Rel-16 GWUS Huawei, HiSilicon discussion Rel-16 NB\_IOTenh3-Core, LTE\_eMTC5-Core

R2-2000828 UE-group wake-up signal for MTC/NB-IoT Sony discussion Rel-16 NB\_IOTenh3-Core R2-1915235 Withdrawn

[R2-2001024](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001024.zip) Paging probability based UE grouping Lenovo, Motorola Mobility discussion Rel-16

[R2-2001025](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001025.zip) WUS grouping for mobile UE Lenovo, Motorola Mobility discussion Rel-16

[R2-2001026](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001026.zip) Consideration on WUS configuration Lenovo, Motorola Mobility discussion Rel-16

[R2-2001203](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001203.zip) Consideration on mobility for WUS ZTE Corporation, Sanechips discussion Rel-16 LTE\_eMTC5-Core, NB\_IOTenh3-Core

[R2-2001210](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001210.zip) Formula for mapping UE to WUS group ZTE Corporation, Sanechips discussion Rel-16 LTE\_eMTC5-Core, NB\_IOTenh3-Core R2-1915638

[R2-2001472](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001472.zip) Group WUS Ericsson discussion Rel-16 LTE\_eMTC5-Core, NB\_IOTenh3-Core R2-1915801

### 7.2.4 Transmission in preconfigured resources

Including support for transmission in preconfigured resources in idle and/or connected mode based on SC-FDMA waveform for UEs with a valid timing advance.

Transmission in preconfigured resources for MTC and NB-IoT is treated jointly under this Agenda Item.

This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponing of some items to next meeting. A web conference will be used for handling some of the discussions in this AI.

Reports/Summaries

[R2-2002021](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2002021.zip) Summary of Other RRC-MAC-PHY interactions Qualcomm Incorporated discussion Rel-16 LTE\_eMTC5-Core, NB\_IOTenh3-Core

[R2-2002028](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2002028.zip) Summary of RRC in general and L1 signalling impact to RRC (including e.g. how/when to configure PHY) Ericsson discussion Rel-16 NB\_IOTenh3-Core, LTE\_eMTC5-Core

Others

[R2-2000250](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000250.zip) Remaining clarifications on PUR configuration THALES discussion

[R2-2000435](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000435.zip) T300 applicability for PUR Qualcomm Incorporated discussion Rel-16 LTE\_eMTC5-Core, NB\_IOTenh3-Core

[R2-2000443](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000443.zip) TA validation based on serving cell RSRP change (related to RAN4 LSes) Sierra Wireless, S.A. discussion Rel-16 R2-1916427

[R2-2000559](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000559.zip) Security Aspects of D-PUR for control plane solution Nokia, Nokia Shanghai Bell discussion Rel-16

[R2-2000640](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000640.zip) Handling of D-PUR configuration for CP solution Huawei, HiSilicon discussion Rel-16 NB\_IOTenh3-Core, LTE\_eMTC5-Core R2-1915312

[R2-2000641](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000641.zip) [Draft] LS on handling of D-PUR configuration for the CP solution Huawei LS out Rel-16 NB\_IOTenh3-Core, LTE\_eMTC5-Core To:RAN WG3

[R2-2000642](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000642.zip) RRC-MAC-PHY interactions for PUR Huawei, HiSilicon discussion Rel-16 NB\_IOTenh3-Core, LTE\_eMTC5-Core

[R2-2000643](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000643.zip) Signalling aspect of PUR configuration Huawei, HiSilicon discussion Rel-16 NB\_IOTenh3-Core, LTE\_eMTC5-Core

[R2-2000695](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000695.zip) Remaining FFSes on RRC-MAC interaction for PUR Qualcomm Incorporated discussion Rel-16 LTE\_eMTC5-Core, NB\_IOTenh3-Core

[R2-2000984](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000984.zip) PUR periodicity and UE multiplexing Ericsson discussion NB\_IOTenh3-Core, LTE\_eMTC5-Core

[R2-2000985](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000985.zip) RRC-MAC interaction details and other FFSs for PUR in running MAC CR Ericsson discussion NB\_IOTenh3-Core, LTE\_eMTC5-Core

[R2-2001198](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001198.zip) D-PUR reconfiguration and release for CP solution ZTE Corporation, Sanechips discussion Rel-16 LTE\_eMTC5-Core, NB\_IOTenh3-Core R2-1914717

[R2-2001200](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001200.zip) MAC-RRC coordination for TA validation and some FFS for D-PUR ZTE Corporation, Sanechips discussion Rel-16 LTE\_eMTC5-Core, NB\_IOTenh3-Core

[R2-2001201](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001201.zip) Remaining FFSs for D-PUR in 36.331 ZTE Corporation, Sanechips discussion Rel-16 LTE\_eMTC5-Core, NB\_IOTenh3-Core

[R2-2001202](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001202.zip) Remaining FFSs for D-PUR in 36.321 ZTE Corporation, Sanechips discussion Rel-16 LTE\_eMTC5-Core, NB\_IOTenh3-Core

[R2-2001394](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001394.zip) Clarification for the condition of PUR configuration request procedure LG Electronics UK discussion Rel-16

[R2-2001395](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001395.zip) Handling application response for D-PUR transmission LG Electronics UK discussion Rel-16

[R2-2001397](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001397.zip) Discussion on delivery of D-PUR configuration request LG Electronics UK discussion Rel-16 R2-1915951

[R2-2001398](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001398.zip) Paging response usign D-PUR LG Electronics UK discussion Rel-16 R2-1915952

[R2-2001399](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001399.zip) Discussion on preconfigured shared uplink resource transmission LG Electronics UK discussion Rel-16 R2-1915053

[R2-2001516](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001516.zip) Further Pre-configured UL Resources Design Considerations Sierra Wireless, S.A. discussion Rel-16

[R2-2001601](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001601.zip) Handling D-PUR configuration in RRC\_CONNECTED state ASUSTeK discussion Rel-16 36.331 NB\_IOTenh3-Core

[R2-2001602](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001602.zip) Remaining issues of D-PUR TA timer ASUSTeK discussion Rel-16 NB\_IOTenh3-Core

### 7.2.5 Scheduling multiple DL/UL transport blocks

Including scheduling multiple DL/UL transport blocks with or without DCI for SC-PTM and unicast

Scheduling multiple DL/UL transport blocks for NB-IoT is treated jointly with MTC under AI 7.1.5. Do not use this AI for any item that can be discussed jointly.

### 7.2.6 Network management tool enhancement

Including SON support for ANR, Random access performance and RLF report

Including outcome of the email discussion [108#95][NB-IoT] Finalise SON ANR and RLF (Huawei)

This agenda item may utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponing of some items to next meeting. A web conference may be used for handling some of the discussions in this AI.

Reports/Summaries

[R2-2000623](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000623.zip) Summary of [108#95][NB-IoT] Finalise SON ANR and RLF Huawei report Rel-16 NB\_IOTenh3-Core

Others

[R2-2001027](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001027.zip) Remaining issues on ANR reporting Lenovo, Motorola Mobility discussion Rel-16

### 7.2.7 Improved multi-carrier operation

Including support of Msg3 quality reporting for non-anchor access.

Including signalling to indicate on a non-anchor carrier for paging a set of subframes which will contain NRS even when no paging NPDCCH is transmitted.

This agenda item may utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponing of some items to next meeting. A web conference may be used for handling some of the discussions in this AI.

[R2-2000624](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000624.zip) NRS presence on non-anchor paging carrier Huawei, HiSilicon discussion Rel-16 NB\_IOTenh3-Core

* [AT109e][304][NBIOT R16] NRS presence on non-anchor paging carrier (Huawei)

Status: Not Started

Scope: Discuss and review the CRs

Intended outcome: Endorsed TP for main CRs, or decision to e.g. postpone/not agree.

Deadline: 06-03-2020, 12:00 CET

### 7.2.8 Inter-RAT cell selection

Including power efficient NB-IoT mechanism which would assist idle mode inter-RAT cell selection for NB-IoT to and from LTE, LTE-MTC and GERAN

This agenda item may utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponing of some items to next meeting. A web conference may be used for handling some of the discussions in this AI.

### 7.2.9 Coexistence with NR

Study NR and LTE specifications to identify possible issues related to coexistence of NB-IoT with NR

This agenda item may utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponing of some items to next meeting. A web conference may be used for handling some of the discussions in this AI.

Coexistence with NR is treated jointly with MTC under AI 7.1.11 during the e-meeting.

[R2-2000625](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000625.zip) Coexistence with NR for NB-IoT Huawei, HiSilicon discussion Rel-16 NB\_IOTenh3-Core

[R2-2000986](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000986.zip) NB-IoT coexistence with NR Ericsson discussion NB\_IOTenh3-Core

=> Revised in [R2-2002063](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2002063.zip)

[R2-2002063](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2002063.zip) NB-IoT coexistence with NR Ericsson discussion NB\_IOTenh3-Core

[R2-2001215](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001215.zip) RAN2 impacts of coexistence between NB-IoT and NR ZTE Corporation, Sanechips discussion Rel-16 LTE\_eMTC5-Core, NB\_IOTenh3-Core Late

### 7.2.10 Connection to 5GC (Other common aspects, NB-IoT specific aspects)

Common aspects for MTC and NB-IoT not listed in 7.1.12 are treated jointly under this AI.

Including outcome of the email discussion [108#96][NB-IoT/eMTC R16] Finalise details on RAI (Ericsson)

Including outcome of the email discussion [108#97][NB-IoT / eMTC] Consider how to minimize ping-pong between CN types in RRC\_IDLE/RRC\_INACTIVE. (Qualcomm)

This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponing of some items to next meeting. A web conference will be used for handling some of the discussions in this AI.

Reports/Summaries

[R2-2000540](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000540.zip) Email discussion report [108#97] for how to minimize ping-pong between CN types in RRC\_IDLE/RRC\_INACTIVE Qualcomm India Pvt Ltd discussion Rel-16 LTE\_eMTC5-Core, NB\_IOTenh3-Core

[R2-2001474](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001474.zip) Report - Email discussion [108#96][NB-IoT/eMTC R16] Finalise details on RAI Ericsson discussion Rel-16 LTE\_eMTC5-Core, NB\_IOTenh3-Core

[R2-2002015](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2002015.zip) Summary of contributions for connection to 5GC (AI 7.2.10) Huawei discussion Rel-16 NB\_IOTenh3-Core, LTE\_eMTC5-Core

Others

[R2-2000517](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000517.zip) Remaining FFSs for connection to 5GC ZTE Corporation, Sanechips discussion Rel-16 LTE\_eMTC5-Core, NB\_IOTenh3-Core

[R2-2000539](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000539.zip) UAC information change indication for eMTC UE connected to 5GC Qualcomm Incorporated discussion Rel-16 LTE\_eMTC5-Core, NB\_IOTenh3-Core R2-1914801

[R2-2000648](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000648.zip) Access barring for eMTC connected to 5GC Huawei, HiSilicon discussion Rel-16 LTE\_eMTC5-Core

R2-2000830 Mobility enhancements for Connectivity to 5GC for MTC and NB-IoT Sony discussion Rel-16 NB\_IOTenh3-Core R2-1915237 Withdrawn

[R2-2001014](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001014.zip) UE redirection to a specific CN type and ping-pong behavior Sony Europe B.V. discussion NB\_IOTenh3-Core

[R2-2001478](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001478.zip) AS RAI and optimization of release in EDT Ericsson discussion LTE\_eMTC5-Core, NB\_IOTenh3-Core Late

### 7.2.11 UE specific DRX

Specify support of UE specific DRX and consider expanding the current DRX range

Including outcome of the email discussion [108#98][NB-IoT] UE specific DRX (Huawei)

This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponing of some items to next meeting. A web conference will be used for handling some of the discussions in this AI.

Reports/Summaries

[R2-2000626](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000626.zip) Report of email discussion [108#98][NB-IoT] UE specific DRX Huawei report Rel-16 NB\_IOTenh3-Core Late

* Revised to R2-2001781

R2-2001781 Report of email discussion [108#98][NB-IoT] UE specific DRX Huawei report Rel-16 NB\_IOTenh3-Core Late

Others

[R2-2000627](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000627.zip) [Draft] Reply LS to Reply LS on Rel-16 NB-IoT enhancements Huawei LS out Rel-16 NB\_IOTenh3-Core To:TSG RAN, TSG CT, SA2 WG2, CT WG1, RAN WG3 Cc:TSG SA Late

[R2-2000628](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000628.zip) TP for Introduction of UE specific DRX for NB-IoT in 36.300 Huawei discussion Rel-16 36.300 NB\_IOTenh3-Core Late

[R2-2000629](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000629.zip) TP Introduction of UE specific DRX for NB-IoT in 36.304 Huawei discussion Rel-16 36.304 NB\_IOTenh3-Core Late

R2-2000630 TP for Introduction of UE specific DRX for NB-IoT in 36.306 Huawei discussion Rel-16 36.306 NB\_IOTenh3-Core Late

[R2-2000631](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000631.zip) TP for Introduction of UE specific DRX for NB-IoT in 36.331 Huawei discussion Rel-16 36.331 NB\_IOTenh3-Core Late

[R2-2000836](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2000836.zip) Details on UE Specific DRX cycle Sony discussion Rel-16 NB\_IOTenh3-Core

[R2-2001629](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001629.zip) NB-IoT UE Specific DRX - NB-IoT UE specific DRX – Options 1/2 and Fast Paging Escalation Sequans Communications discussion Rel-16 NB\_IOTenh3-Core

[R2-2001630](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109_e\Docs\R2-2001630.zip) NB-IoT UE Specific DRX - Efficiency Issues Sequans Communications discussion Rel-16 NB\_IOTenh3-Core R2-1916236

### 7.2.12 Other

Others