**3GPP TSG-RAN WG2 Meeting #115 electronic draftR2-2108837**

Online, August, 2021

Agenda Item: 10.7

Source: Session Chair (Huawei)

Title: <draft> Report NB-IoT breakout session

Document for: Approval

## General

Please see the following TDocs for e-meeting guidance:

[R2-2106900](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2106900.zip) Agenda for RAN2#115-e Chairman agenda Late

Time Schedule
Please refer to the latest schedule in the RAN2 inbox on the public 3GPP servers.

## List and Status of Offline Email Discussions

The deadlines refer to the deadline for providing company comments unless stated otherwise.

* [AT115-e][300][NBIOT/eMTC] Organisational Brian’s Session (Session Chair)

 **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:** EOM

 **Status:** started

## 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.

## 7.3 Additional enhancements for NB-IoT

(NB\_IOTenh3-Core; leading WG: RAN1; REL-16; started: Jun 18; Completed: June 20; WID: RP-200293)

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

Some sub-items in 7.2 and 7.3 may be treated jointly.

### 7.3.1 General and Stage-2 Corrections

Including incoming LSs etc

### 7.3.2 UE-group wake-up signal (WUS) Corrections

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

### 7.3.3 Transmission in preconfigured resources corrections

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

### 7.3.4 Other NB-IoT Specific corrections

NB-IoT specific topics

## 9.1 NB-IoT and eMTC enhancements

(NB\_IOTenh4\_LTE\_eMTC6-Core; leading WG: RAN1; REL-17; WID: RP-211340)

Time budget: 1 TU

Tdoc Limitation: 4 tdocs

Email max expectation: 4 threads

### 9.1.1 Organizational

### 9.1.2 NB-IoT neighbor cell measurements and corresponding measurement triggering before RLF

Focus on:

Details of the criteria and configuration for starting measurements

Whether any further information needs to be provided by the NW

Whether any assistance information from UE is needed.

If/how to support “early” RLF

[R2-2107122](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2107122.zip) Consideration on neighbour cell measurement in RRC connected state Qualcomm Incorporated discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2107429](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2107429.zip) Open issues on connected mode measurements for RLF Huawei, HiSilicon discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2107761](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2107761.zip) Remaining issues on connected mode measurement ZTE Corporation, Sanechips discussion NB\_IOTenh4\_LTE\_eMTC6-Core [R2-2105314](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2105314.zip)

[R2-2107810](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2107810.zip) Network assistance information for Re-establishment time reduction Nokia, Nokia Shanghai Bell discussion Rel-17

[R2-2107811](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2107811.zip) On the open aspects for connected mode measurements for RLF enhancements Nokia, Nokia Shanghai Bell discussion Rel-17

[R2-2107869](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2107869.zip) Triggering cell selection early Huawei, HiSilicon, MediaTek Inc., Spreadtrum Communications, Lenovo, Motorola Mobility, Fraunhofer, Novamint, CMCC, China Unicom, Reliance Jio discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2108390](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2108390.zip) Discussion on connected mode measurement in NB-IoT Ericsson discussion

[R2-2108843](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2108843.zip) Summary of AI 9.1.2 NB-IoT neighbor cell measurements (Huawei) Huawei discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

### 9.1.3 NB-IoT carrier selection based on the coverage level, and associated carrier specific configuration

Focus on details of the remaining 2 sub-options and selection of one of the options:

For option 1, whether DRX can be part of the carrier selection criteria

For option 1, upon cell change, whether to fallback or to select carrier based on previously determined CEL

For both options whether there is a report from the UE to suggest a carrier or provide a metric report

For both options whether to use a hysteresis/longer averaging/timer on measured NRSRP

[R2-2107123](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2107123.zip) Support for NB-IoT carrier selection based on the coverage level Qualcomm Incorporated discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2107124](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2107124.zip) Signalling for coverage-based paging carrier selection Qualcomm Incorporated discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2107207](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2107207.zip) Discussion on details of paging carrier selection options MediaTek Inc. discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2107370](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2107370.zip) Further discussion on enhanced paging carrier selection Spreadtrum Communications discussion Rel-17

[R2-2107391](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2107391.zip) Further discussion on enhanced paging carrier selection NEC Corporation discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2107430](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2107430.zip) Paging carrier selection Huawei, HiSilicon discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2107762](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2107762.zip) Remaining issues on CEL-based paging carrier selection ZTE Corporation, Sanechips discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core [R2-2105317](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2105317.zip)

[R2-2107812](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2107812.zip) Further analysis on solution for coverage level based paging carrier selection Nokia, Nokia Shanghai Bell discussion Rel-17

[R2-2108391](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2108391.zip) Paging Carrier Selection Ericsson discussion

[R2-2108828](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2108828.zip) Summary of AI 9.1.3 NB-IoT carrier selection Ericsson discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

### 9.1.4 Other

Includes WI objectives led by other WGs.

Includes resubmission of [R2-2106603](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2106603.zip) Report of [AT114-e][302][NBIOT/eMTC R17] NB-IoT/eMTC Other (ZTE), ZTE

[R2-2107431](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2107431.zip) L2 buffer size calculations for eMTC and NB-IoT enhancements Huawei, HiSilicon discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2107763](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2107763.zip) Remaining issues on 14 HARQ and 1736bits TBS for eMTC ZTE Corporation, Sanechips discussion NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2107764](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2107764.zip) Remaining issues on 16QAM for NB-IoT ZTE Corporation, Sanechips discussion NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2107996](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2107996.zip) Report of [AT114-e][302][NBIOT/eMTC R17] NB-IoT/eMTC Other ZTE (email discussion rapporteur) discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core [R2-2106603](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2106603.zip)

[R2-2108392](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2108392.zip) Support of 16-QAM for unicast in UL and DL in NB-IoT Ericsson discussion [R2-2106078](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2106078.zip)

[R2-2108742](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2108742.zip) Total L2 Buffer Size for NB-IoT and LTE-M UEs Ericsson discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core [R2-2106158](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2106158.zip)

[R2-2109030](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Inbox/R2-2109030.zip) Summary of AI 9.1.4 NB-IoT/eMTC Other (ZTE)