**3GPP TSG-RAN2 Meeting #114-e draftR2-2106477**

**Online, 19th – 27th , May 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:

[R2-2104700](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2104700.zip) Agenda for RAN2#114-e Chairman agenda

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.

* [AT114-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

* [AT114-e][301][NBIOT/eMTC R17] NB-IoT Carrier Selection (Ericsson)

 **Scope:** Discussion of open points as per the summary document in [R2-2106466](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2106466.zip).

 **Intended outcome:** Report in R2-2106601

 **Deadline:** Monday May 24 1200 UTC

 **Status:** TBD after Monday online

* [AT114-e][302][NBIOT/eMTC R17] NB-IoT/eMTC Other (ZTE)

 **Scope:** Discussion of open points in agenda item 9.1.4.

 **Intended outcome:** Report in R2-2106603

 **Deadline:** Monday May 24 1200 UTC

 **Status:** started

* [AT114-e][303][NBIOT/eMTC R16] PUR Corrections (ZTE)

 **Scope:** Discussion of CRs in [R2-2106214](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2106214.zip) and [R2-2106277](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2106277.zip). Poll for support and initial comments to CRs.

 **Intended outcome:** Report in R2-2106604

 **Deadline:** Monday May 24 1200 UTC

 **Status:** started

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## 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.

[R2-2106214](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2106214.zip) Add ack-NACK-NumRepetitions for PUR-Config-NB ZTE Corporation, Sanechips CR Rel-16 36.331 16.4.0 4679 - F NB\_IOTenh3-Core

[R2-2106277](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2106277.zip) MAC clarifications for PUR ZTE Corporation, Sanechips, MediaTek Inc. CR Rel-16 36.321 16.4.0 1524 - F LTE\_eMTC5-Core, NB\_IOTenh3-Core

* [AT114-e][303][NBIOT/eMTC R16] PUR Corrections (ZTE)

 **Scope:** Discussion of CRs in [R2-2106214](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2106214.zip) and [R2-2106277](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2106277.zip). Poll for support and initial comments to CRs.

 **Intended outcome:** Report in R2-2106604

 **Deadline:** Monday May 24 1200 UTC

### 7.3.4 Other NB-IoT Specific corrections

NB-IoT specific topics

# 9 Rel-17 EUTRA Work Items

## 9.1 NB-IoT and eMTC enhancements

(NB\_IOTenh4\_LTE\_eMTC6-Core; leading WG: RAN1; REL-17; WID: RP-201306)

Time budget: 1 TU

Tdoc Limitation: 4 tdocs

Email max expectation: 4 threads

### 9.1.1 Organizational

[R2-2104706](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2104706.zip) LS on Agreements Related to Support of a maximum DL TBS of 1736 bits as a Rel-17 optional UE capability (R1-2103942; contact: Sony) RAN1 LS in Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core To:RAN2

[R2-2104725](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2104725.zip) Reply LS on neighbour cell measurement in NB-IoT RRC\_CONNECTED state (R4-2105800; contact: Huawei) RAN4 LS in Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core To:RAN2

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

Including outcome of [Post113bis-e][351][NBIOT/eMTC R17] NB-IoT RLF measurements (Huawei)

[R2-2105661](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2105661.zip) Report of email discussion [351] NB-IoT RLF measurements (Huawei) Huawei report Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core Late

[R2-2105224](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2105224.zip) Analysis on connected mode signalling procedure changes for Re-establishment time reduction Nokia, Nokia Shanghai Bells discussion Rel-17

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

[R2-2105543](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2105543.zip) Discussion on the remaining issue of reestablishment-time-reduction Spreadtrum Communications discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2105657](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2105657.zip) Triggering RLF cell selection before T3010 expiry Huawei, HiSilicon discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2105828](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2105828.zip) Neighbor cell measurements triggering before RLF Lenovo, Motorola Mobility discussion Rel-17

[R2-2105918](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2105918.zip) Consideration on neighbour cell measurement in RRC connected state Qualcomm Incorporated discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2106080](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2106080.zip) Discussion on connected mode measurement in NB-IoT Ericsson discussion Rel-17

[R2-2106289](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2106289.zip) Measurement before radio link failure MediaTek Inc. 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 the following points for each of the solution options:

How does NW configure/enable (dedicated, broadcast signalling?)

How does UE select carrier, based on what criteria and metrics?

What happens upon cell change?

What happens upon coverage change?

Details of the fallback carrier(s).

[R2-2106466](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2106466.zip) Summary of NB-IoT AI 9.1.3 carrier selection based on coverage level Ericsson

* [AT114-e][301][NBIOT/eMTC R17] NB-IoT Carrier Selection (Ericsson)

 **Scope:** Discussion of open points as per the summary document in [R2-2106466](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2106466.zip).

 **Intended outcome:** Report in R2-2106601

 **Deadline:** Monday May 24 1200 UTC

[R2-2105225](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2105225.zip) Further analysis on paging carrier selection options Nokia, Nokia Shanghai Bells discussion Rel-17

[R2-2105317](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2105317.zip) Further discussion on CEL-based paging carrier selection ZTE Corporation, Sanechips discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core R2-2103321

[R2-2105544](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2105544.zip) Further discussion on enhanced paging carrier selection and NPRACH carrier selection Spreadtrum Communications discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2105642](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2105642.zip) Simplified Static solution THALES discussion

[R2-2105658](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2105658.zip) Clarification on Paging carrier selection Huawei, HiSilicon discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2105659](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2105659.zip) Guildelines for the design of coverage based paging carrier selection Huawei, HiSilicon discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2105919](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2105919.zip) Considerations on the two paging carrier selection schemes Qualcomm Incorporated discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2106076](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2106076.zip) Analysis of Rmax based solution and carrier-based solution Ericsson discussion Rel-17

[R2-2106198](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2106198.zip) Carrier selection enhancement MediaTek Inc. discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2106380](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2106380.zip) Network configuration for paging carrier selection Nokia Solutions & Networks (I) discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6

### 9.1.4 Other

Includes WI objectives led by other WGs.

[R2-2105318](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2105318.zip) Further discussion on 16QAM for NB-IoT ZTE Corporation, Sanechips discussion NB\_IOTenh4\_LTE\_eMTC6-Core R2-2103321

[R2-2105363](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2105363.zip) Further discussion on 14 HARQ and DL TBS of 1736bits for eMTC ZTE Corporation, Sanechips discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2105660](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2105660.zip) Support of DL TBS of 1736 bits for HD-FDD Cat. M1 Ues Huawei, HiSilicon discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2106078](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_114-e/Docs/R2-2106078.zip) Support of 16-QAM for unicast in UL and DL in NB-IoT Ericsson discussion Rel-17

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

* [AT114-e][302][NBIOT/eMTC R17] NB-IoT/eMTC Other (ZTE)

 **Scope:** Discussion of open points in agenda item 9.1.4.

 **Intended outcome:** Report in R2-2106603

 **Deadline:** Monday May 24 1200 UTC