**3GPP TSG-RAN WG2 Meeting #117 electronic draftR2-2203517**

**Online, 21st February – 3rd March, 2022**

Agenda Item: 10.7

Source: Session Chair (Interdigital)

Title: [draft] Report NB-IoT breakout session

Document for: Approval

## General

Please see the following TDocs for e-meeting guidance:

[R2-2202101](file:///C%3A%5C%5CUsers%5Cbrian.martin%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5CRAN2%5CRAN2_117_e%5CDocs%5CR2-2202101.zip) Agenda for RAN2#117-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.

* [AT117-e][300][NBIOT/eMTC] Organisational Brian’s Session (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:** EOM

* [AT117-e][304][NBIOT R15] DRX active time after Scheduling Request or SPS BSR (Huawei)

**Status**: Started

 **Scope:** Discussion of whether correction is needed, and work on the CRs.

 **Intended outcome:** Report in R2-2203571, and revised CRs (if needed – Tdocs can be allocated if necessary).

 **Deadline:** Thursday 24th February 1200 UTC

* [AT117-e][305][NBIOT R15] 2 HARQ processes and HARQ RTT timer (Ericsson)

**Status**: Started

 **Scope:** Discussion of whether correction is needed, and work on the CRs.

 **Intended outcome:** Report in R2-2203572, and revised CRs (if needed – Tdocs can be allocated if necessary).

 **Deadline:** Thursday 24th February 1200 UTC

* [AT117-e][306][NBIOT R16] Random access on multicarrier (CMCC)

**Status**: Started

 **Scope:** Discussion of whether correction is needed, and work on the CRs.

 **Intended outcome:** Report in R2-2203573, and revised CRs (if needed – Tdocs can be allocated if necessary).

 **Deadline:** Thursday 24th February 1200 UTC

* [AT117-e][307][NBIOT/eMTC R17] Reply LS to RAN3 on coverage based carrier selection (TBD)

**Status**: TBD

 **Scope:** draft the LS [TBD]

 **Deadline:** TBD

* [AT117-e][308][NBIOT/eMTC R17] 36.331 CR (Qualcomm)

**Status**: TBD

 **Scope:** Update and work on the CR [TBD]

 **Deadline:** TBD

* [AT117-e][309][NBIOT/eMTC R17] 36.306 CR (ZTE)

**Status**: TBD

 **Scope:** Update and work on the CR [TBD]

 **Deadline:** TBD

* [AT117-e][310][NBIOT/eMTC R17] 36.300 CR (Huawei)

**Status**: TBD

 **Scope:** Update and work on the CR [TBD]

 **Deadline:** TBD

* [AT117-e][311][NBIOT/eMTC R17] 36.302 CR (Huawei)

**Status**: TBD

 **Scope:** Update and work on the CR [TBD]

 **Deadline:** TBD

* [AT117-e][312][NBIOT R16] PUR Response Window (Qualcomm)

**Status**: Started

 **Scope:** Discussion of whether correction is needed, and work on the CRs.

 **Intended outcome:** Report in R2-2203574, and revised CR (if needed – Tdocs can be allocated if necessary).

 **Deadline:** Thursday 24th February 1200 UTC

## 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.

[R2-2203214](file:///C%3A%5C%5CUsers%5Cbrian.martin%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5CRAN2%5CRAN2_117_e%5CDocs%5CR2-2203214.zip) Correction to DRX active time after a Scheduling Request or a SPS BSR has been sent in NB-IoT Huawei, HiSilicon CR Rel-15 36.321 15.11.0 1528 - F NB\_IOTenh2-Core

[R2-2203215](file:///C%3A%5C%5CUsers%5Cbrian.martin%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5CRAN2%5CRAN2_117_e%5CDocs%5CR2-2203215.zip) Correction to DRX active time after a Scheduling Request or a SPS BSR has been sent in NB-IoT Huawei, HiSilicon CR Rel-16 36.321 16.6.0 1529 - A NB\_IOTenh2-Core

* [AT117-e][304][NBIOT R15] DRX active time after Scheduling Request or SPS BSR (Huawei)

**Status**: Started

 **Scope:** Discussion of whether correction is needed, and work on the CRs.

 **Intended outcome:** Report in R2-2203571, and revised CRs (if needed – Tdocs can be allocated if necessary).

 **Deadline:** Thursday 24th February 1200 UTC

[R2-2203480](file:///C%3A%5C%5CUsers%5Cbrian.martin%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5CRAN2%5CRAN2_117_e%5CDocs%5CR2-2203480.zip) Discussion on enabling 2 HARQ processes and HARQ RTT timer in NB-IoT Ericsson discussion NB\_IOTenh-Core

[R2-2203486](file:///C%3A%5C%5CUsers%5Cbrian.martin%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5CRAN2%5CRAN2_117_e%5CDocs%5CR2-2203486.zip) Clarification on CDRX and two HARQ interaction for NB-IoT Ericsson CR Rel-14 36.321 14.13.0 1530 - F NB\_IOTenh-Core

[R2-2203495](file:///C%3A%5C%5CUsers%5Cbrian.martin%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5CRAN2%5CRAN2_117_e%5CDocs%5CR2-2203495.zip) Clarification on CDRX and two HARQ interaction for NB-IoT Ericsson CR Rel-15 36.321 15.11.0 1531 - A NB\_IOTenh-Core

[R2-2203496](file:///C%3A%5C%5CUsers%5Cbrian.martin%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5CRAN2%5CRAN2_117_e%5CDocs%5CR2-2203496.zip) Clarification on CDRX and two HARQ interaction for NB-IoT Ericsson CR Rel-16 36.321 16.6.0 1532 - A NB\_IOTenh-Core

* [AT117-e][305][NBIOT R15] 2 HARQ processes and HARQ RTT timer (Ericsson)

**Status**: Started

 **Scope:** Discussion of whether correction is needed, and work on the CRs.

 **Intended outcome:** Report in R2-2203572, and revised CRs (if needed – Tdocs can be allocated if necessary).

 **Deadline:** Thursday 24th February 1200 UTC

## 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 documents in 7.2 and 7.3 may be treated jointly.

[R2-2202633](file:///C%3A%5C%5CUsers%5Cbrian.martin%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5CRAN2%5CRAN2_117_e%5CDocs%5CR2-2202633.zip) Discussion on the issue for random access on multicarrier for NB-IoT CMCC discussion Rel-16 NB\_IOTenh3-Core

[R2-2202634](file:///C%3A%5C%5CUsers%5Cbrian.martin%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5CRAN2%5CRAN2_117_e%5CDocs%5CR2-2202634.zip) Solution for random access issue on multiCarrier in NB-IoT CMCC draftCR Rel-16 36.331 16.7.0 F NB\_IOTenh3-Core

[R2-2202635](file:///C%3A%5C%5CUsers%5Cbrian.martin%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5CRAN2%5CRAN2_117_e%5CDocs%5CR2-2202635.zip) Solution for random access issue on multiCarrier in NB-IoT CMCC draftCR Rel-16 36.321 16.6.0 F NB\_IOTenh3-Core

* [AT117-e][306][NBIOT R16] Random access on multicarrier (CMCC)

**Status**: Started

 **Scope:** Discussion of whether correction is needed, and work on the CRs.

 **Intended outcome:** Report in R2-2203573, and revised CRs (if needed – Tdocs can be allocated if necessary).

 **Deadline:** Thursday 24th February 1200 UTC

[R2-2203724](file:///C%3A%5C%5CUsers%5Cbrian.martin%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5CRAN2%5CRAN2_117_e%5CDocs%5CR2-2203724.zip) Correction to pur-ResponseWindowTimer and removal of pur-ResponseWindowSize Qualcomm Incorporated, Huawei, HiSilicon CR Rel-16 36.321 16.6.0 1534 - F NB\_IOTenh3-Core, LTE\_eMTC5-Core Late

* [AT117-e][312][NBIOT R16] PUR Response Window (Qualcomm)

**Status**: Started

 **Scope:** Discussion of whether correction is needed, and work on the CRs.

 **Intended outcome:** Report in R2-2203574, and revised CR (if needed – Tdocs can be allocated if necessary).

 **Deadline:** Thursday 24th February 1200 UTC

## 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: 1 tdocs

### 9.1.1 Organizational

LS in

36.300 running CR (Huawei)

36.331 running CR (Qualcomm)

36.304 running CR (Nokia)

36.306 running CR (ZTE)

[R2-2202124](file:///C%3A%5C%5CUsers%5Cbrian.martin%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5CRAN2%5CRAN2_117_e%5CDocs%5CR2-2202124.zip) LS on Coverage-Based Carrier Selection (R3-221162; contact: Nokia) RAN3 LS in Rel-17 To:RAN2

* [AT117-e][307][NBIOT/eMTC R17] Reply LS to RAN3 on coverage based carrier selection (TBD)

**Status**: TBD

 **Scope:** draft the LS [TBD]

 **Deadline:** TBD

[R2-2202427](file:///C%3A%5C%5CUsers%5Cbrian.martin%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5CRAN2%5CRAN2_117_e%5CDocs%5CR2-2202427.zip) Introduction of NB-IoT/eMTC Enhancements Qualcomm Incorporated CR Rel-17 36.331 16.7.0 4760 - B NB\_IOTenh4\_LTE\_eMTC6-Core

* [AT117-e][308][NBIOT/eMTC R17] 36.331 CR (Qualcomm)

**Status**: TBD

 **Scope:** Update and work on the CR [TBD]

 **Deadline:** TBD

[R2-2202743](file:///C%3A%5C%5CUsers%5Cbrian.martin%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5CRAN2%5CRAN2_117_e%5CDocs%5CR2-2202743.zip) 36306 running CR for NB-IoT eMTC ZTE Corporation, Sanechips CR Rel-17 36.306 16.7.0 1841 - B NB\_IOTenh4\_LTE\_eMTC6-Core

* [AT117-e][309][NBIOT/eMTC R17] 36.306 CR (ZTE)

**Status**: TBD

 **Scope:** Update and work on the CR [TBD]

 **Deadline:** TBD

[R2-2203216](file:///C%3A%5C%5CUsers%5Cbrian.martin%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5CRAN2%5CRAN2_117_e%5CDocs%5CR2-2203216.zip) Introduction of Rel-17 enhancements for NB-IoT and eMTC Huawei, HiSilicon CR Rel-17 36.300 16.7.0 1354 - B NB\_IOTenh4\_LTE\_eMTC6-Core

* [AT117-e][310][NBIOT/eMTC R17] 36.300 CR (Huawei)

**Status**: TBD

 **Scope:** Update and work on the CR [TBD]

 **Deadline:** TBD

[R2-2203217](file:///C%3A%5C%5CUsers%5Cbrian.martin%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5CRAN2%5CRAN2_117_e%5CDocs%5CR2-2203217.zip) Introduction of Rel-17 enhancements for NB-IoT and eMTC Huawei, HiSilicon CR Rel-17 36.302 16.1.0 1211 - B NB\_IOTenh4\_LTE\_eMTC6-Core

* [AT117-e][311][NBIOT/eMTC R17] 36.302 CR (Huawei)

**Status**: TBD

 **Scope:** Update and work on the CR [TBD]

 **Deadline:** TBD

### 9.1.2 Open Issues

Outcomes of:

[Pre117-e][301][NBIOT/eMTC R17] NB-IoT carrier selection (ZTE)

[Pre117-e][302][NBIOT/eMTC R17] Capabilities open issues (Huawei)

[Pre117-e][303][NBIOT/eMTC R17] Other open issues (Ericsson)

[R2-2202739](file:///C%3A%5C%5CUsers%5Cbrian.martin%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5CRAN2%5CRAN2_117_e%5CDocs%5CR2-2202739.zip) Report of [Pre117e-301] Carrier selection open issues ZTE Corporation, Sanechips report Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core Late

[R2-2202745](file:///C%3A%5C%5CUsers%5Cbrian.martin%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5CRAN2%5CRAN2_117_e%5CDocs%5CR2-2202745.zip) ASN.1 issue and RAN3 impact of carrier selection ZTE Corporation, Sanechips discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

[R2-2203218](file:///C%3A%5C%5CUsers%5Cbrian.martin%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5CRAN2%5CRAN2_117_e%5CDocs%5CR2-2203218.zip) Report of [Pre117-e][302][NBIOT/eMTC R17] Capabilities open issues (Huawei) Huawei, HiSilicon report Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core Late

[R2-2203384](file:///C%3A%5C%5CUsers%5Cbrian.martin%5COneDrive%20-%20InterDigital%20Communications%2C%20Inc%5CDocuments%5CRAN2%5CRAN2_117_e%5CDocs%5CR2-2203384.zip) Report on [Pre117-e][303][NBIOTeMTC R17] Other open issues (Ericsson) Ericsson report Rel-17 Late

### 9.1.3 Other