3GPP TSG-RAN WG2 Meeting #113bis-e draftR2-2104451

**Online, April 12th - 20th 2021**

**Source: Document Rapporteur (Ericsson)**

**Title: RAN2 agreements for Rel-17 NB-IoT and LTE-MTC**

**Agenda Item: 9.1.1**

**Document for: Endorsement**

# 1 Introduction

This document lists RAN2 agreements made for Rel-17 “Additional enhancements for NB-IoT and LTE-M” work item (WI code NB\_IOTenh4\_LTE\_eMTC6; WID in [RP-201306](http://3gpp.org/ftp/tsg_ran/TSG_RAN/TSGR_88e/Docs/RP-201306.zip)), until and including the RAN2#113bis-e, April 12th – 20th 2021.

NOTE: Email agreements for CRs/specific topics are not listed in this document.

# 2 Additional enhancements for NB-IoT and LTE-MTC

## 2.1 Organizational

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| RAN2#111-e agreements:* Will maintain a document similar to the one used in R16 for capturing agreements.
* The endorsed report can be provided in R2-2008309.
* [Post111-e][350][NBIOT/eMTC R17] Capture the agreements (Ericsson)
	+ - Scope: Capture the agreements.
		- Intended outcome: endorsed report in R2-2008309
		- Deadline: Friday, 2020-09-04 13:00 UTC

RAN2#112-e agreements: None (except for this document, see clause 5)RAN2#113-e agreements: None (except for this document, see clause 5)RAN2#113bis-e agreements: None (except for this document, see clause 5) |

## 2.2 NB-IoT neighbour cell measurements and corresponding measurement triggering before RLF

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| RAN2#111-e agreements:* Study current RLF procedure to understand the time taken to select the cell for access. Start and end points FFS.
* Support neighbour cell measurements in RRC\_CONNECTED, at least for intra-frequency.
	+ - FFS inter-frequency
		- FFS whether measurements are done on the anchor carrier
		- FFS how neighbour cell measurement is triggered
		- FFS how to perform neighbour cell measurements
* Working assumption: Neighbour cell measurement results are not reported to the network in RRC\_CONNECTED.
	+ - FFS whether and when other information can be sent

RAN2#112-e agreements:* Enhancements to the random-access procedure are not considered.
* The solution includes reduction of the time between declaration of RLF and the start of the random-access procedure (points C and D)
* FFS whether the solution includes reduction of the time between out-of-sync detection and declaration of RLF (points B and C)

RAN2#113-e agreements:* Neighbour cells measurement (detection and measurements) are performed only on the anchor carrier.
* The solution is optional

[R2-2102165](http://ftp.3gpp.org/tsg_ran/WG2_RL2/TSGR2_113-e/Docs/R2-2102165.zip) LS on neighbour cell measurement in NB-IoT RRC\_CONNECTED state LS out Rel-17 To: RAN4. NB\_IOTenh4\_LTE\_eMTC6-CoreRAN2#113bis-e agreements: None |

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

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| RAN2#111-e agreements:* Paging carrier selection Improvements based on CE level is considered
* Paging carrier selection Improvements based on DRX cycle may be considered
	+ - whether DRX cycle is considered as part of CE level (Rmax) or can be also considered separately
* Enhancements for NPRACH Carrier selection carrier may be considered
* Paging carrier selection Improvements solely based on WUS or GWUS is not considered
* FFS service based

RAN2#112-e agreements: NoneRAN2#113-e agreements:* Select between one of the options:
	+ - Option 1: UE selects a paging carrier based on a rule configured by the network
		- Option 2: NW configures a specific paging carrier
* Working assumption: For both options, when coverage changes, mechanism that requires UE to report the update of coverage is not introduced.

RAN2#113bis-e agreements: None |

## 2.4 Other

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| RAN2#113bis-e agreements:* Working assumption: For the UE supporting 16-QAM, the L2 buffer size is 12000 bytes.
* Working assumption: Support of 16-QAM has separate UE capabilities for DL and UL
* 14 HARQ activation is configured by dedicated RRC signalling.
* Working assumption: No change to current L2 buffer size requirement
* DL TBS of 1736 bits is configured by dedicated RRC signalling.
* FFS: Whether to update L2 buffer size requirement
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# 3 References: List of approved outgoing Rel-17 LSs

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| **Tdoc** | **Meeting** | **Title** | **WI** | **To** | **Cc** |
| R2-2102165 | RAN2#113-e | LS on neighbour cell measurement in NB-IoT RRC\_CONNECTED state | NB\_IOTenh4\_LTE\_eMTC6-Core | RAN4 |  |
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# 4 References: Reports from the breakout session

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| **Meeting** | **Date** | **Title** | **Tdoc** |
| RAN2#111-e, Online | 17-28 August 2020 | Report NB-IoT breakout session | R2-2008127 |
| RAN2#112-e, Online | 2-13 November 2020 | Report NB-IoT breakout session | R2-2010707 |
| RAN2#113-e, Online | Jan 25 - Feb 5 2021 | Report NB-IoT breakout session | R2-2101957 |
| RAN2#113bis-e, Online | 12 - 20 April 2021 | Report NB-IoT breakout session | R2-2104307 |

# 5 Change history

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| **Tdoc** | **Title** | **Comment** |
| R2-2008309 | RAN2 agreements for Rel-17 additional enhancements for NB-IoT & LTE-MTC | Post RAN2#111-e  |
| R2-2010911 | RAN2 agreements for Rel-17 additional enhancements for NB-IoT & LTE-MTC | Post RAN2#112-e |
| R2-2102164 | RAN2 agreements for Rel-17 additional enhancements for NB-IoT & LTE-MTC | Post RAN2#113-e |
| R2-2104451 | RAN2 agreements for Rel-17 additional enhancements for NB-IoT & LTE-MTC | Post RAN2#113bis-e |
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