**3GPP TSG-RAN3 Meeting #115-e *R3-222929***

**Online, , 21th Feb 2022 – 3rd Mar 2022**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.460** | **CR** | **0047** | **rev** | **6** | **Current version:** | **16.4.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network |  |

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|  | | | | | | | | | | |
| ***Title:*** | Introduction of NR MBS | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | LG Electronics | | | | | | | | | |
| ***Source to TSG:*** | R3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_MBS-Core | | | | |  | ***Date:*** | | | 2022-03-04 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | NR MBS Service is supported in release 17. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | NR MBS is introduced. | | | | | | | | |
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| ***Consequences if not approved:*** | | NR MBS is not supported in case of architecture for separation gNB-CU-CP and gNB-CU-UP. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 2, 3.3, 5.1.x (new), 6.x (new) | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | rev1: resubmission in R3-210787  rev2: resubmission in R3-211484  rev3: resubmission in R3-213150  rev4: resubmission in R3-214613  rev5: resubmission in R3-220009  rev6: capture TP agreed in RAN3#115-e   * R3-222896 [TP for BL CR 38.460] Multicast and Broadcast E1AP functions | | | | | | | | |

*Start of the First Change*

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 38.401: "NG-RAN; Architecture Description".

[3] 3GPP TS 38.461: "NG-RAN; E1 layer 1".

[4] 3GPP TS 38.462: "NG-RAN; E1 signalling transport".

[5] 3GPP TS 38.463: "NG-RAN; E1 Application Protocol (E1AP)".

[6] 3GPP TS 38.300: "NR; Overall description; Stage-2".

[7] 3GPP TS 37.340: "NR; Multi-connectivity; Overall description; Stage-2".

[x] 3GPP TS 23.247: "5G multicast-broadcast services; Stage 2".

*Start of the Next Change*

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [1].

DL Downlink

DRB Data Radio Bearer

E1AP E1 Application Protocol

IP Internet Protocol

MBS Multicast/Broadcast Service

PTP Point to Point

PTM Point to Multipoint

SCTP Stream Control Transmission Protocol

TNL Transport Network Layer

*Start of the Next Change*

### 5.1.x E1 bearer context management function for NR MBS

The E1 bearer context management function for NR MBS consists of two sub-sets for functions, one for NR MBS broadcast, one for NR MBS multicast.

Both sets follow the principles of the E1 bearer context management functions, with the following differences

- E1 NR MBS procedure concerns a single MBS Session Resource only.

- E1 NR MBS procedures concern the control of MRB resources in gNB-CU-UP

Editor’s Note: Specification of gNB-CU-UP initiated procedures for both, multicast and broadcast, are FFS and requires specification text if not defined.

- E1 NR MBS procedures do not contol security information, as for NR MBS, PDCP does not apply security as specified in TS 38.300 [4].

- QoS flow to MRB mapping is determined by the gNB-CU-CP or, in case of shared NR-U terminations, the gNB-CU-UP may be notified about the QoS flow to MRB mapping already determined in the bearer context for the shared NR-U termination. The gNB-CU-CP may inform the gNB-CU-UP whether it is contended with the already determined mapping decision.

NOTE: Not all QoS flow parameters are applicable for NR MBS, as specified in TS 23.247 [x].

Editor’s Note: Some specification text for data forwarding, where applicable, to be inserted here.

Editor’s Note: Header Compression text to be inserted here as well. So far only schemes w/o feedback schemes assumed.

- DL data arrival detection is not applicable for NR MBS.

- Data volume reporting is not applicable for NR MBS.

- Suspension and resumption of bearer contexts is not applicable for NR MBS.

- CA based packet duplication is not applicable for NR MBS.

*Start of the Next Change*

6.x NR MBS procedures

The E1 MBS procedures are listed below:

- Broadcast E1AP MBS procedures

- BC Bearer Context Setup

- BC Bearer Context Modification (gNB-CU-CP inititated)

- BC Bearer Context Modification (gNB-CU-UP inititated)

- BC Bearer Context Release (gNB-CU-CP inititated)

- BC Bearer Context Release (gNB-CU-UP inititated)

- Multicast E1AP MBS procedures

- MC Bearer Context Setup

- MC Bearer Context Modification (gNB-CU-CP inititated)

- MC Bearer Context Modification (gNB-CU-UP inititated)

- MC Bearer Context Release (gNB-CU-CP inititated)

- MC Bearer Context Release (gNB-CU-UP inititated)

*End of the Changes*