**3GPP TSG-RAN WG3 Meeting #113-e *R3-213578***

**E-meeting, 16-26 Aug 2021**

**Title:** (TP to TS 38.401 BL CR) Bearer management over F1 and E1

**Source:** Huawei, CBN, China Telecom

**Agenda item:** 22.2.4

**Document Type:** other

# 1. Introduction

This contribution provides TP to reflect the following agreement achieved in RAN3#112-e:

1. For IP Multicast Transport support for Broadcast and Multicast service：WA: F1-U multicast transport is not supported (achieved by RAN3#112-e)

And the agreements made during this meeting:

1. For broadcast, introduce gNB-CU-CP triggered F1AP procedures: MBS Context Setup, MBS Context Modification, MBS Context Release. Detailed naming FFS.
2. For broadcast, introduce gNB-CU-CP triggered E1AP procedures: MBS Bearer Setup, MBS Bearer Modification, MBS Bearer Release. Detailed naming FFS.
3. For broadcast, the shared NG-U tunnel is established during the CU-CP triggered E1AP: MBS Bearer Setup procedure. The IP multicast address could be included in the E1AP: MBS Bearer Setup Request, and the unicast transport DL NG-U GTP-U address could be included in the E1AP: MBS Bearer Setup Response.
4. For broadcast, the shared F1-U tunnel is established during the procedures to setup the broadcast context and bearer.

# 2. Text proposal to TS 38.401

***--------------------------------Start of the Change-----------------------------***

## 6.1 Overview

***//skip unchanged part***

### 6.1.x Overall Architecture of NR MBS

The overall architecture specified in section 6.1.1 and 6.1.2 applies for NR MBS.

Editor’s Note: Applicability of specified cardinalities may need to be revisited.

Upon establishment of a MBS Session resource by the 5GC, the gNB-CU triggers the establishment of MBS radio bearers, involving the gNB-DU. If E1 is deployed, the gNB-CU-CP triggers establishment of respective MBS UP resources in the gNB-CU-UP.

A shared F1-U tunnel is used between the gNB-CU and the gNB-DU for PTM transmission of a MBS radio bearer. The gNB-DU assigns the DL GTP-U TEID and provides it to the gNB-CU. If E1 is deployed the gNB-CU-CP forwards it to the gNB-CU-UP.

Editor’s Note: It is also FFS whether the F1-U tunnel for the PTM transmission is established per DU or per cell. The definition and usage of the term “PTM” is FFS. Also, the definition of the term “MBS radio bearer” is FFS.

***--------------------------------Start of the Next Change-----------------------------***

## 8.xx Overall procedures for NR MBS

The following clauses describe the overall procedures for NR MBS involving E1 and F1.

### 8.xx.b MBS Session Resource Establishment for Broadcast

Editor’s Note: Detailed message names may be revisited after further discussion.

The signalling flow for MBS Session Resource Establishment for broadcast involving E1 and F1 is shown in Figure 8.xx.b-1:



Figure 8.xx.b-1: MBS Session Resource Establishment for Broadcast service

1. The AMF sends MBS SESSION RESOURCE SETUP REQUEST message to the gNB, with the MBS information, and the IP multicast address of the broadcast Session.

2. The gNB-CU-CP sends MBS BEARER CONTEXT SETUP REQUEST message to the gNB-CU-UP, with the MBS context and the IP multicast address of the broadcast Session to setup the shared NG-U tunnel.

3. The gNB-CU-UP sends MBS BEARER CONTEXT SETUP RESPONSE to the gNB-CU-CP, with the assigned DL NG-U GTP-U tunnel information if unicast transmission is selected.

4. The gNB-CU provides the MBS information to the gNB-DU in the MBS CONTEXT SETUP REQUEST message.

5. The gNB-DU sends the MBS CONTEXT SETUP RESPONSE message to the gNB-CU-CP, includes the assigned DL F1-U GTP-U tunnel information to setup the shared F1-U tunnel for the MRB.

6. The gNB-CU-CP sends the MBS BEARER CONTEXT MODIFICATION REQUEST message to the gNB-CU-UP, with the DL F1-U GTP-U tunnel information received from the gNB-DU in step 5.

7. The gNB-CU-UP sends the MBS BEARER CONTEXT MODIFICATION RESPONSE message to the gNB-CU-CP.

8. The gNB sends MBS SESSION RESOURCE SETUP RESPONSE message to the AMF.

***--------------------------------End of the Change-----------------------------***