3GPP TSG-RAN WG3 Meeting #113-e R3-21xxxx

**Online, 16 - 27 August 2021**

**Agenda item: 22.2.2**

**Source:**  **Qualcomm Incorporated, Huawei, Lenovo, Motorola Mobility**

**Title:** (**TP to TS 38.470 BL CR) Multicast Group Paging**

**Document for: Other**

# **1 Introduction**

As discussed in [1], the following proposals are achieved:

Proposal 1: Introduce MBS Session List in PDU Session Level, and each MBS Session item should:

* includes MBS Session ID;
* includes list of MBS QoS Flow information (includes MBS QoS Flow ID, MBS QoS profile, and the mapped unicast QoS Flow ID);
* supports to add/modify/release MBS QoS flows;
* includes MBS Service Area Information.

Proposal 2: Use the accepted MBS QFI in the *PDU Session Resource Modify Response Transfer* IE to indicate the support of MBS by the gNB.

Proposal 3: Introduce non UE associated class1 NGAP: Session activation/deactivation procedures for Multicast Session Management.

Proposal 4: Introduce NGAP: GROUP PAGING message to support group paging from CN to RAN. And the NGAP: GROUP PAGING message includes:

* MBS Session ID
* TAI List
* Service Area

**Proposal 5: Introduce non UE associated Class 2 F1AP: Group Paging procedure to support group paging from gNB-CU to gNB-DU. And the F1AP: GROUP PAGINGE message includes:**

* **MBS Session ID**
* **Paging Cell List**

Proposal 6: Introduce a non-UE associated class1 NGAP: Multicast Distribution Setup procedure, triggered by the gNB:

* in case the gNB decides or is configured to use unicast transport for multicast distribution sessions, it includes the DL GTP-U tunnel info in the Multicast Distribution Setup Request.
* in case the DL GTP-U tunnel info is not included in the Multicast Distribution Setup Request, the core network shall provide IP multicast DL tunnel info to the gNB, to enable IP multicast transport.

Proposal 7: Introduce a non-UE associated Class1 E1AP procedure, e.g. named as Multicast Distribution Setup procedure, triggered by the gNB-CU-UP:

* in case the gNB-CU-UP decides or is configured to use unicast transport for multicast distribution sessions, it includes the DL GTP-U tunnel info in the Multicast Distribution Response Request.
* in case the DL GTP-U tunnel info is not included in the Multicast Distribution Setup Request, the cgNB-CU-CP shall provide IP multicast DL tunnel info to the gNB-CU-UP, to enable IP multicast transport.

In this paper, we provide the text proposal to BL CR of TS 38.470 in Section 3.

# **2 Reference**

1. R3-213555 Consideration on Multicast Session Management Huawei, CBN, China Unicom, Lenovo, Motorola Mobility, Qualcomm Incorporated, China Telecom
2. R3-213556 (TP to TS 38.410 BL CR) Multicast Session Management Huawei, CBN, China Unicom, Lenovo, Motorola Mobility, Qualcomm Incorporated, China Telecom
3. R3-213557 (TP to TS 38.413 BL CR) Multicast Session Management Huawei, Lenovo, Motorola Mobility, Qualcomm Incorporated
4. R3-213746 (TP to TS 38.460 BL CR) Support of Multicast Distribution Setup and Release Lenovo, Motorola Mobility, Huawei, Qualcomm Incorporated
5. R3-213747 (TP to TS 38.463 BL CR) Support of Multicast Distribution Setup and Release Lenovo, Motorola Mobility, Huawei, Qualcomm Incorporated

# **3 Text Proposal**

***-----------------Start of the Changes-------------------***

### 6.1.x NR MBS procedures

The F1 MBS procedures are listed below:

* Multicast Group Paging procedure