**3GPP T****SG-RAN WG3 Meeting #125b R3-24xxxx**

**Hefei, CN, 14 - 18 Oct, 2024**

**Agenda Item: 14.2**

**Source: Huawei, Nokia, Nokia Shanghai Bell, Ericsson**

**Title: (TP for TS 38.413 and TS 38.300) Support MBS broadcast service**

**Document for: discussion**

# 1 Introduction

This contribution provides the Stage 2 TP for NTN MBS.

# Text Proposal for TS 38.300

<<<<<<<<<<<<<<<<<<<< First Change >>>>>>>>>>>>>>>>>>>>

### 16.14.5 NG-RAN signalling

The Cell Identity, as defined in TS 38.413 [26] and TS 38.423 [50], used in following cases corresponds to a Mapped Cell ID, irrespective of the orbit of the NTN payload or the types of service links supported:

- The Cell Identity indicated by the gNB to the Core Network as part of the User Location Information;

- The Cell Identity used for Paging Optimization in NG interface;

- The Cell Identity used for Area of Interest;

- The Cell Identity used for PWS;

 - The Cell Identity used for MBS broadcast service.

The Cell Identity included within the target identification of the handover messages allows identifying the correct target cell. The cell identity used in the NG and Xn handover messages, Xn Setup and Xn NG-RAN Node Configuration Update procedures is expected to be Uu Cell ID.

The Cell Identities used in the RAN Paging Area during Xn RAN paging allow the identification of the correct target cells for RAN paging.

NOTE 1: The Cell Identity used for RAN Paging is assumed to typically represent a Uu Cell ID.

The mapping between Mapped Cell IDs and geographical areas is configured in the RAN and Core Network.

NOTE 2: A specific geographical location may be mapped to multiple Mapped Cell ID(s), and such Mapped Cell IDs may be configured to indicate differerent geographical areas (e.g. overlapping and/or with different dimensions).

The gNB is responsible for constructing the Mapped Cell ID based on the UE location information received from the UE, if available. The mapping may be pre-configured (e.g., up to operator's policy) or up to implementation.

NOTE 3: As described in TS 23.501 [3], the User Location Information may enable the AMF to determine whether the UE is allowed to operate at its present location. Special Mapped Cell IDs or TACs may be used to indicate areas outside the serving PLMN's country.

The gNB reports the broadcasted TAC(s) of the selected PLMN to the AMF as part of ULI. In case the gNB knows the UE's location information, the gNB may determine the TAI the UE is currently located in and provide that TAI to the AMF as part of ULI.

To support the intended service area of a broadcast service (e.g. MBS broadcast) in case the satellite footprint covers a larger area, the intended service area may be in a form of cell ID list, TAI list, or the geographic area or any of combinations as defined in TS 38.413 [26].

Editor’s Note: The above paragraphs may be further reformulated.

<<<<<<<<<<<<<<<<<<<< End of Changes >>>>>>>>>>>>>>>>>>>>