3GPP TSG-RAN WG3 Meeting #125 R3-244746

**Maastricht, NL, 19 - 23 August, 2024**

Agenda Item: 12.2

Source: Huawei

Title: (TP for TR 38.799): WAB mobility

Document for: Discussion

# 1 Introduction

This is to provide TP for WAB mobility according to the following agreements and CB:

**The single gNB solution including the options below shall be captured in the TR:**

* **Single gNB single cell using registration update due to TAC change**
* **Single gNB two cells with different TAC using NG HO**
* **Single gNB single cell without TAC change**

**CB: # WAB**

* **Draft reply LS to SA2 (QC)**
* **Draft TPs capturing agreements taken**
* **Draft TPs on any other agreements possibly reached offline**
* **Derive TR conclusions based on agreements taken (online and offline)**

(Moderator – Ericsson)

Summary of offline discussions R3-244737

#  Annex——TP for TR 38.799 v1.0.0

*Start of Change*

##### 4.3.4.2.2 WAB-gNB mobility with change of UE’s AMF(s)

Due to WAB-node movement, the change of UE’s AMF(s) may be needed, based on, e.g., WAB-node’s current location and/or additional criteria. The NG connection handling and WAB-gNB configuration update may affect the served UEs.

------------------unchanged parts are skipped----------------

###### 4.3.4.2.2.2 Solution with two logical WAB-gNBs

In addition, it is also possible to support the change of UE’s AMF(s) with only single gNB. There are three options.

**Option 1**: Single gNB single cell using registration update due to TAC change

In this option, the WAB-gNB establishes NG connection towards the new AMF after obtaining the configuration parameters needed to establish the new NG connection. It maintains NG connections to two AMFs simutaneously, and indicates the new TAC only to the new AMF. The WAB-gNB directly change the broadcasted system information (including TAC) to the new value corresponding to the new AMF. Then the WAB-gNB sends short message in PDCCH to UE for the system information change notification, and UE will detect the new TAC value which is out of its RA scope. After that, the UE’s Mobility Registration Update procedure is triggered as defined in TS 23.502, and the old AMF will forward the UE’s Registration Request message and transfer the UE contexts to the new AMF during this procedure. After that, the NG connection(s) between the WAB-gNB and the old AMF(s) will be removed

**Option 2**: Single gNB single cell without TAC change

In this option, upon AMF change, the WAB-gNB retains its TAC. When the WAB-gNB establishes an NG connection to the new AMF, the WAB-gNB indicates the TAC to the new AMF, and removes the TAC from the supported TAC list at the old AMF. After this, the UE context transfer between the old and the new AMF is triggered. After the UE contexts have been transferred, the WAB-gNB removes the NG connection with the old AMF.

**Option 3**: Single gNB two cells with different TAC using NG HO

In this option, the procedures defined in the 4.3.4.2.2.1 can be reused mostly, the only difference is that the new cell(s) and the old cell(s)are served by same WAB-gNB, no new logical WAB-gNB needs to be instantiated.

*End of Change*