3GPP TSG-RAN WG3 #126 R3-247828

Orlando, USA, 18th – 22nd , November, 2024

Agenda Item: 12.2

Source: NTTDOCOMO (moderator)

Title: Summary of Offline Discussion on WAB

Document for: Approval

# For chair notes

## For multi hop prevention

It is agreed to send reply LS to SA2.

To: SA2

CC: RAN2

RAN3 has agreed the following solution for multi hop prevention for HO.

For HO, the target WAB-gNB should reject HO preparation including the S-NSSAI used for Backhauling.

Further discussion on whether to add the following in the reply LS in the on line session.

RAN3 is still working on a solution for multi hop prevention for initial access.

Solution1: For initial access, WAB-gNB may use dedicated frequencies and/or PCIs and potential other legacy OTA parameters (e.g. forbidden cell list (CGI list,a range of CGI), TAC, gNB ID), to ensure that the WAB-MTs of other WAB-nodes avoid (re)selecting the WAB-gNB cells.

Solution3: For initial access, WAB-gNB-cells broadcast a new indicator in SIB to bar WAB-MT, and the WAB-MT avoids (re)selection of cells broadcasting this indicator.

## For UE’s AMF change during WAB-gNB mobility

It is agreed to send reply LS to SA2 to confirm the feasibility of following single WAB-gNB solutions.

Huawei provides detailed description of OptionB1 and Option B2.

Ericsson provides detailed description of OptionB3.

• Option B1: Single WAB-gNB with a single cell using mobility registration update due to TAC change.

• Option B2: Single WAB-gNB with two cells with different TACs, using NG-based HO

• Option B3: Single WAB-gNB single cell without TAC change.

Qualcomm take the reply LS.

# Introduction

This document provides a summary of the following offline discussion on WAB.

**CB: WAB**

* **Discuss the FFS captured**
* **Agree on a text for a reply LS to SA2 (either a partial reply or a full reply)**

(moderator – DoCoMo)

Summary of offline disc in R3-247828

# Discussion

## For multi hop prevention

**To be further discussed whether Solution 1 or Solution 3 (or both) need to be selected**

**1. For initial access, WAB-gNB may use dedicated frequencies and/or PCIs and potential other legacy OTA parameters (e.g. forbidden cell list (CGI list,a range of CGI), TAC, gNB ID), to ensure that the WAB-MTs of other WAB-nodes avoid (re)selecting the WAB-gNB cells.**

**3. For initial access, WAB-gNB-cells broadcast a new indicator in SIB to bar WAB-MT, and the WAB-MT avoids (re)selection of cells broadcasting this indicator.**

[offline discussion result]

…

RAN3 has agreed the following solution for multi hop prevention for HO.

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To: SA2

CC: RAN2

Further discussion on whether to add the following in the reply LS in the on line session.

RAN3 is still working on a solution for multi hop prevention for initial access.

Solution1:For initial access, WAB-gNB may use dedicated frequencies and/or PCIs and potential other legacy OTA parameters (e.g. forbidden cell list (CGI list,a range of CGI), TAC, gNB ID), to ensure that the WAB-MTs of other WAB-nodes avoid (re)selecting the WAB-gNB cells.

Solution3:For initial access, WAB-gNB-cells broadcast a new indicator in SIB to bar WAB-MT, and the WAB-MT avoids (re)selection of cells broadcasting this indicator.

## For UE’s AMF change during WAB-gNB mobility

**The “two logical gNB solution” can support UE’s AMF change during WAB-gNB mobility.**

**It is for further discussions which solution to adopt, if the single gNB solution, the “two gNB solution” or both. It is to be further checked whether a single gNB solution is feasible via an LS to SA2, if the LS is agreeable.**

[offline discussion result]

It is agreed to send reply LS to SA2 to confirm the feasibility of following single WAB-gNB solutions.

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Qualcomm take the reply LS.

# Conclusion, Recommendations

# References

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| --- | --- | --- |
| [R3-247109](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247109.zip) | (TP for WAB BL CR for TS 38.401): Functional Aspects of WAB-Nodes (Ericsson) | other |
| [R3-247343](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247343.zip) | (TP for TS 38.423) Discussion on WAB mobility (Nokia, Nokia Shanghai Bell) | other |
| [R3-247363](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247363.zip) | (TPs for TS 38.413) Architecture and Access control for WAB (Huawei) | other |
| [R3-247195](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247195.zip) | (TP to 38.401 36.300) Discussion on supporting WAB (ZTE Corporation) | other |
| [R3-247196](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247196.zip) | Discussion on other aspects for WAB and the reply LS to SA2 (ZTE Corporation) | other |
| [R3-247197](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247197.zip) | (TP to 38.305) Support of location service involving WAB-nodes (ZTE Corporation, Nokia, Nokia Shanghai Bell, Ericsson, Qualcomm, Lenovo, CATT) | other |
| [R3-247198](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247198.zip) | (TP to 38.455) Support of location service involving WAB-nodes (ZTE Corporation, Nokia, Nokia Shanghai Bell, Ericsson, Qualcomm, Lenovo, CATT) | other |
| [R3-247222](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247222.zip) | (TP to BL CR of 38.423 on WAB) Discussion on mobility and reliability for WAB (NEC) | other |
| [R3-247226](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247226.zip) |  Discussion on enhancements for WAB (CANON Research Centre France) | discussion |
| [R3-247227](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247227.zip) | (draft Reply LS to SA2 – TP to BL CR 38.401) Discussion on SA2 questions on multi-hop WAB and UE ULI (Qualcomm Inc.) | other |
| [R3-247228](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247228.zip) | (TP to BL CR 38.401) Discussion of aspects related to WAB (Qualcomm Inc.) | other |
| [R3-247229](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247229.zip) | BL draft CR to TS 38.300 on Support of WAB (Qualcomm, Ericsson, CATT, ZTE, Nokia, Nokia Shanghai Bell) | draftCR |
| [R3-247268](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247268.zip) | (draft Reply LSs to SA2) On support of WAB (CATT) | discussion |
| [R3-247269](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247269.zip) | Discussion on enhancements for WAB (CATT) | discussion |
| [R3-247279](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247279.zip) | Discussion on Wireless Access Backhaul (NTT DOCOMO INC.) | discussion |
| [R3-247342](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247342.zip) | (TP for TS 38.401) Discussion on NG management and Xn management for WAB (Nokia, Nokia Shanghai Bell) | other |
| [R3-247110](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247110.zip) | Reply to SA2 Regarding UE Access Control and Additional ULI for WAB-Nodes (Ericsson) | DiscussionRev in [R3-247771](file:///C%3A%5CUsers%5C5088196%5COUT%5C%E6%8F%90%E5%87%BA%EF%BC%91%5Cnew%5Cnew1%5Cnew2%5CRAN3%20125bis%5CInbox%5CR3-247771.zip) |
| [R3-247353](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247353.zip) | (TP to BLCR for TS 38.410) Discussion on WAB mobility (Samsung) | discussion |
| [R3-247354](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247354.zip) | Discussion on other aspects for the support of WAB (Samsung) | discussion |
| [R3-247364](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247364.zip) | (TP for TS 38.401) Discussion on WAB related procedures (Huawei) | other |
| [R3-247428](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247428.zip) | Architecture and configuration for WAB-node (Lenovo) | discussion |
| [R3-247429](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247429.zip) | Discussion on WAB node migration (Lenovo) | discussion |
| [R3-247627](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247627.zip) | Discussion on RAN2 Impact and Functional Aspects of WAB (China Telecom) | discussion |
| [R3-247628](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247628.zip) | Discussion on Multi-hop Prevention and Authorization for WAB (China Telecom) | discussion |
| [R3-247722](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247722.zip) | Further consideration on support of WAB (LG Electronics) | discussion |
| [R3-247723](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_126%5CDocs%5CR3-247723.zip) | (TP to TS 38.401 and 38.423) TP for WAB support (LG Electronics) | other |
| [R3-247793](file:///C%3A%5CUsers%5C5088196%5COUT%5C%E6%8F%90%E5%87%BA%EF%BC%91%5Cnew%5Cnew1%5Cnew2%5CRAN3%20125bis%5CInbox%5CR3-247793.zip) | Summary of Offline Discussion on additional topological enhancement (NTT Docomo) | discussion |