**3GPP TSG RAN WG3#124R3-243864**

Fukuoka City, Fukuoka, Japan, May 17 – 21, 2024

**Title: [Draft]** Reply LS on FS\_VMR\_Ph2 solution impacts to RAN

**Response to:** LS in R3-243021 (S2-2405822) on FS\_VMR\_Ph2 solution impacts to RAN

**Release:** Rel-19

**Study Item:** FS\_VMR\_Ph2

**Source:** Qualcomm [**to be: RAN3**]

**To:** SA2

Cc: RAN2

**Contact person:**

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Attachments: None

**1. Overall Description:**

RAN3 would like to thank SA2 for their LS on FS\_VMR\_Ph2 solution impacts to RAN (R3-243021/S2-2405822).

RAN3 has discussed the questions provided by SA2 and would like to provide the following replies:

*-* ***Question 1****: SA2 currently considers that the MWAB (MWAB-UE) authorization could be based on dedicated slice ID(s) (S-NSSAI(s)). Therefore, from SA2 perspective no MWAB-specific AS layer indication at MWAB-UE's RRC establishment is required. SA2 would like to also point out that if there was a strict need for indication at AS layer, the existing mechanism of including S-NSSAI in RRC connection establishment could be considered. SA2 would like to invite RAN3 to provide the feedback if any scenario considered by RAN3 needs such a MWAB-specific AS layer indication. Note that SA2 considers the MWAB-gNB and MWAB-UE may register and connect to different PLMNs, and the authorization of the MWAB-UE is different from the MWAB-gNB service authorization/configuration/activation by OAM/SeGW.*

On question 1, RAN3 achieved the following agreement:

“RAN3 understands that authorization of the WAB-MT is different from the WAB-gNB service authorization/configuration/activation by e.g. OAM/SeGW.

WAB-MT authorization provides the WAB MT with the right to support BH PDU sessions.

In case MT authorization is based on slice, signaling enhancements to the AS layer for the support of WAB-MT authorization are not needed. SA2 to decide whether MT authorization based on slicing is supported.

Authorization of WAB-gNB provides service authorization, i.e., the right to serve UEs.”

*-* ***Question 2****: For the MWAB (MWAB-UE) authorization result, SA2 could not identify any reason to inform/update that to the NG-RAN serving the MWAB-UE. Therefore, SA2 would like to understand from RAN3's perspective whether the MWAB authorization result needs to be provided to the NG-RAN serving the MWAB-UE.*

On question 2, RAN3 will further discuss the matter in the ongoing study.

*-* ***Question 3****: To support mobility of the MWAB, some solutions assume that the MWAB-gNB can instantiate two cells (with same gNB ID or different gNB ID), and handover connected UEs between the two cells. The different gNB IDs use case is driven by the need to change AMF if the MWAB moves into a geographic area where a different AMF must be chosen to serve UEs. SA2 would like to ask RAN3 to confirm if this can be supported or not.*

On question 3, RAN3 achieved the following agreement:

“If needed, the WAB-gNB may power up one or more new cells with new configuration parameters related to its current location and handover UEs between the old and new cell served by the WAB-gNB.”

RAN3 is currently discussing whether this procedure is needed for supporting AMF change of UE, and, whether the old and the new cell(s) need to have different gNB-IDs, i.e., belong to different logical WAB-gNBs, in case this procedure is used for AMF change.

***- Question 4****: SA2 discussed the scenario of Xn interface between RAN nodes over the IP connectivity provided by the PDU session of MWAB-UE, and would like to ask RAN3 if this scenario can be supported by RAN3.*

On question 4, RAN3 achieved the following agreement:

“Establishment of Xn Connections of the WAB-gNB with BH-RAN nodes, as well as with surrounding RAN nodes, is supported and can follow legacy procedures.”

RAN3 has also added protocol stacks to TR 38.799, which show how the WAB-gNB’s Xn traffic can be transported over the PDU session(s) of the co-located WAB-MT.

On the feedback to TR 23.700-06 requested by SA2:

RAN3 is currently studying RAN-related aspects of WAB as part of the RAN SI on Additional Topological Enhancements. This study includes aspects raised in TR 23.700-06. RAN3 is scheduled to conclude this study in TSG-RAN3 Meeting #125.

**2. Actions:**

**To RAN2 group.**

**ACTION:** RAN3 kindly asks SA2 to take the above feedback into account.

**3. Date of Next RAN3 Meetings:**

TSG-RAN WG3 Meeting #125, Aug 19 to 23, 2024 Maastricht, NL

TSG-RAN WG3 Meeting #125-bis, October 14 to 18, 2024 China (TBC)