**3GPP TSG RAN WG2#119-bis-eR2-22xxxxx**

**E-Meeting, 10th – 19th October 2022**

Title: [DRAFT] Reply LS on FS\_VMR solutions review

Response to: LS R2-2209350 (S2-2207070) on FS\_VMR solutions review

Release: Rel-18

Work Item: NR\_mobile\_IAB

Source: Qualcomm [to be: RAN2]

To: SA2

Cc: RAN3, RAN4, RAN

**Contact Person:**

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**Send any reply LS to:** 3GPP Liaisons Coordinator,[**mailto:3GPPLiaison@etsi.org**](mailto:3GPPLiaison@etsi.org)

Attachments: None

**1. Overall Description:**

RAN2 thanks SA2 for their LS on FS\_VMR solutions review.

RAN2 would like to provide the following feedback on the points raised by SA2:

- **SA2 point #1:** With regard to Key Issue#1 (as defined in clause 5.1), SA2 would like to understand the necessary parameters for the operation of a Mobile Base Station Relay (MBSR), i.e. the mobile-IAB node. Would these parameters only be provided by OAM servers, or would additional parameters be required, including in roaming cases.

**RAN2’s feedback on point #1:**The OAM-based parameter configuration is not in RAN2 scope. The roaming case is not in RAN2 scope.

- **SA2 point #2:** With regard to Key Issue#3 (as defined in clause 5.3), SA2 would like to understand if the MBSR, i.e. mobile-IAB node, would keep the same TAC, and Cell ID, when it changes serving donor gNB. SA2 has documented different solutions based on different options and needs RAN2 and RAN3 feedbacks for down selection.

**RAN2’s feedback on point #2:** The mobile IAB-node’s NCGI does not have to change during partial migration. The mobile IAB-node’s NCGI is changed during inter-donor migration of the IAB-DU. RAN2 is presently discussing if the mobile IAB-node’s PCI has to change during inter-donor-migration of the IAB-DU. RAN2 is presently also discussing if the mobile IAB-node’s TAC broadcast needs to change when the IAB-node is moving.

- **SA2 point #3:** Also, with regard to Key Issue#3, SA2 would like to understand details of the inter-IAB donor gNB mobility procedure for a MBSR, e.g. the feasibility of supporting NGAP messages containing multiple UE information during the handover procedure.

**RAN2’s feedback on point #3:** This topic is not in RAN2 scope.

- **SA2 point #4:** With regard to Key Issue#4 (as defined in clause 5.4), SA2 would like to understand if IAB-node integration procedure or inter-IAB-donor gNB mobility procedure, or both, can be used for MBSR to integrate into the VPLMN.

**RAN2’s feedback on point #4:**This topic is not in RAN2 scope.

- **SA2 point #5:** With regard to Key Issue#5 (as defined in clause 5.5), is it feasible for the IAB-donor gNB to identify that a UE is served by a MBSR (e.g. indicate TRP is mobile and the reference point is a MBSR/mobile).

**RAN2’s feedback on point #5:** RAN2 has achieved the following agreement:

* UE capability signalling is the baseline to let CU know that the MT is a “mobile-IAB” type. FFS early mobile-IAB indication, e.g. in Msg5.

RAN2 believes that based on this agreement, the IAB-donor-CU should be able to identify that a UE is served by the mobile IAB-node. RAN2 cannot comment on the example provided by SA2 in the bracket since it is non in RAN2 scope.

- **SA2 point #6:** Additionally, with regard to Key Issue#5, would NRPPa procedure for TRP location query be used by an LMF to obtain the MBSR location information?

**RAN2’s feedback on point #6:**This topic is not in RAN2 scope.

- **SA2 point #7:** With regard to Key Issue#6 (as defined in clause 5.6), is it feasible for the IAB-donor gNB to provide an additional ULI (e.g. TAI/NG CGI information) for the MBSR to the AMF of the UE served by the MBSR, over NGAP together with the existing ULI for the UE?

**RAN2’s feedback on point #7:**This topic is not in RAN2 scope.

**2. Actions:**

**To SA2 group.**

**ACTION:** RAN2 kindly asks SA2 to take the above feedback into account.

**3. Date of Next RAN2 Meetings:**

RAN2#120 14th - 18th November 2022 Toulouse, France

RAN2#121 27th February - 3rd March 2023 Athens, Greece