**SA WG2 Meeting #S2-163 S2-2407165**

**27 - 31 May, 2024, Jeju, South Korea**

**Title: [Draft] LS on FS\_5GSAT\_Ph3\_ARCH\_Ph3 conclusions**

**Response to:** **S2-2405870, S2-2405871, S2-2405886**

**Release: Rel-19**

**Work Item: FS\_5GSAT\_Ph3\_ARCH**

**Source: SA2**

**To: SA3, SA3-LI**

**Cc: RAN2**

**Contact person: Boren Guo**

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

**Attachments:**

# 1 Overall description

SA2 thanks SA3 and SA3-LI for the Liaisons (S2-2405870, S2-2405871, S2-2405886).

SA2 would like to inform SA3 and SA3-LI that the conclusions of FS\_5GSAT\_Ph3 are as follows:

* **KI#2:**

Two implementation architecture options, i.e., 1) MME split; 2) full EPC on board, have been selected as the baseline architecture to support Store and Forward. SA2 intends to standardize only the parts indicated in the conclusion for normative work (i.e. the UE interface and HSS interface updates). Please find the attached pCR for detailed information. SA2 would like to ask SA3 and SA3-LI to provide feedback on security for the 2 architecture options.

* **KI#3:**

SA2 has concluded the feasibility study for the support of UE-Satellite-UE communications which allow the media of an IMS communication service of two users in coverage of regenerative satellite to be routed directly between the UEs under certain conditions. The initial assumption is that both UEs belong to the PLMN that provides satellite coverage.

The diagram in figure 1 illustrates the high-level architecture SA2 intends to use to develop normative specifications. If a UE A is the target, the AGW allocated to UEA is responsible for forwarding the media to the LI functions that are also assumed to be onboard the satellite. As NGSO satellite serving UE A changes, the media path is re-routed so that it traverses the UPF and AGW that may be different from the originally assigned UPF and AGW (e.g. the UPF and AGW onboard the new satellite or the UPF and AGW on the ground).

Note that the LI functions may store the data logged for a certain period before delivering it to the ground network.



**Figure 1: reference architecture assuming interception of UE**

# 2 Actions

**To SA3:**

**ACTION:** SA2 kindly asks SA3 to take the above information into account and provide feedback if any.

**To SA3-LI:**

**ACTION:** SA2 kindly asks SA3-LI to consider the following questions:

**Question 1:** considering the most generic option whereby the UPF and AGW allocated to the target UE may change during the course of the call, is this architecture meeting the LI requirements? If not, is it feasible to enhance the specifications to support LI?

**Question 2:** Is it feasible to support LI for Voice over 5GS if the AGW is not in the media path? (i.e. tapping the media flows directly in the UPF, same as N9 HR tracing). SA2 is also considering the option of inserting the AGW on the ground in the media path when lawful interception must start. If this functionality is not yet supported, is there any plan to enhance the specifications to do so?

# 3 Dates of next TSG SA WG 2 meetings

3GPP TSG SA2#164 19th August- 23th August, 2024 Maastricht, NL

3GPP TSG SA2#165 14th October- 18th October,2024 India, IN