**3GPP TSG-SA3 Meeting #116 *S3-242518-r2***

Jeju, South Korea, 20th - 24th May 2024 (revision of S3-241955)

**Source: Huawei, HiSilicon**

**Title: UUAA supporting multiple USS**

**Document for: Approval**

**Agenda Item: 5.11**

# 1 Decision/action requested

***Approve the pCR to TR 33.759***

# 2 References

None

# 3 Rationale

The current UUAA procedure works only for single USS. This contribution proposes amendments to UUAA to support multiple USS.

# 4 Detailed proposal

pCR

\*\*\* 1st CHANGE \*\*\*

## 6.Y Solution # Y: UUAA supporting multiple USS

### 6.Y.1 Introduction

This solution addresses the key issue #1.

The solution adapts the UUAA procedure in TS 33.256 [4] to support multiple USS. By and large, there are two changes: the UAV’s request and the UAS NF’s authentication requests/results are revised to support more than one USS.

### 6.Y.2 Solution details

With reference to the clause 5.2.1.2/5.2.1.3 in TS 33.256 [4], the amended UUAA steps at registration/PDU session establishment respectively are shown below to support multiple USS:

1. The AMF/SMF triggers UUAA based on the CAA-Level UAV ID provided by the UAV. The UAV may provide more than one USS addresses to indicate more than one USS is involved in the UUAA.

NOTE: it is also allowed for UAV to provide single USS address in a UUAA procedure. This implies multiple rounds of UUAA procedures in support of multiple USS

2. The AMF/SMF sends a message to UAS-NF as in TS 33.256 [4].

3-4. The UAS NF resolves the USS address based on CAA-Level UAV ID or uses the provided USS address. If more than one USS addresses are resolved, the UAS NF sends an Authentication Request to each of the USS. The procedures of sending each of the Authentication Requests and the follow-up steps can follow the steps described in TS 33.256 [4].

5. The UAS NF can store multiple UUAA results (one for each USS) for each UAV.

6-8. The UAS NF sends USS-specific UUAA results (one for each USS) together with the USS Identifier to the UAV.

### 6.Y.3 Evaluation

TBD

Editor’s Note: How to handle conflicting parallel UUAA (e.g., CAA level UAV ID assignment, conflicting authorization result) is FFS.

Editor’s Note: How the UAV determines which USS to communicate with after successfully completing multiple UUAA is FFS.

Editor’s Note: Alignment with SA2 conclusions for the support of multiple USS is FFS.

\*\*\* END OF 1st CHANGE\*\*\*