**3GPP TSG-SA3 Meeting #116 *draft\_S3-242583\_r1***

Jeju, South Korea, 20th - 24th May 2024

**Source: China Unicom, ZTE**

**Title: New solution for UE authorization**

**Document for: Approval**

**Agenda Item: 5.18**

# 1 Decision/action requested

***Approve the pCR to TR 33.721***

# 2 References

1. 3GPP TS 33.434, “Security aspects of Service Enabler Architecture Layer (SEAL) for verticals.”

# 3 Rationale

This contribution proposes a new solution for KI #1 in TR 33.721.

# 4 Detailed proposal

\*\*\* Start of 1st Change \*\*\*

## 6.Y Solution #Y: Support for spatial localization service authorization

### 6.Y.1 Introduction

This solution is for KI #1 and addresses the security requirements for authorizing UE to access spatial localization services. This solution is based on the Service Enabler Architecture Layer (SEAL) Location Management (LM) service to provide spatial localization services (e.g. spatial map management, spatial anchor management), and SEAL identity management (SIM) service to perform UE authorization.

### Y.2 Solution details

Before getting authorization to specific service, the VAL UE authentication is executed by the SIM-S as described in TS 33.434 [4]. After successful authentication, the SIM-C requests and receives an access token from SIM-S as shown in Figure 6.Y.2.1.



**Figure 6.Y.2-1: Get Access Token**

1. User Authentication is completed between VAL UE and the SIM-S.
2. The VAL UE sends an access token request to the SIM-S, including the identity of the VAL UE and the specific spatial localization service the UE requests to access.
3. The SIM-S authorizes the VAL UE for the requested service and provides access token for the VAL UE.

With the received access token, the VAL UE can request for spatial localization service from SEAL LM server. The procedure of getting spatial map for metaverse application is shown in Figure 6.Y.2.2.



**Figure 6.Y.2-2: Get Spatial Map**

1. A secure channel is established between SEAL LM client and SEAL LM server. Subsequent communication makes use of this channel.

1. The VAL UE sends a request message containing the access token to the SEAL LM server to get the spatial map via SEAL LM client.

2. On receiving the service authorization message, the SEAL LM server validates the access token.

3. If the access token is valid, the SEAL LM server provides the spatial map information to the VAL UE via SEAL LM client. Otherwise, the response included the failure cause indicating that the token is invalid.

The same procedure can also be applied for getting spatial anchor and any other spatial localization services provided by SEAL LM server by changing the request service.

Editor’s Note: The application enablement architecture for metaverse services is to be aligned with SA6.

### 6.Y.3 Evaluation

 TBD

\*\*\* End of 1st Change \*\*\*