**3GPP TSG-SA3 Meeting #124 draft\_S3-253211\_r1**

Wuhan, China, 13th – 17th Oct. 2025

**Source: OPPO**

**Title:** **New solution on** **authorization for sensing service request**

**Document for: Approval**

**Agenda item: 5.2.7**

**Spec: 3GPP TR 33.777**

**Version: 0.1.0**

**Work Item: FS\_Sensing\_SEC**

**Comments**

This pCR proposes to add a new solution for KI#1.

**Proposed Changes**

\* \* \* Start of Change \* \* \* \*

6.X Solution #X: Solution on authorization for sensing service request

### 6.X.1 Introduction

This solution addresses Key Issue#1 on Security of authorization for sensing service invocation and revocation. Specifically, it addresses the third requirement in KI#1: “The 5G system shall be able to authorize sensing service request from a sensing service consumer”.

According to TR 23.700-14 [2], a sensing service request may be initiated by a sensing service consumer. The authorization on service permission includes two levels:

- The first level of authorization is for service access. When the NEF receives the sensing service request initiated by the sensing service consumer (e.g. an AF), the NEF can determine whether the sensing service consumer is authorized to request the sensing service from the 5GC, according to clause 12 in TS 33.501 [5].

- The second level of authorization is based on the local policy. The Sensing Function may check the Sensing Profile to verify the sensing service request from NEF to determine if a sensing service is allowed.

### 6.X.2 Solution details



Figure 6.X.1 Authorization for sensing service request

1. The AF requests a service request for sensing. The request may include AF ID, sensing service type (object detection, object tracking, etc), sensing service requirements (e.g. accuracy, latency, etc), sensing target region or area.
2. The NEF may authorize the sensing service request from the AF by reusing the OAuth 2.0 mechanism in clause 12 of TS 33.501 [5].
3. The NEF may discover and select the candidate Sensing Function(s).
4. If the authorization succeeds, then the NEF sends the sensing service request message to the Sensing Function. The request message may contain the Sensing Service type and associated parameters, e.g., AF ID, Target Sensing Service Area, Sensing Service Type, Sensing service time duration.
5. The Sensing Function may authorize the sensing service request based on the local policy. The Sensing Function may check the Sensing Profiles to verify the sensing service request from NEF, which may contain allowed/ forbidden Sensing Service Area, allowed/forbidden Sensing Service type, allowed/forbidden Sensing service time duration, etc.

Editor’s Note: Where to store the Sensing Profiles is to be aligned with SA2.

Editor’s Note: The authorization in Sensing Function is to be aligned with SA2.

1. If the authorization succeeds, then the Sensing Function proceeds to execute the sensing service.
2. The Sensing Function sends the sensing results to NEF.
3. The NEF sends the sensing results to AF.

### 6.X.1 Evaluation

TBD.

\* \* \* End of Change \* \* \* \*