**3GPP TSG-SA3 Meeting #124 draft\_S3-253355-r3**

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**Source: Xiaomi, InterDigital**

**Title: New Security Area on Sensing Security and Privacy**

**Document for: Approval**

**Agenda item: 5.3.1**

**Spec: 3GPP TR 33.801-01**

**Version: 0.1.0**

**Work Item: FS\_6G\_SEC**

**Comments**

For the study of 6G architecture, the study on integration of Sensing and Communication over 3GPP access, considering the sensing modes to be supported and other sources of sensing data is one of the work tasks.

In TR 38.914 for the study on 6G scenarios and requirements, it is documented that the 6GR and 6G RAN architecture should at least support use cases of detection and/or tracking of passive objects, including at least UAVs, human, vehicles and AGVs. In the moderator's summary for RAN-led 6G study, it was endorsed that 6GR should study the sensing modes, including TRP monostatic, TRP-TRP bistatic, TRP-UE DL, UE-TRP UL, UE-UE bistatic and UE monostatic.

According to TR 33.777, the scope of 5GA sensing security only focuses on the security aspects of gNB-based mono-static sensing mode for UAV sensing target use cases. It means that the sensing objects (including human, vehicles and AVG) agreed in TR 38.914 and the sensing modes endorsed for RAN-led 6G study which are not in the scope of TR 33.777 need to be studied in 6G system to support the RAN-led 6G study and SA2-led 6G architecture study.

Based on above analysis, this contribution proposes a new security area on sensing security and privacy for TR 33.801-01.

\* \* \* First Change \* \* \* \*

# 4 Security areas and high level security requirements

## 4.1 Security areas

Editor's Note: This clause further clarifies the scope of the study by listing the security areas that SA3 is working on.

This document includes the following security areas:

1. Sensing security and privacy deals with the security and privacy protection for integration of sensing and communication considering the use cases in TR 38.914 [x] and the sensing modes decided by RAN and other sources of sensing data supported by SA2.

\* \* \* Next Change \* \* \* \*

# 5 Key issues and solutions

## 5.x Security area #x: Sensing security and privacy

### 5.x.1 Introduction

TR 33.777 [y] of 5GA sensing security only focuses on the security aspects of gNB-based mono-static sensing mode for UAV sensing target use cases. According to TR 38.914 [x], 6GR and 6G RAN architecture should support use cases of detection and/or tracking of passive objects, including at least UAVs, human, vehicles and AGVs. In the RAN-led 6G study, more sensing modes than gNB-based monostatic mode (e.g. UE-based modes) will be studied. In addition, integration of Sensing and Communication considering more sensing modes and other sources of sensing data (e.g. non-3GPP sensing data) is also one of the work tasks of the SA2-led 6G study. Hence, the security and privacy aspects for the sensing objects agreed in TR 38.914 [x], the sensing modes supported in RAN-led 6G study and other sources of sensing data introduced by SA2, which are not in the scope of TR 33.777 [y], need to be studied in 6G system.

This security area considers how 6G system protects sensing data and sensing results when more use cases and more sensing modes involving the UE are in scope. 6G Integrated Sensing and Communication (ISAC) is expected to include UE‑originated sensing and UE‑assisted ISAC (e.g., data collection, pre‑processing, or local fusion), including privacy‑sensitive use cases such as health monitoring or home intrusion detection. Consequently, the 6G sensing architecture needs to address security and privacy aspects for more sensing data types including personal data and across the full data path: collection, processing, caching/storage/retrieval, and exposure.

\* \* \* Next Change \* \* \* \*

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[x] 3GPP TR 38.914: "Study on 6G Scenarios and Requirements".

[y] 3GPP TR 33.777: "Study on Security and Privacy Aspects of Integrated Sensing and Communication".

\* \* \* End of Changes \* \* \* \*