**3GPP TSG-SA3 Meeting #109Adhoc-e *draft\_S3-230182-r1***

**Online, 16 - 20 January 2023**

**Source: Huawei, HiSilicon**

**Title: New solution of security for the Ranging/SL positioning device discovery**

**Document for: Approval**

**Agenda Item: 5.19**

# 1 Decision/action requested

***Approve the new solution proposal to TR 33.893***

# 2 References

N/A

# 3 Rationale

The contribution proposes to add a new solution to provide secure Ranging/SL positioning device discovery.

# 4 Detailed proposal

\*\*\*BEGINNING OF THE 1st CHANGE\*\*\*

## 6.X Solution #X: Security of the Ranging/SL positioning device discovery

### 6.X.1 Introduction

This solution addresses the security of the Ranging/SL positioning device discovery in Key Issue #3. As per the assumption under clause 4.1, the solution of discovery security reuses the direct discovery security defined for 5G ProSe in TS 33.503 [6] as a baseline.

### 6.X.2 Solution details

For 5G ProSe capable UE, the security materials, i.e. Code-Sending Security Parameters and the Code-Receiving Security Parameters, are used to protect the Model A or Model B discovery messages. The security materials are provisioned to the UE by 5G DDNMF or PCF:

* In the case the security materials are provisioned by 5G DDNMF, the 5G ProSe UE-to-Network Relay discovery procedures (i.e. Relay Discovery Key Request/Response) described in clause 6.1.3.2.2 in TS 33.503 [6] is reused.
* In the case the security materials are provisioned by PCF, the service authorisation and provisioning as defined in TS 23.304 [4] clause 6.2 is reused.

### 6.X.3 Evaluation

This solution only covers the security of 5G ProSe capable UE. This solution supports the integrity protection, confidentiality protection and authenticity of the discovery message.

\*\*\*END OF THE CHANGES\*\*\*