**3GPP TSG-SA3 Meeting #124 S3-253301-r1**

**Wuhan, China, 13th – 17th Oct. 2025**

**Source: OPPO, Nokia?, Huawei, Ericsson**

**Title: New Key Issue on AIOT device ID protection in DO-A procedure**

**Document for: Approval**

**Agenda item: 5.2.11**

**Spec: 3GPP TS 33.714**

**Version: 0.0.0**

**Work Item: FS\_AIoT\_SEC\_Ph2**

**Comments**

It is proposed to approve the new key issue on AIOT device ID protection in DO-A procedure.

**Proposed Changes**

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

## 5.X Key Issue #X: AIOT device ID protection in DO-A procedure

### 5.X.1 Key issue details

In TR 23700-30[x], KI#2 describes the issues on the system architecture to support DO-A (Device Oriented-Autonomous) capable Ambient IoT Devices in Topology 1 and Topology 2. For AIoT device type 1, specified in Release-19, all communications between the network and the AIOT device are initiated by the network. Unlike AIOT device type 1, the DO-A AIOT device autonomously initiates communication by sending message to the network. Due to this change, privacy mechanisms specified in Release-19 for AIOT device type 1 may not be feasible for DO-A AIOT devices. Therefore, mechanisms for privacy of device ID of DO-A AIOT device contained in the message(s) exchanged between the device and the network should be studied.

### 5.X.2 Threats

An attacker can identify, monitor and track a DO-A AIoT device based on the identifiers associated with the AIoT device if the identifiers are not privacy protected.

### 5.X.3 Potential security requirements

The 5G system shall support mechanisms to mitigate privacy threats (described above) by identifying, linking, and tracking the identifier of the DO-A capable AIOT device(s).

\* \* \* Second 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 23700-30: "Study on Architecture support of Ambient power-enabled Internet of Things (AIoT); Phase 2".

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