**3GPP TSG-SA WG2 Meeting #163** **S2-2407048**

**27 May - 31 May, 2024, Jeju, South Korea (Revision of S2-2406983)**

**Title: [Draft] LS on Clarification of requirements for Ambient IoT**

**Response to: -**

**Release:** **Rel-19**

Work Item: FS\_AmbientIoT

Source: SA2

To: SA1, RAN1, SA3

Cc: RAN2

Contact Person: Peter Hedman

E-mail Address: peter (dot) hedman (at) ericsson (dot) com

**Send any reply LS to: 3GPP Liaisons Coordinator,** [**mailto:3GPPLiaison@etsi.org**](mailto:3GPPLiaison@etsi.org)

**Attachments:** -

# 1 Overall description

While progressing the study on Ambient IoT, SA2 discussed some of the SA1 requirements in TS 22.369 and SA2 would like to ask SA1 the following questions:

**Question 1:** Are requirements for support of an unalterable/permanent equipment identification, and any specific usage, also valid for Ambient IoT devices that only send uplink messages when triggered by the network?

TS 22.369 includes the following requirement:

### *5.2.6 Security and privacy*

*The 5G system shall enable security protection suitable for Ambient IoT, without compromising overall 5G security protection.*

*The 5G system shall be able to provide a mechanism to protect the privacy of information (e.g., location and identity) exchanged during communication between an Ambient IoT device and the 5G network or an Ambient IoT capable UE.*

SA2 discussed the requirements listed above and is seeking clarification whether "suitable for Ambient IoT" means that the second requirement does not necessarily apply to all classes of Ambient IoT devices that may be supported in Rel-19.

Rel-19 Ambient IoT work focuses on indoor inventory and command scenarios,. SA2 is specifically discussing whether for inventory taking (as described in TS 22.639 clause 4.3) there is a need to ensure privacy of the AIoT device identifier.

There is no consensus in SA2 whether a AIoT device will always be able to support security procedures. There are also different views in SA2 whether privacy protection is required for all inventory taking scenarios.

**Question 2: Do the requirements listed in clause 5.2.6 of TS 22.369 for privacy protection apply to any Ambient IoT device that need to be supported in Rel-19? If these requirements do not apply to all Ambient IoT devices, does this imply that such devices would be restricted to certain deployment scenarios?**

**Question 3: Does command signaling, e.g. for sensor data collection or actuator control in TS 22.369 clause 4.3, need to generally be security protected (privacy, integrity and confidentiality protection)?**

TS 22.369 includes the following requirements:

### *5.2.3 Management*

*The 5G network shall support suitable management mechanisms for an Ambient IoT device or a group of Ambient IoT devices.*

*The 5G system shall support a mechanism to:*

*- disable the capability to transmit RF signals for one or more Ambient IoT device that is / are currently able to transmit RF signals*

*- enable the capability to transmit RF signals for one or more Ambient IoT device that is / are currently disabled to transmit RF signals*

*Based on operator policy, the 5G system shall provide a suitable mechanism to permanently disable the capability of an Ambient IoT device or a group of Ambient IoT devices to transmit RF signals. Subject to operator policy and regulatory requirements, the 5G system shall support suitable mechanisms for the Ambient IoT device to move between one or more networks and countries.*

**Question 4**: Is the last requirement above on mobility related to the previous requirements on disabling AIOT devices?

While there is no consensus in SA2 whether it is in RAN1 scope to determine devices' level of capability to support non-volatile memory; SA2 would like to ask the following question to RAN1:

**Question 5:** What AIoT device capabilities can SA2 expect when it comes to support, and usage of non-volatile memory, e.g. will all AIoT devices be able to support storage of higher layer information e.g. temporary identifiers?

SA2 would like to ask SA3 to provide SA2 with any progress of the SA3 work as soon as SA3 made any agreements that can impact SA2.

# 2 Actions

**To SA1:**

**ACTION:** SA2 kindly asks SA1 to answer questions 1 to 4.

**To RAN1:**

**ACTION:** SA2 kindly asks RAN1 to answer question 5.

**To SA3:**

**ACTION:** SA2 kindly asks SA3 to provide SA2 with any progress of the SA3 work as soon as SA3 made any agreements that can impact SA2.

# 3 Date of next TSG SA WG SA2 meetings

SA2#164 2024-08-19 – 2024-08-23 Maastricht, NL

SA2#165 2024-10-14 – 2024-10-18 India