**3GPP TSG-SA3 Meeting #116 *draft\_S3-242150-r2***

Jeju, South Korea, 20th - 24th May 2024

**Source: Qualcomm Incorporated**

**Title: New Key Issue on the protection of information during AIoT service communication**

**Document for: Approval**

**Agenda Item: 5.9**

# 1 Decision/action requested

***This contribution proposes a new Key issue in TR 33.713.***

# 2 References

[1] Draft TR 33.713 v0.1.0

# 3 Rationale

This contribution proposes a new Key Issue on the protection of information during Ambient power-enabled IoT (AIoT) service communication.

# 4 Detailed proposal

It is proposed that SA3 approve the below pCR for inclusion in the TR [1].

**\*\*\*\*\* START OF CHANGES \*\*\*\*\***

## 5.Y Key issue #Y: Protection of information during AIoT service communication

### 5.Y.1 Key issue details

As per TS 22.369 [2], Ambient power-enabled IoT (AIoT) services aim to support various use cases, including inventory taking, sensor data collection, asset tracking, and actuator control. These services intended to operate with lower power consumption and complexity than the existing IoT technologies such as eMTC, NB-IoT, and RedCap. To fulfil these requirements, AIoT devices require a communication capability.

From a security perspective, security mechanisms to protect the information transmitted during AIoT service communication need to be supported. Failure to provide such security mechanisms will lead to various attacks such as eavesdropping, manipulation and/or unauthorized transmission of the information during AIoT service communication.

Therefore, this key issue focuses on how to protect the information during AIoT service communication considering the specific use casesthat are differentiated from the exiting IoT technologies.

### 5.Y.2 Security threats

An attacker can acquire data transmitted to/from AIoT devices by eavesdropping messages if the communication of AIoT service is not confidentiality protected.

An attacker can manipulate information during communication of AIoT service if the communication of AIoT service is not integrity protected.

An attacker can replay a message if replay protection is not activated.

### 5.Y.3 Potential security requirements

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