**3GPP TSG-WG SA2 Meeting #166 *S2-2412515***

**Orlando, USA, 18th Oct – 22nd Oct, 2024 (revision of S2-2412125)**

Title: [DRAFT] AIoT Conclusions in SA2

Response to: S2-2411311(R2-2409412)

Release: Release 19

Work Item: FS\_AmbientIoT, FS\_Ambient\_IoT\_solutions

Source: [Huawei to be] SA2

To: SA3, SA5, RAN2, RAN3

Cc: RAN, SA

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Attachments: TR 23.700-13, v2.0.0

**1. Overall Description:**

This LS provides information to the following aspects.

1. **Reply to LS on RAN2 agreements and assumptions for Ambient IoT**

SA2 thanks RAN2 for the LS (R2-2409412) on assistance information from the CN to the Reader for A-IoT. After discussion, SA2 would like to provide the answer to the questions in the LS as following:

Q1: Can the CN provide, to the reader, an estimate of the expected size of the following D2R message(s) in response to the service request?

SA2 answer: yes. When request AIoT service to the 5G network, AF provides the expected size of the following D2R message(s), then the CN provides the expected size of the following D2R message(s) in response to the service request.

Q2: If such information (see Q1) can be provided by CN to the reader, can it be provided only in some cases or in all cases?

SA2 answer: SA2 assumes the expected size of the following D2R message(s) can be provided to the RAN in all cases.

1. **Summary of overall progress/conclusion in the SA2 study item, which may be useful for the future work of other WGs**

SA2 has discussed and drawn the conclusion on the Ambient IoT including following aspects:

- General architecture design which is topology 1 and 2 agnostic.

- Architecture to support topology 1.

- Architecture to support topology 2.

- Ambient IoT Device ID device management, including AIoT Device identification and subscription-like information.

- Ambient IoT Services and their expose to an AF.

For detailed conclusion content, please check the attached TR.

SA2 expects coordination between RAN and SA to align the scope of normative work in Rel-19.

1. **SA2 will re-visit the following issues in coordination with other WGs in the normative phase**
2. Issues in coordination with SA WG3:

* Architecture aspects to support security e.g. Authentication, ID Validation.
* Whether the temporary ID in the AIoT NAS layer is required for the privacy protection is FFS and is pending SA WG3 decision.
* Whether and how to support enabling temporarily disabled AIoT devices. (In the approved SP-231806/240969, it is stated that enable/disable device operation will be handled by SA3)

1. Issues in coordination with RAN WG:

* Radio resources allocation to Readers for topology 2.
* For RRC based option of topology2, whether the gNB performs the down selection of UE readers provided by AIOTF.

1. **Following issues will be completed in SA2 in the normative phase**

* The name of the entity to store the AIoT Device subscription data.

**2. Actions:**

**To SA3, SA5, RAN2 and RAN3 group.**

**ACTION:** SA2 kindly asks SA3, SA5, RAN2 and RAN3 to take the above information for your future work.

**3. Date of Next TSG SA WG2 Meetings:**

TSG SA2 Meeting #166-Adhoc-e 20th Jan – 24th Jan, 2025 Online

TSG-SA2 Meeting #167 17th Feb – 21st Feb, 2025 Athens, GR

TSG-SA2 Meeting #168 7th Apr – 11th Apr, 2025 Goteborg, Sweden