**3GPP TSG-RAN WG3 Meeting #129 R3-255795**

**Bengaluru, India, 25 – 29 August 2025**

**Title:** (TP to TS 38.300 BL CR) Reader Selection

**Source:** ZTE Corporation, China Telecom, Huawei, Xiaomi, CATT

Agenda item: 16.2

**Document for:** Discussion and Decision

# Introduction

This TP is for Reader Selection based on the following agreements.

* **AIoT RAN node receives the requested service area information (encoded as area and/or reader ID list) from AIoT CN.**
* **Upon receiving only the area in Inventory Request, the gNB selects readers within the indicated area**
* **Upon receiving neither the area nor the reader list in Inventory Request, the gNB selects all the served readers**
* **Upon receiving only the reader list in Inventory Request, the gNB shall take the requested reader list into account to perform inventory (within the request reader list).**
* **The “receiving both the area and the reader list in Inventory Request” case is allowed.**

# TP for TS38.300

===========================Start of the change====================================

### 16.xx.x3 Inventory procedure

Figure 16.xx.x3-1 depicts the basic communication between the gNB and the A-IoT CN node for the Inventory procedure.



Figure 16.xx.x3-1: Inventory procedure

1. The A-IoT CN node initiates the Inventory procedure over NG-C by sending the Inventory Request message to the gNB. The Inventory Request message includes a Correlation ID and A-IOTF Identifier to identify the inventory session. The Inventory Request message also includes an A-IoT Device Identification Requested corresponding to the A-IoT device(s) which are targeted for the inventory. The A-IoT Device Identification Requested may indicate inventory for a single device, a group of devices or for all devices.

 The Inventory Request message also includes Requested Service Area Information. If the Requested Service Area Information contains:

- neither the Requested AIoT Area List nor the Request Reader List, the gNB shall select all readers it serves

- the Requested AIoT Area List, the gNB shall select readers within the indicated AIoT Area(s)

- the Requested Reader List, the gNB shall take the reader list into account

 to perform inventory.

 The Inventory Request message also includes the Expected D2R message size and may include Inventory Assistance Information e.g. Approximate number of Target A-IoT devices.

Editor’s Note 1: Whether the Expected D2R message size is mandatory is FFS.

 The Inventory Request message may also include a follow-on command indicator to indicate that at least for one of the targeted A-IoT device(s) a Command procedure will follow.

Editor’s Note 2: Specification of further parameters of the Inventory Request message (e.g., other assistance information from 5GC) needs further work.

2. The gNB allocates and co-ordinates the usage of A-IoT radio resources.

3. The gNB confirms the request from the A-IoT CN node by replying with the Inventory Response message. The Inventory Response message includes the AIOTF Identifier and the Correlation ID received in the Inventory Request message.

NOTE 2: If the gNB is not able to perform the Inventory procedure, it rejects the request and sends an Inventory Failure message to the A-IoT CN node.

4. The gNB performs the Inventory procedure towards the A-IoT device(s) over the A-IoT radio interface.

5./6. Upon receiving the inventory result from the A-IoT device(s), the gNB sends the Inventory Report message to the A-IoT CN node. If the Inventory procedure concerns multiple A-IoT devices, multiple Inventory Report messages may be sent to the A-IoT CN node.

 The Inventory Report message includes the AIOTF Identifier and the Correlation ID received in the Inventory Request message and further includes the A-IoT NAS PDU(s) carrying the inventoried A-IoT device ID(s).

 If a follow-on Command indicator was received at step 1, the Inventory Report message also includes a RAN A-IoT device NGAP ID for each A-IoT device which was inventoried.

NOTE 3: If the Inventory procedure concerns multiple A-IoT devices, an Inventory Report may include reports from multiple A-IoT devices.7. Upon completion of the inventory procedure the gNB may send an Inventory Complete Indication.

Editor’s Note 3: It is FFS whether this inventory complete indication is done via a new procedure or introducing indication IE in the current Inventory Report message.

===========================Next of the change====================================