**3GPP TSG-SA3 Meeting #124S3-253306-r6**

**, , 3 - 2025**

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
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|  |  | **CR** |  | **rev** | **2** | **Current version:** |  |  |
|  |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network | **X** |

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|  |
| ***Title:***  | T-ID Terminology and handling clarification in clause 5.4.3 |
|  |  |
| ***Source to WG:*** | Interdigital, OPPO |
| ***Source to TSG:*** |  |
|  |  |
| ***Work item code:*** | AmbientIoT-SEC |  | ***Date:*** |  |
|  |  |  |  |  |
| ***Category:*** | F |  | ***Release:*** | Rel-19 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)…Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
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| ***Reason for change:*** | Clarification of handling T-ID. |
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| ***Summary of change:*** | Additional text in clause 5.4.3 is added to harmonize the T-ID handling information IE terminology, and clarify its processing.  |
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| ***Consequences if not approved:*** | Inconsistent terminology and unclear processing for the T-ID handling information IE.  |
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| ***Clauses affected:*** | 5.4.3 |
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|  | **Y** | **N** |  |  |
| ***Other specs*** |  |  |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  |  |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  |  |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

\*\*\* BEGIN OF CHANGES \*\*\*

### 5.4.3 Procedure for AIoT Device identifier protection with Temp ID update during Individual inventory

For the protection of the AIoT device permanent identifier during the inventory procedure with the AIoT device identifier described in clause 5.2.2, the following changes shall apply:

- In step 1, AIOTF shall retrieve a T-ID in addition to the RANDAIOT\_n from ADM. The ADM shall, based on T-ID type, either fetch the stored T-ID in the AIoT device profile or generate the T-ID as specified in Annex B.1..

- In steps 2, 3, and 4, the T-ID shall be used as a device identification information.

- In steps 2 and 3, the AIOTF includes the T-ID handling information. T-ID handling information includes:

- T-ID type that can be either a concealed type or a stored type.

- If the T-ID type is a concealed type, whether or not it is based on the stored T-ID or the AIoT Device Permanent Identifier.

- Whether the stored T-ID type shall be updated via a Command procedure or during step 4.

NG-RAN includes the T-ID handling information in the paging message.

- In step 4, the AIoT device, based on the T-ID handling indication in the paging message, generates the T-ID in the same way as the ADM did in step 1. The AIoT device determines it needs to reply to the NG-RAN if the generated T-ID matches the received T-ID. In case the stored T-ID update shall be done without a command, the AIoT Device generates a new Temp\_ID\_n+1 as specified in Annex B.1 and stores the new Temp ID\_n+1.

- In steps 5 and 6, device identification information is not included in the D2R message and the Inventory Report message.

- In step 7, the AIoT device permanent identifier is used as device identification information. AIOTF requests the ADM to derive a new T-ID as specified in Annex B.1 and to store it in the AIoT Device profile.

NOTE 1: The AIOTF identifies the AIoT device by checking the received RESAIoT parameter. Therefore, the device identification information is not needed in the D2R message and the Inventory Report message.

NOTE 2: In case of concealed T-ID type, every AIoT device that receives an Inventory Request with T-ID needs to perform a T-ID matching by generating a T-ID based on the KAIoT\_root and check if the generated T-ID matches the received T-ID. It is assumed that the AIoT device that receives the Inventory Request has enough energy to perform this T-ID matching in addition to the Inventory procedure specified in clause 5.2.2.

NOTE 3: In case of stored T-ID type, the stored T-IDs on the device side and network side can get out of synch. The handling of such situation is described in clause 5.4.4 of present document.

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