**3GPP TSG-SA3 Meeting #106-e *S3-21xxxx***

e-meeting, 14 - 25 February 2022 (revision of S3-yyxxxx)

**Source: ZTE**

**Title: New WID on Authentication and Key Management for Applications (AKMA) push function**

**Document for: Approval**

**Agenda Item: xxx**

3GPP™ Work Item Description

Information on Work Items can be found at <http://www.3gpp.org/Work-Items>   
See also the [3GPP Working Procedures](http://www.3gpp.org/specifications-groups/working-procedures), article 39 and the TSG Working Methods in [3GPP TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm)

Title: Authentication and Key Management for Applications (AKMA) push function

Acronym: AKMA\_push

Unique identifier:

Potential target Release: Rel-18

# 1 Impacts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Affects: | UICC apps | ME | AN | CN | Others (specify) |
| Yes |  | X |  | X |  |
| No |  |  | X |  |  |
| Don't know | X |  |  |  | X |
|  |  |  |  |  |  |

# 2 Classification of the Work Item and linked work items

## 2.1 Primary classification

### This work item is a …

|  |  |
| --- | --- |
| X | Feature |
|  | Building Block |
|  | *Work Task* |
|  | Study Item |

## 2.2 Parent Work Item

|  |  |  |  |
| --- | --- | --- | --- |
| Parent Work / Study Items | | | |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
| N/A | N/A | N/A | N/A |

### 2.3 Other related Work Items and dependencies

|  |  |  |
| --- | --- | --- |
| Other related Work /Study Items (if any) | | |
| Unique ID | Title | Nature of relationship |
| 850021 | Authentication and Key Management for Applications (AKMA) based on 3GPP credentials in the 5G System (5GS) | Related work item for AKMA. |
| 800036 | Study on authentication and key management for applications based on 3GPP credential in 5G | Related study item for AKMA |

# 3 Justification

3GPP defined the Authentication and Key Management for Applications (AKMA) in TS 33.535. It supports the generation of application session keys based on 3GPP credential in 5G, in order to establish mutual communication between the UE and the application server securely. In this work item, the aim is to fulfil the not yet supported push feature for AKMA, which has been discussed in TS 33.835.

The GBA push feature specified in TS 33.223 is a mechanism to bootstrap the security between a NAF and a UE, without forcing the UE to contact the BSF to initiate the bootstrapping. With the GBA push, the NAF can share a secret key with the UE, and to push messages to UE securely. Considering that the push mechanism is an efficient way for the message transmission initiated by application function, it would be beneficial to support the push mechanism for the AKMA. For instance, AFs send information to the UE to trigger the UE to perform application actions in IoT scenarios.

It should be mentioned that the GBA push security solution cannot be reused here. A new security mechanism is needed since AKMA has defined different authentication procedures compared with authentication method specified in GBA, e.g., EAP AKA', 5G AKA, etc. Therefore, it is necessary to normalize the AKMA push function.

# 4 Objective

The objectives of this work item are to:

- Specify AKMA push architecture

- Specify AKMA push requirements on network functions

- Specify AKMA push procedure

# 5 Expected Output and Time scale

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| New specifications {One line per specification. Create/delete lines as needed} | | | | | |
| Type | TS/TR number | Title | For info  at TSG# | For approval at TSG# | Rapporteur |
| TS | TS 33.XXX | Study on Authentication and Key Management for Applications (AKMA) push function | TSG#98 | TSG#99 | Zhen Xing, ZTE, xing.zhen@zte.com.cn |

|  |  |  |  |
| --- | --- | --- | --- |
| Impacted existing TS/TR {One line per specification. Create/delete lines as needed} | | | |
| TS/TR No. | Description of change | Target completion plenary# | Remarks |
|  |  |  |  |

# 6 Work item Rapporteur(s)

Zhen Xing, ZTE, xing.zhen@zte.com.cn

# 7 Work item leadership

SA3

# 8 Aspects that involve other WGs

Potentially SA2 for system architecture and procedure.

Potentially CT1, CT3 and CT4 for Stage-3 work.

# 9 Supporting Individual Members

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| --- |
| Supporting IM name |
| ZTE |
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