**3GPP TSG-SA3 Meeting #106-e *S3-220263-r2***

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

**Source: China Mobile**

**Title: New WID on 5G Security Assurance Specification (SCAS) for the Authentication and Key Management for Applications (AKMA) Anchor Function Function (AAnF)**

**Document for: Approval**

**Agenda Item: 4.18**

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: New WID on Security Assurance Specification for the Authentication and Key Management for Applications (AKMA) Anchor Function Function (AAnF)

Acronym: SCAS\_5G\_AAnF

Unique identifier:

Potential target Release: Rel-18

# 1 Impacts

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

# 3 Justification

5G has attracted more and more attention from the society, security assurance about network products, which could ensure network products own relatively security protection. 3GPP has defined security assurance specifications for gNB, AMF, SMF, UDM, AUSF, NRF, NEF, SEPP, and UPF in 5G network, and new security assurance specifications have been established for N3IWF, NWDAF, IPUPS, SECOP.

A new network functionality, Authentication and Key Management for Applications Anchor Function Function (AAnF), has been introduced for 5G core in TS 33.535. The AAnF is designed as the anchor function in the HPLMN, which stores the AKMA Anchor Key (KAKMA) and UE AKMA contexts for AKMA service, and also generates the key material to be used between the UE and the Application Function (AF).

Therefore, the Security Assurance Specifications (SCAS) work need to be expanded for AAnF, to identify and define security functional requirements and basic vulnerability requirements that need to be tested for security assurance of AAnF. A separate specification for SCAS AAnF is required to complete the entire portfolio.

# 4 Objective

The objective is to develop the SCAS for the AAnF network product class, with the aims to:

- identify critical assets and threats of the AAnF not already identified in TR 33.926

- develop and/or adapt AAnF specific security functional requirements and related test cases

- develop and/or adapt AAnF specific basic vulnerability testing requirements and related test cases

# 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 | 33.xxx | Security Assurance Specification for Authentication and Key Management for Applications Anchor Function Function (AAnF) | TSG#98(Dec 2022) | TSG#99( Mar 2023) | Xiaoting Huang, China Mobile, huangxiaoting@chinamobile.com |

|  |
| --- |
| Impacted existing TS/TR {One line per specification. Create/delete lines as needed} |
| TS/TR No. | Description of change  | Target completion plenary# | Remarks |
| TR 33.926 | The critical assets and threats discovered during the work of 5G AAnF SCAS |  |  |

# 6 Work item Rapporteur(s)

Xiaoting Huang, China Mobile, huangxiaoting@chinamobile.com

# 7 Work item leadership

SA3

# 8 Aspects that involve other WGs

None

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| China Mobile |
| ZTE |
| Huawei |
| Hisilicon |
| Ericsson  |
| CATT |