**3GPP TSG-SA3 Meeting #105-e *S3-220170***

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

**Source: Huawei, HiSilicon**

**Title: New WID on Study of Security aspect of home network triggered primary authentication**

**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: Study of Security aspect of home network triggered primary authentication

Acronym: FS\_HN\_Auth

Unique identifier:

{A number to be provided by MCC at the plenary}

Potential target Release: Rel-18

# 1 Impacts

{For Normative work, identify the anticipated impacts. For a Study, identify the scope of the study}

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

# 2 Classification of the Work Item and linked work items

## 2.1 Primary classification

### This work item is a Study Item

{Tick one box. "**Feature** / **Building Block** / Work Task" form a hierarchical structure. E.g. no Building Block can be proposed without a corresponding parent Feature. The full structure of all existing Work Items is shown in the 3GPP Work Plan in <ftp://ftp.3gpp.org/Information/WORK_PLAN>}

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

## 2.2 Parent Work Item

For a brand-new topic, use “N/A” in the table below. Otherwise indicate the 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 |
| N/A | N/A | N/A |

**Dependency on non-3GPP (draft) specification:**

# 3 Justification

It is desirable for the HN to be able trigger primary authentication. This study is proposed to investigate the support such a capability in 5GS. This study can provide home network control and address issues but not limit to , for example , UPU/SoR COUNT wrap around, long lived key KAUSF and unavailability of valid key KAF.

# 4 Objective

The objective of this study includes: follows:

1. Study the use cases which needs HN initiated primary authentication and the associated security threats and requirements. As part of this investigation, the study aims at identifying which network function in the HN is better suitable to trigger the primary authentication, and corresponding procedures, and the potential impacts on existing visited and home network, and the running services.
2. Investigate solutions for potential normative work.

# 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 |
| Internal TR | TR 33.8XX | Study of HN triggered primary authentication | TSG#96 | TSG#98 |  |

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

# 6 Work item Rapporteur(s)

He Li, Huawei, LIHE2@HUAWEI.COM

# 7 Work item leadership

SA3

# 8 Aspects that involve other WGs

SA2

CT4

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| Huawei |
| HiSilicon |
| OPPO |
| China Mobile |
| LG Electronics |
| Deutsche Telekom AG |
| Intel |
| NEC |
| Nokia |
| Nokia Shanghai Bell |
| InterDigital |