**3GPP TSG-SA3 Meeting #107-e *S3-221086***

e-meeting, 16 - 20 May 2022 (revision of S3-yyxxxx)

**Source: Huawei, Hisilicon**

**Title: Study on security support for Next Generation Real Time Communication services**

**Document for: Approval**

**Agenda Item: 6**

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 on security support for Next Generation Real Time Communication services

Acronym: FS\_NGRTC\_SEC

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

|  |  |
| --- | --- |
|  | 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 |
| 770003 | Study on enhancements to IMS for new real time communication services | Study Item of Stage 1 requirements |
| 790003 | Enhancements to IMS for new real time communication services | Work Item of Stage 1 requirements |
| 850042 | Study on evolution of IMS multimedia telephony service | Study Item of Stage 1 requirements |
| 920036 | Evolution of IMS Multimedia Telephony Service | Work Item of Stage 1 requirements |
| 940066 | Study on system architecture for next generation real time communication services | Stage 2 Rel-18 study item |

# 3 Justification

SA2 has started a study on system architecture for next generation real time communication services documented in TR 23.700-87. In this study, SA2's aim is to cover further enhancements to the IMS to fulfil the stage 1 service requirements for IMS in TS 22.261. Among these requirements, there are a few potential security impact need SA3’s investigation.

For example, the requirement to support 3rd party (e.g. enterprise) to securely demonstrate to the called party that the caller (e.g. employee) is authorized to use or referring to the specific business information when placing a call touches upon the 3rd parties’ identity authentication and authorization in the IMS network. According to SA2’s preliminary evaluation, SA3 is required to be deeply involved on this topic.

The other relevant SA2 requirement is on how to support data channel and service-based architecture in IMS network. Security is critical for support evolution of IMS network, e.g. protection of data transferring between UE and data channel, revisiting whether SBA mechanisms can fit in service-based architecture in IMS network, etc. Therefore, there is a need to consider a security study in SA3 to ensure the security of evolution of IMS services.

# 4 Objective

The aim of this study is about the security aspects for any potential enhancements to be developed by SA2 based on the outcome of their study in TR 23.700-87. For each of the objectives in the scope of the SA2 study, the security aspects that are to be covered in this study are as follows:

- Analysing the potential security aspects on demonstrating specific identity information during a call in case that 3rd party to verify via operator network that the caller is authorized to use or referring to specific identity information which can be securely demonstrate to the callee when placing a call

- Analysing potential security impacts from supporting service-based architecture in IMS media control interfaces.

• NOTE: The existing SBA security mechanisms should be reused as much as possible.

# 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 | 33.XXX | Study on security support for next generation real time communication services | SA#96 June 2022 | SA#100 June 2023 | Fei, Li, Huawei,  Austin.lifei@huawei.com |

|  |  |  |  |
| --- | --- | --- | --- |
| 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)

Fei, Li, Huawei, Austin.lifei@huawei.com

# 7 Work item leadership

SA3

# 8 Aspects that involve other WGs

SA2 for other stage 2 aspects

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| China Mobile |
| Deutsche Telekom |
| China Unicom |
| China Telecommunications |
| Huawei |
| Hisilicon |
| CATT |
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