**3GPP TSG-SA3 Meeting #115 *draft\_S3-240968-r1***

**Athens, Greece, 26th February –1st March, 2024** **(revision of S3-240624, S3-240565, S3-240439,**

 **S3-240507)**

**Source: CATT, ZTE, China Unicom, ChinaTelecom, Huawei, HiSilicon**

**Title: New SID on Study on Security Aspects of Enhancement for Proximity Based Services in 5GS Phase 3**

**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 Aspects of Enhancement for Proximity Based Services in 5GS Phase 3

Acronym: FS\_5G\_ProSe\_Ph3

Unique identifier:

Potential target Release: Rel-19

# 1 Impacts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Affects: | UICC apps | ME | AN | CN | Others (specify) |
| Yes |  | X | X | X |  |
| No |  |  |  |  |  |
| 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 | Study  |
|  | Normative – Stage 1 |
|  | Normative – Stage 2 |
|  | Normative – Stage 3 |
|  | Normative – Other\* |

**\* Other = e.g. testing**

## 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 |
| 900007 | Proximity based Services in 5GS | Rel-17 Stage 2 5G\_ProSe work item. |
| 970016 | Proximity-based Services in 5GS Phase 2 | Rel-18 Stage 2 5G\_ProSe\_Ph2 work item. |
| 941002 | NR sidelink relay enhancements | Rel-18 RAN work item on NR sidelink relay enhancements |
| 930008 | Security Aspects of Proximity based Services (ProSe) in the 5G System (5GS) | Rel-17 SA3 work item on security aspects. |
| 990045 | Security Aspects of Proximity-based Services in 5GS Phase 2 | Rel-18 SA3 work item on security aspects. |
| 1020066 | Study on System Enhancement for Proximity-based Services in 5GS - Phase 3 | Rel-19 Stage 2 5G\_ProSe\_Ph3 study item. |

# 3 Justification

The 5G System has been enhanced to support Proximity Services in Release 17 and Release 18. According to the ProSe SID proposal (SP-231798) approved at SA Meeting #102, SA2 plans to study the following work tasks in Release 19:

* *WT-1: Enhance ProSe to support multi-hop over NR PC5 reference point*
	+ *WT-1.1: for UE-to-Network Relay*
	+ *WT-1.2: for UE-UE Relay*

*NOTE 1: The UE-to-Network Relay include both Layer-3 and Layer-2 Relays. UE-to-UE Relay include L3 Relay only.*

The security of these new features should be studied in SA3.

# 4 Objective

The objective is to study the security and privacy aspects of proximity based services in 5G system phase 3 while basing this study on ProSe security specified in Rel-17 and Rel-18. Ensure that security solutions are aligned with the work in SA2, RANs and SA1. The work is comprised of the following parts:

- WT-1.1: Identify and study the security and privacy key issues of proximity based services to support multi-hop over NR PC5 reference point for UE-to-Network Relay which include both Layer-3 and Layer-2 Relays.

- WT-1.2: Identify and study the security and privacy key issues of proximity based services to support multi-hop over NR PC5 reference point for UE-to-UE Relay which include Layer-3 Relay only.

NOTE: Timely feedback on supporting SA2/RANs study needs to be considered.

## TU estimates and dependencies

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Work Task ID | TU Estimate(Study) | TU Estimate(Normative) | RAN/SA2 Dependency(Yes/No/Maybe) | Inter Work Tasks Dependency |
| **WT-1.1** | **1.5** | **0.5** | **Yes** |  |
| **WT-1.2** | **1.5** | **0.5** | **Yes** |  |
|  |  |  |  |  |

Total TU estimates for the study phase: 3

Total TU estimates for the normative phase: 1

Total TU estimates: 4

# 5 Expected Output and Time scale

***{If this WID covers both stage 2 and stage 3, clearly indicate the different completion dates.}***

|  |
| --- |
| 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 Aspects of Enhancement for Proximity Based Services in 5GS Phase 3 | TSG SA#105 (Sept., 2024) | TSG SA#106 (Dec., 2024) |  |

|  |
| --- |
| 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)

# 7 Work item leadership

SA3

# 8 Aspects that involve other WGs

Potential interactions with SA2 WG and RAN WGs during the work.

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| CATT |
| ZTE |
| China Unicom |
| ChinaTelecom |
| Huawei |
| HiSilicon |
| Xiaomi |
| OPPO |
| Ericsson |
| Interdigital |
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