**3GPP TSG-SA3 Meeting #115 *S3-240967r1***

**Athens, Greece, 26th February - 1st March 2024** **(revision of xx-yyxxxx)**

**Source: Huawei, HiSilicon**

**Title: New SID on UAS security enhancements**

**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: New SID on UAS security enhancements

Acronym: FS\_UAS3\_Sec

Unique identifier:

Potential target Release: Rel-19

# 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 |  | 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 | 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 |  |  |  |

### 2.3 Other related Work Items and dependencies

|  |
| --- |
| Other related Work /Study Items (if any) |
| Unique ID | Title | Nature of relationship |
| 1020069 | Study on (Stage 2 of) Phase 3 for UAS, UAV and UAM | Stage 2 architecture and system |

# 3 Justification

**Potential UAV Phase 3 enhancements:** A new Rel-19 SID was approved with three work tasks, i.e. (WT#1) study whether and how to enhance NEF services to support service exposure and interactions between MNOs and UTM functions, (WT#2) study whether and how to enable network-assisted/ground-based mechanism for DAA (Detect And Avoid) that leverages information collected and generated in the 5GS, and (WT#3) study how to support no-transmit zones for UAVs. As of the start of the meeting, SA2 has progressed with the architecture assumptions/requirements and three key issues approved in its study report TR23.700-59.

The corresponding security aspects should be studied to ensure security of these new features.

# 4 Objective

The objectives of this study are to identify potential security issues and provide security solutions for UAV Phase 3 enhancements. Specifically,

* WT#1: study potential security issues and provide solutions for the enhanced NEF services to support service exposure and interactions between MNOs and UTM functions, e.g. security impact of supporting multiple USS, new interface between NEF and UTM etc.
* WT#2: study potential security and privacy issues related to network-assisted/ground-based mechanism for DAA.
* WT#3: study potential security and privacy issues related to no-transmit zones for UAVs.

NOTE: Additional privacy and security aspects related to SA2 Work Tasks can be addressed based on SA2 progress.

## TU estimates and dependencies

|  |  |  |
| --- | --- | --- |
| Work Task ID | TU Estimate(Study) | TU Estimate(Normative) |
| WT1 | 0.5 | 0.5 |
| WT2 | 0.5 | 0.5 |
| WT2 | 0.5 | 0.5 |
|  |  |  |

Total TU estimates for the study phase: 1.5

Total TU estimates for the normative phase: 1.5

Total TU estimates: 3

# 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 enhancements to UAS Phase 3 |  | SA#106 | TBD |
|  |  |  |  |  |  |

|  |
| --- |
| 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)

*TBD*

# 7 Work item leadership

SA3

# 8 Aspects that involve other WGs

N/A

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| Huawei |
| HiSilicon |
|  |
|  |
|  |
|  |