**3GPP TSG-SA5 Meeting #155 *S5-242702***

**Jeju, South Korea, 27 - 31 May 2024** **(revision of xx-yyxxxx)**

**Source: China Mobile**

**Title: New WID on Charging Aspects of Uncrewed Aerial Vehicle**

**Document for: Approval**

**Agenda Item: 7.2**

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 Charging aspects of Uncrewed Aerial Vehicle

Acronym: UAV\_CH

Unique identifier: TBD

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 |  |
| 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 …

|  |  |
| --- | --- |
|  | Study  |
|  | Normative – Stage 1 |
| X | Normative – Stage 2 |
| X | 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) |
|  |  |  |  |

### 2.3 Other related Work Items and dependencies

|  |
| --- |
| Other related Work /Study Items (if any) |
| Unique ID | Title | Nature of relationship |
| 810013 | Remote Identification of Unmanned Aerial Systems | SA1 Work Item |
| 820011 | Study on supporting Uncrewed Aerial Systems Connectivity, Identification, and Tracking | SA2 Study Item |
| 900014 | (Stage 2 of) Support of Uncrewed Aerial Systems Connectivity, Identification, and Tracking | SA2 Work Item |

# 3 Justification

SA2 has already defined the system level support of uncrewed aerial systems (UAS) in TS 23.256 since Release 17, in particular, the 3GPP system can be used to enable UAS identification and tracking, and to support UAS command and control functions.

According to TS 23.256, the UAV is associated with CAA-level UAV Identity and 3GPP UAV ID in the 3GPP system:

* CAA-level UAV Identity: A UAV is assigned a CAA-level UAV Identity by functions in the aviation domain (e.g. USS). This assigned identity is used for Remote Identification and Tracking and to identify the UAV.
* 3GPP UAV ID: A 3GPP UAV ID is associated to the UAV by the 3GPP system in the subscription information and is used by the 3GPP system to identify the UAV. GPSI in the format of External Identifier is used as the 3GPP UAV ID.

Based on the above information, the CAA-level UAV Identity can be involved in charging domain, and combined with 3GPP UAV ID (i.e. GPSI) to make it possible for charging differentiation of UAV and other devices.



# 4 Objective

The objective of this work item is to specify charging enhancements to support UAV, including:

* WT-1: Specify charging enhancements to support UAV identification;
* WT-2: Specify corresponding CHF-CDR parameters impacts and potential open API impacts.

## TU estimates and dependencies

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Work Task ID** | **TU Estimate****(Study)** | **TU Estimate****(Normative)** | **RAN Dependency****(Yes/No/Maybe)**  | **SA Dependency****(Yes/No/Maybe)** | **Non-3GPP Dependency** |
| WT-1 | 0 | 1 | No | No | No |
| WT-2 | 0 | 1 | No | No | No |

**Total TU estimates for the study phase: 0**

**Total TU estimates for the normative phase: 2**

**Total TU estimates: 2**

# 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 |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

|  |
| --- |
| Impacted existing TS/TR {One line per specification. Create/delete lines as needed} |
| TS/TR No. | Description of change  | Target completion plenary# | Remarks |
| TS 32.255 | Update possible charging information to supportUAV charging. | TSG SA#106(Dec 2024) |  |
| TS 32.256 | Update possible charging information to supportUAV charging. | TSG SA#106(Dec 2024) |  |
| TS 32.291 | Update UAV charging related Nchf\_ConvergedCharging service API. | TSG SA#107(Mar 2025) |  |
| TS 32.298 | Update UAV charging related CHF-CDR information. | TSG SA#107(Mar 2025) |  |

# 6 Work item Rapporteur(s)

# 7 Work item leadership

SA5

# 8 Aspects that involve other WGs

None.

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| China Mobile |
| Huawei |
| HiSilicon |
| CATT |
|  |