**3GPP TSG-SA WG6 Meeting #46-e S6-212506r1**

**e-meeting, 15th – 23rd November 2021 (revision of S6-21xxxx)**

**Source: InterDigital**

**Title: New KI on change of USS / UTM during flight**

**Document for: Approval**

**Agenda Item: 10.8**

A new KI for eUASAPP is proposed. The KI is on change of USS / UTM during flight. The below new KI is proposed added into 3GPP TR 23.700-55 v 0.1.0.

\* \* \* \* Start of changes \* \* \* \*

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 22.125: "Uncrewed Aerial System (UAS) support in 3GPP".

[3] 3GPP TS 23.255: "Application layer support for Uncrewed Aerial System (UAS); Functional architecture and information flows".

[4] 3GPP TS 23.256: " Support of Uncrewed Aerial Systems (UAS) connectivity, identification and tracking".

[5] 3GPP TS 23.434: "Service Enabler Architecture Layer for Verticals (SEAL); Functional architecture and information flows".

[x] 3GPP TR 23.xyz: "Study on architecture enhancements for uncrewed aerial systems and urban air mobility".

\* \* \* \* Next change \* \* \* \*

## 3.3 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [1].

SEAL Service Enabler Architecture Layer

UAE UAS Application Enabler

UAS Uncrewed Aerial System

USS UAS Service Supplier

UTM UAS Traffic Management

# 4 Key issues

## 4.1 Key issue #a: change of USS / UTM during flight

In the current version of 3GPP TS 23.255 [3], it is assumed that the UE communicate with a single USS/UTM during flight. However, it is not unlikely that a single flight can span the service area of more than one USS/UTM.

Solutions for change of USS/UTM during flight must be coordinated with the work outlined by 3GPP TR 23.xyz [x].

It is required to study the following:

- How the UAE layer can be enhanced to support change of USS/UTM during flight.

- Whether existing mechanisms for SEAL are sufficient to support change of USS/UTM during flight, and how SEAL, if possible, can be enhanced.

## 4.2 Key issue #x: <Title>

This clause describes the key issue with a suitable title. Please provide a high-level description of the key issue along with a list of open issues.

\* \* \* \* Next change \* \* \* \*

# 9 Overall evaluation

This clause provides a summary of architecture enhancements and solution evaluations.

## 9.1 Architecture enhancements

## 9.2 Key issue evaluations

### 9.2.1 General

All the key issues, solutions and architecture enhancements specified in this technical report are listed in Table 9.2.1-1.

Table 9.2.1-1 provides a mapping of the key issues to the related solutions. It also indicates whether the solution requires enhancement to the Release-17 architecture and lists the dependencies on other working groups.

Table 9.2.1-1 Key issue and solutions

| Key issues (evaluation clause reference) | Solution | Architectural enhancement  (clause reference) | Enhancements required | Dependency or relationship with other working groups |
| --- | --- | --- | --- | --- |
| KI #a Change of USS / UTM during flight |  |  |  | SA2 |
| *KI#1: <title>* | *Solution #x: <title>* | *6.x* | *Architecture / None* | *<WG>* |
| *Solution #y: <title>* | *6.y* | *Architecture / None* | *<WG>* |

### 9.2.2 Evaluation of key issue #a: change of USS / UTM during flight

### 9.2.x Evaluation of key issue #x

This clause provides an overall evaluation of all the solutions defined for Key Issue #x.

\* \* \* \* End of changes \* \* \* \*