**3GPP TSG-SA WG6 Meeting #46-e S6-212508r2**

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

**Source: InterDigital**

**Title: New KI on support for UAV service restriction area**

**Document for: Approval**

**Agenda Item: 10.8**

A new KI for eUASAPP is proposed. This KI is on support for UAV service restriction area. The below new KI is proposed added into 3GPP TR 23.700-55 v 0.1.0.

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

## 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

UAV Uncrewed Aerial Vehicle

# 4 Key issues

## 4.1 Key issue #c: support for UAV service restriction area

In 3GPP TS 22.125 [2], it is described how the UAV service restriction area can be restricted for UEs not authorized for connectivity, in order to prevent non-UAVs to connect in a forbidden area, e.g. based on height above ground.

The stage-1 requirements in question are:

[R-6.3-001] The 3GPP network shall be able to support network-based 3D space positioning (e.g., with altitude 30~300m) of a UE onboard UAV.

[R-6.3-002] The 3GPP system shall be able to notify the authorized third party of potential stopping of connectivity service before the UE onboard of UAV enters an area (e.g., due to altitude) where the connectivity service is not authorized for the UE.

It is required to study the following:

- Whether and how the UAE layer be enhanced to support UAV service restriction area.

## 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 on other working groups |
| --- | --- | --- | --- | --- |
| KI #c support for UAV service restriction area |  |  |  |  |
| *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 #c: support for UAV service restriction area

### 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 \* \* \* \*