**3GPP TSG-SA WG6 Meeting #52-bis-e S6-23dddd**

**e-meeting, 11th – 20th January 2023 (revision of S6-23xxxx)**

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  |  | **CR** |  | **rev** | **-** | **Current version:** |  |  |
|  |
| *For* [***HELP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network | **X** |

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|  |
| ***Title:***  | Requirements for support for DAA |
|  |  |
| ***Source to WG:*** |  |
| ***Source to TSG:*** |  |
|  |  |
| ***Work item code:*** |  |  | ***Date:*** |  |
|  |  |  |  |  |
| ***Category:*** |  |  | ***Release:*** |  |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)…Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
|  |  |
| ***Reason for change:*** | Requirements are provided based the conclusion on support for DAA in 3GPP TR 23.700-55. |
|  |  |
| ***Summary of change:*** | The requirements due to support for DAA are added. |
|  |  |
| ***Consequences if not approved:*** | The requirements due to support for DAA are missing. |
|  |  |
| ***Clauses affected:*** | 3.1, 3.2, 4.8 (New), 4.8.1 (New), 4.8.2 (New) |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

## \* \* \* First Change \* \* \*

## 3.1 Terms

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

**DAA capability:** The possibility for a UAV to assist with handling detect and avoid during flight.

**DAA policy:** The configuration provided by a UAS application specific server to assist with handling detect and avoid.

**Multi-USS capability:** The possibility for a UAV to change USS during flight.

NOTE: A UAV with Multi-USS capability can be controlled by more than one USS during a flight, but at any given time, the UAV is under the control of only one USS.

**Multi-USS policy:** The configuration provided by a UAS application specific server to assist at change of USS.

**Remote Identification (Remote ID) of UAS:** The ability of a UAS to provide identification and tracking information that can be received by other parties, to facilitate advanced operations for the UAS (such as Beyond Visual Line of Sight operations as well as operations over people), assist regulatory agencies, air traffic management agencies, law enforcement, and security agencies when a UAS appears to be flying in an unsafe manner or where the UAS is not allowed to fly.

**UAS Service Supplier (USS):** An entity that provides services to support the safe and efficient use of airspace by providing services to the operator / pilot of a UAS in meeting UTM operational requirements. A USS can provide any subset of functionality to meet the provider's business objectives (e.g., UTM, Remote Identification). In the scope of this specification, the term USS refers to both USS and USS/UTM.

**UAV:** The Uncrewed Aerial Vehicle (also called remotely piloted aircraft or drone) of a UAS.

For the purposes of the present document, the following terms given in 3GPP TS 22.125 [2] apply

**Command and Control (C2) Communication**

**Uncrewed Aerial System (UAS)**

**Uncrewed Aerial System Traffic Management (UTM)**

**UAV controller**

For the purposes of the present document, the following terms given in clause 4.2 of 3GPP TS 22.125 [2] apply

**Direct C2 Communication**

**Network-Assisted C2 communication**

**UTM-Navigated C2 communication**

## 3.2 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].

BVLOS Beyond Visual Line Of Sight

C2 Command and Control

CAPIF Common API Framework for northbound APIs

DAA Detect And Avoid

QoS Quality of Service

SEAL Service Enabler Architecture Layer

UAE UAS Application Enabler

UAS Uncrewed Aerial System

UAV Uncrewed Aerial Vehicle

UAV-C Uncrewed Aerial Vehicle-Controller

USS UAS Service Supplier

UTM UAS Traffic Management

## \* \* \* Next Change \* \* \*

## 4.8 Support of detect and avoid services and applications

### 4.8.1 Description

This clause specifies the requirements related to support for detect and avoid services and applications.

### 4.8.2 Requirements

[AR-4.8.2-a] The UAE Server shall provide a mechanism for the UAE Client to report its DAA capability to the UAE Server.

[AR-4.8.2-b] The UAE Server shall provide a mechanism for reception of the policies for DAA support and configuration from the USS and further provide the policies to the UAE Client (UAV).

[AR-4.8.2-c] The UAE layer shall provide a mechanism for a UAS application specific server to obtain DAA related events for a UAV.

[AR-4.8.2-d] The UAS application enabler layer shall provide a mechanism for a UAS application specific client to obtain DAA related events for a UAV.

## \* \* \* End of Change \* \* \*