



Global UTM
Association

Liaison Statement

Liaison Statement Title:	Support of UAVs authentication/authorization in 3GPP systems and interfacing with USS/UTM
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Action Required by Recipient	
Internal Recipients:	
External Recipients:	Send to: 3GPP SA WG2, 3GPP SA WG3, 3GPP SA WG6. CC to: 3GPP CT WG1, 3GPP CT WG3, 3GPP CT WG4.

Introduction

Aerial Connectivity Joint Activity (ACJA) is the first initiative to result from the cooperation agreement signed last year by the GSMA and the Global UTM Association (GUTMA)¹. ACJA has been conceived in large part to give relevant members of the aviation and cellular industries a forum by which they can share views on how their two worlds can work most effectively together.

ACJA therefore also aims to educate stakeholders from across the cellular and aviation ecosystems – in particular, by creating a common understanding. Particular focus for ACJA will be given to how standards are used to promote safety, as standards-based systems benefit from more testing, data analysis, and experience than individual proprietary systems. ACJA's work will also seek to identify the potential capabilities and needs of cellular networks in unmanned traffic management (UTM) and aviation in general.

The Global UTM Association (GUTMA) is a non-profit consortium of worldwide Unmanned Aircraft Systems Traffic Management (UTM) stakeholders. Its purpose is to foster the safe, secure and efficient integration of drones in national airspace systems. Its mission is to support and accelerate the transparent implementation of globally interoperable UTM systems. GUTMA gathers various type of stakeholders starting from UTM companies, Drone Manufacturers, Aircraft manufacturers, CAAs, ANSPs and Airline. As a strong player in UTM world, GUTMA is working with FAA / EASA and SDOs to provide market driven recommendations and standards.

Overall Description

In 2020 ACJA sent an LS to 3GPP titled "Support of UAVs in 3GPP systems and interfacing with USS/UTM", discussing input from the ACJA aviation community to 3GPP.

In particular, the following was indicated:

The USS will consider the 3GPP mobile network as one of multiple Supplementary Data Service Providers (SDSP) the USS will be interfacing with as part of the overall UTM model.

GUTMA realizes that a USS would interface with the 3GPP mobile networks for a variety of potential services: connectivity for Command & Control (C2) and payload

¹ <https://www.gsma.com/iot/news/gsma-and-gutma-launch-new-joint-initiative-to-align-mobile-and-aviation-industries/>

links between UAV and ground systems, location and tracking (using 3GPP location services and indications from on-board instruments), requiring specific QoS assuring minimum safety and operability and providing required reporting. It is expected that such 3GPP services will be available to USS leveraging the existing Network Exposure Function (NEF) webservices framework, where a set of APIs is available for the USS to invoke such services.

The GUTMA survey has indicated that **the interfacing between the USS and the SDSPs should minimize the burden and impact on the USS, which includes the need for complex interfacing solutions and the need for new functionality in the USS. GUTMA considers that requiring a USS to implement solutions like Diameter, EAP, and the need for the USS to become an EAP/Diameter server would add unnecessary complexity to the USS which is not required for interfacing with any other SDSPs.**

ACJA would like to re-iterate that the adoption of an EAP/Diameter solution for UAV authentication and authorization an unacceptable solution for the UTM community.

ACTIONS

GSMA and GUTMA, as part of the joint activity ACJA, kindly asks 3GPP SA2, SA3, and SA6 to take this information into account.

NEXT MEETINGS

ACJA#12 5th of May 2021