**SA WG2 Meeting #160-Ad Hoc-e S2-2400227**

**E-meeting, January 22 – 29, 2024 (revision of S2-24xxxxx)**

**Source: Ericsson, LG Electronics**

**Title: New KI: KI for WT#2**

**Document for: Approval**

**Agenda Item: 19.10**

**Work Item / Release: FS\_UAS\_Ph3 / Rel-19**

*Abstract of the contribution: This paper proposes a new Key Issue for WT#2 of FS\_UAS\_Ph3.*

# Discussion

FS\_UAS\_Ph3 SID (SP-231801) includes the following objective:

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| 4 Objective The aim of this study work is to investigate and identify potential architecture and system level enhancements to support additional scenarios and requirements for UAV (Uncrewed Aerial Vehicle) and UAM (Urban Air Mobility).  Specifically, the objectives include:  - **WT#1:** Based on SA1 requirements and input from aviation fora, study whether and how to enhance NEF services to support service exposure and interactions between MNOs and UTM functions for i.e. pre-mission flight planning, in-mission flight monitoring, C2 communication reliability, interfacing with UTM (e.g. supporting the scenario of multiple USS serving the geographical areas corresponding to UAV flight path).  - **WT#2:** Based on SA1 requirements, study whether and how to enable network-assisted/ground-based mechanism for DAA (Detect And Avoid) that leverages information collected and generated in the 5GS, including whether and what new information is needed.  NOTE 1: The solution shall co-exist with and leverage, to the extent possible, Direct DAA solutions considered in Release 18.  NOTE 2: Sensing related information is out of scope of this study.  - **WT#3:** Study how to support no-transmit zones for UAVs. |

This paper proposes a new Key Issue for WT#2 of FS\_UAS\_Ph3.

# Proposal

It is proposed to agree the following changes into TR 23.700-59.

\* \* \* \* Start of 1st Change \* \* \* \*

## 3.3 Abbreviations

For the purposes of the present document, the abbreviations given in 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 TR 21.905 [1].

DAA Detect and Avoid

NWDAA Network-Based/Assisted DAA

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

# 5.x Key Issue #x: Network-assisted/ground-based mechanism for DAA (Detect And Avoid) with 5GS information

## 5.X.1 Description

Network-assisted/ground-based mechanism for DAA (NWDAA) for tactical deconfliction and collision avoidance as well as UTM control of UAV flight path can be considered as a complement for DAA based on PC5 reference point specified in Rel-18.

In this key issue, the following aspects are required to be studied:

- Study whether and how to enable network-assisted/ground-based mechanism for DAA (Detect And Avoid);

- Whether and what new information is needed for NWDAA;

- Any architectural impacts for the support of NWDAA;

* Whether and what information is needed for NWDAA;

- Study which existing information collected and generated in the 5GS can be utilised to enable DAA, if determined to be enabled for these mechanisms.

- Study whether any and what type of new information may be collected and/or generated in the 5GS to support NWDAA.

* Whether and how NWDAA mechanisms provide UTM and UAVs with the information collected or generated by the 5G system.

\* \* \* \* End of Changes \* \* \* \*