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| Summary:  |
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| Proposal: |
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DRAFT CEPT BRIEF ON AGENDA ITEM 1.10

1.10 to consider spectrum needs and regulatory provisions for the introduction and use of the Global Aeronautical Distress and Safety System (GADSS), in accordance with Resolution 426 (WRC-15)

# ISSUE

 Resolution 426 (WRC-15) invites ITU-R:

1. to conduct the relevant studies, taking into account information and requirements provided by ICAO for both the terrestrial and satellite components, including:
	1. quantification and characterization of radiocommunication requirements related to GADSS, such as:

data traffic requirements for different system components of GADSS (such as the aircraft tracking, autonomous distress and flight data recovery systems) and their terrestrial and satellite components at each phase of the operation;

information on the radiocommunication requirement related to safety-of-life applications;

performance criteria for terrestrial and satellite systems;

* 1. analysis of the existing allocations to the relevant aeronautical services and determining whether any additional spectrum is required;
	2. studies on sharing and/or compatibility with the existing services;
1. to undertake studies of the existing regulatory provisions to determine whether it might be necessary to apply additional regulatory measures.

It also resolves to invites WRC-19:

1. to take appropriate actions, taking into account the results of ITU-R studies
2. to analyse the necessity for further studies, and consider whether this matter should be brought to the attention of future competent conference.

# Preliminary CEPT position

CEPT recognises that the implementation of the GADSS concept would contribute to increasing the effectiveness of the current alerting of search and rescue services for civil aviation transportation.

CEPT is of the view

* that systems contributing to the GADSS have to be identified in accordance with ICAO requirements or recommendations provided in SARPs, manuals or guidance material;
* that any changes to the Radio Regulations should be determined on the basis of the GADSS concept developed by ICAO;
* that systems identified to contribute to the GADSS may not necessarily require any additional frequency allocation nor any new or revised regulatory provisions
* that additional regulatory actions for the introduction and use of GADSS, if any, should be identified ensuring sharing and compatibility with systems in incumbent radiocommunication services in the frequency bands proposed for GADSS introduction and in the adjacent frequency bands without imposing any additional constraints on the existing and planned systems.
* that according to the process to implement the GADSS concept an extension of activities towards WRC-23 may need to be considered

# Background

One of the main reasons why the level of safety of air transport remains high is the willingness of the aviation community to learn important lessons from prior events.

On the rare occasions when accidents occur, rescuing survivors has the highest priority, followed by the recovery of fatalities, the wreckage and the flight recorders. Analysis of the data from such recorders is very important in supporting accident investigation which may, through identification of the cause of the accident, contribute towards enhancing safety.

As a result of the investigation into the loss of Malaysia Airlines flight 370 and taking into account the loss of Air France flight 447, the need was identified for the effectiveness of the alerting of search and rescue services to be increased from its current level and for it to be globally consistent. As a result, a concept of operations for a GADSS was established, with the document describing the concept now being in a mature draft form (it is expected that the concept is approved by the end of 2017).

The GADSS concept specifies the high level functions needed with a description of users and usages of flight track information during all phases of flight, both normal and distress flight conditions including timely and accurate location of an aircraft accident site and recovery of flight data.

To date ICAO has identified changes to its Standards and Recommended Practices to enable the GADSS concept among which are those establishing:

* the operator’s responsibility to track its aircraft with a 15 minute time interval.
* the need for aircraft in distress to transmit an autonomous distress tracking signal at least every minute.

Whilst these changes do not necessarily require a change to the Table of Allocations they may involve a change to other Articles within the Radio Regulations (e.g. requiring the autonomous transmission of distress tracking information may require changes to Article 37).

The consequent objectives of the GADSS Concept of Operation are, on a worldwide scale;

* Ensure timely detection of aircraft in distress

To timely initiate SAR actions

* Ensure tracking of aircraft in distress and timely and accurate location of end of flight

To accurately direct SAR actions

* Enable efficient and effective SAR operations
* Ensure timely retrieval of Flight Recorder Data

In addition at WP5B meeting (November 2016) it was confirmed that combination of terrestrial and satellite systems will be used for GADSS operation.

# List of relevant documents

* PTC(17)INFO002 Document Concept of Operations for the Global Aeronautical Distress and Safety System (GADSS) Version 5.11;

# Actions to be taken

to analyse the existing allocations to aeronautical and aeronautical satellite services in order to define whether they are consistent with GADSS application scenarios identified by ICAO

to assess possible compatibility studies between the existing and new applications of the aeronautical mobile service, as appropriate based on requirements identified under the ICAO GADSS work;

evaluate the regulatory impact of possible requested changes to the Table of Allocations status of existing aeronautical mobile service frequency bands

consider the regulatory changes required, if any, in particular to Articles 28 (Radiodetermination services), 30 (general provisions for distress and safety communications) and Chapter VIII (Aeronautical services)

# Relevant information from outside CEPT

## European Union (date of proposal)

TBD

## Regional telecommunication organisations

APT (date of proposal)

TBD

ATU (date of proposal)

TBD

Arab Group (20 April 2017)

* Support following-up studies and ensuring the protection of existing services in the case of new allocations are made.

CITEL (July 2017)

CAN, USA,B

The quantification and characterization of the radiocommunications requirements for both the terrestrial and satellite components of GADSS are the responsibility of ICAO;

Based on those requirements, relevant studies should be conducted in the ITU-R to review existing regulatory provisions and determine if additional regulatory changes are needed;

ITU-R studies should be done in coordination with ICAO.

RCC (April 2017)

The RCC Administrations support the need in the development of the Global Aeronautical Distress and Safety System (GADSS).

The RCC Administrations consider that spectrum requirements, frequency bands, regulatory provisions for the introduction and use of GADSS should be identified based on GADSS concept which shall be developed by ICAO and submitted to the ITU. And GADSS shall share the considered and adjacent frequency bands with systems in existing radio services without imposing additional constraints on the existing systems.

The RCC Administrations do not oppose the revision of Resolution 426 (WRC-15) to increase the period of studies on spectrum requirements and regulation for implementation and use of GADSS and transfer this issue to the WRC-23 agenda.

## International organisations

IATA (date of proposal)

TBD

ICAO (September 16)

To support studies to identify any regulatory changes required for the implementation of GADSS in accordance with ICAO requirements, and action by WRC-19 to integrate those changes into the Radio Regulations.

IMO (August 16)

TBD

SFCG (date of proposal)

TBD

WMO and EUMETNET (December 2016)

TBD

## Regional organisations

Nato (June 2017)

This NATO military assessment summary is a common military assessment of the NATO Nations on the potential impacts and benefits of Agenda Item 1.10. It does not constitute a common position of the NATO Nations.

This agenda item currently has no direct impact on NATO military usage, but constraints due to safety aspects, could be added to military systems in existing aeronautical bands.

ESA (date of proposal)

TBD

Eurocontrol (date of proposal)

TBD

## OTHER INTERNATIONAL AND REGIONAL ORGANISATIONS

EBU (date of proposal)

TBD

GSMA (date of proposal)

TBD

CRAF (June 2017)

CRAF supports the protection of existing RAS frequency allocations. No changes should be made to the RR unless acceptable sharing and compatibility criteria are developed to ensure the protection of RAS from future GADSS operations.