



ASSEMBLY — 40TH SESSION

TECHNICAL COMMISSION

Agenda Item 30: Other Issues to be considered by the Technical Commission

UPPER AIRSPACE

(Presented by the International Coordinating Council of Aerospace Industries Associations (ICCAIA) and the International Federation of Air Line Pilots' Associations (IFALPA))

EXECUTIVE SUMMARY

This paper presents the views of the International Coordinating Council of Aerospace Industries Associations (ICCAIA) on the next steps forward for the International Civil Aviation Organization (ICAO) regarding use of the upper airspace. As our paper presented at the 13th Air Navigation Conference outlined, the upper airspace presents new aviation uses and currently has few, if any, regulations surrounding its use. A key consideration to progress this use entails the establishment of a global altitude level.

**Action:** The Assembly is invited to:

- a) request ICAO to establish common upper airspace altitude boundaries worldwide; and
- b) request ICAO to establish operational procedures for a global upper airspace strategy with intent of worldwide implementation that interfaces with all aircraft operations, including commercial space operations.

<i>Strategic Objectives:</i>	This working paper relates to the Safety, Air Navigation Capacity and Efficiency and Air Transport development Strategic Objectives.
<i>Financial implications:</i>	The activities referred to in this paper will be subject to the resources available in the 2020-2022 Regular Programme Budget and/or from extra budgetary contributions.
<i>References:</i>	Doc 10115, <i>Report of the Thirteenth Air Navigation Conference (AN-Conf/13)</i> , Corrigenda Nos. 1 and 2, and Supplement No. 1 Doc 10075, <i>Assembly Resolutions in Force (as of 6 October 2016)</i>

<sup>1</sup> English, Arabic, Chinese, French, Russian and Spanish versions provided by ICCAIA.

## 1. INTRODUCTION

1.1 The aviation industry today looks very different than it did even a few years ago. New and innovative technologies will revolutionize the industry and present new opportunities for aviation that were merely concepts up until recently. One of the most challenging areas deals with the so called “upper airspace”.

1.2 While the current density of operations in this airspace is relatively low, the number of operations is projected to increase. ICCAIA believes that it is now appropriate for ICAO to work with its Member States to continue and elevate its work on the airspace.

1.3 Although industry and the regulatory bodies around the world are still in the early stages of their work to fully operationalize activity in this airspace, it would be appropriate for ICAO, in partnership with industry and its member states, to begin setting a framework for use of this airspace worldwide. The first step would be for ICAO to begin work on establishing common definition of upper airspace altitude boundaries worldwide.

## 2. DISCUSSION

2.1 Global civil aviation authorities (CAAs) and air navigation service providers (ANSPs) are experiencing an increase in requests for routine commercial access by emerging aerospace technologies in upper altitudes of civil managed airspace. The proposal contained herein would benefit civil aviation since various parts of the world define the airspace differently and as civil users look to utilize the airspace in the future, it will be important for there to be a globally harmonized standard for that airspace.

2.2 It is in the interest of the ICAO to take a leadership role in development of global airspace classification, regulations regarding its operational use, and an airspace (traffic) management mechanism for commercial applications in the upper airspace.

2.2.1 It is expected commercial aerospace operations in the upper airspace will increase exponentially over the next two decades. Emerging applications include: high altitude long endurance (HALE) solar aircraft operating in the upper airspace in cylindrical volumes of airspace (depending on time of day), other HALE aircraft operations, HALE unmanned balloon operations, sub-orbital commercial aircraft, commercial space operations in non-segregated airspace, increased “other” State aerospace operations in upper airspace (military, etc.).

2.2.2 There continues to be a mindset within the aerospace community that global upper airspace should be used as Random Navigation by States and does not require accepted ICAO operating, structure or traffic management requirements.

2.2.3 Some States are establishing space and traffic management initiatives that require broader inclusion of upper airspace operations related to commercial space launch and re-entry as well as sub-orbital operations (especially regarding fixed HALE aircraft volumes of airspace in the upper airspace).

## 3. CONCLUSION

3.1 The aviation industry today looks very different than it did even a few years ago. One of the most innovative areas deals with the so called “upper airspace”. It is timely that ICAO consider

taking a leadership position by developing a unified strategy for upper airspace classification, use and airspace (traffic) management through the establishment of common upper airspace altitude worldwide and operational procedures that would interface with all aircraft operations, including commercial space operations.

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