



ASSEMBLY — 40TH SESSION

EXECUTIVE COMMITTEE

Agenda Item 26: Other high-level policy issues to be considered by the Executive Committee

COMMERCIAL SPACE OPERATIONS INTEGRATION

(Presented by the International Federation of Air Traffic Controllers' Association (IFATCA), the International Federation of Air Line Pilots' Associations (IFALPA) and the International Air Transport Association (IATA))

EXECUTIVE SUMMARY

As Commercial Space activities continue to evolve, there are concerns over the continued impact on airspace access and the suggestion that these operations should be kept free of provisions. Although we understand the desire to limit the development of global provisions, at a time when industry is increasing the number of flights while it acquires valuable information, these situations are not free of risk. In considering the situation, we believe that future operations must be done via an agreed upon process, that includes collaboration with stakeholders, and ensures an appropriate safety risk assessment is completed.

Action: The Assembly is invited to:

- invite States to note the development in commercial space activities, and to recognize that these activities need to be safely and efficiently integrated within the existing airspace, and
- request ICAO formalize the development of provisions for the integration of commercial space operations into controlled airspace

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objectives: Safety and Capacity and Efficiency.
<i>Financial implications:</i>	For ICAO, the cost related to developing the provisions, although Industry will be supporting the process. For States, the production of related regulation.
<i>References:</i>	

¹ Arabic, Chinese, English, French, Russian and Spanish versions provided by IATA, IFALPA and IFATCA.

1. INTRODUCTION

1.1 Developments in the area of commercial space travel, and the growth projections for both air traffic and commercial space operations, have raised significant concerns within the aviation community. These new types of operations will increasingly affect the ability of commercial aviation to plan flights and maintain efficient operations.. Due to the nature of commercial spacecraft launches and recovery, the portion and timeframe of airspace restrictions, if not reassessed, will become disproportionate in the way they affect commercial aviation and other airspace users.

1.2 As new proposals enabling increased Commercial Space operations are developed, we are concerned that the proposals may not have sufficiently taken into consideration the impact these activities will have on commercial air transport operations, nor have they been reviewed to ensure they comply with ICAO provisions and accepted levels of safety for commercial aircraft operations.

2. DISCUSSION

2.1 Although there are concepts and proposals to minimize the amount of airspace used by these operations under development, the proposals have left a number of concerns that need to be addressed. In particular while attempting to develop new concepts and procedures, there are a number of items that fall under the remit of ICAO, given that these operations traverse international airspace.

2.2 With a higher frequency of commercial space launches, the amount of airspace associated debris fields, relevant spacecraft landing sites, separation requirements, and decrease in airspace capacity, all warrant the need for clearly defined safety standards and procedures. Operators and airspace managers, must control the unpredictability of these operations to ensure they provide for a high level of flight efficiency for all airspace users. In addition, the manner in which the airspace constraints have been used, has created an imbalance with airspace being restricted in a manner that promotes one industry over another. Whether an industry is emerging, or well established, all should comply with the development of safety risk mitigations that limit the impact to all users. Freedom of navigation and equality of use, must be maintained.

2.3 The designation of airspace for which air traffic services are provided is distinct, and separate from the designation of sovereign airspace. ICAO Annexes do not determine how a State should provide air traffic services within its national airspace, but they do specify the requirements and expectations for the provision of services within international airspace delegated to them. This allows States to determine, based on the activity, what level of service and additional services are required.

2.4 Current approaches toward commercial space operations have been contained within danger areas or have required large areas of separation. These areas have predominantly been contained over high seas, with a mix of procedures and responsibilities. The size of the areas, the amount of time these areas are restricted, and the processes used to notify civil operators are inconsistent. In addition, there are two significant concerns with the current approach: The operations are conducted over international waters but are not always based on ICAO standards, and the lack of harmonized procedures for air traffic controllers and notification for airlines, constitute a concern regarding safe and efficient operations.

2.5 In order to resolve the aforementioned concerns, we believe an increase in collaboration with all stakeholders is necessary. We acknowledge that there has been a level of coordination, however we do not believe the global perspective has been taken into account. The diverse user types increase the level of complexity in shared airspace. This situation has highlighted the need to develop appropriate

regulatory guidance material, standards, and recommended practices related to the management of airspace where these activities occur.

2.6 In order to ensure these activities are safely and efficiently integrated into the existing airspace, ICAO, with the support of industry, should develop standards and guidance addressing issues such as separation or airspace restrictions.

3. **CONCLUSION**

3.1 As commercial space operations are expected to increase in international airspace, ICAO must initiate steps to address these activities, bringing these industry partners from the emerging entrant level, to a level that will result in their eventual integration.

3.2 The Assembly is asked to consider the recommendations contained in the Executive Summary.

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