



ASSEMBLY — 42ND SESSION

TECHNICAL COMMISSION

Agenda Item 24: Aviation Safety and Air Navigation Priority Initiatives

ANSP TO ANSP COLLABORATION TO ENSURE SAFE AND EFFICIENT AIRSPACE INTEGRATION DURING SPACE TRANSPORTATION OPERATIONS

(Presented by the United States)

EXECUTIVE SUMMARY

This paper presents the United States' proposal for increased bilateral and multi-lateral cooperation between Air Navigation Service Providers (ANSPs) on airspace integration during intentional space transportation operations (STOs) to ensure safety and maximize efficiency in airspace management.

Action: The Assembly is invited to:

- a) reaffirm Resolutions A40-26: Commercial space transport (CST) and AN-Conf/14 Rec. 3.1/6 — Addressing the safe integration of space transport operations into the airspace system;
- b) encourage States to direct their air navigation services providers (ANSPs) to collaborate bilaterally on airspace integration during space transportation operations (STOs) to ensure safety and efficiency in the airspace system;
- c) encourage States to direct their ANSPs to work multilaterally, through organizations like CANSO, to develop best practices on airspace integration during STOs to ensure safety and efficiency in the airspace system; and
- d) request ICAO to work collaboratively with the United Nations Office for Outer Space Affairs (UNOOSA) to advance joint priorities on airspace integration.

<i>Strategic Goals:</i>	This working paper relates to Strategic Goals <i>Every Flight is Safe and Secure</i> ; and <i>Aviation Delivers Seamless, Accessible and Reliable Mobility for All</i> .
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<i>Financial implications:</i>	None.
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<i>References:</i>	Doc 7300, <i>Convention on International Civil Aviation</i> , Articles 3 and 12 ICAO Annexes 11 — <i>Air Traffic Services</i> and 15 — <i>Aeronautical Information Services</i> Doc 10066, <i>Procedures for Air Navigation Services – Aeronautical Information Management</i> (PANS-AIM) Resolution A40-26: Commercial space transport (CST) Doc 10209, <i>Report of the Fourteenth Air Navigation Conference (AN-Conf/14)</i> , AN-Conf/14-WP/213 AN-Conf/14, Recommendation 3.1/6 — Addressing the safe integration of space transport operations into the airspace system UN Committee on Peaceful Uses of Outer Space
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	CANSO Publication on ANSP Considerations for Managing Space Operations CANSO Academy Webinar on Understanding Space launch and Re-entry Operations, International Coordination Needs and Processes
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1. INTRODUCTION

1.1 The Chicago *Convention on International Civil Aviation* (Doc 7300) established the International Civil Aviation Organization (ICAO) to harmonize Standards and Recommended Practices (SARPs) for international civil aviation. ICAO's mandate as defined in Article 3 of the Chicago Convention, applies only to civil aircraft. As stated in the *Report of the Fourteenth Air Navigation Conference (AN-Conf/14)* (Doc 10209), Agenda Item 3.1 "The Conference...noted, for instance, that space vehicles do not meet the definition of "aircraft," and therefore, ICAO's mandate does not extend to the regulation of space vehicles.

1.2 ICAO plays a critical role in airspace integration during space transportation operations (STOs). As reaffirmed by resolution A40-26: Commercial space transport (CST) during the 40th Session of the ICAO Assembly, the role of ICAO is "...developing policy guidance in the areas where international CST [commercial space transportation] operations intersect with international civil aviation." This intersection is the management of airspace during such operations, including, but not limited to:

- a) publishing of NOTAMs for aircraft hazard areas (Danger Areas) consistent with procedures laid out by ICAO Annexes 11— *Air Traffic Services*, 15 — *Aeronautical Information Services* and *Procedures for Air Navigation Services — Aeronautical Information Management (PANS-AIM)* (Doc 10066), regarding activities potentially hazardous to civil aircraft;
- b) ensuring States comply with their obligations under Article 12: *Rules of the air* of the Chicago Convention regarding flight rules over international airspace; and
- c) ensuring the launching air navigation services provider (ANSP) fulfils its responsibility for the coordination of these activities.

1.3 The growing number of STOs has underscored the need for enhanced coordination and collaboration between ANSPs. In addition to the need for increased coordination, the increasing number of STOs has highlighted the need for ANSP collaboration to maximize the utilization of airspace while maintaining the safety of all users and the non-participating public.

2. DISCUSSION

2.1 Airspace coordination and management during STOs

2.1.1 Airspace closures will be requested consistent with applicable SARPs, regulations and policies. Protection of airspace is primarily done by activating approved hazard areas,¹ coordinating international NOTAMs and developing strategic solutions for operations, including routing considerations

¹ Hazard areas are volumes of airspace where the risk to aircraft exceeds a certain regulatory standard. They may be implemented by ANSPs through Danger Areas over the high seas, Restricted Areas over land or territorial waters, or other airspace management measures.

and airspace management tools. The coordinating ANSP is often also responsible for monitoring, evaluating, and disseminating real-time information to stakeholders about operation status.

2.1.2 ANSPs that are new to integrating these types of operations may not yet have experience with this particular form of coordination or traffic management. Collaboration with more experienced ANSPs can help with development of processes and procedures for handling these requests and implementing airspace management practices that allow for safe integration of STOs and help minimize closure times and maximize airspace efficiency.

2.2 Cooperation

2.2.1 As the number of STOs increase, so too does the number of ANSPs that are affected by these operations. Bilateral cooperation between ANSPs is key to ensuring ANSPs that are newer to the coordination of these activities are appropriately prepared for what is being asked of them. In alignment with Annex 11, launching ANSPs should engage with affected ANSPs to provide information when conducting activities that impact their airspace.

2.2.2 Existing multi-lateral organizations like the Civil Air Navigation Services Organization (CANSO) provide a forum for multi-lateral cooperation between ANSPs as well. Development of guidance material in multi-lateral organizations like CANSO could allow ANSPs to increase consistency in their practices without the rigidity of SARPs. Guidance material can easily be adopted and revised as new practices and procedures are developed and refined making this an ideal route for multi-lateral cooperation.

2.2.3 Bilateral and multi-lateral cooperation is intended to foster increased consistency in practices for airspace integration during STOs. The development of new SARPs to handle such activities would be premature and may lead to practices that are not adaptable to new developments in the ways ANSPs handle these activities.

2.2.4 ANSPs are also encouraged to collaborate with State space regulators of launch and re-entry operators. Space laws and regulations are different from aviation law and regulations.

2.3 Cooperation with the UN committee on the peaceful uses of outer space (UN COPUOS)

2.3.1 The US encourages ICAO and individual States to support increased partnership and collaboration between ICAO and the UN COPUOS on matters of airspace integration during STOs as affirmed by the Conference at AN-Conf/14 in Recommendation 3.1/6. UN COPUOS, established in 1959, has 104 Member States as of mid-2025. The Office of Outer Space Affairs provides secretariat services to COPUOS.

2.4 Efficiency

2.4.1 The US has developed several processes and procedures to minimize airspace impacts from STOs and maximize utilization of airspace for all users and is working to share these practices in both bilateral and multi-lateral forums with other States as they begin integrating either their own or neighbouring States launch activity. The US is committed to developing/providing educational artifacts to aid ANSPs with the integration of STOs and collaboratively evolve these practices as experience is gained.

3. **CONCLUSION**

3.1 The Assembly is invited to refer to Actions a) through d) contained in the Executive Summary.

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