



International Civil Aviation Organization

**AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP
SIXTEENTH MEETING (APIRG/16)
(Kigali, Rwanda 19-23 November 2007)**

Agenda Item 3.0: Global and Inter-Regional Activities

3.3: Global Air Navigation Plan

PROGRESS REPORT ON UNMANNED AERIAL VEHICLE (UAV) WORK

(Presented by the Secretariat)

SUMMARY

On 12 April 2005, the Air Navigation Commission requested the Secretary General to consult selected States and international organizations with respect to a number of issues related to UAVs. On 8 November 2005, when reviewing the results of the consultation, the Commission noted the intention of the Secretariat to convene a meeting of interested States and international organizations on the subject of UAVs, with the aim of developing a UAV programme plan. Two informal meetings were subsequently held in May 2006 and January 2007. This paper presents a review of the two meetings.

Action by APIRG/16 is in paragraph 5.

1. INTRODUCTION

1.1 On 12 April 2005, the Air Navigation Commission requested the Secretary General to consult selected States and international organizations with respect to present and foreseen international civil unmanned aerial vehicle (UAV) activities in civil airspace; procedures to obviate danger to civil aircraft posed by UAVs operated as State aircraft; and procedures that might be in place for the issuance of special operating authorizations for international civil UAV operations.

1.2 During its review on 8 November 2005 including replies of States, the Commission, noted the intention of the Secretariat to convene a meeting of interested States and international organizations on the subject of UAVs, with the aim of developing a UAV programme plan.

2. FIRST INFORMAL ICAO MEETING ON UAVs

2.1 Subsequent to the above, the first ICAO exploratory meeting on UAVs was held in Montreal from 23 to 24 May 2006, with the objective of determining the potential role of ICAO in UAV

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regulatory development work. The meeting agreed that although there would eventually be a wide range of technical and performance specifications and standards, only a portion of those would be necessary for inclusion as ICAO Standards and Recommended Practices (SARPs) and that ICAO was not the most suitable body to lead the effort to develop specifications. However, it was agreed that there was a need for harmonization of terms, strategies and principles with respect to the regulatory framework and that ICAO should act as a focal point.

2.2 The meeting requested the Secretariat to bring the following points to the attention of the Commission:

- a) UAV work should be given a high priority in ICAO;
- b) there is a need for an ICAO focal point;
- c) the Commission should endorse the principle tenets of ICAO's role in UAV work; and
- d) the Secretariat may need assistance from outside resources if the work increases substantially.

3. SECOND INFORMAL ICAO MEETING ON UAVs

3.1 Taking advantage of a meeting of European Organisation for Civil Aviation Equipment (EUROCAE) Working Group 73 (WG-73), where a majority of the participants of the first ICAO informal meeting were in attendance, a second informal ICAO meeting on UAVs was held on 11 and 12 January 2007 in Palm Coast, Florida.

3.2 The second informal ICAO meeting concluded that work on technical specifications for UAV operations was well underway within both RTCA (Radio Technical Commission on Aeronautics) and EUROCAE and was being adequately coordinated through a joint committee of the two working groups. The main issue for ICAO was therefore, related to the need to ensure safety and uniformity in international civil aviation operations. In this context, it was agreed that there was no specific need for new ICAO SARPs at this early stage. However, there was a need to harmonize notions, concepts and terms. The meeting agreed that ICAO should coordinate the development of a strategic guidance document that would guide the regulatory evolution that, even though non-binding, would be used as the basis for development of regulations by the various organizations and States. As regulatory material developed by States and organizations gained maturity such material could be proposed for inclusion in the ICAO guidance document. The document would then serve as the basis for achieving consensus in view of later development of SARPs.

3.3 The meeting felt strongly that the eventual development of SARPs should be undertaken in a well-coordinated manner. Because this was a newly emerging technology it was felt that there was a unique opportunity to ensure harmonization and uniformity at an early stage and that all ICAO work efforts should be based on a strategic approach and should support the emerging work of other regulatory bodies. The meeting had also suggested that from this point onwards, the subject should be referred to as unmanned aircraft systems (UAS), in line with RTCA and EUROCAE agreements.

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3.4 Finally, it was concluded that ICAO should serve as a focal point with the aim of ensuring global interoperability and harmonization; to develop a regulatory concept; to coordinate the development of UAS SARPs; to contribute to the development of technical specifications by other bodies; and to identify communication requirements for UAS activity.

4. ESTABLISHMENT OF A STUDY GROUP

4.1 It is felt that eventually there will be a need to amend or develop new SARPs to accommodate UAS activity in non-segregated, controlled airspace. However, there is no urgency or clear basis for amending SARPs at this point in time. It was therefore suggested that no work be assigned to any ICAO panel until a need is clearly identified. However, it was decided to establish an ICAO study group to assist the Secretariat in developing a framework for regulatory development, guiding the SARPs development process within ICAO, and to support a safe, secure and efficient integration of UAS into non-segregated airspace. The draft terms of reference and work programme of this Study Group Unmanned Aircraft Systems Study Group (UASSG) are at the Appendix to this paper.

5. ACTION BY APIRG/16

5.1 The Meeting is invited to:

- a) note the results of the two ICAO exploratory meetings on UAVs; and
- b) take into account the outcome of the two informal meetings in the work programme of APIRG.

APPENDIX

UNMANNED AIRCRAFT SYSTEMS STUDY GROUP (UASSG)

Terms of Reference

In light of rapid technological advances, to assist the Secretariat in coordinating a framework for regulatory development as well as in guiding the Standards and Recommended Practices (SARPs) development process within ICAO, for civil unmanned aircraft systems (UAS), and to support a safe, secure and efficient integration of UAS into non-segregated airspace and aerodromes.

Work Programme

- 1) Assist the Secretariat in coordinating all ICAO UAS related work, with the aim of ensuring global interoperability and harmonization.
- 2) Develop a UAS regulatory concept and associated guidance material.
- 3) Contribute to the development of technical specifications by other bodies (e.g., terms, concepts), as requested.
- 4) Identify communication requirements for UAS.

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