



ICAO SAFETY

Remotely Piloted Aircraft Systems (RPAS)

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RPAS Programme Team

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Background

- ICAO initiated work on unmanned aircraft systems in 2007 when the ANC decided during its 175th Session in April 2007 to establish the Unmanned Aircraft Systems Study Group (UASSG). The UASSG served as the ICAO focal point for all UAS related issues until it was superseded by the Remotely Piloted Aircraft Systems Panel (RPASP) in 2014
- Eighteen of the 19 Annexes will be amended to accommodate RPAS/UAS requirements. (Annex 5 — *Units of Measurement to be Used in Air and Ground Operations* will not be affected.)



Two important points

- Unmanned aircraft are aircraft whether remotely piloted, automatic, autonomous or somewhere in between
- Performance-based Standards provide greatest freedom of choice, allowing the most appropriate solution to be considered; however prescriptive Standards are sometimes required (e.g. frequency spectrum)



UA versus RPA

- Unmanned aircraft include:
 - Free balloons
 - Fully automatic and/or autonomous aircraft
 - Drones
 - Remotely piloted aircraft
 - Airspace/aerodrome integration requires control
 - Control, in real time, provided by a licensed remote pilot





ICAO Focus

- International IFR operations
- Global interoperability
 - Priority is fundamentals to initiate international operations
 - » Certificate of airworthiness
 - » RPAS operator certificate
 - » Remote pilot license
- National Authority Focus: Domestic operations, which may differ significantly from int'l ops





Remotely Piloted Aircraft Systems Panel (RPASP)

Background:

Approved by ANC during the 196th Session in May 2014

Continue the work from the former UASSG

Manage the work programme in accordance with the job cards approved by ANC

Focal point and coordinator of all ICAO RPAS related work





Objective and scope

- Develop Standards and Recommended Practices (SARPs), procedures and guidance to facilitate safe, secure and efficient integration of remotely piloted aircraft (RPA) into non-segregated airspace and aerodromes
- Maintain the existing level of safety for manned aviation
- Priority is instrument flight rules (IFR) operation in controlled airspace



Structure:

- Composed by six working groups with experts in:
 - airworthiness
 - telecommunications for command and control (C2) and air traffic control
 - detect and avoid (DAA)
 - personnel licensing – **2018 adoption**
 - RPAS operations
 - air traffic management
- Members: 23 States and 11 international organizations
- Observers: 3 States and 5 international organizations



Interdependencies

- Other panels of the ANC are involved in RPAS/UAS topics such as accident investigation, communications, flight recorders, frequency spectrum, surveillance and safety management.
- Coordination beyond ANC:

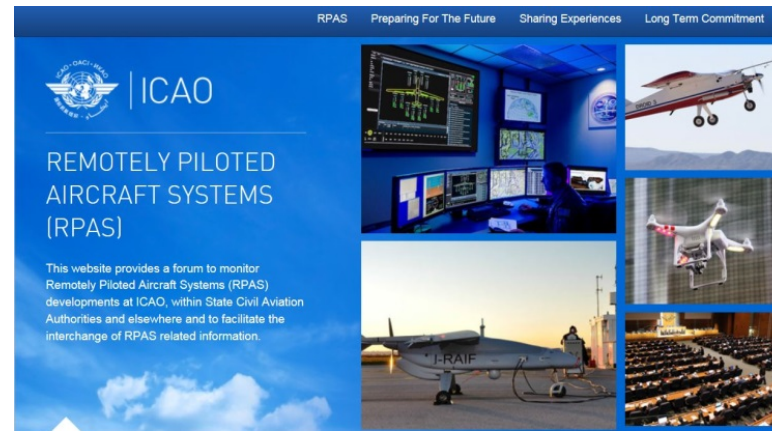
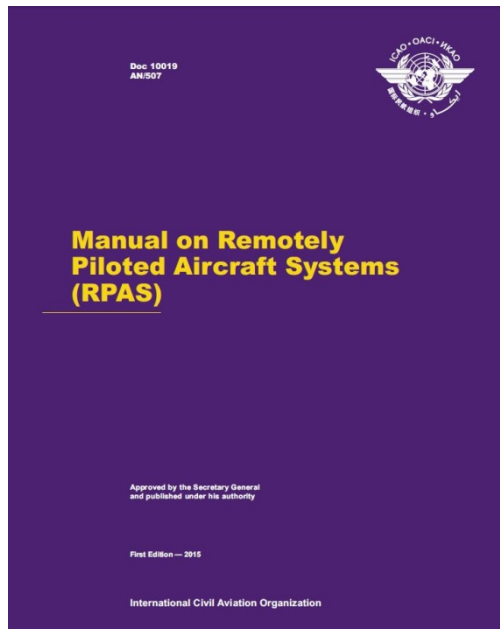
Aviation Security (AVESC) Panel - The Council on 15 June 2015 (C-DEC 205/4) recognized two different security-related issues, namely: one concerning the unlawful usage of RPAS; and the other related to the security threat to RPAS systems. It was understood that the former would be considered by the AVSEC Panel, while the latter would be handled by the RPAS Panel.

Legal Committee - The Legal Committee is conducting a study on liability issues relevant to unmanned aircraft.

Committee on Aviation Environmental Protection (CAEP) - The CAEP Technical Committee is currently reviewing the status of RPA noise certification. The aim is to determine whether there is a need for work during the next CAEP cycle (2016 to 2019) in this area.



Guidance material and resources



PREPARING FOR THE FUTURE

RPAS are a new component of the aviation system, one which ICAO, States, international organizations and industry are working to understand, define and ultimately integrate into non-segregated airspace.

The goal of ICAO in addressing RPAS is to provide an international regulatory framework through Standards and Recommended Practices (SARPs), procedures





Challenges ahead

- RPAS workshops
 - Will demonstrate how to interact between regulator and operator using content of RPAS Manual
 - Beginning 2nd Qtr 2016
- Addition of small drones to the ICAO work programme





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