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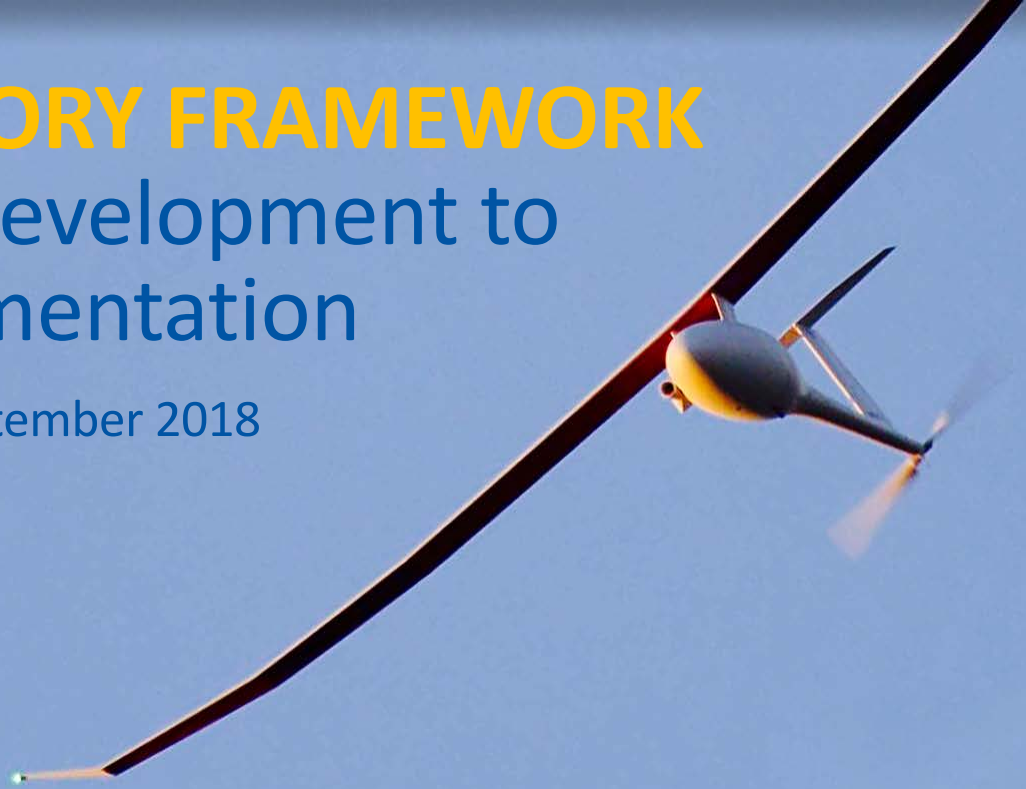
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RPAS REGULATORY FRAMEWORK

Standards development to implementation

10 September 2018

TAI Feng
Air Navigation Commissioner



Unmanned aircraft systems

- New and challenging addition to ICAO



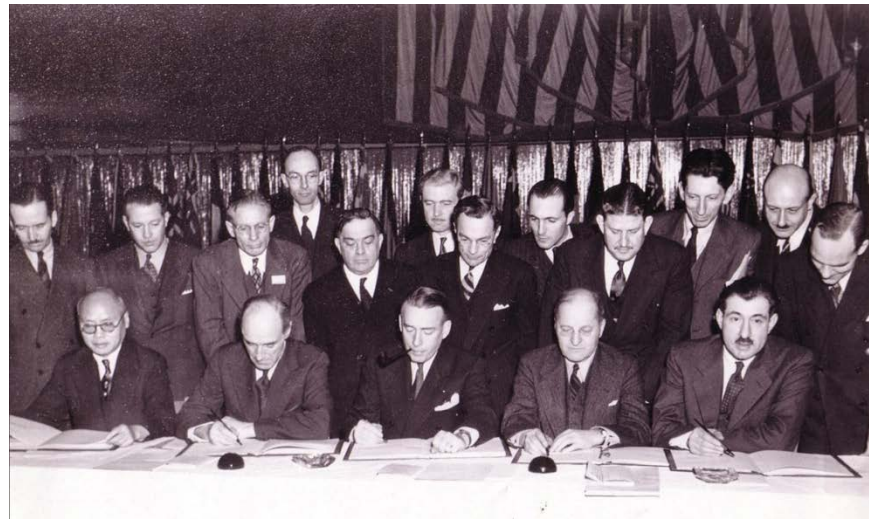


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Pilotless Aircraft

- Paris Convention on 13 October 1919 start the legal framework for ICAO
- The protocol of 15 June 1929 amending the Paris Convention first refers to “Pilotless aircraft”
- The Chicago Convention of 7 December 1944 included Article 8 entitled “Pilotless aircraft”





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UASSG

- Coordinating the development of ICAO SARPs, PANS and guidance material for UAS
- Focal point at ICAO for all activities pertaining to UAS from April 2008 to July 2014



RPAS Panel

- Developing the regulatory framework for RPAS to conduct IFR operations in controlled non-segregated airspace/aerodromes

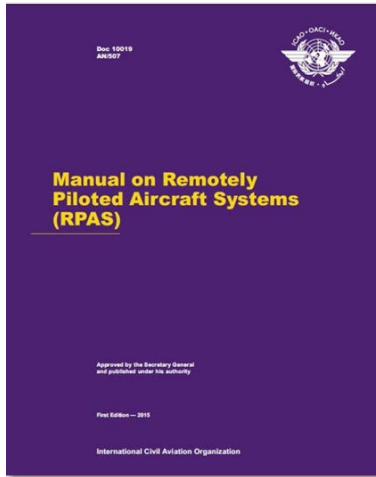




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Guidance Material



Grid for Unmanned Aircraft
This grid is a sample for learning purposes. Participants should fill this grid according to their State requirements.

	Chapter 5 RPAS registration	Chapter 6 Responsibilities of the RPAS operator	Chapter 7 Safety management	Chapter 8 Lossing and competencies manual
Annex 4 Nationality and Registration Marks 4.1.1 and 4.3.2	Annex 7 Aircraft Nationality and Registration Marks 4.3.1 and 4.3.2	Annex 6 Operation of Aircraft. An operator is defined as a person, engaged in or offering to engage in an aircraft operation, in the context of RPAS, an aircraft operation includes the RPAS.	Annex 19 Safety Management	Annex 1 Personnel Licensing Annex 2.2.2 ROC
May be required depending if local or international operator	Depending on local regulations, some documents (listed in RPAS Manual 6.6.2) may be required.	Operation should not increase safety risks to general public and archeological site	Based on domestic regulations. License may not be required but demonstration of competencies	
		Hazard identification and risk assessment with mitigation strategies		
Any aircraft engaged in international operations	ROC required. Some other documents	SMS Process in place Part Ch.7 International Operations	This is for Co scenario & RPAS certificates	





Annexes

- 18 of 19 Annexes will be amended

- Annex 1 - Personnel Licensing
- Annex 2 - Rules of the Air
- Annex 3 - Meteorological Services
- Annex 4 - Aeronautical Charts
- Annex 5 - Units of Measurement
- Annex 6 - Operation of Aircraft
- Annex 7 - Aircraft Nationality and Registration Marks
- Annex 8 - Airworthiness of Aircraft
- Annex 9 - Facilitation
- Annex 10 - Aeronautical Telecommunications
- Annex 11 - Air Traffic Services
- Annex 12 - Search and Rescue
- Annex 13 - Aircraft Accident and Incident Investigation
- Annex 14 - Aerodromes
- Annex 15 - Aeronautical Information Services
- Annex 16 - Environmental Protection
- Annex 17 - Security
- Annex 18 - The Safe Transportation of Dangerous Goods by Air
- Annex 19 - Safety management



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Remote Pilot License (RPL)

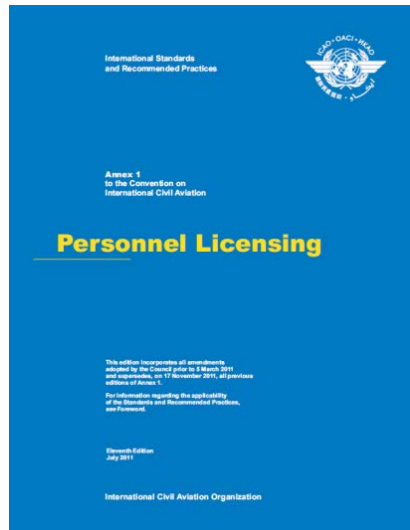




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ANNEX & PANS





Presentations

- Mr. Denis Jauvin, Technical Officer, RPAS, ICAO
- Mr. Patrice Desvallées, Program Director, Strategic and Emerging Projects, DGCA, France
- Mr. Melvin Wong, Head (Unmanned Aircraft Systems), Airworthiness/Flight Operations, CAAS, Singapore
- Dr. Kristy Kiernan, Program Chair, the Master of Science in Unmanned Systems, Embry-Riddle Aeronautical University



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