



ICAO



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# Unmanned Aviation Week

- RPAS/3 and DRONE ENABLE/2 -

Chengdu, China, 10 to 14 September 2018

# Agenda

**ICAO's Third  
Remotely Piloted  
Aircraft Systems  
Symposium  
(RPAS/3)**

# Registration - Sunday, 9 September 2018

00:00 – 00:00      **On-site Registration**

# Day 1 - Monday, 10 September 2018

00:00 – 00:00      **On-site Registration**

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09:30 – 10:10      **Welcome Remarks**

**Dr. Fang LIU**, *Secretary General, ICAO*

Chinese Representative (TBD)

Chinese Representative (TBD)

Chinese Representative (TBD)

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10:10 – 10:40      **Global Perspectives and Challenges**

**Captain Houston Mills**, *Global Aviation Strategy & Public Policy Director, United Parcel Service (UPS)*

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10:40 – 11:15      **Coffee Break**



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11:15 – 12:30      **CATEGORIZATION – responding to the rapid expansion and growth of the unmanned industry**

*The speed at which unmanned aviation is developing challenges the existing operational environment. A new paradigm for regulating these aircraft is needed that considers the aircraft and operation jointly.*

**Moderator: Mr. Nico Voorbach**, *Director ICAO Affairs, CANSO*

**Presentations:**

**Mr. Mike Lissone**, *Secretary General, JARUS*

**Mr. YANG Honghai**, *Regional Director North Asia, Safety and Flight Operations, IATA*

**Mr. Scott Duffy**, *Manager Remotely Piloted Aircraft Operations, CASA, Australia*

**Mr. Randy Willis**, *Chairman, ICAO Remotely Piloted Aircraft Systems Panel, FAA, United States*

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12:30 – 14:00      **Lunch Break**



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14:00 – 15:30

## RPAS REGULATORY FRAMEWORK – Standards development to implementation

*Licensing and training of remote pilots is one of the pillars to enable safe RPAS operations. As ICAO's regulatory framework is evolving with SARPs on these two topics already adopted, participants will share their experiences on strategies to transition from regulatory development to implementation.*

**Moderator:** **Mr. TAI Feng**, Air Navigation Commissioner, Second Vice President and Chairman of the Ad hoc Working Group on Implementation, ICAO

### 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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15:30 – 16:00

Coffee Break



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16:00 – 17:30

## BENEFITS AND CHALLENGES – implementing harmonized regulations

*Aviation is an international activity which is supported through use of harmonized regulations. Panellists will discuss the benefits of working regionally and globally to implement regulations and oversee operations.*

**Moderator:** **Mr. Arun Mishra**, Regional Director, ICAO Bangkok Office

### Panel discussion:

**Dr. LIU Hao**, Chair of the ICAO ASIA/PACIFIC UAS Task Force

**Mr. Christopher Petras**, Legal Officer, ICAO

**Mr. Catalin Radu**, Deputy Director, ANB, ICAO

**Ms. Kate Madden**, Aeronautical Service Officer, Civil Aviation Authority, New Zealand

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**End of Day 1**

## Day 2 - Tuesday, 11 September 2018

00:00 – 00:00

On-site Registration

09:00 – 09:10

Keynote Speech

Ms. Poppy Khoza, Director of Civil Aviation, South Africa

09:10 – 10:30

**RPAS OPERATIONS – beyond the paradigm of manned aviation**

*The unique characteristics of RPAS components, which differ in many ways from manned aviation, bring new challenges for RPAS operators. This session will discuss such challenges and new ways to safely accomplish the gradual transition of accommodation to integration.*

**Moderator:** Mr. Michael Gadd, Head of International Regulatory Affairs, Altitude Angel

**Presentations:**

Mr. Richard Eva, Aviation Manager, Shell Corporation

Ms. Mildred Troegeler, Director, Global Airspace Integration, Boeing NeXt

Mr. LI Dongqi, Group Vice President of SF Express & Chairman of Fonair Co., Ltd (SF UAS)

Mr. Marzio Preatoni, Airworthiness, Leonardo Helicopters

10:30 – 11:00

Coffee Break



11:00 – 12:30

**INTEGRATION PLANS – issues to be addressed when integrating RPAS into the ATM system**

*The absence of an on-board pilot will necessitate some unique procedures in the integration of RPA into non-segregated airspace. ANSPs will be invited to discuss the challenges and risks associated with integration. What should ANSPs do to minimize the risk in order to seamlessly integrate RPA into the existing ATM system?*

**Moderator:** Ms. Leslie Cary, Chief, Remotely Piloted Aircraft Systems, ICAO

**Panel discussion:**

Mr. Nico Voorbach, Director, ICAO Affairs, CANSO

Dr. Francis Schubert, Chief Corporate Officer, Skyguide, Switzerland

Mr. Mike Lissone, UAS ATM Integration Manager, Directorate Pan-European Single Sky, EUROCONTROL

Mrs. Catherine Ronfle-Nadaud, Direction de la Technique et de l'innovation, Domaine Etudes Européennes et Innovation, DGAC, France

Mr. ZHANG Xinghao, Director, Air Traffic Control Division, Air Traffic Management Bureau, CAAC, China

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12:30 – 14:00

Lunch



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14:00 – 15:30

### **BUILDING A PERFORMANCE-BASED REGULATORY ENVIRONMENT FOR RPAS OPERATIONS – Are States ready?**

*RPAS are creating a new industry with large economic potential. Their associated technologies and operating concepts are evolving rapidly. Globally, regulators are being challenged with the safe and efficient integration of RPAS into environments shared by a highly regulated and well-established manned aircraft industry. What regulatory and oversight solutions are currently available?*

**Moderator:** Mr. Claude Hurley, President, Air Navigation Commission, ICAO

#### **Presentations:**

**Mr. Everette Rochon**, Manager, Flight Standards General Aviation and Commercial Division, FAA, United States

**Mr. Damodaran Dilip Kumar**, Joint General Manager (ATM), Airports Authority, India

**Mr. Scott Duffy**, Manager Remotely Piloted Aircraft Operations (RPAS), Civil Aviation Safety Authority (CASA), Australia

**Mr. Paweł Szymański**, Director of the Unmanned Aircraft Department, Civil Aviation Authority, Poland

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15:30 – 16:00

Coffee Break



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16:00 – 17:30

### **EMERGING TECHNOLOGIES – the balance between legacy and innovation**

*Technological advances can improve the safety and efficiency of our airspace but they also bring challenges. This session will showcase emerging technologies, their potential capabilities and the gaps or shortcomings as we look for interoperable solutions.*

**Moderator:** Mr. Filippo Tomasello, Senior Partner, EURO USC Italia

#### **Presentation:**

**Mr. Fredrik Nordström**, Head of UAS Regulations, AIRBUS

**Mr. Hyunchul Shim**, Professor/Director, Dept of Aerospace Eng., Korea Advanced Institute of Science and Technology

**Mr. Pierre Fossier**, Vice President, Chief Technology Officer, Thales – Land and Air Systems

**Mr. WANG Yufeng**, Director, HUAWEI Wireless X Labs

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**End of Day 2**

# Day 3 - Wednesday, 12 September 2018

00:00 – 00:00

**On-site Registration**

09:00 – 09:10

**Keynote Speech**

**Mr. Logan Jones**, *Senior Director HorizonX & NeXt, Boeing*

09:10 – 10:30

**RPAS OPERATIONS – Impact on other stakeholders**

*When introducing any new type of airspace user into the existing air navigation system, potential safety or efficiency impacts on other airspace users may emerge. This session will investigate the disruptive impact of RPAS operations on other airspace users and potential mitigations for maintaining a safe and efficient system.*

**Moderator: Mr. Catalin Radu**, *Deputy Director, ANB, ICAO*

**Presentations:**

**Mr. Jeffrey D. Richards**, *Air Traffic Controller and RPAS and UAVs Subject Matter Expert, IFATCA*

**Mr. Pirasuth Sasunee**, *Technical Advisor, IFALPA*

**Mr. SL Wong**, *Head of Technical & Industry Affairs, ACI*

**Mr. Daniel Vaca**, *Head ATM Harmonization and Global Policy, IATA*

10:30 – 11:00

**Coffee Break**



11:00 – 12:30

**CIVIL AND MILITARY COLLABORATION – from legacy to partnership**

*Civil and military cooperation contributes to safety as well as capacity and efficiency of airspace. Collaboration enhances these further. As RPAS are introduced into the civil aviation environment, military lessons learned, as well as operational inputs, will optimize our progress on a regulatory framework that addresses all stakeholders' needs safely and efficiently.*

**Moderator: Mr. Mark Wuennenberg**, *Technical Officer, Remotely Piloted Aircraft Systems, ICAO*

**Panel discussion:**

**Mr. Jorge Humberto Vargas Rainho**, *Planning Division Advisor, Defense Ministry, Brazilian Air Force*

**Mr. Jorge Alexandre De Almeida Regis**, *Department of Airspace Control, Brazilian Air Force*

**Mr. Edgar Reuber**, *Senior Military Expert, Eurocontrol*

**Mr. Matthias Grall**, *Federal Ministry of Defence, Section Forces Policy, ATM, Germany*

**Mr. Andreas Udovic**, *Project Manager, DFS Deutsche Flugsicherung GmbH, Germany*

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12:30 – 14:00

Lunch



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14:00 – 15:20

### **FOCUS ON CHINA – Activities and lessons learned in China**

*Many exciting RPAS related activities are underway in China. What are they and what can the rest of the world learn from these activities?*

**Moderator:** Mr. **YANG Fei**, Coordinator of UAS Leadership Office, Office of Air Traffic Regulation, CAAC, China

**Presentations:**

**Mr. CHEN Guangcheng**, Director of Air Transportation Division, Flight Standard Department, CAAC, China

**Mr. SUN Lihua**, Deputy Director General, Information Center, CAAC, China

**Ms. LIU Yanguang**, General Manager, JDX Drone Business Development Center

**Mr. ZHANG Xiang**, Vice General Manager, CETC Special Mission Aircraft System Engineering Co., Ltd

**Mr. LIU Gang**, General Manager, The Innovation Center of Sichuan Industrial Cloud Manufacturing Co., Ltd

**Mr. CHEN Ming**, Technical Development Director, DJI

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15:20 – 15:30

### **ATM / UTM – Preview of DRONE ENABLE/2**

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15:30 – 16:00

### **Wrap-up Session**

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***End of RPAS/3 Symposium***

**ICAO's Second  
DRONE ENABLE  
Symposium  
(DRONE ENABLE/2)**

# Day 4 - Thursday, 13 September 2018

00:00 – 00:00

On-site Registration

09:45 – 10:10

Welcome Remarks

Dr. Fang LIU, Secretary General, ICAO

Chinese Representative – (TBD)

10:10 – 10:30

**A successful year at ICAO – moving the RPAS and UAS files**

*This session will provide an overview of the work undertaken by ICAO RPAS/UAS on the advancement of RPAS regulatory material and the UTM Framework developed from the DRONE ENABLE/1 efforts.*

**Ms. Leslie Cary**, Chief, Remotely Piloted Aircraft Systems, ICAO

10:30 – 11:00

Coffee Break



11:00 – 12:30

**What is UTM and why is it separate from, but interoperable with, ATM?**

*This session will provide an opportunity to explore the roles and functionalities of UTM and ATM from the technological and operational perspectives. This will allow an understanding of the relationship between UTM and ATM systems and the critical issues driving the need for interoperability.*

*Note - This session sets the scene for the upcoming sessions which will address technical solutions submitted through the RFI process.*

**Moderator: Dr. Hiroko Nakamura**, Deputy Director General at JAPAN Unmanned System Traffic & Radio Management Consortium (JUTM)

**Presentations:**

**Mr. Mike Lissone**, UAS ATM Integration Manager, EUROCONTROL

**Mr. LI Ning**, Director, Air Traffic Service & Aeronautical Information Service Division, Office of Air Traffic Regulation, CAAC, China

**Mr. Benoit Curdy**, Secretary General, Global UTM Association

**Dr. LOW Kin Huat**, Principal Investigator of TM-UAS Programme, Air Traffic Management Research Institute (ATMRI); Professor, Nanyang Technological University, Singapore

12:30 – 14:00

Lunch



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14:00 – 15:00

## UTM/ATM Transitions from a Traditional Perspective

*This session will provide an opportunity to showcase selected submissions from experts that describe the challenges and critical issues encountered when aircraft, manned or unmanned, transition between a UTM and an ATM environment.*

### Moderators:

**Dr. LIU Hao**, Director, Institute of Aviation Law and Standards, Deputy Director, National Research Center of Air Traffic Management Law and Standards, China

**Mr. Peter van Blyenburgh**, President, UVS International

### Presentations:

**Mr. Markus Klopff**, Director Strategic Marketing ATM, Senior Lead Expert, Frequentis AG

**Mr. Brenden Hedblom**, Business Development Manager, Thales Air Traffic Management

**Dr. Joe Polastre**, Altiscope, A<sup>3</sup> by Airbus

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15:00 – 15:30

Coffee Break



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15:30 – 17:00

## UTM/ATM Transitions from a Non-Traditional Perspective

*This session will provide an opportunity to showcase selected submissions from experts that describe the challenges and critical issues encountered when aircraft, manned or unmanned, transition between a UTM and an ATM environment.*

### Moderators:

**Mr. Peter van Blyenburgh**, President, UVS International

**Dr. LIU Hao**, Director, Institute of Aviation Law and Standards, Deputy Director, National Research Center of Air Traffic Management Law and Standards, China

### Presentations:

**Mr. Tomasz Różyński**, Director of Operations Planning Bureau, Polish Air Navigation Services Agency with **Mr. Pawel Korzec**, CEO DroneRadar

**Mr. Marc Kegelaers**, CEO, Unifly

**Mr. Lindsay James Mohr**, CEO, AirMarket

**Ms. Patricia Hervías Vallejo**, International ATM and UTM Department, Indra

### Discussion

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**17:00 – 17:20**

## **ICAO Global Aviation Trust Framework**

*Implementation of a Global Aviation Trust Framework to help enable innovation and interoperability. Providing a possible solution for integration of unmanned aircraft into non-segregated airspace and enabling the provision of a digital identity capability, with the potential for such information to be globally transferable. This presentation will discuss how previous experience in establishing trust in the aviation community can be applied in a modern context to solve today's demands for the interoperability, security, and innovation required to enable UAS operations.*

**Mr. William R. Voss**, *Special Adviser to the Director, Air Navigation Bureau, ICAO*

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***End of Day 4***

## Day 5 - Friday, 14 September 2018

00:00 – 00:00

**On-site Registration**

09:00 – 09:15

**Keynote Speech**

**Mr. Dirk Hoke**, Chief Executive Officer, Airbus Defence and Space

09:15 – 09:30

**UTM Framework Update**

*This session will summarize the material found in the UTM Framework, Edition 1, which was developed by the ICAO UAS Advisory Group based on the information derived from DRONE ENABLE/1.*

**Mr. Mark Wuennenberg**, Technical Officer, ICAO Air Navigation Bureau

09:30 – 10:30

**Beyond UTM - Something Out of the Ordinary**

*This session will include several unique presentations on various topics, outside the scope of the UTM discussion, but that are relevant to the advancement of the UAS industry.*

**Moderator: Mr. Michael Gadd**, Head of International Regulatory Affairs, Altitude Angel

**Presentations:**

**Mr. Trent Fulcher**, Head of Strategy, Airways' New Zealand

**Mr. Michael Baum**, Permanent Editorial Board, Aviators Code Initiative

**Mr. Harrison Wolf**, Project Lead, Drones and Tomorrow's Airspace, World Economic Forum

**Ms. ZHANG Yan**, Vice President, Ehang Intelligent Equipment (Guangzhou) Co., Ltd

**Discussion**

10:30 – 11:00

**Coffee Break**



11:00 – 12:30

**Reality Check: A discussion about the Realities of ATM and UTM achieving Interoperability**

*This session will discuss the similarities/differences between the technical and operational capabilities provided by ATM today, and the capabilities being developed for the UTM environment. When discussed, many are seeing similarities, but are they truly similar? If so, where are they similar? If not, assuming ATM stands sufficient, to what degree does UTM need to match up?*

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**Moderator:** Mr. John Scull Walker, Senior Partner, The Padina Group

**Panel discussion:**

**Mr. Benoit Curdy**, Secretary General, Global UTM Association

**Mr. Reinaldo Negron**, Head of Project Wing UTM

**Mr. Nico Voorbach**, Director, ICAO and Industry Affairs CANSO

**Mr. Mike Lissone**, Unmanned Aircraft System (UAS) air traffic management (ATM) Integration Manager, Eurocontrol

Opening statement followed by a debate regarding ATM/UTM.

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**12:30 – 14:00**

Lunch



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**14:00 – 15:30**

**VERY HIGH ALTITUDE OPERATIONS – Lessons from UTM**

*As the development of UTM moves forward enabling various unmanned aircraft operations at low altitude, what lessons learned or best practices can be applied to the management of high level airspace above current commercial flight trajectories? Is the technology that has driven the development of UTM applicable to high altitude operations? What commonalities do high altitude airspace management share with UTM?*

**Moderator:** Ms. Nancy Graham, President, Graham Aerospace International

**Presentations:**

**Mr. Rob Eagles**, Head of Aviation, Project Loon

**Mr. Andrew Tailby**, Head of Flight Operations, Zephyr Programme, Airbus

**Mr. Reinaldo Negron**, Head of Project Wing UTM

**Mr. Brenden Hedblom**, Business Development Manager, Thales Air Traffic Management

**Dr. GUO Xiao**, General Manager, Beijing Infinite Space Technology Co., Ltd

**Discussion**

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**15:30 – 16:00**

Coffee Break



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**16:00 – 16:20**

**Aircraft Registry Network (ARN)**

*The aircraft registry network which ICAO has spearheaded will be explained, including its purpose, intended functionality and interaction with national registry systems. A live demonstration of the system will be provided.*

**Mr. Stephen P. Creamer**, Director, ICAO Air Navigation Bureau

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16:20 – 17:20

**Wrap up and Next steps**

*Looking back at the presentations and related discussions, what are the key points that garnered support? Can we begin to define the boundaries of a potential UTM system and where the UTM and ATM systems meet? Can we identify the critical information streams needed to enable such a dynamic system? How do we use the information provided during DRONE ENABLE/2 to further the framework developed from DRONE ENABLE/1 activities?*

**Moderator:** Mr. Stephen P. Creamer, Director, ICAO Air Navigation Bureau

**Panel discussion:**  
All moderators

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***End of DRONE ENABLE/2 Symposium***

***End of Unmanned Aviation Week 2018***