



VIRTUAL DRONE ENABLE/2021
ICAO's Unmanned Aircraft Systems (UAS) Industry Symposium
Addressing Tomorrow's Challenges Today

13, 14, 15, 20, 21 April 2021

DAY 1 – Tuesday, 13 April 2021

<p>9:00-9:10 EDT 13:00-13:10 UTC</p>	<p>Welcome Remarks</p>
<p>9:10-9:25 EDT 13:10-13:25 UTC</p>	<p>Opening Address <i>Dr. Fang LIU, Secretary General, ICAO</i></p>
<p>9:25-9:45 EDT 13:25-13:45 UTC</p>	<p>Keynote Address <i>Dr. Young Tae Kim, Secretary-General, International Transport Forum, Organisation for Economic Co-operation and Development (OECD)</i></p>
<p>9:45-9:55 EDT 13:45-13:55 UTC</p>	<p style="text-align: center;"><i>Break – Sponsored by TBD</i></p>
<p>9:55-10:30 EDT 13:55-14:30 UTC</p>	<p>ICAO Updates RPAS Panel <i>This session will provide an overview of the work being undertaken by ICAO and the progress being made with RPAS regulatory materials.</i></p> <p>Mr. Frederic Malaud, <i>Technical Officer, Remotely Piloted Aircraft Systems Section, ICAO – RPAS Panel Secretary</i></p> <p>UAS Advisory Group (UAS-AG) <i>This update will summarize the work of the ICAO UAS Advisory Group, including the most recent updates to the UTM Framework based on the information derived from DRONE ENABLE/3, updates to the ICAO UAS Toolkit and the results of the DRONE ENABLE/2021 RFI Process.</i></p> <p>Mr. Mark Wuennenberg, <i>Technical Officer, Remotely Piloted Aircraft Systems Section, ICAO – UAS Advisory Group (UAS-AG) Secretary</i></p> <p>ICAO Model UAS Regulations <i>This session will provide an overview of the ICAO UAS Model Regulations developed to support UAS regulatory harmonization. The companion supporting guidance material will also be discussed</i></p> <p>Ms. JC Shine, <i>Technical Officer, Remotely Piloted Aircraft Systems Section, ICAO</i></p> <p>ICAO Aircraft Registration Network Update/Demo <i>While developing the Aircraft Registration Network, a critical element was identified which impacts global harmonization of aircraft registries. That being, in many States “free text” is used to capture “the manufacturer” and “manufacturer’s designation” of the aircraft. As even subtle differences in this data complicate registry reconciliations, this poses a challenge. As a result, ICAO worked with the Korean Ministry of Land, Infrastructure and Transport on an application that will allow aircraft registry and other applications to interact with the Commercial Aviation Safety Team (CAST)/ICAO Aircraft Taxonomy. A prototype of the application will be presented that will demonstrate how such a system can be integrated using open source code and API calls. The system allows consulting the CAST/ICAO taxonomy in real-time to request new aircraft codes when one is not available.</i></p> <p>Mr. Miguel Marin, <i>Chief, Operational Safety Section, ICAO</i></p>



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10:30-10:45 EDT 14:30-14:45 UTC	ICAO Update – Q&A Session
10:45-10:55 EDT 14:45-14:55 UTC	<i>Break – Sponsored by TBD</i>
10:55-11:45 EDT 14:55-15:45 UTC	<p>Panel Session – Interaction with Key Aviation and Non-Aviation Stakeholders <i>This panel will discuss viewpoints from various stakeholders, who may not traditionally be part of the UTM discussions, regarding what they are looking for, expecting, needing, concerned about, etc., when it comes to the development and deployment UTM capabilities.</i></p> <p>Moderator: Mr. Koen De Vos,</p> <p>Presentations: Mr. Erwin Verstraelen, Chief Digital Inform. & Innovation Officer, Antwerp Port Authority Mr. Vendelin Clicques, President, International Emergency Drones Organization (IEDO) Mr. Andreas Richter, Head of Department “Innovation and Cluster”, Ministry of Economy and Innovation, City of Hamburg Dr. Scott Burgess, UAS Special Advisor, Helicopter Association International (HAI) Mr. Christopher Cooper, Senior Director, Regulatory Affairs, International Aircraft Owners and Pilots Association (IAOPA)</p>
11:45-12:00 EDT 15:45-16:00 UTC	Panel Q&A Session
12:00-12:10 EDT 16:00-16:10 UTC	Day 1 close out and preview for Day 2
<i>End of Day 1 - SkyTalk</i>	
12:30-14:00 EDT 16:30-18:00 UTC	Day 1 Round Table – Facilitator lead open discussion on day 1 topics



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DAY 2 – Wednesday, 14 April 2021

9:00-9:10 EDT 13:00-13:10 UTC	Welcome Remarks
9:10-9:25 EDT 13:10-13:25 UTC	Keynote Address Mr. Ali Bahrami, Associate Administrator for Aviation Safety, Federal Aviation Administration
9:25-9:35 EDT 13:25-13:35 UTC	Intro RFI Session 1 – Pt 1 Moderator - Ms. Ruby Sayyed – Head ATM Advocacy, International Air Transport Association (IATA)
9:35-10:35 EDT 13:35-14:35 UTC	RFI Session 1 – Pt 1 <i>UA Performance Requirements in a UTM Environment</i> Speakers Mr. Andy Thurling, Chief Technology Officer, Northeast UAS Airspace Integration Research Alliance (NUAIR) Mr. Marcello Coura, Drone Operations Coordinator, OMNI Táxi Aéreo Mr. Steven Van Den Berghe, Chief Technical Officer, EuroUSC Mr. Michael Hardt, Boeing Associate Technical Fellow, Autonomy, Boeing Research & Technology
10:35-10:45 EDT 14:35-14:45 UTC	Break – Sponsored by TBD
10:45-11:45 EDT 14:45-15:45 UTC	RFI Session 1 – Pt 2 <i>UA Performance Requirements in a UTM Environment</i> Speakers Mr. Terrence "Terry" Martin, Professor, Queensland University of Technology (Nova Systems) Mr. André Arruda & Lucas Florêncio, Co-Founders, AL Drones Dr. Kin Huat Low, Principal Investigator of UAS Programme, Air Traffic Management Research Institute (ATMRI) Mr. Reinaldo Negron, Head of UTM, Wing
11:45-12:05 EDT 15:45-16:05 UTC	RFI Session – Q&A Session
12:05-12:15 EDT 16:05-16:15 UTC	Day 2 close out and preview for Day 3
End of Day 2 - SkyTalk	
12:45-14:00 EDT 16:45-18:00 UTC	Day 2 Round Table – Facilitator lead open discussion on day 2 topics



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DAY 3 – Thursday, 15 April 2021

9:00-9:10 EDT 13:00-13:10 UTC	Welcome Remarks
9:10-9:25 EDT 13:10-13:25 UTC	Keynote Address Mr. Patrick Ky, <i>Executive Director, European Union Aviation Safety Agency (EASA)</i>
9:25-9:35 EDT 13:25-13:35 UTC	Intro RFI Session 2 – Pt 1 Moderator – Mr. Jay Merkle, <i>Executive Director, Office of UAS Integration, Federal Aviation Administration (FAA)</i>
9:35-10:15 EDT 13:35-14:15 UTC	RFI Session 2 – Pt 1 <i>UTM System Certification Requirements</i> Speakers Mr. Ted Lester, <i>former Chief Technologist, AiRXOS part of GE Aviation</i> Mr. Benoît Curdy, <i>Digital Transformation Architect, Innovation and Digitalization Unit, Swiss FOCA</i> Mr. Robert Champagne, <i>Principal Software Engineer, Amazon Prime Air</i>
10:15-10:25 EDT 14:15-14:25 UTC	<i>Break – Sponsored by TBD</i>
10:25-11:00 EDT 14:25-15:00 UTC	RFI Session 1 – Pt 2 <i>UTM System Certification Requirements</i> Speakers Mr. Andrew Carter, <i>Chief Technology Officer, ResilenX</i> Dr. Scot Campbell, <i>Head of UTM System Design, Airbus UTM</i> Mr. Michael Maes, <i>Managing Director, EuroUSC</i>
11:00-11:20 EDT 15:00-15:20 UTC	RFI Session – Q&A Session
11:20-11:30 EDT 15:20-15:30 UTC	<i>Break – Sponsored by TBD</i>



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<p>11:30-12:10 EDT 15:30-16:10 UTC</p>	<p>UTM Development and Deployment Lessons Learned <i>This session will have experts from various sectors of UTM, including service providers, regulators and research organizations, discussing their lessons learned and how these can facilitate global harmonization and assist other States or organization moving forward with the development and deployment of UTM systems.</i></p> <p>Moderator: <i>Mr. Michael Gadd, Head of Compliance and Certification, Blue Bear Systems Research</i></p> <p>Presentations: Mr. Steve Bradford, <i>Chief Scientist-Architecture & NextGen Development, Federal Aviation Administration (FAA)</i> Professor LIU Hao, <i>Acting Chair of Joint Authorities for Rulemaking of Unmanned Systems (JARUS)/ Deputy Director of National Research Center of ATM Law and Standard, China</i> Mr. Robin Garrity, <i>Senior External Affairs Officer, SESAR Joint Undertaking</i> Mr. Gary Newman, <i>Aviation Safety Inspector - Airspace, GCAA, United Arab Emirates</i> Dr. Daisuke Kubo, <i>Associate Senior Researcher, Next Generation Aeronautical Innovation Hub Center, Japan Aerospace Exploration Agency (JAXA)</i> Mr. Koen Meuleman, <i>Co-founder Regulatory Affairs, Unifly</i></p>
<p>12:10-12:25 EDT 16:10-16:25 UTC</p>	<p>Panel Q&A Session</p>
<p>12:25-12:35 EDT 16:25-16:35 UTC</p>	<p>Day 3 close out and preview for Day 4</p>
<p><i>End of Day 3 - SkyTalk</i></p>	
<p>13:00-14:30 EDT 17:00-18:30 UTC</p>	<p>Day 3 Round Table – Facilitator lead open discussion on day 3 Topics</p>



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DAY 4 – Tuesday, 20 April 2021

9:00-9:10 EDT 13:00-13:10 UTC	Welcome Remarks
9:10-9:25 EDT 13:10-13:25 UTC	Keynote Address Mr. Luis Felipe de Oliveira, <i>Director General, Airports Council International (ACI)</i>
9:25-9:35 EDT 13:25-13:35 UTC	Intro RFI Session 3 – Pt 1 Moderator Mr. Thomas Romig, <i>Vice President Safety & Operations, Airports Council International (ACI)</i>
9:35-10:35 EDT 13:35-14:35 UTC	RFI Session 3 – Pt 1 <i>UTM Integration into Aerodrome Environments/Activities</i> Speakers Mr. Philip Binks, <i>Head of Air Traffic Management, Altitude Angel</i> Mr. Jose Airton Patricio, <i>Systems Engineering, Atech</i> Dr. Andreas Lamprecht, <i>Chief Technology Officer, Airmap</i> Mr. Luigi Bruculeri, <i>Senior Technical Project Manager, Techno Sky, ENAV</i>
10:35-10:45 EDT 14:35-14:45 UTC	Break – Sponsored by TBD
10:45-11:45 EDT 14:45-15:45 UTC	RFI Session 3 – Pt 2 <i>UTM Integration into Aerodrome Environments/Activities</i> Speakers Ms. Julia Sanchez, <i>ATM UAS Specialist, European Organisation for the Safety of Air Navigation (EUROCONTROL)</i> Ms. Patricia Hervais, <i>Head of UTM Systems Engineering, Indra Sistemas</i> Mr. Mateusz Kotliński / Mr. Maciej Włodarczyk, <i>U-space Program Manager / Head of UAS Operations Department, Polish Air Navigation Services Agency (PANSZA)</i> Mr. Frank Matus, <i>Director, Digital Aviation Market Development – Americas, Thales</i>
11:45-12:05 EDT 15:45-16:05 UTC	RFI Session – Q&A Session
12:05-12:15 EDT 16:05-16:15 UTC	Day 4 close out and preview for Day 5
End of Day 4 - SkyTalk	
12:45-14:00 EDT 16:45-18:00 UTC	Day 4 Round Table – Facilitator lead open discussion on day 4 topics



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DAY 5 – Wednesday, 21 April 2021

9:00-9:05 EDT 13:00-13:05 UTC	Welcome Remarks
9:05-9:20 EDT 13:05-13:20 UTC	Keynote Address Mr. Franz Drees-Gross, <i>Regional Director for Infrastructure, Latin America and Caribbean Region, World Bank Group</i>
9:20-10:05 EDT 13:20-14:05 UTC	Panel Session – Cyber Resilience <i>This panel will discuss the evolution of the aviation system considering its needs for secure and resilient connections for exchange of safety critical messages and how an international aviation trust framework can help new entrants to be safely integrated in a non-segregated airspace considering possible cyber threats. The panel will discuss the potential threats in a digitally connected environment and the need for global regulations to guarantee acceptable levels of safety in UAS and UTM operations.</i> Moderator: Mr. Saulo Da Silva, <i>Chief, Global Interoperable Systems, ICAO</i> Presentations: Mr. Robert Gallo, <i>Chief Executive Officer, Kryptus EED S.A.</i> Mr. Dan Diessner, <i>Senior Research Scientist, Embry Riddle Aeronautical University</i> Mr. Rob Segers, <i>Information System Security Architect, Federal Aviation Administration</i> Mr. Patrick Mana, <i>Cyber-Security Cell Manager, EUROCONTROL</i> Mr. Andy Thurling, <i>Chief Technology Officer, NUAIR Alliance</i>
10:05-10:20 EDT 14:05-14:20 UTC	Panel Q&A Session
10:20-10:30 EDT 14:20-14:30 UTC	Break – Sponsored by TBD
10:30-11:10 EDT 14:30-15:10 UTC	Panel Session – Brazilian Focus <i>This panel will highlight the entire process related to UAS operations in Brazil and will involve all the key stakeholders, including operators and Brazilian Authorities. Attendees will be provided with an understanding of the main goals and the challenges during the various processes. In addition, based on their various points of view, the panellists will discuss the necessity of implementing a viable UAS Traffic Management system as a key enabler for UAS scalability.</i> Moderator: Ms. Daniele Lins, <i>Department of Aerospace Control (DECEA), Brazil</i> Presentations: Mr. Jorge Alexandre de Almeida Regis, <i>Air Traffic Controller, Head of Military Operations Subdivision, Department of Aerospace Control (DECEA), Brazil</i> Mr. André Arruda and Mr. Lucas Florêncio Queiróz de Oliveira, <i>Co-Founder, AL Drones, Brazil</i> Mr. Giovanni Amianti, <i>Chief Executive Officer, XMobots, Brazil</i> Mr. Roberto Honorato, <i>Head of Airworthiness Department, National Civil Aviation Agency (ANAC), Brazil</i> Mr. Ailton José de Oliveira Jr., <i>Coordinator Drones and New Technologies Group, National Civil Aviation Agency (ANAC), Brazil</i>



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11:10-11:25 EDT 15:10-15:25 UTC	Panel Q&A Session
11:25-11:35 EDT 15:25-15:35 UTC	<i>Break – Sponsored by TBD</i>
11:35-12:15 EDT 15:35-16:15 UTC	<p>Panel Session – Advanced/Urban Air Mobility</p> <p><i>This panel will have leaders in the field of advanced/urban air mobility discuss their recent advancements, the regulatory/technical challenges that remain and what is needed to see this capability deploy safely.</i></p> <p>Moderator: Mr. Graham Warwick, Managing Editor, Technology, Aviation Week</p> <p>Presentations: Mr. Edward Xu, Chief Strategy Officer, EHang Holdings Mr. John Illson, Commercial Certification Lead, Joby Aviation Mr. David Rottblatt, Vice President, Business Development, Eve Urban Air Mobility Mr. Dan Dalton, Vice President, Global Partnerships, Wisk Mr. David Oord, Head of Regulatory Affairs Americas, Lilium Mr. Mike Whitaker, Global Head of Policy, Urban Air Mobility Division of Hyundai Motor Group</p>
12:15-12:30 EDT 16:15-16:30 UTC	Panel Q&A Session
12:30-13:00 EDT 16:30-17:00 UTC	<p>Panel Session – Flight Rules in an Evolving Environment</p> <p><i>Future regulatory provisions should acknowledge the change in the role of the human with higher levels of automation. Given the time it takes to formulate, assess, and implement new provisions in the aviation system, it is critical to consider the new use cases for unmanned aircraft and the provisions that would be required in the future to ensure safe operations. How does the role of the human in the loop change and what are the implications on airspace management and flight rules – for new entrants and for conventional aviation? In this final session of DRONE ENABLE, you will hear from two key individuals with unique insight into the pending evolution of the aviation system and how these can be progressed effectively.</i></p> <p>Moderator: Mr. Chris Dalton, Chief, Air Traffic Management Section, ICAO</p> <p>Panelists: Mr. Stephen P. Creamer, Director, Air Navigation Bureau, ICAO Mr. Carlos Cirilo, Director, ATM Infrastructure, International Air Transport Association (IATA)</p>
13:00-13:15 EDT 17:00-17:15 UTC	Symposium Close-Out
<i>End of Day 5</i>	