



ICAO

# AIR NAVIGATION WORLD 2023

## ATM Procedures for Today

23 - 27 October 2023 | Singapore

Hosted by

**CAAS**

Civil Aviation Authority of Singapore

Programme and Directory

|                            | Day 1   | Day 2  | Day 3   | Day 4  | Day 5  |
|----------------------------|---|--|---|--|--|
| 08:00 – 09:00              |   | <i>Morning Networking*</i>                                 |   |  |  |
| Session 1<br>09:00 – 10:30 | <b>09:00 – 10:00 (Day 1 only)</b><br>Registration<br><i>Morning Networking*</i> | 2.1 Separation Methods and Minima–Terminal Part I          | 2.4 Separation Methods and Minima – En-route    | 3.3 Contingency planning and crisis response and safety risk assessments | 3.6 GADSS  |
|                            | <b>10:00 – 10:30 (Day 1 only)</b><br>Opening & Welcome                          |  |   |  |  |
| 10:30 – 11:00              | <b>10:30 – 11:10 (Day 1 only)</b><br>1.1 Setting the Scene                      | <i>Coffee Break</i>  |   |  |  |
| Session 2<br>11:00 - 12:30 | <b>11:10 – 11:40 (Day 1 only)</b><br><i>Coffee Break</i>                        | 2.2 Separation Methods and Minima–Terminal Part II         | 3.1 ATS data link (CPDLC, ADS-C, AIDC and PBCS) | 3.4 Transition from FPL2012 to FF-ICE                                    | Test Your Knowledge in ATM                               |
|                            | <b>11:40 – 12:30 (Day 1 only)</b><br>1.1 Setting the Scene                      |  |   |  |  |
| 12:30 – 13:30              | <i>Lunch Break</i>  |  |   |  |  |
| 13:30 - 14:00              | SkyTalks by Thales  | SkyTalks by Aireon   | SkyTalks by Startical                           | SkyTalks by Leidos   |  |
| Session 3<br>14:00 - 15:30 | 1.2 Implementation Expectations and Challenges                                  | 2.3 Separation Methods and Minima – Terminal Part II -WAKE | 3.1 ATS data link (CPDLC, ADS-C, AIDC and PBCS) | 3.4 Transition from FPL2012 to FF-ICE                                    | Wrap-Ups and Closing                                     |
| 15:30 – 16:00              |   | <i>Coffee Break</i>  |   |  | <b>15:30 – 18:30 (Day 5 only)</b><br><i>Social event</i> |
| Session 4<br>16:00 - 17:00 |   | 2.3 Separation Methods and Minima – Terminal Part II -WAKE | 3.2 Free Route Airspace (FRA)                   | 3.5 ATFM   |  |
| 17:00 – 18:00              |   | <i>Evening Networking*</i>                                 |   |  |  |
| 18:00 – 20:00              | <i>Gala Dinner hosted by CAAS</i>   |  |   |  |  |

*\* Optional Networking opportunities with light refreshments and beverages, kindly provided by CAAS*

# AIR NAVIGATION WORLD 2023

## ATM Procedures for Today

23 - 27 October 2023 | Singapore

### DAY 1 – MONDAY, 23 October 2023

#### Opening and Welcome

30m

##### Welcome and opening remarks

- *Mr. Chee Hong Tat, Acting Minister for Transport-Ministry of Transport Singapore*
- *Mr. Juan Carlos Salazar, Secretary General, ICAO*

#### 1.1 - Setting the Scene

90m

The session will provide information on the current global status of air traffic management (ATM) performance, and fundamental building blocks to enable tangible performance improvement in the coming years, with an eye on the future, and in line with the long-term global aspirational goal for international aviation of net-zero carbon emissions by 2050. The session will also address change management, which is essential in supporting transitions to achieve desired outcomes, involving planning, implementing, and managing changes effectively, whether they are organizational changes, process changes, or technological changes.

- *Ms. Michele Merkle, Director of the Air Navigation Bureau*
- *Mr. Stephen P. Creamer, Former Director of the Air Navigation Bureau*

##### SkyTalks by Thales - The future of ATC: an environmental actor

*Speaker: Mr. Hugh Rodrick, AIR Lab Deputy Director – Chief Product Owner, Thales AMS*

#### 1.2 - Implementation Expectations and Challenges

90m

The session aims to present the ICAO standard-making process and how ICAO provisions address the operational needs and support the evolution of the aviation sector. The regional experience concerning the implementation of ATM operational and technical improvements and the challenges faced will be presented from States and ANSPs' perspectives. The Session will also discuss whether the airspace users' operational requirements and capabilities have been accommodated by the air traffic services (ATS) providers.

*Moderator: Mr. Han Kok Juan, Director-General, Civil Aviation Authority of Singapore*

*Speakers:*

- *Mr. Padhraic Kelleher, President of the Air Navigation Commission*
- *Mr. Tao Ma, Regional Director, ICAO Asia and Pacific (APAC) Office*
- *Mr. Ahmed Al Jallaf, Chairman of MIDANPIRG*
- *Mr. Poh Theen Soh, Director Asia Pacific Affairs of CANSO*
- *Mr. Blair Cowles, Regional Director IATA Asia-Pacific*

# AIR NAVIGATION WORLD 2023

## ATM Procedures for Today

23 - 27 October 2023 | Singapore

### DAY 2 – TUESDAY, 24 October 2023

#### 2 - Separation Methods and Minima

|            |   |
|------------|---|
| <p>90m</p> | <p><b>2.1 Separation Methods and Minima – Terminal Part I</b></p> <p>This session will provide an overview of ICAO provisions and guidance to improve the sustainability and efficiency of terminal operations. The session will address subjects such as SID/STAR, CDO/CCO and PBN instrument approaches.</p> <p><i>Facilitator: Mr. Doug Marek, PBNNAS CEO and former FAA Air Traffic Manager and Technical Officer PBN Programme at ICAO</i></p> <p><i>Speakers:</i></p> <ul style="list-style-type: none"> <li>• <b>Mr. Mike Balder</b>, Director Safety PBNNAS and former FAA ATO Safety and Technical Training and CANSO Safety Standing Committee</li> <li>• <b>Mr. Walter White</b>, Chief Operating Officer and Director of PBN Airspace Architecture for PBNNAS and Former Technical Officer PBN Programme at ICAO</li> </ul>   |
| <p>90m</p> | <p><b>2.2 Separation Methods and Minima – Terminal Part II</b></p> <p>This session will build on the previous session and discuss specific initiatives to improve the sustainability and efficiency of terminal operations. Advancements in avionics, navigation, surveillance and automation capabilities have and will continue to facilitate improvements in terminal operations. It is foreseen that benefits include improvements to efficiency and predictability, as well as reducing environmental impact (e.g. fuel burn, emissions and noise exposure). This session will review implementation lessons and benefits at locations that have implemented the recently amended ICAO parallel approach procedures, the reduced divergence departures procedures, and other means of optimizing terminal operations.</p> <p><i>Moderator: Mr. Anthony Ang, Technical Expert, Air Traffic Management (ATM) Section, Air Navigation Bureau, ICAO</i></p> <p><i>Speakers:</i></p> <ul style="list-style-type: none"> <li>• <b>Dr. Sheila Conway</b>, Technical Fellow, Sustainable Transportation, The Boeing Company</li> <li>• <b>Mr. Blake Cushnie</b>, Program Director, Service Delivery, NAVCANADA</li> <li>• <b>Mr. Nick Tallman</b>, Concept Advancement Lead, Airspace Modernization Group, Mission Support Services, Air Traffic Organization (ATO), Federal Aviation Administration</li> <li>• <b>Mr. David Perks</b>, Senior ATS Specialist, ATM Standards, Airservices Australia</li> </ul> |
| <p>90m</p> | <p><b>2.3 Separation Methods and Minima – Terminal Part II – Wake</b></p> <p>This session will provide an overview of ICAO provisions related to wake turbulence separation minima. The session also considers implementation experiences, lessons learned and benefits at locations that have implemented these provisions.</p> <p><i>Moderator: Mr. Jean-François Lepage, Industry Observer for the International Federation of Air Traffic Controllers' Associations (IFATCA) on the ICAO Air Navigation Commission</i></p> <p><i>Speakers:</i></p> <ul style="list-style-type: none"> <li>• <b>Mr. Frederic Rooseleer</b>, EUROCONTROL Runway Performance – Deployment Support Coordinator, ASBU-WAKE Lead</li> <li>• <b>Mr. Vincent Hwa</b>, Director of Air Traffic Services, Civil Aviation Authority of Singapore</li> <li>• <b>Mr. Mohammad Al Dossari</b>, Senior Director - Air Navigation and Aerodromes Aviation Safety Affairs, General Civil Aviation Authority, United Arab Emirates</li> </ul>   |

# AIR NAVIGATION WORLD 2023

## ATM Procedures for Today

23 - 27 October 2023 | Singapore

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|     | <p><b>SkyTalks by Aireon - Harnessing Space-Based ADS-B, Cloud Services for ATFM</b></p> <p><i>Speaker: Mr. Stuart Ratcliffe, ATFM Product Manager, Aireon</i></p>   |
| 60m | <p><b>2.3 Separation Methods and Minima – Terminal Part II – Wake (Cont'd)</b></p> <p>This session will review implementation lessons and benefits at locations implementing the ICAO procedures concerning wake turbulence separation minima based on aircraft Groups (WTG) and time-based separation (TBS) minima for wake turbulence – final approach course.</p> <p><i>Moderator: Mr. Jean-François Lepage, Industry Observer for the International Federation of Air Traffic Controllers' Associations (IFATCA) on the ICAO Air Navigation Commission</i></p> <p><i>Speakers:</i></p> <ul style="list-style-type: none"> <li>• <b>Mr. Wai Hon Anfernee POON</b>, Atg. Senior Operations Officer (Strategic Planning), Hong Kong Civil Aviation Department</li> <li>• <b>Mr. Blake Cushnie</b>, NAVCANADA Program Director, Service Delivery</li> <li>• <b>Mr. Sebastiaan de Stigter</b>, Senior Project Manager at LVNL – Air Traffic Control, Netherlands</li> </ul> |

### DAY 3 – WEDNESDAY, 25 October 2023

|     |  |
|-----|--|
| 90m | <p><b>2.4 Separation Methods and Minima – En-route</b></p> <p>This session will consider the implementation of increasingly efficient ICAO separation minima in the en-route phase of flight. This work has provided demonstrable and measurable benefits to the aviation industry and has been enabled by the expansion of ATS surveillance services into airspace that was previously the domain of procedural separations and enabled by CNS capabilities (such as CPDLC, ADS-C and SB ADS-B) which have provided the foundation for performance-based (RCP, RNP, and RSP) separation minima.</p> <p><i>Moderator: Mr. Noel Dwyer, National Manager, ATS Standards Delivery, NAV CANADA</i></p> <p><i>Speakers:</i></p> <ul style="list-style-type: none"> <li>• <b>Mr. Noel Dwyer</b>, National Manager, ATS Standards Delivery, NAV CANADA</li> <li>• <b>Dr. Steve Barry</b>, Risk Intelligence Lead, Airservices Australia</li> <li>• <b>Mr. Andrew Wee</b>, Deputy Director, Safety and Standards, Civil Aviation Authority of Singapore</li> <li>• <b>Mr. Paul Radford</b>, Monitoring, Oceanic Systems Development Specialist, Airways New Zealand</li> </ul> |
|-----|--|

### Session 3 - ATM PERFORMANCE IMPROVEMENT ENABLERS

|     |   |
|-----|---|
| 90m | <p><b>3.1 ATS data link operations – (CPDLC, ADS-C, AIDC)</b></p> <p>This session will consider the role of data link communications (CPDLC, ADS-C and AIDC) in current and future ATM operations. The session will address the experience and plans of using data links in varying ranges (just as a complementary means to HF voice communication to as an essential tool to realize trajectory-based operations). The session will also provide hands-on guidance for planning and implementation of data link services, using specific sections of the Global Operational Data Link Manual (GOLD, 10037), and the newly developed global AIDC manual.</p> <p><i>Moderator: Ms. Shelley Bailey, International Coordination Air Traffic Specialist, NAV CANADA</i></p> <p><i>Speakers:</i></p> <ul style="list-style-type: none"> <li>• <b>Mr. Kwek Chin Lin</b>, ATC Specialist, Operations Technology, Civil Aviation Authority of Singapore</li> </ul> |
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# AIR NAVIGATION WORLD 2023

## ATM Procedures for Today

23 - 27 October 2023 | Singapore

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|------------|--|
|            | <ul style="list-style-type: none"> <li>• <b>Mr. Paul Radford</b>, Monitoring, Oceanic Systems Development Specialist, Airways New Zealand</li> <li>• <b>Mr. Yukio Imada</b>, Special Assistant to the Director, Air Navigation Services Planning Division, Civil Aviation Bureau, Ministry of Land, Infrastructure, Transport and Tourism, Japan</li> <li>• <b>Ms. Lisa Bee</b>, Director of Air Traffic Services, Viasat+ Inmarsat Aviation</li> <li>• <b>Mr. Dung Nguyen</b>, Principal Systems Engineer, Data Link Systems, Boeing Company</li> <li>• <b>Capt. Paul Vissers</b>, ATS Committee Chairman, International Federation of Air Line Pilots' Associations</li> </ul>   |
|            | <p><b>SkyTalks by Startical - Satellite-based VHF Communications</b></p> <p><i>Speaker: Mr. Juan Jose Cornejo, Business Development Director, Startical</i></p>  |
| <p>90m</p> | <p><b>3.1 ATS data link operations – (PBCS)</b></p> <p>This session will consider the role of performance-based communication and services (PBCS) in current and future ATM operations. The session will provide an overview of the PBCS framework and implementation lessons learned for all the components of the PBCS framework, using specific sections of the Performance-Based Communication and Surveillance Manual (Doc 9869).</p> <p><i>Moderator: Ms. Crystal Kim, Technical Officer, Air Traffic Management (ATM) Section, Air Navigation Bureau, ICAO</i></p> <p><i>Speakers:</i></p> <ul style="list-style-type: none"> <li>• <b>Ms. Shelley Bailey</b>, International Coordination Air Traffic Specialist, NAV CANADA</li> <li>• <b>Mr. Kwek Chin Lin</b>, ATC Specialist, Operations Technology, Civil Aviation Authority of Singapore</li> <li>• <b>Mr. Paul Radford</b>, Monitoring, Oceanic Systems Development Specialist, Airways New Zealand</li> <li>• <b>Mr. Yukio Imada</b>, Special Assistant to the Director, Air Navigation Services Planning Division, Civil Aviation Bureau, Ministry of Land, Infrastructure, Transport and Tourism, Japan</li> <li>• <b>Ms. Lisa Bee</b>, Director of Air Traffic Services, Viasat+ Inmarsat Aviation</li> <li>• <b>Mr. Dung Nguyen</b>, Principal Systems Engineer, Data Link Systems, Boeing Company</li> </ul> |
| <p>60m</p> | <p><b>3.2 Free Route Airspace Concept</b></p> <p>The free route airspace (FRA) concept refers to a flexible and efficient approach to airspace management. It allows airspace users to plan their own trajectories within specified airspace, without the need to follow predetermined airways or routes. This concept aims to enhance airspace utilization, reduce fuel consumption, and minimize emissions by providing greater freedom and flexibility for aircraft navigation. An overview of FRA concept will be provided addressing the planning and implementation considerations, criteria used and lessons learned.</p> <p><i>Facilitator: Mr. Tihomir Todorov, Head of Section Airspace Design, EUROCONTROL</i></p>  |

# AIR NAVIGATION WORLD 2023

## ATM Procedures for Today

23 - 27 October 2023 | Singapore

### DAY 4 – THURSDAY, 26 October 2023

|     |   |
|-----|---|
| 90m | <p><b>3.3 Contingency planning, crisis response and safety risk assessments</b></p> <p>This session will provide an opportunity to consider and discuss the many and varied issues that could prompt an ATM contingency situation. The session will focus on initial actions to be taken, ongoing contingency management, and transition back to normal operations, from the point of view of air traffic services providers and operators, and how these can be expedited using a contingency coordination team. The session will also address the ICAO requirements for appropriate ATS authority to ensure that a safety risk assessment is conducted for activities potentially hazardous to civil aircraft and that appropriate risk mitigation measures are implemented.</p> <p><i>Facilitator: Mr. Chris Dalton, Chief, Air Traffic Management (ATM) Section, Air Navigation Bureau, ICAO</i></p>  |
|     | <p><b>SkyTalks by Leidos - Interoperable Flow Management Systems</b></p> <p><i>Speaker: Dr. Tony Ng, CTO and Solution Architect for the Civil Transportation Solutions division, Leidos</i></p>   |
| 90m | <p><b>3.4 Transitioning from FPL2012 to the flight and flow information for the collaborative environment (FF-ICE)</b></p> <p>The FF-ICE concept was developed to address the limitations and constraints of the current flight planning mechanism, commonly known as FPL2012 and the increasing need for the exchange of flight and flow information in a trajectory-based operations (TBO) environment. The session will provide an overview of the FF-ICE concept and global requirements and procedures that are envisioned to be applicable in November 2024. The session will also discuss considerations for planning and implementation of the FF-ICE services, including transition strategy and determining regional and national dates for sunsetting FPL2012. The session will also provide an outlook on global ATM concepts, such as connected aircraft and trajectory-based operations, and consider how to transition by implementing key building blocks.</p> <p><i>Moderator: Mr. Henk Hof, Head of the ICAO and Concept Unit, EUROCONTROL</i></p> <p><i>Speakers:</i></p> <ul style="list-style-type: none"> <li>• <b>Mr. Yean Guan Tan</b>, Director, Air Traffic Management Plans and Development Division, Civil Aviation Authority of Singapore</li> <li>• <b>Mr. Augustin Gheorghe</b>, Senior Expert, EUROCONTROL</li> <li>• <b>Ms. Diana Liang</b>, Enterprise Portfolio Manager, Federal Aviation Administration</li> <li>• <b>Mr. Yukio Imada</b>, Special Assistant to the Director, Air Navigation Services Planning Division, Civil Aviation Bureau, Ministry of Land, Infrastructure, Transport and Tourism, Japan</li> <li>• <b>Dr. Amornrat Jirattigalachote</b>, Strategic Planning Manager (Engineering) Aeronautical Radio of Thailand Ltd.</li> </ul> |
| 90m | <p><b>3.4 Transitioning from FPL2012 to the flight and flow information for the collaborative environment (FF-ICE) (Cont'd)</b></p>   |
| 60m | <p><b>3.5 Air Traffic Flow Management</b></p> <p>Collaborative air traffic flow management (ATFM) has evolved beyond issues around excess traffic to now contribute in all instances to a safer, more orderly, expeditious and environmentally sustainable flow of air traffic, and to support cross-border collaboration. This evolution is about ensuring that air traffic control capacity is optimized and utilized to the maximum extent possible. This session will provide an overview of proposals for amendment to Annex 11 and PANS-ATM, which will become applicable in the coming years. The subject of the amendment includes: the measuring of air traffic control capacity for controlled airspace and controlled aerodromes at the national level; multi-States arrangements and centralized organization; the ATFM framework at the national and regional levels highlighting the required regulations, organizational structure and functions, operating procedures, etc. The session will also share the current ATFM implementation experiences and challenges.</p>   |

# AIR NAVIGATION WORLD 2023

## ATM Procedures for Today

23 - 27 October 2023 | Singapore

**Moderator:** *Mr. Elie El Khoury, Technical Officer, Air Traffic Management (ATM) Section, Air Navigation Bureau, ICAO*

**Speakers:**

- **Mr. Tihomir Todorov**, Head of Section Airspace Design, EUROCONTROL
- **Mr. Joaquim Lobo Junior**, Head of Air Traffic Management Regulation Section, Department of Airspace Control, Brazil
- **Piyawut Tantimekabut (Toon)**, Air Traffic Management Network Manager, Aeronautical Radio of Thailand Ltd (AEROTHAI) and Chair of the ICAO APAC ATFM Steering Group
- **Mr. Hamad Al Belushi**, Chairman of ICAO Middle East Region ATFM Task Force
- **Mr. Stuart Ratcliffe**, Co-Chair of the CANSO ATFM/A-CDM Work Group

### DAY 5 – FRIDAY, 27 October 2023

60m

#### 3.6 The Global Aeronautical Distress and Safety System (GADSS)

This session will provide an overview of the GADSS concept and global requirements and procedures. The session will focus on new developments in the GADSS, including the location of an aircraft in distress repository (LADR), and the implications of these systems on the operations of air traffic services providers.

**Facilitator:** *Mr. John Welton, Technical Officer, Air Traffic Management (ATM) Section, Air Navigation Bureau, ICAO*

#### Test Your Knowledge in ATM

90m

This session will allow participants to consolidate knowledge gained during ANW-ATM. Whether you are a seasoned ATM expert or new to the world of Air Traffic Management, there is always something new to discover. Utilizing a light-hearted and less formal format, Test Your Knowledge in ATM provides an opportunity to reinforce your learning and prove your expertise. There may even be a prize on offer

— END —

# AIR NAVIGATION WORLD 2023

## ATM Procedures for Today

23 - 27 October 2023 | Singapore

### EXHIBITION FLOOR PLAN



# AIR NAVIGATION WORLD 2023

## ATM Procedures for Today

23 - 27 October 2023 | Singapore

Hosted by

Booth #4



Civil Aviation Authority of Singapore

### Company description

The mission of the Civil Aviation Authority of Singapore is to grow a safe, vibrant air hub and civil aviation system, making a key contribution to Singapore's success. CAAS' roles are to oversee and promote safety in the aviation industry, develop the air hub and aviation industry, provide air navigation services, provide aviation training for human resource development, and contribute to the development of international civil aviation. For more information, visit [www.caas.gov.sg](http://www.caas.gov.sg).

### Contact information:

Michelle Hoo  
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### Website:

<https://www.caas.gov.sg>

# AIR NAVIGATION WORLD 2023

## ATM Procedures for Today

23 - 27 October 2023 | Singapore

Booth #6



### Company description

Leidos continues to partner with Air Navigation Service Providers - addressing their most complex and unique challenges to provide safe, efficient, and predictable movement of aircraft. Our 64-year history, starting with the US Federal Aviation Administration (FAA) spans software development, deployment, and system maintenance throughout the world. With premier solutions for en route, oceanic, tower, traffic flow and flight services Leidos integrates capabilities across the Communication, Navigation, and Surveillance domains. Beyond ATM, Leidos continues as the #1 largest US Federal Government contractor - providing the necessary depth and breadth of experience to deliver solutions at scale with speed and security.

### Contact information:

Milton Yang  
Sr. Director Business Development, Transportation Solutions  
[milton.yang@leidos.com](mailto:milton.yang@leidos.com)

### Website:

<https://www.leidos.com/>



# TAKING AIR TRAFFIC CONTROL SYSTEMS TO NEW HEIGHTS

Leidos provides air traffic control systems that help manage the world's busiest and most complex airspace.

For more information visit  
[leidos.com/ATM](https://leidos.com/ATM)



2 / 3  
of all aircraft  
take off, fly and land  
using Thales solutions

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**THALES**  
Building a future we can all trust

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## ATM Procedures for Today

23 - 27 October 2023 | Singapore

Booth #7



**THALES**  
Building a future we can all trust

### Company description

Thales is the world leader in air mobility solutions. An impressive 2 out of every 3 planes around the world land and take-off with the help of Thales. We combine half a century's experience in development and deployment with an unrivalled worldwide installed base, advanced technology and ground-breaking innovations to deliver solutions that are continually adapted to the ever-changing aviation system's needs.

### Contact information:

Benjamin Binet  
VP Strategy & Public Affairs  
[benjamin.binet@thalesgroup.com](mailto:benjamin.binet@thalesgroup.com)

### Website:

<https://www.thalesgroup.com/en>

# AIR NAVIGATION WORLD 2023

## ATM Procedures for Today

23 - 27 October 2023 | Singapore



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### **Company description**

Aireon has deployed a global, space-based air traffic surveillance system for Automatic Dependent Surveillance-Broadcast (ADS-B) equipped aircraft, harnessing next-generation aviation surveillance technologies to improve efficiency, enhance safety and reduce emissions. In partnership with leading ANSPs, Aireon is providing a global, real-time air traffic surveillance system, available to all aviation stakeholders.

### **Contact information:**

Christopher Devlin  
[chris.devlin@aireon.com](mailto:chris.devlin@aireon.com)

### **Website:**

<https://aireon.com/>

# AIR NAVIGATION WORLD 2023

## ATM Procedures for Today

23 - 27 October 2023 | Singapore



# VariFlight<sup>®</sup>

### Company description

As a leading provider of air travel services and digital technology solutions, VariFlight possesses nearly 20 years of civil aviation expertise. We have always been committed to efficiency promoting and value adding for the industry through advanced technologies.

Leveraging the power of smart IT solutions and digital services, VariFlight helps airports, airlines and ANSPs to improve operational efficiency, whilst we also offer intelligent travel data applications for enterprises, passengers and the broader community. Additionally, we operate a number of industry consulting and information platforms as well as joint research labs with industry-leading partners.

### Contact information:

Simon Li, VP

[simon.li@variflight.com](mailto:simon.li@variflight.com)

### Website:

<https://www.variflight.com/>

# AIR NAVIGATION WORLD 2023

## ATM Procedures for Today

23 - 27 October 2023 | Singapore



Booth #5



### Company description

Frequentis is a global supplier of communication and information systems for control centres with safety-critical tasks. The listed family company develops and markets its “control centre solutions” in the Air Traffic Management segment (civil and military air traffic control, air defence) and the Public Safety & Transport segment (police, fire brigades, emergency rescue services, coastguards, port authorities, railways). With a market share of 30%, Frequentis is the world market leader in voice communication systems for air traffic control. Frequentis is also the global leader in aeronautical information management and aeronautical message handling systems.

For more information, please visit [www.frequentis.com](http://www.frequentis.com).

### Contact information:

Martin Chaloupek, Managing Director  
FRQ Singapore Pte Ltd.  
[martin.chaloupek@frequentis.com](mailto:martin.chaloupek@frequentis.com)

### Website:

<https://www.frequentis.com/>

# startical



## **SATELLITE-BASED VHF COMMUNICATIONS AND ADS-B**

Startical will provide satellite-based VHF communications (voice and data) and ADS-B surveillance services with global coverage, key to reducing aircraft separation in oceanic and continental remote areas, thereby reducing separation standards, increasing efficiency and capacity while reinforcing the level of security required.

Startical will not require any changes to avionics or software upgrade. Pilots and air traffic controllers will not need additional training or further certification and both VHF and ADS-B data will be processed by current air traffic control systems without modification.

Startical is working in the digital sky demonstrator project ECHOES to demonstrate the benefits of introducing direct controller pilot communication (DCPC) in oceanic airspace via VHF voice and via VHF VDL-2 data (with the VHF ground stations being substituted by LEO satellites, but no change to the aircraft avionics), in combination with satellite-based ADS-B.

# AIR NAVIGATION WORLD 2023

## ATM Procedures for Today

23 - 27 October 2023 | Singapore

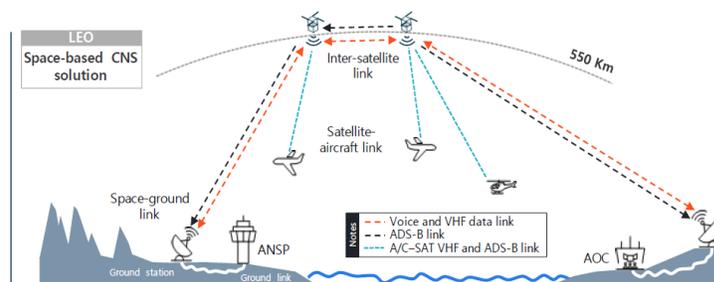


Booth #8

# startical

### Company description

Startical, a joint venture of Enaire and Indra that will launch a constellation of satellites specifically designed for ATM. Startical will provide satellite-based VHF communications (voice and data) and ADS-B surveillance services with global coverage, key to reducing aircraft separation in oceanic and continental remote areas, thereby reducing separation standards, increasing efficiency and capacity while reinforcing the level of security required. In addition, it will serve as a backup for the continental areas. Startical will not require any changes to avionics or existing ATC systems. Pilots and air traffic controllers will not need additional training or further certification.



### Contact information:

Juan Jose Cornejo, Business Development Director  
[jjcornejo@startical.com](mailto:jjcornejo@startical.com)

### Website:

<https://www.startical.com/en/>

# AIR NAVIGATION WORLD 2023

## ATM Procedures for Today

23 - 27 October 2023 | Singapore

Booth #9



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### Company description

A total airspace solutions company providing air traffic management analysis, concept of operations (CONOPS), airspace master planning, Performance-based Navigation (PBN) airspace/procedure designs, ICAO aviation system block upgrades (ASBU), traffic flow management, safety cases, training, drone regulations, and remote tower integration.

### Contact information:

Doug Marek  
[info@PBNNAS.com](mailto:info@PBNNAS.com)

### Website:

[www.PBNNAS.com](http://www.PBNNAS.com)

# AIR NAVIGATION WORLD 2023

## ATM Procedures for Today

23 - 27 October 2023 | Singapore

Booth #10



### **Company description**

SkyWare is a cloud services solution provider entirely focused on the digitalization of business operations in both the ANSP and Airport environments. SkyWare's cloud-based solutions include ABX: for Air Navigation and Aviation Billing & Invoicing, and RWX: for Aerodrome Inspection & Reporting (GRF & Part 139).

SkyWare was founded in Ottawa, Canada by a group of aviation professionals with extensive experience in the design and implementation of all types of ground-based aeronautical systems. SkyWare now services a global and diverse customer-base who trust our solutions and our expertise to make their digital transformations a success.

SkyWare is on a global mission to digitalize both ANSP and Airport operations to enhance performance, reduce costs and improve safety.

### **Contact information:**

Adam Paquette, Sales Manager  
[apaquette@skywarelabs.com](mailto:apaquette@skywarelabs.com)

### **Website:**

<https://skyware.aero/>

SAVE THE DATE

**INNOVATION**

**FAIR**

**12**

**MARCH  
2024**

**14**



ICAO **Global Implementation  
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