



A new air traffic management solution for emerging economies and island nations

By Aliona Groh, Director, Marketing and Communications, Adacel.

It is impressive to learn about the strides and progress so many countries around the world have made to improve safety in their airspace.

Yet, we know too well, some of the safety initiatives in smaller, emerging economies, could prove burdensome and could delay other airport initiatives.

Adacel is renowned worldwide as the leader in air traffic control simulation, and for good reason. There are more Adacel MaxSim ATC simulators installed around the globe than all the other ATC simulator brands combined. Yet, our expertise as an Air Traffic Management solution provider is less known. In recent years, however, the capabilities of the full suite of Adacel's ATM products has grown immensely, leading to broader adoption by operators worldwide. In this brief article, I would like to present to you this new, cost-effective alternative to help you make the best possible choice for your organization.

Adacel's Aurora Air Traffic Management solution has been successfully implemented in many countries around the world. For two decades, it has been used extensively over oceanic airspace and in recent years it has been expanded to provide enroute, terminal, approach, and control tower capabilities. Recently, Aurora has been significantly enhanced with new features, which take this robust ATM system capabilities to a whole new level.

Aurora ATM automation system delivers:

- **High-scalability and versatility:** The system can be customized based on our customers' requirements at different locations. It is also easily configurable to comply with present and future air traffic management requirements. Aurora ATM incorporates the latest CNS/ATM technologies and it is space-based ADS-B ready.
- **Operational Efficiency:** Aurora ATM delivers an impressive suite of high-end functionalities to help mitigate work load and help improve airspace efficiencies. They include:
 - Airspace situation display for an integrated presentation of all surveillance data (ADS-B, Multilateration, Radar, ADS-C and pilot position reports);
 - Electronic flight strips, with real-time data updated automatically; a broad range of built-in protocols, from manual data entry to completely automated AIDC messages;
 - 4D flight profiles that allow users to perform medium-term conflict detection, long in advance of any potential loss of separation;
 - Medium-term conflict detection (MTCD) with quick and agile warnings;
 - Short Term Conflict Alert (STCA) that swiftly and automatically generates visual and audio warnings when users are about to experience short-term conflict;
 - Digital Video and Audio Recording (DVAR) – which meets or exceeds the ICAO standards – to capture events and help with data analysis;
 - Complete range of aircraft clearances, CPDLC-compatible and MTCD-integrated;

- Enhanced integrated surveillance, including multiple radars, Multilateration (MLAT) as well as conventional and space-based ADS-B feeds processing;
- Auxiliary Aeronautical Information Display (AAID) interfaced with Aurora ATM system along with the Automated Weather Observation System;
- D-ATIS, delivering forward-looking technology that supports traditional analog and digital ATIS broadcasts. It is packed with essential tools and capabilities, including: Data Link Communications, Weather Data Consumption, Weather Display, Flight Data Display, automated and manual data entry.
- An industry-leading aeronautical billing system, Aerobooks provides a fully integrated cloud-based solution. A cost-efficient and comprehensive data gathering, permitting, invoicing and collection solution, Aerobooks eliminates inaccuracies, errors and delays for better revenue management.
- **Redundancy and rapid failure recovery:** To reduce the probability of system failure, Aurora ATM provides a high level of redundancy. The flight and surveillance data processing are delivered by redundant servers in a master-slave communication network with an automatic switchover in case of failure. Aurora provides several levels of failure recovery mechanisms, from airspace sectorization to a complete reload of the system with the operational database. In case of unlikely total system failure, air traffic controllers have quick access to the most updated backup Electronic Flight Strips and to an independent Airspace Situation Display directly connected to the surveillance feeds.
- **Integrated simulator training:** Adacel's MaxSim simulator delivers authentic training situations with the Aurora air traffic management system. The integrated training simulator flawlessly emulates control tower and instrument flight rules (IFR) environments with advanced functionality to support the most grueling training requirements. The seamless integration of Aurora and MaxSim is a huge advantage for our customers. No more headaches looking for a separate training system and trying to configure it to closely reflect the ATM system's features and capabilities.
- **Global footprint.** Aurora is currently in operational use in airspaces controlled by Fiji, France, Iceland, New Zealand, Norway, Portugal and the United States – an impressive range of worldwide users. Now, with its new array of capabilities, this impressive system is a great alternative to serve your air traffic management needs.