



# Virtual Airfield Management System (VAMS)

*Manage airfield traffic safely and efficiently from a remote location*

Some airports have multiple RAMP towers and control units because of the geographical layout of the airport or obstructions due to temporary activities such as construction. The presence of these disparate operational units can result in a need for increased human resources, a lack of task coordination between the units, and an increase in radio/telephone communications.



The Virtual Airfield Management System (VAMS) from AirIT and Searidge Technologies makes it possible to simulate an out-of-the-window view for one or multiple geographically dispersed aprons, de-icing pads, and aircraft parking areas, and consolidates the various views into one operator display.

The Searidge IntelliDAR™ system processes video from a series of video sensors networked together to provide real-time positioning of all targets in a given area. The video captured by thermal cameras is then processed using advanced computer vision algorithms in order to provide non-cooperative target detection, continuous tracking, geospatial positioning, and a variety of target attributes enabling smooth aircraft hand-off from the runway to the gates.

The VAMS solution integrates the Searidge IntelliDAR™ track data into existing airport surveillance data sources (such as ASDE-X or A-SMGCS) and is presented on the AirIT Aerial View Display (AVD). The solution delivers graphical, dynamic, real-time position reporting and tracking of aircraft in the movement and non-movement areas of the airfield to allow for smooth aircraft hand-off from the runway to gates and enable controllers to manage airfield traffic safely and efficiently from a remote windowless location.

## Features & Benefits

- Safe, reliable, live video: Intelligent airside security
- Video thumbnails of traffic: Visually confirm and validate targets of interest, increasing safety and efficiency
- Real-time target positioning: Situational awareness increases safety
- Coverage in low-visibility operations: All weather performance
- Versatile display options: Consolidate ground control positions and reduce costs
- Ability to run a co-located operational unit: Increase efficiency and throughput
- Automation: Free up valuable human resources and real estate, reduce radio/telephone communications and save capital
- ASTERIX compliant output: Leverages existing technology infrastructure - minimizing costs

- Modular design: Scalable to grow with airport needs

- Redundant architecture: Proven reliability for ATC and airport use

## Deployment Versatility

The solution versatility provides airports with support for the following remote applications:

- Runway monitoring
- Apron management
- Virtual ramp control systems
- Remote tower services
- Incursion monitoring and collision avoidance
- ATC-tower blind spots
- De-icing, parking, and cargo area monitoring
- Perimeter protection and intrusion alerting
- ASDE-X/A-SMGCS augmentation



*Searidge's remote tower capabilities enable controllers/operators to provide advisory or control services to aircraft and vehicles from geographically independent locations.*

### *Implementation: First of Its Kind in the United States*

#### **Fort Lauderdale-Hollywood International Airport (FLL)**

*The system will allow ground traffic on the north side of the airport, which is currently monitored and directed from a small structure adjacent to the airport's ramp area, to be monitored and controlled remotely in the operations center. The airport's goal is to remotely manage ramp traffic safely and effectively. And as the airport grows, the implementation of the VAMS will allow maximum airfield efficiency and utilization and minimize impacts of line of sight limitations and congestion caused by the ongoing construction of the airport's new runway.*

## Experienced Team

Fostering continued innovation, Searidge and AirIT have partnered to deliver safety-critical solutions to airports. Their knowledge, experience, and global presence have made them the right partners to deliver reliable solutions to the market and to help address RTCA Task Force 5 recommendations to share surface information with stakeholders for increased safety and efficiency.

#### About AirIT:

AirIT is an information technology firm based in Orlando, FL. The company's comprehensive portfolio of solutions enable airports and airlines to better utilize and manage resources, enhance the passenger experience, reduce costs, and optimize revenue generation. Our airport operational, passenger processing, and revenue management platforms deliver enterprise-class business intelligence solutions and are the most innovative in the air transportation marketplace.

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