

Searidge Technologies Inc. is a provider of mission critical technology solutions and services in support of Air Traffic Control and Airport Operation markets. Searidge combines a unique blend of experience working with Air Navigation Service (ANS) providers and expertise in video and imaging technologies to design and develop solutions that address current industry challenges and directly impact the safety and expediency of traffic throughout the airport surface. We are the first company to deploy an operational, stand-alone system using camera sensors and video analytics in an air traffic control tower for the purpose of airport surface surveillance and control.

ATC Video Engineering

Quality Approach to Each Project

Engineering Quality Management

For us, quality is more than testing a system after it has been developed, and more than providing a mechanism to record deficiencies. It's a philosophy that permeates everything we do, backed by a tangible, measurable process.

We have created a rigorous *Engineering Quality Management process* that is applied to every client project, ensuring that we operate in the most efficient and effective manner possible. The net result for our clients is projects of the highest quality, which are delivered on time, and on budget.



Specialized laboratories and state-of-the-art equipment

Since we are developing safety critical systems for the aviation industry, Searidge maintains efficient work processes in order to ensure the best management in high tech practices and standards in effect. From feasibility study to short run production, Searidge Technologies uses specialized laboratories and state-of-the-art equipment to design, develop, test and validate our imaging and video engineering work.

Testing Facilities

- Alignment and machining
- Visible and IR MTF measurements
- Spectrophotometry
- Colorimetry
- Scatterometry
- Shack-Hartman sensor
- Clean room space
- Environmental chamber
- Vibration setup

Environmental Testing

- Quality control
- Thermal and humidity test

Custom Solutions and Services

Professional Services

Searidge *Professional Services* specializes in the design, analyses, testing, and integration of a variety of digital video acquisition systems and image processing techniques in support of complex air traffic control and airport operations functions. From requirements gathering, to system design and production - each step is carefully reviewed to meet our client's needs in every aspect of the project.

Every project receives our full attention from beginning to completion. Our clients can count on:

- A dedicated project manager is assign to each project
- Contribution and direct involvement from our team of experts in imaging and optical design
- Leverage our experience working with Air Navigation Service (ANS) providers
- Check, measure, and review, throughout the project cycle to ensure that it meets our client's needs and expectations



Custom Solution Development

Searidge offers unparalleled custom video and imaging solution development for airport and air traffic control applications. Each project is fully developed and produced in-house according to best business practices. Before even starting a project, we make sure we can guarantee that our clients have access to the qualified and experienced human resources each project phase requires. In addition, whether for a feasibility study or prototype manufacturing, we always divide projects into steps and determine the risks inherent to each one.

Searidge has taken on several R&D projects aimed at solving many of today's challenges. From advanced imaging to intelligent vision system such as IntelliDAR™ to weather sector visibility assessment and LIDAR - optical and imaging technologies offer many solutions to many problems faced by airport and ANS providers alike.

- Automated Weather Observation
- Foreign Object Debris (FOD) Detection
- Wildlife Management
- Runway Lighting Integration

Call in the experts from Searidge Technologies for a consultation on how we can apply our video engineering capabilities to solve complex air traffic control and airport operations challenges.

Leveraging CCTV Infrastructure

Thinking about buying a digital camera surveillance system or upgrading an existing CCTV infrastructure to monitors the airport surface such the apron and movement areas? With extensive experience working with ANS providers and thorough understanding of their operations, Searidge assists their clients to evaluate and deploy an ATC grade digital camera system that would meet the most stringent of requirements. Searidge works closely with our client every step of the way from initial site survey, business problem analysis, system specification design, to system deployment and technology transition plan. All systems are design with operational safety and efficiency in mind helping our clients to solve today's ATM challenges.

Sample Projects at A Glance

Sector Visibility Assessment – Large North American ANSP

Searidge was contracted to perform a feasibility investigating the possibility of using commercial-off-the-shelf cameras to provide reliable automated sector visibility data. The purpose of this study was to evaluate the possibility of enhancing weather monitoring at weather observation sites across the country. The hardware selected for the study was evaluated for its performance in extreme weather conditions.

The study showed the possibility of evaluating visibility conditions by detecting the presence of markers in the camera's field of view. These markers were chosen from clear day images, and from these a comparison is made against the current image to report a maximum visibility distance.

Automated Weather Observation using Digital Cameras – Large North American ANSP

Searidge has been contracted to provide a system capable of monitoring weather in 130 sites across the country. This modernized, digital-weather-camera system being supplied by Searidge Technologies will provide various video analytics to video scenes in real-time, and report on sector visibility, amongst other functions. The system will help to promote flight safety by providing current weather conditions to pilots by assisting them in making timely weather-related decisions with confidence. The system will provide real-time camera data showing the weather information of a given location, and additional information such as sector visibility.

'Marine Exclusion Zone' Detection - Airport in Toronto, Canada

Searidge was selected to provide a solution for the monitoring of the Marine Exclusion Zone (MEZ) and the surrounding protected area at the Toronto City Center Airport. The airport is currently expanding its facilities resulting in direct visibility of the MEZ being affected. The deployment involves the installation of Searidge's IMD display product providing the controller with a view of the MEZ and the protected area established in the vicinity of the airport. It is critical that all vessels operating around the MEZ be detected and tracked in order to ensure and maintain regular operations.

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Existing CCTV Surveillance system at airport

