

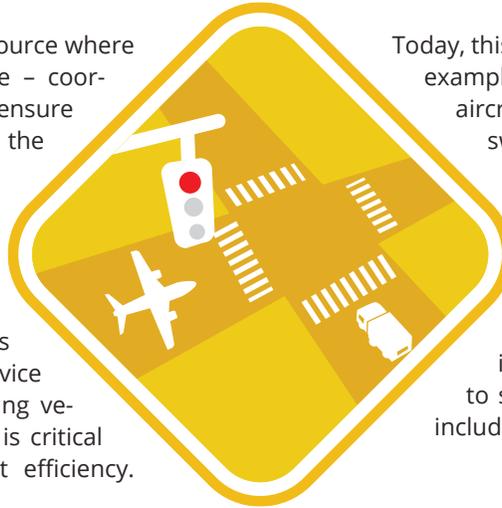
Airport Traffic Lighting Control

A reliable decision support tool to increase efficiency and throughput



The airport surface is the key shared resource where all stakeholder responsibilities converge – coordination and management is critical to ensure safety and continual aircraft flow-- from the runway to the gates.

Synchronizing this process can often be challenging due to geographical (line of sight) limitations, airport layout, increasing traffic demands and the complex set of aircraft procedures required to manage aircraft and service vehicles sharing the same space. Keeping vehicles separated and moving efficiently is critical for both passenger safety and airport efficiency.



Today, this function is often manually controlled. For example, traffic lights are switched on when an aircraft needs to cross a service road, and then switched off when the operation is complete. Multiple sources like the human eye, radio communication and existing surface detection equipment are being used to detect and predict when an aircraft is approaching. If this process is not functioning optimally or there is a human error and an aircraft is forced to stop for service vehicles, implications may include fuel burn and delays.

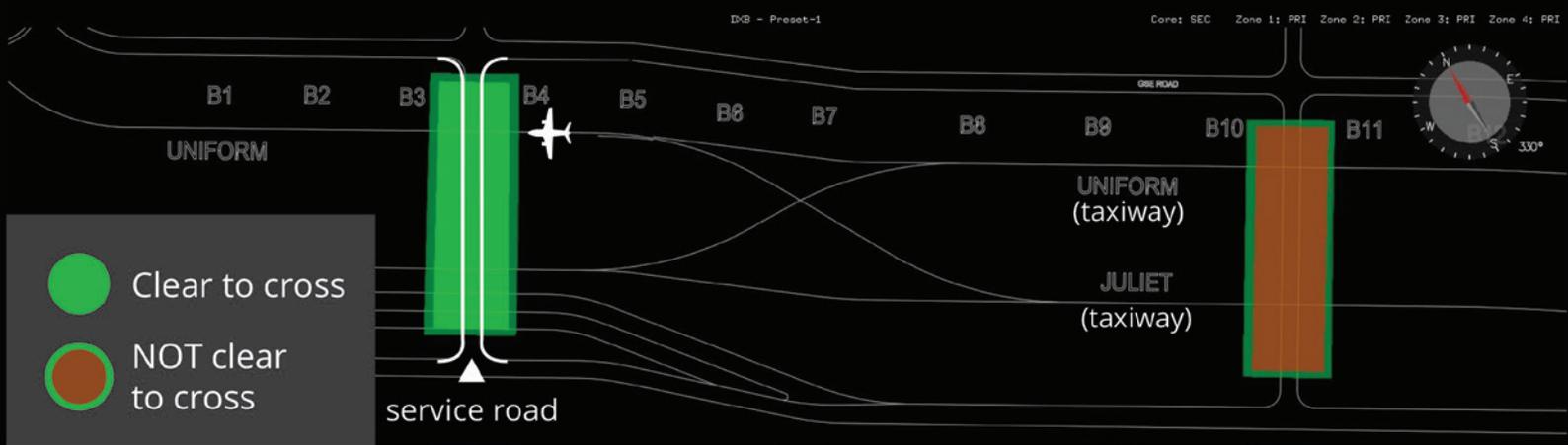
The Searidge Solution

Leveraging the Searidge ATC-Grade Video and IntelliDAR™ intelligent video platforms, the Airport Traffic Lighting Control solution offers airport stakeholders:

- A decision support tool for enhanced situational awareness & incursion prevention
- Increased airport efficiency through better management of airport vehicle traffic
- Higher throughput on the airfield
- Smoother aircraft hand-off
- More efficient use of human resources
- Reduced operator workload
- Decreased airline/airport-operating costs

The ATC-Grade Video platform uses commercial off-the-shelf visible and thermal video camera sensors, with optional Pan-Tilt-Zoom (PTZ) functionality and Searidge proprietary analytics software to continuously monitor and present real-time feeds to a one-look, fully customizable display. Integrated with IntelliDAR, the solution also automatically detects and tracks all targets within a specified area of interest to provide live taxiway and service road occupancy information to the operator.

This semi-automated system operates in all-weather conditions and offers valuable data including real-time vehicle tracking and alerting, giving operators a tool to assist them in making timely traffic management decisions. A dedicated source for live traffic information, the Searidge solution helps prevent incursions while ensuring efficient throughput.



Features & Benefits

The system strengthens the airport's safety net, and allows operators to make informed decisions.

Features and benefits include:

- Panoramic out-the-window views: Gives operators a clear view of distant traffic
- Pan-Tilt-Zoom (PTZ) functionality: Multiple camera viewing options
- Alerting/Automated alarms: Alerting operators to approaching vehicles and potential problems in a timing manner
- Thermal video for low visibility conditions: All-weather performance
- Video thumbnails of traffic: Visually confirm and validate targets of interest, increasing safety and efficiency
- Adherence to regulatory procedures
- Versatile display options: Consolidate ground controller positions and reduce costs
- ASTERIX compliant output: Leverage existing technology infrastructure minimizing costs
- Open Interface: Seamless integration with existing traffic lighting system and other surface detection systems
- Video archiving for incident review and training purposes
- Flexible, modular design: Start with one intersection and scale up as required

Integration

Our unique blend of experience in both airport and ATC operations allows us to develop and integrate innovative technology solutions that improve airport surface operations.

Searidge can integrate with airports' existing traffic lighting systems and through an adaptation/training process and use of advanced video analytics algorithms, the system can "learn" the local traffic patterns such that the automated control functions adhere to the operational rules with a high degree of confidence.

Additionally, Searidge has leveraged systems like Advanced Surface Movement Guidance and Control System (A-SMGCS), Automatic Dependent Surveillance-broadcast (ADS-B), Advanced Surface Detection Equipment (ASDE), Multilateration (MLAT), Surface Movement Radar (SMR), Electronic Flight Progress System (EFPS), and more to provide complete situational awareness to operators.

Our Customers

Some of the busiest airports in Canada, Europe, the Middle East and the United States are currently deploying applications using this technology. Applications include:

- Apron surveillance/automated gate status;
- Automated billing, and
- Airfield lighting automation.



Take an Interactive Tour of our ANSP & Airport Solutions

Searidge Technologies

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