

**360° NIGHT PERIMETER SURVEILLANCE AT REGIONAL AIRPORT****OVERVIEW**

**Customer:** Mid-sized regional airport

**Challenge:** Night perimeter surveillance, forensic recording, real-time all-weather monitoring

**Solution:** 2 Spynel cameras provide complete 24/7 surveillance with automated intrusion detection, AVI recording, user-friendly control, operates in all weather conditions

**Results:** Targets tracked in real time, locations confirmed, threats intercepted.

**Conclusion:** EOI Spynel infrared cameras are ideal solutions for perimeter security, forensic recording and 24/7 surveillance in airports worldwide.

**CUSTOMER**

Electro Optical Industries successfully solved night surveillance and perimeter security issues for a mid-sized regional airport in the American Midwest. In 2011, the airport accommodated 4.2 million passengers plus 144 million pounds of mail and cargo, with an average of 90 flights departing daily through 20 gates. The airport's total land area spans 10 square kilometres.

**CHALLENGE**

To local airport authority staff, perimeter security was a critical issue. Though existing strategies included video cameras and vehicle patrols, these tactics were effective only during daylight hours. Under the veil of darkness, the staff was blind to potential breaches and attacks. With no safeguards in place, a nighttime perimeter breach could be devastating, and bring serious legal repercussions and considerable negative press. Airport officials needed a solution that would provide total night time visibility so personnel could maintain complete perimeter control at all times. The control software needed to be user-friendly so that non-technical employees could master

it quickly. Also TSA personnel required a superior surveillance solution to monitor potential terror threats 24 hours a day. The federal agency needed night imaging that could be used to coordinate ground forces if a tactical deployment were ever necessary. Furthermore, TSA officials needed the forensic capability to replay and analyze video data (independent from the control room live footage) with the resolution and clarity necessary for use as evidence in court.

**SOLUTION**

EOI's Spynel panoramic infrared security system was an ideal solution for the airport's security and surveillance needs. The system uses a continuously rotating line scan sensor to produce a 360 degree image and detect and track intrusions in real time; essentially the Spynel cameras operate like a "radar with eyes." This comprehensive 24/7 surveillance immediately solved the deficiencies of light-based camera monitoring. In addition, the Spynel-C long wave infrared sensor allows for detection of a human at up to 3 km distance in total darkness and adverse weather conditions, including fog, rain, snow, and smoke.

At the regional airport, only two Spynel cameras were installed on dedicated towers and calibrated to monitor the airport's 9 mile perimeter fence. In the control room, users were able to view and track all intrusions through panoramic disk views, while simultaneously opening an unlimited number of target zoom windows.

Spynel cameras are remarkably easy to operate. The system's intuitive, user-friendly control software requires minimal training, even for new employees with no prior knowledge or experience with infrared technologies. The interface is designed to mitigate fatigue and overload by allowing for detection zones around areas of interest, thus limiting the number of false alarms. The display automatically jumps and zooms from one intrusion to the next, without any need for operator interaction. Plus, EOI provides thorough training materials and comprehensive tech support, both before and after installation, so that any issue can be resolved quickly and effectively.

In addition to providing complete, 24 hour real-time perimeter surveillance for the airport authority, the Spynel cameras provided TSA officials with an effective way to record and replay the events observed in any viewing zone, at any time over a period of 30 days.

The system records to the widely-used AVI video format so that images can easily be saved to file, burned to DVD and transmitted across a wide array of Windows compatible devices. This record-and-play flexibility provides clear, precise event documentation that is ideally suited for use as legal evidence. In this sense, EOI protects Americans both on the airfield and in the courtroom.

*"I was impressed with the software's ability (and the camera's ability) to detect and track targets at long range. The display was nicely laid out and easy to work with."*

*- Colonel Dennis Treece, U. S. Army (Ret.) Director of Security at Massachusetts Port Authority*

By incorporating these features with the ability to auto-calibrate for temperature and weather conditions, and a rugged military-grade construction, EOI cameras provided the regional airport with a surveillance solution that was not only effective and flexible, but also engineered to endure.

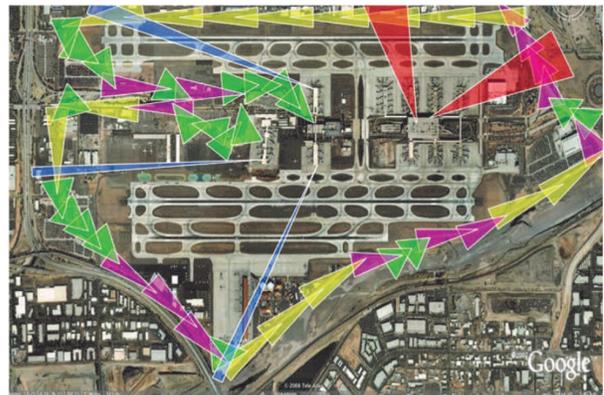
## RESULTS

Initial field trials performed by airport police were a complete success. The Spynel-C cameras immediately detected both men and vehicles, on both sides of the perimeter fence, at a distance of 2 kms. The targets triggered alarms in real time onscreen, the intruders were quickly identified and their locations confirmed with CCTV cameras. Since installation, the Spynel cameras have met all expectations, and after one year of successful operation at the airport, the system was vetted by officials from the Department of Homeland Security.

*EOI's Spynel solution was tested by the National Safe Skies Alliance, an FAA-funded non-profit independent organization that specializes in airport safety and security testing.*

## CONCLUSION

Thanks to their ultra-wide field of view, two Spynel cameras provided more comprehensive coverage than dozens of PTZ infrared cameras. Fewer cameras means less maintenance and a lower total cost of ownership. Based on the success at the regional airport, EOI's Spynel cameras are an ideal strategic solution to the surveillance and perimeter issues faced by mid-sized airports. The customizability, superior functionality, recording options and user-friendly design satisfy the requirements of both airport authority and TSA personnel. EOI cameras are a high-performance, cost-effective solution that easily outperforms conventional video monitoring systems. Both regional and international airports can benefit from the Spynel for securing hot spots and perimeter gaps.



*The above photos show 3 Spynel-C cameras which can be more effective than 56 narrow field of view PTZ cameras.*

Founded in 1964, Electro Optical Industries designs, develops, assembles and sells complete optronic systems for security, industrial and civil applications. EOI established itself as an international reference for infrared technology innovation through the development of its award-winning real-time 360 degree infrared camera, the Spynel (2008 Product of the year from Photonics Tech Briefs, 2010 Innovation Prize from the EuroNaval Committee, 2011 Kummerman award from the French Academy of Marine, 2012 GovSec Platinum Award). Tested by NSSA