



Executive Summary

Profile:

Education: Tertiary Institution

- 65,000 students and 2600 staff
- 5 Campuses across Melbourne
- 650+ CCTV cameras
- www.swinburne.edu.au



Key Personnel:

Chris Goetze

Swinburne University
(IT Security Officer)

Kain Jarvis

Swinburne University
(Security Manager)

Angelo Salvatore

Milestone Systems
(AU/NZ Regional Manager)

Goal:

- To examine the use of analytics to improve the efficiency of live monitoring across a multi-campus CCTV surveillance network.

Solution:

- Implemented iCetana's iMotionFocus to monitor known "hot spots" across multiple campuses.
- Added iCetana's LiveWall software to display in real-time event alerts.

Results:

- iMotionFocus software detected vandalism, loitering, fights, anti-social behavior, breaches of campus regulations and vehicle violations.
- The software performed well; as a result Swinburne is now a reference site for other Universities and Milestone clients.

iCetana's Intelligent Video Analytics used at Swinburne University

Operational Situation

The main campus of Swinburne University of Technology's (SUT) is located in the inner-suburb of Hawthorn. This presents various challenges for the security team. To overcome these challenges, SUT has invested in a state-of-the-art Milestone CCTV surveillance system with over 650 Axis cameras to assess situations and assist in the protection of its students, staff, and building facilities across its campuses - especially after hours.

The camera feeds are all fed back via a high-speed network to a central control room where they are available for review on an extensive video wall. After investing in this state-of-the-art surveillance system, Swinburne was keen to examine efficient ways to monitor all the camera feeds from their network.



Chris Goetze explains, "We have excellent CCTV surveillance infrastructure in place with great penetration and coverage across our campuses, but with hundreds of cameras, there is invariably more video-data streaming into the command-center than the security team can easily "live" monitor. We were looking for new technologies that could help filter the feeds, and present only those incidents requiring closer inspection".

“The iMotionFocus system performs well and can enhance the situational awareness for the entire security team”

Kain Jarvis - Security Manager

Solution

In searching for a solution a key issue was that the analytics had to perform in a very busy 24x7 environment, and didn't require complex programming and ongoing maintenance.

That is when Milestone's Angelo Salvatore referred SUT to iCetana, who thought their technology might be well suited.



“A lot of video analytics companies over the last 5-10 years have tried to tackle the problem of automating surveillance. Whilst the systems perform well in certain scenarios, they are challenged when the number of cameras and scene complexity increases. The guys from iCetana have designed their system to use a radically different approach specifically to solve these problems. Their system can automatically learn and detect “all kinds” of events without the customer having to program anything. Based on results from one of my other client sites I thought the software may be of benefit to SUT.”

Angelo Salvatore.

Results

The iMotionFocus software was installed to monitor known hotspots across all five Melbourne campuses. As iCetana is a Milestone Solution Partner, the system was designed to easily integrate into Swinburne's Milestone VMS environment.

In addition to the iMotionFocus analytics, iCetana also deployed their LiveWall plugin, to show any detected events on a single LCD screen.

By focusing on events displayed on the LiveWall screen, operators were able to easily monitor large numbers of cameras with a single view rather than scanning banks of video monitors.

“iCetana's iMotionFocus and LiveWall system have proven to be excellent tools. The system was implemented and operational with no per-scene configuration or pre-programming required. It was also easy to use with minimal training required by the security team. The LiveWall application displayed the most “unusual” behaviour from the monitored cameras allowing us to gain insights to a range of incidents. For each incident, iMotionFocus seamlessly triggered recording with our existing milestone servers, ensuring we captured adequate footage for any post review.” - Chris Goetze

Typically, the events detected and shown on the LiveWall represented only 1% of the total video footage streaming from the camera network to the control room – effectively reducing the operator's load and enabling them to focus on other important tasks. Of the incidents detected, many were the typical security events such as vandalism, loitering, fights, anti-social behaviour, and vehicle violations.

“The fact the system could do this automatically was quite impressive,” said Kain Jarvis - Security Manager, “but what pleasantly surprised us was all the other interesting stuff it picked up. For example, within 30 minutes of us watching it, we found an unauthorized vendor selling goods, as well as paramedics arriving at a campus. It found these events simply due to the unusual motion.” - Kain Jarvis.

The iCetana system – with its innovative motion based approach - was able to monitor 50 hotspots on a single server with the capacity to do more than 100.

“With iMotionFocus you could easily scale to monitor an entire surveillance network with only a few servers, making it very cost effective.” - Chris Goetze.

Learns Alerts Adapts


iCetana

Next Steps

As a result of the trial, Swinburne University is now acting as a reference site for other Universities and Milestone clients looking to solve similar challenges.

“We are very happy to recommend the iCetana system to anyone live monitoring a large CCTV network. The iMotionFocus system performs well and can enhance situational awareness for the entire security team”. – Kain Jarvis.

How it Works

iCetana's iMotionFocus system, automatically monitors live-video feeds from CCTV surveillance networks, to self-learn what normally happens on each camera view. It then instantly alerts operators to any “unusual” events as they occur.

iMotionFocus can be readily deployed into an existing CCTV network as a “plug n go” solution without requiring any pre-defined rules or custom-configuration. The system can automatically detect a wide-range of incidents and adapt to changes in the viewed environment. Its unique features enable the system to cost-effectively scale to thousands of cameras.

iMotionFocus meets a pressing need of large video surveillance sites for operators to efficiently monitor and identify security events as they occur.

About iCetana

iCetana Pty. Ltd. has developed an intelligent video surveillance system, iMotionFocus®, that automatically analyses video data from large CCTV networks to highlight only the “most unusual” events for operator review. This dramatically improves operator-monitoring efficiency and the system has been proven effective at monitoring critical infrastructure sites, public transport hubs, large education campuses, and city municipalities.

For more information, visit www.icetana.com

For More Information

To learn more about iCetana's intelligent video surveillance software, iMotionFocus, please contact via email info@icetana.com.au or visit www.icetana.com.au



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