



VIDEO ANALYTICS

IMPROVING OPERATIONAL EFFECTIVENESS AND REDUCING SECURITY COSTS

OVERVIEW

Traditional security technology has its limitations. Security operations based on traditional systems handle incidents reactively and adapt poorly to fluctuations in security activity.

New and emerging artificial intelligence based 'Learning' video analytics use either facial, behavioural or object recognition technology to automatically identify persons and behaviours of interest, alerting security personnel to proactively respond to potential risks or threats.

Thus, higher levels of protection can be delivered with less cost, better quality and greater precision.

DEFINING THE CHALLENGE

Many organisations have made significant investments in their security systems. However, the effectiveness of those systems is limited by how many persons are actively monitoring them. If an additional CCTV camera or a sensor is installed but left without supervision, it is unlikely to prevent any incident or damage.

With restricted manpower to supervise, security operations are often conducted in a reactive manner. Instead of taking preventative measures, the security force is dealing with post event recovery after incidents or damages have taken place. The limit of traditional technology forces the operational human resource cost to grow together with the capital cost of security systems. Without this ongoing investment, the result is often security systems that are rendered at least partially ineffective.

In addition, traditional security designs fail to cope with fluctuations in security activity. While technical security products help security operators to monitor the crowd, the ability of security operators to identify suspects or breaches is reduced when there is a high flow of people. More people tends to equal more guards, and thus less-effective technical protection.

Most of today's security management is incident-based, as suspects are identified by human observation instead of track records. Because security personnel can't memorise a sizeable number of suspects from the past, identifying the potential troublemaker is the most significant, yet most challenging, task for damage prevention. For example, a reported harmer might walk into a public library unrecognised until a repeated harm occurs, or illegal rubbish dumpers can wander into a council office without being recognised and penalised.



DISCOVERING WHAT'S POSSIBLE

Video analytics technology using either facial, object or behavioural recognition provides computerised vision to identify threats, suspicious behaviours and persons of interest. Instead of constant human monitoring, computers can pinpoint potential incidents or troublemakers automatically, bring this to the attention of security operators at the early stage, and enable them to take preventative measures. This adds a proactive layer of control to the existing reactive security management portfolio and can significantly improve overall operation quality and efficiency.

With the aid of video analytics, security teams are more resilient to fluctuation in demand. Video analytic products are capable of recognising faces from a crowd of tens of thousands of people, several times per second. This creates an effective filter to differentiate “potentially harmful people”, “likely harmless people” and “known important people” in crowded or high-flow locations. Items left-behind or patterns of activity can also be recognised and brought to the attention of security personnel. This helps them to pinpoint high-risk targets even if they have not been spotted on-site in the past. Employees can thus be utilised more effectively and proactively, reducing the business cost.

Persons or behaviours of interest are recorded in the system for future detection. Whether it is a criminal, a lost child, a vehicle, or a random object, the system detects them in real-time and helps operators trace back their past trails, saving review effort and improving operational responsiveness.

DESIGNING THE SOLUTION

IPP offers an integrated approach combining Technology Transformation, Impact Architecture and Security Engineering solutions.

Our experienced consultants have a wide range of exposure to security technologies and risk environments ensuring that we can identify the appropriate video analytics solutions for technology, purpose, reliability and budget.

With our expertise in security design and video analytics systems we can help you understand what type of video analysis or recognition system best fits your requirements, and ensure they become an integral part of your overall security operation - instead of a standalone service that requires additional management efforts.

INNOVATION

DELIVERING THE OUTCOME

IPP's experienced team can review your existing security technology and ensure best investment protection. When a tailored solution is required, the cross-domain knowledge and vendor management skills of our project managers can assist in defining your technical needs and managing complete solutions.

SOCIAL IMPACT	
SAFE & WELCOMING EXPERIENCE	Good security management creates a safer environment improving inclusion, safety and wellbeing for all employees, visitors and the public.
POSITIVE EXPERIENCES	Teaming video analytics with digital displays and user focused applications provide the opportunity to leverage security technology to drive an improved user experience through targeted communications and actions such as pop-up messages (e.g. "Happy Birthday Bill"), automated preference selections (e.g. automated lift calls) and VIP identification for improved service. The possibilities are endless.

ECONOMIC IMPACT	
PROACTIVE APPROACH	Traditional security technology typically detects incidents after they have occurred. Harmful behaviours are not found unless they have been spotted by the security operator. Very few suspects are identified through screening at entry, based on a security guard's memory. In contrast, video analytics leads to greater accuracy and a more proactive approach to security.
VERSATILITY	Continuous monitoring is an impractical and costly security measure. Video analytics technology can replace human monitoring with in more areas with better precision and reduced ongoing costs.
RETURN ON INVESTMENT	Where your security management capability needs improvement, the introduction of video analytics is very likely to achieve outcomes comparable to or exceeding a substantial upgrade of traditional systems with a relatively small investment.

SUMMARY

Unlike traditional security technology, video analytics systems work 24/7 to improve the analysis of suspicious behaviour and the detection of objects and persons of interest. This changes the way we look at security from being reactive to proactive, creating a safer environment for people, greater efficiencies and control, a reduction in effort hours and consequently, a reduction in costs.

Do you know whether facial, behavioural, or object recognition technology best suits your needs? Talk to us about our recent video analytics projects and the benefits this technology might bring to your organisation.



BILL LIU
CONSULTANT

Bill has extensive experience as a Technical Expert and Project Manager for several major security projects. He is an enthusiast in the field of Artificial Intelligence, interested in exploring its technical possibilities and assisting organisations to improve security management results.



MIKE FARROW
CONSULTANT

A Senior Consultant with a strong technical background gained from 40 years' experience in Information Technology. Ownership of large and innovative projects has provided Mike with the right lens to assess and deploy facial, behavioural, and object recognition technology.

**OUR ENABLER IS
TECHNOLOGY, OUR
DEFINING FACTOR IS
PEOPLE.**