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The new PACOM NVR

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Balancing the market requirements equation

The IP video surveillance market has been consistently growing and it is forecasted to grow 330% by 2017 in Australia and New Zealand (*Frost and Sullivan, 2011*). This growth is driven by the customer's demand for high definition image quality, scalability, ease of accessing video from mobile devices, and more.

However, these new feature sets come with a premium price (as compared to the current prices of its analogue counterparts).

We also understand that migrating to IP-CCTV is not easy for traditional analogue installers and integrators because it requires IP knowledge and experience.

Having all these variables in mind, we embarked on a journey to design and develop a solution that lets us and our customers (installers and integrators) take advantage of the IP-CCTV market growth, deliver at a price point that the end-users will be willing to pay, and enable our customers to set up and install a hassle free IP-CCTV solution.

OUR TOP PRIORITY: Seamless migration from analogue to IP

With our existing loyal customers in mind, we made sure that our design incorporated the same look and feel of our current Digital Video Recorder models. This includes the appliance casing, set-up buttons, and the GUI (Graphical User Interface). This has proven to be a very effective way of leveraging on our customers' knowledge and experience in operating our DVRs and taking away the fear of managing IP devices. Many of our analogue installers were blown away on how easy and simple it is to set up and configure this new range of PACOM NVRs.

How it works?

The SmartIP NVRs are easily configured. Having a built in PoE switch means installations are made easier in that the network cables (CAT5 or CAT6) are connected directly from the camera to the SmartIP NVR.

Control of the SmartIP is via the supplied mouse, IR remote control or from the front fascia control buttons. Either way on power for the first time, the Quick Wizard will help setup the system by auto discovering and setting up the cameras. Once completed, the system will be in the record mode and further adjustments can be made through the menu structure.

Features and benefits

The most essential benefits that you can get out of the Smart IP NVRs are:

Full HD resolution

The system has the capability to provide real-time viewing and recording at full HD resolution (1080p). This gives the operators the ability to zoom in and provide greater image details either in live view or playback when compared to the traditional analogue type system.

The number of analogue cameras required can also be further reduced depending on the required field of view.





Time and cost savings

With the same look and feel as the DVR interface, you don't have to learn navigating into a new platform. You don't even have to hire IT knowledge and experience. Save time on learning and save costs on hiring IT expertise and focus on your core business.

Simple, quick, and easy installation

With its all in one design, built-in PoE switch, and set-up wizard, installation is very simple, quick, and easy. We've taken out the hassle of looking for a network switch, checking if it is compatible to the NVR, and connecting to an external power source for the switch. We've also taken away the time it takes to configure each camera with the Smart IP NVR's set-up wizard's auto discovery feature.

Stress-free maintenance

Its intuitive and user-friendly interface lets you change your camera settings through the NVR itself via a mouse, IR remote control or using the device fascia buttons.

Application

The Smart IP NVRs are ideal for small foot print environments which can be covered using 4-8 cameras.

Below are some examples

1. Retail Small retail stores including milk bars, specialty shops, small restaurants, and others.

2. Healthcare Small clinics offering dental, general medical services, x-rays, and more.
3. Government Local government branches, post office branches, and more.
4. Banking and Finance Customer service areas such as small branch offices and self-service areas such as ATM locations.
5. Education Small TAFE branches, childcare centres, and more.

Roadmap

From our current 4 and 8 channel Smart IP NVRs (E model), we will be launching two more models, the S and P series.

The S series feature 2MP real-time recording of up to 8 channels (130Mbps), or 1MP real-time recording of 16 channels. They will come with 4HDD internal capacity plus 2 eSATA ports and a built-in 8 port PoE switch.

The P series feature 2MB real-time recording of up to 16 channels (160Mbps), or 1MP real-time recording of 32 channels. They come with 6HDD internal capacity plus 6 eSATA ports and a built-in 8 port PoE switch.

To complement the current and coming Smart IP NVR range, we will be providing various Direct IP™ attachment and accessories including PoE injectors, IP to fibre converters, SFP modules, eSATA storage devices, remote controllers, and more.

Direct IP™ allows real-time monitoring without any degradation of image quality whilst simultaneously recording within networks. It is exclusive to the industry and ensures genuine compatibility, integration, and functionality as a complete one stop shop solution.

These coming models are definitely something to look forward to. On top of having more devices to choose from based on your customers' HD image quality, storage capacity, and number of channels requirements, you can also expect more accessories to be launched which are fully integrated into the system.

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Security system guidelines help frame fairer process

By Keith Newman

Security industry advocates are hoping to create a clearer distinction between installers and consultants who are qualified experts in their trade and those who are simply selling product by standardising on best practice documentation.

The New Zealand Security Association (NZSA) and respected industry auditor Michael Pepper are leading the charge to up-skill and refresh industry professionals and equip those investing in systems with the tools to ensure the job is done right first time.

Pepper, a seasoned security risk management and threat assessment professional, wants to see wider use of best practice guidelines to ensure new systems are 'fit for purpose' and customers aren't bullied by salespeople who only see their next commission.



Michael Pepper, Chief Executive of MAP Datum and auditor for the NZSA

He says installers who push the latest and greatest technology with all the bells and whistles without first understanding the business case and implications aren't doing themselves or their clients any favours.

Pepper, the Chief Executive of MAP Datum, often called in to conduct audits for the NZSA, recommends clients, resellers and installers familiarise themselves with the Security Operational Requirements (SOR) Manual.

He became familiar with the manual, developed by the UK Home Office Centre for Applied Science and Technology, during his two decades in senior roles with the Northern Ireland Prison Service and now it's central to his role auditing existing security systems, planned installations and improvements.

He says the documentation is well suited to the New Zealand environment and only needs references to the relevant legislation changed. Although originally written around CCTV installation, it's adaptable, and has been used to write tenders for security guard responses, intruder detection and access control systems.

The manual covers off issues to be negotiated between client and installer, including "needs, justification and purpose", and when adopted alongside Electronic Security Codes of Practice and the Privacy Commissioners' requirements, provides a strong basis for engagement.

The SOR was added to the NZSA's revised Code of Practice and auditing tools in November 2011 and is now at the heart of a plan to establish broader security industry best practice.



"When it's all boiled down it's about companies being more professional about the advice they give to clients, rather than trying to sell them some hugely expensive system they don't really need and can't afford to maintain."

Once put to use, he says, an installer or an external consultant can use the documentation to turn into a systems specification.

A written record

There's also a concern that there aren't enough private training organisations engaging in security training so the NZSA is stepping up its courses and programmes to ensure that need is met.

Stewart O'Reilly, the NZSA's Training and Audit Manager, says most members have good processes, although in some cases it's still in their heads. "We're

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Advantages of the OR process

- Applicable to any size or type of system
- Provides framework for discussion and collation of opinions
- Identifies the role technology will play
- Identifies relevant and realistic performance goals
- Defines key factors to be included in a test specification
- Exposes conflicts of opinion
- Allows priorities to be set for implementation and operation
- Shows future need for expansion
- Basis for planning, phased implementation and investment appraisal
- Separate operational and technical decision making
- Reassures through commissioning tests and routine audits
- Provides audit trail for decision making

trying to get a degree of consistency and standardisation in place and evidence of the process they've gone through."

In an ideal world, he says the buyer and seller would already be agreeing on the scope and needs of a project and keeping a record of everything they did and why. "We not trying to tell people how to do it but we are saying here's a model you can use that has a great deal of flexibility."

O'Reilly says too often installers know what they're up to when they complete the job but never leave a written record.

The SOR should form part of the "as built folder" explaining why the system was put in place, where the cameras are, the wiring diagram and all you need to know to service and maintain that equipment.

"While end users won't know all the technical details it gives them a basis to have a meaningful conversation with the supplier and if it's a big enough conversation they should be using an intermediary or independent consultant."



Stewart O'Reilly,
NZSA Training
and Audit
Manager

And O'Reilly is concerned that the term consultant is often hijacked by the wrong people which wasn't helped by the definition in the Private Security Personnel and Private Investigators Act 2010.

"There's a flaw in the legislation which designated a consultant as someone who sells security products rather than someone who provides independent advice."

He says the NZSA is working to try and balance this "terminology problem" created by the law through raising the bar for real consultants.

And the NZSA is taking the matter seriously, running a series of educational programmes and refresher courses based around the SOR and recently appointed O'Reilly as full time Director of Training and Auditing.

This also fits in with the need to implement new training programmes as part of the 2010 Act. "We want to set benchmarks audited against our Code of Practice so that when our members find themselves competing against cowboys they will be identified as being better."

While most NZSA members have been audited and use quality branded equipment from reputable suppliers for corporate and big business, Michael Pepper says, there are issues at the lower end of the market that raise concerns.

A number of smaller companies are bringing in unbranded product from China with minimal or no support. "Domestic, small business and small retail clients end up being disappointed with what they've got."

* UK Home Office CCTV Operational Requirements Manual
from the UK Government National Counter Terrorism Security Office (NaCTSO):
http://www.nactso.gov.uk/system/cms/files/127/files/original/28_09_CCTV_OR_Manual2835.pdf
Or www.mapdsecurity.com and select OR Manual

* The New Zealand Privacy Commissioner guidance document on the use of CCTV
<http://www.privacy.org.nz/news-and-publications/guidance-notes/privacy-and-cctv-a-guide-to-the-privacy-act-for-businesses-agencies-and-organisations/>

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FaceFinder

Advanced Alarm
management

Expandable Storage
e-SATA, iSCSI

S.M.A.R.T. Status
Notification

CMS
1000 DVRs

POS
integrate up
to 16

Mobility
iViewer (iOS)
AndroidViewer

OR model will ease buy-in for Auckland-wide CCTV

The plan to link public CCTV cameras across Auckland in a region-wide surveillance network to prevent crime and anti-social behaviour is being underpinned by the recently adopted security industry operational requirements guidelines.

The project, about to go into trial phase in August, is expected to become a template for how other local authorities and even central government and industry get community buy-in to integrate disparate surveillance technology.

The proposal, is expected to connect thousands of traffic management cameras, council building surveillance and public cameras into a cohesive public places network.

Both the New Zealand Security Association's (NZSA) Code of Practice and best practice documentation recommended by Michael Pepper, former regional chapter vice president and chairman for the security professionals group ASIS, have been adopted as part of the Auckland Council Public Places CCTV Project guidelines.

The council is so determined to tick all the right boxes that it's appointed NZSA Chief Executive Greg Watts to chair the group overseeing the project to ensure it

meets not only the requirements of the councils and its stakeholders but also takes into account privacy and other citizen concerns and meets the highest industry standards.

Clearly it's going to be a controversial process as the various systems are merged and management issues tackled including the potential use of number plate and even facial recognition technologies and the positioning of cameras.

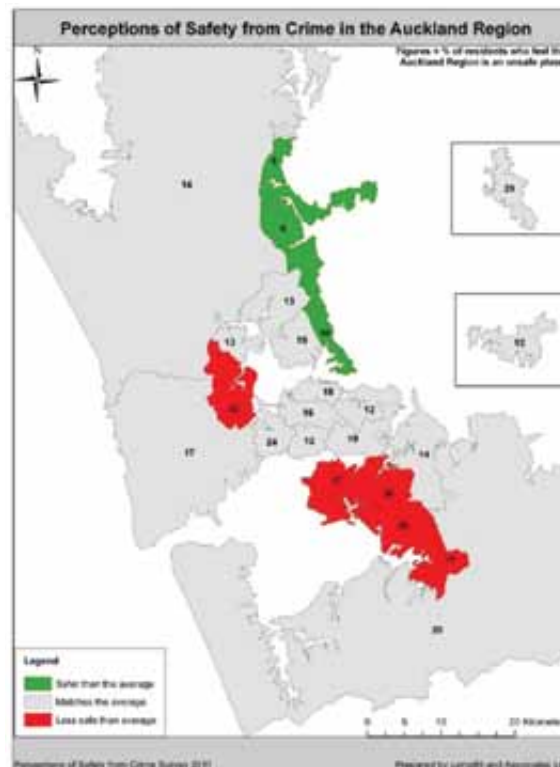
The process outlined in the SOP and Privacy documentation along with the

NZSA code of practice means these matters are likely to be dealt with as transparently as possible to ensure the widest buy-in from those in the Auckland region, and ultimately on a national scale.

Tried and Tested advice

Pepper and the NZSA's Training and Audit Manager Stewart O'Reilly worked closely with project leader Dr Gillian Stewart to help find the right tools and a common best practice platform for the CCTV project.

By Local Board Area



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Papakura
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Dr Stewart says, what was needed was sound, tried and tested advice to give the council and its partners confidence to move forward. The Security Operational Requirements (SOR) Manual covered off all the technical and non-technical bases for a conversation on current practice, design and planning.

“Why reinvent the wheel when all we have to do is contextualise it to the local environment and apply it as a common platform...From the first question: ‘Is it really necessary?’ we have worked our way to how to go about monitoring and evaluating whether its achieving its purpose.”

Dr Stewart says the process is complex, having evolved from a narrow policy

approach where the council identified its position, to a collaborative project involving the Police, the Privacy Commissioner, civil liberties groups, businesses and the private sector.

The SOR guidelines around planning, design and purpose, along with those outlined by the Privacy Commissioner, form a strong framework to deal with what Dr Stewart describes as a kneejerk reaction from some people wanting to put in CCTV systems ‘without thinking it through’.

She says some ‘politicians’ are still struggling to understand whether CCTV is necessary and need more evidence that it should be happening in their community or whether council should be funding it. “The operational requirements cover off all these issues.”

Regional stocktake underway

Dr Stewart says she’s been involved in trying to get buy-in and understanding from 21 local boards as well as governing bodies since November 2012. Although the original trial period was supposed to have begun by now, it’s been pushed out until after the guidelines, which are still being tweaked, get Auckland Council endorsement in August.

During the pilot phase the SOR will be tested to see if it provides the right kind of advice for resolving issues arising from the deployment and linking of CCTV surveillance systems.

Some areas will focus on integrating with Auckland Transport’s camera’s to provide feedback while others will deal with minimum standards and legal and regulatory frameworks.

A stocktake is being undertaken as to the locations, numbers and coverage of cameras across the region and concurrently Auckland Transport will look to converge all of its CCTV cameras for transport use across what were previously seven local authorities.

This is part of assessing the technology assets and compatibility of systems, along with their different models of ownership, use and policies. If all goes well the regional deployment is expected to go ahead by July 2014.

Dr Stewart firmly believes that the project will ultimately deliver a model for implementation that can be duplicated regionally and nationally.

She says the Crime Prevention and Partnership Forum led by the NZ Police, and includes heads of the banks and private sector businesses, is already helping to establish minimum standards with a nationwide approach in mind.

The NZSA’s O’Reilly says the project will become a model for local and central government security systems and is likely to be adopted by private industry. “It will save a lot of money.”

While the current scope of the project remains localised to Auckland, once the guidelines are firmed up Dr Stewart says everyone will know ‘how we will operate and what our roles and responsibilities are’.

At that point she says the Auckland Council will take a more strategic partnership approach and start dealing with funding and the role of the private sector and central government. “If we get it right, there are so many points of leverage it seems unreal,” she says.

by Keith Newman



Dr Gillian Stewart, principal policy analyst with the Auckland Council

Seasoned auditor urges caution with sexy tech

By Keith Newman

While the national ultrafast broadband (UFB) roll out and the increasing affordability of fibre optics as a networking medium are sparking a new wave of enthusiasm for high-end CCTV cameras and the latest digital security gear, auditor Michael Pepper urges caution before committing to 'sexy technology'.

Because technology is changing so rapidly, he says it's important to step back and consider what the real need and long-term value is before being seduced by the latest electronic gadgets.

Sometimes security solutions are too complex or even unnecessary if beefing up physical security will do the trick. Pepper, the Chief Executive of MAP Datum, says in one recent case a woman sought his advice on where to position two cameras and a recorder she was about to purchase.

Her premises had been entered and equipment had disappeared on several occasions but on evaluating the premises, Pepper simply recommended a latch lock so the door automatically locked shut behind people and a mechanical key padlock.

Before committing to cameras, he says it's important to consider the cost of equipment to support them, the network bandwidth to transmit the images and the storage capacity. "You need to look at all the components and know how to balance the load."

He says one client specified 3Mp cameras for use inside a lift at \$2100 each. "I recommended 1.3Mp cameras at one third of the price which did a much better job."

He describes another audit two years ago where 99 cameras were installed but the system failed to work as described even after two technicians had worked for two weeks to try and get it right.

Camera fit for purpose

He says they were wasting their time. "It wasn't the main equipment that was the problem but the fact one type of camera was being asked to do different jobs including looking at car parks, lobbies and work areas." A change in the type of camera resulted in 'a dramatic improvement'.

Pepper says there's no doubt fibre optics will bring relief to security systems in most cities and towns but warns that without careful planning they can quickly use all the bandwidth and suffer load issues 'as quickly as an Auckland traffic jam'.

When he conducts an audit he's looking at the quality of the job, whether the installation has been done properly and is tidy and whether CCTV quality is up to par. "We don't have the resources to do a full audit but we want to make sure the recorded image is as good as the live image."

Pepper, says companies can lose faith and cease to pay attention to new technology if a system is not properly specified, implemented and maintained.

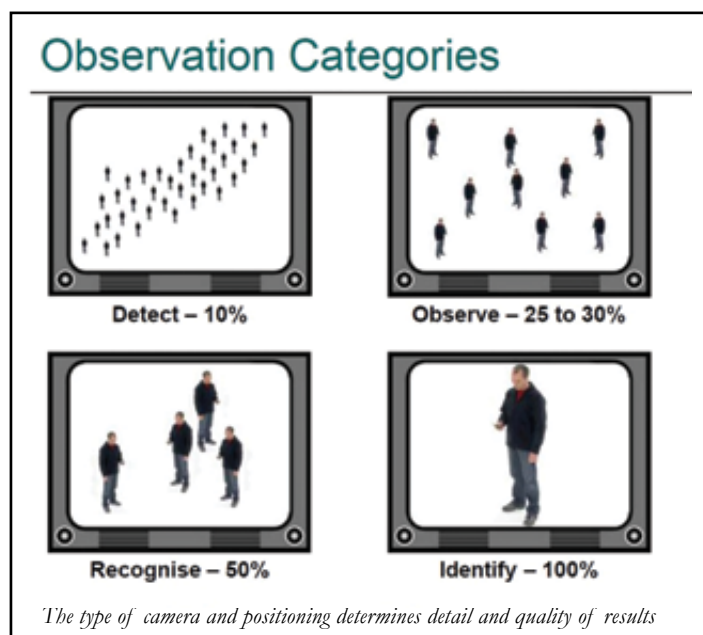
"If you are buying high end cameras, monitoring equipment and storage you need to ask who's going to be looking after it and is it fit for purpose otherwise you can waste a lot of money."

And while many people are chasing the vision of being able to remotely access CCTV footage on their home PC, cellphone or tablet, megapixel IP cameras are huge bandwidth consumers. Even using DSL it can take a long time to transmit, depending on the speed of your connection and how far you are from the exchange.

Pepper says he attended a conference session in the US recently where there was talk of the virtual security guard, with alarms tied in directly to CCTV verification and a monitoring station.

"That's fine but the majority can't afford the kind of cameras that can do this and might be better off staying with a real security guard."

Again Pepper reiterates his warning that users should drive the technology rather than the other way round as its only part of the solution. "It must also be about people, who's operating and maintaining it, and procedures for how to get the best use out of a system. You need the whole picture."



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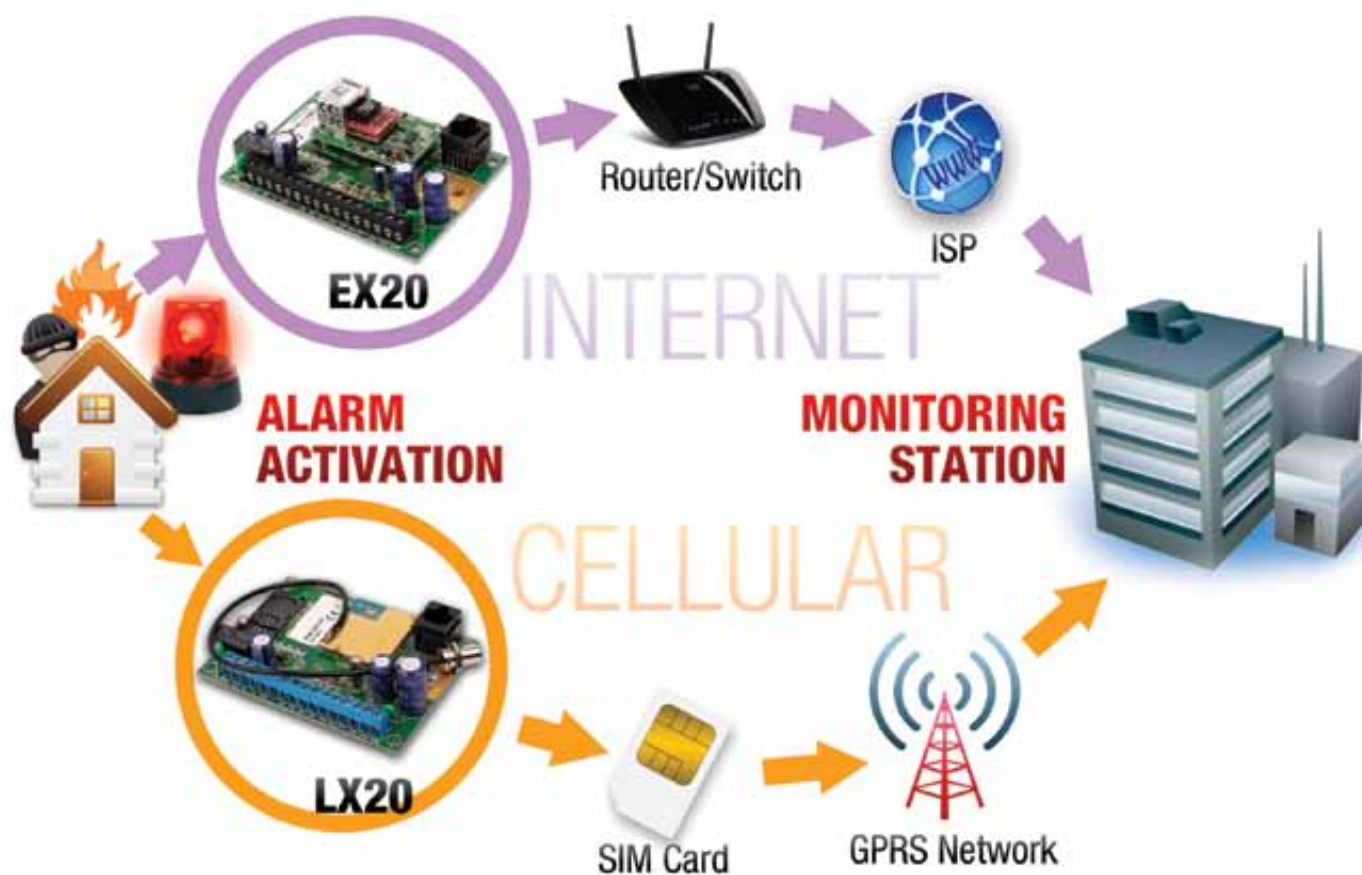
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evacom™ Limited has entered the market of alarm signal technology in New Zealand with a pair of new products that will surely change the way we think about communication. evacom (‘Ever Communicating’) is addressing the rise of Naked Broadband and the corresponding demise of copper landline utilisation by offering alternatives that use cellular technology or the Internet.

Why an alternative?

“My oldest sons are 26 and 24 and between them and more than 20 of their friends and colleagues who have gone flatting or bought houses, not one of them is paying for a ‘home phone’ service,” said a company spokesperson. “Not a

single one. If you want to contact any of their generation, it’s either mobile phone, TXT, email, FaceTime, Skype or Facebook. To the under-30s, the idea of paying \$50 a month to have a ‘telephone’ is as foreign as those old black vinyl disks that used to turn around and get scratched by a needle to make noises.”

And it’s not just the young that are ditching their landlines in favour of cheaper and more efficient technologies. The take-up of ‘home-line internet’ plans from ISPs such as Orcon, Xnet and Woosh proves that 1,000s of New Zealanders are shifting away from POTS (Plain Old Telephone Service).

Alarm monitoring

From sending short, simple TXT messages

through to speaking face-to-face over video networks like FaceTime and Skype, humans have a multitude of communication paths available to them. But machines don’t have this luxury. While we’re gradually replacing local cable networks with wireless systems, machine communication still must traverse great distances and usually this is through a copper wire. None more so than alarm panels, which have traditionally been connected to the old telephone line (PSTN).

But telephone lines have outages – more than most people would think – and can be in use (by humans) when the alarm needs to contact its monitors. Moreover, a telephone line can cost more than the price of monitoring.

Landline use is in decline

Alarms monitored over PSTN copper lines must seek new paths of communication

evacom™ has a solution for all situations

evacom™
Ever Communicating



ALTERNATIVE Solutions

You no longer have to rely on traditional copper wire landlines for alarm monitoring. There are several alternatives, available now.

GPRS

Data packets over 2G/3G cellular networks, using SIM cards and charged by the megabyte

IP (Internet Protocol)

Direct connection of alarm panel to network switch or wireless router, with signals sent over broadband.

ALARM Transmitters for ANY ContactID alarm

evacom™ GPRS/GSM and IP transmitters are high quality, European made modules that are easily fitted to existing alarm panels. Bring your clients into the 21st Century and allow them to cut the landline tether by installing an **evacom™** transmitter today.

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For more information, visit our website:
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The limitations of VoIP

When customers began replacing their landline deals with Internet alternatives (VoIP, SIP etc), many discovered that their alarm could no longer send signals

to the Monitoring Station. If you add this population to the new generation who refuse to pay for an 'old-

fashioned' telephone, but who are even more security conscious than their parents, that's a lot of people who find it galling to discover that their home (or business) security system requires a phone line to send signals.

The latest models of some brands of security system might be emerging with GPRS or IP built in, but the majority of brand new alarm systems on the market still rely on copper wire, and there are still hundreds of thousands of existing systems in place with no choice.

The evacom alternatives

evacom imports and markets high quality transmitter boards that can be retrofitted to almost any existing alarm panel, allowing them to send signals to their monitoring station via either GPRS (data over cellular network) or IP (Internet Protocol or broadband). These compact boards, designed and manufactured in Europe, are simple but very powerful, and have numerous uses in home and business security, as well as other widely disparate industries.



LX20

The LX20 board accepts a standard size SIM card and sends signals over GPRS (General Packet Radio Service). It can be installed into any alarm panel that uses ContactID for a communication protocol, and is small enough to fit into most legacy alarm panel boxes. It comes complete with an aerial with 2m of cabling and evacom also offers an optional independent power supply to ensure a regular load of 12 volts for added security.

The transmitter can be set to poll as often or as infrequently as required. evacom testing, however, has shown that while 30 or 60 second polling might

sound attractive, the delay in signal acknowledgment from some receiving situations can result in false disconnection warnings if polling is less than a few minutes. When you consider that most

existing alarm panels only poll every 24 hours, hourly to three-hourly is generally enough.

One of the best features of the LX20 transmitter (and its sister EX20) is its ability to 'reboot' itself after a signal loss or event that might ordinarily call for a manual down-power and re-power. This negates the requirement of many other accessory panels to physically travel to the site and reboot the board.

Installation is simple, with the only consideration being the placement of the aerial. Best results are generally found on an outside wall as high as it can go (without putting it directly underneath an iron roof).

Why GPRS and not GSM?

GPRS is better known colloquially as mobile broadband, or sometimes '3G' data (although not one hundred percent correct). GPRS sends signals as packet data over the cellular network much like data is sent over the Internet. GSM, on the other hand, is a voice channel communication, and while it is used extensively in some countries for alarm signals, the current situation in New Zealand has its issues.

With GSM, every time the alarm panel sends a signal to the monitoring station, the telecommunication service provider counts the contact as a 'call' and has a minimum charge of one minute. You can imagine an alarm that sends several dozen signals a day (opens and closes in particular) adding up to hundreds of minutes a month. As anyone who has tried to find a decent mobile phone plan in New Zealand can attest; hundreds of mobile minutes a month is not cheap.

SIM costs from \$1.45 pm

GPRS data from the LX20 on the other hand is minuscule (kilobytes per signal) and is much cheaper by comparison.

Furthermore, evacom has determined that with some service providers a monitoring company can piggyback several SIM cards on a single account. For example, \$10 a month (including GST) can provide enough data for six LX20s at an individual (wholesale) cost of \$1.45 each per month. How many minutes do you get for that?

Why landlines are in decline



Age of infrastructure



Unsuitable for boats and caravans



Remote and rural locations



Alternative methods of communication



Cellphone penetration



Ease of sabotage

You might wish to note that evacom also imports a more sophisticated GSM/GPRS board if GSM is the preferred option.

The LX20 is currently available for \$149 for a limited time.



EX20

The EX20 transmitter is similar to the LX20 except that instead of a SIM card and aerial, it has an RJ45 output to take a standard ethernet cable. The LX20 sends signals to the monitoring station directly over the Internet.

Installation is straightforward and only requires a cable to be run from the wireless router or switch to the alarm panel. Even a 15-year-old alarm panel can become just another online device with the addition of an EX20 transmitter.

It is suggested that should an EX20 be installed as the singular method for sending alarm signals, a UPS (Uninterruptible Power Supply) be added to the router. This would ensure that the alarm can continue to send signals in the event of a power cut.

The EX20 is currently available for \$99 for a limited time.

Backup signals

Although many users of evacom transmitters are replacing their traditional landline service, some are using one or the other of these boards to back up their existing PSTN signals. Both boards can be configured as either the primary or the secondary signal transmitter. It's even possible to install both transmitters and have one back the other up.

Stand-alone signal source

A feature of the LX20 and EX20 transmitters is that they can receive inputs from sources other than an alarm panel, and send signals either to a receiver or as an SMS (TXT message). One application

soon to be installed is a series of isolated smoke detectors in outbuildings that are connected directly to LX20 boards (no alarm panel required) and send signals upon activation.

Other possible applications include gate alarms that are too far away for conventional line-of-sight operation and even electronic buzzers, like visitor alerts or panic buttons.

Configuring the boards

evacom supplies at no charge all the software and instructions necessary to enable purchasers and resellers to configure the transmitter boards to their own requirements. There is no third party required. Boards can be configured to send signals to any monitoring station in the country.

No Third Party

One massive advantage of evacom transmitters for security companies and installers is the complete lack of a requirement to use a specific monitoring station or service. evacom supplies all of the software necessary to receive and interpret signals from its transmitters.

Free Receiver

In many cases evacom will lend a fully configured PC to resellers or monitoring companies to enable them to configure their boards and monitor their own signals. The Windows-based software has a very low resource requirement and can run on a 'mature'

PC, which can be purchased for the price of a couple of transmitter boards.

The ability to monitor signals from the LX20 and EX20 boards without an expensive gateway/receiver, database and server is also very valuable. One client of evacom has LX20 boards installed in hundreds of locations around New Zealand and Australia, monitoring a specialist local electronic device that sends signals directly to their dedicated PC whenever the device requires a service. No monitoring station, no alarm panels. Just total control and infinite flexibility.

evacom transmitters

"A full list of the potential applications of these devices is yet to be compiled,"

the evacom spokesperson said, "because we learn of a new one every week. Alarm panels are the most obvious, and not just new ones or specific brands either. There's no requirement to buy a Paradox add-on component for a Paradox alarm, a Micron for a Micron etcetera. The LX20 and EX20 suffice for all.

Having these transmitters also means that an alarm installer need not stock a range of different add-ons for all the



different brands – remembering that for most brands only certain models can take an upgrade. With evacom boards one size fits all."

Add in the flexibility of being able to choose any monitoring station in the country to receive signals and it's obvious that these evacom transmitters will be very popular. "If a security system installer purchases panels from evacom and wishes to use, say, 'XYZ Monitoring Service', and those guys don't have the ability to receive evacom panel signals... we'll set them up pretty damn quick!"



Contact evacom
04 569 3511
info@evacom.co.nz
or visit the website
www.evacom.co.nz

"A full list of the potential applications of these devices is yet to be compiled... because we learn of a new one every week."

Seminar discusses solutions to data storage issues

The exponential growth of technological innovations and data collection were at the top of the agenda at a recent seminar hosted by WD®, a Western Digital company at Sky City, Auckland on July 26 where with the assistance of Auckland based distributor VST (NZ) Ltd, a very informative and entertaining evening was had by all. VST has established itself as one of New Zealand's leading IT storage and surveillance product distributors with brands such as WD, Synology, Vivotek and Infortrend amongst others.

The seminar was to update New Zealand's security industry and computer professionals on the latest information and products with respect to

data storage solutions and the management issues surrounding them. At the forefront were new and updated products from WD, Synology and QNAP.

Patrick Lo, Senior Manager, Regional Marketing, CE & Datacenter Business Unit, WD Asia Pacific, was the first of three presentations at the seminar where he gave us a background on the brand. The unabated growth of data and introduced WD's solutions to increased storage volumes, including the addition of the new WD Se line of data centre capacity hard drives.

Patrick pointed to the significant data growth requires increasing storage volume, such as 500 EB needs to store human genome data for population of 7.1 billion; 200+ EB needed by 2020 for use in social media, with 350 million



Patrick Lo is WD's Senior Regional Business Marketing Manager (CE and Enterprise Storage)

photos uploaded daily on Facebook and 86,000 hours of video uploaded daily on YouTube, all uploaded on a daily basis. In addition there was the estimated 3.3TB of storage required by each household by 2016 and some startling projections for 'big data'. The scale of storage demand is surging due to continuing computer innovations with tablets and other mobile technologies being just the latest. The opportunity here, within the 'cloud' is the software and hardware innovations to manage and extract the value from this massive amount of data, not to mention the security issues around this.

WD hard drive technology

Patrick described Western Digital Corporation (established in 1970 and headquartered in Irvine, California) as a long-time innovator and leader in the storage industry with some 6,000 patents worldwide. As a storage technology pacesetter, the company produces



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reliable, high-performance hard disk and solid state drives to hold, manage and secure this mounting volume of data. These drives are deployed by OEMs and integrators in desktop and mobile computers, enterprise computing systems, embedded systems, DVR and consumer electronics applications, as well as by the company in providing its own storage products. WD's range of storage devices and systems, networking products, media players and software solutions empower people around the world to easily save, store, protect, share and experience their content on multiple devices.

Patrick introduced the innovative new WD Se hard drives as the first designed for scale-out data centre deployments. Built on an enterprise-grade platform for reliable 24x7x365 data centre operation, Patrick said WD Se is tailored to deliver the right combination of performance, reliability and robustness for large-scale replicated environments, mid-sized network attached storage (NAS) deployment, and backup/archiving applications.

"WD Se is a true enterprise-class drive with the right blend of affordability and capabilities to address the massive growth of semi-structured data, which is accelerating the scale-out of data centres of all sizes. Available in capacities up to four TB, the new WD Se hard drives enables customers to balance their data growth challenges in multi-drive enclosures without compromising enterprise-class features.

Today's cloud data centre installations require a cost-effective way to build large-scale storage systems, while maintaining the 24x7 reliability necessary to minimise total cost of ownership," said Patrick.



Douglas Leung, VST's Account Manager for Synology gave us a comprehensive presentation on the storage solution provider



The Synology DS213+ offers high-performance, and is energy efficient with a full list of business features in a NAS solution that helps small to medium-sized businesses

"WD's utilisation of vast amounts of manufacturing and engineering data has forced us – like many other companies – to use map-reduce methodologies to effectively analyse our data. The WD Se hard drives are used in our own big data centre."

WD Se drives also address the fast-growing SMB to mid-range network-attached storage (NAS) market. The robust design and higher workload capabilities for SMB-focused six-bay-plus table-top NAS units and rack-mount multi-tenant NAS solutions with up to 24 bays provide NAS integrators a complement to WD Red hard drives, which are for small NAS systems. WD's other data centre hard drives, branded WD Xe and WD Re, round out the high-end of the storage market, offering higher durability and performance for large-scale rack-based storage systems.

The message is to ensure the right drive is selected and used for the right applications.

These drives undergo at least 5,000,000 hours of functional and thermal testing and over 20,000,000 hours of additional testing under actual workloads in server and storage systems.

Synology storage solutions

VST's Account Manager, Douglas Leung, stood in at short notice to deliver a comprehensive address on storage solution provider, Synology Inc.

Founded in 2000, Synology is a leader in next-generation network attached storage (NAS) servers for the home and small to medium sized business markets. Specialising in both hardware and software for network attached storage devices Douglas described Synology products as

feature-rich, easy-to-use, energy-efficient, reliable and affordable. The company has a global presence with regional offices in the US, the UK, Germany and Taiwan with regional offices in the US and the UK.

Douglas said Synology is known for providing safe and stable storage solutions for a wide variety of customers, from their personal and home office line-up to workgroups, small-business and corporate series. With people demanding more storage, he said Synology has a line-up of diverse storage solutions that fits almost any bill.

But what are the base standards to look for in a server; something with a large capacity, faster transfer speeds or a combination of both? A big part of that decision rests on how the purchaser plans to use the unit. If the server will be used primarily for storage, the user will want a powerful processor and speedy transfer interface. If they are using the NAS as a media server, they will want flexibility in the output of data, like portable device connectivity, Wi-Fi options and internet access. For those just looking to set up a dedicated mail or FTP server, there are advanced security options to help prevent unwanted access to your data.

Synology covers all the bases, with business-specific and personal home-use servers that range anywhere from two-bay to 12-bay servers. Most of these servers are sold as stand-alone units, but many are sold as kits with the hard drives included. All have iOS/Android applications as well.

All Synology NAS are capable of being used as an NVR along with the use of the free Surveillance Station 6 software and Synology RackStation RS10613xs+



RackStation RS10613xs+

Robust, Reliable NVR for Large Scale Projects

Want to centralize a tremendous amount of IP cams and recording servers?
RS10613xs+ features Synology CMS to provide:

- Support for 1,400+ channels
- Built-in DHCP/NTP/VPN/Syslog servers
- Central management with user privilege, e-map, and system notification
- Up to 424TB of storage capacity

"Synology NVR solution is reliable, feature-rich, and cost-effective. It completely exceeded our requirements and expectations, helping us efficiently monitor 26 retail stores and two factories, centrally as well as remotely."



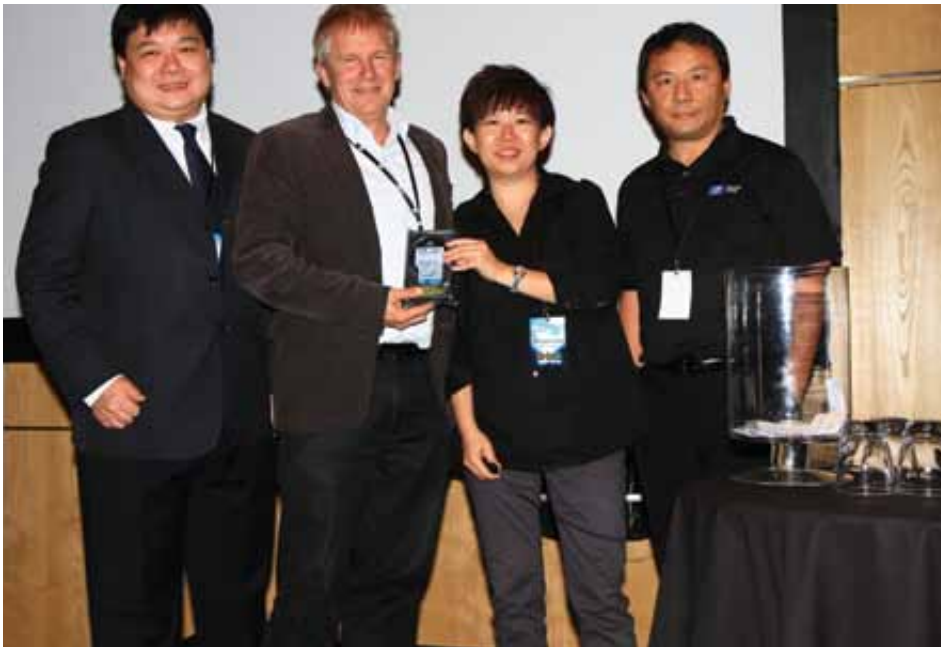
**Lindsay Sutcliffe, CIO,
Couplands' Bakeries**

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Learn more





WD presents the NEW 2 TB WD Se drive as the prize for a lucky draw winner from left to right Patrick Lo (WD), Tony Sarten, (Itron), Margaret Koh (WD), Eric Chan (WD)

users can scale up to an amazing 424Tb of storage capacity.

Surveillance Station, Synology's intelligent and reliable software that supports over 1,400 IP camera models from more than 58 brands will satisfy any users' range of surveillance needs. Surveillance Station provides advanced features, such as fisheye camera de-warping, intelligent video analytics, image enhancement, patrol guard, and a suite of notification tools. With DS cam mobile app, users can remotely watch up to six channels, take snapshots, browse through recorded events, and perform PTZ actions to adjust camera angle, all on their iOS and Android mobile devices.

Synology's Central Management System (CMS) is designed for multi-site and multi-server large-scale deployments. Synology CMS provides a unified point of control over a tremendous amount of cameras and recording servers, allowing users to centrally watch live feeds and recorded footages, set up IP cameras, and manage user privileges and notifications from the CMS host.

The latest Synology NVR614 (*soon to be released*), is an energy-efficiency and stand-alone NVR solution that will feature dual HDMI outputs and allow users to view eight channels of real-time 720p video up to 240FPS. With designated expansion units, its storage space is able to expand to 24TB.

Douglas explained Synology is dedicated to taking full advantage of the latest technologies to bring businesses and home users reliable and affordable ways to centralise data storage, simplify data backup, share and sync files across different platforms, and access data on-the-go.

As the need for higher-definition audio and video files increases and users become acquainted with handling these files, they will find a computer's 1TB hard drive quickly becoming too small. Computer videographers, digital photographers and AV enthusiasts are taking an appreciable interest in server-level storage options.

All Synology product investments are enhanced with product warranties, free software upgrades and 24/7 online support.



Dale Chen is QNAP Systems Supervisor from its APAC business division

QNAP systems

QNAP Systems, Inc. is another Taiwan company providing intelligent storage solutions. The company had Dale Chen from its APAC business division to address the seminar. QNAP also aims to deliver comprehensive offerings in cutting edge NAS and NVR solutions featuring ease-of-use, robust operation, large storage capacity and trustworthy reliability. Dale spoke about QNAP's ability to integrate technologies and designs to develop quality products that effectively improve business efficiency on file sharing, virtualisation applications, storage management and surveillance in business environments, as well as enrich entertainment life for home users with the offering of a fun multimedia centre experience. Headquartered in Taipei, QNAP was founded in 2004 and has excelled at hardware design and software engineering, brought to market numerous remarkable technologies and products while achieving international recognition and winning numerous awards.

The large number of invited guests at the seminar enjoyed a highly entertaining and informative evening. Proceedings were regularly punctuated by searching questions to keep everyone on their toes. And they must have been as a number of significant prizes were won by attentive participants with the right answers.

And as the data storage industry looks to the future, it is encouraging to see companies and products also there to provide the right answers.



The large number of invited guests at the seminar enjoyed a highly entertaining and informative evening

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Visitor Management Systems Help Utilities Protect People and Assets

By Howard Marson, Vice President and General Manager
with EasyLobby, an HID Global Business

Utilities are required to monitor and report who enters their generation operations and other critical facilities, which generally requires implementing a professional visitor management system. Many of the country's leading utilities use secure visitor management software to quickly badge large numbers of contractors and other visitors at their plant facilities. This software also can be used to control costs by monitoring the time and attendance of contractors who are working on-site during scheduled and unscheduled plant outages. Other uses for visitor management systems include screening out unwanted contractors at job sites and generating reports to analyze visitor activity. There are a number of important best practices to consider when implementing visitor management solutions so that they can support the special requirements of utilities and other critical infrastructure environments.

Unlike corporate and other facilities, utility operations are subject to tighter regulations for monitoring and reporting visits by contractors and other guests who have entered their generating or operating plants. In general, utilities and other critical infrastructure companies are required to account for all contractors and other visitors to their facilities. This is more complicated than it sounds, especially when there may be hundreds or thousands of contractors on site during planned and unplanned plant shutdowns. Plus, a typical large electric utility might have a dozen office

buildings, or more, and at least as many electric generating plants throughout their organization. Visitor registration and management software allows utility operations to comply with federal access monitoring and reporting regulations across all of these facilities, while also screening contractors and visitors against government denied party lists, such as terrorist watch lists helping improve cost and efficiency.

A key consideration for visitor management solutions is that they are easy to integrate with access control systems. This improves flexibility and security by enabling the utility to provide barcode or proximity card access to guests so that they can open doors, turnstiles, elevators and other locked areas that are controlled by the access control system.

With this approach, each visitor may use his or her card to enter some areas but not others based on each area's security level and whether the visitor has been granted access permission through the access control system.

The visitor management system can also issue long-term badges with barcode access to expedite contractor check-in/check-out time during multi-day projects.

Another consideration in choosing a visitor management system is cost. In addition to improving visitor security, these systems can also be used to control costs by better monitoring and controlling contractors working at their facilities. For instance, the system can be used to monitor contractor time and attendance by matching the contractor's

sign-in and check-out times. During facility outages there can be hundreds or thousands of additional contractors on site, but with a visitor management system in place, utilities have a reliable mechanism for keeping track of who was there, for what period of time, and whether they were also working at other plants. This can be especially useful for validating the hours that contractors claim to have worked, prior to paying them.

There are a number of other system features that should be included in order to tailor a visitor management solution to specific utility needs. For instance, convenience is improved if the system can manage both guests and contractors, and if there is a web-based option for allowing employees to pre-register guests they know will be arriving. Additionally, the system should automatically notify employees when their guests have arrived and are waiting for them in the lobby. This eliminates the need for the lobby attendant to call each employee, each time a visitor arrives.

In addition to badging authorized visitors, the system also should be capable of screening out undesirable temporary workers, and flagging workers who should be denied access to other facilities. When it comes time for authorized visitors to leave the facility, utilities that have issued barcodes on their visitor badges should be able to complete the check-out process by simply having their lobby attendants scan the barcode upon the guest's departure. This is especially helpful in busy lobbies or at



exit gates, where barcode scanning can significantly accelerate this procedure.

Besides managing visitors, the system also should have the necessary feature set to manage assets and packages that are delivered to facilities. For utilities where guests and contractors will be arriving at an unattended lobby, the system should be capable of operating in stand-alone mode, enabling visitors to pick up their proximity cards from a kiosk. All visitor badges should employ a consistent design across all of the utility's facilities, using a distinct and easy-to-identify colour coding scheme that indicates which visitors need to be escorted, and which do not. Utilities should have the option of including a number of elements on their badges, such as a colour photo, a bar code for easy check-out and emergency contact information.

Last but not least, visitor management systems should be easy for utility lobby attendants to use. With a few simple mouse clicks, the operator should be able to scan a visitor's license and print a professional visitor badge, which can include the visitor's photo and other elements, in less than 20 seconds.

Utilities are under increasing pressure to improve security and business operations while reducing costs and complying with government monitoring and reporting requirements. By implementing a feature-rich visitor management system that can be integrated with their existing access control system, utilities can better monitor and control temporary contractors and other guests while meeting the full range of cost, security and regulatory requirements.

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Geoff Dolan



For over 18 years, Geoffrey Dolan has been a corporate entertainer in New Zealand, Australia, Fiji and Malaysia, leading many major corporations through various client functions, sales conferences, awards nights and roadshows. Geoff has established himself as an extraordinary conference and product host, as either an MC or character facilitator and leading and producing full events over a day or a week.

Jane Turner



Jane joined ASB in 2008 as an Economist and has since taken the role as a Senior Economist. Her role involves monitoring, analysing and forecasting trends in the New Zealand economy, financial markets and monetary policy. Prior to joining ASB, Jane spent 5 years working for the Reserve Bank of New Zealand in Wellington, spending most of this time in the forecasting team as a Senior Economic Analyst.

Roger Lewis



Roger Lewis is a director of a Christchurch based training practice that focuses on developing Personal Efficacy. He successfully operated his own private financial advisory service for 25 years, and was the inaugural chairman and a director of Rutherford Rede, a national financial advisory practice specialising in wealth management services for high net worth clients.

Dr. Warren Tucker



Warren was appointed Dir. of the Government Communications Security Bureau with effect 13 Dec 1999. He took up the position as Director of Security, New Zealand Security Intelligence Service, 2006.

Warren is a founding member and Patron of the New Zealand Institute of Intelligence Professionals (NZIIP), and is Chair of the Strategic Advisory Board, Centre for Defence and Security Studies, Massey University.

Dr. Trevor Bradley



Dr Trevor Bradley lectures at the Institute of Criminology, Victoria University of Wellington. Among other areas of interest, he has been involved in research on New Zealand's domestic private

security industry since 2008 and has published a series of articles on various aspects of private security in academic journals and security industry publications.

2013 Conference Structure:

WEDNESDAY 28 AUGUST

Speakers

7:00am	Industry Breakfast	
	An Insight into the Current Economic Conditions	Jane Turner, ASB Economist

9:00am	Conference & Exhibition Opening	
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9:30am	Providing a Great Customer Experience	Steve Dixon - Vivint (US)
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10:30am	Tea Break	
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11:00am	Terrorist Trends, Ideologies and Tactics	Victor Vella - Panasonic (US)
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12:30pm	Lunch Break	
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1:30pm	Regional Security Issues	Jim Della-Giacoma (Australia/Indonesia)
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3:00pm	Tea Break	
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3:30pm	Skills Org - Electronic	or	Licencing Private Security
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4:00pm	Skills Org - Manpower	or	NZSA Audits
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4:30pm	ASIS Certifications	or	Radio Communications in the Security Industry
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5:00 - 7:00pm	Drinks & Nibbles	
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Victor A. Vella

Victor Vella has 30 years of experience in law enforcement and antiterrorism. As the former head of an elite antiterrorism team, he was responsible for multi-million dollar efforts to develop antiterrorism policy and guidelines, conducting vulnerability and risk analysis, and lead teams of seasoned Federal agents in the performance of covert red team operations. Victor has been involved with the investigation, research, and/or analysis of most major terrorist events that have targeted US citizens and

missions worldwide in the last 25 years.

In 2012, Mr. Vella retired from the DOD and is now the Business Development Manager for Panasonic Systems Communications Company of North America where he is responsible for \$250M in Federal contracts and sales.



Steve Dixon

Steve Dixon is Vice President of Customer Experience and Operations at Vivint Inc., one of the largest home automation companies in North America. With more than 20 years of experience managing customer-facing teams, Steve has worked with some of the largest and most well-respected companies in the world. At Vivint, he is responsible for overseeing all customer service and support functions.

In this capacity, Steve manages Vivint's Customer Care team and oversees monitoring operations for the company's Central Station, which was awarded the 2012 Central Station of the Year by the Central Station Alarm Association (CSAA). He also directs Vivint's Customer Loyalty team and leads the company's Sales Operations group, which is responsible for providing logistical support for Vivint's summer sales program.

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THURSDAY 29 AUGUST

Speakers

9:00am Security at the Crossroads Bob Forsyth - MITIE (UK)

10:30am Tea Break

11:00am Elevator Pitch or Understanding advanced persistent
Cyber Security threats.

12:00pm How to have a Winning Website or Operational Security Requirements

12:30pm Lunch Break

1:30pm Moving Beyond the Crossroads:
Improvement through Productivity Roger Lewis

3:00pm Tea Break

3:30pm Annual NZSIS update

4:00pm Annual Police/CPPF update

4:30pm Regulator update

5:00pm NZSA AGM (Financial Members Only)

7:00pm Pre-Dinner drinks

7:30pm Awards Dinner

Simon Coles



Simon has been in radio industry for one year but has a long background in the IT industry. When not slaving away for Motorola Solutions you will find him conducting one of many water sports. A discussion on the changing nature of the two way radio industry with the improvements provided by Digital radio and the wider benefits that applications can provide integrated with this radio platform.

Rob Cook & Gail King



Rob Cook is the marketing manager at TenderLink, a leading Australasian provider of tender notification



services, web-based e-Procurement systems and bid response training. Gail King is MD of Word Sense Ltd, with extensive skills in writing, reviewing, editing & managing the non-price requirements of tender submissions.

Mark Piper



Mark is a Senior Security Consultant for Insomnia Security where he specialises in enterprise web application security leading the research into APT style attacks, the actors and their methods.

Mark is working to understand future attack models and associated mitigations with the intention of providing the tools and methodologies to assist organisations with the detection and prevention of such attacks.

Jeff Brown



Jeff is the Senior Manager for Security & Resilience with ASB Bank. His role covers Physical and Corporate Security, as well as Crisis Management and Business Continuity Planning.

He was previously the VP of Safety, Security, Operational Risk and the Environment for Air New Zealand.

He is the Deputy Chair of the ASIS NZ Chapter and is a Certified Protection Professional.

Allan Kent



Allan Kent has a wealth of direct experience as a website strategist and business coach for Zeald. Allan makes a point of getting to know your business, examining your overall business aims and

helping show you how effective online marketing will make a difference to your bottom line. "My real passion is sales and marketing and it's in this area where I add most value", says Allan.



Jim Della-Giacoma

Jim Della-Giacoma joined the International Crisis Group in April 2009, initially as South East Asia Project Director, and since May 2013 has been the Brussels-based organization's Asia Program Director. From Jakarta he oversees its work from Afghanistan to the Korean Peninsula, managing staff covering more than a dozen conflict affected countries in this region from Kabul, Islamabad, New Delhi, Yangon, Bangkok, Jakarta, Beijing, and Seoul.

Among other things, Jim has researched, written, and spoken on citizen participation, conflict prevention, corruption, democratization, elections, radicalization, terrorism, and security sector reform. He holds a Bachelor in Economics (Political Economy) from the University of Sydney and a Masters in Asian Studies from the University of NSW.



Bob Forsyth

With over 17 years' experience in the security industry, Bob is a proven achiever at a high level. He is a strong relationship builder who is financially astute with excellent negotiation and communication skills with the ability to work with people at every level.

Bob was promoted to the position of Managing Director of MITIE's security business in April 2010 after an array of notable achievements since joining the company in 2004. Bob has continuously worked to expand the business including the implementation of the response service, and has significantly contributed towards year on year growth. In June 2009 Bob initiated the launch of the business' total security management ethos; to take an integrated risk-based approach to security, incorporating people, technology and consultancy services.

Starlight HD Cameras

High performance in extreme low-light

The new DINION starlight HD 720P and FLEXIDOME starlight HD 720p RD/VR are the next real breakthrough in HD security. In poor light these amazing HD cameras deliver a clear colour image where others show only black and white. And in extreme low-light they deliver a black and white image where others show no image at all! Add the Bosch Video Security app and overcome the bandwidth barrier so you can view HD images from anywhere.



HD security breakthrough

With their high sensitivity in both colour (0.017 lux) and monochrome modes (0.0057 lux), the HD cameras work with minimal ambient light, delivering clear images in a multitude of applications, even where poor lighting is the principle challenge. The 60 fps frame rate helps capture fast moving objects in applications such as traffic and casinos.

Breakthrough imaging

The starlight cameras come with Content Based Imaging Technology (CBIT). This Bosch innovation intelligently combines information from the sensor, image pipe, encoder and intelligent video analysis (IVA) to dynamically optimise the image for every scene. Bosch CBIT-enabled cameras feature two special modes: Intelligent Auto Exposure (iAE), which ensures

the optimal image of important objects and iDNR provides the most usable image possible by cleverly optimising the detail-to-bandwidth ratio.

By using this intelligent noise reduction technology (iDNR), the image clarity is improved and the storage requirements are reduced significantly. The 720p starlight HD camera requires up to 30% less bandwidth than other 720p and SD cameras.



He's not the only one with superior night vision. Be wise and choose the most light-sensitive HD cameras on the market - choose Bosch starlight.



Use everywhere, view from anywhere

The unique FLEXIDOME RD is designed for demanding, outdoor applications. The rugged cast-aluminum dome housing can withstand the equivalent of 55 kg of force and the extended operating temperature range of the camera makes it ideal for any application - extreme temperatures and vandal-prone areas are only two examples. A choice of installation options includes flush, wall and pipe mounting. The extensive range of factory installed Super Resolution HD lenses covers a focal length range from 1.8mm ultra wide angle to a 40mm telephoto.



By applying the Bosch Dynamic Transcoding Technology, HD quality images can be viewed from any location that has access to the internet, even if the available bandwidth is only 128 kBit/s. The video streams can be viewed from your iPad or browser, the free Bosch Viewing Client, or the Bosch Video Management System.

Easy migration to High Definition (HD)

Because they can deliver consistently reliable images in all lighting conditions, the 720p HD cameras are expected to replace SD cameras and as such, can be considered the new standard for professional video surveillance systems. The introduction of these high performance HD cameras at a similar price level as SD cameras underlines the Bosch commitment to constantly improve our range of security cameras and accelerates the transition from analogue to IP.



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Integration Partner Program

Bosch IP standard- and high-definition cameras, encoders and analytics work seamlessly with a wide range of security software and recording solutions from Bosch and other industry providers. Through the Open Network Video Interface Forum (ONVIF) conformance, the open availability of Bosch video software development kits and a team dedicated to special integration and support projects, it is easy to manage Bosch video products within your system design.

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Cyber threats hitting small businesses

Cyberwarfare is not just something government departments and large corporations need to be aware of. Truth be told, it is the smaller firms, the soft targets that need to lift their game to thwart such attacks on their business.

A survey by IT security firm Symantec has revealed that 40 percent of data breaches last year were caused by hackers – people who set out to illegally gain access to someone's computer network.

In addition, 23 percent of data breaches were made accidentally, another 23 percent were due to the loss or theft of personal devices, and eight percent were down to insider theft. Six percent of data theft fell into the 'unknown' box, and one percent was due to fraud.

The 58-page report says 31 percent of all attacks on company computer systems were owned by small businesses and that

in an earlier survey (released in October 2012) small business owners had a false sense of cybersecurity as 77 percent claimed their company was safe from cyber threats such as hackers, viruses, malware or a cybersecurity breach – yet 83 percent had no formal cybersecurity plan.

Symantec's Internet Security Threat Report 2013 says that while small businesses may assume they have nothing a targeted attacker would want to steal, they forget that they retain customer information, create intellectual property, and keep money in the bank.

"While it can be argued that the rewards of attacking a small business are less than what can be gained from a large enterprise, this is more than compensated by the fact that many small companies are typically less careful in their cyber-defences," says the report.

"Criminal activity is often driven by crimes of opportunity. With cybercrimes, that opportunity appears to be with small businesses. Even worse, the lack of adequate security practices by small businesses threatens all of us. Attackers deterred by a large company's defences often choose to breach the lesser defences of a small business that has a business relationship with the attacker's ultimate target, using the smaller company to leap frog into the larger one."

Smartphones

As expected, the amount of mobile malware (malicious software) in 2012 continues to rise. Last year saw a 58 percent increase in mobile malware families compared to 2011. The year's total now accounts for 59 percent of all malware to-date. With a 32 percent increase in the number of vulnerabilities

reported in mobile operating systems, it might be tempting to blame them for the increase. However, this would be wrong.

The report says: "In the PC space, a vulnerability drives attacks as new vulnerabilities are incorporated into commonly available toolkits. The more they're used, the faster they spread. This is not occurring in the mobile space. Today, mobile vulnerabilities have little or no correlation to mobile malware. In fact, while Apple's iOS had the most documented vulnerabilities in 2012, there was only one threat created for the platform.

"Compare this to the Android operating system (OS); although only 13 vulnerabilities were reported, it led all mobile operating systems in the amount of malware written for the platform.

Vulnerabilities will likely become a factor in mobile malware, but given Android's market share, the openness of the platform, and the multiple distribution methods available to applications embedded with malware, it is the 'go-to' platform of malware authors."

Watering hole attacks

The report's authors say the biggest innovation in targeted attacks is the emergence of watering hole attacks. This involves compromising a legitimate website that a targeted victim might visit and using it to install malware on their computer.

"For example, this year we saw a line of code in a tracking script on a human rights organization's website with the potential to compromise a computer," says the report. "It exploited a new, zero-day vulnerability in Internet Explorer to infect visitors."

A zero-day attack is when people attack

Mac attack

Historically, Mac users have felt less vulnerable to malware than PC users. As Apple has gained market share, Macs have become a more attractive target. In fact, 2012 saw the first significant Mac malware outbreak. The Flashback attack exploited a vulnerability in Java to create a cross-platform threat. It was incorporated into the Blackhole attack toolkit and used by criminals to infect 600,000 Macs, which is about one Mac in 100.

Source / Symantec

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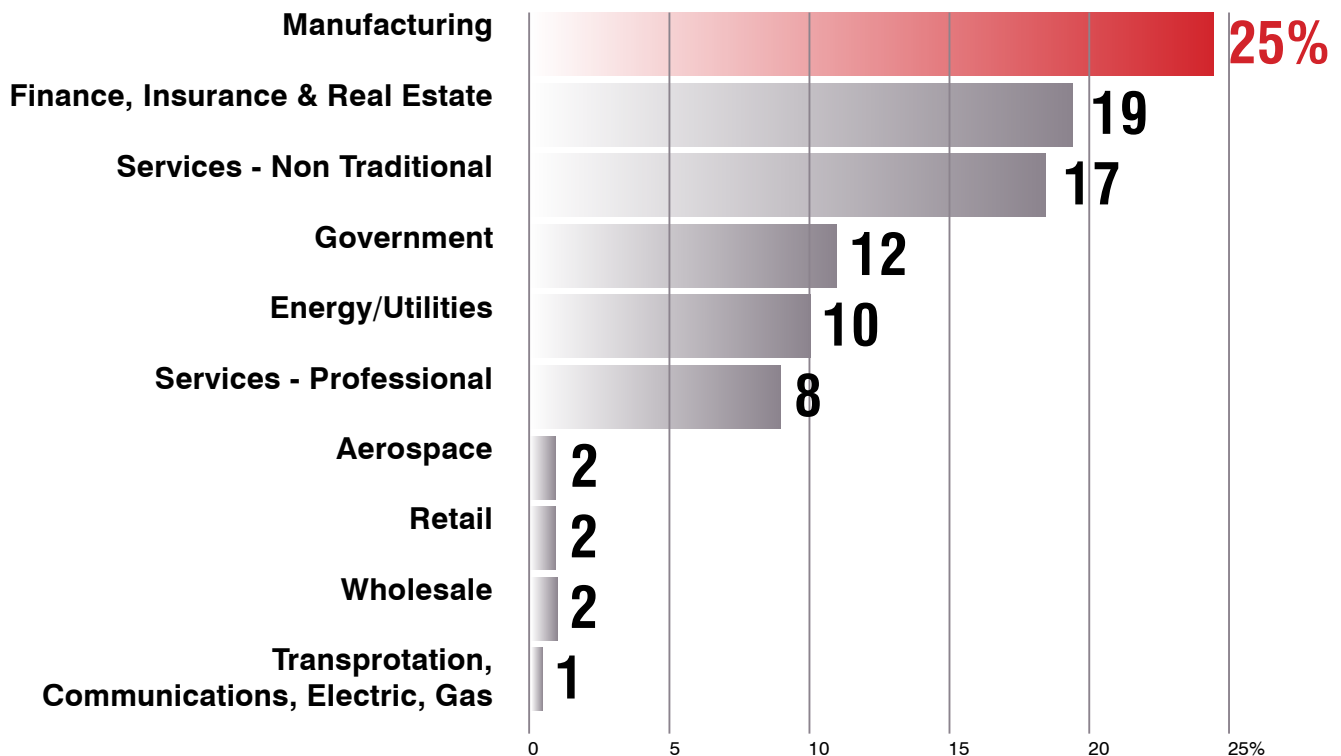
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Top 10 Industries attacked in 2012

Source Symantec



a website on the day a vulnerability is first known about – and well before any fix has been issued.

The report says: “Our data showed that within 24 hours, people in 500 different large companies and government organizations visited the site and ran the risk of infection.

“The attackers in this case, known as the Elderwood Gang, used sophisticated tools and exploited zero-day vulnerabilities in their attacks, pointing to a well resourced team backed by a large criminal organization or a nation state.”

Ransomware on the rise

Ransomware locks your computer with the criminals demanding a release fee that’s paid by credit card. The malware is often quite sophisticated, difficult to remove, and in some cases it persists in safe mode, blocking attempts at remote support. The ransom typically ranges between \$50 and \$400. In many cases, payment doesn’t unlock the computer.

Source / Symantec

The report recommends that all computer users and businesses assume they are a target and that if they improve their defences against the most serious threats, they will automatically improve their protection against other threats.

Based on Norton Safe Web data, the Symantec technology that scans the web looking for websites hosting malware, the firm determined that 61 percent of malicious sites are actually regular websites that have been compromised and infected with malicious code.

Risks of social media

The report says cyber criminals are less interested in email than a few years back – thanks in part to the growth of social websites such as Facebook.

The report’s authors say social media combines two behaviours that are useful for criminals; social proof and sharing. Social proofing is the psychological mechanism that convinces people to do things because their friends are doing it. “For example, if you get a message on your Facebook wall from a trusted friend, you’re more likely to click on it,” says the report.

“Sharing is what people do with social networks; they share personal information such as their birthday, home address,

and other contact details. This type of information is very useful for identity thieves. For example, your social media profile might contain clues to security questions a hacker would need to reset your password and take control of your account.

People are spending more time online, and the most popular activity is for social networking. Furthermore, younger users are more commonly using mobile devices to access the internet and social media applications.”

Symantec says social media sites are a threat to business owners because companies are often unwilling to block access to these sites – so they need to find ways to protect themselves against web-based malware on these and other sites.

“This means multi-layer security software at the gateway and on client PCs. It also requires aggressive patching and updating to reduce the risk of drive-by infections. Lastly, user education and clear policies are essential, especially regarding the amount of personal information users disclose online.”

It’s worth remembering bank robber Willie Sutton. When asked why he robbed banks he said: “Because that’s where the money is.” Today, online criminals target social media sites because that’s where the victims are.

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The Future of Video use your eyes!

By Wai King Wong, Country Manager, Axis Communications

Since the invention of the first analog video camera, it was natural to compare these devices to the human eye. Focus, light sensitivity, iris, lens, focal length and aperture are all terms used to describe both. Cameras in surveillance were created to see what we as humans couldn't. Yet in the analog CCTV world, the comparisons stopped at seeing.

In the world of IP video, cameras are computers that can see. When we talk of computers, we talk of artificial intelligence. We talk of memory. Today we can compare an IP video system to the human eye and the brain.

There are some areas today where the IP camera bests even our own human abilities, but also qualities where a surveillance system will never replace human intelligence or intuition. How do we stack up today with our IP video devices and where will we fall behind in the future?



Wai King Wong
Country Manager, Axis Communications

Seeing is believing

Let's start with the obvious comparison: the IP camera and the human eye. While there's no perfect calculation, the whole eye is said to have a total resolution of more than 100 megapixels, but this is hardly usable for surveillance and it's not the actual resolution that our brain (the VMS) computes.

While the eye wins outright for overall resolution, one can argue that the usable resolution of the cornea or what the brain computes at a given time can vary greatly, but be roughly estimated between 5-10 megapixels depending on the person's eyesight. Still, given that lens technology is not on par with the higher resolutions in security cameras – maxing out around 5 megapixels for professional surveillance – and that most 10-20MP cameras lack frame rate and image quality around the edges of the scene, it is a clear win for the human eye.

There's one main reason that lenses are not keeping pace with IP camera and sensor development, and therefore the human eye: Moore's Law. Unlike the IT components inside a camera, optical components like the lens do not follow Moore's Law. So while lenses are taking longer to evolve, IP camera developers are using the ever-growing processing power in the cameras to look beyond pure resolution and improve overall image clarity with better light sensitivity.

Many of us suffer with poor night vision. But unlike our eyes, cameras have the ability to leverage IR wavelengths and produce a black and white image at night. Analog held one final advantage over IP regarding light sensitivity, yet neither analog nor IP could produce colour images in the dark. Both of these cornerstones were passed during the last year with the introduction of colour-at-night Lightfinder technology. Here, Moore's Law is really kicking in with sensor development and we can expect a lot of

progress in low light video. Also, as CMOS sensor technologies evolve we now have the ability to be almost as light sensitive in 5MP cameras as the human eye, and much more light sensitive than the eye in HTDV and VGA resolutions.

And then of course there is the ability to see with absolutely no light at all – which no human can do. For this we now have professional-grade, all-digital thermal network cameras that can be integrated into an IP-based surveillance system. Thermal cameras can detect humans and objects in complete darkness as well as poor visibility conditions and are no longer just for military usage.

Wide dynamic range is another hot issue related to the sensor and image processing. The human eye is said to have a contrast range to 120 dB. If compared to the best wide dynamic range network cameras on the market, it's a dead heat tie. However, when humans try to see during constant contrast change, the eyes will get very tired and a headache is likely on the horizon. So in the long run and especially when fighting direct sunlight, the camera is better than the human eye without even the need to wear sunglasses.

Now that we've covered resolution and light sensitivity of the camera vs the eye, the next comparison is with field of view and mechanical speed. The eye has a field of view of approximately 75-95° and a pan-tilt speed of roughly 900°/second. If we compare this with current PTZ cameras, the human eye is faster than the majority and still beats the autofocus algorithms of most cameras. Thus, improving focus will be the manufacturer focus for the coming years.

However, since the human eye lacks optical zoom, IP security cameras have a major leg up. We continue to see improvements in the evolution of optics and motors in PTZ cameras that Darwin can't keep up with.

But remember, in the same way the human eye can contract infections and obstructions, so do security cameras. Dirt, fog, dust and even spider webs affect the camera as much as they do our own eyes. Without the ability to brush debris away from their lenses, installation environment and housings are increasingly important and will see further development.

Unlike our eyes, however, the biggest leg up for the camera is that it never needs to sleep!

From detection to analysis

The no-need-for-rest feature of cameras means that video analytics is superior in the ability to perform around-the-clock, monotonous tasks like people counting, cross-line detection and license plate recognition (LPR). Think about the patience you would have to have to sit on the side of a highway and make a note of all the license plates that drive by. But when it comes to more advanced analytics, the human brain and intuition wins over a security camera in most aspects.

When in controlled environments, advanced analytics are working really well. Face detection by a video surveillance camera in a crowd is something we all can dream of, but face detection in a controlled environment can be deployed successfully. This intelligent feature will not only play a big future role in access control, but in more unique applications like retail customer reward programs.

When it comes to detecting strange behavior and forensics, there is nothing like a guard or operator. While advanced behavioral analytics are improving, the human element will be important for many years to come – even if CSI and other TV shows would like you to believe otherwise.

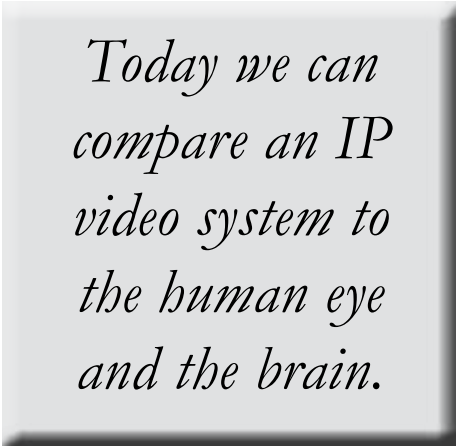
The key to the future is mining all the high-quality video data that IP cameras capture and consider new and novel uses for this information. The retail market will be the biggest winner in the future. Analytics will continue to improve – especially as software developers from all walks of life are attracted to the surveillance industry with the goal to develop applications to run inside the camera itself – but a human will nearly always be required for this aspect of the industry to thrive.

However, when talking about analytics and software, there is the rising issue of potential patent lawsuits attempting to block the use of a specific algorithm. This is happening in our industry as well as many others, including the mobile phone market. One solution could be to pool

patent fees amongst the patent holders in order to share these innovations with the world while keeping overall costs down for the end-user. This will leave us free to innovate and drive business. Until then, we as people will have an advantage over surveillance systems for many years because it's not possible to patent humans (fortunately)!

How's your long and short-term memory?

We all have personal memories that we can look back on in an instant. I'm not a neurology specialist, so it's astonishing how our brains can analyze the pictures/videos from our past and have the ability to record for many years. Here, even the most advanced computers completely lag humans. That's good news for police officers interviewing folks about a crime – even if eye witness testimony is sometimes proven shaky.



*Today we can
compare an IP
video system to
the human eye
and the brain.*

Humans are said to have short term and long term memories. So too do surveillance systems. Consider long term memories as the server-based and NVR systems with the ability to download and store video for long periods of time. Local, edge-based recording is then short term memory – which is improving in the camera not through memory exercises, but through Moore's Law.

Edge-based storage in a small camera system environment has many benefits and it will continue to get better. Today's standard for a modern surveillance system is HDTV and, if configured properly, the user will never miss a single frame. With the evolution of SD-cards, which are now available in 64 and 128 GB with more storage to come, we can easily store weeks of high quality video inside the camera or encoder in the coming years.

And as edge-based storage grows, so too does Internet bandwidth and availability. Just as our own human behaviour has dictated the rising use of Gmail, online banking, movie streaming, personal

storage, file sharing and other cloud-based services, a similar need for anytime, anywhere video access and offsite storage has led to the emergence of hosted video. While edge recording is perfect for single site deployments, hosted video has seen success where the end-user has multiple dispersed sites to monitor.

Yet a question I often get when speaking about the growth of edge-based and hosted video storage is if these technology trends mean the end of the VMS. The answer is simple: These cameras still need to be managed, and what does this the best is a good VMS!

The real game changer will be in the smaller camera count market where we will see edge storage replace the DVR rather soon. This trend may be even more disruptive when we combine good camera-edge-recording and analytics. A third layer is when we combine edge recording with hosted video. Using analytics with increased edge storage capacities will be attractive because this solution does not require continuous Internet bandwidth.

So while humans can remember even our earliest memories, an IP surveillance system has the most reliable long term memory and its short term memory growth is far outpacing our own.

Man vs machine

When we compare man vs machine in the surveillance world, the one certainty is that we need to work together for maximum efficiency today and into the future.

Humans have higher pixel vision, but the IP camera helps us see in difficult light and pure darkness. Guards and officers in the field can scan quickly for signs of trouble, while their colleagues in the command post use cameras to zoom in for a closer – and safer – look. Our brains can analyze a scene and predict behaviour thanks to human intuition, but the IP camera is there to help with repetitive tasks without getting bored or falling asleep at the wheel. Our long term memories are unrivaled in the animal world, but the camera never lies or misremembers.

Moore's Law keeps on working to give us more processing power and usable resolution, while the latest human evolution seems to be that we are growing larger, taller and, yes, wider – just like our old analog TVs!

IP video will continue to improve and humans must adapt to get the most out of the technology. After all, in a footrace, it's clear that Mr Moore is much faster than Mr Darwin.

Thermal imaging cameras used for deer management

In the UK deer have no natural predators and as such deer numbers have increased dramatically. Aside from deer culling the only limitations to their population growth are typically starvation, disease and traffic collisions

The Deer Initiative estimates that there is a need to cull at least 500,000 deer a year in the UK. Without selective and careful deer culling, deer problems will increase

dramatically. Damage caused by deer can include serious damage to crops, trees and shrubs and result in a considerable headache for countryside managers and gardeners alike.

There is also the problem of deer-vehicle collisions, which can have very real and even fatal consequences. Whilst other forms of deer management may also be explored, for example the use of fencing and other deterrents, it is the

belief of County Deer Stalking that deer numbers can only be controlled properly by selective and careful culling.

County Deer Stalking was formed by Peter Jones who is a professional Deer Stalker in the South East of England. Jones manages the deer over a variety of beautiful countryside locations in Hampshire, Surrey and Sussex; counties which have large populations of Fallow, Roe and Muntjac Deer.

As a professional stalker he has all the relevant Deer Management Qualifications (DMQ) and is a DMQ Approved Witness for the British Deer Society and British Association for Shooting and Conservation.

Besides managing deer over around 2,000 acres, County Deer Stalking also offers accompanied Deer Stalking of wild, free-ranging deer to both the beginner and experienced hunter.

An addition to the stalking kit

Typically the standard equipment for deer stalkers is a rifle with telescopic sight, a pair of binoculars and a knife. "For the last two years I heard and read more and more about using thermal imaging cameras for outdoor applications," says Peter Jones. "I was really keen to get my hands on one to find out how I could use this technology during stalks." Never having used any type of night or thermal vision before, Peter was presented the opportunity to add a FLIR Scout PS-32 to his kit of equipment.

FLIR Scout PS-Series are the smallest and most affordable thermal imaging cameras in its class. They are equipped with an uncooled, maintenance free, microbolometer detector which delivers





These deer are easy to spot thanks to the InstAlert™ feature, which colours the hottest part in the thermal image red, available on all FLIR Scout PS-Series



In addition to the InstAlert mode, where the hottest objects are highlighted red, there is also the choice for Black Hot or White Hot mode



This heat signature of deer clearly shows up in the thermal image looking through the trees



crisp thermal images in any day or night situation. The FLIR Scout PS-32 produces thermal images of 320 x 240 pixels. Users who do not need this high resolution can choose the PS-24 which produces images of 240 x 180 pixels. All cameras are equipped with advanced internal camera software that delivers a crisp image without the need for user adjustments.

Definitely an addition

Despite using the FLIR Scout PS-32 for only a short while, Peter soon discovered the advantages of using thermal imaging in his profession. "With the pressures of hunting, deer have become increasingly nocturnal, which makes the night ideal for counting deer numbers," he explains. "Usually counting is done in the early morning or late in the evening, but with the use of a thermal imaging camera this can now be done at night, providing more accurate records."

Contrary to other countries, the UK prohibits the culling of deer at night. "But

a thermal imaging camera is not only a great tool for use in the dark, on a couple of occasions recently, I have seen for myself how useful thermal imaging can be during the day when I used the FLIR Scout PS-32 to scan dense woodlands, to see if I could pick up any heat signatures," said Peter. "And it worked! In only one month there were three occasions where I picked up heat signatures from deer which would have remained unseen when using other, more traditional methods. Lots of people set out to stalk in the morning when it is still dark. A thermal imaging camera allows you to scan the field to establish if there are deer around. If there are, it gives you the confidence to wait until it is light enough to approach and take a shot."

Following up on wounded animals

At County Deer Stalking it is important that all deer stalking is carried out in a safe and humane manner and that culling is achieved according to the Best Practice

Guidelines for Deer Management. A deer must be shot in such a way that it does not suffer. On occasion however, despite best intentions, this is not always the case. Peter explains; "When a deer is shot, it will normally run a little before it bleeds out. However on rare occasions when a deer is not shot cleanly it may be able to make off a long distance into cover. Previously it took me hours in the dark to find a wounded deer, achieved only by following the blood trail with a flash light. With the FLIR Scout PS-32 it is possible to pick up the heat signature of an injured deer allowing me to rediscover and dispatch it more quickly."

Learn to work with it

A thermal imaging camera is not a magic tool that will solve all your problems. In combination with other equipment for deer stalking it is however a very useful addition. "It takes practice to work with a thermal imaging camera in combination with your binoculars," says Peter. "Gauging distance is difficult with a thermal imaging camera. If you use a thermal imaging camera in combination with your binoculars it also takes some time to get used to the different images that the two tools provide." A thermal imaging camera is a perfect tool to locate a heat signature, but it is not always possible to identify which animal the signature belongs to. "Over typical shooting distances you cannot always clearly identify the source of a heat signature, for example smaller species of deer can be confused with other wildlife such as foxes, hares and pheasants. Therefore a thermal imaging camera will not replace other equipment but it is a very good addition to the equipment a professional deer stalker uses. Especially the FLIR Scout PS-Series, which is small enough to fit in your pocket and light enough to carry with the rest of your kit."

More about FLIR Systems and our products can be found at <http://www.flir.com/cs/apac/en/FLIR>



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Proving the Audit Trail

By Philip Roigard CPP
RISQ NEW ZEALAND LIMITED

Some years ago we were asked to investigate a case of suspected illegal export of primary produce from New Zealand contrary to NZ Export Regulations. The case involved some interesting elements, but was essentially an example of proving the audit trail.

We began by amassing a large amount of export documentation within a defined period and then set about following and proving the most current shipment within that sample. We began at the point of origin, the suspect's warehouse where we observed a shipment being loaded into containers. We then followed the truck to a provincial NZ port where we observed it being loaded on a ship. We established the various ports of call for that ship from the shipping company and proceeded to monitor the ship and our target containers (2) through the various ports to an end user.

While in theory that sounds relatively straight forward, the practical application of that was a little more challenging.



Philip Roigard CPP

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First stop was Auckland, predominantly to load more containers for export, and for our containers, simply a transit port where they remained stowed on board. It was relatively easy to monitor a container ship at Fergusson Wharf from the observation point on Gladstone Road.

The next stop was Brisbane and again for our containers, just a transit port, but of course we had to be sure they were not off-loaded there. We managed to enlist the assistance of the Australian Quarantine & Inspection Service (AQIS) who not only confirmed through documentation that our containers were not due for discharge at Brisbane, but physically took us to Fisherman Islands (Brisbane's Container Terminal) and to the Stevedoring company tasked with the ship's loading, and ultimately on board the vessel to physically photograph our containers stowed on the forward deck.

The third leg was Kuala Lumpur (KL), Malaysia, a non-English speaking country where we had few local contacts. How do you access a security controlled container terminal in a foreign country and locate our two specific containers? Unfazed by the perceived difficulty we took a taxi from our hotel and proceeded out to Port Klang, 38 kms away, to see what we could achieve. En route we noticed some trucks with containers travelling from the port towards KL. We decided it would be prudent to check their container numbers as they went by, on the remote possibility that one of them turned out to be ours. To our surprise the fourth truck observed was carrying one of our containers. We alerted our taxi driver to stop and "follow that truck". Our driver turned and said, "you're kidding right?" and when we convinced him that we were not, he beamed a huge smile and said, "I've been waiting my whole life for someone to say that to me." His enthusiasm for the task had to be slightly curtailed and once instructed in some rudimentary surveillance tactics, he settled to the task with great pleasure.

We followed our container to a storage warehouse where it was off-loaded.

The following day we returned to the warehouse (same taxi driver, who by now was becoming our best Malaysian friend) and found the container de-vanned and empty, awaiting removal. We travelled to the local produce markets and soon located our NZ product for sale. We made a purchase, documented the packing and donated the contents to our increasingly more enthusiastic taxi driver.

The final leg of our journey was Shanghai, and our first visit to China. Once again, a non-English speaking country, where we had few local contacts. We enlisted the assistance of an interpreter and proceeded about our task. Some advance planning had organised an introduction to a major produce importer, who turned out to be extremely knowledgeable and had many contacts.

Through his assistance we were taken to a warehouse and located our NZ product recently unloaded from our second container. We documented the shipment's identification numbers and then proceeded to the local produce markets where we located some of our product for sale. Again we made a purchase and completed the end user requirements.

Having proved the passage of goods from exporter to end user we now had to document and present our case. Here we used an I 2 chart, which portrayed in simple graphic form multiple transactions through various entities to a final foreign end user. The evidence and chart were subsequently used by the Ministry of Agriculture & Fisheries (MAF) in a prosecution of our suspect exporter.

This case highlights three other common requirements of any fraud investigation:

- Patience and determination
- Attention to detail
- The presentation of complex / multiple transactions in a simple form

E5016

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The AVer E5016 embedded Linux HD NVR leads the way for a new generation of high performance, cost-effective NVRs, designed to achieve exceptional image quality and excellent reliability. The E5016 supports up to 5 megapixels per channel and a total of 32 megapixels for all channels. It offers PC-like preview performance with an impressive throughput rate of 120 Mbps, recording all 16 channels using tri-codec compression.



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Expandable storage

The E5016 comes equipped with 4 removable HDD trays and internal RAID support (level 0,1,10*) to enhance data storage efficiency and reliability. Additional storage space can be achieved through the e-SATA port dedicated for external devices like external HDDs or RAID disk arrays. The E5016's total storage capabilities can reach 28TB for non-stop recording of all channels in full HD1080p resolution and high quality for about one month.



Standardized intuitive GUI

The inventive, user-friendly design of the E5016's graphical user interface (GUI) aims to make NVR setup as convenient as possible, with hierarchical, tree view camera listings, simplified click-and-drag preview selection, as well as a set of built-in smart tools like resolution manager and HDD calculator. Moreover, the user interface is standardized for local sites (NVRs) and remote sites (CMS), significantly reducing training time and related costs.



Easy POS integration

The E5016 supports easy point of sale (POS) integration, allowing users to connect up to 5 POS systems without any additional data processing devices. With POS integration, live transaction data is overlaid onto live camera images, facilitating quick review and analysis of items sold through keyword filtering.



Remote management

The E5016 comes equipped with a bundle of remote access applications and management software. The CM5000, AVer's next generation of central management software (CMS), offers full remote control over NVRs and enhanced functionality. AVer's AndroidViewer and iViewer mobile access applications help managers and others to stay on top of events in today's dynamic business environment.

Interested in being a Private Investigator in New Zealand

Note: This document has been prepared by the writer and are entirely the personal views of the writer and not NZIPI. The points are intended as a guide only.

I am often asked what the criteria, age and abilities are to;

- Apply for a private investigators licence in NZ.
- Become a successful private investigator in NZ.
- Start a career as a private investigator in NZ.

To be able to offer your service as a private investigator in New Zealand you need to be approved pursuant to our Act and this is governed by the PSPLA. This link will explain the licensing regime and requirements http://www.justice.govt.nz/tribunals/PSPLA/applying-for-a-licence-or-certificate-of-approval-1/copy_of_apply-for-a-licence.

For 36 years until 2010 PI's were governed by the 1974 Act that set out

certain skills or experience required to offer your services. That all changed with the 2010 Act that stipulates age and conviction requirements but no necessary relevant experience. This means that currently there are literally hundreds of individuals with a Certificate of Approval ("COA") who just ticked the PI box at no extra fee, often while applying for a security related role.

Persons holding a COA still report to a licence holder but the reality is that no longer is everyone legally able to work as a PI in New Zealand qualified or requires any investigative ability, and to make matters worse, there is no mandatory or ongoing training required. For these reasons, anyone contemplating instructing a "licenced individual" should be very careful and seek some form or corroborative evidence as to experience and ability, such as membership of NZIPI.

That said, the real PI profession has always been the domain of former police and typically sole traders, or one/two person agencies with a few only larger companies that employ staff. The profession is typically comprised of self-employed contract investigators, many who work for a variety of agencies. Previously certain insurance companies, corporates, banks and government agencies were known to instruct many private investigators but the trend in recent years has been towards an "in-house" model and that has dramatically reduced the amount of available work. After the Christchurch earthquake a number of self-employed operators went to work for EQC and that has since

slowed, meaning a return to mainstream work or leaving to seek other full-time employment.

The typical PI client is likely to be a lawyer, executive in a corporate, business owner or government manager. They are looking to have an issue (not theirs personally) resolved and want to be seen as instructing the right person, a professional who will take care of the problem. Therefore, there is often no room for a trainee performing an interview or enquiry as often you only get the one go. This means that the investigator must be of the highest calibre which of course means having had formal training and experience. Juniors, tend to work domestic cases, some surveillance, serve documents, trace individuals, try to recover third party debts and some basic background enquiry work. This is often the low paid work and sporadic, meaning that there is a high turnover of individuals.

Virtually everyone in the profession knows everyone else and there has been a marked attitude swing in recent years to mutual respect and assisting each other. www.nzipi.org.nz is a group of individuals who have been accepted by their peers as members.

It should be obvious that the first way to a career as a "private" investigator is to be formally trained, usually this means having served in the police. There are courses and all education is great, but the reality is that there is nothing to beat a known professional investigator and someone who can demonstrate experience. Otherwise, it's junior work only, if indeed there is such a position in one of the



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larger companies, on contract and the fluctuations of income that results.

Assuming a person is qualified and wants to enter the profession, they should try to meet with a private investigator and discuss their goals and be willing to start on a trial on a limited rate. The question you need to consider is? Why the agency would spend their time and effort as opposed to using a proven investigator. Time is money, PI's only bill for time and do not sell products.

It is very different performing an investigation for a corporate as opposed to "being the Police". Today's clients know our business and they definitely know their

business, so there is no pulling the wool over their eyes. They demand respect, results, accountability and will be watching every minute spent critiquing the enquiry and the bill.

The one that shines through is the ability to interview. Any investigator wishing to enter the private profession should be willing to learn everything they can about interview skills.

Likewise, there is no room for "the old ways" and you must be prepared to commit to any and all ongoing training and the changes in legislation especially privacy and health and safety. I fondly recall sitting at the rear of the Association for the Deaf

classes with earplugs learning lip reading just to be able to lip read in pubs.

If you really think, having regard to all the comments above, that the profession is for you, you are able to work your way up with not a lot of income at times then I do encourage you to pursue the same. If that is the case, then the first thing I would do is to start learning or perhaps if already qualified, committing to advanced learning of interview skills.

It takes a certain person to be a successful PI, usually a person who is very savvy, confident and a bit outgoing, able to talk to anyone at any time.

Ron McQuilter

Industry News

Synthetic cannabis wake-up call for employers

Employers want workplace drug screening to include the detection of synthetic drugs, says the New Zealand Drug Detection Agency (NZDDA) – a private firm offering drug testing services.

The company has included tests for synthetic cannabis in its drug detection arsenal since last year, and says 15 percent of the firm's workplace drug screening tasks it is involved in is to detect synthetic cannabis – the company expects this to rise this year.

The company's Chief Executive Chris Hilson says: "Between November 2012 and April 2013, NZDDA has carried out more than 5,000 workplace drug tests to detect synthetic cannabis. Of those samples that were non-negative, an average of 12 percent – with a spike of 24 percent in November – have come back from independent lab testing as positive, that is, detecting synthetic cannabis compounds.

"The dangerous effects of synthetic cannabis are now well-known to most New Zealanders. Causing severe nausea, vomiting, anxiety attacks, seizures and aggressive behaviour as well as psychotic episodes, synthetic cannabis is not a good drug to be detected in the workplace."

Canterbury Health Laboratories' Head Scientist Grant Moore says: "Synthetic cannabis is a dangerous drug and the more developments the manufacturers make the more unknown the long-term effects of it on users."

Human error likely cause of data breaches

Computer security firm Symantec and the Ponemon Institute has released the 2013 Cost of Data Breach Study: Global Analysis, which reveals human errors and

system problems caused two-thirds of data breaches in 2012.

The Ponemon Institute puts a value on customer or consumer data of \$136 per record. It says the cost per record is the average cost per compromised data record of direct and indirect expenses incurred by an organization.

Data breaches include employee mishandling of confidential data, lack of system controls and violations of industry and government regulations. Heavily regulated fields – including healthcare, finance and pharmaceutical – incurred breach costs 70 percent higher than other industries.

"While external attackers and their evolving methods pose a great threat to companies, the dangers associated with the insider threat can be equally destructive and insidious," said Larry Ponemon, Chairman, Ponemon Institute.

Anil Chakravarthy, Executive Vice President of the information security group, Symantec, says: "Eight years of research on data breach costs has shown employee behaviour to be one of the most pressing issues facing organizations today, up 22 percent since the first survey.

Given organizations with strong security postures and incident response plans, experienced breach costs 20 percent less than others, the importance of a well-coordinated, holistic approach is clear.

Companies must protect their customers' sensitive information no matter where it resides, be it on a PC, mobile device, corporate network or data centre."

The eighth annual global report is based on the actual data breach experiences of 277 companies in nine countries including: Australia, the United States, UK, France, Germany, Italy, India, Japan, and Brazil.

The nine country and global summary reports can be found at <http://bit.ly/10FjDik>.

All of the data breach incidents studied in the reports occurred in the 2012 calendar year. In order to properly track trend data, the Ponemon Institute does not include "mega data breaches" of more than 100,000 compromised records.

Companies can analyse their own risk by visiting Symantec's Data Breach Risk Calculator, which takes the organization's size, industry, location and security practices into consideration for both a per record and an organisational estimate.

Symantec says human errors and system problems account for 64 percent of data breaches in the global study, while prior research shows that 62 percent of employees think it is acceptable to transfer corporate data outside the company and the majority never delete the data, leaving it vulnerable to data leaks.

Call for more protection of subcontractors

After having his fingers burned many times by lead contracting companies going into liquidation, Peter Diver of Christchurch wants people up and down the country to vote for change by signing his on-line petition.

He is one of many subcontracting companies and trades people who have missed out financially through receiverships which typically leaves subcontracting firms out of pocket. "The fact is," says Peter. "The subbies always miss out while the legally secured creditors fight over the dregs when a main contractor goes bust."

On the web: www.tradescontractorspetition.co.nz/

Volunteers pick up slack while fire law languishes

Keith Newman discovers loyalty and strong informal relationships between volunteers in fire, ambulance and police continue to mask the potential for an emergency response crisis while Cabinet again reviews decades old funding, training and mandate issues

Volunteer fire fighters, tired of playing poor second cousin to their professional peers, are hopeful a long overdue review of the fire service will trigger law changes and an official mandate to do the work they've been engaged in for decades.

They're hopeful Internal Affairs Minister, Chris Tremain will submit the majority of the recommendations in

the latest Fire Service Functions and Funding review to Cabinet by late August to advance their case for achieving parity with their professional peers.

Volunteers make up around 87 percent of those on active fire service and increasingly find themselves doubling as first call medics and rescue personnel in serious car crashes, medical emergencies, civil defence, natural disasters and situations involving hazardous materials.

However, fire fighters have no official mandate to engage in this kind of work, something that Tremain hopes will be resolved through legislation introduced to Parliament 'late this year'.

Fingers are crossed that this will result in volunteers being eligible to receive the same level of training offered to their professional counterparts, and that they will no longer have to fund-raise to have appropriate equipment to do their job.



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STI-RP-GF-11/CN Ref. 720-051G

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Internal Affairs Minister, Chris Tremain

Tremain says Cabinet has agreed on the need to modernise the legal mandate for the fire services to ensure 'effective and efficient service delivery' and to begin the process of establishing more stable and equitable funding.

He was continuing to engage with stakeholders ahead of putting forward his final recommendations to Cabinet. "The priority is to look at the legislation and make sure it is fit-for-purpose and to gather more data about funding."

He sees no need for any radical changes to the way fire services are organised and affirms that rural fire authorities will remain responsible for managing fire in forests and on rural land.

Legislation timewarp

There are more than 11,000 volunteer fire fighters in New Zealand; 8,000 in the urban area which includes small outlying towns, compared to only 1,700 professional fire fighters. Another 2,990 volunteers operate in the rural sector, mainly employed



Rick Braddock, Chairman of the United Fire Brigade Association (UFBA)

by the Department of Conservation (DOC), forestry or local authorities.

They're caught between 1970s legislation, 21st century expectations of a more diversified role than pointing hoses at fires, twin governance structures and inequity in training and funding.

Despite the fact there is no single legislative authority for emergency services, fire, ambulance, Police and other services have developed their own internal arrangements and relationships which are at the heart of the current system.

This is complicated by differing responsibilities, allocation of resources and changing geographical boundaries, something many in the emergency services would like to see clarified.

United Fire Brigades Association (UFBA) Chairman Rick Braddock says inequality issues have contributed to a history of tension between volunteers and career fire fighters, "particularly when you consider that volunteers respond to 80 percent of all incidents and yet cost the fire service just 7 percent of its annual budget."

Braddock says fire fighters everywhere will welcome a law change to legitimise their role in "rescues, extrications from crashed vehicles, dealing with hazardous materials and medical calls, all of which they are presently carrying out without legal authority."

Without that mandate, if something goes wrong, they may not be covered by insurance and open to the possibility of being sued. "It's a risky business and their current legal position while acting in good faith is unclear," says Braddock.

Rural impact

National Rural Fire Authority (NRFA), National Fire Officer, Murray Dudfield says its members are tasked by legislation to undertake effective fire control measures, which can include the threat of fire resulting from a car accident.

That arrangement is 'very loose' and NFRA, forestry and rural fire sector stakeholders have been looking to have things 'tightened up' for some time.

Dudfield says ideally all fire fighters need to have some protection around their involvement in non-fire situations. Technically they're only required to 'secure the scene' of a car accident for example, until the urban fire service arrives with the right tools and skills.

The same applies in the rare occasion of structural fires in rural areas; the RFAs engage in 'external attack with water through the windows' and are not typically equipped with breathing apparatus to enter the building.



National Rural Fire Authority, National Fire Office, Murray Dudfield

The National Rural Fire Authority (NRFA) is responsible for 76 rural Fire Authorities (RFAs) covering 96 percent of the country's land mass including forests. As part of the RFA constitutions, all rural fire fighters need to have minimum standards which include 'situational awareness and fire fighter safety and wellbeing' rather than medical or extrication skills.

In the end though it's down to each individual, based on that minimum skill requirement, to respond as they see fit. "Some judgements have to be made," says Dudfield.

While a few volunteer brigades in Auckland have breathing apparatus, he says 98 percent of volunteer brigades don't, although in the rural areas the exposure is quite small. "There's some risk in achieving and retaining that kind of skillset," he says.

While there are guidelines for what the RFAs can do, Dudfield says, human nature often intervenes. Volunteer fire fighters and emergency services personnel can act as individual 'Joe Citizens' when they step in to assist people or go beyond the specific calling of their role whether on duty or not.

In the RFA constitution, for example, there's a requirement to respond to 'community need'. While each situation is different, 'there's always a risk and there does need to be some clarity around accountability'.

He's not aware of any incidents around the country where 'something should have happened that didn't happen'.

He referenced the example where volunteer fire fighter and a professional rural fire fighter, were presented respectively with a Royal Humane Society of New Zealand silver and bronze medal for their part in intervening in an Oamaru car accident in 2008.

A long wait for change

Efforts to improve the training, management and funding of volunteer fire fighters have been going on since the mid-1990s but only gained traction in April 2003 when local and central government agreed there was a need for a more collaborative approach.

The following year comprehensive new fire and rescue legislation was proposed, including extending the mandate of fire fighters to carry out rescue work and develop a property-based funding system.

This was seen as a way to deal with the 'ambiguity and inconsistency' in the current law, the evolving roles of fire services in non-fire emergencies and achieving a more co-ordinated and efficient approach to the various roles of fire fighters.

Discussions continued with the various stakeholders and in July 2006 it was again affirmed fire services legislation was behind the times. A range of concerns formed part of an official fire policy review in 2007 which included a proposal to merge urban and rural fire authorities under a single Fire and Rescue Service for greater efficiency.

This proved contentious, with Federated Farmers and rural firefighters believing the rural sector would be sidelined. Plans for a more equitable approach to funding were opposed by a number of large commercial building owners, local authorities, primary producers and insurance stakeholders.

It all seemed too hard, so Internal Affairs Minister Rick Barker withdrew all the recommendations, including the mandate for fire service work outside of firefighting.

After a further six years of talkfests, workshops, high level meetings and discussions a three person panel under the chairmanship of former MP and Wellington Regional Council member Paul Swain, repackaged most of the concerns into the current Fire Service Functions and Funding review.

Internal Affairs minister Chris Tremain is expected to put his recommendations to Cabinet in August.

The car had struck a power pole and caught fire; despite a high voltage line arcing through the vehicle the two fire fighters essentially broke the rules to try and keep the couple inside alive. The response from the first fireman on the scene who persisted despite receiving electric shocks was "we're all volunteers so they can't fire us."

Clear framework essential

The Fire Service Functions and Funding review has a high level of support across the fire sector and Braddock is particularly pleased the UFBA's role as an advocacy group for volunteers has gained official recognition as a consulting partner on the terms of engagement and equal conditions for volunteers.

Without a clear operational framework, volunteers will continue to exist in an environment of uncertainty. The Fire Service Commission responsible for the NZ Fire Service and the National Rural Fire Authority,

alongside the UFBA, and others made submissions to the review and have continued to thrash out the parameters of a new framework ahead of the ministerial announcement.

Cabinet agreed in June 2012 that an independent review panel led by former MP Paul Swain would look at a range of issues including more efficient and effective governance and structure for the New Zealand Fire Service Commission and its dual responsibilities.

The results of the panel's deliberations were released by Chris Tremain in February, with dozens of recommendations, including a clear legal mandate for the Fire Service to undertake non-fire related activities, guidelines for working more collaboratively with other emergency services and more equitable funding.

The minister's take on the recommendations was supposed to go to Cabinet for approval in April, but has since engaged in 'a significant amount

of further work and analysis' with key stakeholders including the UFBA, the union, insurance companies and other Government ministers.

While a package of reforms, including legislative and non-legislative changes is proposed he says it's important to do things right and remains determined not to let the issues fall by the wayside, as has happened with previous reviews.

One of the sticking points is "determining a comprehensive consideration of future funding options, along with ways to improve the equity of the Fire Service levy by 'removing opportunities for levy avoidance'."

Tremain reminded MPs that the legislation is almost 40 years old, and fire fighters now perform a much wider range of tasks than they did in 1977. Although they currently spend 18 percent of their time on non-fire work, under current legislation they're only mandated to fight fires.

50-year shake-up

UFBA Chairman Rick Braddock hailed the review, with its focus on working more co-operatively, as providing "a blueprint for the future" which if implemented could result in "the biggest shake up in 50-years' for the fire services."

The report confirmed that the value of volunteer fire-fighters contributions was around 100 million dollars each year, and their efforts were critical to the country's fire protection in provincial cities and smaller communities.

If adopted Braddock says the recommendations would positively impact on the future engagement, deployment and management of the country's volunteer fire-fighters resulting in "a different structure and a better equipped fire service generally."

He's encouraged at the inclusion of the UFBA's request to have a NZ Fire Service senior executive interact with volunteers as part of a sustainability programme so relationships are on par with career fire fighters.

Braddock, has not come up through the fire service, but took his role as a professional director and lobbyist last year to raise the profile of the UFBA and ensure its recommendations got a fair hearing before all the parties including the Government.

"I've been staggered to see what these people do when you consider most of the 11,000 plus members all have full time jobs. When you talk with them about some issues they face you realise this is what heartland New Zealand is all about."



Demand on volunteers escalates as funding and training squeezed

While some emergency services are pulling back from the front line because of budget cuts, volunteer fire fighters operating in a legal grey zone are forced to fundraise for additional equipment to go beyond the call of duty, in roles they're not adequately trained or equipped for.

Although there are paramedics on some volunteer crews, most are untrained or have limited training in special rescues and many brigades have to run garage sales and fundraising events to pay for vans and appropriate equipment to respond to non-fire call outs.

The NZ Fire Service provides volunteer brigades with most of their equipment, although when volunteers aren't properly trained it can refuse to provide 'fit for purpose' resources, such as 'jaws of life' or breathing apparatus.

United Fire Brigades Association (UFBA) Chairman Rick Braddock, says this is an area of frustration as volunteers don't have access to the same level of training or funding as their paid counterparts.

"There's some niggles and frustrations around this; that process needs to be streamlined and arranged so the right gear is provided for the right job," he says.



Former broadcaster and retiring UFBA board member, Rick Carlyon

Some of the greatest opposition to a change in funding for fire services has come from Government departments, big business, local authorities and insurance companies, reluctant to adjust levies or rating levels to ensure a more equitable contribution.

Fairness in fire funding

The UFBA has been advocating for a greater insurance contribution toward the cost of fire protection since 1878 but generally found its calls for brigades to be better funded, to help reduce the loss of life and property, met with indifference.

In fact the UFBA, the only organised nationwide body representing volunteers in 485 brigades wasn't recognised by the NZ Fire Services Commission until 2008 and only accepted as a consulting partner in the recent negotiations as part of the fire services review.

Currently the Crown and many large corporations contribute nothing toward the operations of the NZ Fire Service, the bulk of funding comes from insurance premiums on residential housing.

The Crown and many large business are either self-insuring, or insure off shore, bypassing the requirement to contribute. That in itself is a sore point the UFBA would like to see addressed in a 'user pays system that's more fair and equitable'.

Retiring UFBA board member Ric Carlyon says local authorities must take some of the blame for scuttling past attempts at a fairer funding scheme. "They have repeatedly declined to collect fire insurance premiums along with rate demands."

He says universal premiums collected from every rateable property would mean all owners would pay and overall premiums would be reduced. Currently many do not pay, but still enjoy the service when they dial 111.

"Local bodies say ratepayers only look at the total sum payable without analysis and would object to the increase, probably without realising the equivalent fire premium for their property had disappeared from their insurance company bill."

At one stage, Carlyon says local authorities were looking at an agreement to collect fire premiums through rating

but wanted a bigger say in the governance and management of fire services. "That would have been unpalatable for other stakeholders."

The issue, including taking another look at a rates-based levy, is one of the thorniest being considered by Internal Affairs minister Chris Tremain, ahead of his submission to Cabinet, as part of the fire services review.

Unrelenting pressure

Meanwhile the unrelenting pressure on volunteers is unlikely to ease, particularly in remote and rural communities where there's been a dramatic increase in the number of people dialling 111 asking for the NZ Fire Service to attend medical emergencies because they're likely to get there quicker.

St John and the NZ Fire Service have been working closely together for many years and in 2007 signed a memorandum of understanding (MOU) that St John could despatch fire trucks as first responders in emergencies if no ambulances were available.

Then it was announced in September last year that ambulances will no longer be sent to minor 111 calls as the organisation continued to bleed cash from what was already a \$15 million annual operating loss.

If fire appliances are closer they'll now respond to life threatening events such as cardiac arrests and drowning.

Braddock says, the use of the fire service as principal responder to medical emergencies and serious car crashes is increasing as other emergency services are cut or removed entirely from some areas.

There is an expectation, public and otherwise, that volunteers will attend crashes, particularly in towns and provincial centres and on country roads where higher speeds cause more significant and severe accidents.

What's required, says Braddock, is to formalise those functions so people can become suitably qualified, have the right equipment and are trained to cope. He wants to see perceived prejudices between full timers and volunteers eliminated by ensuring volunteer brigades are more closely associated with their professional counterparts. "We're strongly advocating for equitable funding."

Keith Newman

fire door holding electromagnets

Standard, floor mounted, wall to door distance 114mm



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Designed, tested and produced in New Zealand to AS4178

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FDH40SS

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Monitoring for faults, fires and failures

Keith Newman talks to alarm monitoring innovator Richard Stewart about the importance of having premises protected 24x7 and futureproofing alarm technology

The firm that helped the NZ Fire Service automate and migrate its systems to digital is concerned that only 20 percent of the country's buildings that are required to have fire alarms and sprinkler systems actually subscribe to monitoring services.

Automatic Fire Alarm Monitoring (AFAM), one of three agencies certified by the NZ Fire Service, polls the status of fire and smoke alarms every 10 minutes for about 1000 premises over the Vodafone cellular network.

Chief Executive Richard Stewart suggests owners of buildings that aren't connected, including those which have a \$20,000-\$30,000 investment in sophisticated alarms and smoke detectors, need to rethink what's at risk.

"When they leave at the end of the day the alarm may activate in the middle of the night when there's no-one to call the fire brigade but for \$2 a day you could have everything monitored."

The real benefit, says Stewart, is in monitoring for faults. "Under the Building Code most alarms need to be tested once a

month but they could break down an hour after testing and no-one would know."

The Christchurch-based, Kiwi-owned company, claims it's a world leader in the development and use of fully automatic fire monitoring systems and that others leveraged its innovation to adopt similar approaches.

The AFAM monitoring system is entirely web-based with clients and service agents able to log in and see everything about their connections. "We developed the technology first but to keep ahead of your competitors you just have to keep enhancing and investing in r&d," says Stewart.

He recommends building owners have a secondary copper-based connection to ensure monitoring continues if the cellular network fails or at the very least have a facility to default to paging or SMS messaging to raise the alarm when premises become unprotected.

While most security systems only test every 24-hours, AFAM polls its connections six times an hour so it's aware of any errors or breaks in communication. "We know within few minutes if it's off the air."

If the alarm goes off, there's no return signal, if there's a fault or a battery needs changing, its automatic monitoring system immediately sends pager messages to the relevant service providers.

Stewart says all buildings over three to four storeys, along with shopping centres, rest homes, prisons and hospitals, have to have fire alarms but only about 20 percent have a direct connection to the fire service through a monitoring agency.

The only saving grace may be that all buildings over a certain size require a sprinkler system which can contain fires and need to be monitored, so the NZ Fire Service can shut down the water.



Richard Stewart, Chief Executive of AFAM

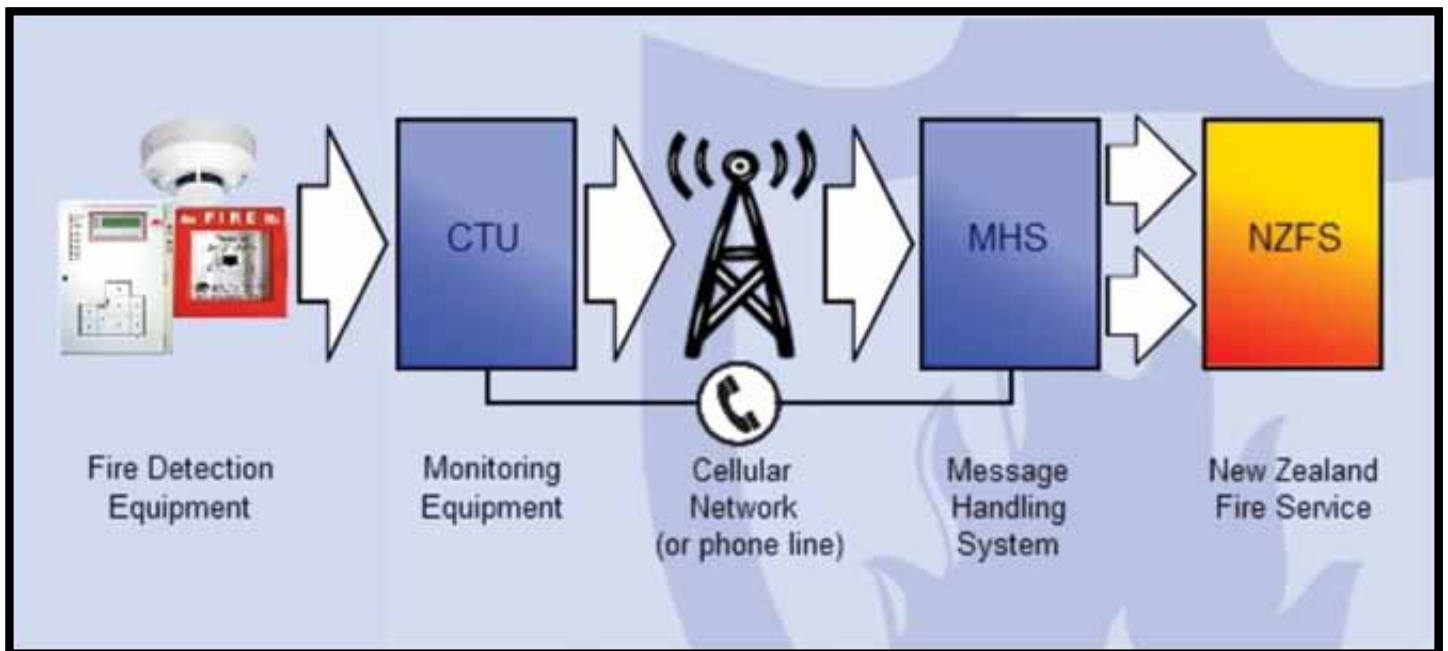
Economic loss implicit

The consequence of not monitoring for security and fire can be the loss of not only the building and the contents but of jobs, and consequently have an economic impact on a community.

"Statistics from the US suggest that if a building has a major fire the business can go bankrupt within nine months because they lose all their customers," says Stewart. "They may get an insurance cheque but once they can't supply, their customers go somewhere else and it's difficult to get them back."

He says a major toilet basin manufacturer in Dunedin had its premises destroyed by fire and the owner used the insurance cheque to relocate to Auckland. "There have been a number of cases like that including freezing works and mills which were





The Automatic Fire Alarm Monitoring system consists of the monitoring equipment (CTU) installed in the customer's building, and the message handling system (MHS)

destroyed because they didn't have sprinkler systems then relocated or were unable to re-open because of lost business."

Unless the premises are monitored someone still needs to ring the fire brigade. Contrary to popular opinion, Stewart says the red boxes with 'break this glass in case of fire' don't alert the fire brigade, they're simply required by the Building Code to raise the alarm to evacuate the building.

While he says the Building Code is pretty balanced, owners and tenants, need to take additional steps if they want to fully protect their businesses beyond simply increasing their insurance coverage.

Working up the ladder

Richard Stewart began his career with Benefis Fire Protection in Auckland as a registered electrician and installer in 1980, and worked his way up to branch manager and supervisor before taking on the general manager's role with the original Associated Fire Alarm Monitoring which was on contract to the NZ Fire Service.

"I got captured and have not been able to escape. People are in this industry because they like helping, saving lives and protecting property and once you do your basic trades you tend to specialise and get to know how everything is supposed to work."

He remained with AFAM for 15-years, providing and operating the technology behind the Fire Service monitoring system alongside network provider Telecom. The game changer came in 2004 when Telecom announced its plan to decommission its Alcatel-based alarm transport system (ATS) network which handled all fire-related voice and data calls.

Stewart says Telecom was having difficulty finding the right expertise to service the old technology and decided its cellphone network was a better option for fire monitoring. This gave the NZ Fire Service two years to weigh up the options for a next generation monitoring system. AFAM was commissioned to redesign the alarm transport service for the digital era so it could extract more useful data from building alarm panels to help reduce false alarms and more efficiently deploy fire response teams.

ADT Fire Monitoring, owned by Armourguard Security, won the tender for a new message handling system (STS MHS) and an 18 month exclusive contract as service provider to manage the new environment and upgrade client systems.

The upgrade enabled a much richer stream of data to be transmitted from analogue addressable panels, isolating individual point and zone data. It sent out an 'event signals' from alarm, sprinkler or smoke detectors, indicating 'fire, test, isolate, defect or comms fail' messages for service agents and the NZ Fire Service.

The old ATS network remained active until 2007 when the last client migrated to the new network.

New era of automation

In the meantime AFAM had developed its own network and interface technology using Vodafone's 2G cellular network. By 2008 it had re-entered the market with the same shareholders and a subtle name change, replacing 'Associated' with 'Automatic' and established its own monitoring centre in Christchurch.

Today all fire industry monitoring is IP-based with AFAM using Vodafone's GPRS digital cellular network, ADT using Telecom mobile and AlarmNZ using the DSL (digital subscriber line) technology over the copper network and Ethernet.

Stewart says the Vodafone 2G network still has a 25-year life as it's now dedicated to fire monitoring and serving hundreds of thousands of smart power meters while mainstream voice and data callers have migrated across to the 3G network.

He contends that New Zealand is a world leader in the fire industry largely because we're a small country and it's easier to be more innovative and efficient. "It's a niche market and there's no big corporates here like Sony or Panasonic building fire alarms so Wormald and Pertronics have the lion's share, making product here and exporting it."

In the future he says monitoring and alarms systems will allow more information to flow through the system and the NZ Fire Service will have more graphical images to see where a fire started, where it is currently and where it's spreading to.

While AFAM's network and increasingly sophisticated technology is geared for this smarter data flow, using analogue addressable sensors in daisy chain loops, he says the NZ Fire Service is not yet ready to handle this.

Ultimately Stewart imagines that 3D images will be available through iPads. "We'll be ready for that, we have three people engaged in development and a plan in place to continue developing and enhancing our offerings."

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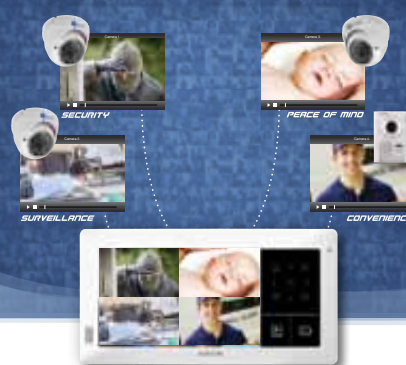
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