

# **nzSecurity** Magazine

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is all pumped up

**Home Automation**  
Let your house do the work

**Low water pressure threatens  
fire sprinkler effectiveness**

**Changes in Technology  
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Editorial contributions welcome.

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is the 15th March 2012

## Features

### April-May

Government, Transport, Tourism,  
Access Management, IT Security  
Threats

### June-July

Wholesalers and Manufacturers  
Smart card technology, perimeter  
protection

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# Bully Boy is all pumped up

**A sleek new system for retractable bollards is catching on across New Zealand and the rest of the world.  
Steve Hart met up with one of its designers**

**T**he father and son team at Auckland firm, Bully Boy, have put a unique twist on retractable bollards to make them both quicker to install and around half the cost of its nearest competitors.

Bully Boy is a range on retractable bollards that come in different sizes to meet the needs of home-owners who take their security seriously, through to business owners and right up to military installations.

You may well have seen this product in action. You can't help but stand and stare as these sexy-looking bollards, with their flashing red and green LED lights, stainless steel exterior and smooth rise and fall motion elegantly keeping unwanted vehicles out.

Filled with steel and concrete, these crash-proof bollards, silently sink into the ground as compressed air is released. Having sensed the vehicle has crossed the threshold; the whisper quiet compressor (as used by dentists everywhere) kicks into life and pumps the Bully Boys back into place in less than 20 seconds.

Flashing lights, green for go and red for wait, let drivers know when to stop or proceed.

David Broadhurst, a director of the Bully Boy firm, came up with the system with his engineer father (Charles) after finding out the price of European retractable bollard systems.

"We were asked by a home owner to supply and install a retractable bollard at the start of their long driveway and were astonished at not only the cost, but the complexity of installation," says David. "We could see ongoing issues with maintenance, particularly with drainage etc.

We weren't sure the customer would be happy in the long term and thought there must be an easier and cheaper way to achieve the same result. So we set about designing an alternative system that did a better job from the ground up."

The firm, which has been operating now for five years and so far has 12 installations across New Zealand and Australia, is already talking with foreign Embassies abroad, military installations in places such as the Middle East, as well as local companies keen to beef up their security.

Unlike many other retractable bollard systems, the Bully Boy has airtight seals – because it rises and falls due to compressed air. The upshot is, that because the strengthened cylinders sit in an airtight container, there is no need for drainage. This is another reason why this system is easy and cheaper to install than older style products.

High voltage cables are not required, and that means resource consent may not even be an issue for most users.

"All we really need to do is dig a hole of about two metres deep and run a low voltage power line and a compressed air line to the retractable bollard," says David.

Although the Bully Boys may be tough enough to stop even the most determined driver from getting through them, inside these heavy-duty stainless steel beasts are some electronic smarts.

For starters, whenever the Bully Boys are touched by more than a passing glance, they use a built in modem to send off a text message to let not only the Bully Boy staff know, but the property owner and its security company.





*David Broadhurst is a Director of Bully Boy*

“When I get a message saying a Bully Boy has been hit, I’ll routinely call the client’s security company and ask them to go and have a look,” says David. “It might be a minor scrape or something more serious.

Our clients also like that fact that we are ahead of the game when it comes to any alarms linked to their Bully Boy installation.”

Because the Bully Boys have a built in wireless system, they can also be operated by remote control. Ideal for when an employee gets trapped behind the Bully Boys late at night having forgotten their pass or code number.

The Bully Boys system showed its metal just last year when a lorry driver rammed them on Wellington’s waterfront.

## Key Benefits

### Flexibility

- Control your Bully Boy bollards through cellphone, pin pad or integration with an access control system to ensure you control who can enter your premises and at what time of the day.

### Easy installation

- Bully Boys are completely sealed against ingress of dirt, silt and water, so there is no drainage required. There are no high voltage cables and all their associated safety and compliance requirements. Sealed casing means easy installation and replacement if your Bully Boys are damaged.

### Low maintenance

- A Bully Boy bollard assembly does not incorporate motors, pumps, valves, hydraulics, pneumatic cylinders or high voltage wiring, all of which are prone to failure and corrosion when placed in the middle of a road.
- There are no hydraulic fluids or mechanical parts - there is only one moving part and that is the bollard ram itself.

### Improved security

- The full length of a Bully Boy barrier ram is a solid filled composite design.
- The barrier ram is extremely strong and difficult to cut.
- The total length of the barrier ram is over twice the raised height of the bollard reducing the stress on the reinforced concrete foundation.
- High axial loading capacity so heavy vehicles will not damage a Bully Boy.

### Elegant

- High quality stainless steel finishing with classy LED lights to indicate bollard operation, makes Bully Boys ideal for public spaces, corporate environments and private residences.

“The Bully Boys did their job alright, but we did have to replace a post. I think the driver was a bit shocked at how tough they really are,” says David. “I think the vehicle was a write off.

The Bully Boys look shinny in the stainless steel, they are elegant. But when you understand that when these bollards are fully erect – and only the top half is above ground – you can quickly figure out that pushing these posts over is not going to be easy. It’s like hitting an iceberg.”

Although the Bully Boys are as hard as nails, getting them installed in places such as security-critical areas abroad takes more than David’s assurance that they will keep people such as car bombers away from secured buildings.

Right now the company is embarking on a very expensive exercise to have their Bully Boy bollards crash tested at a registered facility in Christchurch.

This requires Bully Boy to install a set of bollards – both fixed and retractable



*Te Wero Island, Auckland Viaduct*



– at the test facility and then supplying a lorry to be driven into them at high speed.

“Everything is measured during the test, and if we meet their criteria – we are sure we will – then we can become certificated and confidently approach managers of military bases and what you might call sensitive areas,” says David.

“We are already talking with potential clients in the Middle East and Singapore. The UK and the US are also in our sights.”

The Bully Boy range comes in three sizes; five inch (domestic), six inch (business) and eight inch (military). All three sizes are available at heights of 450mm, 600mm and 750mm.

David sees huge applications for the Bully Boy bollard system in New Zealand, particularly because it is priced so well and is quick and easy to install – just one or two days on a typical installation – subject to planning.

“Because the Bully Boys look so cool they are not out of place in the home environment, we envisage people using one or two of these to keep unwanted

### Where Bully Boys are currently used

**Taranaki Street entrance to Wellington’s waterfront.**

**Client:** Positively Wellington Waterfront.

**Massey University**, Palmerston North, selected Bully Boy to replace conventional vehicle barrier arms at a student accommodation car park. Thefts from cars have since dropped dramatically.

**Client:** Massey University.

**Auckland Waterfront**, Bascule Bridge to Te Wero Island. The bollards are interfaced to the existing security system on Te Wero Island.

**Client:** Te Wero Island.

**Melbourne, Australia.** The Melbourne Royal Exhibition Building is one of the world’s oldest remaining exhibition pavilions and the first building in Australia to achieve a World Heritage listing.

**Client:** Melbourne Royal Exhibition building.

**Pumpkin Patch HQ** in East Tamaki.

**Client:** Pumpkin Patch.

**Ubertec Retail Store**, Parnell, Auckland.

**Client:** Ubertec.



*Kings College, Auckland with Pin Code access control*



vehicles out and to prevent people’s cars, caravans, motorhome and trailer boat being taken,” says David.

Bully Boy can also serve owners of plant and machinery well too, by stopping their equipment being driven off their site, and to stop low loaders entering and scooping up whatever is available.

Development of Bully Boy is ongoing, with alternative versions coming on line very soon. One of which is a manual retractable system, ideal for places without power, such as some rural locations, or for home-owners who prefer a simpler option to the fully powered version.

For more information please contact  
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0800 28559 269  
(0800 BULLYBOY)  
or

Email: [dave.wrathall@bullyboy.co.nz](mailto:dave.wrathall@bullyboy.co.nz)

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# NO ENTRY



...unless we want you in of course

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- Easy Install - completely sealed system, requires no drainage or high voltage cables
- Low maintenance - no motors, pumps, valves or hydraulics.
- Secure - solid filled composite design, heavy vehicle proof

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# Let your house do the work

**W**hen you get home, you might pop the garage door with the remote control and unset the alarm, find yourself fumbling for the light switches in the garage then in the hall, then again in the kitchen and lounge, then because the lights are on you must close the blinds. You turn the heating on; you dump your bag and slump in front of the telly to watch the news. You get up again to find the remote control and readjust the lighting dimmers for watching television.

Or you can let the house do all that stuff for you in a scenario that is now routine for houses with home automation, says Brendon Reid, the founder of Automation Associates, an Auckland company specialising in the field.

Demand is growing; he has taken on seven new staff over recent months, boosting his total workforce to over 30 – and he is still looking for more.

It is all a far cry from the state of home automation when he started the company as a one-man-band back in 1995.

“I had little to do with building automation hardware at all for the first few years. At that time the residential brands in New Zealand were X.10 type systems. (A system that ran control signals over existing mains power wiring). You’d get them in from the U.S. and they ran exactly how they were priced. They were dreadful things – I had a few bits and pieces but they never really worked too well.”

It is all different now. In his futuristic showroom in College Hill, Reid casually picks up an iPad, touches the screen and reveals a control panel for his own house, from where he can check the status of everything from his clothes drier to his security system. He slides a few lighting dimmers up and down to demonstrate, and across town somewhere, the lights in his house respond.

## First taste

Reid’s first taste of the business earned him a cool \$63.

“I drilled ten holes in somebody’s house and pulled some cabling from their existing stereo – they were doing a renovation – to the pool area. I used my granddad’s old Black and Decker drill,” he recalls.

From cabling, the company moved into multi-room audio systems, giving it a background common to many home automation businesses. As the technology developed multi-room audio companies began to expand in control and integration of systems like security access control, surveillance cameras, lighting, heating and air-conditioning.

These days, home automation, integrated homes and smart homes are umbrella terms that mean different things according to your budget. They loosely describe any combination of multi-room



*Brendon Reid in his showroom*





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audio and video, and advanced lighting control which offers pre-set scenes controlled from a touch screen. These systems are typically added together with structured cabling, security and CCTV systems to complete the home automation package.

For Automation Associates installing and integrating the systems is big business.

“Today our average residential home automation system sale is around \$120,000 with big systems coming in at around \$700,000,” says Reid.

He says he will not compromise the quality of the installation by price cutting, but there are systems on the market for all size budgets.

“Home automation products have usually been expensive, and the market has been small, but overseas it has penetrated into the lower level of the market and as volumes have gone up, the prices have come down. This has made the systems far more accessible to the New Zealand and Australian markets. There are some brilliant local products available now as well.

“There has recently been a strong backlash against systems that have been poorly put together. The cost is coming down and more people are getting involved which is great, but many are not doing a good job, they are letting clients down and that is very bad for our industry.”

CEDIA, the Custom Electronic Design and Installation Association is an industry association set up to counter this trend by providing training, accreditation and recognition for members.

“We wouldn’t be where we are today without them,” says Reid.



### Backbone

Even if you can’t afford a full integrated home automation system, new home owners are still installing a backbone of structured cabling to make home computer networks and telephones more flexible.

Similar to an electrician installing power sockets in a new house without knowing what appliances will be plugged in, structured cabling provides pre-wired wall jacks (wall sockets) that run back to a central patch panel in a cabinet, sometimes called a home hub. From there is an easy connection to external connections like telephone and internet.

“If you are thinking ahead you’re going to want some sort of structured cabling in a new house,” says Reid. “What you run

over that cabling is totally up to you. You can put a computer signal over it, or an Ethernet network, a baby monitor, a POTS (plain old telephone system) telephone, and you can put web cameras on it.”

At the same time Reid says traditional coaxial cable for television distribution is just about dead, as the industry heads towards IP (Internet Protocol) video networks and smart televisions that now have Ethernet jacks on them and are internet enabled, opening them up for everything from news and weather to movies and internet browsing.

### Security cabling

Coaxial cabling for surveillance cameras is also disappearing, displaced by IP cameras running over structured cabling back to an Ethernet switch with a feed to a network video recorder or remote access from the internet.

To explain all the options, including the security system, Reid meets with the client over a set of house plans.

“We use the layer concept to explain to the client the things that are available with a security system,” says Reid.

“We start off with layer three, which is beams around the outside of the property in the gardens, it doesn’t sound a siren, but says ‘hi you know the dog is out again, or somebody is at the back fence’.

We cover layer two perimeter security with bugs on the doors and windows to activate the alarms before access can be gained by an intruder. Then we come inside to layer one with PIR sensors and layer zero is the panic buttons by the bed,” he says.

“All this gets nailed in the first meeting. People usually say they will take the security, there is not typically too much discussion about it.”



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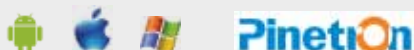


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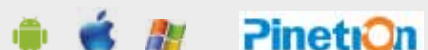


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*Brendon Reid controls house with iPad*

## Separate

Reid believes the security system that forms part of a home automation set up should be a discrete standalone system which communicates with the other home automation systems but do not depend on them to operate.

"We engineer our subsystems independently, so our lighting system, security system, our surveillance system, our structured cabling system, are all independently engineered and run themselves independently.

For example if the lighting system fails, your doors are still locked, the security system is still doing its job, and if there was a power surge that takes out the music system, your alarm still works."

Under this approach the independent systems communicate at a higher level.

"For example the PIR sensor, the smoke detector, and the bug in the door have the sirens and the usual security peripheral devices and they wire back to a security panel. That panel will communicate with the automation system, and they might have a 'chat' and say 'nobody's here lets turn this room off.' The communication is about those kinds of things," says Reid.

"You can get more clever and say, for example, 'the alarm has been armed for a week, there is nobody around so we will cut the hot water.' Another common one is the panic button where the panel dials out to an alarm monitoring centre, but we also turn all of the lights outside the house on."

Independent systems also mean that Reid can select the best individual specialist systems.

"It is possible that you can mix your security system and say your lighting system, but to my mind it's a very bad idea. We build up our systems independently so that we get to choose the best of breed in each subsystem.

We use the best lighting control and the best audio system and so on, it's all about reliability. If your system doesn't work right, word spreads really fast."

## Integration

"Using the best of each breed we build them up independently and then tie them together at a higher level using some contact closure, RS 232, or IP communication."

These three methods are rungs on the open systems interconnection (OSI) ladder, which allows devices to talk to each other. Contact closure is the most basic level, the physical level.

"Every alarm panel can close contacts and sound a siren, and we can read that and do something with it. It is pretty basic but a lot of the times it is all that is required, but if I want to know three things we've got to put three pairs of wires across," says Reid.

"The next level up from that is RS 232 communications where devices can send as many messages backwards and forwards as you like, but set up often involves trial and error to set up because different manufacturers interpret the standard differently.

The third method of communication has arrived in the last three or four years as automation systems have come out with Ethernet jacks on them and alarm companies have come to the party with Ethernet cards. With Ethernet there's no mucking around with the correct pins, it is a standard that plugs in and works every time.



It is fantastic because we struggled for years to get a set of RS 232 command protocols out of many alarm manufacturers; they were scared to death that they were giving away their intellectual property but where they held back it ended up being to their own disadvantage."

When they communicate sometimes the alarm system is telling the home automation system what to do and sometimes it is the other way round.

"Initially the security companies were not very keen on letting a client get a touchscreen and tell the alarm system what to do," says Reid. "That was another sticking point for a long time, but then that disappeared too."

### Touchscreens

Tablet touchscreens perhaps form the most visible evidence of home automation systems integrating and communicating.

"iPhones and iPads are great for us. At first we were concerned because we used to sell dedicated control tablets for say \$12,000 and then iPads turned up in stores for \$800," says Reid.

"What it has done it is totally changed peoples acceptance of control tablets, because they are so common, and we are now selling iPads and apps (iPad applications or software) to people. Unlike alarm keypads, they are lovely big touch screens with lots of screen real estate. People can see what the zones are and they can see what doors are open because we can label them on a list, or we put door open and closed icons on a plan image of the house."

He says the ability to draw graphs or pictures of the house makes tablets a much more user friendly experience, especially with persistence. This means if the beam,

say outside a house, is set off, it will display on the screen and will persist there for five minutes before going away, so instead of scrolling through logs, you can see immediately what the zone was, and what the issue was.

But Reid adds there is a downside to using a consumer electronics product like an iPad.

"The kids might get their hands on it and delete the app or alter settings. We can't lock them down as we would like to. However in the end a touchscreen makes controlling the system far easier."

### Friendly

Perhaps that is what has changed so rapidly. Not only are the controls becoming easier, more ergonomic and human friendly, so is the house – in a way that seemed like science fiction a few year ago.

As Reid heads home he will pop the garage door and unset the alarm with his remote. Those two actions will tell his home automation system somebody has arrived and it's time to put the house back into occupied mode. The heater will turn on if it is cold, if it is dark, the path up the stairs to the kitchen will be illuminated.

"In my house the system turns the television on and plays Juice TV on the kitchen speakers, so there is music in the background," says Reid.

"It brings on the lights in my kitchen splashback, turning a house into a welcoming home. It makes me smile every time I lie on the couch with a beer and a book and turn the music down from my iPhone. We tell our clients it is all about convenience but at the end of the day it's also pretty cool."

## New Member to the Electronic Sales Team



**I**ngersoll Rand Security Technologies is pleased to announce that Patrick Baker has joined the team as Electronic Sales Consultant for New Zealand.

Patrick brings with him six years experience in the electronic security industry.

Patrick's experience and knowledge will add an important dimension to our talent breadth and further strengthen our business.



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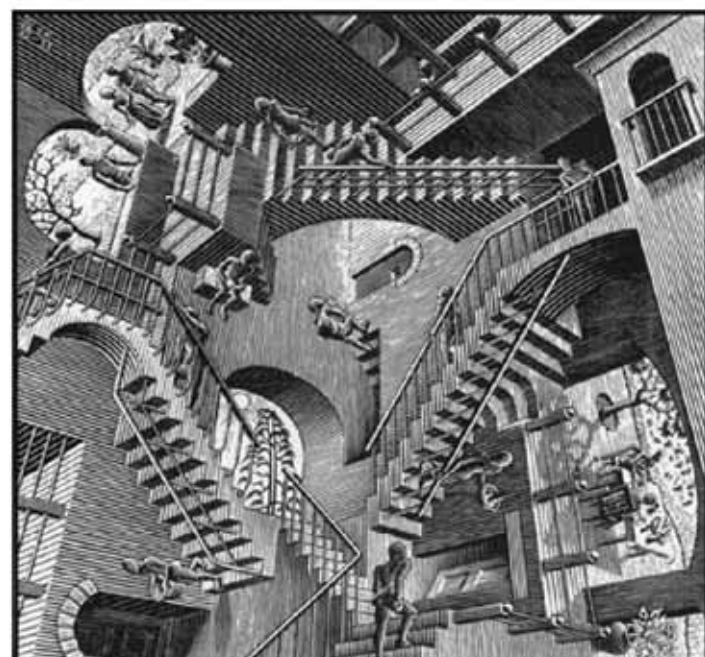
# Five building inefficiencies that are business opportunities

By Jim Sinopoli, PE, LEED AP, RCDD  
Managing Principal, Smart Buildings LLC

**“I’d be a bum in the street with a tin cup if the markets were always efficient.” - Warren Buffett**

**S**ome see inefficiencies as problems, which they are; others see them as opportunities as well. In Mr Buffett’s case he’s looking for an inefficient market that has undervalued a company or its underlying assets. If markets were always efficient everything would be valued correctly and Mr Buffett wouldn’t find those good deals.

For those of us involved in the design, construction and operation of buildings, inefficiencies are issues as well as opportunities. Inefficiencies are opportunities if we can provide efficiency and therefore value to a process or business. Businesses, especially those involved in building technology systems, will start-up and grow based on their capability to provide efficiencies to building owners. Nowhere is there a better example than the massive initiatives on energy conservation, which at its core are a response to our inefficiencies in the way we generate, supply and consume power.



The question for buildings and in particular building systems then is, “are there inefficiencies in the design, construction and operation of our buildings?” I would guess you know the answer to that. Almost 10 years ago an article in the Economist magazine suggested 30% waste in US construction projects. Five years ago the US National Institute of Science and Technology estimated the lack of interoperability in the construction industry was costing around \$16 billion per year. Other studies show a decrease in productivity in the industry compared to increases in most other economic sectors. So in an industry that some characterize as legacy, decreasing in productivity, wasteful and somewhat dysfunctional, what are the “pockets” of inefficiencies where solutions would bring value? Where is it that our businesses and ideas can grow and thrive with the right products and services? What follows are five areas that are now “ripe”:

**1. The woeful lack of sensing, metering and monitoring of a building’s performance** – Can you actually manage anything without having information or data? How many building owners are currently “managing” energy by only comparing this month’s utility bill to last months? How granular and time sensitive is that?

Our vision should be that buildings will be equipped with meaningful technology; walls and ceilings will be embedded with sensors, every aspect of a building’s performance and use will be metered and measured, real-time information on the building will be provided to occupants and building management relevant to their particular needs, buildings will be fully interactive with the power grid and geo-spatial location systems will be deployed to track every building asset. Products and services that can transform raw sensor and consumption data into actionable information for building owners will succeed.

**2. The inefficiencies and ineffectiveness in transferring data from the design and construction processes into a facility management system** – How is data and information that is created or obtained during the design and construction process handed off to building operations?



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Most of it is still paper handed over in three-ring binders and boxes, maybe CDs of drawings and specifications too. Lost in this handoff is data and information that could improve the management and operation of the building.

Building Information Modeling (BIM) is very promising in addressing this issue but for those owners or designers who haven't adopted BIM yet, the operation is hindered by having information in a paper format that can't easily be ingested by a facility management system. How many facility managers have the time or budget to re-enter data into a FMS?

The previously mentioned NIST study that conclude that \$16 billion was wasted every year due to lack of interoperability was essentially about the exchange of data (or lack of) between all the parties involved in the design, construction and operation of a building. Designers and contractors need to change their

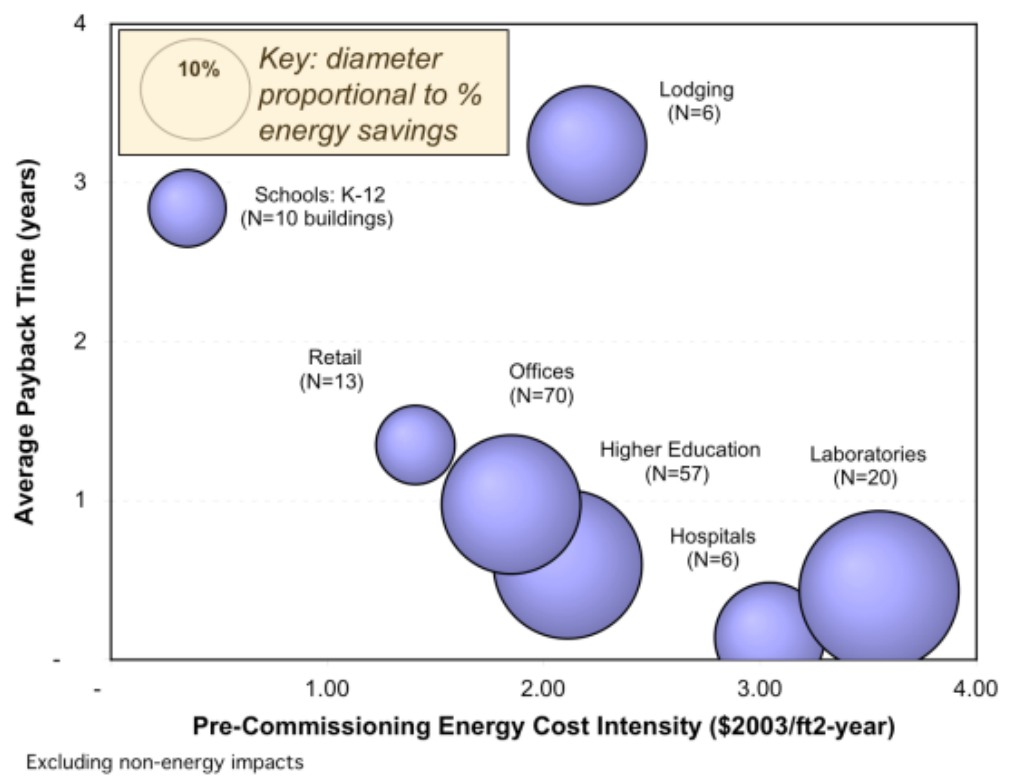


deliverables and documentation for easy use by building operations. There is a market demand to maximize the data and information created during design and construction for the betterment of building operations. Again, products and services that can facilitate collaboration between all parties involved and provide the owner with solid data and information for building management will succeed.

**3. The ineffectiveness of most space planning** – Studies have shown that office buildings occupied by service-sector companies are oftentimes less than 50 percent occupied. That's right; on a typical day half of the people are mobile, absent or working at home and are not in the building. Exacerbating the situation in the short term is the state of the economy which has shed jobs, and in the long term, the advancement of mobile, office and home technology. What we're doing now is primarily providing space for the most improbable case when every employee is showing up for work in the office and in turn, wasting operating and/or capital cost on empty office space.

Space planning is very critical to employee productivity and company expenses. Products and services that balance technology, space costs and employee productivity will thrive. Better utilization of space, flexibility in space use, systems that can provide HVAC and lighting aligned with office occupancy and can blend office workers, stay-at-home-workers and mobile workers in a cohesive and collaborative entity have a bright future.

**4. The sub-optimal operation of building systems** – A 2004 study sponsored by the DOE concluded that the median payback time for recommissioning an existing commercial office building is 0.7 years. Quick name one other activity that has a payback period that short. With a 0.7 year payback period does



it make any sense to do recommissioning every 2 or 3 years? As the chart demonstrates, some energy intensive building types, such as hospitals and laboratories have almost immediate payback. We need automated, continuous commissioning. That means a transition to intelligent commissioning software tools that can be used to automatically optimize building systems without human intervention. Any products or services providing this can hit the sweet spot.

**5. The lack of building system integration** – If the various systems in a building are not integrated the building owner/ manager is not getting all the functionality they could out of the systems. The adage: "The whole is greater than the sum of its parts," applies to integrated systems. It means that integrating the system provides functionality that doesn't exist with separate systems. A number of case studies demonstrate the value of integrated building systems, which is primarily lowering capital and operating costs. The integration of building systems is just one piece of a much larger industry-wide effort to integrate and collaborate. Organizations such as the AIA and the National Institute of Building Science's initiative with the Whole Building Design Guide are supporting integrated project teams, an integrated design approach and collaboration between designers, contractors and owners. Technology, economics and the move to energy efficiency are driving integrated systems and the successful firms will embrace the concept and grow with it.

For more information about smart buildings, technology design or to schedule a Continuing Education program -

email: [jsinopoli@smart-buildings.com](mailto:jsinopoli@smart-buildings.com)



# Introducing Command Centre v7.00

Gallagher's Command Centre v7.00 security integration platform (previously Cardax FT) capitalises on its highly customisable and configurable capabilities. The new client ensures the security team sees exactly what they need to see, sized and placed on screen exactly where they want it. From alarms management, to general monitoring and control; from Challenge to cardholder administration, the information the security team needs is provided seamlessly and in context, exactly as they have designed.

Security Product Manager Trish Thompson says Gallagher Command Centre v7.00 is about "the control room and managing, monitoring, and controlling security within a site." "This version introduces the ability for you to put in front of your operators

the particular information they need to see to manage the task in front of them," she says.

With an in-built and intuitive user interface design tool, high resolution multi-monitor workstations have more power than ever before. Operators can create or adjust screen layouts in minutes with previews updating as they work. No specialist skills are needed, and the job is done in minutes not hours. Operators are able to mix and match information from different sources, and filter the content to provide operators with real situational awareness. Everything they need and nothing they don't, Command Centre is customisable right down to an individual's role, providing targeted information at the operators' fingertips.

The Gallagher platform resides on the organisation's IT network and stores information about cardholders, the site, and system activity. This business-connected security platform not only delivers security from the perimeter to the hub, but automatically executes business policy, enforcing compliance with internal and external regulations. Gallagher provides a suite of systems that can be fully integrated and securely managed through allocated privileges to authorised users.

Gallagher provides premium integrated security solutions encompassing both security systems and professional services. Gallagher delivers electronic access control, intruder alarms management, perimeter security and compliance management through a single integration platform.

## T Series Readers

Along with Gallagher Command Centre v7.00, Gallagher recently introduced durable and highly secure T series readers. The T series reader range supports the latest high security contact smartcards, Mifare Plus and Mifare DESFire EV1, which offers flexible control of card data along with high card security.

"Gallagher T series readers and Command Centre v7.00 software are a powerful combination," explains Thompson. "The readers have the ability to download new code over the network. This means we have high

speed protocols between our control panel and our readers; we can put new features at the door without any requirement to replace hardware."

The Gallagher readers can be installed as a completely new access control security system or integrated with existing systems. A robust vandal cover extends installation options and functionality of the readers to the harshest environments on the planet. These highly functional and durable readers come complete with a lifetime warranty.



For additional information, please contact: Michael Collins, NZ Sales Manager  
07 839 9800 / 021 221 7482 - Michael.Collins@gallagher.co

[www.gallagher.co](http://www.gallagher.co)





# Let the cut price jobs go

**T**he problem with cutting prices is that there is always someone ready to do it cheaper than you. You might get this job, you might get the next job, but before you know it the reduced prices become your new benchmark.

I interviewed Reid Brendon this month for our story on home automation. When I asked him if price competition is a problem, he said he won't compromise on quality, he just let cut price jobs go.

Brendon has grown his company Automation Associates from humble beginnings into a success story, employing 30+ staff. He didn't get to be a success by trying to be the cheapest – he got there by striving to be the best.

Basing your strategy on trying to be the cheapest is nearly always a weak strategy, but many businesses do it anyway because they don't have an alternative strategy or they haven't been given the skills to do the job any other way.

When you are under the pressure of trying to win a job, plenty of reasons to cut the price for a quick sale, will appear. Maybe you need a sale to make month sales target, maybe you have been missing sales, maybe the customer is baulking at the cost, maybe you don't believe your product is really worth the price, maybe you think your competitors give everybody a big discount.

The trouble is that your competitor will be thinking the same things. The result is a downward spiral that is not good for your business or for the health of the industry.

It is a problem worrying some industry leaders. Right back in September 2010 Michael Frampton, Manager of Strategy and Corporate Relations for ETITO, the security industry training organisation,

warned the New Zealand Security Association conference.

"It's no secret that chunks of the security industry have traditionally been characterised by a number of factors considered unsustainable in many other industries," he said.

He went on to finger poor investment in training, poaching of trained staff from competitor firms, before cutting to the heart of the matter.

"Competing on price alone leads to disloyal customers, low margins and many sleepless nights for business managers and owners. Price competition can work. But once you start leading with price, you better be prepared to be the lowest cost service and offer the lowest prices in the market - bar none."

Evidently not much has changed because Scott Carter, founder of Matrix Security, echoed those comments during his acceptance speech for his Security Personality of the Year award last year.

He said he wants to see the industry move right away from being a price driven commodity industry where standards and wages are driven ever lower.

"We talk about valuing people, but if we sell purely on price it's the front line people and the customers that suffer more than ever," he said.

None of this is to say you shouldn't be competitive; no business will survive if it isn't, but that is a different thing to selling on price alone.

The security industry doesn't have to be a commodity industry with purely price driven approach because the main product is not stamped out by machine – it is the services of people and each company has different strengths.

This is true whether you are man guarding or installing alarms. Your people



*Peter Parnham is an Auckland based business mentor and freelance writer*

will make all the difference between a good job and a poor job.

If you think this is all airy-fairy theory consider this: Are all cars the same price? Are all the breakfast cereals identically priced? Does everyone buy the cheapest shoes? Does everyone employ the cheapest painter? No, of course they don't.

Price is just one component of the decision to buy and it doesn't even have to be the most important one, unless that is, you choose to sell on price and price alone.

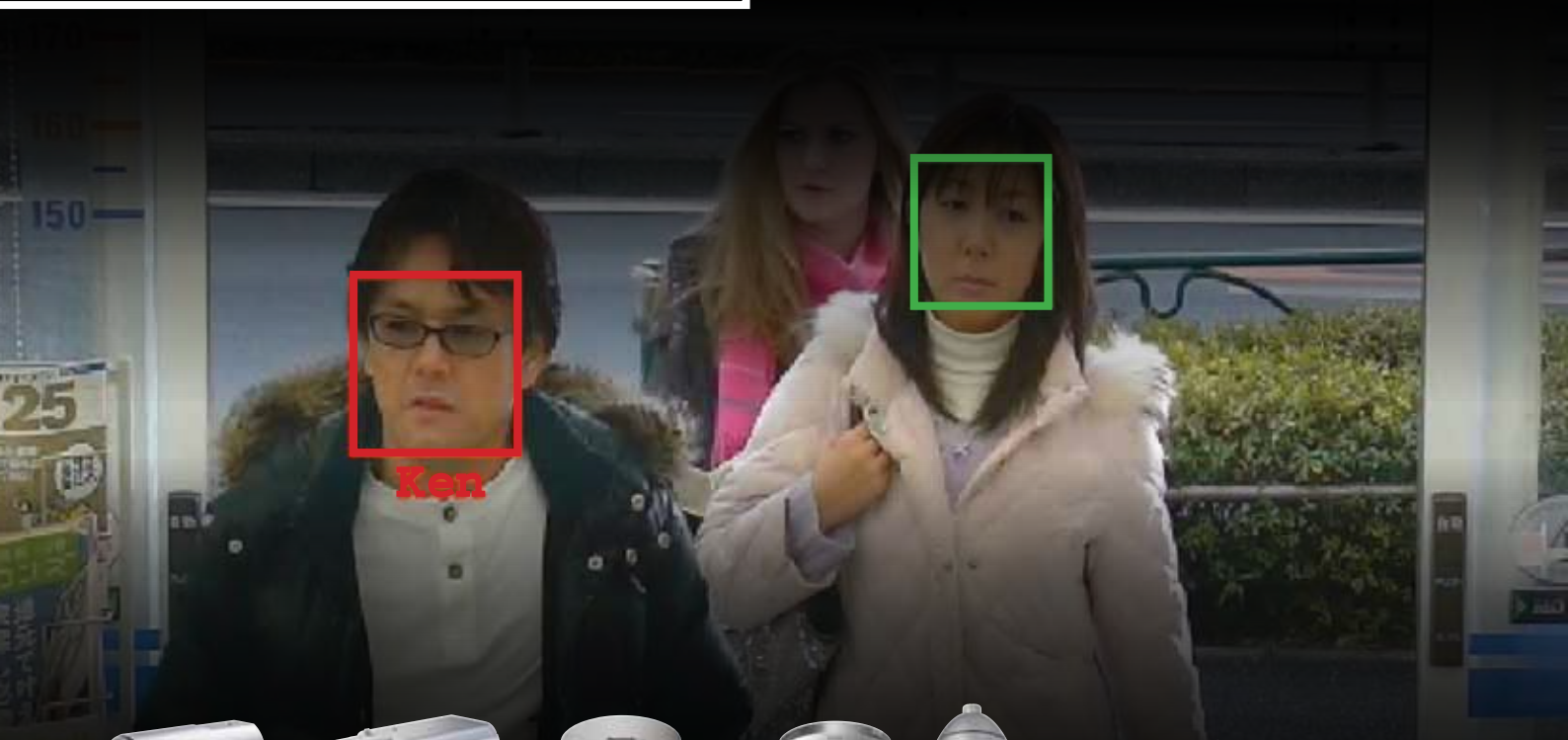
*This is the first in a series of columns about business issues written by Peter Parnham, an Auckland based business mentor and freelance writer.*

**Contact:**  
peter.parnham@paraphrase.co.nz.

**Next issue:** How to avoid making price the central issue.

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# Security death highlights risk

**T**he murder of security guard, Charanpreet Dhaliwal, is a sobering reminder of the risks that security guards face on the job.

ACC says 'other protective service workers' – including security guards, bodyguards, bouncers, but excluding prison guards, made a total of 36 assault work-related claims over the last seven years. Meanwhile, another 569 non-assault related claims were made from the same group over the same period



*Murdered guard Charanpreet Singh Dhaliwal*

although both numbers have trended down.

The Department of Labour was unable to put a number on fatalities that have occurred, and will not issue any comment about the recent case while their health and safety investigation is underway. However Scott Wilson, a partner with Duncan Cotterill Lawyers, speaking in general terms, says the death highlights the need for employers to evaluate whether they have employees working alone and what steps ought to be taken to protect them from harm, including injury, illness and emergency.

He says the Auckland tragedy has unsettling ties to a recent Canadian case where, in what appears to be the first prosecution of its kind worldwide, an employer was charged and fined \$90,000 Canadian dollars (NZ\$110,000) after an employee working alone was the victim of a criminal offence.

The victim employee in the Canadian case, a 34-year-old female security guard, was assigned to guard overnight the construction site of a retail business. Suspecting intruders, she phoned the dispatch centre and her call was transferred to the emergency police number, but before police arrived the intruder attacked, raped and threatened to kill her during a 20-minute ordeal.

Wilson says the employer in the case was charged and fined for failing to ensure, as far as reasonably practicable, the health and safety of the security guard as was required by the State's occupational health and safety law. In particular, they failed to complete a hazard assessment which was required



*Scott Wilson, a partner with Duncan Cotterill Lawyers*

where an employee would be working alone and assistance would not be readily available in the event of an emergency, injury or illness.

If a proper hazard assessment had been completed, the court held it may have led to further action to protect the employee, such as an hourly call to the security company dispatch centre, provision of a radio, or requirements for the mobile patrol to check in regularly on security guards who are working alone.

"This case highlights the importance for all employers to evaluate whether they have employees working alone and what should be done to protect them from harm, including violence," says Wilson.

“There is no legal definition of ‘working alone’ in New Zealand, but this shouldn’t deter employers from effecting working alone policies and procedures,” he says.

“Employers have a broad duty to take all practicable steps to ensure the safety of employees while at work and in New Zealand working alone can be a hazard.” He says employers should seek their own specific professional advice but in general terms they should:

- Carry out hazard assessments specific to working alone situations.
- Create or update policies and procedures to eliminate or reduce the risks associated with working alone. This could include a verbal or visual check-in procedure at certain times.
- Provide an effective means of communication for employees working alone in case of emergency, accident or illness.
- Provide training to employees who will be working alone.

“There is no doubt that an employee’s exposure to accidents, injury, illness and violence is heightened when the employee is working alone – whether the employee is a security guard or an electrician or newspaper journalist,” says Wilson.

He urges employers to consider whether their working alone policies and procedures need to be implemented or updated, to eliminate or reduce the risks for the staff who are in that position.

“It’s more than just about complying with the law,” he says. “It might prevent another tragedy.”

## Police seek man

**W**aitakere Police are still seeking a man who is believed to have been in the vicinity of the Henderson construction site where a 22 year old security guard, Charanpreet Dhaliwal, was murdered in November.

Detective Senior Sergeant Stan Brown says the man was among a group of four males who are known to have been in the area prior to or at the time the body of Charanpreet Dhaliwal was found.

“We would like this man to contact us so that we can establish the identities of all members of the group. The group had earlier been refused admission to the Lovebirds Gentlemen’s Club, a local nightclub operating near the construction site,” he said.



“The manager of the club has told us a group of four young men had attempted to enter the club but they were turned away at the door by another club employee.”

The group are all described as being Male Polynesians between 17 and 20 years wearing casual street clothing.

Charanpreet Dhaliwal, also known as ‘Lucky’, was a 22 year old Indian student working his first nightshift as a security guard on a construction site in Henderson.

His body was found at 3.15am on Friday 18 November 2011 by Fulton Hogan staff returning a work vehicle. A medical examination subsequently established that he died from head injuries as a result of being assaulted.

Police say security guards can play a crucial role in helping police identify persons in the area and obtain a complete picture of events and movements on the night.

They particularly want to speak to any security guards who were working in the area of Selwood Road and The Concourse, Henderson on the night of 17 November 2011. They also want to speak with any security workers who may have any information about criminal offending in this commercial area in the period leading up to the murder.

*New Zealand Security Magazine offers its condolences to the family of Charanpreet Dhaliwal and urges anyone who has information about the identity of the group of males describes to call the investigation team at 0800 OP HOPE – 0800 674 673 or alternatively call Crime Stoppers anonymously on 0800 555 111.*



# Australian Customs and Border Protection Service

Solutions from HID Global and Relegen deliver real-time armoury tracking capabilities for the Australian Customs and Border Protection Service

**T**he Australian Customs and Border Protection Service is responsible for the protection of the Australian community, while supporting legitimate trade and travel.

At a time of unprecedented threat levels – illicit drug trafficking, terrorism, people smuggling – Customs and Border Protection manages the security and integrity of Australia's borders, working closely with other government and international agencies, to detect and deter unlawful movement of goods and people across the border.

Concurrently, they are responsible for protecting Australian economic interests during an era of rapid growth in international commerce and travel. By enforcing trade regulations and collecting tariffs, Customs and Border Protection helps Australia compete in a global economy.

"Customs and Border Protection plays a vital role in national security, derived from its broader responsibilities at the border and the extensive powers, expertise and technology it brings to bear," said Michael Carmody, Chief Executive Officer, of Australian Customs and Border Protection Service. "Modernisation of customs organisations will remain imperative, with the Australian Customs and Border Protection Service motivated by continuing pressure for more sophisticated and integrated processes."

## Challenges

Border protection responsibility lies in the capable hands of over 5500 Customs and Border Protection employees in over 50 locations around Australia and overseas, and is managed from the Central Office in Canberra.



The Customs and Border Protection Strategic Outlook (2007) projects that by 2015, these employees will assume responsibility for the annual oversight and management of:

- ◆ 34.1 million international passengers
- ◆ 3.7 million import sea containers
- ◆ 2.7 million export sea containers
- ◆ 17.5 million air cargo consignments
- ◆ 220 million postal articles
- ◆ 22,865 arriving ships

Protecting the Australian community demands sophisticated intelligence, targeting high-risk aircraft, vessels, cargo, postal items and travellers. It also requires sophisticated tools, including thousands of items of weaponry, protective gear, specialised equipment and vehicles. Furthermore, effective deployment and management of these tools is vital to assure the safety and security of Customs and Border

Protection's officers, and the 22.6 million Australian citizens they serve and protect.

Prior to 2011, Customs and Border Protection maintained a system of separate spreadsheets to track and manage this considerable arsenal. More importantly, the view from Central Office in Canberra lacked immediacy. Lags in reporting times could lead to delays in repairing or replacing critical equipment, or in identifying a missing or stolen weapon.

What Customs and Border Protection sought was a fast and easy way to correlate information about the location and status of arms and bulletproof vests with the officers to which they had been assigned. As staff across different locations kept their own spreadsheets, Customs and Border Protection needed a solution that could easily deliver accurate and up to date views to Central Office.

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## Solution

Under Michael Carmody's imperative for more efficient, integrated processes, the Australian Customs and Border Protection Service issued a global tender for an asset tracking system. They discovered a partnership between Relegen and HID Global best fit their needs.

Relegen specialises in the development and delivery of asset intelligence solutions. The Australian Defence Force [ADF] has employed Relegen's technology – assetDNA™ – to manage critical assets for over a decade. The similarities between the ADF's and Customs and Border Protection's asset management needs, combined with the flexibility of the assetDNA solution, made Relegen the clear choice around which to build Customs and Border Protection's new system.

The Relegen solution is enhanced by their assetDNA software technology, which enables users to assign a globally unique identity to each asset. In this case, Customs and Border Protection have opted to use the assets' serial number. This identifier is then carried by Relegen's proprietary assetDNA tagging solution. A third layer of security is added through DataTraceDNA®, a covert security technology from DataDot Technology Ltd. This means that even in the event that the assetDNA tag is removed or destroyed, Customs and Border Protection can still identify the asset as one of their own.

"Our ten plus years experience at a mission-critical level with the Australian Defence Force prepared us well to deliver the comprehensive asset tracking solution Customs and Border Protection requires," reports Paul Bennett, Managing Director, Relegen. "The combination of our assetDNA software and multi-layer, intelligent tagging solution enables Customs and Border Protection to track each asset uniquely. Even if a tag is separated from a weapon, Customs and Border Protection can still identify the asset through DataTraceDNA."

The ability of assetDNA to track each asset uniquely, and in real-time, is made possible by radio frequency identification technology from HID Global. A world leader in the development and production of innovative identification tags and readers, HID provides innovative asset tags and technical support vital to the Customs and Border Protection solution.

Before HID could recommend tagging solutions, a thorough assessment of each asset was required: How is the asset used, by whom is it used, and under what conditions? For Customs and Border Protection, each tag must withstand the rigors of daily use under potentially hazardous conditions. HID manufactures asset tags that adhere and function under extreme conditions, resisting impact and vibration and exposure to saltwater and chemicals.

According to Relegen's MD, Paul Bennett, "assetDNA is a powerful asset intelligence system. However, our ability to collect data is enormously dependent on reliable tags that can withstand the rigors of daily use in extreme conditions. That's why we rely on HID. Their tags perform."

"All Customs and Border Protection assets were analysed in terms of materials of construction and conditions of use," says Tony Hilder, Sales Director, Industry and Logistics for Asia Pacific HID Global. "Then, we were able to match a HID tag to deliver the necessary level of reliable performance over the life of each asset."

HID was able to provide Customs and Border Protection with a customized compilation of RFID tagging solutions that will:

- ◆ Withstand impact and vibration – on an assault rifle, or in a physical confrontation
- ◆ Resist exposure to harmful elements – including saltwater, or chemical agents
- ◆ Install covertly and inconspicuously – to prevent detection or tampering
- ◆ Maintain data integrity and performance – assuring systemic veracity



The HID Logi Tag® Family is being applied where mechanical, chemical and temperature resistance is imperative, with the HID IN Tag Family providing ruggedised tag solutions for severe environs.

## Benefits

Relegen and HID are working together to help implement the sophisticated asset tracking system across all Customs and Border Protection locations. This includes the tagging of each of the armaments and critical assets in each agency, as well as training for all Customs and Border Protection personnel.

The result will be a comprehensive system that gives Customs and Border Protection a real-time view of all assets deployed and in inventory, empowering the Central Office to make critical decisions based on the latest information at-hand. It will also mean greater safety and security for Customs and Border Protection officers. Officers can perform their duties, confident they have been issued the correct equipment and assured that it is in proper working order. In addition, the new system further minimises the risk that weapons may be stolen or remanufactured.

The new system will also enable optimisation of asset use. Customs and Border Protection can now identify each asset's progress through its lifecycle, and identify specific assets in need of immediate repair or replacement.

Customs and Border Protection will recognise significant productivity enhancements in staff time spent mustering their formidable arsenal.

Going forward, the Customs and Border Protection asset-tracking system provides a model for any organisation managing operation-critical assets, in routine or emergency response situations.

Worldwide, police forces, fire departments, emergency medical teams, hospitals, and other organisations are employing solutions from Relegen and HID Global to respond quickly and comprehensively in emergencies, provide better safety for their employees, and drive the performance of their mission critical assets more effectively.



*HID IN Tag transponders are proven effective for tagging ballistic vests and protective garments*



# 2012 – the time to train is now

There's no better time to get employees on the road to gaining a security-specific qualification than right now. Training is not only good for staff morale and retention, it fosters efficiency and productivity. A more qualified workforce benefits the security industry at all levels by increasing the skills and professionalism of officers and other staff.



ETITO has a qualification pathway available that has something for those new to the workplace training opportunity and those who are looking to continue on it.

#### First steps

The National Certificate in Security [Level 2] is ETITO's entry-level national qualification for security personnel, and includes skills training across communication, law, conflict management, emergency management and crowd control. It has been designed to provide a strong platform from which the security industry can continue to build its professional standing.

Once trainees have achieved this qualification they can then continue their training with the National Certificate in Security [Level 3 or 4]. This qualification recognises a broad range of skills and knowledge common to all security officers as well as specific skills [strands] to match the particular type of service in which they work.

#### New approaches

For the two conflict management unit standards in the level 2 qualification, trainees will be able to

use a combination of online and face-to-face tools for training and assessment. The online tool combines video and audio clips with a range of questions to engage trainees in different ways of learning, and gives them a different perspective about the challenges they may face in their job.

#### Supporting trainees

ETITO is continuing to develop resources for trainees to achieve their training goals. Workbooks are available to help trainees with the foundation knowledge they need to be security officers. Content includes professional requirements, the law, communication and managing stress, anger and alcohol.

ETITO is currently updating these workbooks and also developing a new one to reflect the new version of the level 2 qualification released in November 2011. These will be available to trainees soon.

#### Numeracy and literacy

Changes have occurred throughout workplaces that mean a greater demand for higher levels of literacy and numeracy. All security trainees

working towards a level 2 or level 3 qualification in security should complete a literacy and numeracy assessment before beginning their qualification. There is a specially developed online assessment available and it takes just 20-30 minutes to do. Trainees can complete it from a computer at work, at home, or at a local library. The assessment will identify literacy and numeracy abilities and where they might need to improve to help a person meet the demands and needs of their job. ETITO has a team that will work with firms and trainees to tailor the kind of things that will work for them to make a difference.

#### Talk to ETITO

2012 is going to be the year for security staff training – pick up the phone now and talk to us about new training opportunities or how we can work with you to support what you're already doing.

#### Contact

Mike Hull [Northern Region] 09 583 1368

Kelly Walter [Southern Region] 04 499 7678

**[www.etito.co.nz](http://www.etito.co.nz)**

email: [info@etito.co.nz](mailto:info@etito.co.nz)

For all training enquiries please call us tollfree  
on 0508 4 ETITO [0508 4 38486].



**ETITO**

# Heat goes on hot vehicles

**S**ecurity officers on mobile patrol can now check a suspicious vehicle on the spot to see if it is stolen, thanks to a new online searchable database of stolen vehicles on the New Zealand Police website.

A positive match could forewarn security officers that intruders may be in the area and allow them to assist police with apprehending offenders and recovering stolen vehicles.

Security officer who are equipped with smart phones can search the online database directly, via a request to their operations room, or can be provided with hard copy downloaded list of stolen vehicles at the beginning of their shift.

You don't need the registration number to make a search. The database works just as well with VIN, engine or chassis numbers, returning the make, vehicle type and colour, and when the vehicle was reported stolen.

The new service went live in December and police say they are pleased with the response. Almost 100,000 searches were made in the first six weeks, although they believe a proportion of those searches are owners checking to see that their stolen vehicle is listed.

Twenty thousand or more vehicles are stolen every year in New Zealand. Already far less than the peak of the mid-1990s when over thirty five thousand vehicles were stolen in a year, police hope that the new service will help reduce rates of vehicle theft further as the risk of being caught with a stolen vehicle will rise, providing an extra deterrent for offenders.

## Conference conversation

Detective Inspector Paul Berry from Police National Headquarters says he had the idea for the service after attending the New Zealand Security conference a couple of years ago.

"At the conference dinner some guarding company managers questioned me about how to get hold of the stolen car lists for the last 24 hours because their guards were driving round and were only too happy to keep their eyes peeled," he says.

"Often they would go into police stations and speak to the local sergeant or they would know somebody and they would get a list. It was all legitimate but it was time consuming and so I asked myself: 'What is to stop us giving the public access to some of the data which does not impinge on people's privacy?'"

"He says the project was not technically difficult but it had to be secure. The solution was to create a list on the police web server that is updated three times daily but has no links to the police intelligence systems.

There is a very clear firewall between public access and the police intelligence system," says Berry. "We put data into the format that we are allowed to release, sending out across to our mail server and publishing it on the web. This means you can only access what you can see – there is nothing else behind it," he says.

## Crime prevention

Berry chairs the Crime Prevention Partnership Forum and when he put the idea to them, they told him it would open up a number of avenues in addition to the use by mobile patrols.

The Crime Prevention Partnership Forum is a high level partnership between police and business that has been developing since December 2009. Membership includes nine business groups such as the Insurance Council of NZ and the NZ Retailers Association and



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the NZ Security Association is represented by board member, Peter Freeman.

Freeman says the stolen vehicles online database is one of several initiatives from the group that will be introduced over the next year and is proof that the Crime Prevention Partnership Forum is leading to a significant improvement in the relationship between the police and the security industry.

"When I got involved with NZ Security Association some eight years ago, the relationship with the police was patchy, to say the least. But over the last four or five years the NZ Security Association's relationship with the police has improved in leaps and bounds especially at the higher level, and that is now filtering down. We've got regular communications with the police at lots of different levels.

"The police are now recognising what the industry has to contribute to crime prevention and community safety as a whole, which is great, and they have also been very supportive as we work to improve the professionalism of the industry."

When it comes to the stolen vehicle online database, Freeman says it is more than just reporting stolen cars – it can be used proactively to reduce other crime like ram raids that inevitably use stolen vehicles.

"For example it could also be used proactively by 'cash in transit' services because nine times out of ten if you're going to be robbed you will be followed by a stolen vehicle," he says.

Detective Inspector Berry says it is still early days and he expects the database will spawn other ideas within the industries represented on the Crime Prevention Partnership Forum as they learn how to utilise the information in the downloadable lists.

"If security companies were looking at automated number plate recognition on their vehicles for their own purposes, they could load the list into their database. Some of the big companies who have major contracts with the oil companies, are looking at it for petrol station forecourts, particularly around petrol drive offs," he says.

Using the information, vehicle registrations could be checked before the cashier enables the pump, and they could ring the police if a stolen car was detected.

Moteliers who are connected to national systems could use it to check vehicle registration numbers as visitors check-in.

"Berry says because there is no privacy information concerns, the downloaded stolen vehicle list could be used with registration number recognition systems in public places like large shopping mall car parks helping with crime prevention and increasing the safety and security of shoppers."

"I think once security industry members understand what is happening here, they will see a business opportunity



# Signature Security name to go

**T**ycos International is combining Signature Security's Australian and New Zealand operations with its ADT Security business under the ADT name, following its purchase of the company.

Before acquisition by Tyco, Signature Security was a leading provider of electronic security services in New Zealand and Australia providing security installation and monitoring services to more than 90,000 premises with annualized revenue of approximately \$108 million.

ADT, part of Tyco's security solutions business, is the world's largest electronic security provider and measures its revenue in billions.

The company declined to comment about job losses citing the confidentiality of their agreements surrounding the acquisition.

and that is fine so long as it's about crime prevention," he says.

"Quite a few vehicles get stolen here, containerised and sent overseas, so there is an opportunity for overseas agencies at the border to go online and check whether an import is stolen."

This is all great stuff for the security industry, but the sheer number of users so far also suggests to Berry that the public is also making good use of the service for the most basic and obvious purpose – when you want to buy a car now you can go online and make sure it is not stolen.

To search the database of stolen vehicles go to  
[www.police.govt.nz/stolen/vehicles](http://www.police.govt.nz/stolen/vehicles).



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The IS Series can be integrated with cameras and alarm systems as part of a comprehensive security infrastructure.

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# Car crime fighter steps up to the plate

Cars and number plates have always stood out to Jason Smith

Jason works in the emergency communications centre at Christchurch Police and is regularly contacted by police members looking for information about suspicious vehicles. Using his own knowledge and advanced search capabilities of NIA and Business Objects, he's often able to make a match even if the vehicle's true identification has been tampered with, the plates are missing, or plate details are incorrect or incomplete.

He honed his knack for identifying cars as a Scene of Crime Officer based mainly in Counties Manukau in 2002, five years after starting full-time work with Police.

Before working for police Jason had been a licensed Private Investigator for about 6 years.

As he drove to jobs he often spotted cars with false plates and called them into the communications centre. "A number of times they were still being driven by offenders. Being in a plain vehicle, we

were able to follow them until a marked car managed to stop them," says Jason.

He's part of an unofficial network of Police staff who are passionate about car crime. Not only is auto theft a multi-million dollar industry in its own right, vehicles play pivotal roles in many types of crime, says Jason. He's happy to help staff identify burnt-out vehicles, farm machinery, trucks and motorbikes. "If we correctly identify the car we can prosecute the right people, tell the vehicle's owners and insurers and close the file, rather than treating it as an abandoned vehicle."

Jason became a member of the Australasian Branch of the International Association of Auto Theft Investigators (IAATI) in 2006, when he represented

Police at its conference. This year he was appointed Vice-president of the Australasian Branch. He also became the first member of Police to be awarded Auto Theft Investigator accreditation by IAATI. It was presented to him at the organisation's international conference in Atlantic City, New Jersey, in August.

He acknowledges management staff of the South Communications Centre and PNHQ for their ongoing support and assistance.

Jason has been a car enthusiast since he was a kid and has owned around 50 cars (he just turned 40). His top-rated three are a Supercharged Jaguar XJR, a Jaguar XJS Convertible and a BMW 740i.

*Reprinted with premission of NZ police publication Ten One.*

*"I just know which plates fit which cars. If they don't match, it's a first clue the vehicle may have been stolen," he says.*



*Jason Smith of South Comms is part of an unofficial network of staff who are passionate about car crime.  
Photo: Senior Constable Deb Wilson, Canterbury*

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## Panasonic NVR WJ-NV200K



The WJ-NV200K provides the first real alternative to analog DVRs – at an analog price point!

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Real time Face Matching is also achieved using the Face Detection feature of the Panasonic Smart HD range of IP cameras. This provides fast detection and matching VS a stored database of known faces to alert the operator / store owner of unwanted guests.

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## Panasonic Video Doorphone VL-SW250BX



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### Features Include:

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- Simple installation
- Door release function
- 20 apartment Lobby unit available for expansion

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## Panasonic SD5 Dome WV-CF504E



Panasonic have released an internal dome variant of their class leading Super Dynamic 5 analog camera. The WV-CF504E has the same functionality as the popular full body camera in an attractive compact dome.

SD5 is still recognized as the best performing camera in severe backlight situations! perfect for retail, corporate and industrial applications.

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## Interlogix TS1162 3-LED Arming Station



The new Interlogix **TS1162** 3-LED Arming Station is now available from Hillsec. The TS1162 arming station can be connected directly to the Challenger RS-485 LAN, up to 1.5km from the Challenger panel or Intelligent Access Controller.

It has an input for request to exit (RTE) control and an open collector output that can be used to control a door relay or door strike. The **TS1162's** performance and robust construction make it suitable for a wide range of applications, including dusty or wet environments (rated to IP67). It may be used as a Challenger system remote arming station. The unique design of the housing allows the keypad to be used in the most demanding surroundings. It can be installed directly onto a metal surface without insulation.

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## Hills VoiceNav Lite A security system that talks to you!!



The Hills VoiceNav Lite sets a new benchmark as an affordable, speech enabled, 16 zone LED code pad that is compatible with all Hills Reliance control panels. Encased in an elegant and slim profile design with individually illuminated soft touch keys, the VoiceNav Lite is perfectly suited for all residential and commercial applications, requiring up to 16 zones of control.

The VoiceNav Lite comes well equipped with essential features, such as the unique built-in "personal voice guide" (PVG). The built-in personal voice guide enables users to control their security system with ease through the use of smart voice prompts, eliminating the need to decipher confusing flashing lights or referring back to lengthy user manuals. The VoiceNav Lite's speech engine capabilities provide users with an exciting experience, not previously available in any standalone LED code pads.

**Keen to find out more? Visit or contact your local Hillsec branch today for a quick run through of the VoiceNav Lite's extensive features.**



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The Vigatron Coax IP extenders is also available.

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# NZSA, What's New for 2012

As 2012 gets underway, the NZSA office is as busy as ever planning and implementing a number of new initiatives. Firstly on January 16th we commenced the process of reviewing and rewriting our Codes of Practice.

Our auditors, led by Stewart O'Reilly are currently preparing draft revisions of the existing codes as well as developing a series of new codes for the industry. These drafts will then be submitted to NZSA members, end users and other relevant stakeholders for comment by the end of March. Once all feedback has been consolidated and reviewed, updated codes will be prepared and submitted to our legal team for final approval, before being formally implemented. All NZSA members will have the opportunity to provide input into the updating of the codes and I would advise all members to take the opportunity to do so. It is only through this process that the Codes of Practice will remain a valid benchmark for the industry and a differentiator in the market.

At the end of February myself and a number of my team along with several business consultants will be embarking upon a national roadshow, visiting ten cities around the country, including Dunedin, Christchurch, Nelson, Wellington, Tauranga, Napier, New Plymouth, Rotorua, Auckland and Whangarei to promote the NZSA and provide training and tools to help security

companies thrive in this challenging economic climate. There will also be an opportunity to network afterwards with drinks and nibbles for all who attend. An agenda, dates and locations will be communicated to all NZSA members in early February. If you are interested in attending one of these road shows, please contact the NZSA office on 09 486 0441 or email [Lucy@security.org.nz](mailto:Lucy@security.org.nz) to register your interest and secure your seat today.

The dates for this years Conference & Exhibition have been set for the 22nd & 23rd of August 2012. The event will be held at the Rendezvous Hotel in Auckland and will be host to several prominent international speakers. The Exhibition, which runs along side the Conference, will be promoted on national radio in the months leading up to the event to draw a larger number of visitors from the security industry and general industry.

There will be a limited number of sponsorship opportunities and exhibition stands available for the two-day event, which will be sold on a first come first served basis. If you are considering becoming a major sponsor or securing one of the limited exhibition stands, please register your interest with Paula Whitaker at [Paula@security.org.nz](mailto:Paula@security.org.nz).

On the back of a highly successful national radio advertising campaign which started in November 2011, the NZSA will be continuing to market and promote the benefits of using NZSA member companies and the NZSA's role in the industry. A series of new radio commercials will go to air in February and March, followed by more targeted campaigns throughout the year. In conjunction with radio advertising we will also be increasing print and web advertising in 2012.

As I mentioned in December's edition of NZ Security Magazine, the NZSA continues to work closely with the licensing authority and the Ministry of Justice supporting the rollout of the new security licenses and COA's. The MOJ continues to forward questions relating to the new Private Security Act and the

license application process to the NZSA and as a result call volumes to the office have increased significantly. Overall the processing of licenses and COA applications has gone well considering volumes and time frames. The biggest issue has been uncollected and returned licenses and certificates, with 2,384 out of a total of 15,763 being returned due to non-collection and approximately 357 currently being held at Post Shops around the country awaiting pickup. If you are a company or an individual who has applied for but not received a letter notifying you that your license or COA is ready for collection within eight weeks of applying, I would suggest you email the PSPLA office at [pspla@justice.govt.nz](mailto:pspla@justice.govt.nz) or alternately visit your designated Post Shop to see if it is being held there.

As of the 18th of January 15,763 licenses and certificates have been issued and of those 14,526 were certificates of approval, 457 were individual licenses and 780 were company licenses.

With regard to the mandatory training requirements, we are still waiting for these to be announced and will communicate to the industry as soon as we receive the information.

Finally I would like to advise that there are a number of new NZSA membership benefits in the pipeline, including very competitive mobile phone plans as well as business software and training applications designed to assist companies operate more effectively and efficiently, further information on these and other new benefits will be sent to all members in due course. Lastly several months ago the NZSA launched it's "Job Search" facility on the website [www.security.org.nz](http://www.security.org.nz), if you are an NZSA member and want to advertise a job opportunity, please go online and submit your job specification free of charge. Many companies who have used this service have reported excellent results in the number and quality of candidates who have applied through the website.

*Greg Watts, Executive Officer NZSA*



*Greg Watts, Executive Officer, NZSA*

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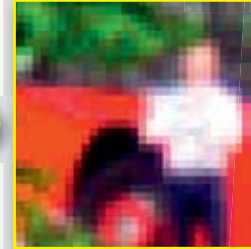


Dallmeier Panomera DP6000 Long Distance camera compared to Nikon D7000

Standard  
16 Megapixel Camera

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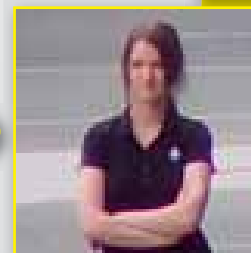
525 ft / 160 m



328 ft / 100 m



197 ft / 60 m



131 ft / 40 m



66 ft / 20 m



# NZIPI Update

**2**012 and the start of a very busy year for the New Zealand Institute of Professional Investigators, the only New Zealand Private Investigation Professional Body.

As such it is perhaps incumbent on us to pick up the pieces from some poor legislation. I refer to the recent introduction of the Private Security Personnel and Private Investigators Act 2010 governing our profession that took 37 years in the making, yet has some glaring issues, one of which could destroy our good reputation committed private investigators have been working for years to create.

Imagine letting a person practice law without any training or qualification. You just don't believe it could ever happen.

So what about just putting a Police uniform on any person with no training or experience and letting them go around in a Police car attending crimes and interviewing witnesses.

Again, you would think the world had gone nuts. Why then would a new Act permit the Ministry of Justice to grant a person a Certificate of Approval to be an independent contractor Private Investigator without any training, qualification or other experience, just because the applicant happens to pay for a Crowd Controllers Certificate at the same time and just decides to tick the box for PI.



*Ron McQuilter is the current chairman of the NZIPI and is Managing Director of Paragon Investigations*

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It gets worse, if a truly well qualified and experienced Private Investigator does the reverse and ticks to be a Crowd Controller then they will soon be required to sit an exam, despite the persons Police or other background.

For this reason, NZIPI have decided to look very carefully at applications for membership whilst at the same time embarking on a soon to be released marketing campaign promoting that clients seek NZIPI membership status of their investigators. Perhaps, this is the only way a client could get some form of comfort that the person to whom they have placed their trust (and money) is at least regarded by their peers as a person fit to be a member of NZIPI.

Some good news though is that our submissions to the New Zealand Transport Agency were well received and after lengthy dialogue, access to the Motor Vehicle register has been granted to many applicants, of course on payment of the appropriate fee. By way of background, no Private Investigator in my 29 years in the business here has to my knowledge ever been taken to task over checking the owner of a vehicle.

What was interesting in our submissions was when we discussed the necessity when performing surveillance to ensure you are following the correct suspect. It sounds obvious but from a privacy perspective how horrible is it if a Private Investigator was following you around because you unwittingly parked your car outside his suspect's house and the Investigator was unable to determine the registered owner.

This surely invades another's privacy and also could allow a crime to occur while the wrong person is being followed. The granting of access does come with very strict reporting and auditing requirements with the onus on the Private Investigator to ensure accurate records of all vehicles checked are maintained and the purpose noted.

So with a positive start the outlook for 2012 is good for the members of NZIPI, or more importantly the clients we act for. The membership is united in our Code of Ethics and promoting ourselves as New Zealand's foremost Professional Investigative Industry Body.



## What happened to good old fashioned surveillance

PI gets a flash new Snitch GPS tracker purpose adapted to allow it to be both hard wired and battery operated.

The PI decides to test the battery life (expected to be four days). So the very busy PI plants the GPS somewhere where it cannot easily be found, then forgets where he put it

That was on 29 September 2011 and it's still missing.





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# Boundaries of Security Report's 2012 edition launched

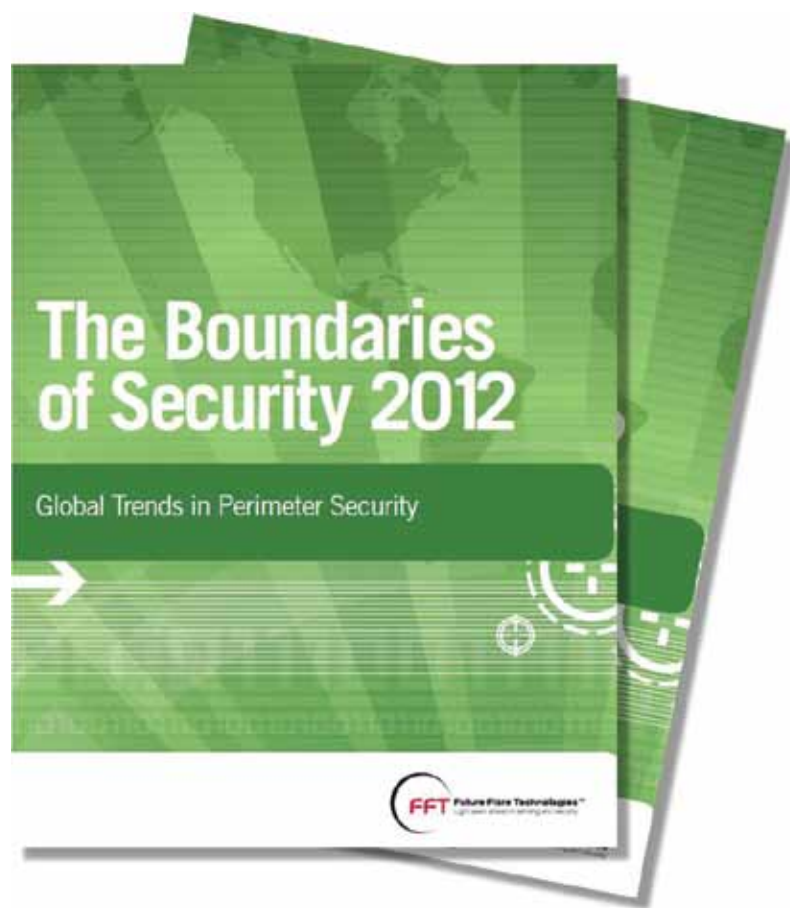
**F**ollowing the enormous popularity of previous editions of the Boundaries of Security Report, the 2012 edition of this global resource for security industry professionals, was launched online.

The 110 page annual report was originally published in 2010 by designers and manufacturers of the world's leading fibre optic intrusion detection technologies, Future Fibre Technologies, and has quickly become a 'must-have' resource for all forward-thinking security consultants and industry professionals.

Previous editions of Boundaries of Security received exceptional reviews from security experts including Ian Bergman, Government Liaison Manager at Dyesol Ltd, who said the report analyses complex and inter-related issues (technical, policy and human nature) in a very balanced and logical way, reflecting reality rather than hype.

"It touches on many subtleties in the area of perimeter protection, identifying strengths and weaknesses of the industries technologies very well in an obviously unbiased way," he said.

The new 2012 edition has been updated to include the latest market research and emerging industry trends from IMS Research, best practice recommendations for designing effective perimeter security systems for infrastructure and high value asset protection, as well as examining the important role signal processing plays in intrusion detection. It also features clear explanations of the latest intrusion detection technologies including C-OTDR Fibre Optics, Fiber Bragg Grating sensors, and Ground Based Radar systems.



Also added are whitepapers explaining the importance and operation of Artificial Intelligence (AI) in processing raw alarm data to eliminate nuisance alarms and how to go about selecting a perimeter intrusion detection technology, once again in easy to understand terminology.

Valued at \$300, the 2012 Boundaries of Security report will be available for free for a limited time to qualified individuals at [www.fftsecurity.com/BoS\\_2012](http://www.fftsecurity.com/BoS_2012) from late December.

## About Future Fibre Technologies

FFT is the world leader in the design and development of fiber optic sensing technologies for security applications. FFT has successfully positioned itself to be the technology of choice for large perimeter protection applications, pipeline security monitoring and communications/data network security.

**To learn more about Future Fibre Technologies, please visit [www.fftsecurity.com](http://www.fftsecurity.com)**

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# Axis presents market's first PTZ network cameras with active cooling for surveillance in desert environments

**A**xis Communications, the world leader in network video, introduced on January 18th, 2012 the AXIS Q60-C PTZ Dome Network Cameras with integrated active cooling for exceptional and reliable video surveillance in desert environments.

The high-speed pan/tilt/zoom cameras, with powerful zoom and resolutions up to HDTV 1080p, operate in heat up to 75°C. With the ability to withstand sandstorms, the easy-to-install and highly compact IP cameras meet the military standard, MIL-STD-810G. The cameras are ideal for use at construction, mining and oil/gas sites, along pipeline installations and for city surveillance.

"You have in desert areas—which make up about one-third of Earth's land surface—mining, oil and gas fields, pipeline installations as well as cities that need surveillance cameras that can withstand extreme heat and harsh conditions such as sandstorms," says Wai King Wong, Country Manager, South Pacific, Axis Communications.

"In desert environments, it is critical for a camera with moving parts to have a high enough operating temperature to ensure optimal and reliable performance," Wong explains. "The reason is that a camera with direct exposure to sunlight can be heated to a temperature of at least 15°C over the surrounding temperature, so an air temperature of 45°C may mean that the camera has to operate at 60°C or higher. A PTZ camera that is not designed to



*AXIS Q60-C PTZ Dome Network Camera*

operate at such temperatures would have extra wear and tear and a shortened life span."

AXIS Q60-C cameras can operate in 75°C down to -20°C, and their advanced climate control system can handle rapid temperature changes to eliminate condensation. The IP66 and NEMA 4X-rated cameras are dust and waterproof and require no additional housing. The cameras address a range of environmental conditions specified under MIL-STD-810G, including temperature shock, solar radiation and sand.

An AXIS Q60-C camera is connected to a supplied media converter switch that provides two SFP optical fiber slots and

two RJ-45 connectors, which give installers the flexibility to connect the camera cost-effectively to the network in a daisy chain over long distances using fiber optic or standard network cables. The media converter switch also enables the camera to connect to external alarm devices via two configurable input/output ports and to 12V power.

The camera models consist of AXIS Q6032-C (with Extended D1 resolution and 35x optical zoom), AXIS Q6034-C (with HDTV 720p and 18x optical zoom) and AXIS Q6035-C (with HDTV 1080p and 20x optical zoom). The cameras support day and night functionality, wide dynamic range, H.264 and Motion JPEG, automatic guard tour, alarm management and intelligent video capabilities such as auto-tracking, Active Gatekeeper and other video analytic applications from Axis' partners. They are ONVIF conformant and are supported by AXIS Camera Station video management software and the industry's largest base of application software through Axis' Application Development Partner program.

**The cameras will be available through Axis' New Zealand distributors:**

- Hills Electronic Security  
<http://www.hillsec.co.nz>
- Channel Ten Security Imports Limited  
<http://www.channelten.co.nz>

# Mi5 Security Winner in Top 100 Global Technology Awards

**W**ireless technology security company, Mi5 Limited, has been recognised as one of the top 100 technology start-ups in the world after winning a Red Herring Magazine 2011 Top 100 Global award. Since 1996 the Red Herring100 list has been used by technology industry investors and commentators to uncover the most promising private ventures from around the world.

"Choosing the best out of the previous two years was very hard," said Alex Vieux, Chairman of Red Herring. "After rigorous contemplation and discussion, we narrowed down our list from 1,100 potential companies to 100 winners. It was an extremely difficult process. Mi5 Security should be extremely proud of its achievement, the Top 100 Global are truly the best of the best."

In winning the award Mi5 Security stood out from thousands of entrants and according to the judges has an excellent business model and go-to-market strategies. Mi5 Security CEO, Helen Wattie, says the judges also identified Mi5 as being a team of experienced and passionate entrepreneurs with unique, innovative and disruptive technologies that the judges felt would go far.

"Mi5 is on a high growth path," she says. "We have met a number of key industry contacts through being a Red Herring Top 100 Global finalist and we now expect to further our venture capital and partnership discussions in order to accelerate our expansion plans into the USA and other markets."

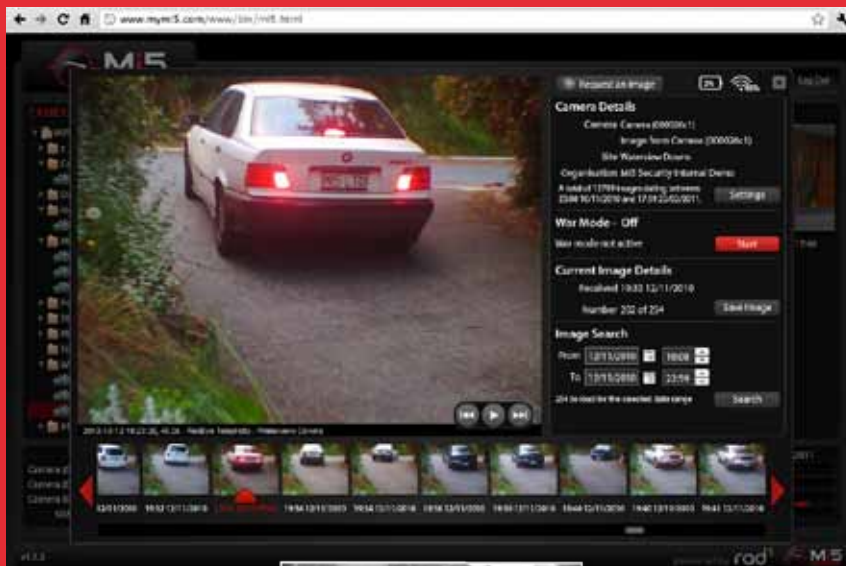
Finalists are judged on a range of qualitative and quantitative metrics, including technology innovation, financial

performance, growth, management, potential globalisation of the strategy and market share improvement. Mi5 received its award at an awards ceremony in Los Angeles.

## About Mi5 Security

Mi5 Security is an acknowledged world leader in the creation and supply of converged security and technology innovations. Mi5's solutions enable its customers to easily control and manage their security and monitoring requirements in remote locations. It achieves this through the delivery of new and unique surveillance and online products, combining the latest technology advances with proven and solid security practices. Based in New Zealand and Australia, Mi5 Security sells its products internationally through a network of partners and licensees.

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## Put your trust in the name you know Schlage Readers and Credentials

**F**or more than 90 years Schlage has been providing innovative security solutions for schools, hospitals, hotels, airports and a host of other commercial buildings. Ingersoll Rand brings Schlage Readers and Credentials cutting edge technology to New Zealand, with wireless security products and credential solutions. Schlage offers several different reader and credential technologies, with a full offering no matter how demanding the project specifications may be.

### Multi-technology Readers

Industry leading multi-technology card readers from Schlage combine traditional proximity and advanced contactless smart technology in one reader. This gives your organization the ability to utilize 125 kHz proximity technologies in your systems today and the flexibility of adding 13.56 MHz smart cards to the system in the future without the need to replace readers.

Multi-technology readers from Schlage provide compatibility with smart credentials and proximity cards from XceedID®, and with most other major providers of proximity and smart credentials. In addition, multi-technology readers from Schlage support all applicable ISO standards.

### Smart Card Readers

In new applications and in facilities where there is no existing legacy population of proximity cards, single frequency 13.56 MHz smart card readers and contactless smart credentials from Schlage provide an ideal solution. Contactless smart card readers from Schlage are able to read multiple smart card formats, providing you with unparalleled flexibility for your application.

### Proximity Readers

Schlage offers a full line of 125 kHz proximity readers that provide an attractive and cost-effective solution for facilities already using proximity technology or looking to upgrade from more traditional technologies. Proximity readers from Schlage provide you the ability to read proximity credentials from several manufacturers, including Schlage, XceedID®, and HID® proximity.



*SXF1050-1060 Schlage*



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*SXF2110HI*



## New Schlage Contactless Smart Credential Readers

**More Security, Speed and Data Storage**

**Support MIFARE®, DESFire™ and MIFARE DESFire™ EV1 technologies**

**I**ngersoll Rand Security Technologies has announced that a new line of Schlage contactless smart credential readers will let facilities meet today's requirements while providing a foundation for future applications. Operating on 13.56 MHz frequency, these contactless smart credential readers provide one of the most advanced identification reader technologies available today. The combination of the new Schlage readers and smart credentials provides more security, more speed and more data storage than the more common systems of today.

These new contactless smart credential readers provide the highest level of security, compatibility and scalability on the market today.

The new readers will help organizations support diversified smart credential applications ranging from biometrics to cashless vending and transit passes.

The new Schlage contactless smart credential readers provide advanced security by supporting all applicable ISO 14443 and 15693 standards, the international standards for contactless smart cards. They leverage MIFARE DESFire™ EV1 technology, are encrypted with AES 128-bit diversified keys and include mutual authentication and a message authentication code (MAC) to ensure that data is safe. These readers also come standard as FIPS 201/ PIV II compliant readers, ready to be used in government applications right out of the box.

The new Schlage readers, when used with new Schlage smart credentials, provide an extremely rapid up to 848 kbps baud rate data transfer between the credential and reader, up to 32 times faster than many contactless smart credentials and readers on the market.

The SXF2200 Mid-Range Contactless Smart Credential Reader is ideal for mounting on single gang electrical boxes. The read range provided by this attractive package makes it the standard choice for most wall mounted installations.

The SXF2210 Mid-Range Contactless Smart Credential Reader is ideal for higher security applications where two factor (card and/or pin number) authentications are desirable. This reader may be mounted on standard single gang electrical boxes or any typical wall mounted application.

The new contactless smart credential readers are available now. For more information on the new Schlage line of contactless smart credential readers and credentials, interested parties can go to [www.schlage.com](http://www.schlage.com).



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# The Future of Multi-Purpose Smart Cards on School and Government Facilities

**I**ncreasing threats on school campuses and at government facilities, coupled with diminishing budgets and intense pressure to cut costs across all levels and departments, are forcing security administrators to find new ways to keep their buildings safe without breaking the bank. Each organization features its own set of ever-changing idiosyncrasies and unique challenges, requiring flexible system architectures to satisfy specific needs.

There are a number of steps that security administrators can take to address these issues. Many are improving cost efficiencies and user convenience by deploying multi-purpose smart cards that can be used not only for identifying individuals and granting secure access, but also for applications ranging from transport to cashless payments and even energy control.

According to a study by the research firm IMS, smart-card use is growing at a 13.5-percent CAGR between 2009 and 2013, compared to 2.4 percent for proximity technology in the same period. IMS believes the number of smart-card installations will approach that of proximity installations by 2013. One of the biggest growth drivers is the desire to move to a single card or credential that can store more information for additional applications and/or security.

Deploying multiple applications on a single card not only saves time and money for both organization and user alike, but also simplifies the user's life. Yesterday's ID cards that were used simply to enter a building or earn a discount are now a one-stop source for security and commerce, and can do everything from opening doors to accessing services, managing energy usage, purchasing food and merchandise, checking out materials, and

riding the bus. In the future, these multi-purpose credentials will even be virtualized so that users can carry them in their phones, memory sticks or other electronic devices.

The convergence of multiple applications on a credential, be it a smart card or other devices, is an accelerating trend and many organizations simply will not consider any purchases unless it enables them to add more applications to existing physical access systems and credentials, or extend the use of existing applications.

## Improving School Security

One example of a well-executed, multi-purpose smart card deployment can be seen at Reykjavik University (RU) in Iceland, which had been using proximity technology to secure its buildings for many years. When it came time to build a larger, more modern facility, RU wanted as "key-free" an environment as possible, one that would increase student, faculty and staff convenience and security, reduce costs, improve efficiency, and provide the flexibility to support future needs.

To realize this vision, the university needed a true, multi-application smart card that could be used for cashless vending, canteen transactions, on-demand printing, photo ID production, library access, locker use and more, and that could also give the wider community controlled access to public services such as its buses, museum and swimming pools. The University began moving from proximity solutions to its more secure HID iCLASS® multi-technology technology, easing the transition by using cards and readers that support both technologies. The University has integrated its access control system with lighting, electricity and





room allocation control to further improve overall efficiency. Cards are quickly and easily printed on-site for staff and every incoming student and are now providing approximately 4,000 students with access to all university classrooms, labs, study areas and other buildings as well as the its intranet, 24 hours a day, 365 days a year.

Administrators faced a different convergence challenge at Coventry College. In developing a new security solution, the college had to consider a culture in which staff and students were used to not wearing ID badges. Additionally, there was limited secure parking, no real physical access control, very little control of IT user accounts and problems with photocopy and print service abuses. It was important for the college that its current, very laborious manual processes (such as library book inventory and fine payments) could also be automated and simplified in the future, as part of the planned ID solution. The college also wanted to reduce on-site cash handling by introducing a cashless payment solution for the canteen.

Another key requirement at Coventry College was the ability to control real estate, personnel and assets through a single, multi-application smart card that combined both physical and logical access control. To meet the logical access requirements and provide centralized control of personnel, real estate and university access, the College deployed 1,000 multi-application smart cards with integrated middleware to its staff. It deployed another 12,000 customized cards with ID photos to students for both physical access and cashless catering. The resulting solution enables the storage of personal student information, such as allergies, on the smart card, helping canteen staff to only serve the cardholder with food suitable to their condition.

Transportation management is another common challenge that smart cards can address. At Murcia University, the University and its bus transportation service contractor, Autocares España, needed an efficient way to monitor bus fleet usage both for security purposes and to maximize efficiency. They needed a method to communicate passenger status to the bus driver and also wanted to generate a database of historical usage information. The system also had to be quick, convenient and cost-effective for students, with the ability to integrate two-way text messaging for communicating with bus drivers, and GPS capabilities to supervise itinerary data including distance driven, fuel level, observance of speed limits, stop/start records and whether the buses stayed within their approved route areas.

Murcia University's prior procedure required that bus drivers hand-count passengers and cross-reference that information to the number of cards sold. Drivers also needed to remember whether a student had already ridden the bus to prevent plan abuse. Finally, Autocares España did not have a reliable way to project usage and provide the correct number of buses to accommodate peak rider demand. To solve this challenge, the University and Autocares España chose a solution that integrated GPS, text messaging and database capabilities with a combination of iCLASS contactless reader/writers and 13.56 MHz contactless smart cards.

Now, to use Murcia University's bus service, students simply approach the bus' on-board reader with their card, and it either responds with a green light indicating the card is valid and the student can board the bus, or an orange light accompanied by a buzzer if the card is invalid. A text message then appears on a screen telling the driver the reason that the student is not authorized to ride. All cards are personalized by the university and can be reprogrammed when the amount of transportation purchased expires and the university is considering opportunities for time and attendance and other future applications to be deployed using the same smart card technology.

The combination of physical access and payment capabilities is an increasingly popular smart card application.

One of the nation's leading banks recently developed an award-winning program that consolidates traditional magnetic stripe purchases, contactless payment transactions and facility access on a single employee card.

The selected technology combines a point-of-sale (POS) contactless-payment application and HID's iCLASS® smart card technology for physical access control and security. One of the potential applications for a program like this is to offer students payment functionality (cashless or magnetic stripe) on their physical access card at no additional charge. Services like these improve convenience while enabling students to establish an early banking relationship. For banks, these relationships can extend beyond graduation as a graduate's need for financial services grows.

Universities also must be concerned about maximizing overall security. Today's multi-purpose smart cards carry more information that must be protected and they require more privacy protection. This has created the need for multiple layers of card security, including two-factor authentication to validate identity, and in some cases even biometric templates that must be stored on the card. These are the same technology requirements that have recently been specified by the U.S. government as part of sweeping mandates to establish more secure and reliable forms of identification used by federal employees and contractors.



*Stephen Blakey is the HID Regional Sales Manager for New Zealand.*

*Stephen can be contacted on 09 537 0279 or 0210 824 6096 or by email: [sblakey@hidglobal.com](mailto:sblakey@hidglobal.com)*





# Emergencies, money and you

**W**e are told by most financial commentators to pay off our mortgages as fast as we can. It does not matter if you are a business person, salary or wage earner, you will be told the same.

You might be earning more, have had a good year, received an inheritance, or had a windfall, it does not matter. If you have some surplus money, you will hear the same story again – reduce your mortgage, and in theory, this is the correct advice.

However, what about building up an emergency fund? There are good reasons to do so, and all too often this is overlooked by New Zealanders.

If you were to build up an emergency fund, you would have room to move in the midst of a financial crisis, or tough times, and have more flexibility to keep the bank (or other creditors) off your back.

It is usually quite easy to borrow money when we have secure jobs / normal health, but almost impossible to borrow if things are bad, e.g. if we are made redundant, cannot work, are ill, or have had a bad accident.

Remember “a bank is an organisation that will lend you an umbrella when the sun is shining, but they will want the umbrella back when it starts to rain.”

## There can be many causes of an emergency:

- Global recession
- Accident
- Illness
- Death of the family breadwinner
- Death of the mother of a young family
- Key staff illness or accident
- Economic downturn in NZ
- Poor produce prices
- Imported diseases

- Earthquakes
- Floods
- Droughts
- Rising interest rates
- And some we even cannot imagine

For all the reasons given above, it would be very wise to build up an emergency fund.

## Dead money vs an asset

We cover a lot of risks using life, fire and general insurances, but the premiums are “dead” money that you don’t get back and all too often insurances often do not cover the emergencies that arise.

Most life insurances nowadays are term life, where the premiums increase with age and rise very sharply from around age 55. By building up an emergency fund, you gradually eliminate the need and eventually the cost of such insurances.

Hence your emergency fund is an asset.

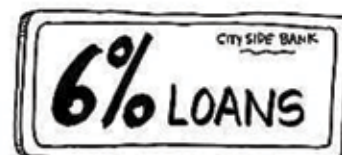
## How much should be in your emergency fund?

It is impossible to come up with precise figures since you cannot know the size and nature of a future emergency. The rule of thumb I was taught in NZ back in 1991 was 3 to 6 months income.

Obviously the more debt you have the more your emergency fund should have in it.

Rocket science is not needed here though, and any amount is better than none. Getting started is the most important step!

In the USA they recommend everyone keeps 8 months income in emergency funds. Given the extent of the credit crunch in the USA, 8 months would have barely been enough for a lot of people.



“YOU'RE PART OF THE 6% WE WON'T BE LENDING MONEY TO...”

## Liquidity (access to money)

Emergency funds need to be liquid - they must be easily accessed. There is not much point having an emergency fund unless it is readily available within say 2 weeks.

How can you build an emergency fund?

If cash flow permits, set up an automatic payment system and put the funds in monthly.

Or allow for contributions to it in your cash flow planning.

As always, seek a balance between debt repayment and living today as well.

## Where not to put it

The first consideration is not in the bank where you have your mortgage. Emergency funds should be as far away from your bank manager’s control as you can get. If you miss a mortgage payment, the bank can move money from one of your accounts to another without even consulting you.

It needs to be under your control and preferably your bank should not even know you have it.

Rental property, beach houses, baches, forestry and commercial buildings are not suitable as emergency funds either as they are not liquid. Money from these assets can take months to unlock (even years sometimes).

Nor should it be all invested in shares, since Murphy's law says they are all too likely to be down 10%, 20% or even 30% at the time you need the money.

None of these assets are suitable as emergency funds.

### Where should emergency money be invested?

Hopefully you will never need the money for an emergency and so it should be invested, but in a conservative place. Ideally it would be invested in a conservative diversified portfolio, with a portion offshore.

If it is invested, over time it should grow and if it is never needed, it will become part of your retirement funding.

New Zealand is a tiny economy and is not particularly well diversified. Further, the New Zealand economy is highly vulnerable to earthquakes, imported diseases and pests. We have already had the Christchurch earthquakes and the PSA disease in Te Puke's kiwifruit orchards. NZ will continue to be at risk of imported pests/diseases that might attack our animals, orchards, crops or forestry. In the event that New Zealand's economy takes a big hit for one reason or another, it is likely that the New Zealand dollar would drop sharply.

If this eventuates, the value of your offshore emergency funds would be maintained.

### What sort of investments is recommended?

A highly diversified conservative portfolio of about 75% in bonds and 25% in shares is suitable.

The bonds should be A rated or better, and the shares in the right kind of share fund, on & offshore.

The correct diversification dramatically reduces risk too.

Bonds over many years have paid 1% to 3% better than short-term bank deposits. Shares have had a bad patch recently but over the longer term shares have outperformed bonds by 3% to 5%.

Therefore over time returns from a correctly structured conservative portfolio over the medium to long term are likely to be about 2% pa higher than bank rates.

### Involvement

It is best to 'stick to your knitting' and do the things that you are good at doing. Therefore, you may be better off to use an AFA (Authorized Financial Adviser) rather than trying to pick good bonds and shares yourself.

### Summary

Get started, even a small emergency fund is better than no emergency fund.

Remember it is an asset, not an expense/cost.

- Always keep it well away from the bank where you have your mortgage.

- Make sure you can assess the funds within 14 days.
- Make sure it is controlled by you, no one else.
- Invest a good portion of it offshore to help counter any nasty downturn or disaster in NZ.
- Review your other affairs and insurances regularly so that the likelihood of needing your emergency fund is kept to a minimum.
- If your emergency funds are never needed, they will become part of your retirement funds.

## About the Author

Alan Clarke was born in Timaru and brought up on a farm in South Canterbury. He gained his commercial pilots licence at age 19 and then flew full time for 20 years in NZ, Africa, England and the USA (14 years offshore).

His flying career included flight instruction, charter flying, topdressing, crop spraying, and oil rig servicing. Alan quit flying at age 40 by which time he had amassed close to 11,000 hours in aeroplanes and helicopters.

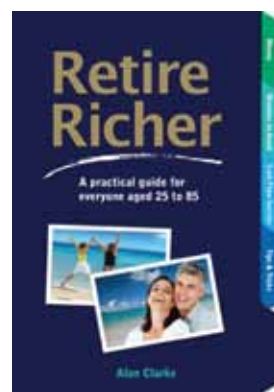
On a brief return trip to New Zealand in 1977, Alan met and married Donna. They then proceeded overseas again and returned permanently to New Zealand in 1984. They now have four children aged 32 down to 20.

In 1987 Alan made a major career change into finance and has been a financial adviser for 24 years. He has first hand experience of what works for some people and why others get it so wrong.

After a period working with others, Alan & Donna established their own financial planning business in 1996.



Alan Clarke



After many years involvement with active investment managers and many years research, Alan and Donna discovered a superior investment method – asset class investing.

In 2005 Alan took up flying again (this time for fun) and is now the NZ agent for Pipistrel motor gliders. Donna & Alan enjoy travel, flying, gliding, tripping around NZ, boating, camping and just "being outside."

2011 marked two new events. Alan became an AFA (authorised financial adviser), licenced by the NZ Securities Commission. This is a new regulatory requirement and is the highest licence currently available in NZ.

Alan has just written his first book called "Retire Richer," which is a holistic and practical guide for all New Zealanders age 25 to 85.

### For more information on Alan & Donna and their various activities go to:

[www.bondsandshares.co.nz](http://www.bondsandshares.co.nz)  
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# Smart software needed to clean up dirty money

By Keith Newman

**I**n June last year the country's financial institutions and those regularly dealing with cash transactions were given two years to comply with new laws that will inevitably require leading edge technology.

The new Anti-Money Laundering and Countering Financing of Terrorism Act 2009 places hefty compliance demands on banks, life insurance and fund management companies, brokers, casinos and even some financial advisors.

They'll need to prove they're not associated with money laundering or financing terrorism and those who're dealing with mega-dollars and complex cross-border transactions will need technology smarter than your average bank teller.

The technology to monitor, manage and isolate irregularities is typically sourced from large overseas providers and commands top dollar. According

to Methodware General Manager, Paul Stokes, many Kiwi companies won't be able to afford this mainstream software or the ongoing upgrades and maintenance.

He says New Zealand companies are generally not of the scale to purchase the systems required to comply with new regulations. To that end Methodware's parent company, Christchurch-based Jade, plans to offer a cut down version of its Joob Intelligence software.

The software, which uses smart techniques and tools to quickly process large volumes of data and ferret out links and connections that could point to suspicious transactions, will be available online from a bureau for an annual fee.

## Monitoring dirty laundry

The software as a service solution, expected to be operational from the second half of 2012, will operate out

of what is tentatively known as the New Zealand Detection Centre, hosted by Jade's data centres in Auckland and Christchurch.

Clients will deliver a batch feed overnight and then receive morning reports showing which transactions need more attention and which need to be sent off to the New Zealand Police Financial Intelligence Unit (NZPFU).

Stokes says regulators will want to have some idea that everyone has systems in place and all boxes ticked well before the Act comes into force in June 2013.

The objective of the new law is to align New Zealand with the global fight against organised crime and enhance our ability to detect and trace illegal money through the financial system.

Justice Minister Simon Power says a collaborative approach between government and industry is required to prevent New Zealand becoming a safe haven for criminals and tax evaders and to ensure our financial sector continues to be attractive to investors.

The new law will allow the Police to use the Criminal Proceeds legislation to attack the profits of crime. Compliance is being managed by the Reserve Bank, the Department of Internal Affairs and the Financial Markets Authority (FMA).

## Exposed to risks

While New Zealand has existing money laundering regulations the general view has been that we're not an obvious target for laundering. However the FMA says, with globalisation and the internet, New Zealand is increasingly exposed to risks from international organised crime and possibly even organisations supporting terrorism.





It estimates money laundering in New Zealand at between \$NZ1-1.5 billion annually. An example of the incentives to profit driven crime are highlighted when comparing the price of gold NZ\$70 per gram with pure methamphetamine at about NZ\$700 per gram.

The FMA says criminals will go to great lengths to keep their profits of crime looking clean. They may purchase expensive vehicles, machinery or property or launder through shares, bonds, commodities and futures. This requires more financial expertise, often through multiple and complicated trading transactions.

FMA Chief Executive, Sean Hughes warns that business and organisations covered by the new law should be looking at developing compliance capabilities now.

A series of seminars were held last year to raise awareness of the new obligations and the risk assessment and compliance programmes needed.

“A key message from Australia, where a similar regime is already in place, is that it takes time to develop the policies, training and personnel required to meet the requirements. Organisations need to get on with this right away,” says Hughes.

### Borderless transactions

Money laundering is one area where i2 Analyst Notebook has proven its mettle, tracking connections across national and international borders.

Obviously you need legal justification and authority to gather data from banks and telecommunications carriers but international co-operation based around banking rules has streamlined the process.

“Money transacts around the world in the space of seconds and only a collaborative effort by agencies that understand the problems and can gather evidence can make a case to stop illegal activities,” says Visual Analysis Business Development Manager Dave Ashton.



NZ Police intercepted this suitcase with \$2.5 million in cash in an investigation where a 'reporting agency' facilitated the laundering of proceeds knowingly linked to drug trafficking. Image: Financial Markets Authority



Suspicious transaction reports (STRs) must be made to the Commissioner of Police if financial organisations believe customers are operating outside the law. This might include large amounts, lots of small amounts, cross border transactions, quick deposits and withdrawals or any kind of abnormal customer behaviour or transactions that don't make economic sense. Image: Financial Markets Authority

The fact i2 is used in 150 countries makes that process relatively seamless.

“Within a few clicks it will show you which account is connected to which, along with time and dates. It will even identify shell companies and narrow down the people that might be of interest.”

It's likely many in the financial sector will call in the big auditing and accounting firms to advise on risk management and compliance ahead of deadline day for the new law. That's when Jade is hoping they'll recommend its new service.

Paul Stokes is unaware of anyone else planning a shared services model to deliver compliance software and suggests any new players from offshore would struggle deploying secure services locally.

“We already provide services and technology into the financial sector so it makes sense that many of these operations may want to use our technology to resolve this problem as well.”

He suggests once the technology is in place to monitor money laundering, banks in particular might want to take the next step and use a more advanced version of the technology to start looking for fraud. Before evidence vanishes.

Globally i2 estimates the amount of money lost to fraud by organisations each year is around five percent of their revenue or \$US2.9 trillion. It confirms investigators and analysts must correlate tremendous volumes of data in a rapidly shifting environment as quickly as possible to ensure the evidence doesn't vanish before anyone is aware a crime has occurred.

Locally Police Minister Judith Collins announced in September that cash and assets worth around \$48 million have been seized under new Criminal Proceeds Act which enables Police to seize assets believed to be the proceeds of crime without first securing a criminal conviction.

She says Police are currently holding restraining orders over \$40 million worth of assets and a further \$8 million has now been forfeited to the Crown. Police now have an understanding with other government agencies to share information, so the legislation can be used to the maximum extent.

The assets seized so far include boats, motorbikes, luxury cars, four-wheel-drive vehicles, cash, bank accounts, lifestyle blocks and a large number of residential properties.

# 3D Facial Recognition installed at Total Infrastructure Ltd

**N**ew 3D Facial Recognition being installed at Total Infrastructure Ltd, saving the business time and money.

Mr Ashok Kapadia, Director of Auckland civil infrastructure, construction and facilities maintenance business, Total Infrastructure Ltd, is installing the latest new 3D facial recognition software “FaceClock” from Time Target, into his business for the New Year. After extensively looking for an overall solution to help with staff management, keep track of staff’s time and attendance and manage wage costs, Mr Kapadia chose Time Target’s FaceClock device.

One of the main reasons for looking into facial recognition software was because other biometric devices that use finger scanning to clock staff in and out, rely on a clean fingerprint and this

isn’t always possible in their workshop environment. Working in an industry where employees have dirty hands due to the very nature of their work, meant that FaceClock would provide the best possible solution.

FaceClock simply scans the employee’s face, saves this information which you name accordingly and then recognises it from then on, so staff just have to look at the scanner momentarily and it will recognise their identity instantly, matching it up to more than sixty main points on their face, ensuring accuracy and verifying them for clocking in or clocking out. This information is then available to be used in rostering and award software and sent to payroll, saving even more time for Total Infrastructure Ltd’s busy office staff and eliminating any possible data entry errors.

The accuracy and ease with which the FaceClock device is used makes it simple

and easy to implement and provides savings to the business across multiple areas, the results for Total Infrastructure Ltd will mean better efficiency and tangible savings. FaceClock is widely used around the world across multiple industries and includes Microsoft, Nokia, Compaq, Toshiba and Sony Ericsson, all current global strategic partners using this technology.

Time Target will work with Total Infrastructure Ltd to achieve an increased level of communication throughout the business. Improved rostering, payroll and better management of staff time and attendance to enable Total Infrastructure Ltd to be more efficient, saving the business both time and money. We enjoy working closely with our clients, such as Mr Kapadia and his team to make sure that both staff and management enjoy using our products and services. Time Target can also be linked into other



systems, so that you can easily view actual sales or production data versus actual wage costs simply and easily, helping to manage daily operations and key staff in the vital areas of your business.

The potential applications for using facial recognition software are extensive, because it's also immune to weather extremes so it can be used in hot, humid or cold conditions, ideal for industries where hygiene is important, as well as various manufacturing industries or any business where no physical contact with a device is preferred and accuracy is important. FaceClock can also be linked

to door access for security environments and is ideal for businesses that require an access control solution as well as clocking times.



For more information about Time Target, please contact us on:  
**Phone: 03 962 3999**  
 or visit our website at [www.timetarget.co.nz](http://www.timetarget.co.nz)

## 3D Facial Recognition Device "FaceClock" from Time Target

### Specifications

<b>Supplied By:</b>	Time Target NZ Ltd
<b>Model:</b>	F810 Time & Access
<b>Embedded:</b>	Allows processing and matching to be stored on device
<b>Multi Authentication:</b>	System can work with Face, Pin & Face, Card, Card & Photo
<b>Simple Design:</b>	Includes 3.5 inch colour screen for face positioning and voice prompt
<b>Flexible:</b>	Compatible with existing door access control units
<b>Accurate &amp; Fast:</b>	Scans instantly and stores up to 1000 users in less than 1 second
<b>User Capacity:</b>	1000 face users or 5000 card users
<b>Reliable:</b>	Performs under varying lighting conditions including in the dark
<b>High Usability:</b>	Over 2 years market testing Failure rate is less than 0.0001% Incident trackable for security
<b>Keyboard:</b>	Touch keypad with 3.5 inch colour screen
<b>Working Temp:</b>	0 – 40 degrees Celsius
<b>Working Humidity:</b>	20% - 80%
<b>Working Distance:</b>	30 – 80cm
<b>Size:</b>	230mm x 105mm x 130mm
<b>Weight:</b>	600gm

### Features

- ◆ Does not require physical contact with the unit when using.
- ◆ Accurate & reliable – scans 60 different facial points to ensure a match.
- ◆ Works in all climates – not affected by the weather, suitable for hot, cold and humid environments.
- ◆ Photo not recognised, avoiding fraudulent users.
- ◆ Stops the spread of germs or bacteria in sterile or food related environments.
- ◆ Avoids "buddy punching" completely.
- ◆ Convenient and simple to use.
- ◆ Ideal for dirty or messy work environments where finger scanning is unsuitable.
- ◆ Affordable and easy to install.
- ◆ Highly suitable for multiple industry types and currently used worldwide with more than 50,000 installations.

If 3D facial recognition software sounds like the solution you have been looking for, contact our sales team who will guide you through some options and discuss how it could work in your business.

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# Low water pressure threatens fire sprinkler effectiveness

Keith Newman asks why such an ad hoc approach to water supply when lives could be at risk?

Lives and property may be placed at risk unless local authorities consult more closely with the fire protection industry before reducing water pressure to save water and prolong the life of aging underground pipes.

While Territorial Local Authorities (TLAs) currently have no legal obligation to notify the fire industry of any planned changes, failure to do so could render thousands of fire sprinkler systems non-compliant.

The Fire Protection Association (FPA) is concerned it's being sidelined by ad-hoc decision making and wants to make it compulsory for the country's 67 TLAs to consult ahead of any proposals to reduce water pressure.

The industry group, representing the NZ Fire Service and a wide range of equipment and service providers, wants reassurance from the Government that mains water pressure can continue to be used for sprinkler systems.

Ross Aitken, chairman of the FPA's Water Supply sub-group says most Water Supply Authorities (WSA) appear to be aiming for "guaranteed water supply pressures [that] are so low, that invariably all fire sprinkler systems of the future would need to be installed with pumps and tanks."

He believes the ultra conservative 'no risk' approach is being driven by the increasingly complex nature of local authority accountability.



*Water mains pressure testing*

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“We have no problem with new technology that can give longer life to infrastructure but we need to be consulting so everyone’s aware of these projects and we don’t end up with loss of life or property,” warns Aitken.

### Valve firms implicated

Another concern are the activities of what Aitken calls the ‘backflow industry,’ dealing with valves and pressure reduction technology, which he claims is becoming more active in promoting pressure changes to TLAs.

“They’re consulting with TLAs about ways to manage their water supplies and trying to sell the latest technology.”

While he agrees these companies are simply going about their business, they can apply significant resources to convince councils to extend the life of their water infrastructure. “We don’t want to be left out of this process and we need to ensure we’re consulted.”

If pressure reducing valves are used, the FPA wants assurances they’ll be regularly maintained to prevent faults and further supply reduction.

Underground water mains and reticulated pipes in towns and cities provide the backbone for up to 10,000 fire sprinkler systems in use in commercial buildings around the country. At least two fires a week are doused because sprinkler systems operate correctly.

Department of Internal Affairs sector policy manager Anthony Richards took up the fire protection industry’s cause last year, asking Local Government New Zealand (LGNZ) to inform all its members about the risks of unannounced water pressure changes.

LGNZ wrote to all TLA asset managers, recommending building owners be consulted and given relevant information “well in advance” of pressure adjustments being considered.



Ross Aitken, Chairman of the Fire Protection Association's Water Supply sub-group

**“The irony is that TLAs are often responsible for administering building compliance and Building Code standard NZS4541 specifies that 80 percent of available water supply pressure and volume must be made available for sprinkler systems.”**

### Case by case approach

When asked if there were concerns about a potential disconnect between the fire industry, TLAs and central government requirements, Richards told NZ Security, rather than central government trying to achieve regulatory consistency, it remained a matter for each authority to do its own impact analysis.

He says TLAs are required under the Local Government Act 2002 to consider the effects of decisions as a core part of their business and must ensure “consequent risks to public safety are actively managed.”

While recognising the considerable benefits “for water conservation and asset management purposes,” the department acknowledged the risks “for fire mitigation and suppression generally, and for building owners in particular.”

If the issue remained “persistent and significant,” the department would look at reinforcing the importance of ensuring councils consider all the possible consequences of pressure reduction initiatives.

The FPA began lobbying for a better process after a couple of councils reduced water pressure without informing the industry; an activity that has the potential to render sprinkler systems non-compliant when they’re tested as part of a Building Warrant of Fitness (BWOFF).

The irony is that TLAs are often responsible for administering building compliance, and Building Code standard NZS4541 specifies that 80 percent of available water supply pressure and volume must be made available for sprinkler systems.

### Coverage area reduced

While the sprinkler standard already has a 20 percent contingency for fluctuation, blockages or slow degradation, further changes that limited the 80 percent availability could result in sprinkler heads no longer covering the specified area.

The problem has arisen as some TLAs look at reducing maintenance costs and stalling inevitable infrastructure replacement, by adding new valves or other technology to reduce wear on their pipes.

So far the FPA is taking a conciliatory view, believing authorities who have gone ahead with their plans without notifying building owners or the industry, simply weren’t aware of the implications.

Some reductions have taken place in Wanganui, which has a relatively low water pressure, in Porirua and parts of Auckland.

On learning the New Plymouth District Council planned to reduce pressure in its CBD, the FPA approached the Department of Building and Housing and the Department of Internal Affairs to take up its case.

The council duly consulted, the industry monitored progress, and it was found the small drop in pressure had little or no impact on sprinkler systems. Now a much larger decrease of a further 350 KPA is planned.

The FPA is canvassing its members about the way forward, and because it’s been informed at an early stage, believes everyone’s in a much better position to address issues that may arise.

While New Plymouth is an example of positive interaction with the industry, it’s feared other councils may be about to drop their pressure, escalating concerns about sprinkler performance.

The seemingly ad hoc approach around the country threatens to undermine 100 years of co-operation with local authorities which has enabled the fire industry to connect sprinkler systems at between 500-700KPA or higher in some areas.

“This is supported by the Building Code and has served us well — New Zealand is considered one of the top countries in world in terms effectiveness and reliability of its sprinkler systems,” says the FPA’s Aitken.

To ensure sprinklers are compliant with the Building Code, the fire industry conducts a survey of all systems every two years. If a problem is found, sprinkler maintenance companies need to determine the cause — whether it’s a valve that has been isolated or a problem with the supply.

Resolving such issues can involve cost to the building owner, for example changes to valves, larger pipes, new diesel pumps or tanks or a combination.

If the problem is pressure based, the risk, cost and potential consequences escalate significantly depending on the area, whether its city-wide or across a town or region.





*"In most cases the limiting factor is the small diameter size of piping that has been installed in the building," Nigel Robinson, member of the NZS4541 Sprinkler Standards Committee*

### Standards challenge ahead

In a sector known to be rigorous about its procedures, system designs, specifications and compliance, the fire protection industry faces a real dilemma when something as basic as sprinkler standards are about to be compromised.

Nigel Robinson, Fire Protection Inspection Services (FPIS) group engineer and a member of the NZS4541 Sprinkler Standards Committee, says managing sprinkler certification when water supplies are reduced is a concern for the wider industry and presents something of a Catch 22.

While Standards NZ is expected to publish a revised industry sprinkler standard in 2012 as part of "an acceptable solution" for the Building Code, compliance always comes back to the issue of water supply.

In many ways he says, it's not a standards issue. Responsibility ultimately falls to the building owners and system designers and installation firms.

"While they may build a system that is compliant with water supply pressure today, the question is how long will it remain at that pressure?" asks Robinson.

"We've always had a caveat that systems must be designed to suit the water supply and in reality it may mean that fewer systems will be able to rely on town supply."

And he says, while TLAs will agree to supply the water, there's no agreement on the pressure. "They'll simply say if you want a system that can't be compromised by dropping pressure then go and put a tank and a pump in."

He says one of the criteria for standards is to make it cost effective and specifying a tank and a pump would not be something that would be included. "We've got to look at the issue although the standard is not there to say how the end result will be achieved."

While authorities providing only 400-500KPA are less likely to want to reduce pressure, most at risk are systems in parts of the country designed to operate at higher pressure, for example 700-900 KPA.

While high pressure legacy sprinkler systems are most at risk of having their compliance compromised, the impact of reducing pressure will have a lot to do with the original design.

Some sprinklers will continue to operate in lower pressure and still deliver the same amount of water, particularly if they have the larger orifices being used in the new technology.

However, says Robinson, you can't necessarily swap out one sort of sprinkler head for another and get a better result. "In most cases the limiting factor is the small diameter size of piping that has been installed in the building."

How the matter is dealt with in terms of certification remains up in the air, says Robinson, who's been involved in sprinkler certification and on-site inspections for over 20 years.

### When the heat is on

Sprinkler systems are triggered individually over a period of sustained heat, typically 68 degrees Celsius. Ross Aitken, who as well as heading the FPA's

sprinkler water supply group is also General Manager of fire protection at Chubb New Zealand, says 80-90 percent of fires can be contained through one sprinkler head being activated.

Concerns about excessive use of water are greatly exaggerated as fire sprinkler systems are passive until triggered and minimal users of water.

"It's the readiness of such preventative technology that provides confidence for building owners, insurance companies and tenants. If that confidence is undermined then a major issue exists."

Aitken's not clear how many local authorities are considering a lower pressure but says each case needs to be considered to determine how much it impacts the area of sprinkler head coverage and whether they remain compliant.

While the FPA applauds the fact Internal Affairs went to the Local Government New Zealand, it wants a clearer directive for all TLAs to consult so mistakes aren't made.

The FPA has the support of a range of other industry groups including the New Zealand Fire Service, the building industry, insurance companies, the Institute of Fire Engineers (IFE) and others and unless there's some clarity on the way forward, it plans to escalate its lobbying.

And that doesn't seem at odds with advice from the Department of Internal Affairs which urges the fire safety industry to continue making its views known to councils planning water pressure reduction.

Although decisions on water pressure reduction remained with each authority Internal Affairs sector policy manager Anthony Richards reiterates, it would be a matter of good practice for TLAs to consult with and advise affected building owners and the FPA.

"In addition, each council should be assessing the costs and benefits of such an approach including implications for building owners if a reduction in pressure may affect sprinkler systems."

Of course the FPA and its associates, and various building owners effected, would need to know about TLA plans well ahead of their being implemented in order to plan, prepare or protest which comes back to the urgent need for a consulting arrangement.

Ultimately the industry wants to send a strong message to all TLAs to consult on planned pressure drops and will continue to push for a formalised obligation to do so.

# Changes in technology challenge fire procedures

**F**ire crews could be distracted by information overload unless clear standards are adopted and agreements reached on rapidly making sense of data from different digital fire systems.

Brian Davies, a Fellow of the Institute of Fire Engineers (IFE), says the cycle of technology change is getting shorter and developers of fire alarms, fire safety systems, building designers and the fire service itself must face up to a range of challenges.

While he urges the industry to embrace smart fire systems that enhance fire crew decision-making, he says the information must not add to the call out confusion. He's referring to new digital systems; fire panels and smart sprinkler, heat and smoke sensors, that can deliver detailed reports on the status of a room, a floor or building under threat.

Davies, New Zealand's representative on IFE's international board of directors, is concerned fire officers already have such a short time to determine the best route, where to park and to make critical decisions for each call out.

While technology development is opening up possibilities for measurement, sensing and signalling as part of the design and functionality of passive fire detection systems, interpreting that data en-route presents challenges.



*Institute of Fire Engineers Fellow, Brian Davies*

He says system developers in particular should be talking to the users of the data to ensure it is delivered in a way that enables fire crews to be more informed before they go out the door.

Ideally he says fire alarm systems should be able to interpret the information and signal actions rather than just provide raw data.

He suggests an agreement is needed on ways to prioritise essential data for instant delivery then progressive updates that can be drawn down as resources become available.

Data delivery would work so in-house systems could rapidly interpret information from smart fire systems and building fire safety features.

While authorised call centres which monitor alarms are almost automated when dispatching fire crews, Davies says increasingly they'll need to interpret incoming data and pass on updates in the first few minutes of a call out.

## A panel decision

While many building fire alarm panels are still analogue and simply indicate where different sensors are in the building, complex digital systems require more interpretation skills.

"The first person on location should be able to see the number of sprinkler, heat or smoke detector heads activated since the call was made to determine whether a fire has actually broken out and where," says Davies.

Some systems provide a three dimensional picture using a touch screen for example to visually maneuver around the building and see what is happening.

"There are a lot of changes going on with the panel and delivery of building information; the concern is firefighters could face overload and run the risk of missing critical information," says Davies. And he says firefighters and the fire service needed to lift their game in responding to

newer technologies and making better use of in-house systems.

He claims many existing fire systems are capable of providing a lot more information than the NZ Fire Service can receive through its computer aided dispatch system.

Currently however there's no way of reading data uploads on the fire trucks so this is passed on by radio.

He says this all makes the fire officer's job more complex — they may not be able to take advantage of building features or details from fire systems if they are not aware of them or if they don't get through.

## Talks underway

A range of discussions are now underway across the industry to achieve some standardised approach to how information is delivered and record the specific fire prevention features of new buildings.

While fire safety design features required by the Building Act may work well at a high level, Davies says there should be greater consideration of how this occurs at an operational level.

Some buildings have specific features such as smoke reservoirs in roof spaces and ventilation systems in the roof which the fire service should be aware of. FEI engineers are currently working with building designers on a way forward.

Further evidence of the fire industry struggling to keep pace with technology is in standards for sprinklers and new alarm systems. "New standards used to be developed every 10-years then 5-years and need to be even more regular to reflect the update cycle of new technology."

Davies says Standards New Zealand which runs the system is trying to revise its approach to be more current without a complete re-write each time there are changes.

The risk he says, is that out of date standards could hinder innovation and prevent New Zealand keeping up with leading edge technology.

# Engineers urged to study how fire impacts design

If students pursuing a career in civil, mechanical or structural engineering had a better understanding of how different materials behave under intense heat it could have an important impact on building design.

Dr Anthony Abu, the New Zealand Fire Service Commission lecturer in Fire Engineering at the University of Canterbury, wishes more engineering students took an interest in fire engineering.

He says some students have found employment because of specialist fire engineering training but he'd like to see the optional subject become compulsory.

Dr Abu, who gained his multiple degrees in civil and structural fire engineering at Eastern Mediterranean University and North Cyprus and the University of Sheffield in the UK, is one of a handful of structural fire engineering specialists in the country.

## How materials behave

One of his main areas of research is the resistance of steel and concrete structures to the effects of fires, developing simplified methods for the analysis and design of floor systems and the behaviour of steel connections at elevated temperatures.



Dr Anthony Abu

**“You might damage parts of your building but contain the fire to a particular compartment or floor and ensure the main structure stays — in the end you come back and only replace the damaged parts,”**

**Dr Anthony Abu.**

He's eager to raise the level of understanding about how different materials behave in fires, particularly considering the New Zealand Building Code has a requirement to prevent burning buildings collapsing onto adjacent properties and endangering life.

That's highly relevant for high rise buildings in built up areas, but he says less consideration is given where there's vacant land surrounding a building. If land does get built up surrounding properties could be vulnerable unless proper fire engineering design has been taken into account.

Dr Abu says beyond meeting the requirements of the Building Code, design can also be a major factor in business continuity, which is part of the specialty he is pursuing at Canterbury.

“You might damage parts of your building but contain the fire to a particular compartment or floor and ensure the main structure stays — in the end you come back and only replace the damaged parts.”

Graduates need a good understanding of structural engineering and thermal behaviour of structures. “They need to be familiar with the design of individual building elements such as beams, columns or floors, but more importantly, they should be designing buildings as complete units,” says Dr Abu.

“If one particular member fails in a fire the load can then be transferred to adjacent members that are not exposed to the same sort of temperatures and can continue to hold the building together.”

## Modelling fire response

Depending on the type of building and the types of materials used, numerical modelling of structures may need to be considered, he says, as that is the only way to demonstrate structural response in fire conditions.

“Depending on the type of material you could have additional loads, as the exposed elements are restricted by other elements which introduce additional forces in your structural elements. This in turn may cause premature failure of your building, if it is not adequately designed to resist these extra forces.”

Professor Andrew Buchanan, a world leader in structural fire engineering, founded the structural engineering programme at Canterbury University in 1994, and has brought some local knowledge to the practice, although most of the research still comes from Europe.

Dr Abu says a great deal of the research for this discipline had been done in Europe and England before he moved to New Zealand in 2009. “After 9/11 there's been a lot more interest globally in awareness of how buildings can be impacted by fire.”

Canterbury runs courses on fire engineering at an Undergraduate and Masters level.

“At Master level you might get a mixture of students from mechanical and structural engineering backgrounds being introduced to the idea of structural fire design, as part of the Master of Engineering in Fire Engineering (MEFE) programme.”

More recently final year undergraduates with civil engineering backgrounds have taken the introductory undergraduate course. “It's optional at the moment so not all students are exposed to this but personally I think it would help if a lot more structural engineers knew about this. It would make them more careful about their designs knowing how different materials behave in fires.”



# Sprinkler certifier pulls out

**T**he closure of Verifire on Auckland's North Harbour has meant there is now one certification firm authorised to fully assess the compliance of the nation's sprinkler systems.

Verifire became the sole certifier of sprinkler systems in the 1990s after the New Zealand Insurance Council pulled back from its dominant role in the market.

Former Verifire Technical Manager, Nigel Robinson, says the company lost key technical staff at a critical time and "a change in industry dynamics," meant there was no longer room for two players in the market.

"The industry is now back to where it was in 2001 with one single independent body doing verification and certification work, although about six bodies are engaged in inspection work now," says Robinson.

Aon Sprinkler Certification (ASC), the remaining compliance assessor, began operation in 2007. It's headed by Chris Mak with more than 20 years experience in fire protection engineering and management.



Former Verifire technical manager Nigel Robinson

Aon claims fire sprinkler reliability in Australia and New Zealand is 99.8 percent, one of the best in the world, achieved through monitoring of valves, direct links with the NZ Fire Service receiving equipment and the use of "super-pressurised systems."

ASC believes the reliability record is further enhanced by the country's third party inspection regime where designs of sprinkler systems are peer reviewed by system certifiers before and after installation.

## Insurance driven history

Nigel Robinson, on the closure of Verifire in December, moved back to his old employer, Fire Protection Inspection Services (FPIS), a third party inspection service formed in 1989 to take over site inspection and approval functions from the New Zealand Insurance Council (NZIC).

When he began in the industry in 1987, Robinson was employed by the NZIC, which handled most of the sprinkler certification. Robinson says the sprinkler industry was "initiated, controlled and driven," by the insurance industry for over 100-years.

"Some systems are still put in for insurance purposes but most go in for legislative and compliance purposes."

While there was always a clear legal requirement for sprinkler systems in high rise buildings, rest homes, care and detention facilities, shopping malls and other large premises, most other installations were insurance driven.

It's only since the Building Code changed in 1991 that the requirement became all encompassing. Meanwhile New Zealand sprinkler standards previously based on the British insurance industry evolved over time to the present 4541P version.

The standard now incorporates considerable US input, as that's where the bulk of sprinkler research is done. The 2007 version is currently under review with a revision expected by the end of 2012.

## Methods haven't changed

Sprinkler system technology is relatively similar worldwide and typically

compliant with New Zealand standards. Robinson says when he entered the industry there were a dozen sprinkler types to choose from but today that's expanded to around 40.

He says the methodology and processes for certification have remained fairly static. Certification includes auditing design, installation and commissioning, approving contractors and components and variations in design, maintaining records and ensuring the system complies with the New Zealand standard.

A compliance proposal for installing a sprinkler system in commercial or industrial premises requires the contractor to produce the basic design parameters.

Robinson says this would typically show a diagram of the building, its intended use, what will be stored and how the owner proposes to protect the premises.

Once all the boxes have been ticked the sprinkler system is installed and then the site work is tested and checked in stages. This would include determining whether the piping is supported and hung correctly and the control valves are working as specified.

A certificate is then issued which goes toward the Code of Compliance under the Building Act. Sprinkler systems have to be rechecked every two years as part of the building's warrant of fitness.

Robinson says occasionally faults are found during re-inspection, predominantly relating to a compromised water supply through some form of blockage which may have left parts of the building unprotected.

It may also be discovered that the use of the building has changed and the current system is no longer appropriate.

"Perhaps the system was installed for storage and processing and a new tenant has moved in with a different scenario. Maybe the original tenant was making concrete blocks and now its Styrofoam, gunpowder or rocket fuel."

He says a reassessment may not only include the purpose the building is being put to but, from an insurance perspective, potential heat exposure from a neighbouring building that isn't protected by sprinklers.



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