Joshua Mills

Recognising his own needs when it came to workouts - flexibility and availability - Levenson decided his fitness centres needed to be open 24 hours a day, and be available when there were no Jetts' staff on site. That meant remote real time monitoring.

JETT POWER

Integrator InnerTelligence has installed an Inner Range access control solution for Jetts 24 Hour Fitness, using Inner Range's Insight software to give Jetts' 100,000 members access to any of its 121 gymnasiums across Australia and New Zealand, 24 hours a day.

THERE are some installations that give you a taste of the excitement an integrated future holds for the electronic security industry. Too often, manufacturers, end users and installers get locked into a way of thinking about what's possible for a particular technology.

In avoiding the fixation with local site applications and a reluctance to incorporate CCTV, the Jetts 24 Hour Fitness installation gives integrators *and* end users a target benchmark that simply hasn't existed before.

The key to this installation is the scope of the end user's core application – the need to support a business model that would have most corporate security managers tossing in their sleep. What Jetts decided to do was build a network of fitness centres, initially around Australia, and allow its members to access any one of them using a single credential.

It's enough that this is a cool idea but Jetts' founder Brendon Levenson went further. Recognising his own needs when it came to workouts - flexibility and availability - Levenson decided his fitness centres needed to be open 24 hours a day, and be available when there were no Jetts' staff on site. That meant remote real time monitoring.

The Jetts business model an intriguing concept for anyone who has struggled to fit in gym visits after work, or bridled at obscene gym fees for a one-off visit while interstate on business. Basically, Levenson wanted to make all the challenges members face when trying to schedule workouts go completely away. In short, individual sites operate as franchise businesses but a networked access control system supported by monitored CCTV links them all.

PLANNING THE SOLUTION

According to Steve Utting, co-director of integrator, InnerTelligence, Levenson approached his company late 2007 looking for a system that could handle not just enterprise-wide access control but a whole lot more.

"Honestly, after speaking with Brendon I sat on it for a while pondering on his requirements which included facial recognition cameras, messages to TV's to display people's details as they come through the door and a whole bunch of other things," Utting explains.

"So I went back to him and said: 'We can do this, this and this. And we can do facial recognition but it is going to be horrendously expensive at this stage'. Brendan said: 'Fine - drop facial recognition out, for now.'"

As Utting explains, Levenson wanted someone to put together a system that would make the model he had in his mind come to life and to expand and improve it. But this did not just involve installing multiple systems. All these systems had to talk to each other.

"You need to consider that whatever system we came up with, software then had to be designed that would integrate multiple systems at the club level allowing communication between them," Utting explains.

"In the early days, Brendon was designing his own integration software so I would sit down with the developers and prove that data could be exchanged between the systems. Importantly, Jetts is now using product that has been highly developed for this purpose – that has made things much easier."

Utting says the aim of the Jetts solution was a 24/7 system that's secure, and that's got a camera system that records any activity inside the gym that can be monitored remotely by operators in a control room. Further, the system needed to offer 24/7 access via a card or tag. And there had to be a duress component so that if someone was injured while the fitness centre was unstaffed the members could contact the control room for help.

"The other issue was the doors are permanently locked and if you were alone and laying on the floor injured then you probably couldn't let the ambulance in," Utting explains. "We solved this by giving the

Steve Utting

Virtual Panel within Insight provides a mechanism whereby a user needs only to be programmed once and that user will be automatically propagated down to each Concept 4000 Control Module, granting access for that user.

monitoring station the means to fire the door lock via Fratech Multipath. Because the monitoring station operators are watching the cameras during any reportable event, they can see help arrive and then unlock the doors.

"Something similar applies to bathrooms – if someone needs help they can press the duress button in the bathroom to notify the monitoring station. In this case, the monitoring station knows that they are in the bathroom but obviously can't see the situation, so they will dispatch security who will determine what action needs to be taken."

Also essential to this installation was the ability for the access control system to interface to the gym membership software. This interface would enable members' details and card numbers to be entered into the gym membership software, with this information automatically populating to the master Control Module on each site, as needed, providing member access.

This brief would be challenge enough on a single site but the Jetts' system needed to offer advanced integration options, a flexible and modular design, building automation control, remote monitoring and support for hundreds of thousands of members

across hundreds of sites internationally.

WHAT'S INSTALLED

The key elements integrated at Jetts Fitness Centres by InnerTelligence include Inner Range's Insight software and its many components providing the means to dynamically add or remove users from sites. Handling reporting is Multipath which gives redundancy in communication and the ability for a monitoring station to carry out a 2-way conversation with gym members, see them, and control and unlock doors.

Central to the function of the Jetts' access control solution was that ability to allow members access to more than 121 fitness centres. But as Utting explains, Jetts did not want all member details stored locally.

"What they were after was the ability for any of their members to move freely between any of the gyms," he explains. "But this didn't really mean we had to have every member's details stored locally on each site so we worked with Inner Range in developing the flexibility that we have successfully up and running now."

According to CSD branch manager Joshua Mills,

We get a plan well in advance indicating the site layout and where all the equipment is going to go," he explains. "Every site is identical in terms of electronic security equipment – with 4 or 5 movement detectors and a number of IP cameras.

all Jetts' sites are connected permanently to a central Insight System Management server via the internet. There's a Dynamic User Import Module within Insight that enables outside platforms, such as the gym membership software, to export their user database into Insight including adding new and deleting expired members.

"Insight Virtual Panel provides a mechanism whereby a user needs only to be programmed once and that user will be automatically propagated down to each Concept 4000 Control Module, granting access for that user," Mills explains.

Mills says that in terms of hardware integration, each Control Module on site provides intruder detection, building automation, duress alarm and access control.

"Mobile and fixed duress buttons are used to

notify the monitoring station of an issue. The monitoring station can see and communicate with the member via the camera system which includes built in microphones and speakers.

"The PA system at Jetts is also interfaced to the Concept for automated announcements. For example, if the front door is left open too long, or if a duress button is pressed, Concept provides the logic control to stop the music, continually play the associated announcement, and then return to playing music when the alarm has been acknowledged by closing the door."

THE INSTALLATION

As Utting explains, Jetts Fitness Centres are boutique and this impacts on the size of the centres and the scope of the electronic security solutions.

Utting says the way each job works is that Jetts provides InnerTelligence with a floor plan prior to installation. Of particular importance are camera numbers and the numbers of toilets, the doors of which are incorporated into the security system.

"We get a plan well in advance indicating the site layout and where all the equipment is going to go," he explains. "Every site is identical in terms of electronic security equipment, with 4 or 5 movement detectors and a number of IP cameras.

Utting is reticent about detailing the way InnerTelligence went about configuring hardware centrally and supplying it to site essentially as plug and play.

"Briefly, everything is assembled and tested here at our office before shipping," he explains. "We supply pre-configured kits to the site. We manage the whole kit and caboodle from organising and configuring the equipment to managing and monitoring the system day to day."

All programming is managed from the InnerTelligence office by dialler or Ethernet and Utting says the tech on site never needs access to the programming.

"We usually don't give access to programming to installation techs and the reason for this is to protect the Concept programming we've set up to perform the tasks required by the client," he explains.

"Being able to remotely program and troubleshoot the system is vital. If there's ever a problem I can always dial in and get back to the point where the system can be used again.

"The beauty about knowing Concept as intimately as I do is that I know there is always an alternative. And I don't have to go searching for people to help me at 3 in the morning. You have no idea how many times this capability has overcome issues and kept the system running."

SYSTEM MONITORING

A key element of this solution is the incorporation of video monitoring on every site that's integrated into the operation of the access control solution. The

cameras employed offer 360-degree imaging and a built-in microphone and speaker.

"As soon as someone presses a duress button in the general area the Concept fires an input on the camera system which initiates a call to the monitoring station," explains Utting. "The monitoring station has dedicated phones that are only used for Jetts, so when they ring operators know it's a duress situation and give it priority.

"They'll pick up the phone and have an immediate voice connection and on their workstation they click on a hyperlink and that will bring up the camera."

Utting says that if operators are having a conversation with this person and they find they can't properly hear what the person is saying there are multiple 360-degree cameras on site so they can simply switch cameras by hanging up and physically dialling another camera.

If operators are having a conversation... and they find they can't properly hear what the person is saying they have multiple 360-degree cameras on site so they can simply switch cameras by hanging up and physically dialling another camera

Handling monitoring duties is Inner Range's Multipath-IP alarm transmission system, a solution that allows IP-based reporting of alarm events as well as supporting traditional and new wireless reporting paths.

"The main reason we put Multipath in was because we didn't trust dialler and we had to be able to guarantee that a signal would get out in a duress situation," says Utting. "It was still a case that we had to put in a GPRS solution of some kind because the phone lines weren't going to be guaranteed."

Mills explains that the Multipath IP Alarm transmission system goes over and above simple GSM backup, with Multipath providing polling at 80 second intervals to prove it can get through when needed. He says this means that the control room has got monitoring capabilities to see that the panel is still operating.

"The primary path is Ethernet except for one club that cannot get ADSL connection," explains Utting. "They are on a Multipath wireless GPRS connection and a wireless internet connection and the whole system still runs perfectly. It uploads to the panel and uploads the users within seconds."

Monitoring is also undertaken with duress buttons in bathrooms that report as a toilet duress, as well as duress pendants that are worn in the gym area during the night when gym members are alone.

"There are only 2-3 duress pendants on each site because the system is designed to allow for only one

The key thing is for these places is security so if one person is in there they have got to feel safe, they have got to know the door is locked – that means we need to be able to proactively warn members of danger

person onsite," Utting says. "Obviously, if one person is there only one duress pendant is needed and if there are 2 people you don't need the pendant. But if someone walks out, and you are the only person in the gym you just reach out and put the pendant on."

ADDITIONAL INTEGRATION

Given the clever nature of this installation it comes as no surprise that integration is a key element. One of the major integrations InnerTelligence undertook was linking Concept to the Jetts' audio and speaker system which is used to play music in the fitness centres, as well as to report warning events.

"The key thing is for these places is security so if one person is in there they have got to feel safe, they have got to know the door is locked – that means we need to be able to proactively warn members of danger," explains Utting.

"We have sensors on all the locking mechanisms so if the front door doesn't close properly and the latch is out of position for more than 40 seconds then the music is interrupted and we play the message 'The front door is open, please close it.'

"If the door still remains open after 4 minutes, Concept sends an alarm to the monitoring station. The monitoring station rings the club manager and tells them about this situation. The monitoring station can also send a security patrol."

Utting says that this piece of integration was one of the challenges InnerTelligence came across – this being that when an event occurs all the system

could do was play a 'beep beep' tone as a warning to a range of potential risks.

"Originally we had a number of alerts at a typical Jetts Fitness Centre that gave an audible beeping signal, but gym members would have no idea what a given warning tone meant – especially if they were the only person working out late at night.

"We already had amplifiers and speakers for the music system so we looked at ways of integrating something over the speakers. We found a message centre system which allows the system, based on an input being triggered, to play a message in case of a particular event."

This means members hear the warning tone but now also get the message 'Warning, the front door is still open.'

Also integral to the warning system is the fact the alarm system itself will reactivate if it does not sense movement for a set period of time.

"If someone is still there, maybe on a treadmill for example, and the system can't see them because they are doing little movement, the system will start to arm. At first, the member would only hear the warning tone but now there's a message with it - 'Warning, the system is about to arm, please move to prevent this from happening'. So the member moves around and the message will stop and then they can go on with their workout.

"Another message draws attention to the duress being activated in the bathroom, hopefully someone can then knock on the bathroom doors and offer help. That message will continue playing until someone cancels the trigger by releasing the duress."

Utting says all of these elements of the system have evolved significantly since the initial installations.

CONCLUSION

According to Utting, the Jetts Fitness Centres systems is an evolving solution that will grow and be enhanced over time.

"We are constantly looking for new ways to enhance the system - it really comes down to the technology and ideas that present themselves," he says.

"It's about what can we do with Concept," he says. "Remember, Concept as a solution is inputs and outputs and that's it. It's what you do in between this process that's important and that is what we do.

"You want something to happen, give me an input and I'll give you an output. I get contractors who ring me and say 'Can you do this?' I ask them, 'Can you give me an input?', 'Yep', 'Then I can do it.' Simple as that.

"InnerTelligence likes to do things that fall outside of the box and that most other integrators would find a challenge to design, that's the way we have always approached projects," Utting says. "That's also why we like Concept, because it's so versatile." ◢◤◤