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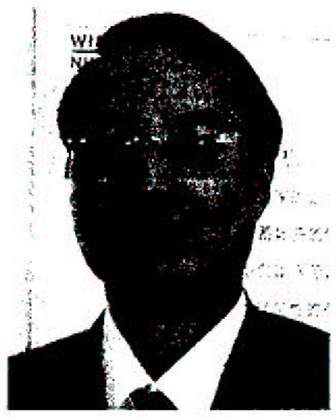

Wireless In Security

An Interview with Dennis Li, President and CEO, MultiVision Intelligent Surveillance Ltd

Wireless is being considered very seriously as the next step to modern security techniques.

by Lye Kim Sheong

Security is very much on the minds of every government and large corporation. With war raging and repercussions uncertain, they have all the reasons in the world to be paranoid about security issues, especially surveillance.

There is a need for security managers to be able to tap back in to their command-and-control centers to monitor critical areas where security might be breached. Modern security demands may dictate surveillance technology to go wireless.

Wireless World spoke to Dennis Li of MultiVision – Hong Kong based surveillance firm – to get a gist of how wireless security will come about.

What of the development of surveillance today?

Previously, the surveillance technology was based on CCTV. These are cameras that capture pictures and transmit them through wires to a video recorder. This is a typical set-up of a surveillance system.

Today, surveillance demand digitisation. So instead of the camera being connected to a VCR, we now have it connected to a DVR – a digital video recorder. It takes the video images and digitises, compress, and then store them in the hard disk for future retrieval. At the same time, because it is digital, you can transmit it through a network or the Internet. You have a lot more flexibility in a digital environment versus analogue. Many clients are migrating from analogue to digital.

We have implemented digital surveillance in very stringent environments, such as Hong Kong's airport, the Mass Transit Railway, China Light and Power, and most recently, a casino in Macau. All these require surveillance to be mission critical – no failures are allowed and it must be up 100 per cent of the time. In case of incidents, it triggers recording and allows monitoring and playback immediately. These are mandatory for mission critical systems, and we do this exceptionally well.

How does it link with other security implementations in the same compound?

In the same compound, there are probably security access controls, which could range from smart cards and PIN, to biometrics and finger and iris print identification. While we are not involved in these security features, we interface to all these devices to trigger on-off signals to record.

Another area would be alarm devices – like fire alarms, infra-red etc. These alarms can trigger not just a recording, but also a remote control operator to alert the security personnel. So an alarm message is sent with a video image into the operator's console for him to pay particular attention to. In a large environment, like the Hong Kong Airport – there are 700 cameras – and you can't be looking at 700 cameras all the time! So some have to be event-driven. This is one example. We allow up to 16 alarm inputs per system.

How does wireless play a role in surveillance?

Wireless plays quite a significant role. Our product differentiation is in our ability to send the images once it is digitised, via a network to a remote location – usually a control room. If it is meant for a manager who is on the road and want to access the same piece of data, a lot of things can come into play.

For example, if my notebook can get into a wireless network, I can look at all the cameras that I have in my offices – in Hong Kong, Singapore, Malaysia, Taiwan, the US or wherever. It just requires a communication media. Typically, in a closed environment, like a factory or a warehouse, all the cameras are linked with physical cables. However, in a more open environment, or when some of the security officers are away, then there is a secondary device that can look back at all the console images – which could be done wired or wireless.

Taking this one step further, we are beginning to look at wireless in terms of mobile application; maybe on a police petrol car. If the car is travelling at 100 miles an hour, is it possible to send that video back to the command-and-control centre to take some action.

Is this hypothetical or is there such a system available?

There is a proof-of-concept of the system. Right now, we are in the 2.5G era – which gives us GPRS modem speeds of 43.2 kbps – but that is split into one uplink and two downlinks. This means that the video feed that is being transmitted back to the host is only 19.2kbps. With that bandwidth, one image can be transmitted every 2-3 seconds. To some people, that is still acceptable, to others it is not.

We have run through this with the Hong Kong police, and to them, this is not an acceptable speed of transmission. We have to wait for 3G before we can expand the bandwidth to 384 kbps – where the video image will be much smoother.

With this proof-of-concept, it won't be too far into the future before we see actual deployment. ©