Minding the shop with network video.

Network video provides a solution for the small business owner needing to keep control.

Organization:
HiQ Lifestyle

Location:
Germiston,
South Africa

Industry segment:
Retail

Application:
Loss prevention

Axis partners:
Cirrus TechVue,
Milestone Systems

Mission

HiQ Lifestyle is a fitment center in Germiston, South Africa fitting tires, batteries, shock absorbers and exhausts. Like most such centers, it is wide open to the public and a hive of activity most of the day, with customers coming and going and staff constantly handling stock that has wide appeal and is highly tradable. Also like most such centers, control of stock to prevent what is euphemistically called 'shrinkage' is a constant battle.

Solution

Cirrus TechVue, a system integrator and network specialist, installed 4 AXIS 210 and 3 AXIS 206 fixed network cameras, and an AXIS 206W wireless network camera. The fixed cameras monitor the shop floor, storeroom, entrance areas and building perimeter, while the wireless camera is moved around as needed and even used as a one-way "video conferencing" unit. Two external cameras are linked via wireless bridges to simplify installation.

A PC running Milestone XProtect® Professional monitoring software displays and records the video data and allows review and retrieval of historical information. Approximately one month's video history is kept for reference.

Result

The system not only delivered on the expectation of controlling stock loss and allowing the owner to keep tabs on the business when away, but became a significant factor in improving quality standards. Having a video record of activity on the shop floor made it possible to identify unambiguously who carried out which jobs.

AXIS
COMMUNICATIONS

30784/EN/E2/0802

"I can pinpoint problems and identify who did what, which not only eliminated stock losses but also improved quality because people are accountable. It used to be nobody's fault, but now we can see whose fault it really was."

Hermann Erdmann, Business Owner, HiQ Lifestyle.

Analog fell short

HiQ had installed a CCTV monitoring system some years earlier which had fallen into disuse. Reliability problems, the cost of maintaining it and poor quality of the video record all contributed to its demise. However, Hermann Erdmann, the owner, still had a need to address stock control problems and moreover with his other business interests he needed a way to keep an eye on things when he was away – something the old analog system could not address at all.

The surveillance requirement was both intensified and complicated by extensive building renovations following a fire a few months earlier.

Simplicity and flexibility

HiQ approached Cirrus Techvue to see if they could offer an updated solution that would deliver what they needed. HiQ had an existing 100Mbps Ethernet network serving nine PCs, three connected wirelessly.

As the network was lightly loaded, Cirrus proposed Axis network cameras running over the existing network, with a dedicated access point for the three cameras connected wirelessly.

"The simplicity of installation and the ability to use existing network infrastructure and commodity PCs and disk storage made the case for an IP-based solution compelling," said Dr Chris Crozier, Director, Cirrus TechVue.

Seven cameras were placed in fixed positions and one, an AXIS 206W, was used as a mobile camera both for ad hoc monitoring and, with a battery and DC/DC converter, as a one-way video conferencing solution: a staff member could walk through the site while the owner monitored the image on his GSM PDA and give instructions over the phone.

The cameras record 24 hours a day at VGA (640x480) resolution. The potentially massive data storage requirements are managed by reducing the frame rate to 5 fps and by using the cameras' motion detection ability to trigger transmission and storage of data with 2 seconds pre- and post-trigger buffering. Extraneous motion such as the flags outside the gate flapping in the breeze is masked out.

The need to monitor activity when not on site was met by providing password-controlled access to individual cameras and to the monitoring software over the Internet. HiQ Lifestyle uses ADSL for Internet connectivity, which, while relatively economical by South African standards, does not provide a fixed external IP address. The problem was solved by using Dynamic DNS (www.dyndns.org) to provide a fixed domain address that dynamically adjusts to changes in the Telkom-allocated IP address.

Delivery beyond expectation

Being able to monitor activity throughout the business, both historically and remotely over the Internet and via GSM on a PDA not only practically eliminated stock loss, but also improved quality control by unequivocally establishing accountability.

Other unexpected benefits arose from the availability of video evidence: a driver who reported for work drunk and became abusive was recorded, short-circuiting the long process of denials and counter-accusations typical in such cases, and a case of "sweetheart-ringing" at the payment point was identified and successfully prosecuted.

"It allows me to see how busy the shop is, wherever I am, and to be in control of my business at all times," said Erdmann.