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Integrated IP infrastructure adds surveillance depth to Galeco monitoring centre

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Galeco Communications has migrated to an all-IP-based remote control and monitoring platform as the company bids to grows its customer base outside of the UK. Brian Sims picks up the story.

By
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Although predominantly a UK monitoring service as things stand, Galeco Communications has recently added customers in Spain and France to its portfolio, and plans to expand further into Europe (and, perhaps, to other continents as well).

Just as well, then, that the new all-IP system it has taken on – itself built around the Immix open architecture software platform devised by SureView Systems – affords Galeco a perpetually expandable system to accommodate new customers around the world.

Galeco initially installed the Immix system to build a CCTV platform around its recorders, but pretty soon discovered it would benefit from a centralised system that could more easily integrate new technologies and offer better reporting features to its customers.

"We needed to have some accountability built into this system – something that would show our customers how quickly we respond to alarms and the procedures we follow," explained Gary Copland, the owner of Galeco Communications. "We also realized that integrating IP technologies over a single network infrastructure could bring more versatility and depth to our system."

Galeco addressed this by directly integrating a variety of IP-based devices including intercoms, video cameras, fire alarms and feed monitors.

In addition to seamless integration with Immix, Copland noted that the IP devices selected are lower-cost technologies that easily absorb into their customers' networks.

PA, intercom and access control

The Immix platform provides Galeco operators with a single point of control to send, receive and respond to alarm events on behalf of their customers. It also provides a database containing customer information such that operators can easily access data from an expansive storage system capable of holding more than a year's worth of images for 500 locations.

One key initiative was to establish an integrated audio and video connection to every facility in the network. Copland and his team selected Barix to provide the audio communications part of the solution.

The Audio-over-IP devices from Barix are installed at customer facilities and connected to an amplifier, microphone and speaker. Each unit is assigned an IP address prior to being added to the network, with only general audio setting adjustments required once online.

Barix – an Audio-over-IP company based in Switzerland – has so far supplied more than 1,000 of its Annuncicom 100 IP audio over IP devices to Galeco.

"The Barix devices offer one- and two-way audio capability," explained Copland. "We can connect each unit to an amplifier and drive PA speakers at each site if we want to relay a warning message or communicate with visitors and staff."

Copland added: "We also use them for intercom communications. The Annuncicoms sit inside the intercom boxes, and we connect the devices to push buttons via their inputs. If someone presses the button, the audio channel to Galeco's central facility is opened, and our operators can speak and listen to the person at the other end."

An access control capability

Copland is quick to point out that "the audio is very clear" and that "the Barix devices are very reliable". He continued: "We occasionally log into the devices to adjust microphone and speaker levels so that they'll match the location and climate."

The Barionet Network I/O controllers, also made by Barix, provide an access control capability, opening and closing doors as people enter and exit buildings. The devices' relay closures and contact closure inputs are used here, as well as to open and close contacts for fire alarms. This means that a fire alarm connected to the Barionet will send a signal to Galeco's main facility if it should be triggered for any reason.

Galeco also uses the device to monitor temperature control devices. The Barionet feeds temperature data to the Immix platform, initiated by a contact closure that triggers an alarm if the temperature in a certain room or commons area drops below (or rises above) a certain degree.

"This is a multi-purpose device we can use for a variety of scenarios," said Copland. "We can control anything from which we can receive an open or close signal. We're able to set off fire alarms and test intercom stations to confirm the signals are coming in over the network. We can also ping the devices every 30 seconds, and receive a return ping to assure us that they are always on and working properly."

The video element explained

Video followed soon after the audio communications went live online. Galeco incorporated video cameras into the same system, taking advantage of existing network infrastructure. By combining audio and video over the same IP link, Galeco operators can communicate with people at the monitored location and elicit a more thorough 'take' on a given situation.

"The benefit of integrating video with the audio gives us a visual reference of the people we are contacting on the site," said Copland. "We're able to use the intercom to direct people to an area of the building where we can clearly identify them on camera. This provides recognition before we call the police, if that should be necessary."

Galeco is using a variety of cameras in the system, including Panasonic, Bosch and Mobotix models. All cameras have internal and external infrared LEDs to ensure that the individual is well-illuminated if the event takes place at night.

Copland noted that the most challenging aspect of the video integration was tying-in the existing transition recorders from customer locations into the Immix system. The recorders capture the images and feed them

to the Immix platform. The images are stored on mirror-image servers to ensure they remain accessible if the main server temporarily goes south.

"SureView has been very good about increasing the range of recorders that can be accepted into the system," explained Copland. "Its IT programmers have been able to program recorders into the system when we have had challenges to ensure they work with Immix."

General operation: what's the deal?

Galeco Communications has as many as ten people monitoring customer facilities during peak hours. Operators receive flashing alarms on their desktops to notify them of events or communication requests.

Clicking on the alarm brings up all relevant information on the facility as stored by Immix, including maps and contact information in the form of an address book that can be shared with facility staff, local police or other emergency organisations.

This information will also include details on the alarming device which, in most cases, would be a fire alarm, intercom, camera or door. The information all ties to the shared, central Immix database that all operators can access. This ensures that every alarm is processed quickly: if one operator is busy with an existing event, the next operator can pick up the next incoming alarm.

The operator is also presented with a list of procedures to follow for the facility where the alarm originated. Those procedures will typically include a list of who to contact based on the kind of emergency encountered, and information designed to ensure that the customer's instructions are precisely followed.

Interrogation of the Immix set-up

Maps are used to direct fire, police and other emergency personnel to the exact location where some form of action will be required. All the while, the information is recorded to Immix to prove accountability to customers.

"We can interrogate Immix at any time to check how many fire alarms we've responded to in the past six months, and our response time for each alarm," enthused Gary Copland. "This gives us something to gauge our operators by and determine how we can improve in the future. Immix ties this all together, but all the various IP components across the network play a significant contributing role."

In conclusion, Copland stated: "The fact that we can continue adding new devices to our existing network is encouraging. It's just a matter of how many operators are required to answer alarms."

An organic growth process, then, based on adding devices and IP addresses. It's one that's obviously working well. End users take note.