



## BOSCH VIDEO MANAGEMENT

Bosch's Video Management System is an enterprise IP video surveillance solution that's designed to manage audio, video and data across any IP network.

**R**ELECTING its serious R&D muscle, Bosch's Video Management System is designed to offer users an enterprise-class client/server video management system, as well as to assure Bosch's stake in the surveillance industry's networked future.

Highlighting the latter is the fact the 4 key software components that comprise Bosch's VMS are designed to run on a single PC in smaller applications or on separate PCs and servers in the case of larger systems. The VMS allows multiple NVRs and client workstations to be used in a modular fashion depending on what's needed. NVRs can also be set up to step in to manage failover, with a single failover NVR designated to support a large number of primary NVRs. The thing to remember is that this

is a software-based system and that means users can deploy it across the server and component brands their experience suggests are best for them, or they can purchase hardware from Bosch.

Those 4 central software components include central server software, which provides management, monitoring and control of all devices connected to the VMS. Next there's Network Video Recorder software which gives recording and playback management for video, audio and data. The third component is Configuration Client software, which provides the user interface for system configuration and management. And finally there's Operator Client software, which provides a user interface for system monitoring and operation.

A fully expanded Bosch VMS has vast functionality thanks to its networked nature. And because the system was designed for networked environments it offers some features and capabilities likely to endear it to integrators and security managers alike.

For a start there's automatic discovery of Bosch IP devices across the network, including things like servers and encoders. Supporting this is automatic IP address assignment of IP devices, as well as batch firmware updates of IP devices. Sticking with configuration, the VMS is supported by a configurable logical tree with predefined camera sequences and auto sequences that can be created by multiple selection of drag and drop to image panes. The VMS also has a configuration delta viewer that can display what's been changed, who changed it and when. There are also 4 user-configurable event buttons.

It goes without saying that the software supports

all relevant Bosch hardware including IP cameras, encoders and digital recorders.

### USER INTERFACE

Bosch's VMS has a comprehensive user interface, incorporating zoomable site maps supporting links, devices, sequences and command scripts. Helping out is the fact that up to 4 monitors can be supported per workstation with CCTV keyboard support connected to either workstation or IP encoder.

The user interface has those flexible image panes that allow any combination of video window sizes and layouts, with any of these panes able to be switched to instant playback. There are also multiple simultaneous instant playback image panes and image windows can display live video, instant playback video, text documents, maps and web pages.

Important from a system management point of view, the state of each device represented is shown by icons and that includes network and video loss. Moving around the GUI is easy too, thanks to a per-user favorite tree that can be individually configured, with the favorites tree including complete views with image pane layouts and camera assignments.

Camera selection is by double click or drag-and-drop from site maps, logical tree or favorites tree. At the same time there's control of attached analog monitors using the same drag and drop, with synchronized playback of up to 25 cameras.

If all this functionality wasn't enough, there's also a multi-camera timeline that allows easy graphical searching of stored video. The timeline colours indicate recording status - normal recording, alarm

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recording, motion recording, protected recording, and audio recording. You select clips by dragging hairlines along the timeline. Getting image streams off the system is easy, too. You can take clips to DVD, network drives or USB sticks.

The search function operates across all connected DVRs and NVRs and it incorporates post-recording motion searches.

Event handling is integral to the VMS' operational capabilities. The event list includes device events (HDD full), network events (heavy network traffic), subsystem events, user events and schedule events. It's possible to combine events to allow more effective handling. Options include event duplication, event allocation to user groups, schedule dependent alarm generation, schedule dependent event logging, and



schedule dependent, event-generated command script invocation.

Meanwhile, alarms can be set to trigger alarm-mode recording for any cameras and there are 100 alarm priorities with selective auto-popup on alarm, alarms displayed in separate alarm window, up to 5 image panes per alarm with live or playback video, sitemaps, documents, or web pages displayed in an alarm row with the highest priority alarms at the top.

Importantly, each alarm has its own wave file, and there's email or SMS notification on alarm, with alarms displayed on analog wall monitor walls.

User management is enhanced by user group rights offering protection, deleting, exporting and printing video, with user group rights for Logbook access and user group priority assignment for PTZ control and Allegient camera access. Individual per-camera privileges are assignable per user group for things like live access, playback, audio, meta data display and dome control.

## INTUIKEY CCTV KEYBOARD

Version 1.1 of VMS saw Bosch take the functionality of its Video Management System a significant stage further. Version 1.1 has support for the Bosch IntuiKey CCTV keyboard and the keyboard can be connected to an IP decoder, allowing camera selection on all analog monitors, camera sequence control, and full PTZ control.

Alternately, the keyboard can be connected to an operator workstation. Workstation-connected keyboards can additionally select cameras displayed on the workstation, control the video display layout, and control video playback with jog-shuttle-like functions using the keyboard joystick.

Another enhancement with Version 1.1 is a Dual Authorization on Login facility that provides special privileges when two operators log in together. This would be necessary if an operator requires extra privileges to, for example, play back video, look at scenes in restricted areas or burn video to DVD. In such cases, a second user from a specified user group can log in with the operator, and a new set of privileges is applied. These special privileges remain in force until the operator logs out.

Valuable too, is the fact Bosch VMS Version 1.1 can now be integrated with Bosch's Building Integration System (BIS). This allows the Bosch VMS to show live video from specific cameras in the event of an alarm triggered by the BIS, start/stop recording of specified cameras or find video associated with a BIS alarm.

One of the important features of the Bosch VMS is the logical and intuitive structure of the Configuration Client mentioned earlier that allows the installer to easily put a system into operation. In addition, the Bosch VMS logs all changes made each time a new configuration is activated and allows 'roll-back' to earlier versions if a revised version does not perform as expected. Moreover, Version 1.1 provides enhanced analog monitor support that allows the creation of analog monitor groups to produce, for example, an analog monitor wall displaying images from selected cameras on the network. Up to 16 predefined groups can be selected via the Video Management System workstation or via an IntuiKey keyboard. ▀ ▄ ▄

