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## Technology Talk: Irvine's Video Wall Project

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### TECHNOLOGY TALK

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he officer in foot pursuit announced his location to dispatch. Dispatchers assigned backup officers to the scene and then tuned their monitors to display images captured by a video camera at an intersection near the officer. They saw the officer struggling with the suspect some distance from his announced location, and they immediately informed backup officers of the new developments. Sound like science fiction? Not in Irvine, California, where this incident occurred.

#### **The Challenge: Make Live Video Information Easier to Use**

Before a recent upgrade, the Irvine Police Department had access to 27 closed-circuit video camera views of various areas of the Civic Center, which were monitored in the communications center and watch commander's office. Department staff also had access to more than 90 traffic intersection camera views from the communications center, with the ability to pan, tilt, and zoom their views of those locations.

In the communications center, the various camera views could be displayed only on two 27-inch monitors. Dispatchers had to decide which views were critical to watch at any point in time and had to change the views on display frequently. In order to change a camera view, dispatchers had to temporarily leave their workstation to operate the controls at another workstation. Only one person could control what was displayed at any time.

The challenge was to increase the number of video displays that could be selected simultaneously, as well as to simplify and increase the functionality of displaying the images.

#### **The Solution: A Wall of Video Screens**

The Irvine Police Department is constantly looking for ways to improve the quality of service that it provides to the community. The Communications Bureau wanted the ability to provide real-time information to officers in the field about what is occurring at specific locations, in order to improve their effectiveness, enhance officer safety, and improve the response to

emergency calls for service. A video wall was designed that allows simultaneous displays from multiple sources, such as real-time video feeds from closed-circuit TV cameras installed throughout the Civic Center facility, at various traffic intersections throughout the city, and at a number of other computer outputs. The goal was to provide a one-touch simple interface utilizing off-the-shelf products.

In order to accomplish this task, three dual-lamp ceiling-mounted projectors and three 100-inch wall-mounted fixed screens were installed in the Communications Center. Two of the three projectors can display either a full screen display or quad-split view, with four images on each screen. The full screen display interfaces with the computer-aided dispatch (CAD) system to display a map of the city showing unit locations and pending calls for service.

The video display interfaces with the department's closed-circuit television building security cameras, CAD system, a VCR/DVD player, and 92 traffic cameras strategically placed throughout the community. Instead of having to select which cameras to view from the two monitors previously installed, it is now possible for dispatchers to display up to 11 different camera views. By selecting any of the intersection cameras, dispatchers can provide and relay real-time information from what they observe to field officers prior to their arrival. These cameras provide feeds from 92 traffic intersections throughout the city, giving the dispatchers 360-degree views, along with pan, tilt, and zoom capabilities that allow them to view details such as license plates on vehicles.

Through a Web interface, users throughout the department can view the camera displays for their respective areas, and each user can define his or her view. In the Communications Center, the video wall can be controlled from any of the eight workstations or the supervisor's office areas. Through this network controller, they can also select and control views from any other video source, such as the CAD system.

Since the implementation of the video wall, information provided from these cameras has been instrumental in the timely resolution of multiple in-progress calls. It has provided a very unique tool to the dispatchers to assist them in providing a higher level of service to the community.

### **The Results: Faster, Safer Police Response to Emergency Calls**

Communications Bureau personnel have been able to take a more active role in providing real-time information regarding calls for service to officers prior to their arrival. This feature has proven invaluable in a number of situations:

- An autistic child was reported missing. Dispatchers checked the cameras in the area, found the child in one of the camera views, and directed officers to the child's location.
- A bank called with a description of a man trying to pass a fraudulent check. A dispatcher monitored the bank on camera, spotted a man matching the description of the suspect leaving the bank, and directed officers to the suspect's location, where he was subsequently arrested.
- After receiving a report that a woman was tied up in the back of a vehicle seen leaving a gas station, dispatchers tracked the vehicle on camera and guided officers to it.
- Dispatchers monitoring the camera view from the department's booking area saw an officer struggling with a suspect and sent help immediately.

Through the Web interface, the availability of the camera views has been increased and simplified. Because dispatchers now have access to more information captured by cameras, they can better prepare officers to deal with situations they are responding to. And because it is made of standard off-the-shelf products, the video wall can grow easily as needs develop. The successes of the video wall have also provided dispatchers with the satisfaction of knowing that they make a difference and reaffirmation that they are valuable members of the team. ■

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