By Virginia Rubey

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CRIME ON DISPLAY

LAPD SERVES AND PROTECTS WITH AN EMERGENCY CONTROL ROOM FIT FOR HOLLYWOOD.

Law and Order may have moved to Los Angeles, but the true story of L.A. crime broadcasts on a seamless video wall in the Real-Time Analysis and Critical Response Division's control room at L.A.'s new Emergency Operations Center.

AV strategists from Oceanside, California's Spectrum Integrated Technology Consulting Group, developed a clear solution in the new RACR facility: 46 inches of LCD x three millimeters of bezel x 28 Flat Panels equals an awe-inspiring 29 million pixels—and L.A.'s lowest crime rate since the 1960s. According to the LAPD's Lieutenant Sean Malinowski, since RACR moved to the new facility, RACR "handle[s] a lot more cases, and are involved in more emergency operations then we were before."

WARNING: AV & IT CROSSING

As the central point of analysis for crime prediction and prevention operations, the RACR facility supports information gathering, analysis, and circulation for the LAPD. "As more and more information becomes available, we need to present it in a way that is easy to understand, so [content and patterns] jump out at you," Lieutenant Malinowski explains. He envisioned a control room with "the idea that anyone can walk in and get started."

The RACR team visualizes L.A. crime patterns based on information displayed on the video walls' central map.

Control room users can analyze closed-circuit news feeds on one side of the video wall and map crime incidents in L.A. by dropping "incident pins" on crime data maps. Analysts visualize the situations that give rise to 911 calls using clearly identifiable icons (i.e., a gun icon represents a shooting incident), and disseminate response decisions quickly to predict and prevent crime in Los Angeles. The image content displayed is often critical in nature; Spectrum's design allows RACR to "Grant" access to digital HD images for other City Departments via fiber at the touch of an icon, and just as easily "Revoke" the image access when appropriate.

"People think they can go out to Best Buy and buy a video wall...but that's a mistake," says Lieutenant Malinowski.

The RACR team knew what they needed, and Malinowski says Spectrum's VP of Technology, John Bilar Jr., asked just the right question: "How would you like this to look?"

SEE LCDS. SAVE LIVES.

RACRs' video wall displays information and data maps to maximize patrol effectiveness, so small gaps between the displays can have big consequences. Rear projectors were undesirable due to bulb replacement concerns and related maintenance costs: "When this [budget] money is gone, it's gone," explains Lieutenant Malinowski. Before Spectrum suggested NEC's new thin-bezel LCDs, "All I'd seen were [LCD] displays with 1/2-inch bezels," he remembers. A video wall comprised of display screens with 1/2- inch bezels wastes critical space on bezels for every screen. "When you put two screens together, you have a one-inch

bezel in between. That's difficult for mapping," Lieutenant Malinowski says. "So we threw the question at the designer."

Spectrum recommended NEC's new ultra-thin bezel LCDs. With three-mm bezels, the gap between two displays is just six-mm, or about the width of a pencil. "When you back off the screen by ten feet the lines pretty much disappear," Lieutenant Malinowski observes. Bilar secured the first installation of NEC's new thin bezel LCDs in the U.S. last year. "They took care of everything," Malinowski says of Spectrum ITC Group.

L.A.'s state-of-the-art Emergency Operations Center houses the LAPD's Real-Time Analysis and Critical Response Division's control room, the city's Emergency Management Department, and the Los Angeles Fire Department Dispatch and Department Operations Center.

The revamped Real-Time Analysis and Critical Response control center boasts a 4 x 7 arrangement of 28 NEC 46-inch X 461UN ultra-narrow LDC displays; over 29 million pixels; and a predictive policing capacity that's up for an award from the National Institute of Justice.

"We'll get at least seven years of [24/7] viewing on these LCD panels," says Malinowski. "It almost pays for itself when you think of how much it would cost to replace projector bulbs."

L.A.'S LOWEST CRIME RATE SINCE THE 1960S
Since the install, "people seem to be more creative; we're always looking for the next thing to add to the wall." The default display features news feeds around the crime data map, but new technology has inspired new ideas. Jupiter's design, and NEC's new thin-bezel screens, have "spurred some creativity here," says Lieutenant Malinowski. "It's certainly spurred productivity. We've been in the center for a year, and last year was our lowest crime rate since the 1960s."

Three years ago, Los Angeles had 1,100 homicides. "This year we're on track to have fewer than 300," Lieutenant Malinowski reports. Statistics from the L.A. County Sheriff's Department report 77,146 incidents of violent crime in 2009—an eight percent drop from 2008.

Spectrum's optimal design for AV technology product integration helps the LAPD prevent crimes like "retaliation" shootings. Lieutenant Malinowski explains, "We have much better access to what's happening on a real-time basis based on mapping solutions on the video wall...and we anticipate a bigger impact in this next year."

LAPD'S AV DREAM TEAM
RACR's control room revolves around the video wall. On either side of the 4 x 7 display, small groups of RACR analysts operate from "Team POD" workstations with 40-inch LCD4020-AVT displays. Response team planners develop crime prevention plans from information feeds read off of three "Decision-Making Monitors," or NEC 46-inch P461-AVT displays. Using Jupiter's PixelNet display processing software and a Crestron touchscreen with a customizable interface, users can scale video wall data inputs with a touch, and render the output as single or grouped displays, sans keyboard or mouse.

With 3mm bezel LCDs, "You have a big landscape," Malinowski points out. The PixelNet/Crestron combo allows team POD and Decision-Making Monitor users to tell the video wall, 'Give me [a local news feed] over here, a map over here, the live cam here...and display my laptop screen on the video wall so the team can see what I'm working on." It's simple, and, he affirms, "The clarity is amazing."

The control room's efficient AV system has inspired the RACR division to explore options to further enhance overall efficiency. "We want to automate [data input operations]," says Lt. Malinowski. He envisions an automated data input system that requires fewer "finger strokes."

GETTING RESULTS
The project team's early experience with PixelNet technology has also been positive. The ITA project team created a series of layouts for the display wall using Local News & Information, National News and Information, LA City Traffic Cameras and 17 RACR PC's, to demonstrate to RACR staff how large amounts of Critical News, Information and Data can be displayed concurrently on the wall.

"PixelNet is so easy to use and very elegant. Or rather it is elegantly simple. You can instantly move windows around, resize them, save them on the wall or save as layouts and then dynamically change it," said Kevin Corcoran, Project Manager in the Information Technology Agency for the City of Los Angeles.

"We have good synergy between our project team and our customer—the LAPD," Corcoran said. "The PixelNet team has been invaluable to our success."

Lieutenant Malinowski adds, "Today not many cities have this. We are hoping to see what is happening in real-time and forecast likely future incidents, deploying increasingly scarce resources more effectively and efficiently."

Virginia Rubey is a New Orleans-based writer and educator.

The LAPD RACR Control Room at a Glance

• Occupies 3,300 sq. ft. on the ground floor of the new 85,000 sq. ft. L.A. Emergency Operations Center

• Number of operators: 8 typical, 30+ based on incident activity.

• **AV EQUIPMENT:**
Displays: NEC
Primary Image Processing:
Jupiter System's PixelNet
Control Systems: Crestron
CATV News & Information Systems:
- HDTV Tuners: Contemporary Research
- AM/FM Tuners: Parasound
- Distribution: Blonder Tongue
Fiber DVI Distribution, Interconnects:
Extron, Belden
Secondary Path Image Distribution & Routing: Extron, Gefen
Audio Routing, Control, Distribution:
Extron, Crestron, RDL, ATI, Sigma
Audio Amplification: Behringer, QSC, JBL
Secondary Path Audio:
Sigma, RDL, Crestron, QSC
Individual Position Headphone
Source Selection: Crestron, Extron
KVM Control Positions: Avocent
Display Wall Structure: RP Visuals
Equipment Racks: Middle Atlantic, CPI

KEY ELEMENTS / / / FOR THE END USER

ROI
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EASE OF USE
Anyone can walk in and get started.

RELIABILITY
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— Lt. Malinowski, LAPD