



Maricopa County Sheriff's Office NiceVision® Case Study

Maricopa County—A Leader in Correctional Facility Management

The Maricopa (AZ) County Sheriff's Office (MCSO), headed by Sheriff Joe Arpaio, is one of the most talked about and internationally recognized Sheriff's offices today. MCSO is the fifth largest such office in the country and is known for innovative and cost-effective jail and law enforcement practices, as well as programs such as Jail.com, a live video feed over the internet of activity within its jails. The MCSO has jurisdiction over 9200 square miles—an area larger than some states. The Sheriff's Office maintains six separate jail facilities and in 1999 those facilities housed an average daily population of more than 7,000 inmates. That same year a total of 114,333 prisoners were booked into the jail system. By recent count, the MCSO had 2,310 employees, including 1,110 Detention Officers, serving a county population of over 2.8 million.

For better or worse, inmate populations in the United States and the facilities to house them are on the rise. Maricopa County mirrors that trend with two new major jail facilities on the drawing board, slated for completion in 2004. The MCSO team in charge of design and construction of the two new jails as well as other facility renovations, work under a mandate from Sheriff Arpaio to build the best-designed and constructed jails in the world while keeping an ever-watchful eye on cost containment. The first new facility, the 4th Avenue Jail, will contain 1,360 cells, including 144 special management cells for close custody (Super Max) inmates. The 4th Avenue Jail will also house the new Central Intake facility, capable of handling 600 bookings every 12 hours. Lower Buckeye Jail, the second new jail, will have 1,867 cells divided into a 504-cell juvenile remand facility, a 960-cell adult max sentenced facility, a 256-cell psychiatric facility and a four-dorm adult minimum facility. The two new jails will increase the total potential inmate population for the MCSO to approximately 10,000.

The Madison Street Jail and CCTV Surveillance Needs

Of the MCSO's current six jail facilities, the Madison Street Jail is at present the second largest. Opened in 1985, the jail has maintained CCTV surveillance to supplement the work of the detention officers for more than ten of those years. Madison Street has six floors with four of the floors housing inmates and the other two floors dedicated to central intake and booking, various administration functions, visiting areas, and other functions and offices. The intake and booking area has handled as many as 40 prisoners at any one time and in late 2000, the jail held approximately 1,550 inmates in its housing units.

The Madison Street Jail CCTV system had 65 black and white cameras positioned throughout the facility, each feeding into separate VCRs. With the original system, not only was image quality from the VCR playback poor, CCTV system operators had an even bigger problem. The original system design provided for only one camera per inmate living area, creating substantial blind spots. MCSO identified a number of other pressing needs that only a new, more technologically advanced system could handle. Those needs included a desire to substantially increase the number of cameras to expand coverage and reduce blind spots; upgrade to color



cameras, improve playback image quality, and better manage the cataloguing and storing of all the video data, especially with the increase in cameras. In addition to solving these immediate system needs, MCSO viewed retrofitting the current jail as an opportunity to investigate new technologies and field test a system that might provide the standard for all their CCTV recording needs in the soon-to-be expanded jail facilities.

Video Recording Essential for Incident Verification

Contrary to what many people might think, CCTV at the MCSO jail facilities (and in most correctional environments) is not used to record and monitor inmates real-time. CCTV recording is used primarily to provide a *record* of any incidents—real or alleged. “We record as extensively as we do so that in the event of an incident—between inmates or between inmates and detention officers—we can review and debrief to determine exactly what happened,” said Tom Davidson, Director of Business and Technology Planning and Projects. “To a large degree, recording is for liability purposes, but it also provides a record of security incidents, inmate fights, disruptions, and the like. Not too long ago, we had an incident where one inmate who was supposed to be locked in was able to get out of his cell and attack another inmate. What happened, how did he get out? The recording of that incident helped us get a clear answer and institute procedures to avoid such incidents in the future.”

Incident verification for disciplinary or management action is important, but for correctional facilities across the country, liability suits initiated by inmates are emerging as the major concern. Liability suits represent enormous potential financial outlays by a county or whatever government entity oversees a correctional facility. “Over the years, Maricopa County has been sued for many millions of dollars in cases where assault or excessive force is alleged,” said Davidson. Maricopa County has also been involved in cases that didn’t involve inmates but rather where employees of one agency have alleged actions or misconduct against employees of another agency. Regardless of whether an allegation is perceived as highly serious or thought to be frivolous, the MCSO has to be prepared to respond to requests for information—millions of dollars of taxpayer money may depend on it. “If a judge orders it, we must respond to a request for information, in many cases videotape, about an incident. So for us, we simply cannot afford to miss a single incident,” Davidson concluded.

The Digital Decision

As a leader in correctional facility management and one with a worldwide reputation, MCSO represented a major challenge, and a major opportunity, for any CCTV system provider hoping to get their system designed into the current and new jail facilities. In late 1999, as the management group approached a decision on the CCTV system, they considered not only the security upgrade to the Madison Street Jail, but also construction of the two new jails for which CCTV would be designed in from the outset. “We knew we wanted digital for the new facilities, it fit with our security philosophy of extensive recording of all jail events. We also really needed to overcome our problems with the cumbersome VHS tape requirements and get a much better handle on our tape library,” said Davidson, who managed the CCTV RFP (Request for Proposal) and oversaw selection of the winning digital video recording system.



Enter NICE Systems

Davidson further outlined MCSO's needs, "We required 15 frames per second to be able to achieve the image quality we needed to verify exactly what was happening in recorded incidents. NICE Systems was the only company that could supply that function for each camera at a reasonable cost. Some of our staff are also interested in 30 frames per second, and we're pleased that with NICE's commitment to constantly improving their technology, they can offer those capabilities if and when we want them. Because we must be prepared to provide information for any liability claim, long-term storage was also a critical factor for us. NICE's storage system and compression methodology fit our technical needs and met our cost considerations."

After careful consideration, MCSO decided on NiceVision, NICE's digital video storage platform, in early 2000 and began the retrofitting of the Madison Street Jail CCTV system. Lt. Bob Barcelo, Executive Officer, who, as part of his responsibilities, oversees the daily operation of the NiceVision system, commented on how the system has performed, "With NiceVision, we have immediate review capability with simultaneous recording, so we don't miss a thing. We've been pleased with the performance of the system and its highly flexible programmability."

The Madison Street Jail CCTV retrofit replaced the original 65 black and white cameras with 147 color cameras connected to five NiceVision digital video recorders. Now, two cameras cover each inmate living area, substantially reducing blind spots and providing vastly superior picture quality. Areas covered include all inmate living areas, central intake and booking, and visiting areas. "The new NiceVision CCTV system gives us the ability to essentially view anything recorded, anyplace, any floor, from the designated viewing stations or areas," said Barcelo. In addition to viewing and playback in the control room and in Lt. Barcelo's office, Sheriff Arpaio himself expressed a keen interest in the information the system provides. Recently, networked PCs were installed in the Sheriff Office Headquarters in a nearby building. Remote monitoring is accomplished without a heavy burden on the County network by creating a separate node configuration that is only "on" when a remote terminal is in use accessing video data. This way, MCSO has remote access, but it's able to limit demands on the network.

In summarizing NiceVision's performance over the first six months of operations, Lt. Bob Barcelo said, "I'd rate it high...I think it's exceptional."

For Corrections, Storage a Top Priority

High capacity storage with flexible and accurate access ranks as a top consideration for correctional facilities today. For Maricopa, with 147 cameras recording 24 hours a day, seven days a week, that's a lot of data. "We probably will never need to look at 95% of what we've recorded, but we've got to have it and we've got to have timely, cost-effective access to those images. The automatic time and dating of the tapes is essential to reducing our cataloguing requirements and eliminating errors. Before NiceVision, the old system required a lot of work. We know this system has saved substantial man hours," commented Barcelo.

At present, Maricopa County stores a minimum of nine months of recorded data. Detention Officers regularly complete incident reports to document notable activities at the facility. When



an incident report prompts review, Lt. Barcelo or one of his staff inputs parameters for the incident into the NiceVision system—date, time, location, and camera—and then debriefs what transpired. Upon review, Barcelo may decide a particular incident requires back up documentation. He then makes a log entry of the incident to be copied, its details, and to whom the information will be given. With the NiceVision system, he then simply sets the begin and end time of the desired segment, selects which recorder to get the feed from, and then plugs an input from the NiceVision system into a regular VCR equipped with a monitor. The highlighted incident is transferred from digital storage to a VHS tape for transfer to another party within MCSO or in response to a formal request. Having seen the ease with which incidents can be located and transferred to a portable medium, MCSO is considering making an annual summary of all incidents that may require further review so as to increase efficiency and improve overall security system operations.

The Final Grade, Please

Given the demanding nature of safely and effectively managing correctional facilities and the increased importance of liability protection, a top functioning, cost-effective digital recording system is no longer seen as a necessary expense. Instead it represents a value-added asset in achieving the formidable management goals for facilities such as the Maricopa County Sheriff's Office and, quite possibly, saving millions of dollars of taxpayer money. In this highly challenging environment, NiceVision is meeting and exceeding expectations: Simply put, I'd rate it an A," concluded Barcelo.