

MOBOTIX

CASE STUDY



Maximum Security for Courthouse and Jail

Designed by architect James Reilly Gordon circa 1911, the Bergen County Courthouse is a fine example of the Beaux Arts classicism that typifies the civic architecture of the period. Its imposing design reflects the pride and confidence in government that characterized public buildings in the early twentieth century.



The Bergen County Jail in New Jersey serves the community as a central reception and processing center for pre-trial male and female adult detainees whose confinement is necessary to ensure a court appearance. The facility

also provides for the detention of both sentenced and unsentenced prisoners in a minimum, medium and maximum-security environment.

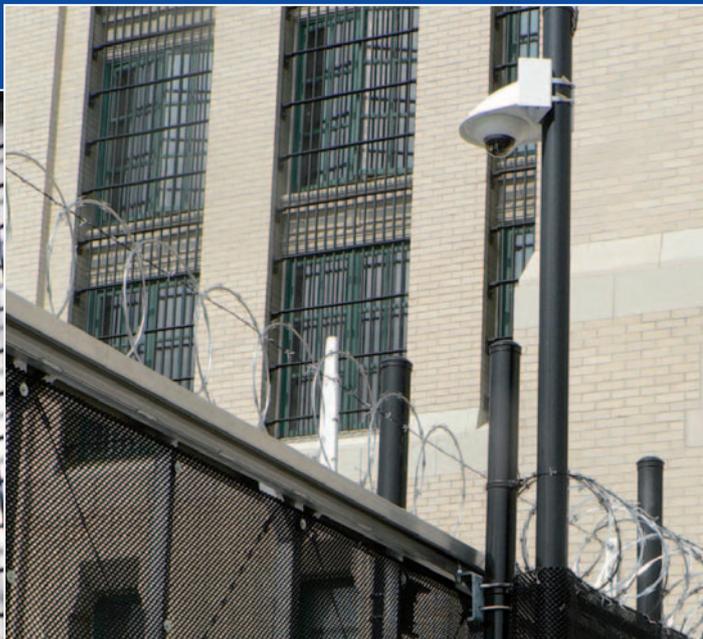
Technology overall is state-of-the-art in the facility, featuring computer control of all inmate housing areas, an integrated perimeter security system, a site-wide duress/panic alarm system and a computerized Control Center. However, the Bergen County Courthouse and Jail had some particular challenges that their analog CCTV cameras simply could not meet. One of those challenges was that these cameras did not offer the level of image

quality to identify persons in the holding cells or in the courthouse. In addition, they wanted a more detailed view of the complete area. The jail also needed higher resolution images and cameras that could not only integrate with their network but also open and close doors and gates, survey wider areas than their current cameras, and not be adversely affected by extreme temperature and weather conditions. "We spend the taxpayers' money wisely, so we needed a system that meets all our needs with maximum cost efficiency" says Leo P McGuire, Sheriff of Bergen County. "My teams critically analyzed the market before any decision was made."

After discussions with MOBOTIX, Bergen County officials became convinced that MOBOTIX had the ideal system - in terms of highly intelligent, advanced digital imaging and extremely sturdy camera design - to enable better overall surveillance of both the courthouse holding cell and the interior and exterior portions of the county jail.

Security-Vision-Systems





90 MOBOTIX cameras watch every inch of the Courthouse, the Sheriff's Office and the Jail, guaranteeing safety for visitors and staff.

Full Coverage in High Resolution

Installation

Bergen County purchased 80 cameras, with most of those being used at the jail and the others at the courthouse. With both indoor and outdoor locations, the complete variety of MOBOTIX cameras are on the job. The original estimated amount of cameras was significant reduced by the use of dual lens D12Di cameras and Hemispheric Q22 cameras with 180 degree views.

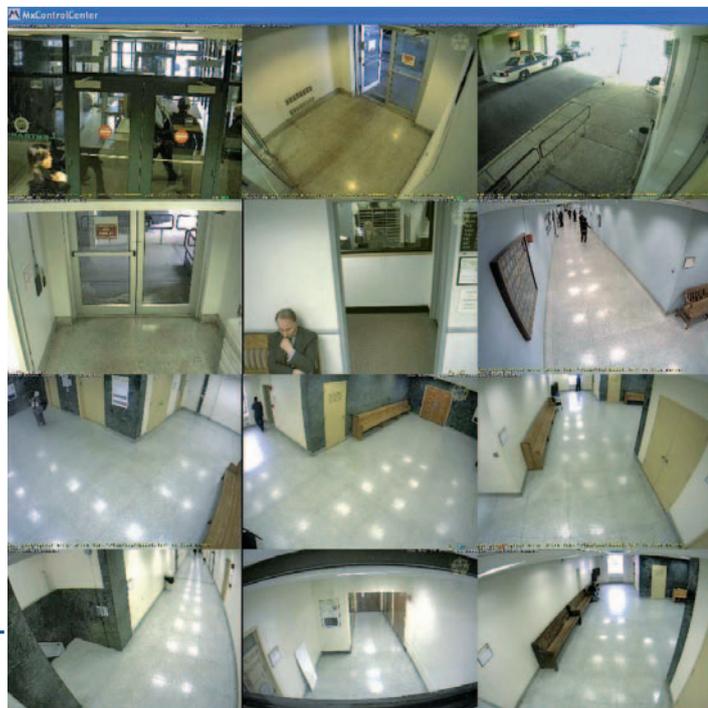
Image quality

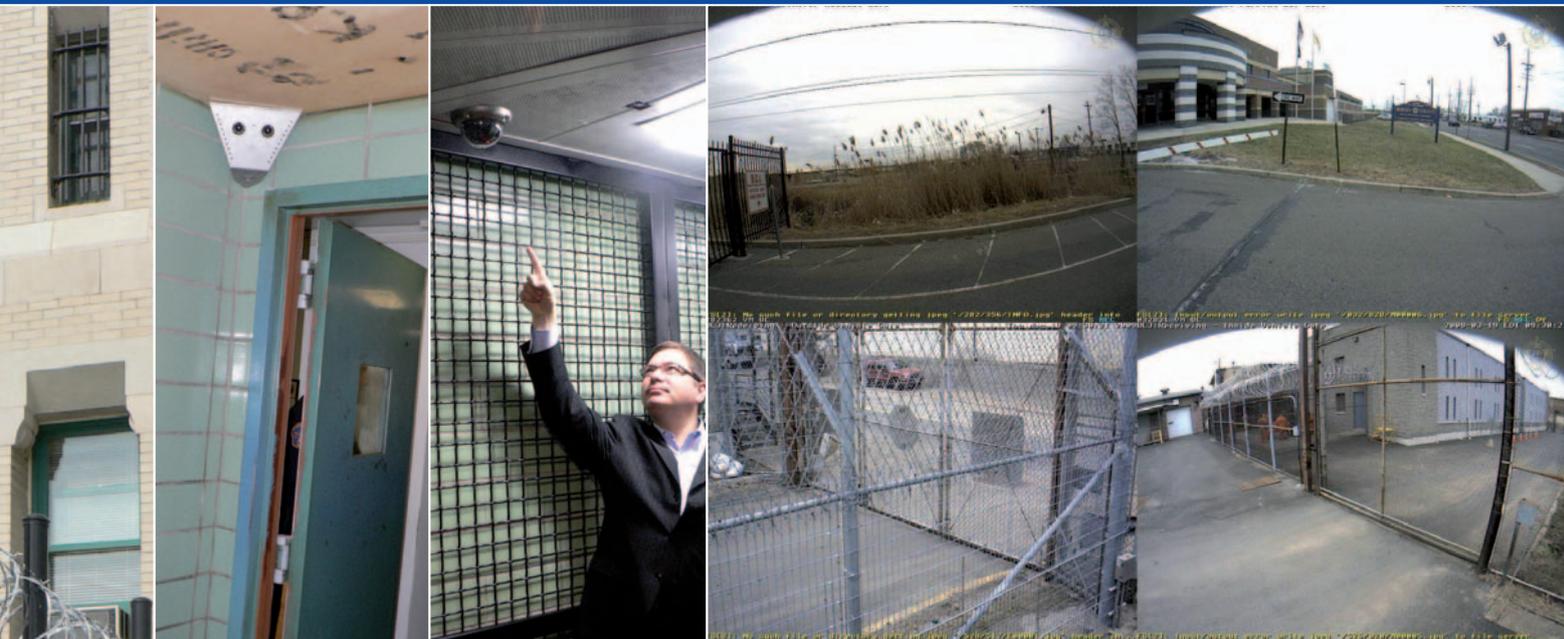
One of the things that impressed Bergen County most about MOBOTIX was the exceptional quality of their video surveillance camera high-resolution images. "We had never seen such clear images from video surveillance cameras," said Phil Lisk, Director of Information Technologies for the Bergen County Sheriff's Office. "Even under very critical light situations, with extreme back light, we are able to see crisp clear images from the cameras in the courthouse and the jail."

The reason for that clarity is that MOBOTIX provides fully digital, intelligent IP (digital) video camera systems, not (converted) analog CCTV cameras. Instead of the typical 288 vertical lines of resolution recorded by DVR'S , MOBOTIX cameras record up to 1536 lines/3 megapixels of resolution, which is 30 times more than the analog standard currently offered in the industry, and even more than HDTV.

Durable design

Bergen County had particular concerns related to the extreme cold in the winter and how that could affect outside cameras. MOBOTIX cameras are built to withstand all sorts of weather conditions and hostile environments: from -30 to +60 °C (-22 to +140 °F) without additional cooling or heating, allowing Power over Ethernet (PoE) all year round. The fiberglass reinforced and shock-resistant MOBOTIX cameras protect the network cable and connections against vandalism as well as severe weather conditions. There is no worry in this case about deterioration due to camera lenses fogging over, or the system getting damaged from the rain, heat or cold weather.





"It was a great relief to know these cameras would not require any additional maintenance in outdoor winter conditions, such as blowers or heaters," said Phil Lisk. "In a high security environment, knowing that the cameras will be operative regardless of the elements is a crucial part of safe operations."

Audio features

The fact that MOBOTIX cameras have both audio and video features introduces an interactive aspect that is a big advantage for Bergen County. "In a corrections setting, you need to see and hear what's going on, so this works very well for us," said Phil Lisk. MOBOTIX cameras can also be programmed to give an audio alert that warns inmates, guards or other employees away from particular areas.

Ability to survey large areas

The dual lens feature of MOBOTIX cameras serves the Bergen County Jail's need to cover very large areas. It is essentially like having two cameras for the price of one with the added advantage of being able to view

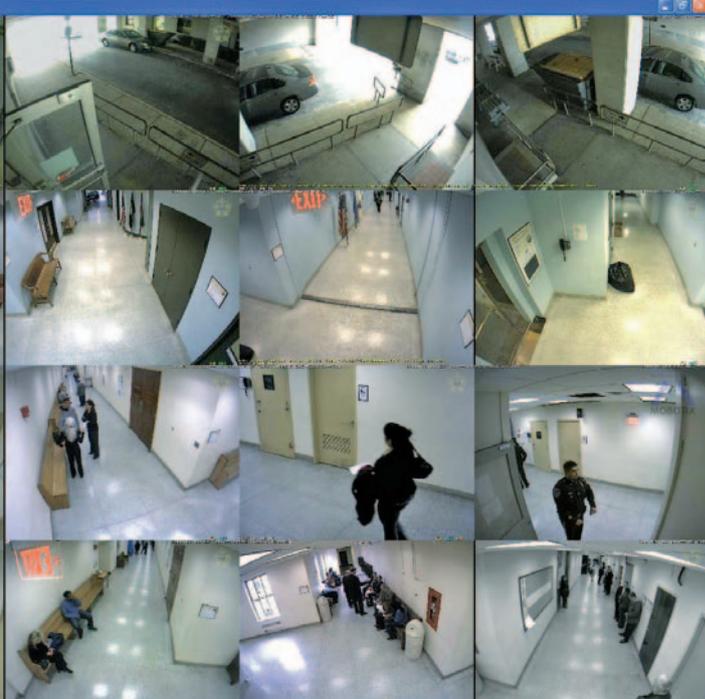
much wider or two separate areas. In addition, MOBOTIX is able to do this with no moving parts.

Other advantages

Because MOBOTIX systems provide 30 times more detail than the average analog camera, one MOBOTIX camera can watch multiple targets and thereby reduce the total number of cameras required. Intelligent, direct storage management on a NAS or fileserver eliminates the need of digital video recorders and reduces the overall cost of storage by a ratio of 10 to 1. For Bergen County, this has translated into a much higher level of safety and security at a much lower cost. In addition, due to the the internal camera ringbuffer overcoming wireless fluctuations, MOBOTIX cameras are an excellent fit with the wireless mesh system Bergen County uses for some of its outdoor cameras. In this case, cameras set on telephone poles bring the signal back on a mesh network, and can handle up to 25 Mbps of data. "By the way" says Phil Lisk "No other system that I have seen provides this kind of quality with such a low network load."

Next steps

Bergen County has begun with the installation of 80 MOBOTIX cameras. Due to its high level of satisfaction with the cameras, Bergen County expects to be installing many more over the next few months, so that the courthouse will have somewhere between 100 to 120 cameras and the jail between 200 to 300.





MOBOTIX Technology: Cost Savings In Every Aspect

High Resolution For Sharp Images

All MOBOTIX cameras are high-resolution cameras with integrated image storage and up to 1536 images lines and 2048 horizontal pixel resolution. The **stored image** thus contains 30 times more detail for creating zoomed sections of the image than regular cameras with 288 lines (CIF, 2CIF). This is why one single MOBOTIX camera with a 90° super wide angle lens is sufficient to monitor an entire room and yet provides more detailed images than traditional technology. The MOBOTIX Day/Night cameras feature zero maintenance with one color and one B/W image sensor.

Intelligent Storage Technology Uses Fewer DVRs

The new, decentralized storage technology pioneered by MOBOTIX reduces the number of recorders that store the smooth high-resolution video by up to 90%. Up to 40 cameras store smooth video streams, including audio on a single PC, with every camera managing its own ring buffer and image database. Intelligent search features provide swift access to the stored events. The professional MxControlCenter software with research functions is available free of charge, no licences required. Event-controlled recording and automatic increase of frame rates upon detecting movements drastically reduce the storage requirements.

Low Power Consumption Means Enormous Savings

Since MOBOTIX cameras are anti-fogging, do not require heating and only use 3 Watts each, power can be injected into the network cabling using standard PoE products, year round. This drastically reduces the amount of cables and the power requirements for backup power.

Integrated Telephone Features

All MOBOTIX IT and Secure models feature bidirectional audio support. The built-in microphone and loudspeaker are used for live audio transmissions and storage purposes. Voice messages with PIN confirmation and call forwarding via IP or ISDN telephony have been integrated as well. Using the switch outputs, you can switch lights or open doors from the phone or from the computer.

Robust And Well-Protected

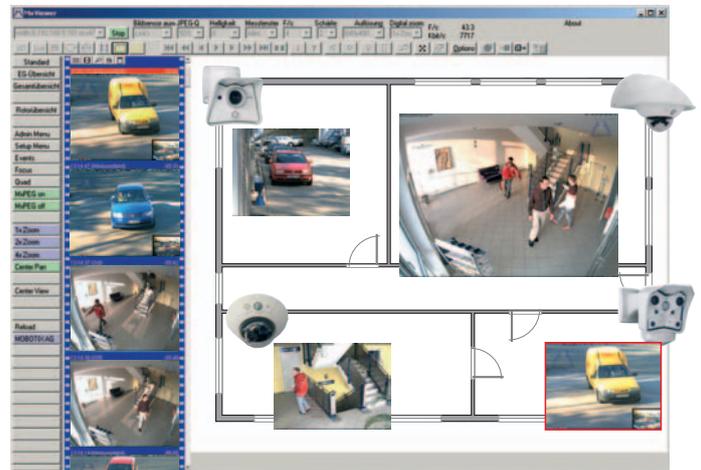
The fiberglass-reinforced housing is shockproof and, together with the concealed cable duct, protects both the camera and the network cabling against damage. Weatherproof (IP65) from -30° to +60°C (-22° to +140°F).

High Return On Investment

Since the number of cameras and storage capacity are freely scalable and any kind of data connection can be used (ISDN, DSL, Ethernet, Wireless, GSM, copper, optical), MOBOTIX means high ROI, even years after installing.

State-Of-The-Art Technology

Developed and manufactured in Langmeil, Germany, MOBOTIX produces image-storing weatherproof high-resolution cameras, including lens and wall/ceiling mount-for as little as 598 EUR (\$798) excl. VAT. To date, more than 100,000 cameras have been sold worldwide.



MxControlCenter alarm management software: free of charge with each camera - no restriction on camera type, layout editor or research functions

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