



MOBOTIX

CASE STUDY

MOBOTIX Cameras Protect Rock'n Roll Hall Of Fame In New York

The Rock and Roll Hall of Fame Annex NYC is the absolute "must see" place for fans of Rock Music. Located in Soho, just a few blocks from Little Italy and Chinatown, the museum is becoming the newest attraction for music fans from New York, and of course visiting tourists. "It's easy to get lost in the music as you journey through galleries filled with the personal mementos of Rock legends like The Beatles, The Rolling Stones, Madonna and Bruce Springsteen. From guitar heroes like Jimi Hendrix to song poets like Bob Dylan" That is the slogan for this exhibition. It is hard to imagine how much enthusiasm and love of details it takes to start a project like this. It takes a lot of connections to talk artists like Madonna or the Rolling Stones into loaning their history making assets to a museum. David Waggett and his team bring all this in. Some of the exhibits have been donated; some of them are loaned from the artists. They all have one thing in common: They are irreplaceable pieces of history, some of them insured with seven figures.



The journey begins in the Hall of Fame Gallery, which pays tribute to each and every artist inducted into the Rock and Roll Hall of Fame. Plaques featuring artist signatures line the walls and light up as visitors listen to a soundtrack of Rock's greatest hits. Feeling the rush of the live concert experience, visitors watch never-before-seen footage of Rock's most electrifying performances in an immersive theater. Witnessing inductees at pivotal moments in their careers – from The Beatles at Shea Stadium to Jimi Hendrix at Woodstock, plus many other ground breaking performances. Following the film, visitors will be given a set of Sennheiser stereo headphones that use wireless technology to transmit audio content as they journey through the remaining galleries. The "Roots and Influences" section is a gallery of high definition screens, mapping the roots and influences of today's most popular musicians, followed by "Moments to Movements", which isolates five critical turning points on the timeline of Rock & Roll that sparked major movements within the music industry. As the exhibition takes place in New York, a special section is dedicated to the city: "New York Rocks". As an epicenter of art and culture, New York City has played an integral role in the history of Rock & Roll. The New York Rocks gallery centers around an interactive map of Manhattan that highlights sites around the city significant to the history of Rock & Roll, from The Chelsea Hotel to the recently closed CBGB club. This gallery also features personal items from the private collections of some of New York's most notable Rock artists, including John Lennon and Billy Joel.

The Rock Annex Experience

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Security-Vision-Systems





Cameras: 18x MOBOTIX DualDome , 13x MOBOTIX Hemispheric, 10x MOBOTIX Allround, 10x MOBOTIX MonoDome
Storage: Overland Snap-Server 6100, Raid 5 with 40TB storage

15 Times More Resolution - MOBOTIX HiRes-Cameras

Security Challenge

With the experience from previous exhibitions, the challenge for a video surveillance system was obvious for the Rock Annex team and integrator ADT. The design of the exhibition, with black ceilings, low light overall, illuminated exhibits and pulsing lights was a



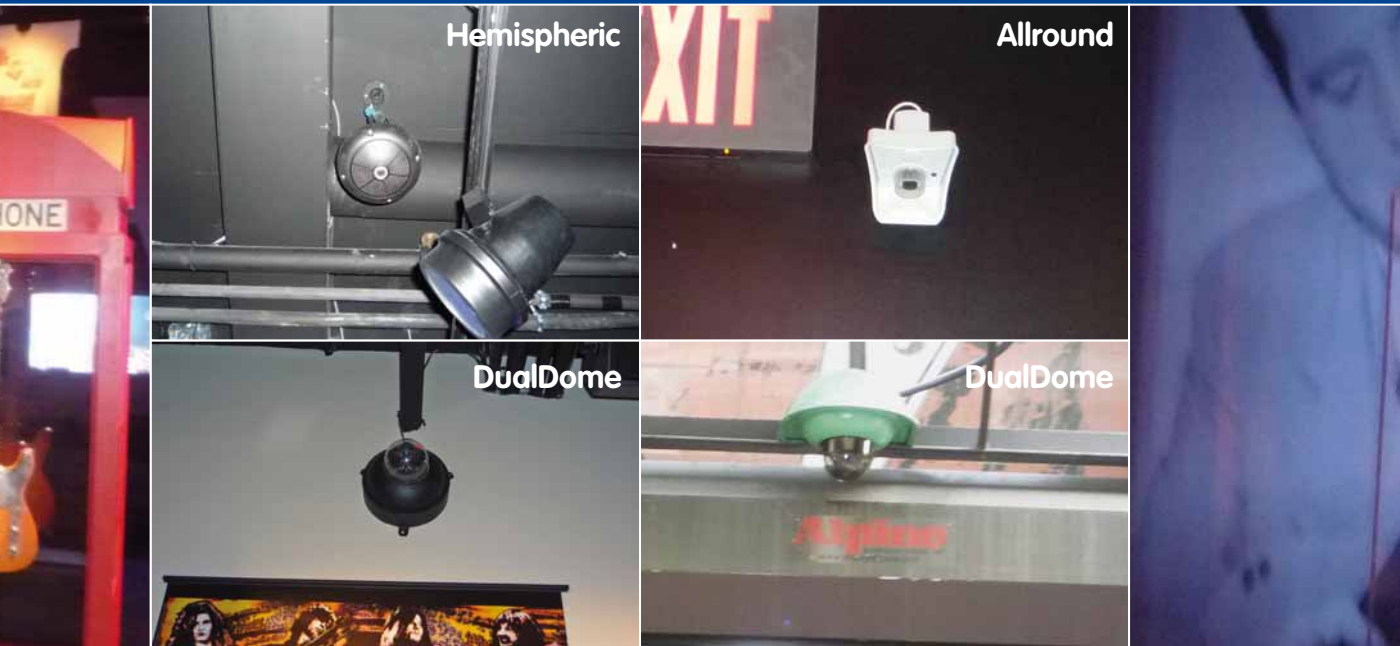
“NO GO” for traditional CCTV systems. “Additionally, we needed a system that can be easily modified if we change the exhibition layout” says David Wagett, General Manager of the Rock Annex. “And of course, with

the value of our assets, we needed high resolution footage, leaving no doubts about the identity of a potential suspect”. But obviously, the safety for the thousands of visitors every month was at least as big of an issue. How would it be possible to achieve that, considering that the budget was limited? “We can make it happen, and it will be even more cost

effective than any other analog or ip-based camera system” A brave statement from ADT New York... With that said, ADT

invited David Waggett and his team to visit the show room of MOBOTIX in Manhattan. “I had never seen anything like this before, the clarity of the images, even under low light conditions was stunning” stats David Waggett, “if you are used to see the poor image quality of a DVR in 2CIF and somebody confronts you with 15 times more resolution, that sticks in your head for a while”. But there was more to discover. “Everybody is talking about MPEG4 and H264, but both technologies are a dead end for surveillance systems” says Wolfgang Ritter, Director of Sales USA for MOBOTIX. “In a critical situation you need the ability to go back frame by frame in the recorded footage, MPEG4 and H264 will not allow you to do that”. Well, back to MJEG? “Of course not” says Wolfgang Ritter” MJEG is not efficient for recording either, the amount of read/write/cycles is killing the performance of your recording device”. In 2001 MOBOTIX developed a high tech codec called “MxPEG”. Based on the fact that MOBOTIX uses strictly digital CMOS technology the limitations of CCD converted analog signals did not apply. “Image generation and image





processing are done in camera, this is where all that performance and the low bandwidth requirements come from “states Bernd Wilhelm, Director of Software Development for MOBOTIX. “ The processor load on your recording device gets cut down by 80%, the performance of your hard discs boosts by about 200%”. “I was impressed by the fact that the recording was not compressed, high quality and still used less bandwidth than MPEG” recalled David Waggett. “That allowed us to run 50 cameras in high resolution on our network, without performance issues”.

Was there a downside? What about costs?

“The MOBOTIX D12, with two 3 Megapixel sensors can easily replace up to 6 analog cameras with one unit, and the MOBOTIX Q22 hemispheric camera covers a whole room of 40x40 feet” said John Peponias, Manager of Commercial Security Solutions at ADT Security NYC, “ We knew exactly what we had discovered with the MOBOTIX solution”. Our Project Team had a huge grin on their face” John recalls, “MOBOTIX was an obvious choice for this high-profile application, and we were all very excited thinking about the opportunity this product represented for us in the market. Technicians are typically so used to traditional CCTV, it was hard for them to imagine that all they had to do was run a CAT5 cable from the server room to the cameras, plug it into the PoE switch and connect the switch with the Overland NAS system.”



Software costs? None. MOBOTIX provides MxControlCenter, a fully functional and unlimited Video Management System, free as a download from the MOBOTIX homepage. The decision for the MOBOTIX system was made quickly. The double lens D12 cameras cover every inch of the exhibition with 1536 TV lines per sensor, the Q22 hemispheric cameras provide overview images of the complete cinema area, the lobby, VIP Lounge and box office, also in 3MegaPixel. “The tweaking of the cameras with variable exposure fields was a big plus” said Serge Gelin, System Installation Team Manager at ADT. “We were able to compensate for any challenges the exhibition lighting posed, eliminating even the smallest distortion from the show lights”.

MOBOTIX technology partner Overland Storage provided the 40TB NAS system that keeps track of all cameras for at least 45 days. MOBOTIX cameras do not require DVR’s or NVR’s. A cost effective, high performance NAS is the perfect solution. “Again, if you work with the installation of CCTV systems on a daily basis, it becomes almost ironic to see how easy the setup for the recording of 50 MOBOTIX cameras was” said Serge Gelin. “The cameras administrate the recording individually, the NAS was easy to setup and provides Raid5 security”. The security office in the Rock Annex can pull in the audio from each of the camera’s microphones in case of an event. Digital pan/tilt/zoom functions allow analysis of every movement in post processing, meaning on the recorded footage. “I can zoom into every corner of the exhibition, even a month later” states Heather McLaren, Operations Manager in the Rock’n Roll Hall of Fame.

In November 2008 the Rock and Roll Hall of Fame Annex NYC opened to the public. The MOBOTIX system is up and running, and even when David Waggett is traveling, he can remotely logon trough the VPN network and see what’s going on.





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 -'D030° 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 highresolution cameras, including lens and wall/ceiling mountfor 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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