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MOBOTIX
CASE STUDY

Network Video – An Ideal Solution for ATMs

24/7 Availability

Self-service terminals such as bank statement printers and ATMs have since long become part of our every day lives. Banks have found them to be the ideal solution for taking the burden of routine tasks from their customer service staff. The customers, in turn, benefit as cash is available 24/7 – everywhere. The Internet financial service company Forium, for example, estimates that there are about 60,000 ATMs at approximately 40,000 locations in Germany.

Key and Punch Card

The first ATM in Germany was installed at the Tübingen Savings Bank in May 1968. In order to use it, customers needed a safety key for the vault, a plastic ID card and a punch card for each 100 Deutschmark note they wanted to pull from the ATM.

While bank officials initially feared that self-service terminals would have a negative impact on the customer relationship, they soon realized the advantages of automation. However, it wasn't until ATMs were installed in the foyers and outside of banks for around-the-clock access that these machines became really popular. According to a 2002 poll, 72 percent of the German population claimed ATMs to be the best technical invention of the past decades, certainly a result that can be attributed to the high degree of availability of ATMs.

Security and Data Protection

As the use of ATMs increased, the security became more and more important. Vault security and vandalism-proofness are as important as the secure transfer of customer data or the evaluation of biometric data for secure identification. Thus, for example, a portrait image is recorded of the customers at the moment they retrieve the money. But can one image alone provide for sufficient security?

Security Vision Systems

MOBOTIX AG

Every single ATM transaction must be documented by photos.

Secure Money Transactions

A Complex Task

Direct sunlight in the back of the customer, for example, can become a problem as it will render the images from the portrait camera useless. Such was the case for a savings bank in northern Germany that has an ATM installed at the southern wall of a shopping center. The bank officials presented this problem to the communications specialist Conect Kommunikations-systeme, whose services range from classical network technology to creative concepts for customized video systems.

"We wanted not only the backlight problem to be solved," remembers Conect CEO Karl Heinrich Spiering, "but we also intended to increase security and were looking for a way to document the 'hand-to-money' event, i.e. the moment of the actual money retrieval. However, neither the construction of the ATM was to be modified, nor was it allowed to show the numeric keypad in the images," he adds.

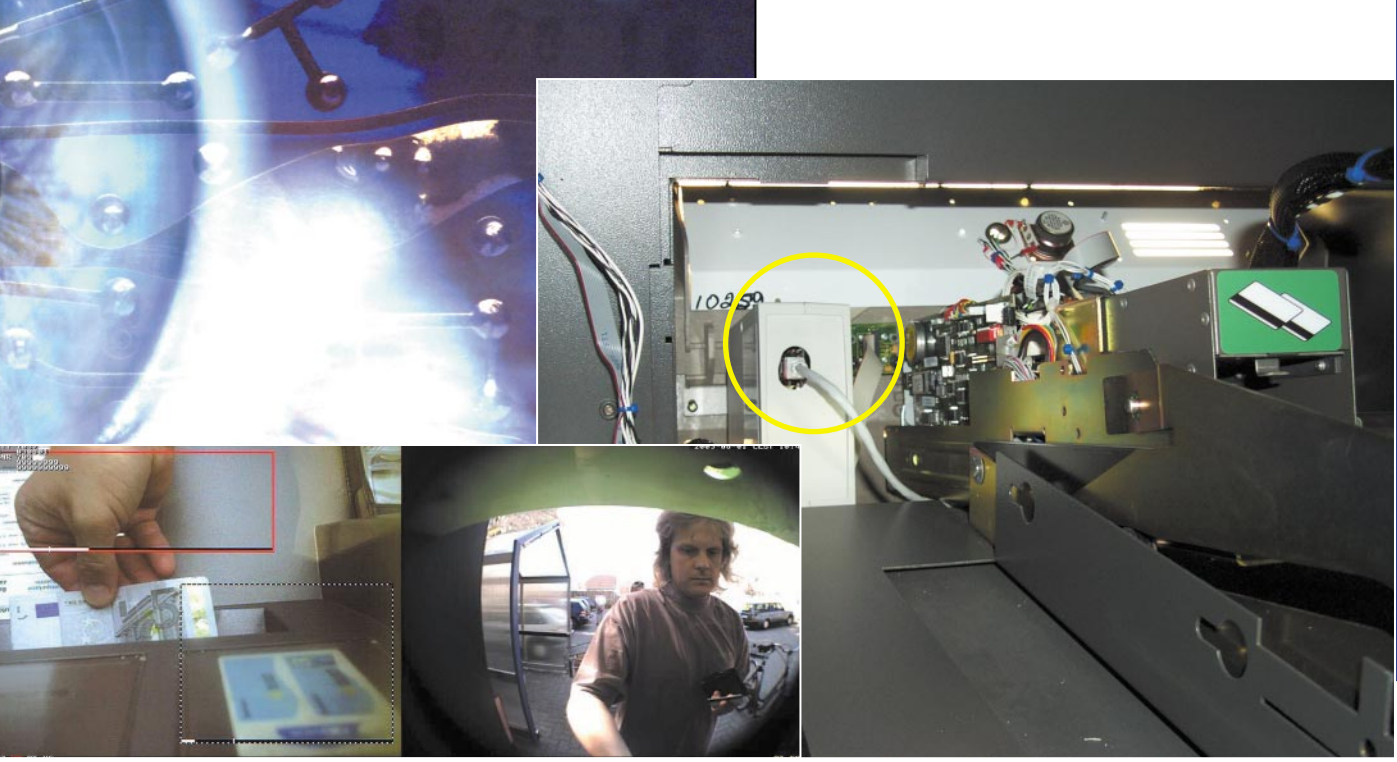
Inspiring Versatility

"It was clear from the onset that a regular camera would not be able to solve this problem," explains Hendrik Braasch, TV and radio technician by trade who works as Conect project manager. "Luckily, about 18 months ago, I came across a magazine article describing the Mobotix camera system," he continues.

From the very first moment, the network specialist was all enthusiastic about the great versatility of this network camera. "The MOBOTIX solution offers such a variety of features and is perfect for realizing the most diverse projects. On top of this, Mobotix offers first-class support. Whenever I have a question, the Mobotix customer service presents the answer in no time," Hendrik Braasch explains.

Customized Solution

This was also true for the "ATM problem" of the savings bank in northern Germany mentioned earlier: "Mobotix offers a very flexible so-called 'integration set' consisting of a mother board and camera lenses on separate mini boards," Hendrik Braasch continues. "And this was the solution we decided for," he concludes. The direct sunlight issue was not at all a problem for the Mobotix solution. The separate lenses provide for a dual image showing the customer portrait in one image and the 'hand-to-money' event in the other.



Fotos: Conect

At night and day alike, the system records three pieces of information: customer portrait, money retrieval and transaction data (in the top left corner of the image).

Visible for insiders only: the components of the Mobotix camera.

Court Approval

In order for the images to be recognized as evidence at a court of law, the transaction data needed to be part of the image. For this purpose, the Conect specialists have developed a proprietary hard- and software solution that is integrated into the ATM. This way the camera can read the bank data from the interface in a converted file format and then displays this information in the camera image. As a result, the bank has this information on every transaction: the customer portrait, the photo of the 'hand-to-money' event and the respective transaction data.

The Triggering Moment

The camera triggers the recording of image sequences by means of pre-defined event areas, e.g. when a bank card is inserted or when a person approaches the machine. The Mobotix file server feature stores the image sequences on a hard drive of a regular computer. From there, an authorized administrator can retrieve the data via the existing LAN/WAN connections.

Low Operating Costs – High Security

For the savings bank, the transfer of these three important pieces of information was an enormous step forward. Moreover, since nobody needs to visit the external ATMs in person any more to collect videotapes, the camera also reduces operating costs and increases security. The camera data can be accessed directly from the control center. Also, extremely expensive video printers are not needed any longer since the images can be printed with standard workstation printers. In order to access the cameras, the existing IT infrastructure can be used. Another plus: as standard browsers and the Linux operating system are used for the camera, there are no license fees to pay.

Built-in Success

No wonder that the savings bank employee in charge is all happy with the camera. "The system is simple and good. I've never seen anything better than this. Compared to this, all other systems were unusable – especially when we compared image quality and user-friendliness," he states. This prototype's success has encouraged Conect – together with other Mobotix secure partners – to develop customized applications for the different ATM systems on the market.

This solution has successfully passed its first real challenge recently: a vandalism attack at 2:45 am was easily solved thanks to the high image quality and to the fact that the image sequences were immediately available.

MOBOTIX Technology –
Cost Savings in Every Aspect

High Resolution For Sharp Images

All MOBOTIX cameras are high-resolution cameras with integrated image storage and 960 lines (1280x960 pixels) resolution. The **stored image** thus contains 12 time more detail for creating zoomed sections of the image than regular cameras with 240 or 288 lines (CIF, 2CIF). This is why one single MOBOTIX camera with a 90° 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%. 40 cameras store smooth video streams including audio on a single PC, each managing its own ring buffer and database. Intelligent search features provide swift access to the stored events. There is no software required for storing and managing video, eliminating license fees and the need for expensive software. 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

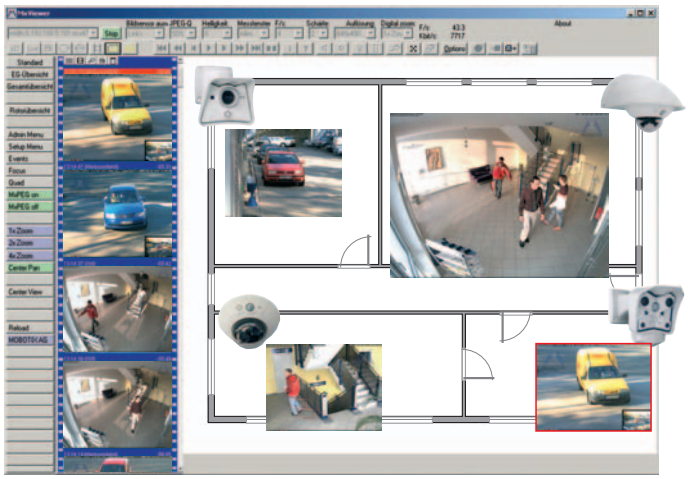
The fiberglass-reinforced housing is shockproof and the SecureFlex mount protects the network cabling as it completely conceals the cables (M12/D12 models). Weatherproof (IP65) from –30° to +60°C (-22° to +140°F).

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 Kaiserslautern, Germany, MOBOTIX produces image-storing weatherproof high-resolution cameras, including lens and wall/ceiling mount for as little as 598 EUR excl. VAT. To date, more than 100,000 cameras have been sold worldwide.



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MOBOTIX AG
Security Vision Systems
Luxemburger Straße 6
D-67657 Kaiserslautern
Tel.: +49 (631) 3033-103
Fax: +49 (631) 3033-190
E-Mail: sales@mobotix.com
www.mobotix.com

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MOBOTIX AG