

DB Station&Service AG  
Bahnhofsmanagement  
(Station Management)  
Saarbrücken



... the new face of IP Video

# MOBOTIX

## C A S E S T U D Y

### Network Video – Information Arrives on Time

#### Attractive and Safe

Arrival and departure, welcome and farewell, staying and shopping – a train station is not just a traffic hub, a building or a site of transition. It is quite a complex operation designed to serve numerous interests, desires and functions.

the goal is to accompany the train travelers in an attractive and safe manner from the moment they drive up and park their cars in front of the station, during their stay in the building, up to the moment they board the train. This also includes arrival assistance in the form of city information systems and optimized links to public transportation systems.

#### Extraordinary Pilot Project

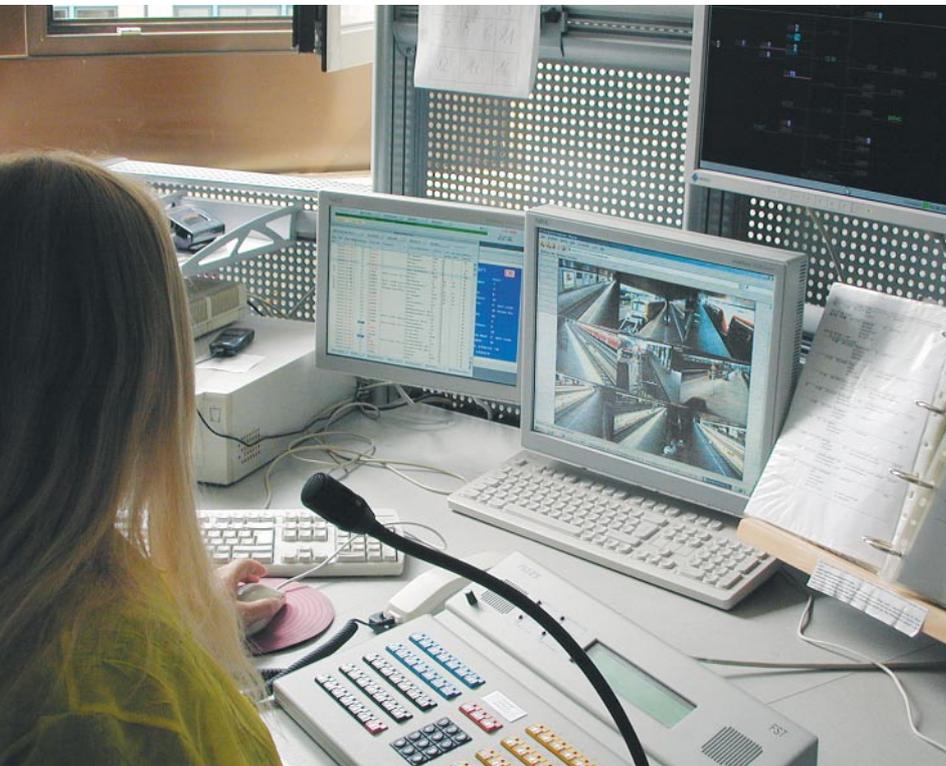
This customer-oriented approach is put into practice in a decentralized fashion by approximately 70 station management units throughout Germany. In the German federal state of Saarland, the Saarbrücken station management unit is responsible for 73 local train stations. Similarly, it is the prime goal for the 50 employees to make the travelers' stay at the stations as pleasant as possible. Helpful information at the right time is one aspect of this concept. In order to improve this service to its customers, the station management unit in the Saarbrücken central station has initiated an extraordinary pilot project.

About 5,800 active train stations are located in Germany. Since Deutsche Bahn (DB, German Rail) was privatized in 1994, DB Station&Service AG has been in charge of operating the German train stations. In order to provide high-quality service, DB Station&Service AG has developed the SST program. This concept is based on the main aspects of Service, Safety and Tidiness and is dedicated to making the non-transportation part of your travel activities as pleasant as possible. In other words,



Security Vision Systems



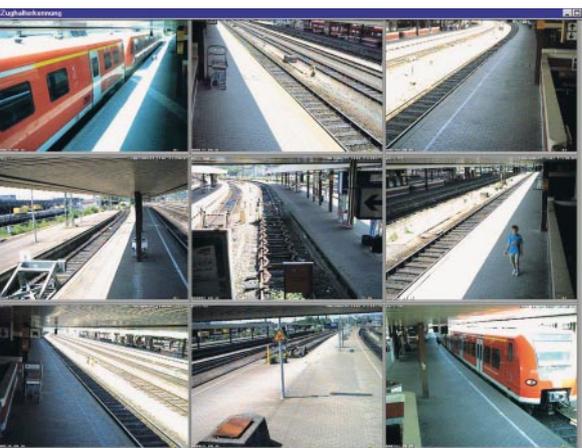


As more and more former switch tower activities are centralized, most announcers cannot view the tracks any more. A problem that is easily solved using a network camera.

## Information on the Fast Track

### Out of Sight

"Dear ladies and gentlemen on track 12, welcome to Saarbrücken central station. After a short stop, this regional train will continue its journey to Trier. Your transfer options are as follows: regional train to Pirmasens



Nord via St. Ingbert, Zweibrücken ..." Such announcements would sound strange if the train had not arrived yet or had already departed. In order to start the announcements properly, the announcers need direct visual contact with the train in the

station. Until the end of March 2003, this was not a problem in Saarbrücken as the announcers' workplace was in the switch tower from where they could view the tracks. On April 1, 2003, however, the Saarbrücken switch tower was closed. Instead, tracks are managed remotely from Karlsruhe, some 100 miles (150 km) away. Worse yet, the new announcers' office

does not allow seeing the tracks directly. As switch tower activities are centralized all over the country, more and more stations are facing a similar situation.

### Precise Images

Hartmut Fries, head of the Saarbrücken station management unit explains, "we could have moved the announcement service to Karlsruhe as well. But the announcers there wouldn't know exactly when the train doors were opening. And on top of this, we would not have had any influence on the announcements any more." Nevertheless, the station manager's top priority is to provide customers with competent and accurate information. "As a result, we have created the position of a Regional Announcer and have installed nine cameras that provide precise images of the trains on our ten tracks," he says. With more than 420 trains arriving and departing at Saarbrücken central station every day, such a solution was desperately needed.

### Centralized Announcements

"Additionally," Hartmut Fries continues, "this solution will soon enable us to provide on-time announcements for the stations in St. Ingbert and Homburg/Saar – from Saarbrücken." These two towns are located about 10



and 22 miles (15 and 35 km) away from Saarbrücken. Future plans have developed even beyond that. "By the year 2010, we want all announcements for all train stations in Saarland to be made from just one announcement center so that travelers will be informed not only competently but also efficiently", Hartmut Fries explains.

For the Saarbrücken pilot project, Deutsche Bahn uses network cameras made by Mobotix. Using a server, these cameras provide live images of the tracks to the announcers' office. In order to protect the travelers' privacy, the cameras' extended image storage features are not utilized. Instead, the system is used exclusively for detecting when the trains are stopping.

#### Individual IP Addresses

The nine cameras are password-protected and they are integrated into the internal network of Deutsche Bahn using individual IP addresses. Thus, only the Regional Announcer can access the camera images. Thanks to a customized menu, the Regional Announcer can switch between a tiled view of all tracks and the view of an individual track by a simple mouse click.

#### All Requirements Met

Uwe Lebeck of the station management unit explains why the company has decided in favor of the Mobotix system. "When drafting the new position, we worked out a list of requirements covering all major aspects. The Mobotix network camera fulfills all these requirements: it is small, it can be installed easily and it has an individual IP address. Also, the cameras' features and the low price compared to a CCTV system has made this decision an easy one," he adds.

#### Future-Oriented Concept

Since March 28, 2003, the system is operating. "So far, we have not experienced any problems," summarizes Hartmut Fries "For our present situation, this solution is more than sufficient. And I am convinced that it will continue to be so for future installations as well," he adds. "As compared to the switch tower situation of the past," his colleague goes on, "our announcers now have a much improved overview and can react to a lot more details." Chances are – bearing the train travelers in mind – that this pilot project will be transformed into a future-oriented station management concept.





## 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

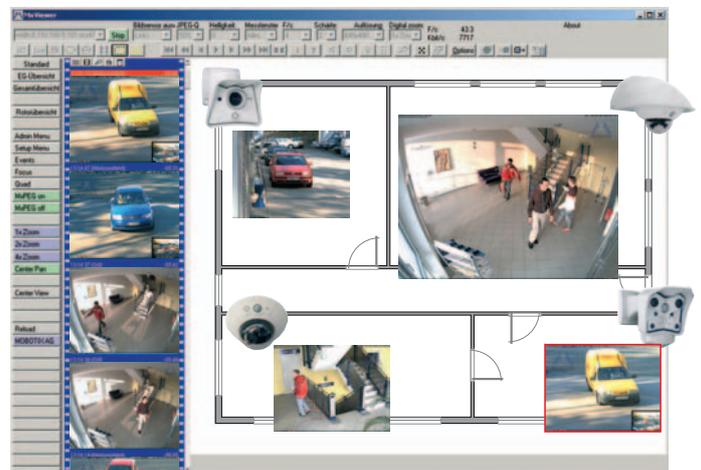
The fiberglass-reinforced housing is shockproof and the SecureFlex mount protects the network cabling as it completely conceals the cables (M12/D12 models). Weatherproof (IP65) from -30° to +60°C (-22° to +140°F).

### 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

