

**Bieber + Marburg,
Giessen, Germany**



BIEBER + MARBURG Uses Video Technology To Document Loading

The manager is visibly pleased. Sven Bieber patiently explains to visitors in the dispatch department how his employees use state-of-the-art technology to keep things under control at any time. The live video stream from Hall 3 is running in large format on the screen on the left. The display also shows several small windows with images from other cameras. The MOBOTIX IP cameras deliver crystal-clear recordings – even the details in the overview recording are clearly recognizable. Visitors can observe how a truck in the building is gradually loaded with steel. A 25-metric ton loading crane slowly lifts large parts onto the loading surface at this very moment.

Save Time With Virtual Tours

The family business, founded in 1899, operates 47 network cameras at its Giessen site. MOBOTIX IP cameras are installed in the halls, in the outside area and at entrances to the office building. Of course, managing director Bieber is primarily concerned with preventing theft and break-ins. However, he soon realized that video technology has a lot more to offer. His employees in management are now always able to examine events across the factory premises and in the halls: What is the status of loading? Can the next truck drive into Hall 6? What is the problem in Hall 8? These and other routines have eliminated tedious and time-consuming inspection rounds. A glance at the screen and a click of the mouse to enlarge the image section are usually enough to determine what is going on.

Everyday up to 50 heavy-duty trucks arrive and leave the premises on Autobahn 485. Approximately 500 to 600 metric tons of steel are transported per day during three-shift operation. Up to 18,000 metric tons of steel are permanently stored in the halls. All processes are carefully documented on video.

Keep An Eye On All The Emergency Exits

The company only closes its gates on the weekend. Video surveillance ensures that nobody can enter the premises or try to break into the office building during this time. The plant manager is the last person to leave the premises on Friday evenings. He can easily determine whether or not all the doors are actually closed and locked by glancing at the monitor before he leaves. The emergency exits are always a bit tricky. They must not be locked during operating hours.

BIEBER + MARBURG locks all emergency exits with video technology. Every time a door is unlocked an image is sent to the main office.

The two cameras mounted on a crane at a height of 12 meters in the high-rack warehouse are a just one great feature of video security. During normal operation, the inventory control system triggers a fully automatic process whereby the crane itself sorts through several thousand different types, grades and dimensions for the correct parts. As some areas are difficult or impossible to see, people need to enter the storage area in exceptional cases only. In spite of this, the dispatch department now always knows immediately if there

are disruptions. The two cameras are connected via Wi-Fi. But the key feature is a special solution. An icon in the live image shows whether or not the crane is in automatic or manual mode.

Are Black And White Images Still Up-To-Date?

ADS System GmbH, based in Bad Homburg, Germany, is responsible for the system concept of the video technology in use at BIEBER + MARBURG. The experienced network and IP video specialist is an Advanced Partner of MOBOTIX. They are well aware of the high quality of the cameras from the high-tech manufacturer.

The ADS experts' system concept relies on black and white images, which seems a bit of an anachronism in an age of high-resolution cameras and high bandwidths. However, not using color has some significant advantages for the video specialists from ADS. Black and white recordings require far less light and deliver better contrasts in challenging conditions such as at dusk or nighttime. "It often requires a considerable amount of effort to evenly illuminate large areas, and even halls with several objects, well enough to create good color images at nighttime," says ADS expert Stefan Junker. "Color cameras also require a higher illumination level to generate images without motion blurring. This level is above that of the guidelines from the DIN EN 12464 for workplaces and the German workplace regulations. The amount of investment and energy required can quickly increase dramatically, particularly when there is a high number of camera points."



More than just Intrusion Protection and Anti-Theft Security

Marcel Finkennagel, management assistant and IT specialist, also quickly became a fan of black and white images. "We were only able to implement low network loads by limiting ourselves to the essentials. Black and white and 12 images per second are sufficient for us. This reduces the data stream immensely, as well as the costs for the network." It is remarkable how little bandwidth the system requires: The live stream of each camera generates approximately 1.5 Mbps. The images are transferred via an own IP network that is completely physically separated from the company's IT system.

MxPEG: Own Compression Standard For Better Streams

Recording also takes place at BIEBER + MARBURG, albeit at just one frame per second. "That's totally sufficient for us," says Finkennagel. Data is stored on QStore servers from ExuS Technology AG that feature a total storage capacity of 24 terabytes. There is still a lot of free

space on the computers, not least because MOBOTIX significantly reduced the amount of data required by using their own image compression process. MxPEG is the freely available

codec that offers far superior results, even better than the MPEG-4 or H.264 standards available on the market. Dr. Magnus Ekerot, Chief Sales Officer at MOBOTIX AG notes: "It's written especially for video surveillance and designed to generate as little image data as possible, thus saving storage space while simultaneously delivering fluid, high-quality streams. MOBOTIX's software MxControlCenter can be used for live viewing and camera parameter configuration. It also allows a fluid and time-based search in the video material."

In Giessen, MOBOTIX IP Allround, DualNight and DualDome camera models are installed. Even icy temperatures as low as -25°C (-13°F) do not cause any

problems. A special plastic shields the housing from outdoor conditions in a secure manner. Heating is not necessary as the cameras do not have any moving parts. The processor delivers enough heat to ensure that the lenses do not fog up in winter. In addition, the innovative T24 IP Video Door Station is integrated into the network. Audio and video data from the two-way communication intercom is also transmitted via the network.

ADS network specialist Junker is not the only one convinced by the performance demonstrated by the MOBOTIX systems. Gerhard Tophoven, the company's key account manager, is also impressed. It was not until after a competition presentation and a comparative test that ADS won the contract. "We are well aware of the power of the MOBOTIX systems. No one else currently on the market even comes close."

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