> "Alcatel-Lucent's solution has more than proven its worth. It is extremely stable and, thanks to its scalability, it can also fulfill future requirements."
>
> Andreas Thurnheer, Director of the Service Management Center, SBB Intervention and Disturbance Management.

SBB: Better security at RailCity stations thanks to IP-based video surveillance

SBB relies on Alcatel-Lucent as general contractor and service partner

SBB CFF FFS

At its most important stations, SBB relies on a video-surveillance solution developed and implemented by Alcatel-Lucent. A supplementary pillar to SBB's security concept, the system increases both the objective and subjective security of passengers and station customers. It also serves crime investigations.

SBB operates a 3000-km-long railway network in Switzerland that transports 300 million passengers and 60 million tons of freight each year. Increasingly, the largest of its 750 stations are developing into attractive meeting points with a wide variety of service and shopping offerings. These stations are centers of public life, heavily frequented and easily accessible. Railway stations are top business locations: every day, over 300,000 commuters pass through the Zurich station; in Berne 130,000; in Basel 120,000; and in Geneva 85,000. The seven major SBB railway stations – Zurich, Berne, Basel, Lausanne, Geneva, Winterthur and Lucerne – have been linked together for several years under the name "RailCity". Based on uniform quality standards, the stations have been expanded into transportation centers with various attractive shops and services. "RailCity" stands for the major SBB stations with their international trains, comprehensive services, and attractive opening hours, even on weekends.

For the largest stations, SBB demands the highest quality standards in every respect – including security. As the operator of RailCity, SBB Immobilien places value not only on architectural measures, cleanliness and the constant presence of rail police and property guards. In the three largest RailCity railway stations – Zurich, Berne and Basel – video surveillance systems were already previously in use as an additional security element. With the project "Multimedia RailCity", this video surveillance was extended to four further RailCity locations: Lucerne, Winterthur, Lausanne and Geneva. At the same time, the analog video system without recording function in Zurich was partially replaced and integrated into the new solution.

Centralization of surveillance sites

For SBB Immobilien, it was important to have a networked solution that was based on IP technology. "Our requirements

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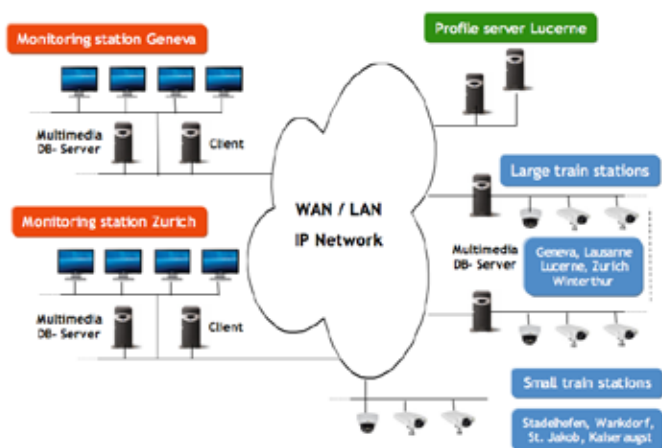
Challenge

- Fully multimedia-capable system
- Modular structure
- Part integration of existing analog video system
- Long life
- Profitability
- Evaluation of the software

Project partners

- SeeTec (Schweiz) GmbH
- EOTEC AG
- Various electrical installation firms

Advantages

- Location-independent accessibility
- Low failure rate
- Flexibility and high performance
- Secure investment thanks to scalability
- Cost-favorable and economic solution
- Easy operability

demanded a system that was fully multimedia-capable, not a hybrid solution," said Project Manager Andreas Thurnheer, Director of SBB's Service Center for Intervention and Disturbance Management. The aim was to allow secured surveillance data to be made quickly available for viewing to investigation authorities on command, in case of an incident. In addition, there was to be capacity for new surveillance centers to be set up as required and centrally controlled. SBB searched for a competent general contractor and integrator able to develop a technical end-to-end solution for the high level of operational demands. The solution was to be expandable, in the modular sense, and ready for use within the time required. Important criteria included simple operability, fulfillment of technical safety requirements, guaranteed maintenance and operation over the duration of the lifecycle and online visualization of system availability at all times via SBB's Network Management Center (NMC).

Alcatel-Lucent's advantage: a good solution and attractive pricing

The final choice was made for Alcatel-Lucent as general contractor and service integrator because the company had submitted the best offer. "Alcatel-Lucent best fulfilled our demands in terms of technology, quality and price," Andreas Thurnheer explained. Furthermore, Alcatel-Lucent had extensive experience in the area of rail-specific video surveillance. Thurnheer: "In the end, we chose the bidder with the best cost-performance ratio."

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Long-term experience as an advantage

Thanks to experience gained from various projects and in systems operation, particularly in the rail segment, Alcatel-Lucent possesses valuable know-how, which was a great advantage for the successful completion of the project and continues to be an advantage for its smooth operation.

Alcatel-Lucent implemented the project as general contractor and relied on cooperation with other business partners. The right software had to be evaluated for the networked solution. The objective was to present a solution that couldn't be beaten in terms of efficiency, operability and a long life – "A real challenge," as Andreas Thurnheer admitted.

Transmission via SBB's new multiservice data network

The new, centralized and IP-based video surveillance solution builds on the software of the company SeeTec, a pioneer and market leader for network-based video surveillance. The video data is saved locally on a total of six HP servers (media databases). These are connected to a central server which administrates the decentralized media database servers. HP workstations with up to four monitors are employed for monitoring and outsourcing visual data.

The camera images of the five newly equipped RailCity train stations are now being presented in regional centers on best-suited multimedia terminals. All video data is saved for 24 hours and then, in accordance with data protection laws, automatical-

ly recorded over. In case of an incident, the data in question must be secured within these 24 hours. Alcatel-Lucent Switzerland guarantees support organization. "In case of a disturbance, it is assessed via triage as to whether SBB Telecom is responsible – for example, in case of disturbances with network parts – or whether we need to turn to Alcatel-Lucent's helpdesk," Andreas Thurnheer explained. If necessary, a support intervention is made, for example if a damaged camera needs to be replaced. "So far, this support structure has worked wonderfully," Thurnheer emphasized.

A big help for solving crimes

Thanks to the new IP-based video solution, it is now possible to secure video data for handover to investigators up to 24 hours after an incident and keep it available for further investigations. This provides police forces with an additional instrument for solving crimes. At the same time, it has been proven that broadly communicated video surveillance has a deterring effect, thereby increasing security. For visitors to the stations and rail passengers, video surveillance promotes a feeling of safety – particularly in the off-hours. In case of an incident (for example: a fire, the use of the emergency telephone, etc.), authorities can receive an immediate image and overview of the situation thanks to the video surveillance. They can then immediately initiate the appropriate measures (direct customer, direct emergency services, etc.).

"The new solution has proven to be highly successful in practice," said Andreas Thurnheer from SBB. "And what's important for us: the system is very stable." Failures occur

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almost exclusively due to acts of vandalism, and the only malfunction of the platform since commissioning in January of 2006 was quickly corrected." The video surveillance has already been useful to police and crime investigators on several occasions thanks to its fast deployment of the security and assistance personnel of Securitrans. "For video data handling that is in accordance with data protection laws – an example is the release of images at the order of the investigating magistrate – the users in the surveillance centers are strictly obligated to observe the regulations stated in the certified user handbook." Feedback from users has also been positive, said Thurnheer. "The change from a 'flowing' television image to a new state-of-the-art solution with 5 frames (JPEG) per second took some getting used to, but the excellent picture quality and the additional features are a definite advantage."

SeeTec

SeeTec is a pioneer of network-based video surveillance. It individually combines the components of various manufacturers and modifies them to fit specific demands. Thanks to the camera management software developed by SeeTec, the company is able to consult clients in a manner that is application-oriented and manufacturer-neutral. Its offer comprises a customized surveillance solution based on client requirements, extending from planning and consultation to complete installation, training and support.

See◉Tec
Netzwerkbasierte Videoüberwachung

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