

Industry Sector Building Technologies Division

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Case study

Bodø airport in Norway – video system based on wide-area surveillance provides more security

Bodø airport is situated in Norway's Nordland province. It has a runway with a length of 2,794 meters and a width of 45 meters, running east - west. In addition to flights to Oslo and other larger Norwegian towns, regional airlines fly from Bodø to the Lofoten islands. In 2007, the airport counted about 1.5 million passengers. To monitor security-related areas indoors and outdoors, Siemens supplied and installed an intelligent video surveillance system. The ordering party for the project was Avinor AS Norway, the airport operator, which is responsible for almost the entire airport network system in the country.

Avinor wanted an efficient video solution capable of effectively monitoring important sections of the airport building, such as baggage handling, the security check area, and the so-called "Critical Part of the Security Restricted Area" (CSRA). In addition, there was a requirement to ensure the security of parked airplanes and to improve the daily work processes at the airport.

Avinor's security manager Haavard Breivik: "We chose Siemens as security partner for Bodø airport to improve security of critical areas within the airport. With a completely tailored security solution to suit the specific needs, they have heightened security while increasing the efficiency and operating reliability of the airport."

The video surveillance system for the airport was developed and installed by Siemens Security Solutions specialist team. The initial stage of the project covered the design of the system. This included site visits to determine the exact positions of the individual cameras and their viewing angles – mandatory requirements. Especially in the case of intelligent video solutions, such as Siveillance™ SitelQ™ and Siveillance™ People, it is extremely important to position the cameras as accurately as possible, thus making certain that the best detection results are obtained. Also,

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Norway's special weather conditions had to be taken into consideration. The findings from the project were written down in a detailed report and served as a basis for the technical description of the system. The project was implemented based on this comprehensive technical documentation.

The systems that were installed are Siveillance™ SiteIQ™ and Siveillance™ People – two innovative and intelligent video solutions. Siveillance™ SiteIQ™ ensures surveillance of very large areas with only one display. An aerial photograph of the airport is used to display movements in the form of classified icons showing people, cars, trucks and airplanes. Crucial alarm zones were set up. In the event of an alarm, the respective video image appears on the display “picture-in-picture“ and on defined alarm monitors. Siveillance™ People allows the use of various types of video content analysis plug-ins, such as Queue, Crowd or Baggage. At Bodø airport, the Queue plug-in was installed for the first time. This device monitors the queue at security check to determine the number of people waiting, enabling the system to inform about the anticipated waiting time for leaving passengers and for staffing planning.

The core of the plant is the video center consisting of two system cabinets. Accommodated in these cabinets are the servers of the intelligent video surveillance systems, the IVM video management systems with I/O server, the digital Sistrore CX 8 video recorder and a Simatrix Neo video crossbar. Simatrix Neo ensures operation should the network fail. The cameras are connected to the center via fiber optic transmission. Another challenge was integration of the existing dome cameras into the new system.

The entire video surveillance system is monitored and operated from a control center using the IP network or a redundant operator panel with analog monitors. If an alarm is set off either automatically or manually, relevant camera images appear directly on the alarm monitors.

A sophisticated user and access right concept was developed in cooperation with the client. This concept allows certain users with individual rights to access the system or parts of it from designated locations across the entire airport.

Airport personnel attended specific training courses to become familiar with the system's functions and operation, ensuring optimization of the work processes at the airport.

The airport at Bodø now operates a video surveillance system perfectly tailored to its special needs. All security-related areas are reliably monitored, camera images are recorded and, in the event of an alarm, a quick response is ensured. In particular, surveillance of critical open spaces

with only one TFT display is very user-friendly. What's more, the statistical information provided by the system about the waiting area at security check will help make optimum use of personnel.

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