

Axis helps moscow hospital monitor patients and increase security.



Organization:
Moscow Hospital

Location:
Moscow, Russia

Industry segment:
Healthcare

Application:
Patient monitoring
and premises security

Axis partner:
EcoProg

Mission

The Institute for Children's Emergency Surgery and Traumatology in Moscow needed cutting-edge technology solutions for its new surgery ward to provide improved medical care to children with serious injuries and in need of emergency medical care, as well as to secure the hospital premises with a reliable video surveillance system.

Solution

To address its needs, the hospital decided to install network video surveillance systems for both medical and security purposes. Axis network cameras were recommended to the hospital management by EcoProg, which had been hired to implement the high-tech video systems as a part of engineering infrastructure also being installed by EcoProg. "We have worked with Axis before and are familiar with their state-of-the-art digital network cameras," said Andrey Vorobyov, chief of the security systems department at EcoProg. "This was a complex task for an important site, so we needed to ensure we used the most reliable equipment to satisfy

the hospital's demands." Network cameras were chosen over analog cameras because of their flexibility, quality, ease of installation and use, as well as cost-efficiency. Quality is one of the main advantages. Network cameras help reveal new details: scaling images from high-resolution cameras shows small details while a picture from an analog TV camera is blurred and the details are obscured.

The field of view of high-definition network cameras is 4 times broader than that of analog cameras, which helps decrease the number of cameras while maintaining the quality of video surveillance. In addition, the video surveillance system installed at the research institute provides the following advantages:

- > Reliability: digital video information may be transmitted via a network or fiber optic line, which barely loses its qualities with time; there is no need for special equipment (such as an amplifier/corrector etc.)

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- > **Stability:** if the video recorder of an analog system breaks down, 8 or 16 video channels are lost at once, while the breakdown of one network camera does not influence the work of others.
- > **Signal constancy:** a digital signal is not distorted when transmitted via communication lines, and protected optic fiber lines are resistant to the influence of high-intensity electromagnetic fields.
- > **Possibility of modernization:** the throughput of the existing fiber optic lines is sufficient to, in the near future, serve the addition of more cameras.
- > **Efficiency:** the amount of equipment used decreases. Resources freed by the lower required capacity and the smaller size of equipment may be used to increase the size of the system's archive.

Result

"With the new network video surveillance system in operation, we can enhance treatment and monitoring of our patients. Medical staff is alerted immediately if a child needs emergency care," said Dr. Leonid Roshal, general director of the Institute of Children's Emergency Surgery and Traumatology. "Our patients – children with serious injuries or recovering from surgery – are the most vulnerable and we need to ensure we provide high quality and fast medical treatment 24 hours a day." Not to be overlooked, the Axis security cameras enable the hospital to monitor the premises and record images from all the cameras deployed 24 hours a day. "With the hospital building constantly monitored our staff has a feeling of control and security," said Dr. Roshal.

Patient monitoring

For the special medical video surveillance system, EcoProg installed 119 Axis network cameras and video servers (AXIS 213 PTZ Network Cameras with AXIS 213CM Connection Modules providing two-way audio and alarm inputs/outputs, and AXIS 241SA Video Servers).

Axis network cameras were deployed in all patient wards to enable the nurse on duty to monitor the wards remotely. Every time a patient activates the nurse call system, an image from the respective ward automatically pops up on the screen at the nurse's desk. The nurse can immediately see which patient in which ward requires care. This is especially helpful if several alarm calls are received simultaneously. The nurse can quickly assess the situation and prioritize patient needs. The cameras are also connected to sound sensors installed in the wards. When sound sensors are activated, the image and sound from the ward are immediately transmitted to the nurse's post. For example, if a child begins to cry, the nurse will be alerted and can react accordingly. In addition, the cameras installed in wards are equipped with microphones that enable two-way communication between a patient and the nurse.

Security surveillance

The hospital's security surveillance system uses 93 network cameras (AXIS 214 PTZ, AXIS 216FD, AXIS 212 PTZ, AXIS 221, AXIS 225FD, AXIS 232D) and AXIS 292 Network Video Decoders. EcoProg installed these cameras both inside and outside the building: in the lobby, corridors, near all entrances, exits, elevators, as well as in staircases and parking lots. The system enables constant remote monitoring of the entire hospital and its premises. The cameras are connected to movement and alarm sensors and are constantly in a 30-second pre-recording mode. This means that digital recording begins automatically when a movement sensor or an alarm system is activated and includes the images from the preceding 30 seconds. For example, if a person enters a surveillance zone, a movement sensor will automatically trigger transmission of the image from the camera to the security guard station and begin live recording. All recorded images are archived and can be studied at a later date if needed.

