

Cameras at the University efficiently prevent crime.

Surveillance system of Charles University in Prague is built upon Axis IP cameras.



Organization:
Faculty of Science, Charles University, Prague

Location:
Prague, Czech Republic

Industry segment:
Education

Application:
Anti-theft surveillance, safety and security

Axis partners:
MC Systems & Services, ATEAS

Mission

Charles University has been dealing with the issue of theft in the public and enclosed environment of the historical buildings of the individual faculties for long time. It has to contend with technical problems, such as poor or extreme lighting, and difficulties that are associated with the open-minded academic environment in relation to camera installations.

Solution

At the time when the university began to deal with the issue in an active manner, more than eight years ago, there was a heavily limited number of IP camera solutions available on the market. The university chose the best that the market had to offer at that time, and as such reached for Axis cameras. Later times and experimenting with products of other manufactures showed that it was an ideal choice. Axis cameras, which natively cooperate with the comprehensive ATEAS Security video surveillance solution, made it possible to build upon a solution that does not prevent continuous future growth from the outset.

Result

The cameras deployed inside the fragmented premises of the historical buildings, often with more than half-meter thick walls, or monitoring dark passages, had to cope with insufficient lighting and contrasting light in the form of sudden glare. Whereas competitive cameras failed completely, the solution was found in cameras with an infra-red filter (e.g. AXIS 223M), yet outdoor cameras were initially mounted with additional lighting that unnecessarily limited the visible angle. This problem was eventually solved with the introduction of Axis cameras with the Lightfinder function for color night vision.

“Today, we no longer need to use additional lighting in the outdoor areas, as with cameras with Lightfinder, such as the AXIS P3364-VE Network Camera dome solution, we completely manage with the lighting background of the city.”

Milan Richter, director of Information Technology Center at Faculty of Science, Charles University in Prague.

Cameras solve the problems with thieves

The first installation of IP cameras at the university involved the monitoring of public entrances, that is large gateways of the main buildings with a heavy flow of students, professors and casual visitors, and unfortunately sometimes also individuals who exploit the liberal academic environment for illegal self-enrichment. One of the initial issues confronting the first cameras installed into dark buildings was seen in the situation where the lens was exposed to a large amount of outdoor lighting and blinded at a completely critical time. The university tried mounting various high-end solutions from various camera vendors, but the problem was eventually solved with the introduction of the AXIS P3364 Network Camera with WDR (Wide Dynamic Range) technology, which are able to handle the situation well. The administrators were interested in the WDR feature because it allows the camera to quickly adjust and compensate backlight, enabling it to obtain a sharp facial image of an incoming individual.

“For example, on one occasion there was an unknown person ringing and asking the gatekeeper to open. It turned out that he was a thief. Thanks to readiness of the cameras we have a great shot of his face, which would later serve as evidence,” added specialists from Information Technology Center at Faculty of Science, Charles University in Prague. The individual faculties are public buildings, thus in theory it would be possible to restrict and control access to their premises, as is the case e.g. at CTU in Prague, however, Charles University takes pride in its free access, and sensitive IP cameras represent one of the ways to maintain this freedom in the future.

Smart motion detection saves server requirements

The university first began installing the initial version of the surveillance system in 2005–2006, belonging among the pioneers in the field of digital CCTV usage. The situation eventually reflected on its selection of cameras, where Axis was one of the few then-available solutions on the Czech market. This turned out to be a very good choice.

After switching from a propriety software solution to the integrated ATEAS Security surveillance platform, with which all Axis cameras are natively integrated, the combination of both solutions enabled the easy addition of further camera points without the need to change the whole system.

“At later stages we just kept the established practice in terms of the convenience and cleanliness of the system. Thanks to the great cooperation of the cameras with ATEAS we are able to work with them in a much better way than with the competition as, for example, the software performs motion detection on the camera, thus saving server requirements. This enables us to currently utilize a single server for recording and storing data,” adds Marek Mika from Information Technology Center at Faculty of Science, Charles University in Prague.

Cameras with Lightfinder proven in outdoor areas

Axis was then the only supplier who could offer cameras capable of switching to night vision (AXIS 221, AXIS 223M), which proved very effective for the university's night-time monitoring of outdoor areas.

The university considers the possibility to do without additional lighting during the night-time monitoring of outdoor areas as one of the great benefits of contemporary technologies. At first, it actively used Axis cameras with the possibility of additional IR lighting, which however considerably limited the surveillance radius of the camera. Today, AXIS P3364, AXIS P1354 or AXIS P1344 Network Cameras with Lightfinder function are deployed in the outdoor areas (the most recent installation was performed in the botanical gardens of the Faculty of Science), which are able to properly monitor a night scene with only the city background lighting. The benefit in this case primarily lies in a considerably extended field of view. A single camera often proves to cover an entire courtyard with sufficient lighting quality.

