

Axis cameras supervise Prague Zoo and illustrate animal life.

Capturing stories from Prague Zoo requires high quality surveillance solution.



Organization:

Prague Zoo

Location:

Czech Republic

Industry segment:

Government

Application:

Safety and security, remote monitoring, broadcasting

Axis partners:

ESPRIT Machine, NUUO

Mission

Nowadays world-famous and modern zoos are able to offer visitors undisturbed experience while ensuring their safety during tour at individual exposure complex or in pavilions. Prague Zoo proposed such an approach as well. Taking into consideration continuous development and ongoing preventive measures in the flood area, the environment of Prague Zoo is very dynamic. Terrain challenges had to correspond with deployment of a sophisticated IP camera system to match the current trends in the field of video surveillance. Establishment of live video broadcasting was a great challenge as well. Fans of the zoo consider online broadcasts as a pleasant enhancement of their home multimedia entertainment. However, all this creates great demands in the field of quality and availability of the transmitted videos, and the quality of the whole solution.

Solution

Prague Zoo's surveillance system runs on 16 servers with the NUUO system, which are integrated in a local network. There are a total of 116 cameras at Prague Zoo, 14 of which are Axis network cameras.

Two of them are used for security purposes – one monitors an elephant simulator for children, which imitates a journey through a jungle on an elephant's back, and the other enables surveillance over the guest residence.

The other Axis cameras are deployed in key installations, where quality and reliable surveillance over animals is necessary, with the option of public broadcasting – e.g., live coverage from the gorilla pavilion or monitoring the incubation of monitor lizards.

Result

The surveillance system in Prague Zoo is robust and represents a solution which is sufficiently scalable to respond to changes in the premises' layout and new requirements of zookeepers for supervision over animals, and other options for public video transmission. Axis cameras provide uninterrupted monitoring in top quality. This contributes towards the perception of Prague Zoo as a modern and continuously growing institution in the eyes of visitors.

“We’ve deployed Axis cameras in Prague Zoo in key installations, where quality and reliable transmission is a must. Sophisticated software, enabling detailed settings of camera and high quality video images, is among the main assets. Another important aspect is reliability, both of the cameras and Axis itself. Thanks to their long tradition, we know that issues with incompatibility of individual Axis products are not a risk. And that support will always be available, which is necessary for us as well as for smooth functioning of the surveillance system in Prague Zoo.”

Petr Šach, ESPRIT Machine.

From monitoring of premises to monitoring of animals

While the primary function of the surveillance system in Prague Zoo was security video surveillance, breeders' requirements quickly started to grow. Monitoring births of animals is of primary importance, where camera supervision enables limiting the breeders' presence and at the same time maintaining the option to intervene in case of complications.

One of the first requirements of breeders for the camera surveillance was monitoring the turtles' egg-laying site – during egg laying it is necessary to have a timely overview, since breeders continuously remove the eggs and place them in hatcheries. It was the hatchery that was one of the most successful locations for video streaming from Prague Zoo. This, however, did not involve turtles, but the incubation of monitor lizards. Under the slogan Birth of Dragons, those interested could watch how small lizards break out of their shell using their egg teeth, thanks to Axis cameras. From a technical point of view, this project was interesting because heat generated by the cameras had to be considered and the hatchery heating adjusted so that the eggs would not overheat. It was also important to set the correct level of supplementary lighting – the lowest possible level is necessary in order to prevent disturbing the environment and at the same time provide a good image, because this was a reason for video streaming to become so successful with the general public.

IP cameras help breeders not only to monitor or archive events in the pavilions. They can, for example, help indicate when female bears are pregnant, because it is difficult to notice it. Audio recordings from sensitive built-in microphones inside some of IP cameras help with clarification for breeders.

Gorillas are great celebrities

From a long-term perspective, the most successful animals at Prague Zoo in terms of public interest in video coverage are gorillas. A community of fans was established and Prague Zoo provides an opportunity to follow these big anthropoids virtually.

Video coverage of the life of a gorilla group led by a male called Richard is based on Axis cameras. After recent floods (it is worth mentioning that two Axis cameras did survive the flood, one of them even despite being submerged), ESPRIT Machine had to carry out a new installation including cabling in the gorilla pavilion.

Constant changes

Prague Zoo's surveillance system was originally based on the V-GUARD system. After the shift to the NUUO system, it now offers better scaling and connectivity – and primarily flexibility. The current 116 cameras do not represent the final number, because the premises are dynamically developing and requirements of breeders and the public keep growing.

This does not involve just growth of the zoo and moving the pavilions or entryways to the zoo premises. Administration of the zoo is open to new technology and innovations, which is why the field of online monitoring of animals will keep increasing. Popular project Slow TV referred to it, when AXIS Q3505-E, AXIS Q1615 and AXIS Q1635 Network Cameras helped several hundred thousand people at first to watch penguins during daytime, followed by successful live streams from armadillos at night combined with a daytime view from the beautiful home of the giraffes.

In terms of the surveillance system, this means that more requirements for top solutions will come, such as the monitoring of salamanders, where a special application provided camera movements in order to find the salamanders in the aquarium. Just as with all critical applications, ESPRIT Machine opted for installation of Axis cameras. There are many specifics of a surveillance system in a zoo. These may involve vandalism: ESPRIT Machine technicians had to try hard to secure the cameras from an orangutan youngster, who had demolished one after another in its enclosure. However, even in these challenging conditions, the development of the surveillance system in Prague Zoo is a tool that contributes to the success of the premises and thus indirectly to better conditions on both sides of the walls, fences and barriers.



Photos: Tomas Adamec

