



CASE STUDY

THE LOGIPIX SYSTEM

Helping to create a secure environment in Hungarian football stadiums

Solution

The governing body for football in Hungary, the Hungarian Football Association (MLSZ) decided to install new video surveillance systems in the Hungarian Premier League stadiums. They started the Stadium Security Program in which the Logipix Stadium Video Surveillance System was chosen to be implemented in the stadiums. In the first phase of development the Logipix System was installed at the grounds of six Hungarian first-class football teams. The stadiums are currently being monitored by the Logipix Multi-megapixel Panoramic camera system, which consists of several 15 Megapixel Logipix cameras and additional Full HD PTZ cameras which are linked to the panoramic system. Logipix Network Video Recorders were also installed to record and store security footage. Operators use the Control Center software to monitor every seat in the stadium which helps staff to effectively handle any violent or inappropriate incidents. The project is an ongoing one with the main goal being to install the Logipix System in stadiums across Hungary.

Benefits

The Logipix System helps to ensure permanent security footage of every seat in each stadium. Several individual 15 Megapixel Logipix cameras cover the entire grounds, with their images being stitched together to create a panoramic view. The system is easily restructured in case of new developments, and the images can provide face recognition thanks to the high quality of the pictures produced. All seats are covered by the Logipix cameras and owing to the stitched panorama images there are no redundant areas. Panoramic images allow an operator to trace the movements of an individual whilst they are on the grounds. Operators can identify and respond immediately to any disorderly conduct at the seats.



The integrated eight Full HD PTZ cameras at the seats work in cohesion with the multi-megapixel panorama system. The objects in the monitored area are covered by several predefined specific points on the Logipix image and on an additional map. Based on these guidance points the HD PTZ cameras can find a selected area in the stadium, which has been appointed by the operator on the Logipix panorama image or on the displayed stadium layout.

In spite of the complexity of the system, thanks to the clear software interface it is still very user-friendly. Operators at the monitoring room use the Control Center software to manage the complete security system. If an incident occurs at the seats, operators can easily see them on the monitors and can retrieve high resolution (1000 pixels/meter) optically zoomed images from special Zoom windows quickly. Therefore necessary actions can be taken immediately to prevent further crowd outbursts, serious injuries and significant damage in the stadium.

All the cameras in the panoramic camera system are installed individually in the stadium. This helps ensure that Logipix provides an efficient and flexible service.





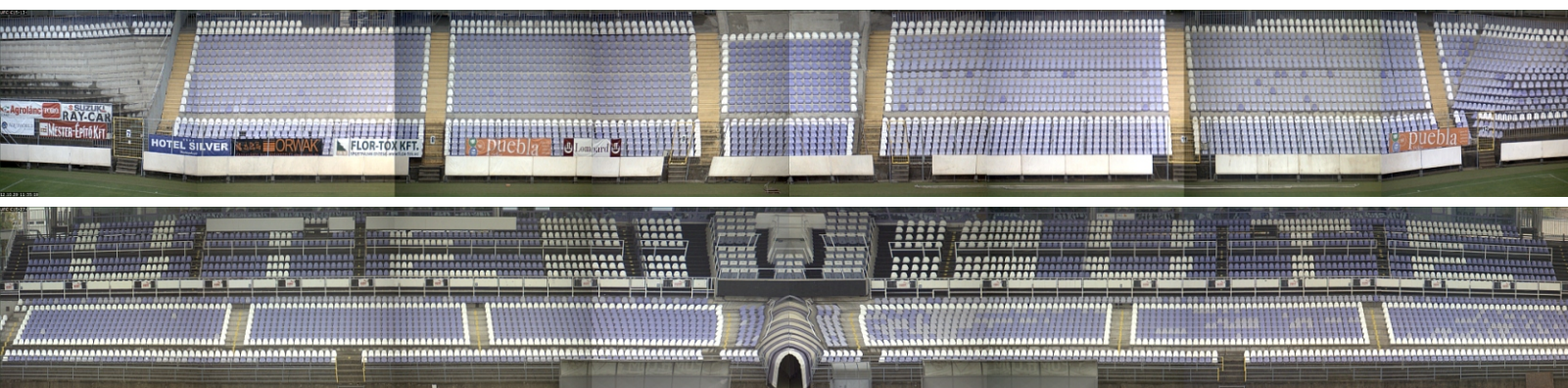
By being able to monitor large areas, and zoom in on certain sections and individuals it is easier to effectively dissipate any violence that may occur or that have started. More visual information of an incident provides more effective action to handle the situation. Additional Full HD PTZ cameras also permanently scan the sections of the stadium. By the Appoint n' Move interactive

control functions PTZ cameras can be controlled easily on their own camera pictures, furthermore on the displayed Logipix panorama images as well by appointing an exact image area. If an incident is currently happening, operators will see it on the Logipix panoramic image and then turn on one or more Full HD PTZ cameras to the targeted area in order to record higher resolution video evidence and pass on the necessary information to the ground security staff or later to the police and courts.

MLSZ replaced several hundred traditional VGA cameras with the multi-megapixel Logipix cameras to cover entire stadiums, which significantly reduced the cost of installation and maintenance. Intuitive Control Center software saved valuable training time as operators were, and are able to learn basic system management in a matter of hours.

Motivation

Football matches are one of the most crowded community events in Hungary. Tens of thousands of people together in one place creates a possible high risk environment. The Hungarian Football Association decided to increase the security in the Hungarian Premier League stadiums. The most important matter was to install a reliable system which could help prevent any unnecessary incidents by providing high-definition videos to help the security deal quickly, effectively and appropriately to situations, as well as to provide irrefutable evidence in court.



Detailed Description

STP Limited developed a complex video surveillance system to help create safer environments in sport stadiums. Full HD PTZ cameras are integrated into a Logipix multi-megapixel panoramic video system. Together they form an effective system, which fully utilizes the advantages of both the HD PTZ cameras and the multi-megapixel camera system. The brand-new system makes a revolutionary step in stadium surveillance. The Full HD PTZ cameras can be controlled interactively in the Control Center software by selecting an exact area on the Logipix panoramic image. The appropriate PTZ camera turns to the right direction and optically zooms in according to the operators selection, the high quality images help to provide security teams with valuable information and if needed video evidence in court.



One of the most important stadiums in the project is that of Újpest FC, as incidents occur there frequently. In the Szusza Ferenc Stadium thirty 15 MP Logipix cameras cover every seat of the 13488 capacity area providing 250 pixels for every meter. The pictures of the cameras are stitched into four panoramic images. This solution ensures that the entire scene is recorded and retained. Operators in the control room work on four workstations with 23" Full HD monitors.

Additionally seven 9 MP Logipix cameras and two Full HD PTZ cameras were installed to monitor all the entrances and exits of the stadium.

