HungaroControl

Hungarian Air Navigation Services

REMOTE TOWER

Remote Tower at LHBP is a project of deploying a remote tower facility at Budapest by integrating the actual A-SMGCS and a new camera system as the main system for controlling the airport.

Straight to the point

THE MAIN CONTRIBUTORS OF THE REMOTE TOWER PROJECT ARE INDRA NAVIA AND SEARIDGE TECHNOLOGIES. AS EVERY COMPLEX SYSTEM IT ALSO HAS SEVERAL OTHER SYSTEM PROVIDERS FOR THE MET SYSTEM, NETWORKING, CONSOLE, ETC.

PURPOSE

The goal of this project is to provide business continuity of air traffic services for Budapest Airport. HungaroControl has chosen remote tower technology for its long-term strategy to enhance situational awareness and safety. Tower independent ATS service with high redundancy (from sensors including data processing ending CWP) should be a perfect platform for providing aerodrome services at a cost effective level and may be a source of further business.

FEATURES, BENEFITS AND SOLUTIONS

The concept of remote tower at Budapest is a complex integration of different type of sensors including visual and radar. Distributed cameras along the two runways and aprons providing general visualization. Pan-tilt-zoom (PTZ) cameras covering all manoeuvring area to provide detailed information. Captured video stream will be placed on a large video-wall providing common visual reference for all ATCOs and on in-CWP positions in front of ATCO providing role specific and detailed visual information regarding his or her area of interest or responsibility.

HungaroControl has a sophisticated A-SMGCS providing safe and stabile air traffic services for Budapest Airport. The key element of remote tower at LHBP is the A-SMGCS. Without any visual references typically during bad weather condition HC can be control the traffic at about 70% of the maximum capacity. And of course he can provide this level of services form outside of the tower building, too. Adding visual information by a camera system HC can achieve the actual maximum capacity and safety level or might increase them from distant place.

Displayed video can be labelled with graphical symbols and flight data. Additional information also can be presented to help manage the situations such as runway occupation, direction of flight (13-31), etc.

PTZ camera is assigned one-by-one to a specific controller position and can be controlled independently providing maximum details of visual information detailed. Thermo sensors are also housed in PTZ. Supervisor can be easily adjust the visual presentation by presets to adopt the different traffic situation and weather circumstances. He or she can choose filters, outline geographical borders or adjust saturation or contrast.

Bidirectional integration of A-SMGCS and camera system provide sophisticated functionality for ATCO to enhance situational awareness and safety and also decrease workload. The A-SMGCS can assign video picture to any of the tracks as a video thumbnail. The ATCO can click on this thumbnail and the integrated system move quickly the assigned PTZ camera to this track (or place of that) and display the captures video to the ATCO's display in front of him or her. So the ATCO can observe what that's really is: plane, animal, truck, human, etc.

With remote tower we can provide more valuable visual information for ATCO to enhance situational awareness and level of safety.

The remote tower technologies is a cost effective business development platform for regional and seasonal airport. HungaroControl gained a possibility to demonstrate the capabilities of such system for the entire community participating in a SESAR LSD project.

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