Autor Administrator
Utorak, 15 Svibanj 2018 18:40

STRIBOR - Intelligent System for Wildfire Video Monitoring and Surveillance (later named OiV Fire Detect AI - https://firedetect.oiv.hr) is a project realised with Croatian state owned company OiV - Odašiljaći i veze (Transmitters and Communications Ltd.) for Croatian Forest Lrd. state owned company responsible for all state owned forests in Croatia. The system performs continuous monitoring of the surrounding area in search for signs of fire and smoke in monitoring mode, and provides commanding officers with information on the severity and spread of fire in surveillance mode. All past events are recorded and kept for 7 days in searchable archive.

System description

All countries suffer from occasional forest fires and wildfires that cause material damages and endanger all life. Forest fire prevention and early and rapid reaction are measures for damage minimization implemented by forest managers.

Forest fire video monitoring and surveillance has been recognized as useful tool for damage prevention and early fire detection in forest fire management. Video sensor located in the area that would otherwise be difficult to access provides video information about the state of the surveilled forest.

The Forest fire video surveillance and monitoring with early fire detection is a system achieved by:

- mounting video sensor on carefully selected locations

- ensuring data transmission of video data to the data center and

- control commands from data center to cameras,

- software system for video surveillance and monitoring with early fire detection and

- web interface for operation on the system.

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Sensors are located on existing communication infrastructure which guarantees good area coverage and ensures existence of electrical power and communication for video cameras as well. Video signal processing takes place in data center and resulting signal is continuously transferred to responsible firefighting operations center, and, if needed, to other authorized stakeholders providing them video information from the field.

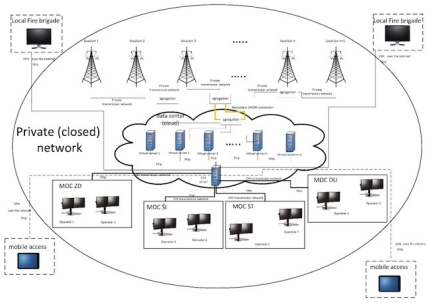
The software system STRIBOR was developed by group of scientists from University of Split. The system consists of modern and innovative intelligent algorithms for forest fire detection, integration with geographical information system, support of data analysis for decision making, distributed scalable architecture ensuring isolation and concurrency of all parts and integration of all information in web user interface.

Engineers and technicians from OiV proved to be skilled for planning, projecting and installation of the system infrastructure which includes is camera mounting, secure telecommunication network, data center installation and maintenance. Skilled workers trained for work on heights

have mounted over 80 cameras on telecommunication pillars in record period of time.

The Forest fire video surveillance and monitoring system is client server based having final users as clients. System users are organized in Monitoring Operation Center(s) – MOC. Video wall plays live video with emphasized suspicious parts of images for focusing of attention. Operators are operating up to 6 location and work on computer with 2 displays. Operators are responsible for alarming the fire brigade in case of fire alarm and controlling the camera on location of fire.

Basic architecture



Camera mounted on pillar

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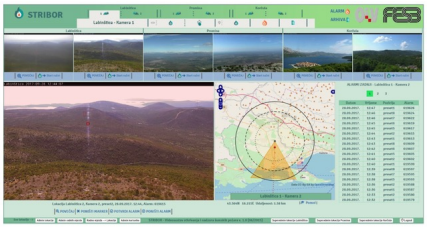
Web user interface



Monitoring and Surveillance Center (MOC)

Video about main system features:

https://vimeo.com/channels/982725