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faedo

FIRE THERMAL DETECTION

Automatic detection, location and monitoring of forest fires through thermal image.

Introduction

Among FAEDO tools against forest fires, the automatic detection system through thermal analysis offers the most efficient solution in the market for the early automatic detection, location and monitoring of forest fires.
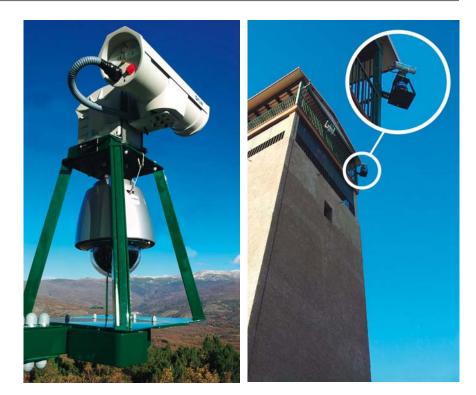
It consists of a control center and one or several lookouts which constantly analyze 360 degrees around them. Meanwhile an advanced algorithm identifies and locates quickly and automatically incipient fires. For its fulfillment, a great fieldwork with many prescribed fires and the support of forest fire experts have been performed. The final result is an expert georeferenced system which allows easy configuration, minimal false positive rate and optimal detection capability.

Features

• Low power consumption: Use of renewable energies.

• Adaptable to multiple communication system, even GSM communications.

• 100% remote control system: operations, configuration, updates and tests.

• Design of a customized detection solution through previous terrain studies.

• Integrable with the authomatic smoke plume detection system

Main components

- **Thermal sensor:** uncooled sensor, high performance and low maintenance. Installed on a pan and tilt movement system. Interchangeable optics.

- **Visible camera:** independent movement, low luminosity and high optic zoom, from 37x .

- **Meteorologic station:** real time analisys of temperature, humidity, direction and speed of the wind. GPS and compass for higher precision in the measurements .

- **Process and control system:** SW included to analyze the image and control the equipment.

- **Lookout:** 10-20m autosupported tower with anti-vandalism system. Possibility of using existing infraestructures.

- **Control Center:** Equipment and necessary software for the remote control of each detection lookout and fire management.

Functionalities

- Continuous working 24h/365 days per year.

- Day and night detection even under adverse weather conditions such as fog.

- Highly reliable: minimal number of false positives thanks to its expert detection algorithm.

- Analyzing speed up to 360° in less than two minutes.

- Detection range up to 15km (700km2 per lookout).

- Precise location through georeferenced image without triangulation.

- Real time fire front and extinguishing works monitoring.

- Authomatic and manual working.

SW Tools

- **FaedoCam:** Real time image, up to 20 cameras, individual control of each camera, visual an acoustic alarm warnings.

- **FaedoMaps:** Alarm location on the maps, 3D viewer layers loaded from local computer or WMS servers, real time indication of covered area by each camera.

- **FaedoConfig:** Camera presets modification, temporal masks for sensility adjustment.

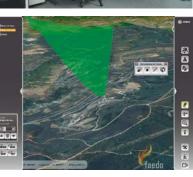- **Data base:** Storage of alarms, weather information and users actions.