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WILDFIRE ANALYST

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Once wildfires start, fast and accurate information is essential to minimise impacts. Wildfire Analyst is a registered software that provides advanced solutions for wildland fire management. The software provides real-time analysis of wildfire behaviour and simulates the spread of wildfires. Simulations are completed in seconds, to support real-time decision-making.

Wildfire Analyst software was specifically designed to support initial fire situations, giving the Fire Chief and Incident Commander the critical early intelligence needed to support resource allocation decision-making.

The software uses predefined weather scenarios, or current and forecasted weather obtained via web services, to model fire behaviour and provide outputs within seconds. This fast performance facilitates the use of outputs in real time and allows for constant adjustment based on field observations and deployment decisions by the incident team, improving the operational response of fire crews.

Application scenario

Software that integrates real-time weather information with advanced modelling to simulate and calculate wildfire behaviour and provide instant information to support real-time decision-making.

Digital technologies

Geo-technologies and advanced analytics based on remote sensing: satellite and LiDAR.

Dashboard and mobile devices.

Socio-economic impact

- Economic: Quick and effective decision-supporting tools to reduce fire damage and costs.
- Environmental: High precision modelling of forest fires and forest fuels permits the quick identification of critical points and faster decision-making capacities to combat fires.
- Social: Accurate information and appropriate analysis saves lives in wildfires and increases public safety, emergency planning and risk prevention.

More info: https://technosylva.com/

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Purpose of the tool

Wildfire Analyst software supports decision-makers in emergency management, by providing real-time information on the situation and the potential evolution of wildfires. It uses advanced state-of-the-art wildfire behaviour simulation to predict the spread and potential impact of fires. This critical information is used to support the dispatching and allocation of resources.

The software is specifically designed to provide analysis capabilities for a range of situations and to be used by people with minimal knowledge of GIS data. This greatly increases usability, allowing users to concentrate on interpreting simulation outputs, and to make important decisions about how and where to deploy firefighting resources.

Description of the tool

The tool integrates Geographical Information Systems (GIS), remote sensing and LiDAR data to support decision making in wildfires and emergency management. It provides simulations very quickly and repeatedly as conditions change. It is designed to be used with a laptop, tablet or mobile devices at the incident command centre, in the operations centre, or directly on scene, providing outputs in under a minute.

Wildfire Analyst provides a range of analytical outputs, available as GIS maps and charts, that empower more accurate and timely decision making.

The company also offers wildfire risk forecasts, using the Wildfire Analyst APP to generate twice a day 10+ million wildfire simulations. The application provides hourly wildfire risk forecasts for a 3-day period. This information is used to support key decision-making processes, such as preparedness, and fire crew activation and placement.

Areas of socio-economic impacts

Social	Real-time wildfire information reduces fire casualties. The tool allows users to analyse fire scenarios through a high usability.
Economic	Fast decisions and reaction capacity save time and money in wildfire fighting and reduce the enormous economic losses caused by wildfires.
Environmental	Climate change, higher temperatures and the lack of forest management have dramatically increased the severity and damage of wildfires in the last decades. Simulations allowing rapid and effective decision-making in both fire suppression and prevention are essential to reduce fire damage.