# Advances in an emergency management software for the Canary Islands

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## Summary

*Capaware is a free software platform to develop 3D multilayer geographical applications. The project has been developed by the Technological Institute of the Canary Islands and the University of Las Palmas de Gran Canaria during the last years.*

*The platform makes simple the development of 3D applications over large geographics areas. It has the classics features of a GIS software and it permits the integration of WMS layers over the 3D land and also 3D designed objects. The system also allows the user to manage the resources and objects in the terrain.*
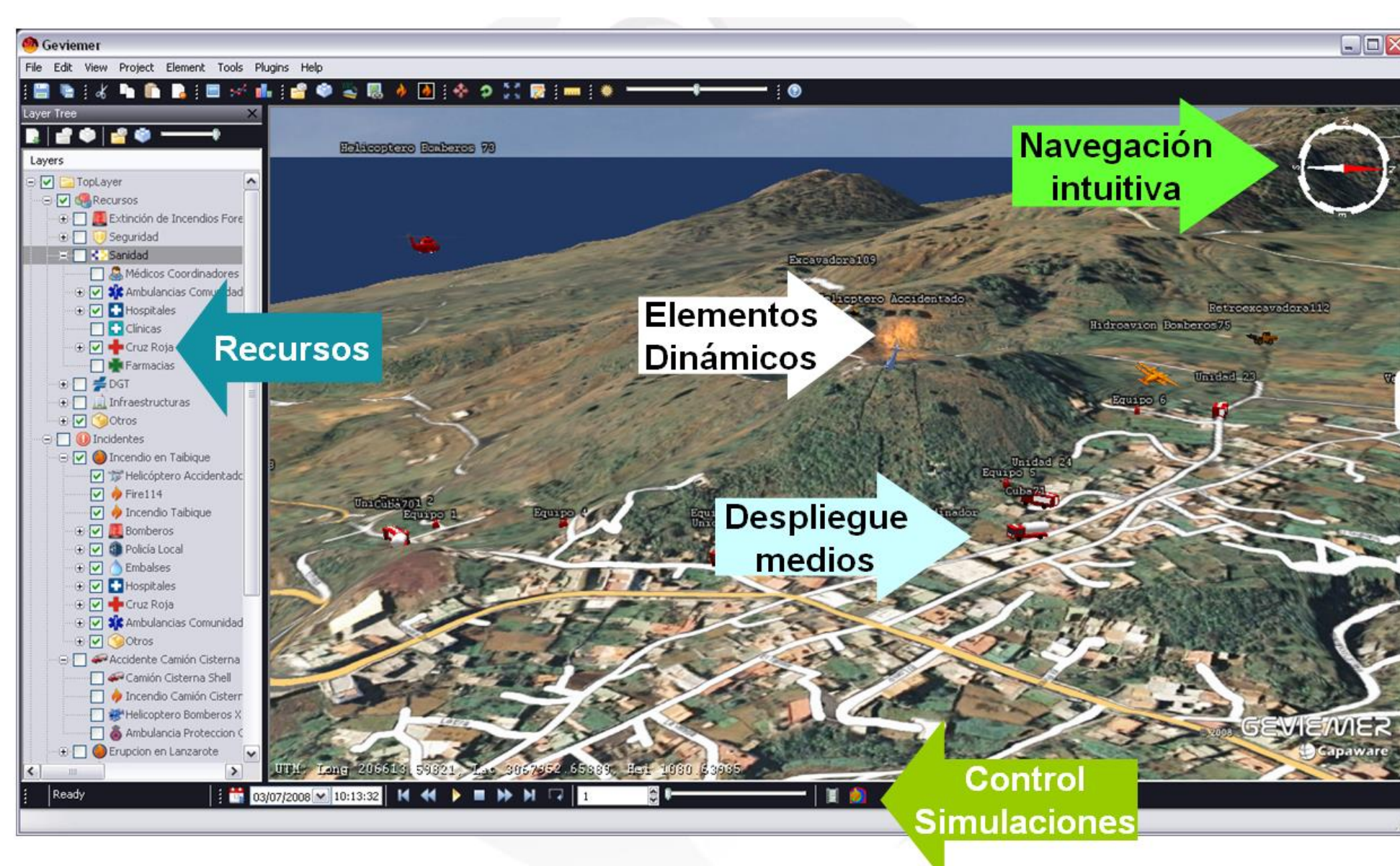
*Currently, the project is oriented to an application that implements an emergency management software for the Cabildo of La Palma island, in particular, it is focused on the forest fire predictions.*
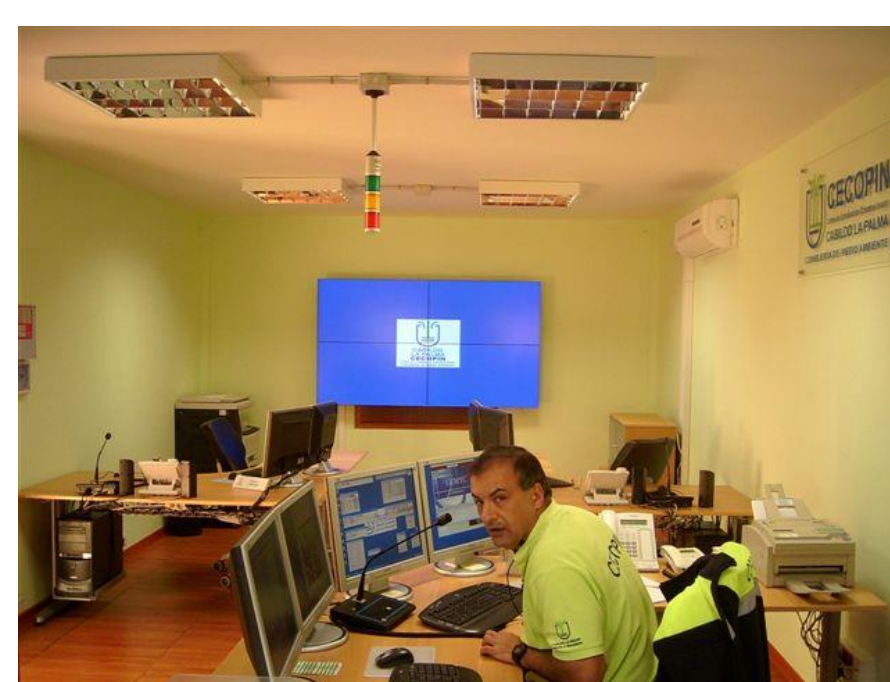
*With the graphics capabilities of the developed tool, a plugin for fire simulations has been developed. This plugin makes use of FARSITE which is a leading fire behavior simulator software. FARSITE uses spatial information on topography and fuels along with weather and wind files. This allows getting realistic 3D simulations that will help local authorities to prevent emergencies and to coordinate the task force in emergency situations in a reasonable time.*

*Our proposal is based on projecting on a video-wall, in the operations or crisis room, with the capacity for georeferencing all kinds of data required for taking important. On the other hand, there is an online management website that keeps a catalogue of services. Among some of their available capacities is the location of vehicles and emergency staff, video streaming from outside cameras, importing data from the client's information system (such as human and material resources, natural areas at risk, protected resources, etc). This is managed from the web application that receives data from GPS receivers, shortest path services, simulation services based on mathematical models, etc.*
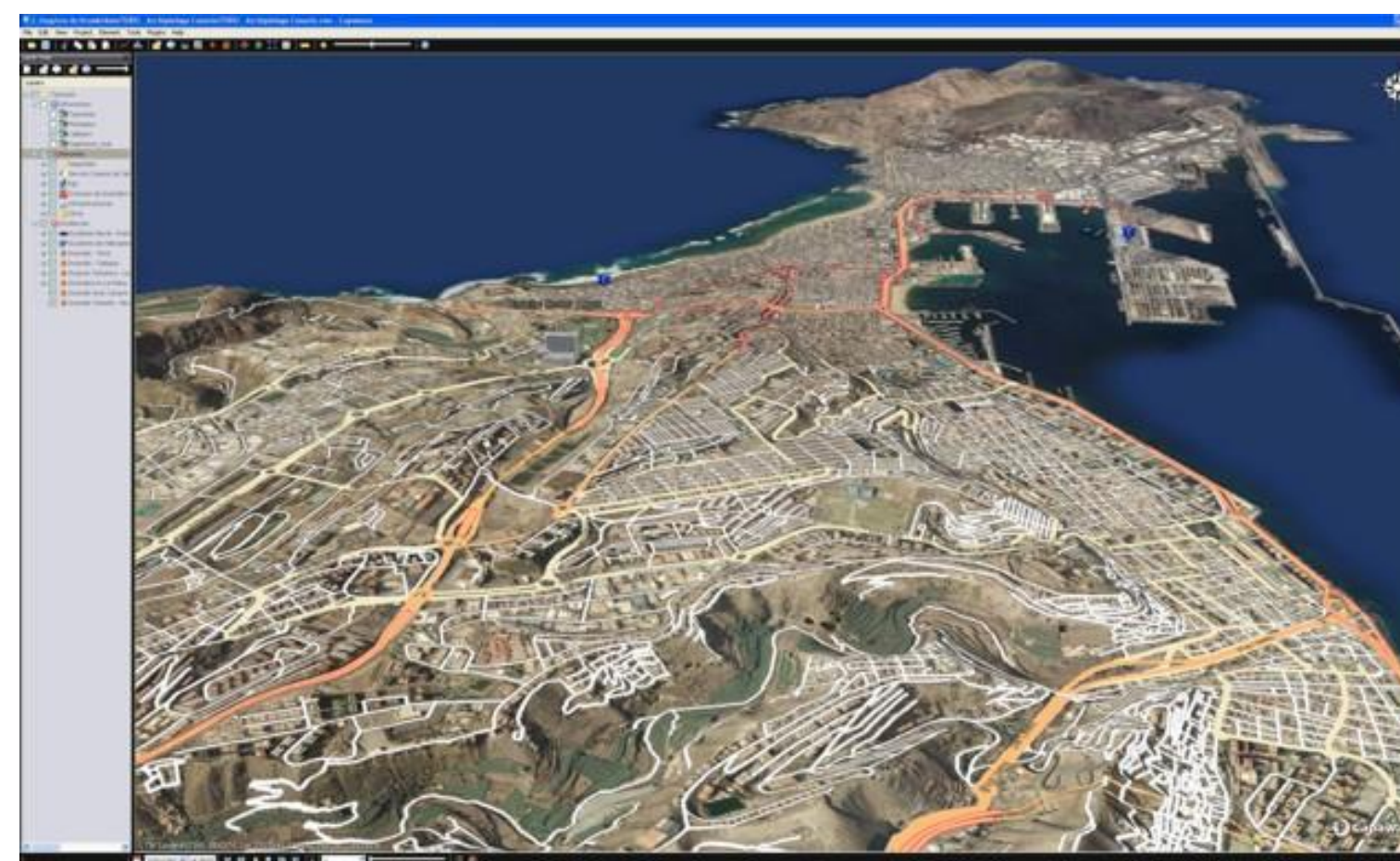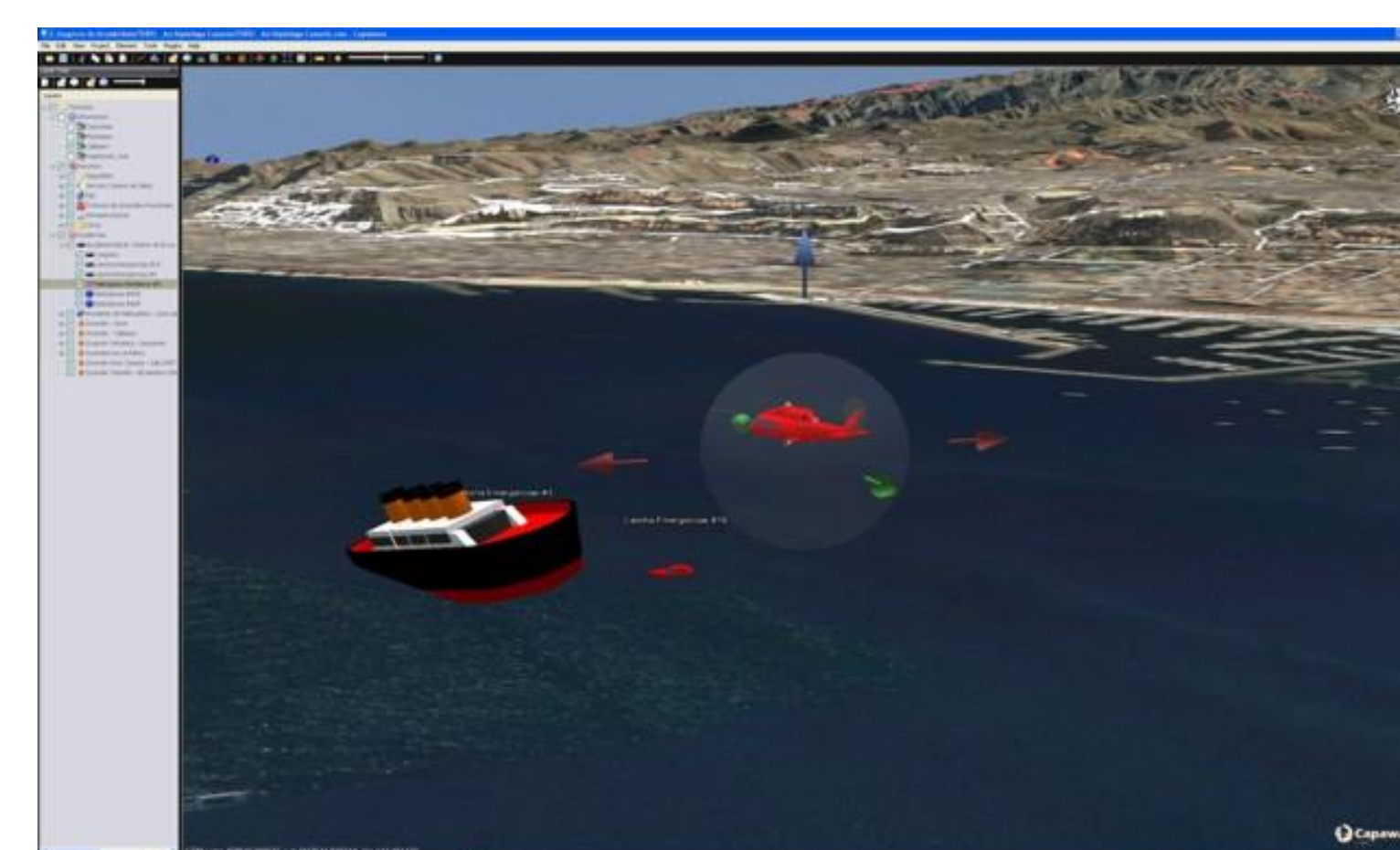
## Acknowledgements
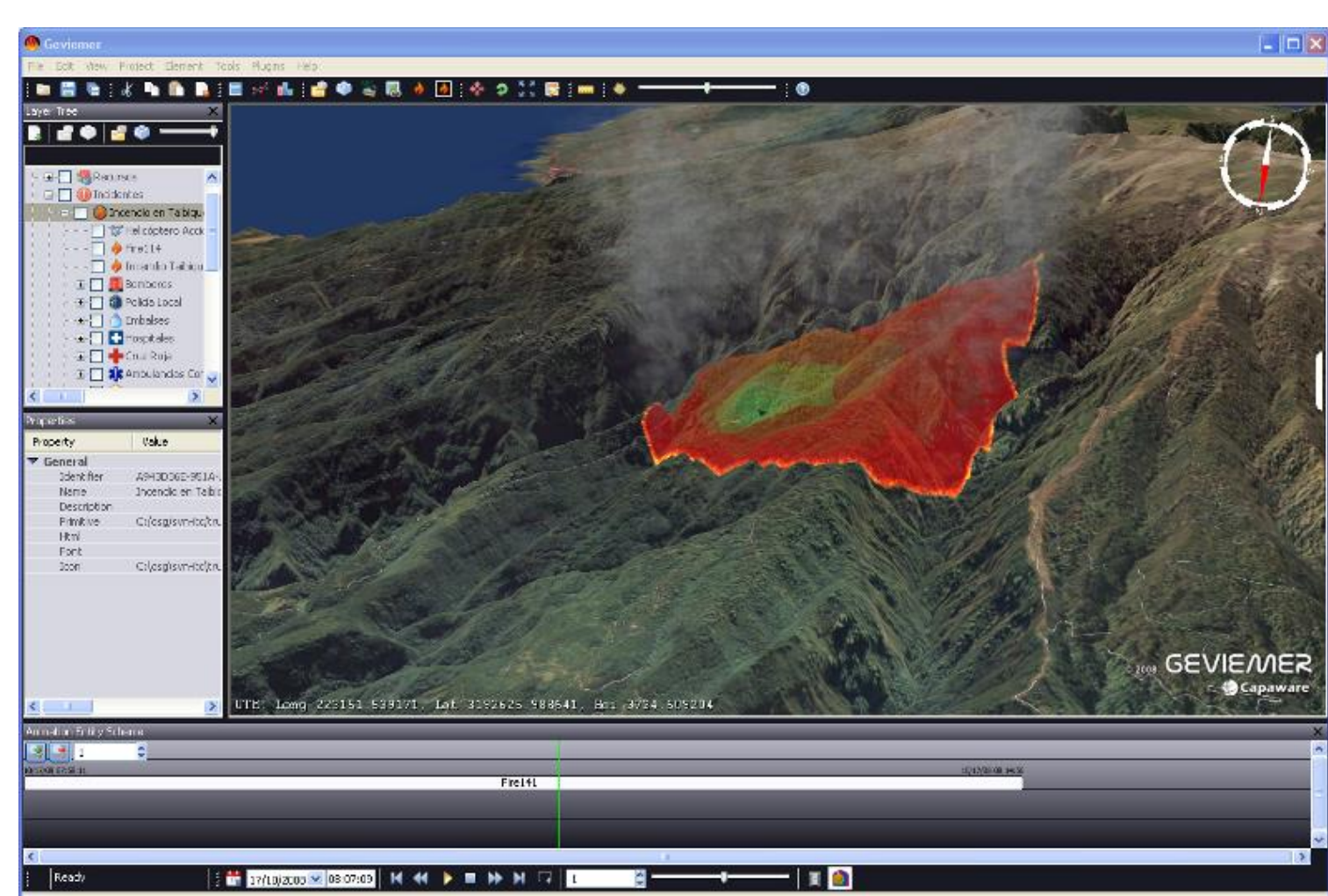
## Basic Features

*Conection to remote WMS servers*



*3D objects inserted on the terrain*



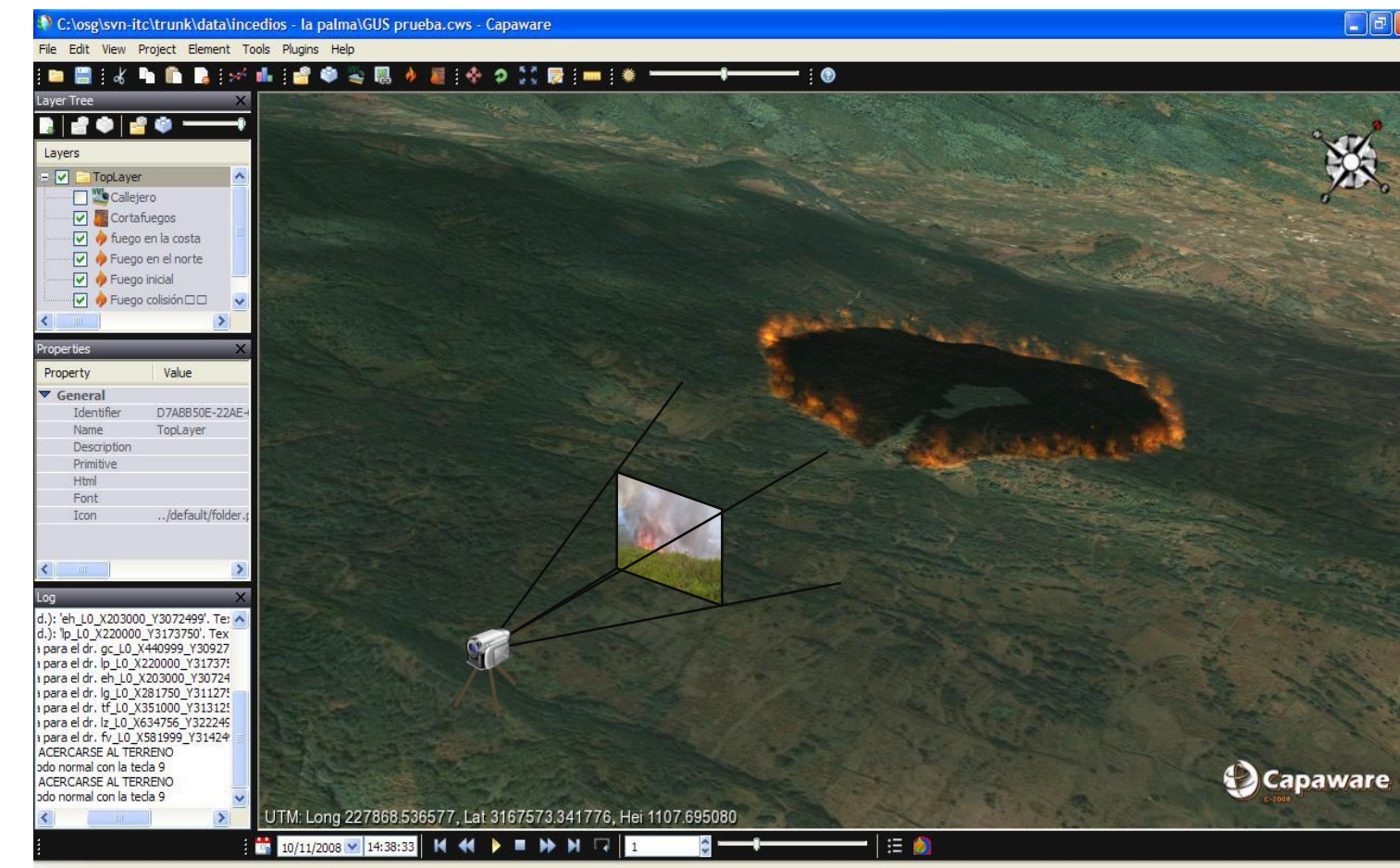*Wildfire simulation using FARSITE engine*

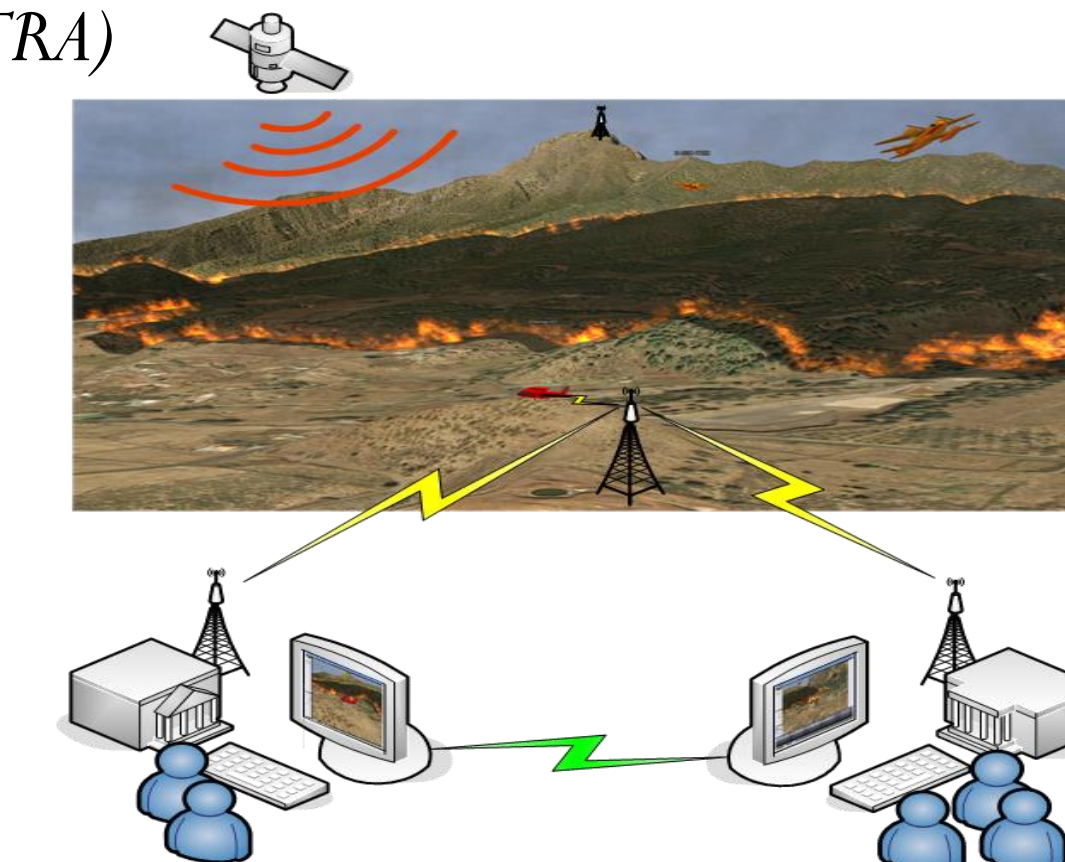

*Multiple users interaction in the same scene*



## New advanced features oriented to emergency management

*Video streaming from surveillance outsides cameras*



*GPS location in real time using Terrestrial Trunked Radio (TETRA)*



*Real time data estimation and measures (wind, temperature)*



*Alternative shortest path routing in emergency situations*