INTERACTIVE URBAN AND FOREST FIRE SIMULATION WITH EXTINGUISHMENT SUPPORT

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Commission IV, WG IV/8

KEY WORDS: Forest Fire, Urban Fire, 3D City Models, Fire Spreading Simulation, Real Time Algorithm, Environment Process Simulation

ABSTRACT:

Fires and other related disasters provoke great destruction of high valuable environments and economical losses, especially when they are located in urban areas. In this work, we present a combined urban and forest fire spreading algorithm to be used in real time and interactive Virtual Simulations. The algorithm is pedagogical oriented and its purpose is not focused in achieving precise results that could be used to predict the fire evolution. The main objective is to obtain a fast, interactive and quasi-realistic Virtual Simulation to be used in the simulation of virtual scenarios where fire-fighters and controllers will be trained. The algorithm supports the main variables involved in the fire spreading (slope and wind) and the radiation effect. An additional method has been added to extinguish the fire.

This contribution was selected in a double blind review process to be published within the *Lecture Notes in Geoinformation and Cartography* series (Springer-Verlag, Heidelberg).

Advances in 3D Geo-Information Sciences

Kolbe, Thomas H.; König, Gerhard; Nagel, Claus (Eds.) 2011, X
ISBN 978-3-642-12669-7, Hardcover
Date of Publication: January 5, 2011
Series Editors: Cartwright, W., Gartner, G., Meng, L., Peterson, M.P.
ISSN: 1863-2246