

Developing a Multiagent-Based Decision Support System for Realtime Multi-Risk Disaster Management

Authors : D. Moser, D. Pinto, A. Cipriano

Abstract : A Disaster Management System (DMS) for countries with different disasters is very important. In the world different disasters like earthquakes, tsunamis, volcanic eruption, fire or other natural or man-made disasters occurs and have an effect on the population. It is also possible that two or more disasters arisen at the same time, this means to handle multi-risk situations. To handle such a situation a Decision Support System (DSS) based on multiagents is a suitable architecture. The most known DMSs deal with one (in the case of an earthquake-tsunami combination with two) disaster and often with one particular disaster. Nevertheless, a DSS helps for a better realtime response. Analyze the existing systems in the literature and expand them for multi-risk disasters to construct a well-organized system is the proposal of our work. The here shown work is an approach of a multi-risk system, which needs an architecture, and well-defined aims. In this moment our study is a kind of case study to analyze the way we have to follow to create our proposed system in the future.

Keywords : decision support system, disaster management system, multi-risk, multiagent system

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