

RISKWATCH

Zlatomir Dimitrov, Venko Bozhilov, Vessela Samoungi, Anna Vassileva

Remote Sensing Application Center – ReSAC

61, Tsar Assen Str., 1463, Sofia, Bulgaria

Tel: (+359 2) 9800731

Tel: (+359 2) 9812231

Tel/Fax: (+359 2) 9818216

E-mail: resac@techno-link.com

Website: www.resac-bq.org

ABSTRACT

Riskwatch is an automatic scanning Web GIS, which provides risk analysis for citizens and decision-makers. The JAVA based system combines RSS⁽¹⁾ feeder incorporated into RSS Disaster Analyst, which on the other hand retrieves information from the Internet, related with forest fires, floods, earthquakes and other natural and man-made disasters in Republic of Bulgaria. Generated information is classified carefully depending on the disasters type and status, as well as its probable location. The processed information is represented in HTML page-newsletter. In parallel with this system sets a record in geodatabase, which easily can be overlaid with other GIS datasets. On Riskwatch Web GIS is available information about all disaster events happened at the current calendar month.

Riskwatch is a pilot application system which supports three main modules – Risk identification, Access to information through Web GIS, and Data update.

Risk identification module uses the most up-to-date tools for information retrieval and self-learning algorithm for automatic extraction of linguistic phrases. The system uses finite-state machines, which perform quick search in Internet, and find phrases or even geographical names. After process of collecting RSS data from various RSS generators is completed, RSS Disaster Analyst performed special data filtration. RSS Disaster Analyst generates data that are not linked with all possible disaster events that happened in the area of interest (for example municipality).

The access to information through Web GIS is as follows. The first step is collection of RSS data from different RSS generators. The second step is RSS data processing with RSS Disaster Analyst. The final result is recorded as a table in the current workspace (database), and is submitted to Web GIS. The records are sorted out in order of priority as follows: importance, location, and date. The final result is represented as thematic map, which includes disaster events, as well as other base cartographic layers.

Data update is performed on the every 15-30 minutes, by reading RSS editions of the major Bulgarian information portals and websites. Due to random and non-weighted manner of occurrence of information about disastrous events in the mass media, final assessment will

be based only on spatial and temporal characteristics of the event. Quantitative estimate could not be performed due to lack of reliable measurement technique.

In order for better information connectivity between citizens and decision-makers, as well as for integration of different information systems at European level, Riskwatch will be connected with the European Forest Fire Information System (EFFIS) and the European Flood Alerting System (EFAS).

(1) RSS: Really Simple Syndication