Development of a Typical WMS for Disaster Management SDI of Iran

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Iran is a hazardous country and always has been affected by various natural disasters such as earthquake, Flood, drought, etc. However there are many problems for managing disasters in Iran. One of the most important problems relates to the availability and accessability of reliable information to use in decision making and planning for disaster management. This problem becomes more critical during disaster response with its dynamic nature that required up-to-date information describing current emergency situation.

Considering that more than 80 pecent of information required for disaster management has spatial nature or components, mansourian *et al*. (2005) highlighted that using SDI[1] and Web-based systems can resolve problems with the information and hence improve and facilitate disaster management.

Based on the conceptual model (developed by mansourian *et al*. (2005)) the ability to share spatial data among organizations involved in disaster management should be provided using Geospatial Web Services Technology. With respect to the OGC's[2] activities, there are three defined standard geospatial web services including:

- Web Map Service (WMS)

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[1] Spatial Data Infrastructure
[2] Open Geospatial Consortium

- Web Feature Servoce (WFS)

- Web Coverage Service (WCS)

In the context of a research project, development of a typical WMS for Iran's Disaster Management is on going in K.N.T. University of Technology. This paper outlines different steps of the project. The paper firstly reviews the importance of spatial data sharing for disaster management and the role of SDI in disaster management. Then OGC's activities as an international organization for standardization of spatial data and technologies are described with emphasize on WMS specification. At last implementation of a typical WMS using .Net Web Services technology and its usage in disaster management is depicted.

References:

Mansourian A. (2005). Development of an SDI Conceptual Model and Web-based GIS to Facilitate Disaster Management, PhD Thesis, Faculty of Geodesy & Geomatics Eng., K.N.Toosi University of Technology, Tehran, Iran