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Design and Development of Typical Mobile GIS for Disaster Management

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Abstract:

Iran is a disaster prone country and it always has been affected by various natural disasters such as flood, drought, earthquake, wild fire, etc. Various studies showed that more than 80% of data required for disaster management, has spatial location or component.

Considering above Geospatial Information Systems (GIS) can provide appropriate capabilities for information and knowledge-based management of disasters. These systems provide managers and rescue teams with the ability to store, update and share spatial data and analysis. However, the ability to use GIS data and analysis on the field, where the rescue operation is on going, by rescue and relief teams is one of the main requirements of disaster management.

In order to provide rescue and relief teams with the ability to use spatial data and GIS analysis during operation, appropriate Mobile GIS software is required. Considering this necessity, in the context of a research project, development of typical Mobile

GIS software for disaster management is an on going project in K.N.T. University of Technology.

This paper summarizes different steps of the mentioned project. The paper starts with a brief look at GIS and disaster management concepts. Different Mobile GIS Architectures and their characteristics will be reviewed, and appropriate architecture will be selected afterward. At last various steps of design and implementation of typical Mobile GIS software based on the selected architecture for disaster management is described.