



Establishment of Past Disaster Geo-Database for Disaster Situation Management and Awareness

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In Korea, the government draws up annual disaster report called 'Jaehaeyeonbo' according to Natural Disaster Countermeasures Acts and save the figures related to damage into database of National Disaster Management System(NDMS). We can figure out how much damage the natural disaster does and simple statistic information for restoration and prevention through the report. In this study, the Smart Disaster Situation Management system was developed which can help monitor disaster and support decision-making using past disaster history. The data from NDMS was categorized according to minimum administrative district and the type of natural disaster and then establish the geo-database. Historic earthquake records before seismological observation as well as 'Jaehaeyeonbo' were established into geo-database in order to analyse and predict the pattern and cycle of earthquake. The geo-database was built-up and edit based on open source like PostgreSQL, Geoserver and published using PostGIS in order to display on digital map. And spatial data from geo-database was matched to the post weather condition and news reports at that time when disaster occurred. If Korea Meteorological Agent issues weather special warning notice, for example typhoon watch, storm warning, the system gives an alarm searching for past disaster similar to weather observation value and also disaster manager or decision-makers are able to infer expected disaster, area under the influence of disaster, damage degree from referential database. This system immediately transmits the alarm message to mobile application for disaster monitoring and situation management.