

Development of Quasi Real-Time Comprehensive System for Earthquake Disaster

Authors : Zhi Liu, Hui Jiang, Jin Li, Kunhao Chen, Langfang Zhang

Abstract : Fast acquisition of the seismic information and accurate assessment of the earthquake disaster is the key problem for emergency rescue after a destructive earthquake. In order to meet the requirements of the earthquake emergency response and rescue for the cities and counties, a quasi real-time comprehensive evaluation system for earthquake disaster is developed. Based on monitoring data of Micro-Electro-Mechanical Systems (MEMS) strong motion network, structure database of a county area and the real-time disaster information by the mobile terminal after an earthquake, fragility analysis method and dynamic correction algorithm are synthetically obtained in the developed system. Real-time evaluation of the seismic disaster in the county region is finally realized to provide scientific basis for seismic emergency command, rescue and assistant decision.

Keywords : quasi real-time, earthquake disaster data collection, MEMS accelerometer, dynamic correction, comprehensive evaluation

Conference Title : ICDEM 2018 : International Conference on Disaster and Emergency Management

Conference Location : London, United Kingdom

Conference Dates : March 15-16, 2018