# Real Time Synchronous Web Application for Collecting and Sharing Disaster Information

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## Abstract

In the event of a devastating earthquake, a number of roads will be damaged and/or blocked by collapsed buildings, and the use of emergency vehicles is expected to be paralyzed and unavailable. It is, therefore, important to quickly collect and utilize disaster information for disaster mitigation. In this research, we developed a Web application for collecting and sharing the disaster information in real time.

System-users access to the system with their own information devices through a web browser, and they post disaster information (collapsed-building, blocked-street, burning building) and pictures. The disaster information and pictures are displayed on the map screen of all users and shared in real time. Furthermore, a fire-spreading simulation is automatically executed and forecast how the fire will spread after few hours.

Through the demonstration experiments by local residents, we demonstrated the effectiveness of the system by monitoring the users' movements and activities of collecting disaster information. Also, we examined the performance of collecting disaster information, namely, investigated the elapsed time and the correctness of posted information. This system is expected to contribute for variety of purposes immediately after the event.

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