

## Innovation of Spatial Representation Technology to Support Disaster Responses

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Thanks to recent development of geospatial information technology, geospatial information has become essential for disaster response activities. Advancement of Web mapping technology allows us to understand the situation by overlaying various location-specific data on a base maps on the web, and specify the areas which the activities should be focused on. Distribution of reasonable image processing software applying SfM and MVS theory has brought the innovation of acquisition methods of disaster information. 3D modelling technology enables realistic understandings of the relationship between disaster and topography.

Geospatial information technology also can support the proper judgement of preparation and emergency response against disaster by the individuals and local communities through such as hazard mapping and information services using mobile devices. For instance, mobile phone applications to assist the evacuation of residents and network analysis system of evacuation routes as the risk communication tool among local community have been rapidly popularizing. Thus, spatial presentation technology, the result of geography and cartography, is now more and more taking vital role for all the stages of disaster response and risk management.

Keywords: geospatial information technology, disaster response, web mapping, 3D modelling, mobile devices, risk communication