

## **Disaster Management and Emergency Services Workshop**

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Paper title: Towards a Level 3 HAZUS-MH Assessment

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**How can new technologies and approaches improve outcomes, reduce costs and/or improve response times for an emergency?** During the 2010 International Space University Space Systems Program at the NASA Ames Research Center the World Bank sponsored a Disaster Risk Management team project to evaluate and identify how advanced remote sensing and geospatial technologies could improve the capability of countries in Central America to perform probabilistic risk assessments. As part of this effort the Disaster Risk Evaluation and Management (DREAM) team developed a rapid prototype of a hand-held computer system to collect exposure data using the iPhone and proposed using college student crowdsourcing to collect exposure data in Belize City. Efforts to obtain World Bank funding to demonstrate the viability of this approach and perform a Level 3 HAZUS-MH assessment for the City of Mountain View were understandably unsuccessful (the World Bank's focus is on developing countries). The CMU Disaster Management Workshop and the CrisisCampSilicon Valley 2010 are the perfect forums to obtain community buy-in and support for this initiative.

**If you were offered 10-15 minutes to give a short talk, what would it be?** Technology for Effective Disaster Risk Management: Using the developing capabilities of hand-held computer technology and crowdsourcing to supplement the default exposure data provided by FEMA for HAZUS-MH.

**What are the most pressing business, process, organization and technical issues?** Limited funding and virtual staffing

**What is the role of university research in this area?** University researchers can provide capabilities for rapid prototyping that could lead to operational program funding and sustained development.

**Do you want to propose and help run a new breakout group?** No, thank you.

**What is the most important action the DMI can take?** The CMU DMI needs to address the complete disaster management mission space: Preparedness, Mitigation, Response and Recovery. A detailed HAZUS-MH study of the earthquake risk for the City of Mountain View could be used by the residents and businesses in the city to understand their individual risks and by the cities decision makers to better understand the earthquake risk and most efficiently invest limited funding to mitigate and prepare for the next major earthquake. This activity could supplement the cities annual disaster mitigation plan and grant application.