Damage Assessment by the First Arriving USAR Team in Haiti in Response to the January 2010 Earthquake

S. Thorvaldsdottir and R. Sigbjörnsson Earthquake Engineering Research Centre, University of Iceland, Austurvegur 2a, 800 Selfoss, Iceland.

E. Birgisson

Verkfræðistofa Erlends Birgissonar, Bæjarlind 4, 201, Kópavogur, Iceland

Damage assessment during search and rescue in collapsed buildings is a critical part of a USAR (urban search and rescue) operation. Four key lessons are drawn from an after-action analysis of the damage-assessment efforts during life-saving operations in Haiti performed by the ICESAR team; the first arriving USAR team in Haiti in response to the January 2010 earthquake. First, the structural evaluation format presented in the INSARAG (International Search and Rescue Advisory Group) Guidelines is a useful checklist for the urban search and rescue engineer. Second, the working relationship between engineers and rescue workers needs to develop and reach a level of mutual respect and understanding of roles and ability in order to create a working relationship. Third, engineers must receive training prior to deployment in order to function properly in a dreadful and dangerous environment, make fast and often life threatening decisions. Finally, staff located thousands of miles away can provide support to field teams by collecting building and situation information, e.g. from the internet, analyze and sent it to the field.

References

- [1] Building Damage Assessment Report, Haiti Earthquake 12 January 2010, Post Disaster Needs Assessment and Recovery Framework, 2010. European Commission, Joint research Centre, United Nations Institute for Training and Research, Operational Satellite Applications Programme, World Bank Global Facility for Disaster Risk Reduction and Recovery and Centre National d'Information Géo-Spatial.
- [3] Google Earth, http://www.google.com/earth/index.html
- [4] INSARAG Guidelines, 2006. International Search and Rescue Advisory Group. http://www.usar.nl/upload/docs/insarag_guidelines_july_2006.pdf.
- [5] Macintyre, A. G., Barbera, J. A., Smith, E. R., 2006. Surviving collapsed structure entrapment after earthquakes: A "time-to-rescue" analysis in *Prehospital Disaster Medicine*; vol.2, paper 1, pp 4-19
- [6] Thorvald, S., 1995. Engineers and Building Collapse Response: From Mexico '85 to Oklahom' 95, EOE Review/Fall, pp.7-12.
- [7] Thorvaldsdóttir, S., 2005. Poster, Using Engineering to Advance Urban Search and Rescue, EERI Annual Meeting

*e-mail: solvth@hi.is. url: www.eerc.hi.is