

Mapping a Crisis, One Text Message at a Time

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An interactive mapping project is revolutionizing the way crises are reported and managed, and is spotlighting the value of citizen journalism. The project, called Ushahidi, which means testimony in Swahili, uses crowdsourcing (gathering information from a large number of people) to map crisis information. It was developed as a website in 2008 in the wake of post election violence in Kenya when media censorship made it difficult for people, particularly aid workers, to find out what was happening and where assistance was most needed. Kenyan lawyer and blogger Ory Okolloh (who runs her blog, www.kenyanpundit.com, out of South Africa) was overwhelmed by reports of violence coming into her own website and proposed the need for a website to map the information that people were sending via text messages from their cell phones.¹

This crisis mapping tool has since been used across the world to monitor violence in Gaza, track political unrest in Congo, manage Washington, D.C.'s record blizzard in 2010, help earthquake victims from Haiti to Chile, and in scores of other situations. The technology is free and open source, meaning individuals and groups can modify it to fit their needs. The web platform receives data via SMS (Short Message Service—e.g., text messages), email, or the web and plots it on a map allowing people to visualize events or a timeline.² The activist mapping documents events in nearly real time and helps humanitarian workers determine areas in greatest need.

Digital volunteers around the globe have increasingly contributed their time using crisis mapping tools such as Ushahidi, Sahana, OpenStreetMap, and other Web 2.0 tools to help in emergency situations such as natural disasters. In June 2009, a spontaneous group of self-described “geeks” created CrisisCommons (crisiscommons.org) to advance the use of technology for better crisis management. The volunteers cre-

ated ad-hoc CrisisCamps to discuss how technology could benefit crisis management in general. These later turned into all day or weekend gatherings, where individuals with only their laptops and power strips harness online tools to take civic engagement to a new level.

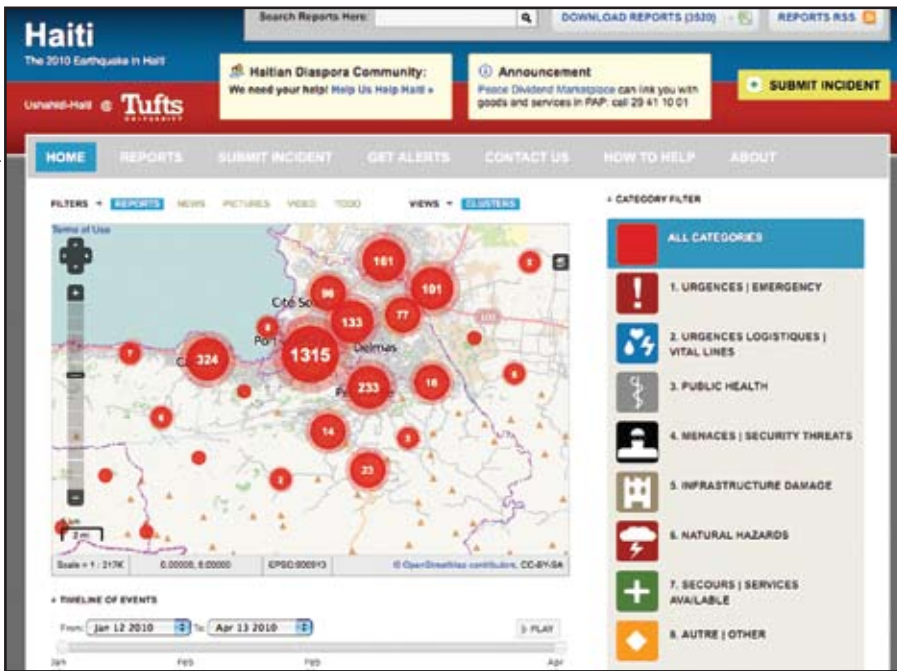
Within hours of the powerful 7.0 earthquake that struck Haiti on January 12, 2010, a crisis map was set up at <http://haiti.ushahidi.com> and run by volunteers out of Tufts University's Fletcher School of Law and Diplomacy, as well as volunteers in Washington, D.C., Geneva, London, and Portland, Oregon.³ An emergency number was set up to receive text messages, and thousands of messages began pouring in from Haiti—one every five seconds in the initial days, according to an update posted on the Ushahidi website six days after the earthquake. Haitians in the Diaspora volunteered to translate messages into English, other volunteers mapped out the GPS coordinates to help humanitarian workers respond.

Just four days after the quake, over 400 volunteers gathered thousands of miles apart in CrisisCamps in D.C., New

York, Los Angeles, Colorado, and New Zealand. The following week, 13 different CrisisCamps took place stretching from London, to Canada, the U.S. and down to Bogota, Colombia.⁴ Volunteers from academia, nonprofits, government agencies, specialists in geospatial data, programming, data creation, individuals and internet-savvy individuals who simply wanted to help, gathered to work on different projects to aid those on the ground in Haiti.

Incorporating every kind of collaborative and social media tool (including open source projects, wikis, blogs, Skype, Twitter, and Facebook), CrisisCamp volunteers have helped provide important information for Haiti's recovery effort. Project developers created mobile translation tools, people finders, and open source applications that help rescuers figure out the location of an intact hospital, or track what different nonprofits on the ground were doing so they wouldn't duplicate efforts and could better coordinate the distribution of resources.


Volunteers have worked in a “surge capacity” to help build a digital map of Haiti with OpenStreetMap (www.openstreetmap.org), using satellite imagery and other sources, for responders and relief agencies to see which roads were passable and better reach survivors; agencies can also use the map imagery to assess damage to specific areas. Other volunteers helped build and aggregate databases for missing persons into one effort—Google People Finder. Volunteers with French or Creole language skills, in D.C., Los Angeles, or



Miami, for example, could work translating the thousands of text messages coming in from those beneath the rubble. Volunteers also translated RSS (Really Simple Syndication) News Feeds, which help provide a more global picture of the emergency. One project focused on emergency efforts to set up water systems. Another project, We Have We Need (www.wehaveweneed.org) allows nonprofits to list their equipment needs and exchange supplies with other groups. The list of projects was ever increasing as more cities around the world sprouted their own CrisisCamps in response to the earthquake in Haiti, and soon after for the February 27 earthquake in Chile. Because many of these projects are open source, individuals do not necessarily need to attend a CrisisCamp. These projects can be worked on from a computer at any location.

An important goal noted by volunteers is to work with community leaders on the ground, in Haiti for example, so that the technology can be used for documenting local needs such as mapping broken bridges or shedding light on problems with aid distribution.⁵

The information and maps created have been used by international bodies such as the World Bank, the European Union, and the United Nations.⁶ The

World Bank, in particular, has been a strong backer of CrisisCommons, offering up its headquarters—along with the *Miami Herald*, George Washington University, and National Public Radio, to name a few—for CrisisCamps. 

Notes

1. Anand Giridharadas, “Africa’s Gift to Silicon Valley: How to Track a Crisis,” *The New York Times* (March 12, 2010).
2. “More about Ushahidi,” www.usahidi.com/media/Ushahidi_1-Page.pdf.
3. Monica Hesse, “Crisis Mapping Brings Online Tool to Haitian Disaster Relief Effort,” *The Washington Post* (January 16, 2010).
4. Niala Boodhoo, “South Florida Tech Community Brainstorms on Haiti Relief Efforts,” *The Miami Herald* (January 24, 2010).
5. Sabina Carlson, “Ushahidi-Haiti: Connecting with Both Local Initiatives and OCHA [The UN Office for the Coordination of Humanitarian Affairs],” <http://blog.usahidi.com>, (March 22, 2010).
6. Riva Richmond, “The Tech Savvy Lend a Hand in Haiti,” *The New York Times* (February 3, 2010).

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