

Fast Facts: Examples of Disaster Relief 2.0 Activities in the 2010 Haiti Earthquake Response



Using Crowdsourcing to Locate Hospitals on Maps

One of more difficult problems during the Haiti operation was determining the location of health facilities. OCHA turned to the volunteer and technical communities to map these facilities, asking Crisis Mappers and Sahana—examples of the Volunteer & Technical Communities—if they could crowdsource the effort to geo-locate **105 health facilities** that had no location data. The request to the crowd went out at **2:40AM on January 22**. Approximately **35 hours** later, the team working on the problem had located the de facto list of **102 of the 105 missing hospitals**, inputting all the data into the Sahana disaster management system. They had verified each facility by having an OpenStreetMap member locate the hospital or clinic on high-resolution satellite imagery at **15cm resolution** and verify that health facility was

located at the submitted coordinates. Sahana made the data available in open data formats, which became one of the best resources for health facility data for the next month. More than **8,000 unique individuals** visited the site or pulled from the feed. Crowdsourcing transformed a project that normally would require **several days** into **just over one day**.



Translating Creole through Mission 4636

Mission 4636 facilitated the collaboration that a team at Stanford established with members of the Haitian diaspora to translate thousands of messages from Creole into English. Haitian Creole has only **12 million speakers worldwide, 9 million** of which live **in Haiti**. In the first days of the disaster, Rob Munro (a computational linguist at Stanford) recruited Creole speakers from Facebook and other public web sites, asking them to begin translating tweets, SMS messages, and Facebook posts coming from Haiti. More than **130,000 text messages** went through 4636 **during the first month** of the response. At its peak, the effort had **1,200 Haitians** translating **thousands of messages per day**, usually within **4.5 minutes** of their arrival. By February, Rob began a partnership with Crowdfunder, a social venture for microtasking that was working with Samasource, another social venture with partners on the ground who could recruit Haiti citizens to perform translation services from Haiti. The effort transitioned to this professional translation platform soon thereafter.



Cell Connectivity in Haiti Provides a Vital Link

According to a report by the US Institute of Peace, “approximately **85 percent** of Haitian households had access to mobile phones at the time of the earthquake, and although **70 percent** of the cell phone towers in Port-au-Prince had been destroyed in the disaster, they were quickly repaired and mostly back online before the 4636 number was operational.” Haitians sent **hundreds of thousands of messages** out via SMS to Twitter, Facebook, Ushahidi, the Thompson-Reuters Foundation Emergency Information Service (EIS), and most importantly, to members of the Haitian diaspora.

Examples of the Volunteer & Technical Communities

CrisisCamps/CrisisCommons started in 2009 as a venue through which crisis response professionals could explore ways to share best practices. It transformed into a structure that mobilized almost **2,000 laypeople** (mostly technologists) in **25 cities** around the world to participate in CrisisCamps, swarming around information needs generated by the Haiti operation.



CrisisMappers is a community of practitioners in the field of crisis mapping, loosely defined as the application of geospatial and crowdsourcing tools to the analysis of humanitarian emergencies. It was founded in November 2009 with approximately 100 members; more than **550 CrisisMappers** participated in the Haiti efforts. The CrisisMappers community, via an email listserve, became the central mechanism for coordinating imagery and mapping activities in Haiti. Its members included representatives from UNOSAT, Google, GeoEye, Digital Globe, OpenStreetMap, and the San Diego State University Visualization Lab, which hosted haiticrisismap.org, and its associated web services.



OpenStreetMap (OSM) is a community of approximately **150,000 mappers** dedicated to building a free and open map of the world. OSM mobilized more than **640 volunteers** around the world, who scanned and rectified old atlases and maps and traced Haitian roads, bridges, and buildings into the OpenStreetMap geospatial wiki using tools that only required a simple web browser and time. In the process, this community turned a blank spot on the map into one of the most accurately mapped countries in the world—creating a map far better than any available to the UN. By mid-March, OpenStreetMap had become the de facto source for Haiti map data within most UN agencies and the EC Humanitarian Unit. MapAction credits OpenStreetMap with providing an essential service and for building a street map of Haiti from scratch in about **two weeks**, a project that should have taken about **a year**.

Ushahidi is a 501(c)3 organization that offers a software platform for managing crowdsourcing projects, mostly in the areas of election monitoring, international development, and crisis deployments. Ushahidi's director of crisis mapping mobilized around **200 students** at Tufts University Fletcher School of Diplomacy to monitor and geolocate reports from Twitter, Facebook, and Mission 4636 on the Ushahidi platform.



(Image Credits: Nigel Snoad, Mark Turner, Mark Turner, Jonathan Shuler, Ushahidi, Nigel Snoad)