

# RELIEF/JIFX at Camp Roberts

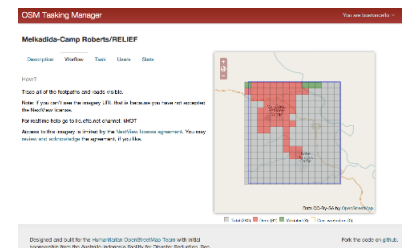


The Research and Experimentation for Local and International First-Responders Joint Interagency Field Explorations (RELIEF/JIFX) offer a world-class opportunity to explore interoperable civil-military systems for HADR operations. These quarterly events hosted by NPS and NDU enable USG, NGO, and private-sector engineers to engage in open innovation in a field environment that closely mimics the real world.

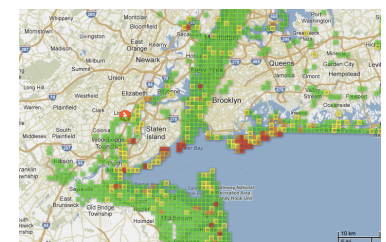
RELIEF events usually draw between 100-400 engineers, scientists, and experts, often creating the largest integration of technical and field operations staff since DARPA's Strong Angel events in 2000, 2004, and 2006. RELIEF serves a unique role in the ecosystem of international disaster response organizations: it can compress months of dispersed R&D trials into a few days of intense work.

RELIEF gives state and federal agencies a safe place to fail and experiment with ideas which would otherwise be difficult to explore. Working in a pre-acquisition space, agencies can send their personnel who need new tools and place them in a field environment where they can hone requirements and build solutions directly with the engineers and scientists who are designing prototypes of technologies that might eventually meet federal needs. Agencies can also come together and accelerate the development of solutions to shared interagency problems.

**Case 1: Imagery to the Crowd (ItC).** During the Haiti earthquake response, OpenStreetMap community built a map of Haiti in 2.5 weeks—less time than it would take to publish an RFP for most agencies. This work happened only because satellite imagery was both technically and legally free to trace. To enable federal agencies to harness this new capability, the State Department's Humanitarian Information Unit partnered with NGA, DoD, and the Humanitarian OpenStreetMap Team (HOT) to create the first workflow to enable crowdsourcing to process commercial satellite imagery purchased by the USG. Its first activation returned critical vector (road) data to the USG and international community for 10 of the largest Kenyan and Ethiopian refugee camps (Cf. <http://bit.ly/melkadida> and <http://hiu.state.gov/>).



**Case 2: Crowdsourcing Damage Assessment for Sandy.** The Civil Air Patrol (CAP) takes photographs of most disasters, providing imagery within hours of impact. However, there was no means to quickly analyze these images. Working in partnership with FEMA, NGA, and HOT, CAP developed a method that connected crowdsourcing platform called MapMill with a federal workflow. During Hurricane Sandy, this tool enabled 6000 volunteers to rate damage levels on 35K photographs. A full report is available here: <http://idibon.com/crowdsourced-hurricane-sandy-response/>.



## Participants have included:

- Army Geospatial Center
- Boeing
- CalEMA
- CalFire
- California National Guard
- Civil Air Patrol
- DHS S&T Directorate
- DHHS
- ESRI
- FEMA
- FEMACorps/Americorps
- Google.org
- HDT Global
- Humanitarian OpenStreetMap Team
- Humanity Road
- Lockheed Martin Corp
- MapBox
- NetHope
- NGA
- Pacific Disaster Center
- OpenGeo
- Spatial Networks
- Stamen Design
- Standby Volunteer Task Force
- USAID
- U.S. Geological Survey
- U.S. Department of State
- Ushahidi
- ViaSat
- VirtualUSA