Humanitarian FOSS Project
Overview

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Sahana Disaster Management

SAHANA
Disaster Management System

Sahana is a web-based disaster management system designed to improve response and recovery efforts after a disaster. It integrates various tools and resources to enhance the management of disaster response efforts.

- **Disaster Management:** Provides real-time information and status updates.
- **Community Management:** Facilitates community involvement and resources.
- **Emergency Management:** Supports emergency response and evacuation.
- **Capacity Management:** Enhances the capacity of local authorities to respond.
- **Logistics Management:** Improves the distribution of resources.
- **Water Management:** Assists in managing water resources.
- **Health Management:** Supports health and medical response.
- **Transportation Management:** Enhances transportation and logistics.
- **Financial Management:** Manages financial resources and funding.
- **Information Management:** Integrates various information sources.

If you need more information, please visit the Sahana website.

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Strong Angel III, San Diego, June 2006

Camp Roberts, CA, Nov’09

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Educational Motivation

• David Patterson (ACM) Nov. 2005, (post Katrina): 
  *Let’s help our neighbors!*

• David Patterson (ACM) Mar. 2006: 
  *Join the open-source movement!*

• Our Question: 
  *Will students building software for the community help revitalize computing education?*
NSF/CPATH Grants

- NSF CPATH Grants: 496K (07-09), 798K (09-11).
- Collaborators: Trinity, Connecticut College, Wesleyan.
- Activities:
  - Trinity-Conn-Wesleyan video conference courses.
  - Summer internship program 2008/9/10.
  - Annual Symposium on computing curriculum (@SIGCSE).
- Current Initiatives
  - Community Building: HFOSS Chapter Initiative.
  - HFOSS Certificate program
  - Sustainability model.
Goal: A Sustainable Community

**Computing Departments**
- Teach computing
- Build FOSS
- Gain skills and opportunities

**IT Corporations FOSS Projects**
- Host/mentor interns
- Fund and advertise
- Volunteer expertise
- Recruit students

**Humanitarian Community**
- Acquire software.
- Host interns
- Teach volunteerism
GNOME Accessibility

- Mousetrap – mouse tracking for physically impaired.
- VizAudio – visual feedback cues for hard-of-hearing.
Portable Open Search Identification Tool

Open Mobile Camp, UNICEF, Oct'09
Collabbit: Lightweight Coordination Tool

Power Outage - Long Island City

Local officials are reporting thousands of people are without power in the Long Island City section of Queens.

Voluntary groups need to pass out water and knock on doors by Will Anderson, Jan 14, 2010 at 06:44 PM

Voluntary groups are requested to report availability. Volunteers will hand out bottled water and knock on doors to make sure people who live alone understand the situation and have access to assistance.

Governor member: Volunteers are reporting that their district is entirely without power. There are thousands of people.

Relevant Groups: Emergency Management
Tags: Power Outage
Comments
HFOSS Summer Institute
Why Should NSF Support FOSS Research?
FOSS has Humanitarian Roots
FOSS and Science

- **FOSS**
  - Open collaborative development process.
  - Freely licensed distribution model.
- **Benkler – commons-based peer production**
  - Wikipedia
  - Architecture for Humanity
  - NASA click workers
  - ...
- **Industrial Science**
  - Proprietary, trade-secret, development process.
  - Property based distribution model.
Problems with the Current Closed Model

- Biology/Medicine – patents on genes?
  - ACLU BRCA1 and BRCA2 lawsuit.
- Synthetic biology – should biological building blocks be proprietary?
  - Drew Endy: Image if computer scientists had patented the semicolon!
- Agriculture – why doesn't everyone trust genetically modified food?
  - Monsanto's Roundup Ready Patent
- Scientific publishing –
  - Should NSF/NIH research results be freely disseminated?
  - What will be published if science becomes (more) proprietary?
Open Source Science Initiatives

- Public Library of Science
- CAMBIA
- Design That Matters (MIT)
- Science Commons
Can FOSS work in science?

- Open Innovation Business Model
- Innocentive.com
- Broadcast search vs. local search
MIT Study

- 166 previously unsolved scientific problems.
- 80,000 scientists in 150 countries.
- 49 problems solved.
- Financial Awards: Mean $29,700 Range: $2000 - $105,000

So...some research questions

• Would the FOSS model work for science?
  • Is the FOSS model itself sustainable?
  • What motivates FOSS participants?
  • Does more openness and transparency advance scientific research?
  • What are the viable business models...for FOSS? ..for science?