

Education



Social Enterprise Workshop

- Semester workshop at UC Berkeley I-School guides students through identifying and funding social enterprises
- Joint with faculty from Haas School of Business
- Regular feedback from (social) entrepreneurs, academics, practitioners, other students
- Half obtained seed funding for pilots



Example: LocalGround.org



End-to-End Impact

- Requires building end-to-end systems, from users to infrastructure
- Requires end-to-end methods, from problem discovery to rigorous evaluation



Why is this Hard?

- ICTD projects require:
 - Doing field work!
 - Deploying real systems!
 - Taking a “whole systems” approach
- Attracts diverse students to CS
- Empirical rigor and ecological validity - i.e. doing good *Science*



Three Paradigms of CS

- Mathematics - Study of Algorithms
- Engineering - Study of Computers and Programs
- Science - Study of Phenomena surrounding Computers

Amnon H. Eden. "Three paradigms of computer science." *Minds and Machines*, Special issue on the Philosophy of Computer Science Vol. 17, No. 2 (Jul. 2007), pp. 135–167

The Last Electrical Engineer

- *Problem:* We need to find things to work on after we've figured out how to build computers
- *Solution:* There are interesting problems all around us!



Building a Community

- CCC-sponsored visioning meeting in Aug 2009
- NSF-sponsored meeting in February 2010
- ACM-sponsored DEV conference in Dec 2010
- Formation of ACM special interest group
- Broadening Computer Science's scope and potential impact



NSDR and ICTD

- Networks and Systems for Developing Regions Workshop has been running since 2008
 - Co-located with SIGCOMM, SOSIP, MobiSys
 - 30-50 submissions each year
- ICTD conference has been running since 2007
 - Steady increase in submissions, up to 150
 - Berkeley, MSR, UW, CMU have active groups



What you can do to help

- Encourage faculty and students to do projects with under-served
- Explore collaborations with schools, NGOs, governments, community orgs
- Teach classes with project opportunities
- Submit papers to DEV, NSDR, ICTD
- Talk to one of us for other ideas!

