Brainstorm Discussion Session:
Enabling Innovation in Teaching & Research

2011 MWF Conference
August 22nd
Given by: Professor Deborah Estrin
How can mobile devices be used as ‘sensors’?
- Quantified self/experience sampling (from consumer to chronic health research)
- Built environment (from asset mapping to hazard mapping)
- Natural environment (from invasive species reporting to forest inventories)
- STEM education (data literacy and computational thinking)

What are the opportunities in research and education?
- From Ecology to Sustainability, to Public Health and Psychiatry
- Engage students in authentic and relevant experimental design, data collection, analysis, and storytelling
Mobile Sensors as Research and Education Tools

* What is crowd sourcing and who is doing it?
  * Quantified self/experience sampling (from consumer to chronic health research)
  * Built environment (from asset mapping to hazard mapping)
  * Natural environment (from invasive species reporting to forest inventories)
  * STEM education (data literacy and computational thinking)

* How to most effectively leverage image, audio and video data in research?

* What are the most significant research opportunities and challenges raised by this form of real-time, but noisy, data?
  * Health sciences
  * Social and behavioral sciences
  * ...
Mobile Sensors as Teaching Tools

- Are mobile devices changing teaching techniques?
- What is the impact on traditional quiz and testing practices?
- What are the implications for privacy?
- What are the implications for freedom of speech?
- Can these devices make teaching more participatory?
- How can we use them to teach greater global awareness and appreciation of diversity and culture?
What is Crowd Sourcing?

- What does it mean to crowd source something?
- Modern day examples of crowd sourcing
  - Egyptian Revolution – data collected from Twitter http://egypt.hypercities.com/
  - Traffic conditions: http://www.waze.com/