

IN4MATX 295:

Personal Informatics

**Class 2: Stage-Based Model
and Mapping the Literature**

Daniel Epstein

A Stage-Based Model of Personal Informatics Systems

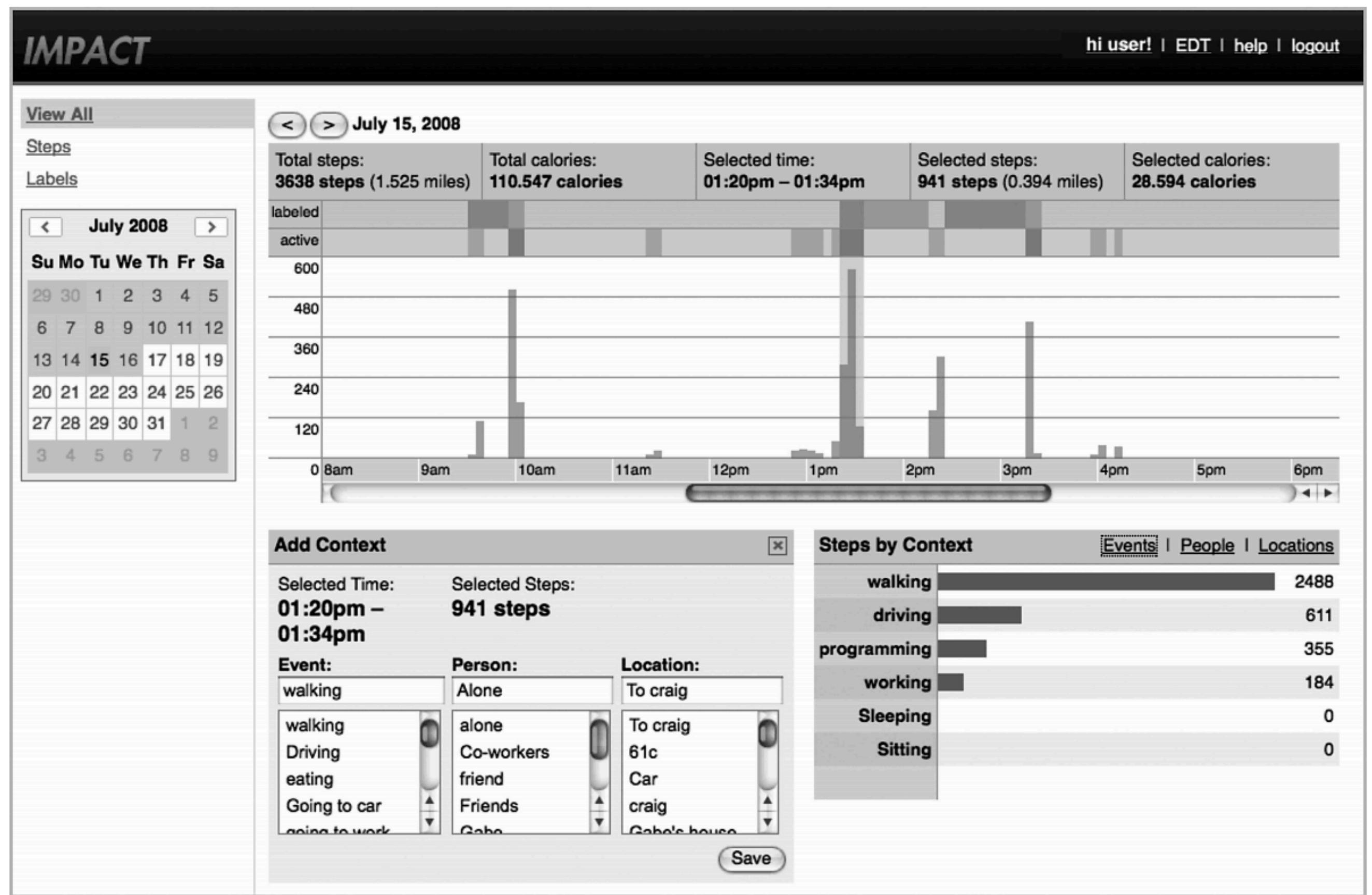
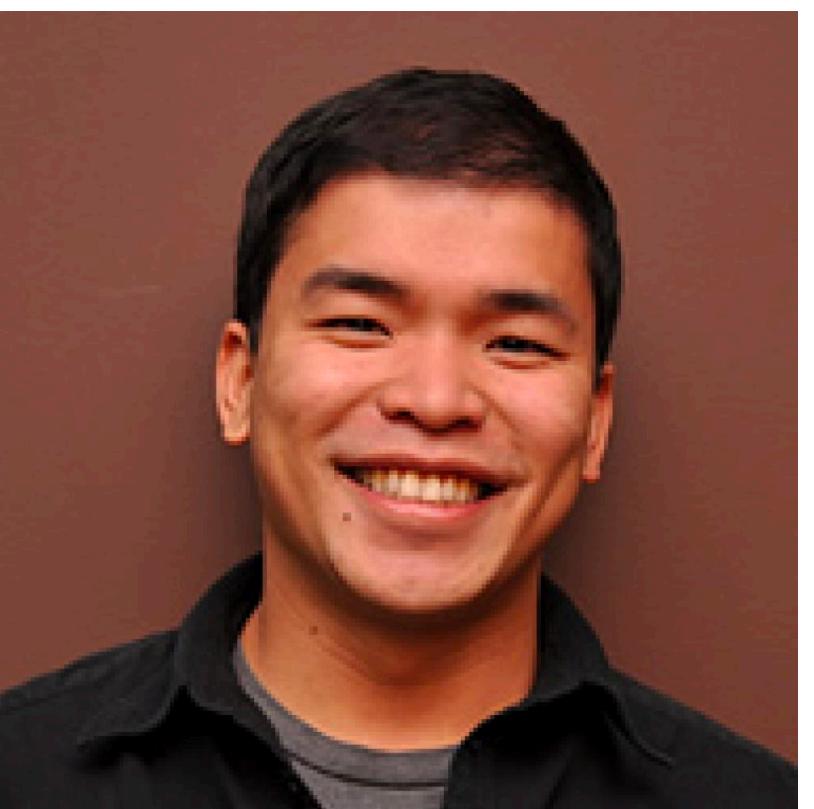
- Ian Li
- Anind Dey
- Jodi Forlizzi
- CHI 2010

Ian Li

- PhD, Carnegie Mellon
- Dissertation: Personal Informatics & Context: Using Context to Reveal Factors that Affect Human Behavior
- Now a UX Engineer at Google



Ian Li



Anind Dey



- Known for context-aware computing
 - “A system is context-aware if it uses context to provide relevant information and/or services to the user, where relevancy depends on the user’s task”
 - Developed systems, toolkits, models, etc. to support this vision
- CHI Academy, elected in 2015
- Currently dean, UW Information School

Jodi Forlizzi



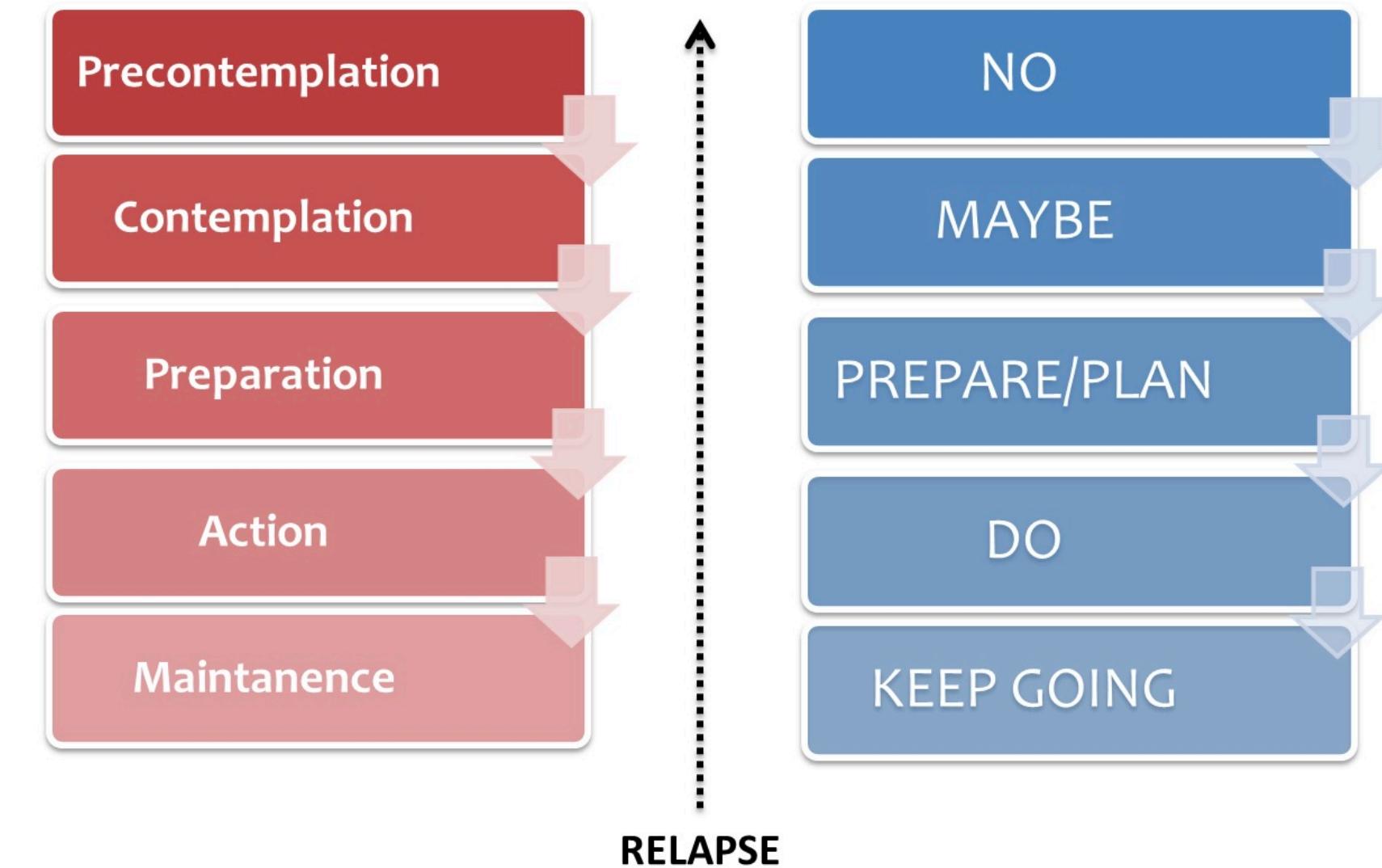
- Known for establishing design research as a recognized method in HCI
 - Used those methods to work across domains: health, learning, games
 - Substantial work on Human-Robot Interaction
- CHI Academy, elected in 2014
- Currently director (chair), CMU HCII

Prior and related literature

- Transtheoretical model of behavior change
- Lifelogging
- Personal Information Management (PIM)
- Slow/reflective technology
- Systems to support collecting data

Transtheoretical model of behavior change

- An assessment of an individual's readiness to change their health behavior
 - Used to inform treatment therapies, such as for smoking cessation
 - But therapies which follow the model are no more or less effective



<https://www.ncbi.nlm.nih.gov/pubmed/10170434>

Lifelogging

- A personal record of one's daily life, at varying levels of detail
- Photo-based logs were popularized/commercialized
 - Microsoft SenseCam (UbiComp 2006)
- But location history is another prominent example
 - Swarm, Foursquare



https://link.springer.com/chapter/10.1007/11853565_11

Personal Information Management

- The activities of acquiring, organizing, and retrieving personal information (documents, email, webpages) to complete tasks
- Primarily concerned with studying how people undertake these activities
- Personal Informatics focuses on activities in support of self-knowledge, with some of (but not entirely) the same data

<https://www.morganclaypool.com/doi/abs/10.2200/S00411ED1V01Y201203ICR021>

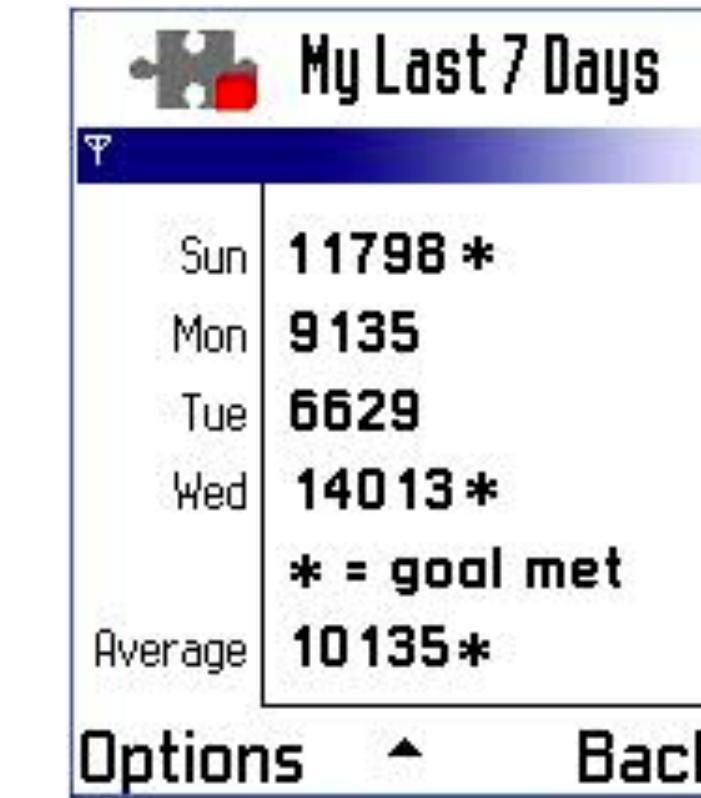
Slow/reflective technology

- HCI research often emphasizes making tasks quicker to accomplish
 - Efficiently organizing menus
 - Developing novel interaction techniques
- By contrast, slow technology is a research agenda to explore how technology can support purposeful reflection
- Often explored through provocative designs

<https://link.springer.com/article/10.1007/PL00000019>

Systems to support collecting data

Houston



<https://dl.acm.org/doi/10.1145/1124772.1124840>

Systems to support collecting data

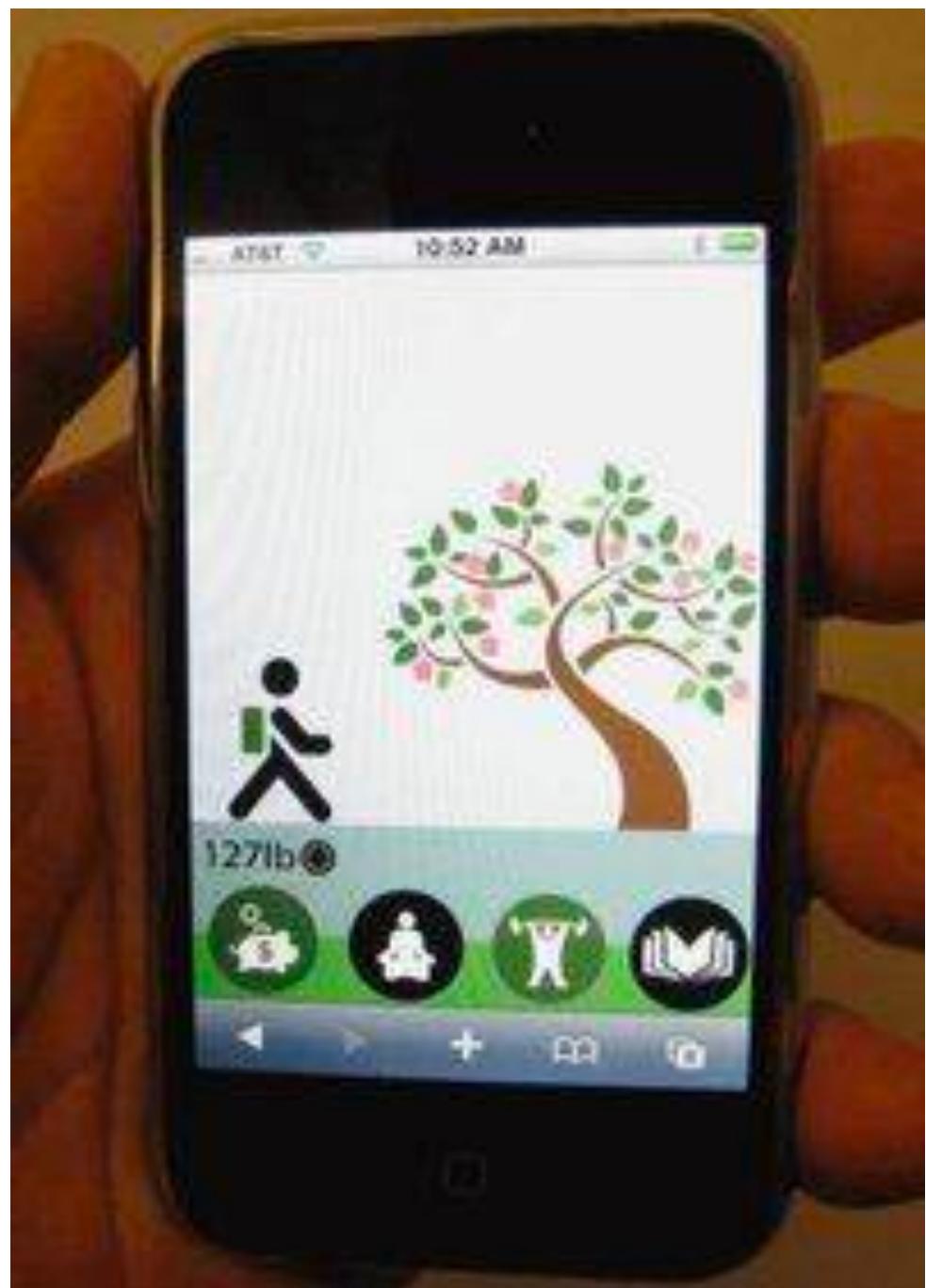
UbiFit



<https://dl.acm.org/doi/10.1145/1357054.1357335>

Systems to support collecting data

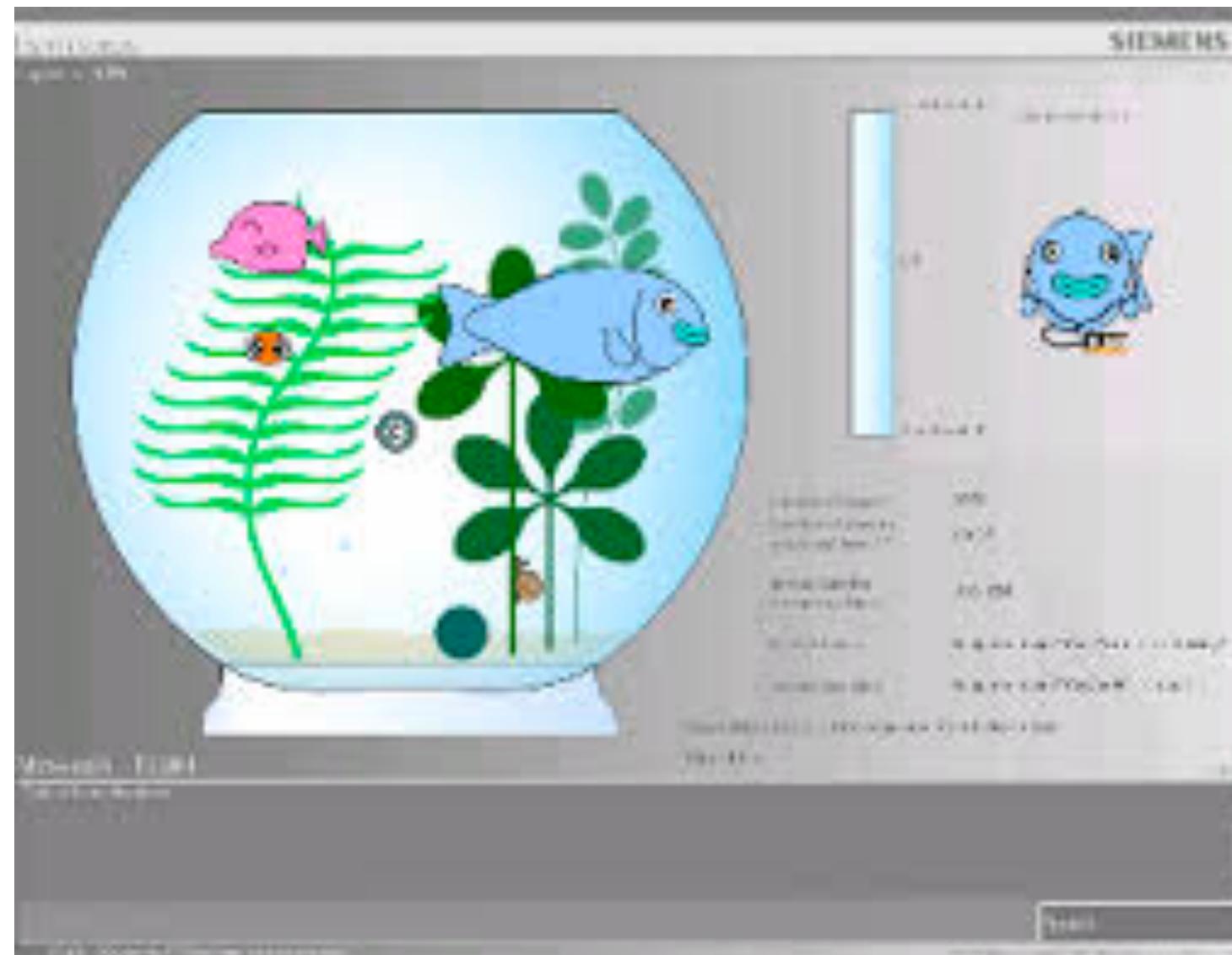
UbiGreen



<https://dl.acm.org/doi/10.1145/1518701.1518861>

Systems to support collecting data

Fish'N'Steps



https://link.springer.com/chapter/10.1007/11853565_16

Later work

- Hosted frequent workshops at CHI and UbiComp to create a research community on the topic
- Further models of personal informatics system use
 - Lived informatics model
 - Tracker goal evolution model
- Put a name to the idea, which proved useful for the community

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