The HCI “Pyramid”: A Taxonomic Overview of HCI

I. Theory

- A. Cognitive/Behavioral/Affective
  - Cognitive theories of attention, learning, affect
  - Card, Moran, & Newell’s “Model human processor”

II. Basic Research

- A. Human performance studies, human brain studies
- B. Observational studies of human-human and human-computer interaction, ethnographic field studies

III. Applied Research

- A. Artifact Design
  - User-centered design
  - Participatory design
  - Task-analytic methods
- B. Artifact Evaluation
  - Cognitive modeling
  - Usability studies
  - Heuristic evaluation

IV. Applications

- A. CSCL
- B. CSCW
- C. Info. Retrieval
- D. Visualization
- E. Ed. Tech.
- F. End-User Computing
Overview of HCI CIS Specialty Area

- **Core Courses**
  - ICS 463 Intro. to HCI Design
  - ICS 464 Intro. to Cognitive Science
  - ICS 664 Human Computer Interaction
  - ICS 665 User Interfaces and Hypermedia
  - ICS 667 Advanced HCI Design Methods [formerly ICS 691 Designing Usable Interfaces (Spring 2000)]

- **Related Background Courses**
  - ICS 464 Cognitive Science
  - ICS 461/661 Artificial Intelligence

- ** Specialty Courses**
  - ICS 491 Software for Learning and Work (Fall 1999)
  - ICS 691 Representations and Interactions for Educational Software (Fall 1998)
  - ICS 691 Component-based Construction of Interactive Learning Environments (Spring 1999)
  - ICS 691 Scientific Visualization (Spring 2001)
  - ICS 691 End-User Computing (Planned)
  - LIS 677 Human Dimension in Information Systems (Spring, 2001 Fall, 2002)

- **Rules**
  - Must take two courses before first attempt at exam
  - Secondary exam given in morning, primary addition in afternoon
  - Those taking primary must take secondary and pass that as well
  - Maximum of two retakes
  - If you pass one part you don't have to retake that part
  - One page of notes (a “cheat sheet”) is allowed

- **Faculty**
  - **Martha Crosby** (crosby@hawaii.edu; adaptive user interfaces based on human physiological and eye tracking data)
  - **Chris Hundhausen** (hundhaus@hawaii.edu; cognitive, social, and cultural dimensions of visualization, end-user computing)
  - **Diane Nahl** (nahl@hawaii.edu; information technology literacy, Affective-Cognitive taxonomy of search behavior)
  - **Dan Suters** (suthers@hawaii.edu; representational affordances and software architectures for computer supported collaborative learning)

- **More Information**
  - Check out the CIS web site, which will soon contain a link to the “HCI Specialty Area” page (will be maintained on the ICS website (http://www.ics.hawaii.edu)
  - Contact any of the HCI Specialty faculty