Designing the Future: Early Visions of HCI

Prof. James A. Landay
University of Washington
Autumn 2012

Interface Hall of Shame or Fame?

- Bar of Soap
  - has a hole!
  - where found?
- From IBM’s RealCD
  - prompt
  - button

Interface Hall of Fame!

- Bar of Soap
  - has a hole!
  - where found?
- Eco-Friendly
  - doesn’t waste
- Black on black??
  - cool!
  - but you can’t see it
  - “click here” shouldn’t be necessary
  - like a door that has a sign telling you to push

Designing the Future: Early Visions of HCI

Prof. James A. Landay
University of Washington
Autumn 2012
Outline

- Review
- Computing in 1945
- Vannevar Bush & As We May Think
- Doug Engelbart & Augmenting Intellect
- SketchPad, Dynabook, & The Star
- Administrivia
- Name Game

Review

"Instant messaging has unleashed many new tasks"

Context - Computing in 1945

Harvard Mark I: 55 feet long, 8 feet high, 5 tons

Vannevar Bush Kicked Off Big Science

- MIT faculty member
- Coordinated WWII scientific effort
- Social contract for science
  - federal government funds universities
  - universities do basic research
  - helps economy & national defense
- “As We May Think”, the Atlantic Monthly, July 1945
- Futuristic inventions / trends:
  - wearable cameras to record life
  - encyclopedia for a nickel
  - automatic transcripts of speech
  - trails of discovery
  - capture of nerve impulses
  - Memex

As We May Think

Picture from http://www.dynamicdiagrams.com/design/memex/model.htm
Predicting → Inventing the Future

Computers weren’t always like this…

Computers don’t have to be like this!

Douglas Engelbart
Augmenting Human Intellect

- Stanford Research Institute (SRI) in the 1960s
- 1962 Paper “Conceptual Model for Augmenting Human Intellect”
  - complexity of problems increasing, need new tools to solve
- Demoed NLS (oNLine System), ’68 Fall Joint Computer Conf. (SF)
  - a real paradigm shift here

Augmenting Human Intellect: Firsts!

- First mouse
- First 2D editing & windows
- First hypertext
- First word processing
- First document version control
- First groupware (shared screen teleconferencing)
- First context-sensitive help
- First distributed client-server
- Many, many more!

Tricycles & Bicycles: Specialized Tools

Tricycles vs Bicycles

SketchPad – Sutherland (1963)
Dynabook – Kay (1974)

Xerox Star – 1st Commercial GUI (1981)

The Future

“The best way to predict the future is to invent it”
Alan Kay

Administrivia

• Attendance
• Turn in assignment #1 now!
• http://www.cs.washington.edu/education/courses/cse440/12au/

Next Time

• Readings
  – Chapter 3 of *The Design of Sites*
  – *The Discipline of Teams*

• Lecture
  – Choose team projects
  – Problem Finding
  – Working as a Team