



USER INTERFACE DESIGN + PROTOTYPING + EVALUATION

Designing the Future: *Early Visions of HCI*

Prof. James A. Landay
University of Washington

CSE 440
January 10, 2013



Interface Hall of Shame or Fame?



- Bar of Soap
 - has a hole!
 - where found?

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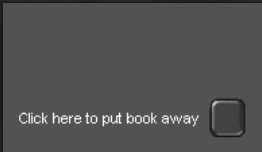

Interface Hall of Fame!



- Bar of Soap
 - has a hole!
 - where found?
 - hotels
- Eco-Friendly
 - doesn't waste

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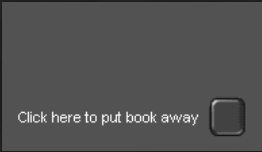

Interface Hall of Shame or Fame?



- From IBM's RealCD
 - prompt
 - button

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Interface Hall of Shame!



- From IBM's RealCD
 - prompt
 - button
- 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

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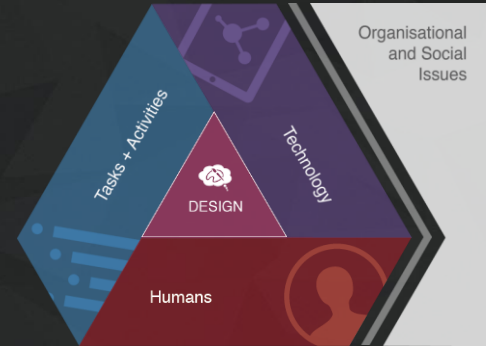
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Outline

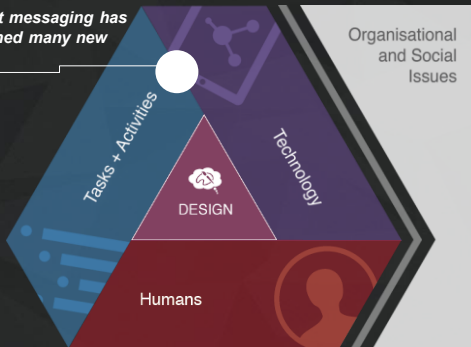
- Review
- Computing in 1945
- Vannevar Bush & As We May Think
- Doug Engelbart & Augmenting Intellect
- SketchPad, Dynabook, & The Star
- Administrivia
- Name Game

Review

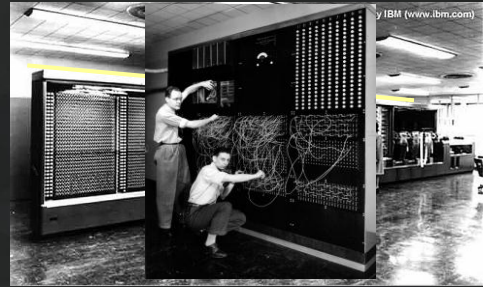


Review

"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

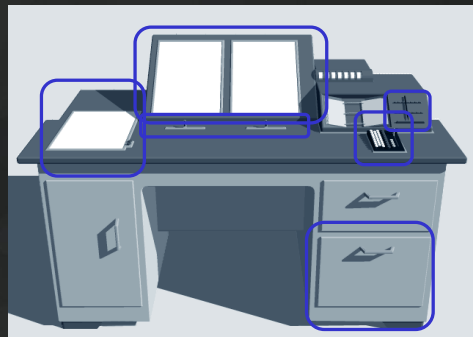
- MIT faculty member
- Coordinated WWII scientific effort
- Social contract for science
 - federal government funds universities
 - universities do basic research
 - helps economy & national defense



<http://www.eecs.mit.edu/ATPS-56/werts/bush/>

- "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.html#download>
 Demo at http://www.dynamicdiagrams.com/casa_studies/mit_memex.html

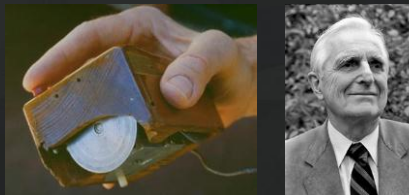
Predicting → Inventing the Future

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



Augmenting Human Intellect: Firsts!

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

Tricycles & Bicycles: Specialized Tools



Tricycles



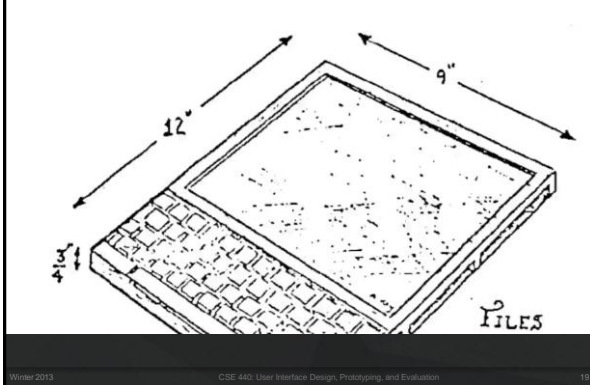
Bicycles

vs

SketchPad – Sutherland (1963)

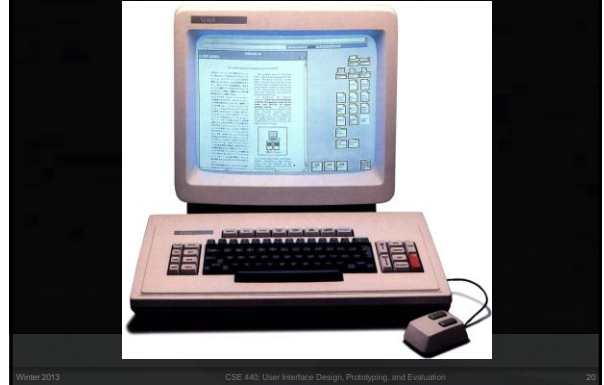


Dynabook – Kay (1974)



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Xerox Star – 1st Commercial GUI (1981)



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The Future

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

Alan Kay

Administrivia

- Attendance
- Everyone should have turned in assignment #1 – any problems doing so?
- Your job to keep up w/ class web site
<http://www.cs.washington.edu/education/courses/cse440/13wi/>

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Next Week

- Readings
 - Chapter 3 of *The Design of Sites*
 - [Tips for Working Successfully in a Group](#) by Randy Pausch
 - [The Discipline of Teams](#)
- Lecture
 - Choose team projects (attendance mandatory)
 - Problem Finding
 - Working as a Team
- Homework (due Thur.)
 - Studio Task #1 – Gestalt Principles (individual)
 - Attendance next Thursday is mandatory (you will discuss your answers to this assignment)

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