Human-Computer Interaction

IS/HCC 760 Fall 2011

Shaun Kane

Today

- Class introduction
- Personal introductions
- Exploring HCI
- Course planning

About the class

- Monday, 4:30-7pm, ITE 406
- Office hours by appointment (ITE 431)

- Each week: Two students lead discussion on an HCI topic (we'll make a schedule today)

Course work

- Written summaries (2 per week; 25%)
  - Email if possible, due by start of class, no late assignments without prior permission
- Class participation (every week; 10%)
- Discussion leader (one class; 15%)
- Course project (50%)

Discussion leaders

- **By next Monday:** Choose a topic in HCI
- **Week before class:** Select 4-6 readings
- **During class:** Lead discussion with an overview of the research, questions to discuss

Project

- Individual project on an area of interest
- Opportunity to explore literature and to plan out future research
- Lit review, pilot/formative study, research paper, presentation

Project deliverables

9/26	Proposal
10/3	Reference list
10/10	Study plan
11/14	Study results
11/28	Paper draft
12/12	Final paper and presentation

What's important

- Active discussion and participation in class
  (prepare questions and talking points)
- Be prepared as a discussion leader
  (this can take a lot of preparation)
- Choose a project topic that interests you
  (and advances your research interests)

Questions about the course?

Introductions

Dr. Shaun K Kane
Assistant Professor
http://umbc.edu/people/skane

UMass Minutemen

W

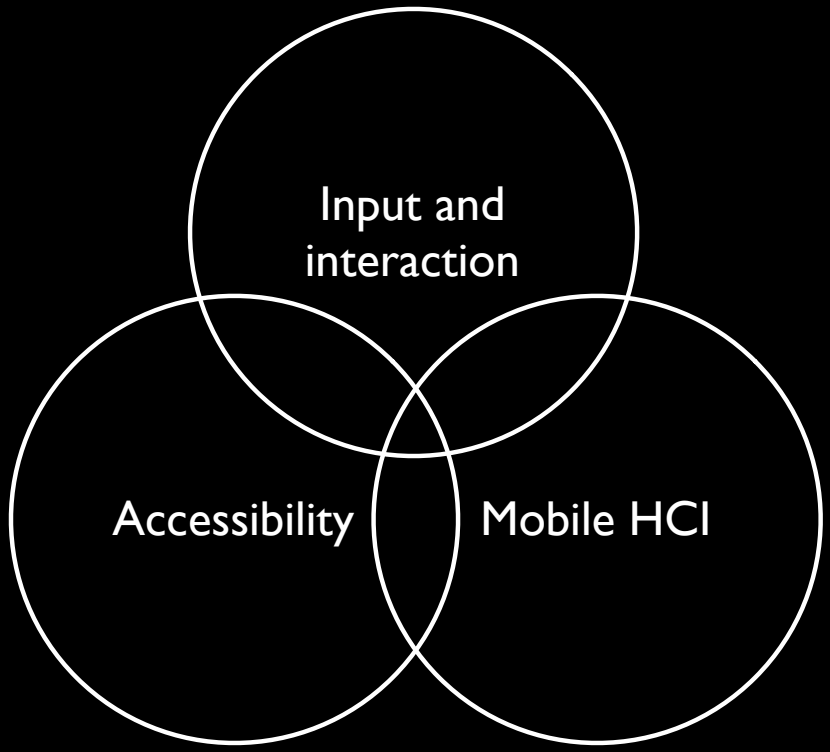
UMBC

intel

Microsoft® Research

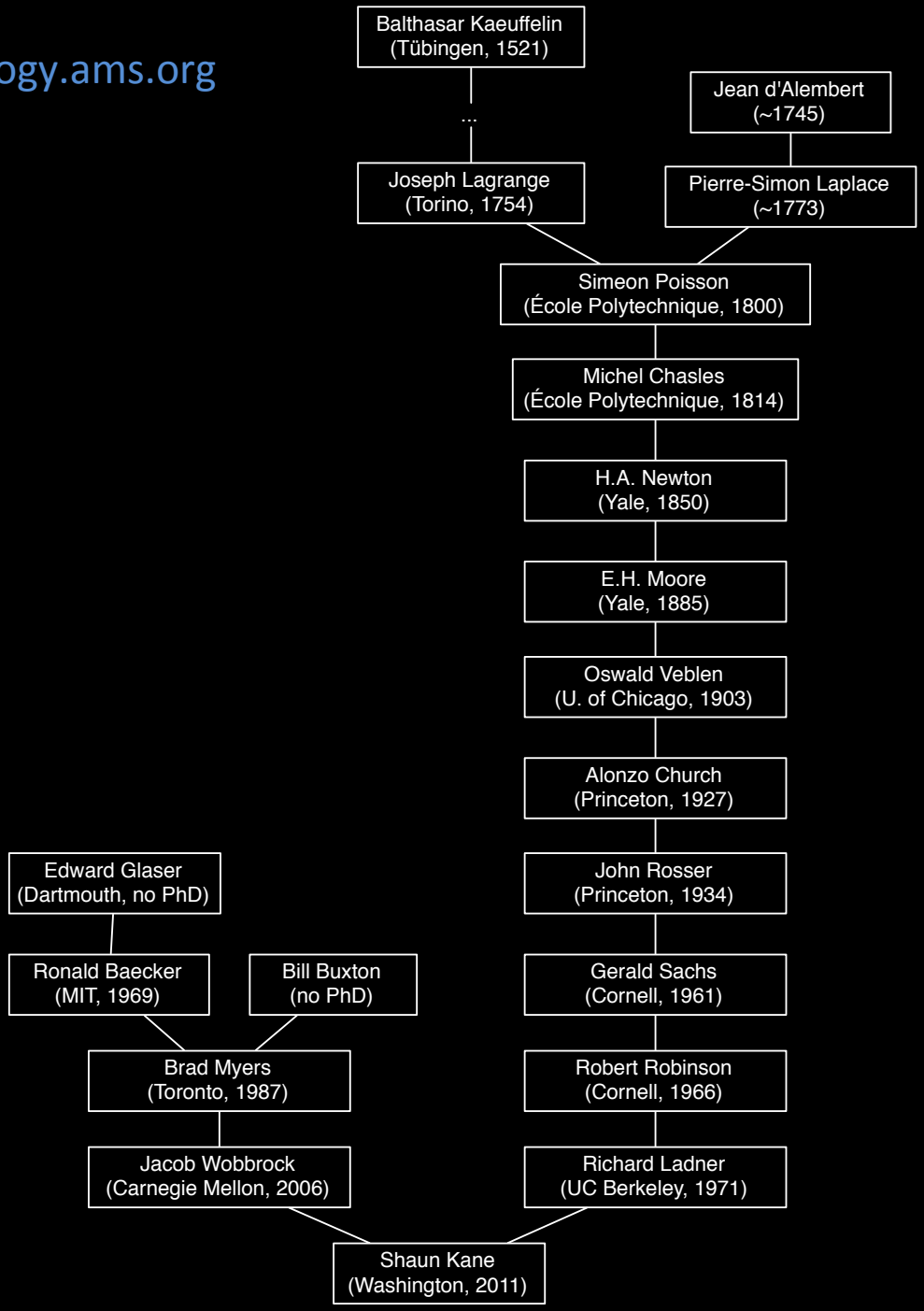
My research

- Developing input and interaction techniques for constrained environments
  - People with disabilities
  - Mobile computing



- Slide Rule
  http://www.youtube.com/watch?v=496IAx6_xys
- Bonfire
  http://www.youtube.com/watch?v=mgtTo7JD_dc

http://www.genealogy.ams.org



Introductions

- Your name
- Where you're from
- Program (IS, HCC, other) and degree
- Interest in HCI

Exploring HCI

- The point of this course
- Grudin (2008): The history of HCI

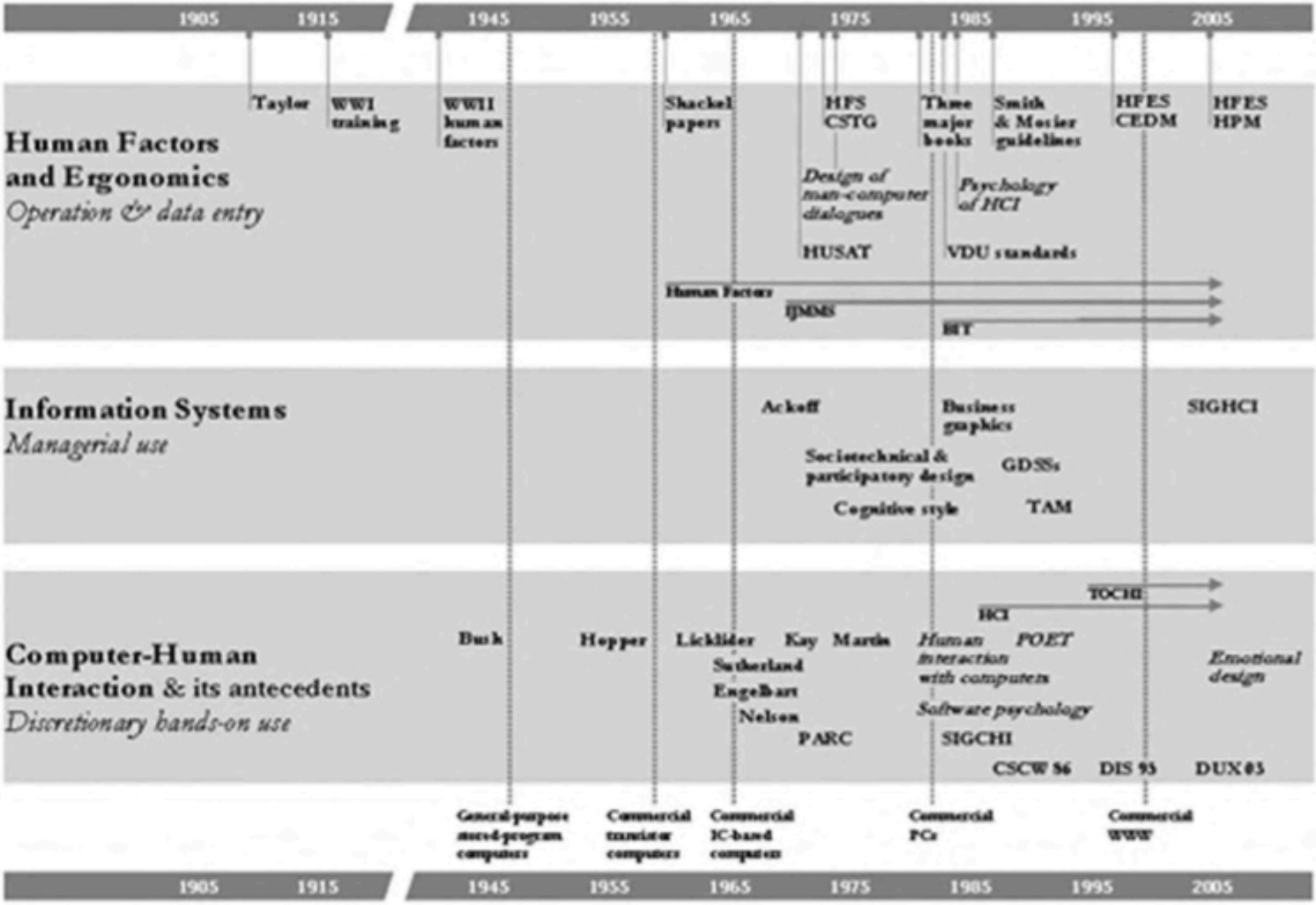
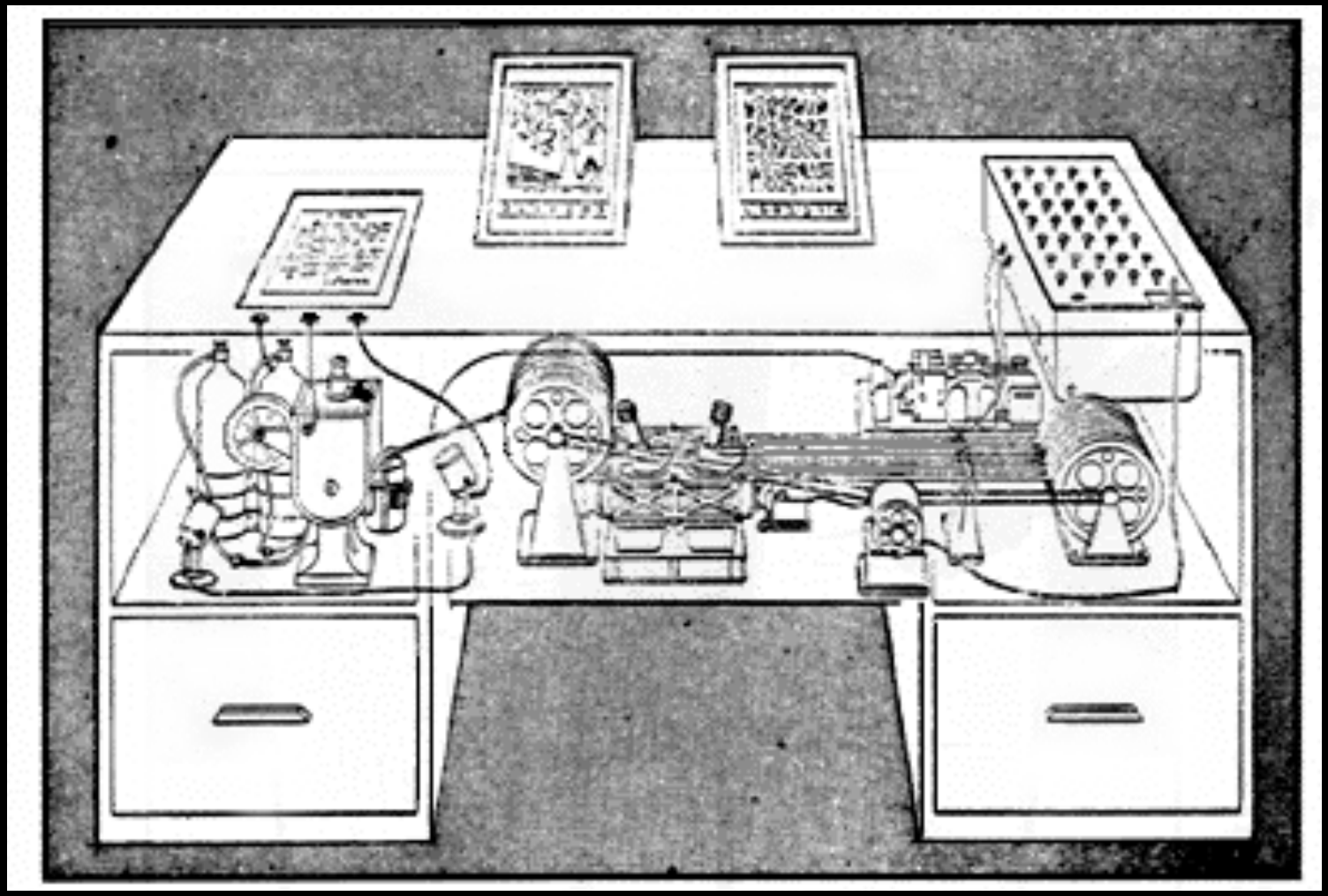


FIGURE 1. HCI events and topics discussed in this chapter. Expansion of acronyms, significance of people and books, and reasons for their placement are in the text.



Memex in the form of a desk would instantly bring files and material on any subject to the operator's fingertips. Slanting translucent viewing screens magnify supermicrofilm filed by code numbers. At left is a mechanism which automatically photographs longhand notes, pictres and letters, then files them in the desk for future reference (LIFE 19(11), p. 123).

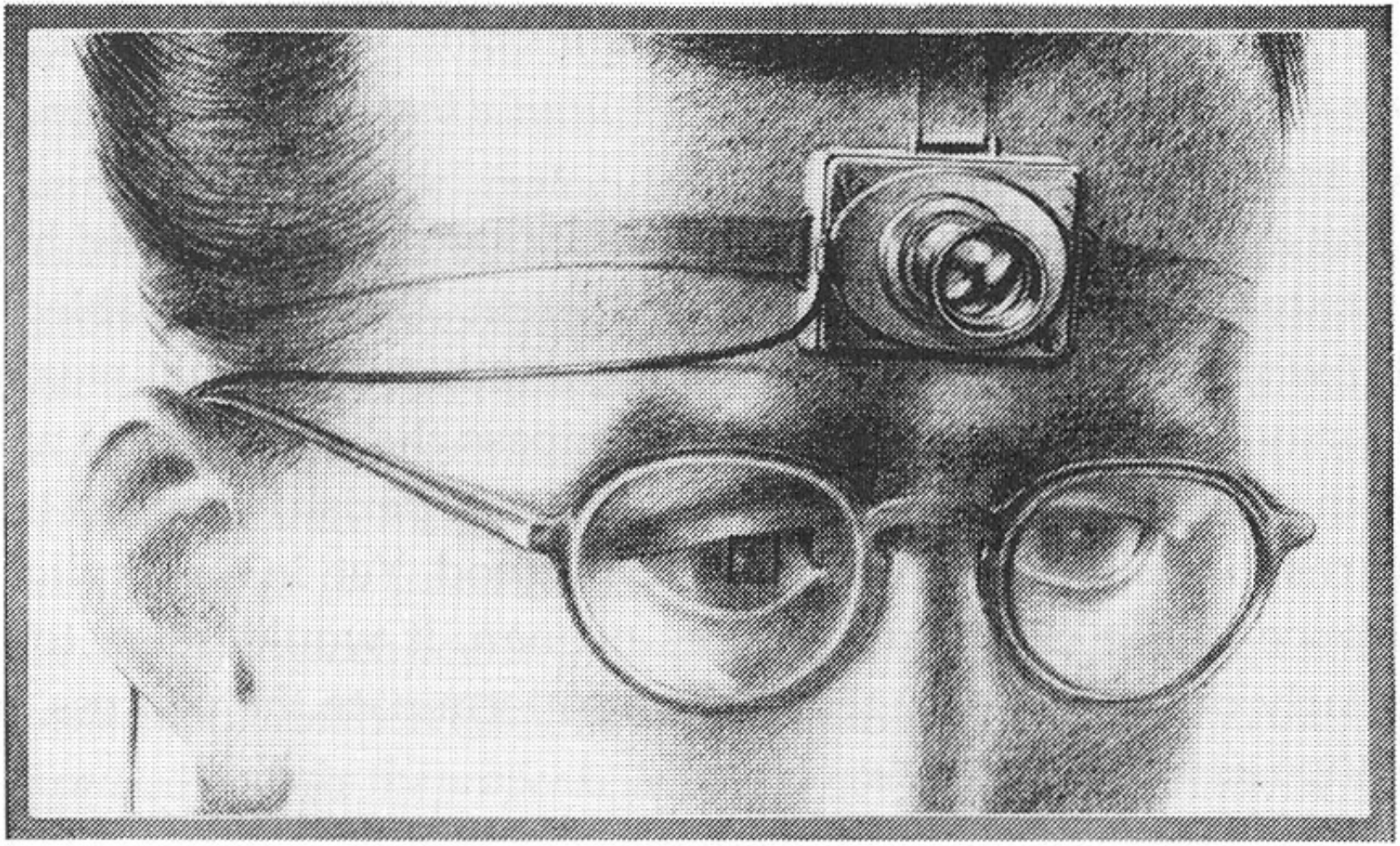
The owner of the memex, let us say, is interested in the origin and properties of the bow and arrow. [...] He has dozens of possibly pertinent books and articles in his memex. First he runs through an encyclopedia, finds an interesting but sketchy article, leaves it projected. Next, in a history, he finds another pertinent item, and ties the two together. Thus he goes, building a trail of many items. Occasionally he inserts a comment of his own, either linking it into the main trail or joining it by a side trail to a particular item. […]

Memex, the “memory extender” (1945)

- Vannevar Bush, “*As we may think,*” Atlantic Monthly, 1945 http://www.theatlantic.com/doc/194507/bush

- Concept sketch for augmenting human capability

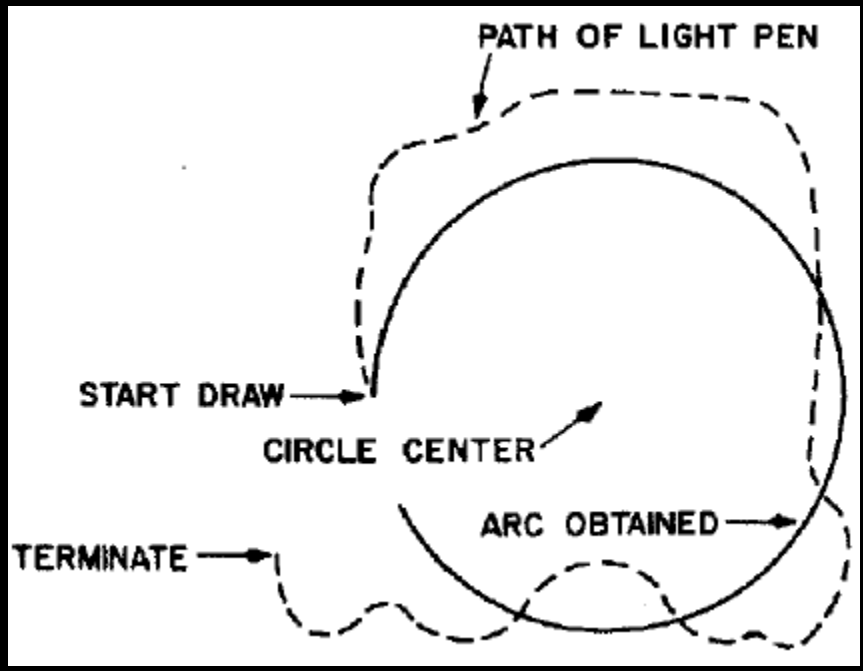
- Contained pioneering ideas for:
  - Hypertext
  - Bookmarks
  - Document annotations
  - Sharing annotations (social technology)
  - Networked encyclopedias



A scientist of the future records experiments with a tiny camera fitted with universal-focus lens. The small square in the eyeglass at the left sights the object (*LIFE 19*(11), p. 112).

Sketchpad (1963)

- Ivan Sutherland, M.I.T. Ph.D. student

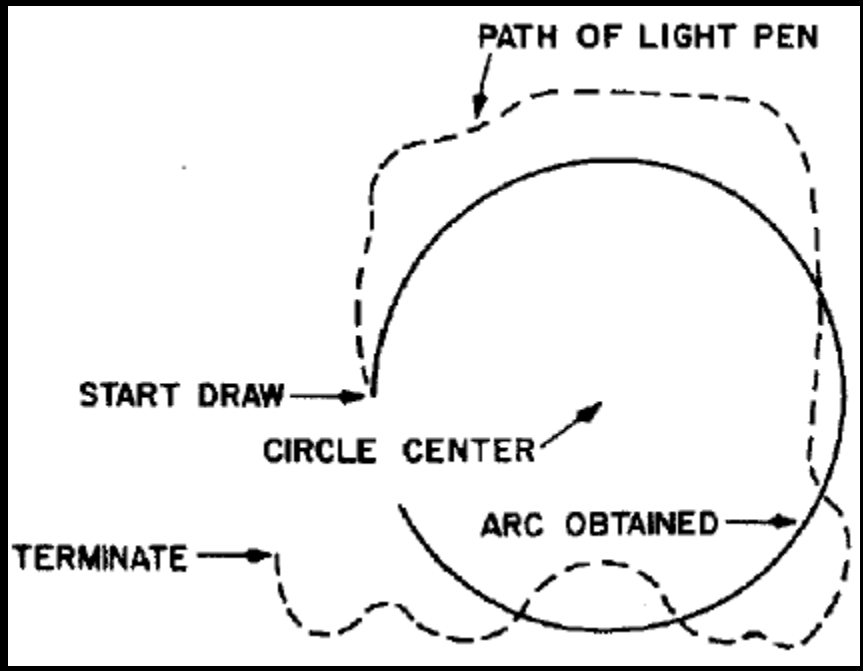


Sketchpad video

- http://www.youtube.com/watch?v=7fHFZcMD3-M

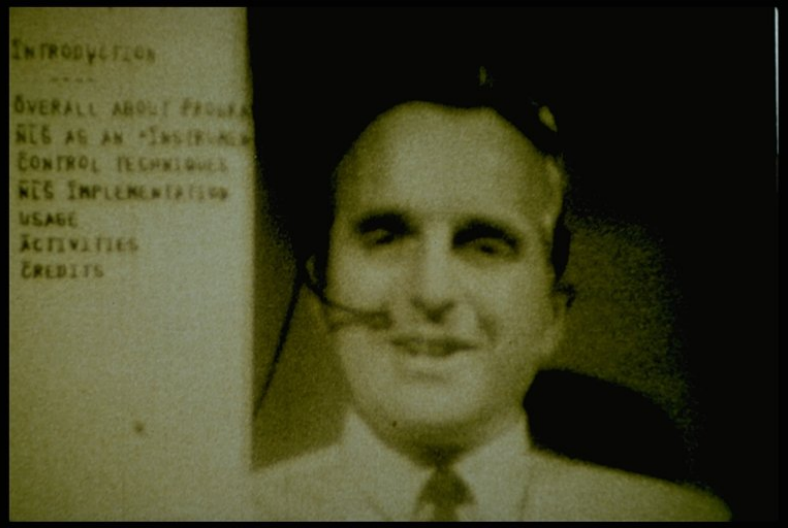
Sketchpad (1963)

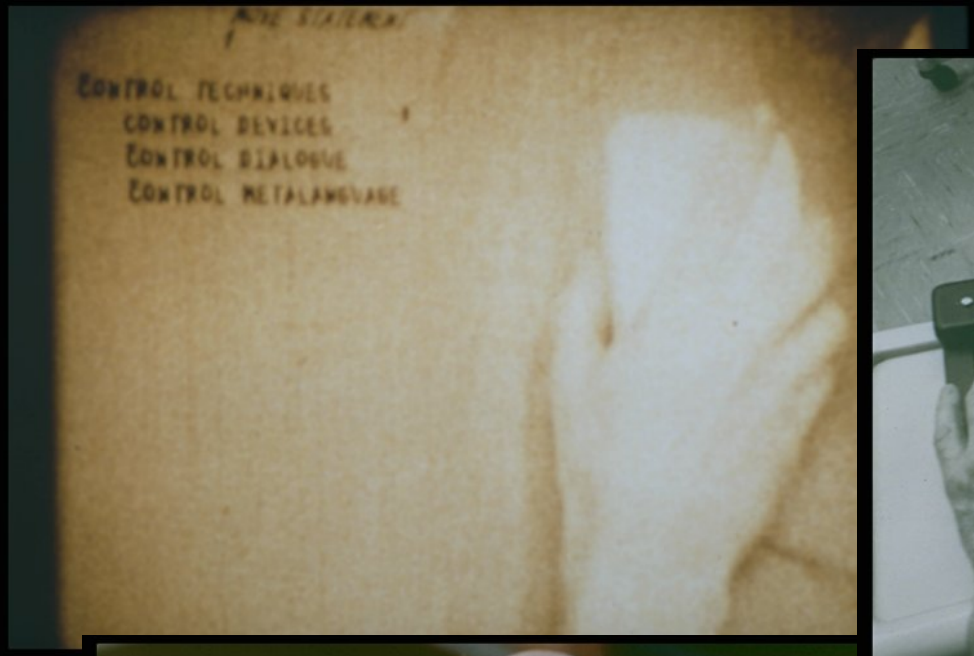
- Ivan Sutherland, M.I.T. Ph.D. student
- Noteworthy, pioneering aspects
  - Graphical user interface
  - Direct manipulation
  - CAD concepts
  - Constraint solving
  - Master objects and instances
  - Snapping behavior
  - Light pen tracking
  - Bimanual interaction
  - …

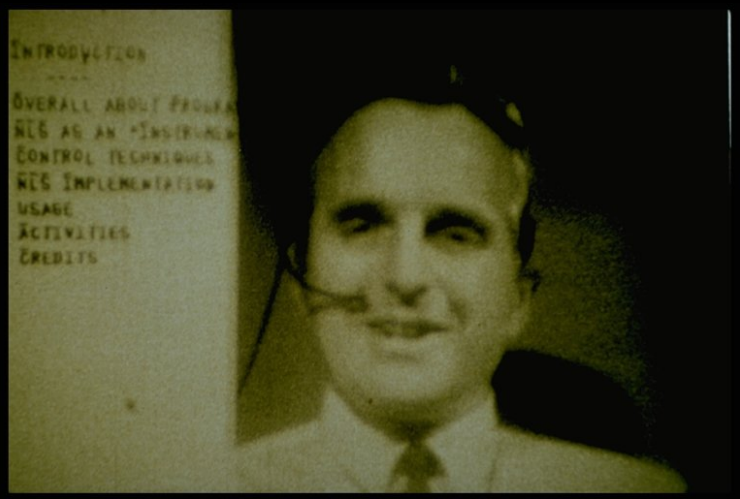


oN-Line System (NLS) (1968)

- Douglas Engelbart, Stanford Research Institute
- The demo that changed the world




CONTROL TECHNIQUES
CONTROL DEVICES
CONTROL DIALOGUE
CONTROL METALANGUAGE

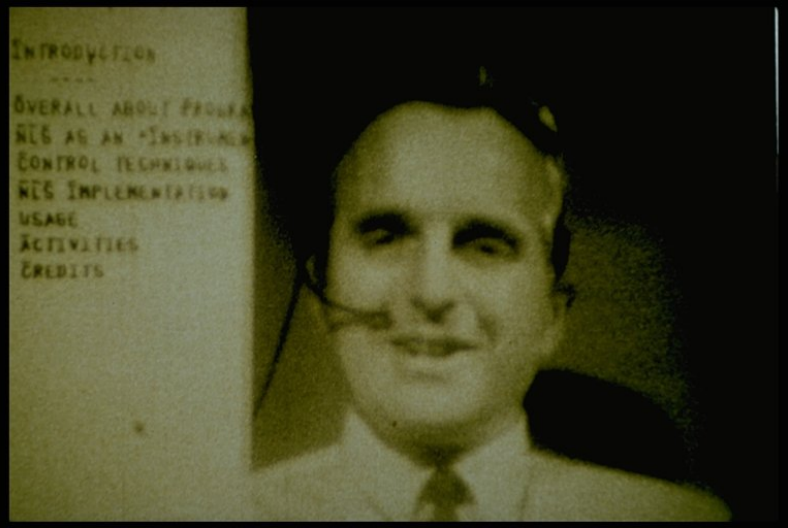

INTRODUCTION
CONTROL TECHNIQUES
USAGE
ACTIVITIES
CREDITS

NLS video

- http://www.youtube.com/watch?v=JfIgzSoTMOs

oN-Line System (NLS) (1968)

- Douglas Engelbart, Stanford Research Institute
- The demo that changed the world
  - Hypertext
  - Cut, copy
  - File creation
  - Direct manipulation
  - Mouse, mouse cursor
  - Text editor
  - Graph editor
  - Networking
  - …



Xerox Alto (1973)

- First graphical user interface (GUI)
- WYSIWYG text editing
  - Bravo
  - Gypsy
- Graphics editing
- Input devices
  - Keyboard
  - 3-button mouse
  - 5-key chord keyset
- Smalltalk environment
- Multi-player game: Alto Trek

Thoughts on Grudin?

Thoughts on Grudin?

- What surprised you?
- What was most interesting?
- How does Grudin's vision for the future differ from your own?

This class

- We'll choose our own focus
- Different aspects of HCI (topics, populations, theory, methods, …)

Next steps

- Choosing discussion topics
- Choosing discussion leaders

- Topics: Let’s go through the papers that you read, and list topics/keywords

Presentation slots

- We’ll assign slots now, and topics by next week
- You can swap slots this week, so long as everyone agrees

For next week

- Alyson and Michele on social privacy and wearable computing
  - I'll send out readings tomorrow

- **To do:**
  - Read assigned papers
  - One-page (*each*) summary of 2 papers
  - Choose a presentation topic