Learning Targets

- HCI early days
- HCI in modern days
- WIMP interfaces
- Web interfaces
- Post-WIMP

Inputs for computers in early days

- Connecting wires
- Paper tape.
- Punch Cards
- Keyboard

HCI was not a subject area of study until the late 80s

First HCI course in Switzerland offered in 1998
Outputs for computers in early days

- Light switches
- Paper and Teletype

Historical milestones

- Direct manipulation - Ivan Sutherland, 1963 MIT
- Mouse - Douglas Engelbart, 1965, SRI (Stanford)
- Windows - Engelbart 1968, Alan Kay 1969 (U. Utah)
- Desktop metaphors - Alan Kay at Xerox PARC in 1970
- Apple's Macintosh - 1984

Indirect: Command-line Interface

Direct manipulation

Direct manipulation in the future
Metaphors are used in computer interfaces in order to aid user to understand a new target domain by allowing them to comprehend it in terms of a source domain they understand [Baecker et al. 1995].

**Desktop Metaphor**

**Xerox Alto**
- First commercialized in early 80s
- WYSIWYG (what you see is what you get)
- Earliest computer with GUIs (graphical user interface)

**Xerox Star**

**Apple Lisa**
- Introduced in 1983
- Based upon many ideas from Xerox Star
- Still costs $10,000

**Apple Macintosh**
- Old Ideas but well done
- $2495
WIMP INTERFACE TERMINOLOGY

- Windows
  - Drop-down window
  - Pop-up window
  - Radio buttons
  - Check boxes
- Icons
- Mice
- Pointers

INTERFACES FOR WEB

- Navigator windows
- Pages and hyperlinks
- Tabs
- Scrolling
- Wizards

FUTURE: THE DISAPPEARING COMPUTERS

- Gesture interfaces
- Two-handed input devices
- Natural language interfaces
- Intelligent agents

VIDEO

http://www.youtube.com/watch?v=QRH8eimU_20 (5 min 30 sec)

WHAT IS THE HCI YOU SEE HERE?

Tablet style PC
Intelligent personal agent (name: Fil)
GUI
The speech interfaces
Visualization
Tangible interfaces

WHAT IS THE HCI DESIGN?

From the user point of view?
- The user: the professor and his various tasks
- Task context: prepare lecture, coordinate his daily activities
- Performance perspective: is he more efficient with this computer?
- The UP principle - user performance, user pleasure.
**THE FUTURE**

- Table top metaphor
- Interfaces for group participants
- Computer-supported collaborative work
- Tele-presence
- Natural interface

**VIRTUAL TABLETOP**

**MICROSOFT SURFACE (2007)**

[Link to video](http://www.youtube.com/watch?v=kr1C917o4jI&feature=related)

**SAMSUNG SUR40 FOR MICROSOFT SURFACE**

**WHO ARE IN THE INTERACTION?**

- children, elderly
- computer aficionados, or despisers
- frequent users to hesitant users,
- hulking teenagers
- people with special needs

**DIVERSITY OF USERS**
LIMITATIONS OF

human memory, attention, learning speed, motor skills

WHAT DO WE USE THE M/C FOR:

- Process and produce documents, solve problems (a software system for air traffic control)
- Internet application (email …)
- E-learning, e-commerce, e-health, e-government
- Travel, information gathering, ..
- Entertainment

APPLICATION AREAS

- computers, software
- communication systems
- sophisticated control systems
- entertainment systems (TV)
- WWW
- vehicles, homes, healthcare, etc.

THE END