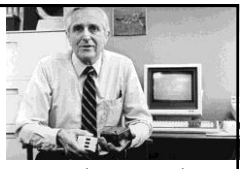
History of HCI

A brief survey of some historical methods of interaction and display

James Tam

Douglas Engelbart: Background



http://www.corporationtocommunity.com

- **The Problem (early '50s)**
  - "...The world is getting more complex, and problems are getting more urgent. These must be dealt with collectively. However, human abilities to deal collectively with complex / urgent problems are not increasing as fast as these problems"

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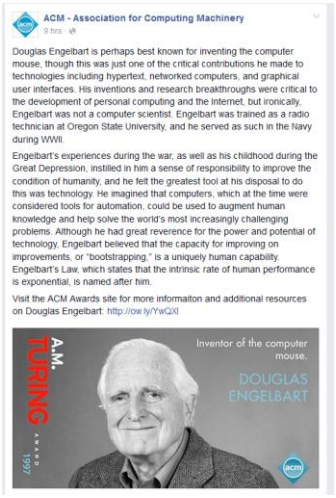

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Douglas Engelbart: Background (2)

- **The Vision (Early 50's)**

  "…I had the image of sitting at a big CRT screen with all kinds of symbols, new and different symbols, not restricted to our old ones. The computer could be manipulated, and you could be operating all kinds of things to drive the computer"

  "... I also had a clear picture that one's colleagues could be sitting in other rooms with similar work stations, tied to the same computer complex, and could be sharing and working and collaborating very closely. And also the assumption that there'd be a lot of new skills, new ways of thinking that would evolve "

James Tam

The Mouse

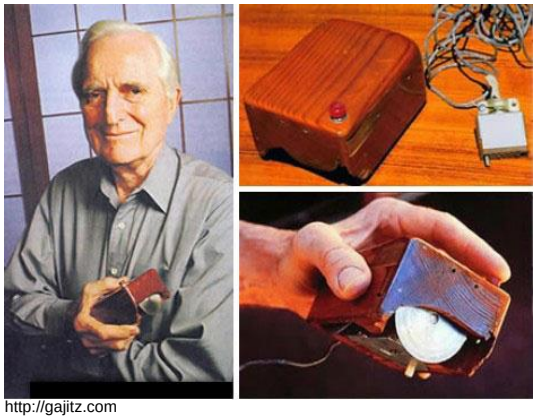
- 1962: ARPA (under JCR Licklider) provided a special fund to realize the vision of a "mechanically enhanced man".
  - It came out of a paper published by Licklider (before he joined ARPA) where he "…forecast a future that will involve a very close coupling between the human and electronic members of the [human-technology] partnership."[1]
- Douglas Engelbart applied for funding.

James Tam

1 "A History of Modern Computing" (Paul Ceruzzi: MIT Press 2003)

The Mouse (2)

- Engelbart spent his time studying an experimenting with ways to improve communication between people and computers.
- 1967: he described (his most famous) invention, the mouse.



http://gajitz.com

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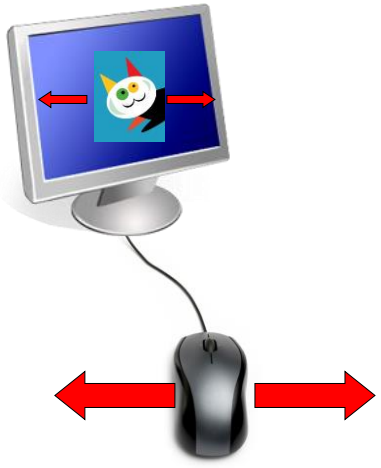
Mouse Significance

- Direct mapping: cause-effect



- Contrast: indirect mappings

Or worse: command line

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Xerox Star

- 1981: Xerox introduced a microcomputer, 8010 Star Information System (Short form: Xerox Star).

http://www.digibarn.com

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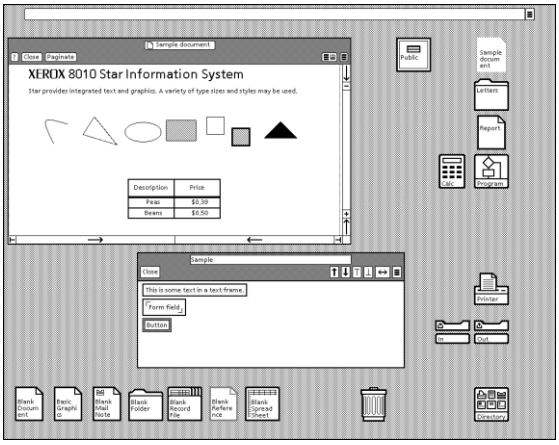
Xerox Star (2)

- The first GUI-driven microcomputer (1981 vs. 1984 for the Apple McIntosh and 1985 for the Commodore Amiga 1000).



http://www.aresluna.org

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After This Section You Should Now Know

- Computer Mouse
  - Who invented the device
  - When was it invented
  - What was the motivation for its creation
  - What is the impact/benefits from the creation of the mouse
- What was the first GUI-driven computer: Xerox Star
  - When was it invented
  - How did the interface work / what was its significance

James Tam