A short history of Human-Computer Interaction

See Michel Beaudouin-Lafon, 40 ans d'Interaction Homme-Machine : points de repères et perspectives, Journées ASTI 2001
Available at http://interstices.info

Memex - Vannevar Bush (1945)
Vision for a desktop information management system
Electromechanical system
Seen as the ancestor of the notion of hypertext

Sketchpad - Ivan Sutherland (1963)
Direct manipulation geometric shapes
Geometric constraints, zoom, click-drag

NLS / Augment - Douglas Engelbart (1968)
Inventor of the mouse (1963)     Bimanual interaction
Hypertext, cooperative work,
document sharing, video-conferencing
Visicalc - Dan Bricklin (1979)
First spreadsheet (Apple II)

Xerox Star - Xerox PARC (1981)
First commercial graphical workstation
Document-centric approach

Graphical personal computer
Finder
MacPaint
MacWrite
Hardware + software design
World-Wide Web - Tim Berners-Lee (1990)

Networked hypertext

Integrated browser + editor

Are the visions getting more and more limited?

NLS/Augment  « Augmenting human intellect »
   Cooperative work
   
Xerox Star   Personal use, network transparency
   Document-centric
   
Macintosh   Personal use, explicit network access
   Application-centric
   
World-Wide Web  Networked, but poor user interaction
   Browsing but not editing

Distinction between invention and innovation

HCI does not follow Moore’s law

Original Macintosh
January 1984 - $2500
   CPU 68000 - 0.7 MIPS
   RAM 128 kB
   Floppy 400 kB
   9” n&b, 512x342
   Keyboard, mouse
   WIMP desktop

iMac 27''
September 2012 - $1700
   CPU core i7 - 150 000 MIPS
   RAM 4 GB
   Hard drive 1 TB
   27” colors, 2560x1440
   Keyboard, mouse
   WIMP desktop

The long nose of innovation

Bill Buxton
Visions are important

- Augmenting Human Intellect – Doug Engelbart
- Ubiquitous Computing – Mark Weiser

BUT a vision is more than just a video

- Knowledge Navigator – Apple
- Future Vision – Microsoft