

# The Computer Age

- **Computer Art**
  - **The cultural debate**
    - **Vannevar Bush: “As We May” (1945)**
    - **George Orwell: Big Brother (1948)**
    - **Norbert Wiener: “Cybernetics” (1948)**
    - **John von Neumann: "The general and logical theory of automata" (1948)**
    - **Alan Turing: “Computing Machinery and Intelligence” (1950)**
    - **John McCarthy: artificial intelligence (1956)**
    - **J.C.R. Licklider: "Man-Computer Symbiosis” (1960)**
    - **Manfred Clynes and Nathan Kline: “Cyborgs and Space” (1960)**
    - **Morton Heilig: the Sensorama (1962)**
    - **Roy Ascott: "Behaviourist Art and the Cybernetic Vision“ (1964)**
    - **SRI Intl: Shakey the Robot (1966)**
    - **Benoît Mandelbrot: “How Long Is the Coast of Britain? Statistical Self-Similarity and Fractional Dimension” (1967)**
    - **Douglas Engelbart: The mother of all demos (1968)**

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    - **Phillip Dick: "Do Androids Dream of Electronic Sheep" (1968)**
    - **Stanley Kubrick: "2001 A Space Odyssey" (1968)**
    - **Dennis Ritchie and Keith Thompson: UNIX (1968)**
    - **DARPA: The Arpanet (1969)**
    - **Nicholas Negroponte: "The Architecture Machine" (1970)**
    - **John Conway: The Game of Life (1970)**
    - **Edward Lorenz: "Does The Flap Of A Butterfly's Wings In Brazil Set Off A Tornado In Texas?" (1972)**
    - **Ray Tomlinson: Email (1972)**
    - **Rainer Werner Fassbinder: "Welt am Draht/ World on a Wire" movie (1973)**
    - **Xerox: the Alto (1973)**
    - **Richard Dawkins: the meme (1976)**
    - **Ars Electronics (1979)**

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    - **The Usenet (1980)**
    - **William Gibson: the cyberspace (1982)**
    - **John Badham: "War Games" movie (1983)**
    - **Bruce Bethke: "Cyberpunk" (1983)**
    - **Apple: the Macintosh (1984)**
    - **Steven Levy: "Hackers: Heroes of the Computer Revolution" (1984)**
    - **Sherry Turkle: "The Second Self" (1984)**
    - **NASA: Virtual Planetary Exploration Workstation (1984)**
    - **MIT Media Lab (1985)**
    - **Toshiba T1100, the first mass-market laptop (1985)**
    - **Lucasfilm: online game "Habitat" (1985) and "avatars"**
    - **Per Bak: "Self-organized criticality" (1987)**
    - **Chris Langton: "Artificial Life" (1987)**

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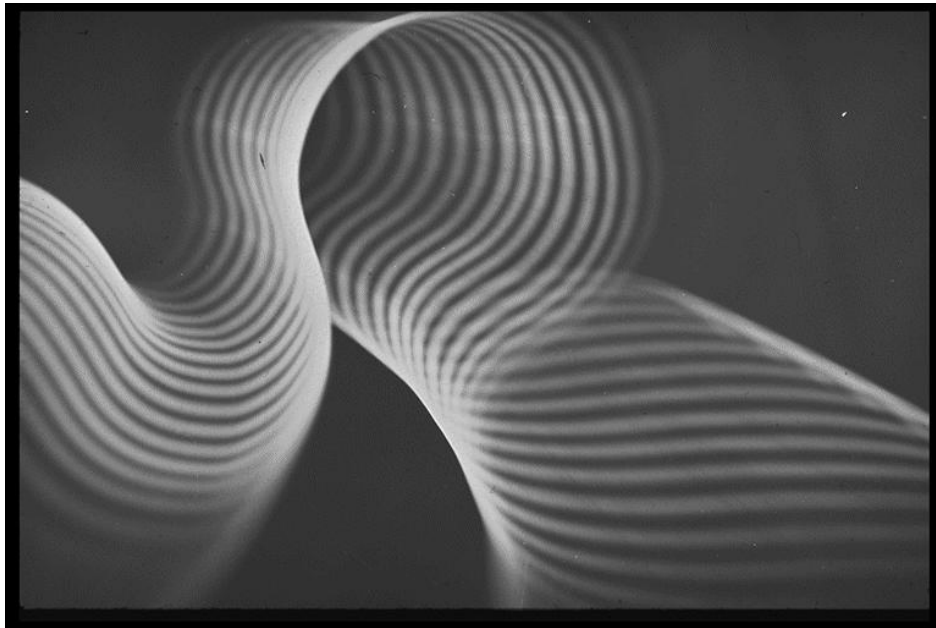
- **Computer Art**
  - **The cultural debate**
    - **Robert Morris: first computer virus on the Arpanet (1988)**
    - **Vernor Vinge: the singularity (1988)**
    - **Mondo 2000 magazine (1989)**
    - **Zentrum für Kunst und Medientechnologie Karlsruhe - ZKM (1989)**
    - **Adobe Photoshop (1990)**
    - **Thomas Ray: "Evolution and optimization of digital organisms" (1991)**
    - **Linus Thorvald: Linux open-source operating system (1991)**
    - **Neal Stephenson: the metaverse (1992)**
    - **Wired magazine (1993)**
    - **Jaron Lanier: "Agents of Alienation" (1995)**

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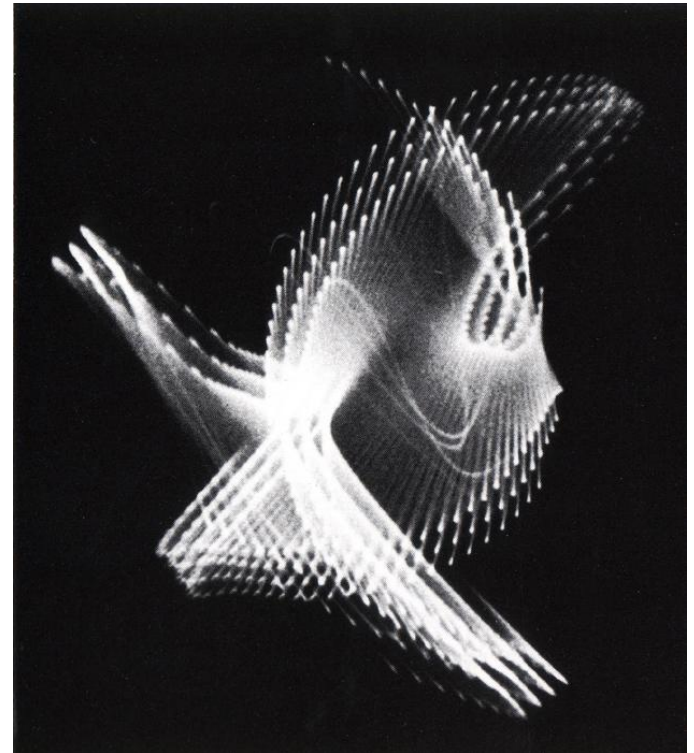
- **Computer Art**
  - **The cultural debate**
    - **SixDegrees social network (1997)**
    - **Napster (1999)**
    - **Philip Rosedale: Second Life (2003)**
    - **Nintendo Wii (2006) that transforms the player's physical movements into movements in the game**
    - **Apple iPhone (2007)**

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- **Computer Art**
  - **Prehistory**
    - **Ben Laposky (1914, USA)**
    - **Herbert Franke (1927, Germany)**



“Lichtformen” (1955)



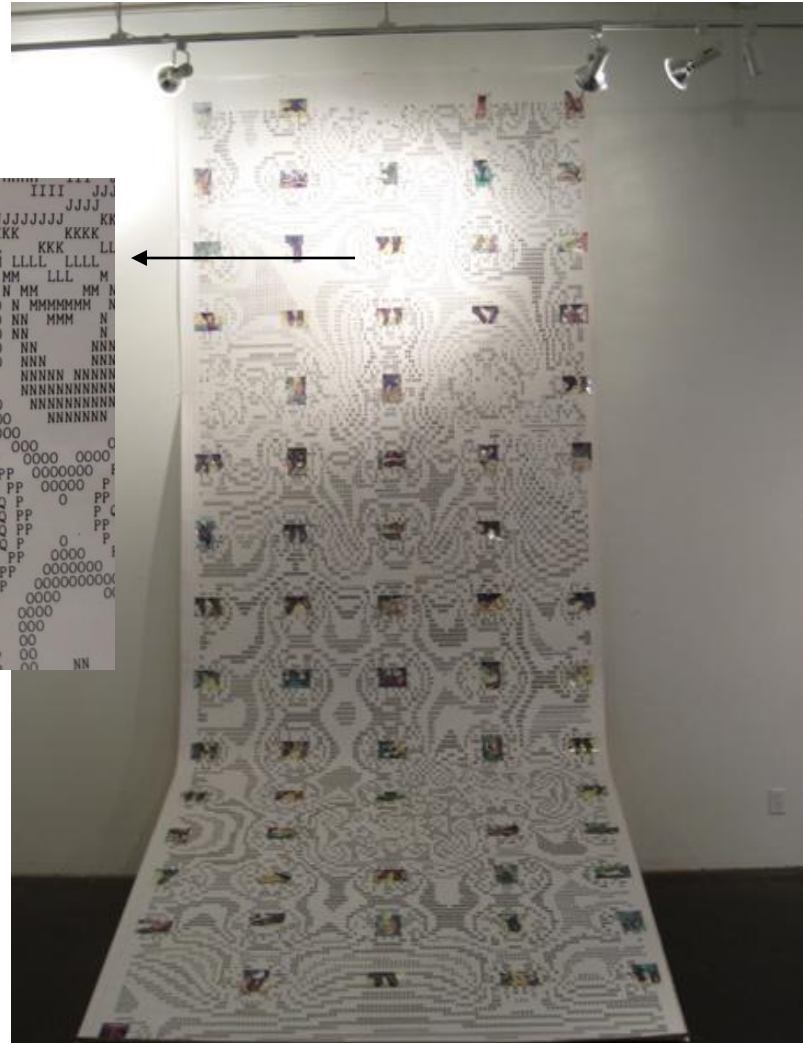
“Oscillons” (1956)

# The Computer Age

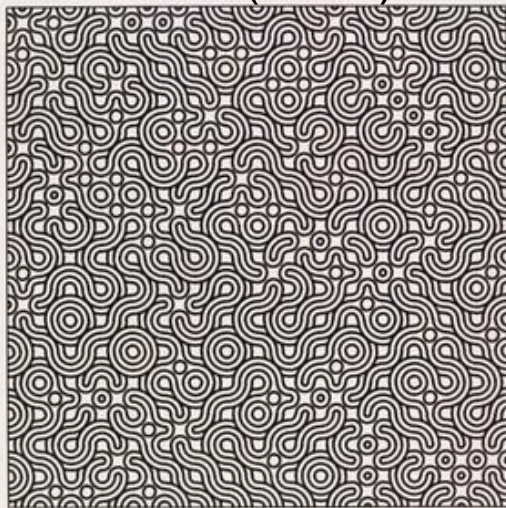
- **Computer Art**
  - **Two main centers of computer art activities: Bell Labs and Technische Universität Stuttgart,**
  - **1960: Desmond Paul Henry's Drawing Machine**
  - **1963: First public showing of computer art: San Jose State University**
  - **1965: Generative Computergrafik exhibition at the Technische Hochschule in Stuttgart**
  - **1965: Computer-Generated Pictures exhibition at the Howard Wise Gallery in New York**
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  - **1966: Billy Kluver's interdisciplinary program Experiments in Art & Technology**
  - **1968: Cybernetic Serendipity exhibition in London**

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- **Computer Art**
  - **Sonya Rapoport (1923, USA)**



Brown (1975)



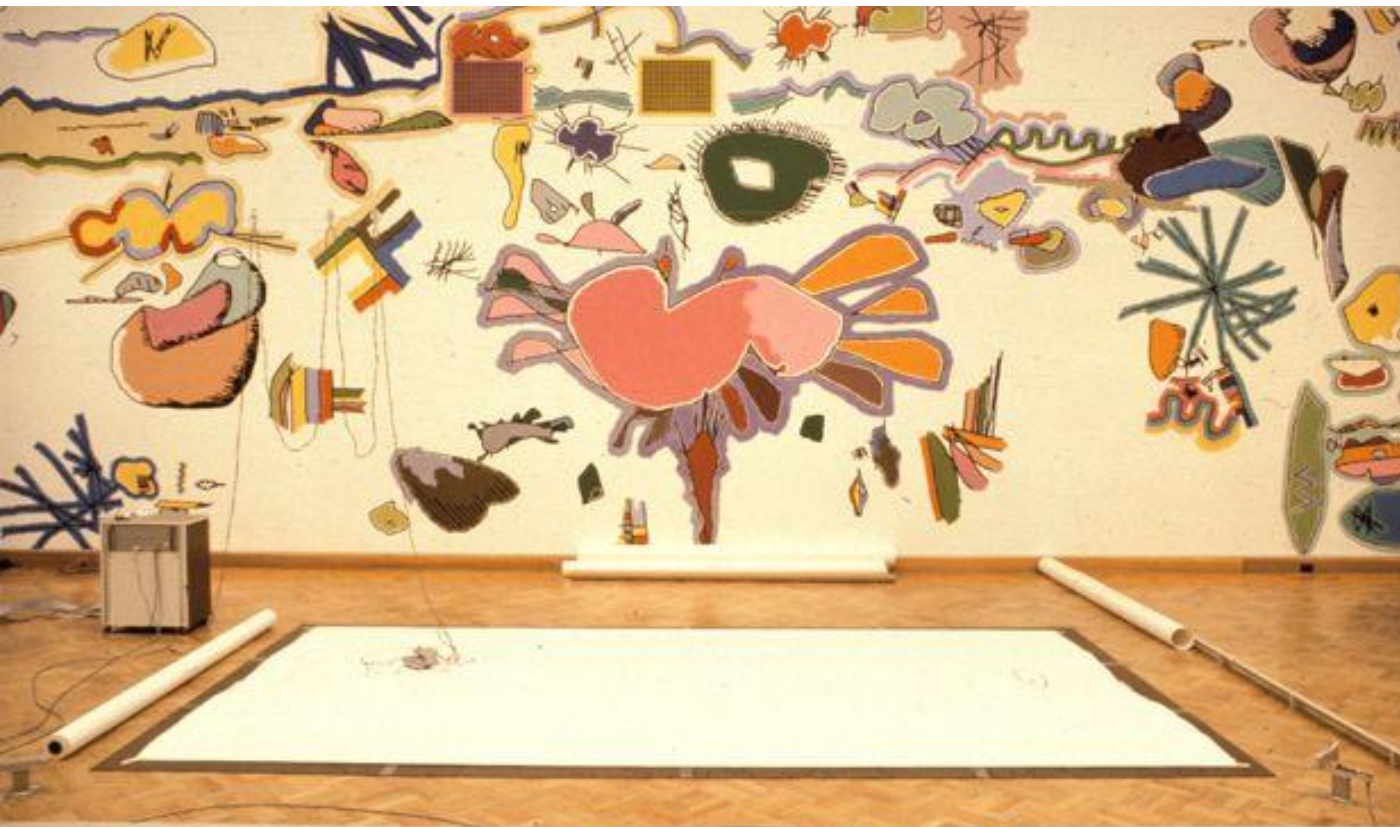
“Shoe Field” (1986)



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- **Computer Art**
  - **Harold Cohen (1928)**

Images created by the program AARON (1979)



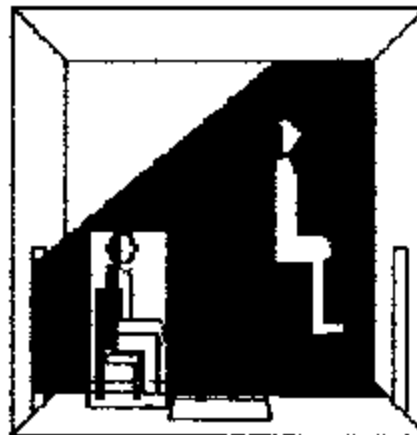
# The Computer Age

- **Computer Art**

- **Paul Brown (1947)**

- **Robert Edgar (1951)**

“Memory Theater” (1985), computer implementation of a memory theatre, designed like a three-dimensional adventure videogame in which the "user" is able to move from room to room to "interact" with the artist's network of images and texts



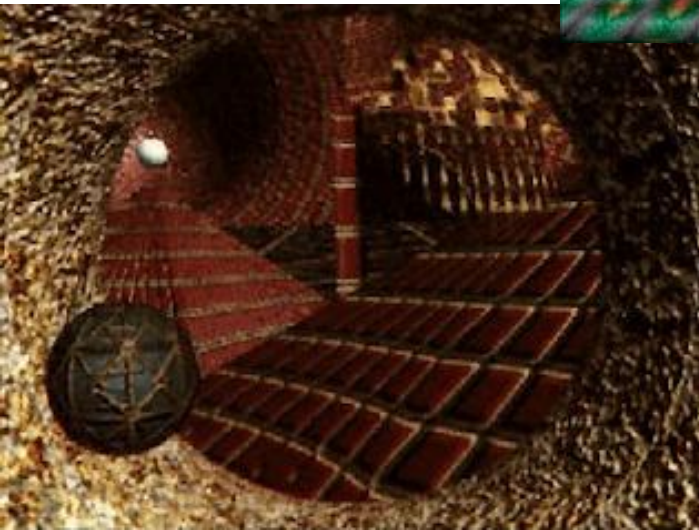
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  - **David Em (1952): computer graphics**

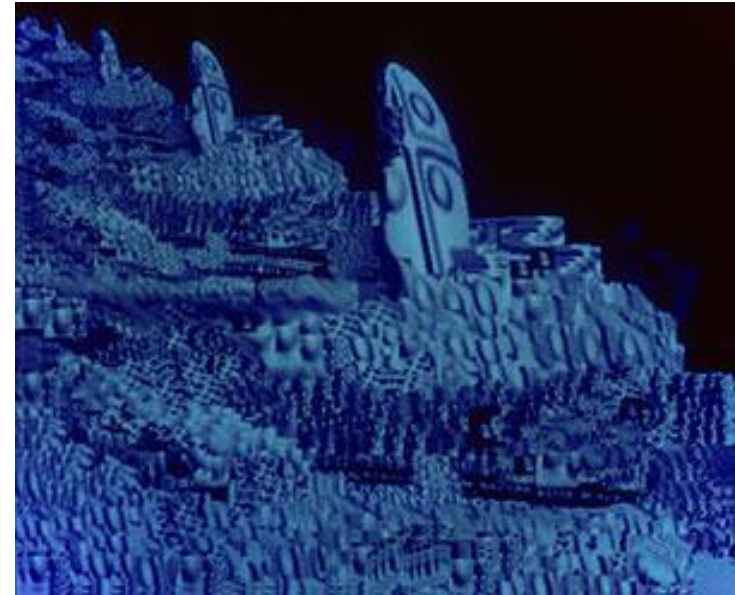


“Transjovian Pipeline” (1979)

“Aku” (1977), a navigable  
computer world



“Nora” (1979)



This is a chapter in piero scaruffi's "A Visual History of the Visual Arts": <http://www.scaruffi.com/art/history>