Computer Graphics -History

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Spring 2016

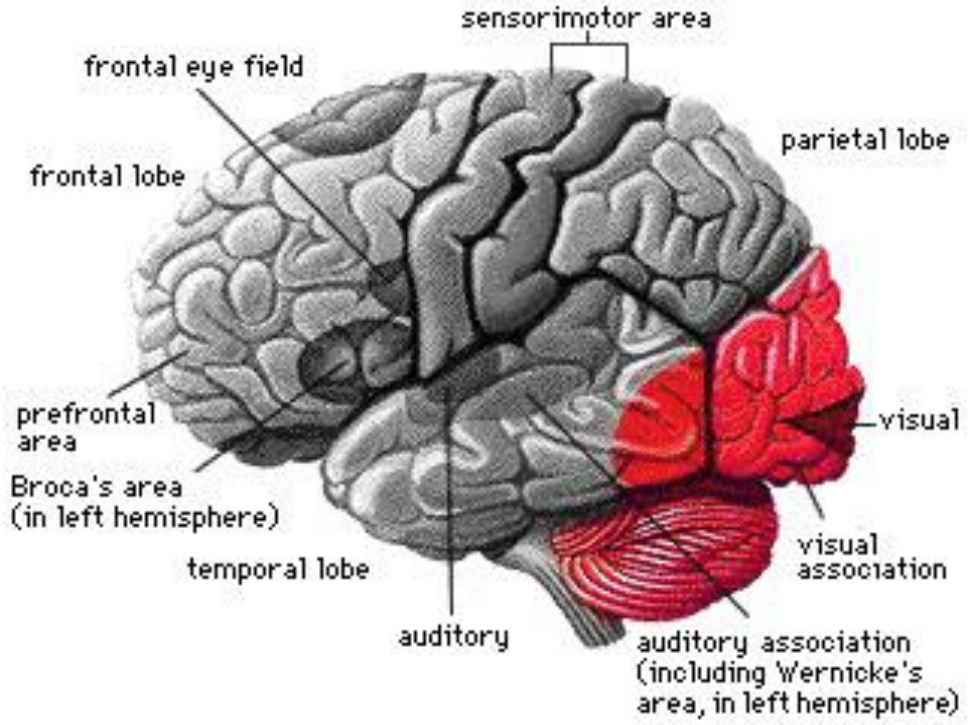
http://jjcao.github.io/ComputerGraphics/

What is computer graphics?

- The use of computers to synthesize and manipulate visual information.

Why visual information?

- About 30% of brain dedicated to visual processing...



- ...eyes are highest-bandwidth port into the head!

Humans are visual creatures!

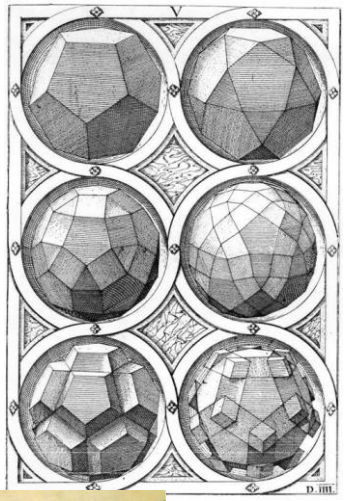
History of visual depiction

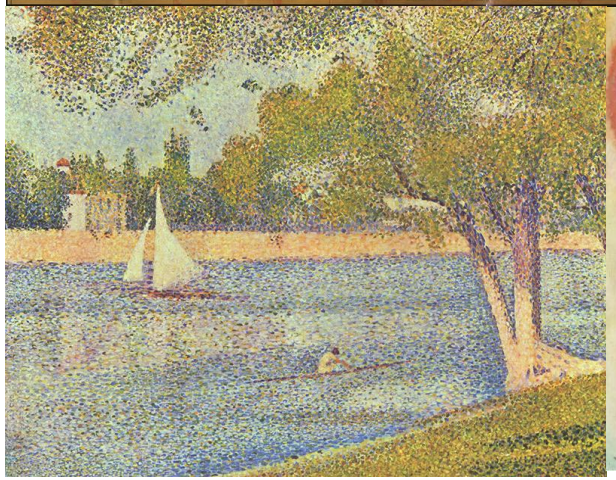
- **Humans have always been visual creatures!**

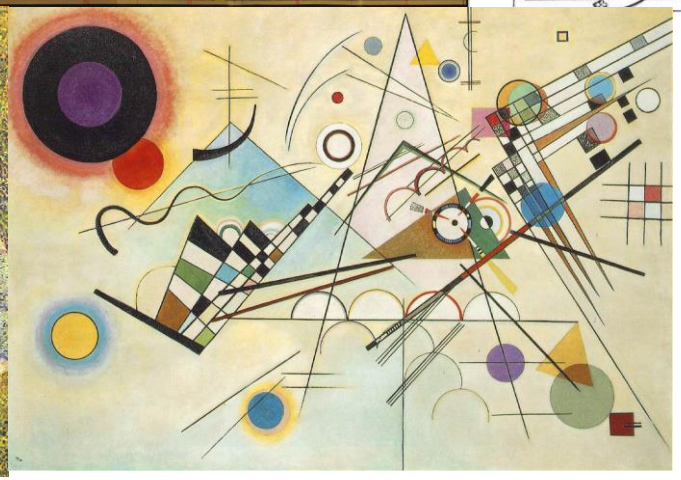
Indonesian cave painting (~38,000 BCE)

Visual technology: painting / illustration

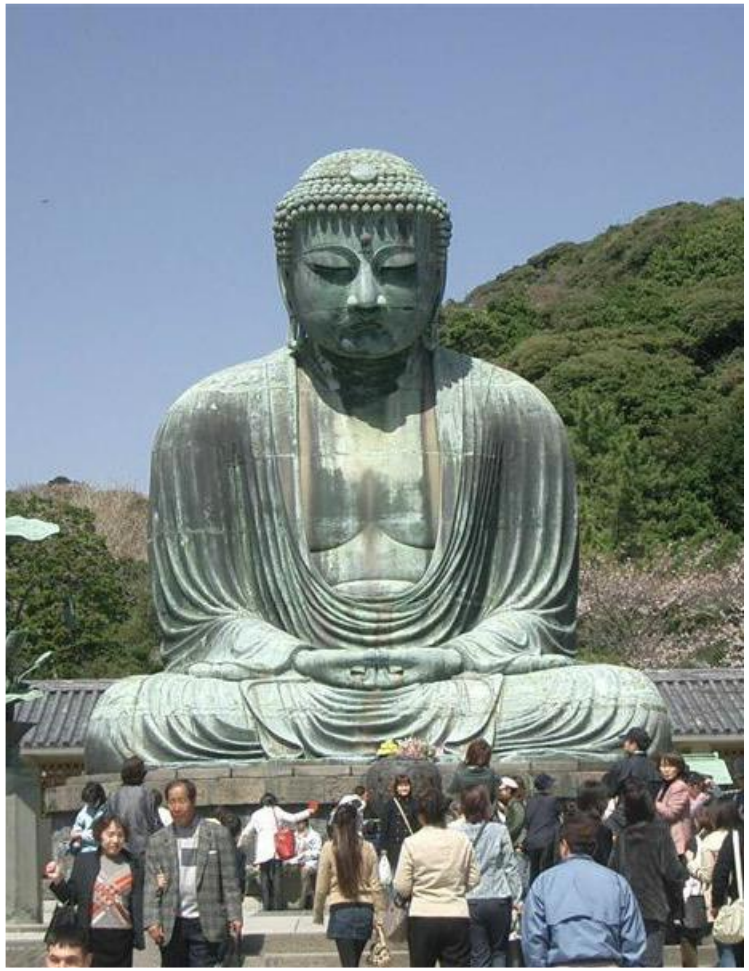
- **Not purely representational: ideas, feelings, data, ...**







Visual technology: carving / sculpture



Visual technology: photography / imaging

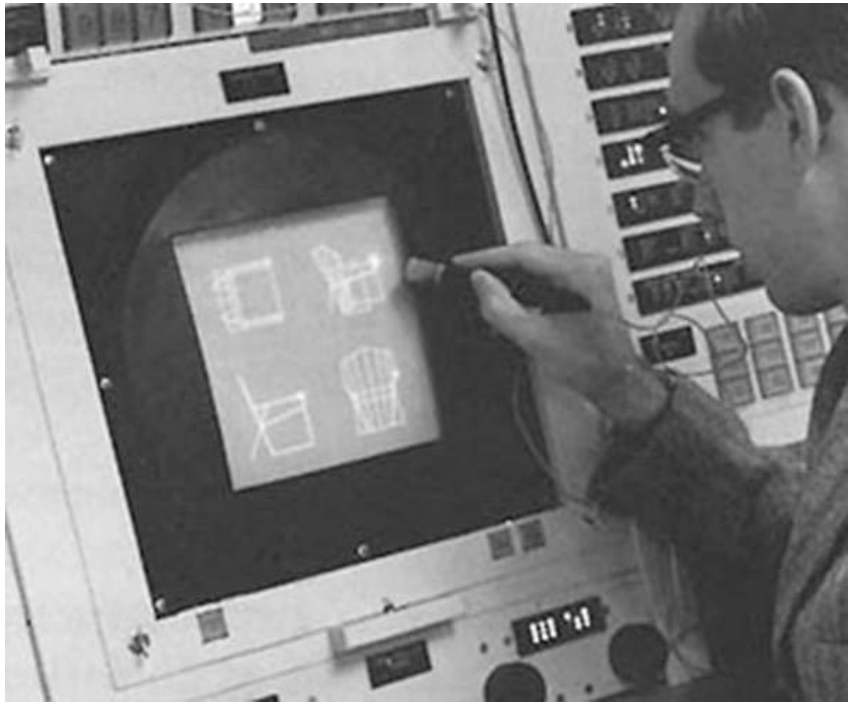
- **Processing of visual data no longer happening in the head!**

Joseph Niépce, “View from the Window at Le Gras” (1826)

Visual technology: photography / imaging

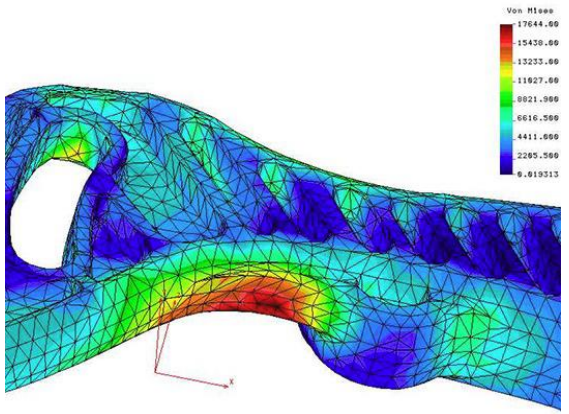
Visual technology: digital imagery

- **Intersection of visual depiction & computation**



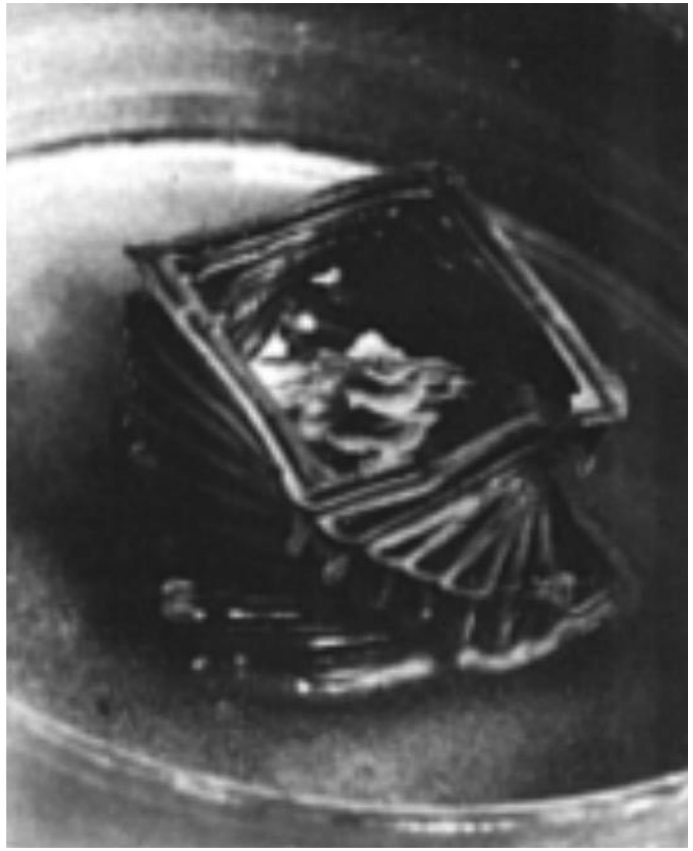
Ivan Sutherland, “Sketchpad” (1963)

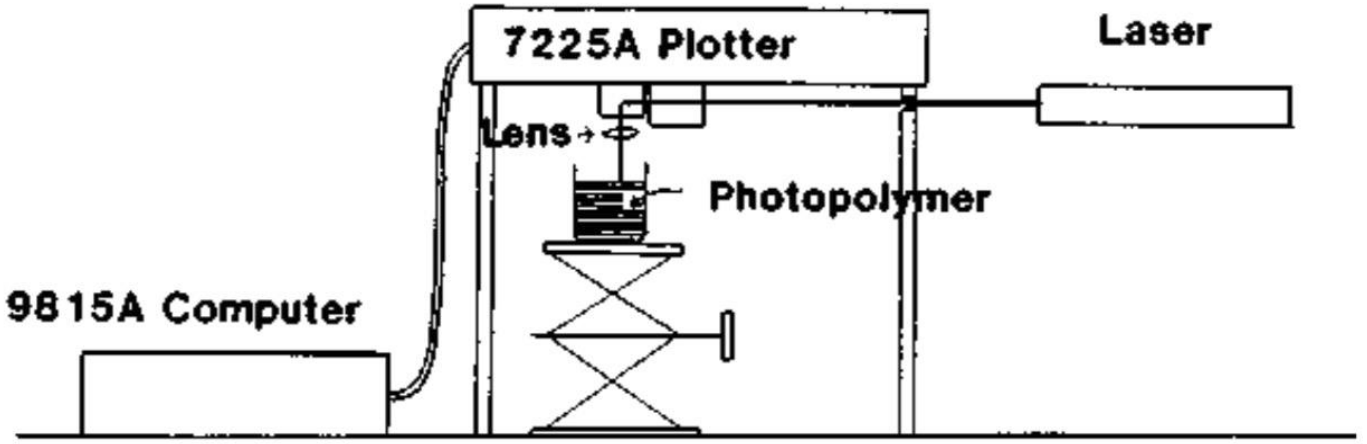
Visual technology: digital imagery



Visual technology: 3D fabrication

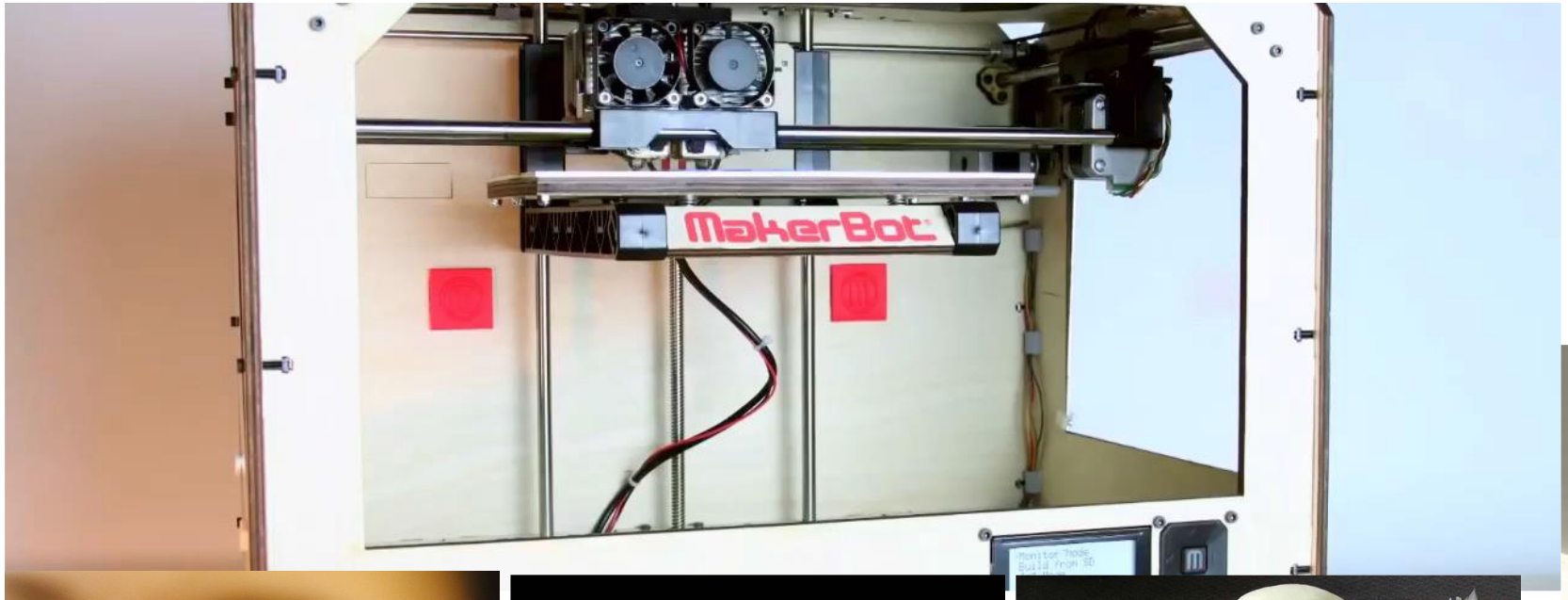
- **Create physical realization of digital shape**

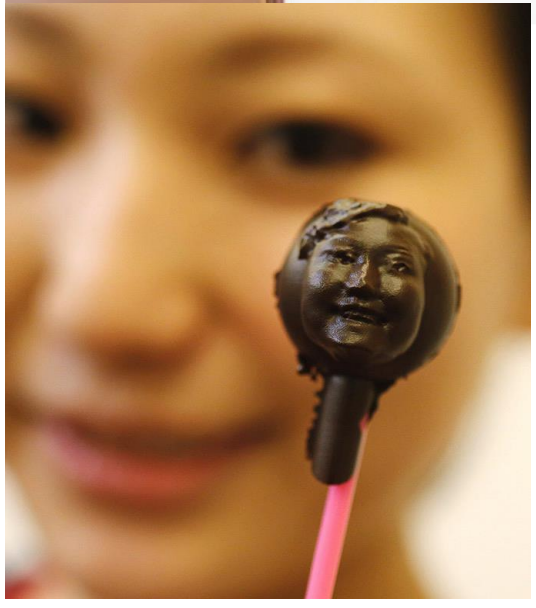


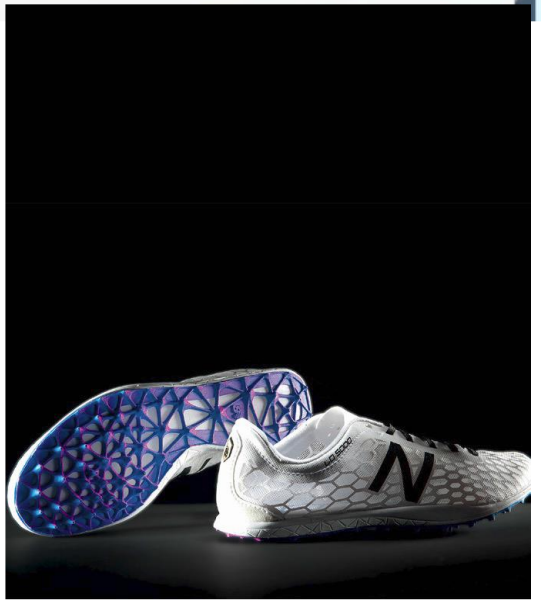


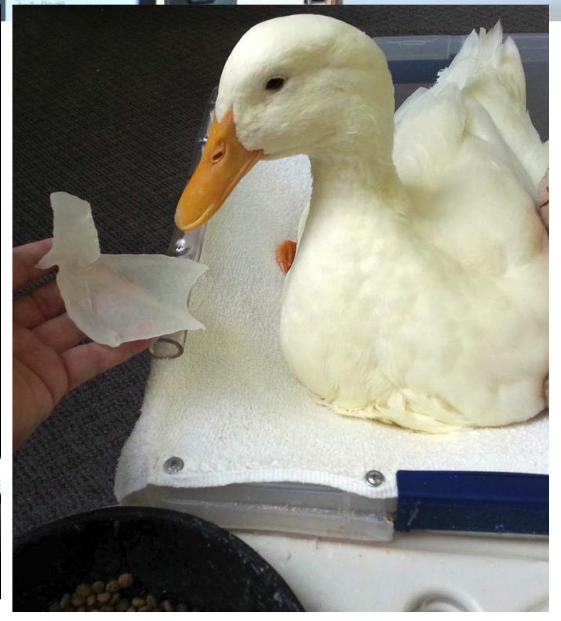
A.J. Herbert / 3M (1979)

Visual technology: 3D fabrication









Technologies for visual depiction

- **Drawing/painting/illustration (~40,000 BCE)**
- **Sculpture (~40,000 BCE)**
- **Photography (~1826)**
- **Digital Imagery (~1963)**
- **3D Fabrication (~1979)**