

Short History of Computer Graphics

Early 60's:



- Computer animations for physical simulation; Edward Zajac displays satellite research using CG in 1961
- 1963: Sutherland (MIT)
Sketchpad (direct manipulation, CAD)
Calligraphics (vector) display devices
Interactive techniques
First mouse (Douglas Englebart)
- 1968: Evans & Sutherland founded
- 1969: First SIGGRAPH

Late 60's to late 70's:



- Utah Dynasty

- 1970: Pierre Bezier develops Bezier curves
- 1971: Gouraud Shading
- 1972: Pong (first computer game) developed
- 1973: Westworld, the first film to use computer animation
- 1974: Ed Catmull develops z-buffer (Utah)
First Computer Animated Short, *Hunger*
Keyframe animation and morphing.
- 1975: Bui-Toung Phong creates Phong Shading (Utah)
Martin Newel models a 3D teapot with Bezier patches (Utah)



Mid 70's -80's:



- Quest for realism. Radiosity shading; mainstream real-time applications.
 - 1982: Tron, Wrath of Kahn. Particle systems and obvious CG.
 - 1984: The Last Star Figher, CG replaces physical models. Early attempts at realism using CG.
 - 1986: First CG animation nominated for and Academy Award: Luxo Jr. (Pixar)
 - 1989: Tin Toy (Pixar) wins Academy Award.

- 1995: Toy Story (Pixar/Disney), the first full length fully computer generated 3D animation. The first fully 3D CG cartoon Babylon 5. First TV show routinely using CG models.



Late 90's:

- Interactive environments, scientific and medical visualization, artistic rendering, image based rendering, path tracing, photon maps, etc.

2000's:

- Real-time photorealistic rendering on consumer HW? Interactively rendered movies? Ubiquitous computing, computer vision and graphics.