A Brief History of Computer Graphics

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1950s

- Pen Plotters
- Computer-controlled oscilloscopes
1960s

- Vector displays
- Interaction
- Ivan Sutherland’s SketchPad project
1970s

- Direct View Storage Tubes (Oregon’s own Tektronix!)
- Color raster displays (CRTs)
- Hardware-accelerated vector displays
- Commercial production companies emerge
- SIGGRAPH conferences (started in 1974)
- Star Wars Episode IV

[Image of various computer displays and presentations]
• Dynamic color raster displays
• Flight simulators
• Silicon Graphics, Inc. (SGI)
• Pixar
• Scientific visualization
• Luxo Jr., Tin Toy
• The Last Starfighter, TRON, Star Trek II: The Wrath of Khan, Young Sherlock Holmes, The Abyss
• Jen-Hsun Huang graduates from Oregon State with a BSEE degree, 1984
1990s

- Texture-mapping in hardware
- OpenGL
- PC graphics cards
- Terminator 2, Jurassic Park, Toy Story, Star Wars Episode 1
2000s

- Hardware Shaders
- OpenGL-ES (Embedded Systems, i.e., intended for underpowered hardware)
- More movies!
2000s

- CG is now so much a part of movies that we don’t even think about it
Where Are We Now?

• Ongoing OpenGL-ES/WebGL merger with OpenGL desktop
• Mobile platforms (tablets, phones)
• 3D movies
• Virtual and Augmented Reality
• Hardware support for ray-tracing
• Vulkan, DX12, Metal
• Game Engines and giant screens being used for live backgrounds in movies
That Last Picture Needs Some More Discussion

The screen is 270° around and 20 feet high!
Computer Graphics

Uses for Computer Graphics

Animation
Art
Cartoons
City Planning
Biology
Scientific Visualization
Medicine
Simulation
Games
Architecture
Planning
Data Visualization
Construction

Training
Navigation
Gaming
Architecture
Commercials
Education

Traffic
Movies
TV

History
Advertising
Cartography
Design
Chemistry

Amusement Parks
Styling
Visualization

Manufacturing

Veterinarian Science

Computer Graphics is for everyone!