A Brief History of Computer Graphics

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
1980s

- 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
**Matrix Resurrections Looks Awesome!**

Keanu Reeves walking through a flexible mirror.

*December 22??*

*We need to wait until December 22?*

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**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

We're waiting for December 22.
That's where we are.

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**That Last Picture Needs Some More Discussion**

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**Uses for Computer Graphics**

- Animation
- Art
- Training
- Movies
- History
- Simulation
- Navigation
- TV
- Advertising
- Cartoons
- Games
- Architecture
- Commercials
- Cartography
- City Planning
- Style
- Education
- Design
- Scientific Visualization
- Biology
- Styling
- Chemistry
- Manufacturing
- Amusement Parks
- Data Visualization
- Land Use Management
- Construction
- Manufacturing
- Veterinarian Science