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A Brief History of Computer Graphics



Oregon State University

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History.pptx

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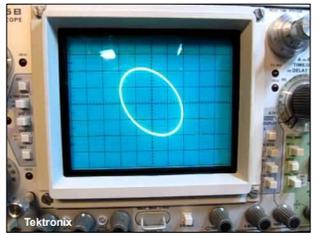
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1950s

- Pen Plotters
- Computer-controlled oscilloscopes



Calcomp



Tektronix



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1960s

- Ivan Sutherland's SketchPad project
- Interaction
- Vector displays



MIT





Imag



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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



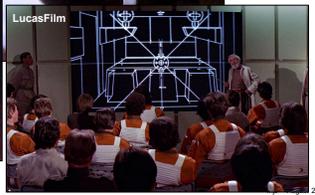
Tektronix



IBM



Megatek



LucasFilm



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1980s

- Hardware-accelerated 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 University with a BSEE degree, 1984**

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1990s

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

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2000s

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

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2000s

- CG is now so much a part of movies that we don't even think about it

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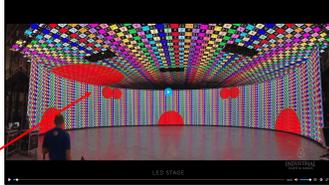
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Where Are We Now?

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- 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 movie-making

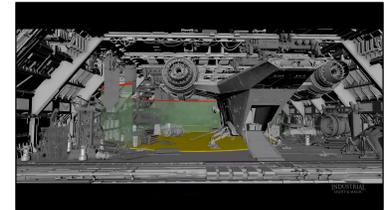
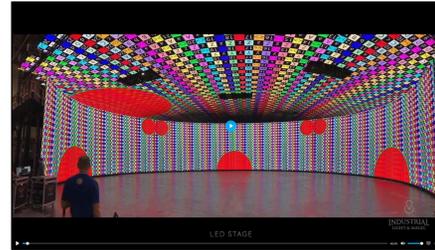


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Immense Virtual Movie Sets are a Big Thing Now

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First used in producing *The Mandalorian*?



The screen is 270° around and 20 feet high!

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Uses for Computer Graphics

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Animation Training Traffic
Simulation Art Navigation Movies History
Games TV Advertising
Cartoons Architecture
City Planning Planning Commercials Cartography
Biology Styling Education Design
Scientific Visualization
Data Amusement Parks Chemistry
Medicine Visualization Manufacturing Land Use Management
Construction Veterinarian Science
Computer Graphics is for everyone!

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