A Brief History of Computer Graphics

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Oregon State University
Computer Graphics

1950s

- Pen Plotters
- Computer-controlled oscilloscopes

Calcomp

Tektronix

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1960s

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

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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

Megatek

IBM

Tektronix

Tektronix

LucasFilm

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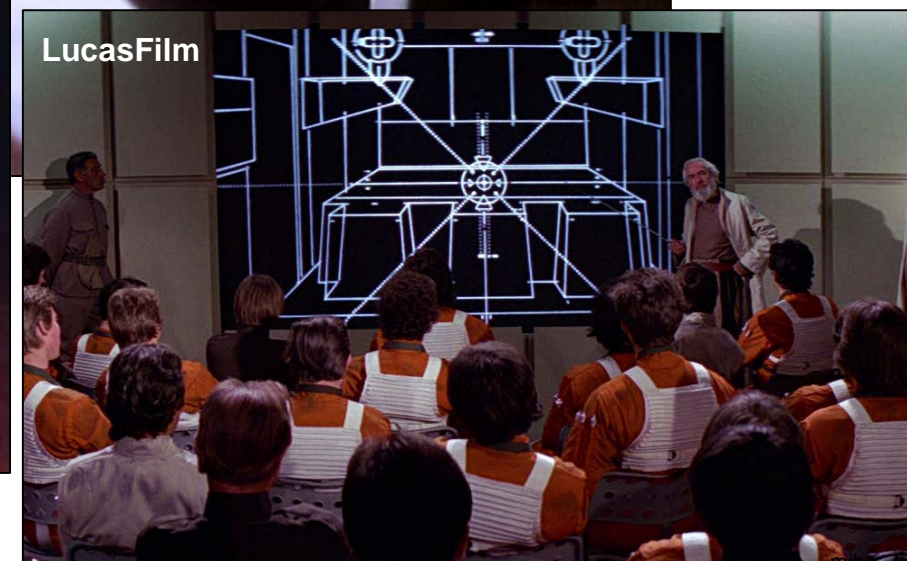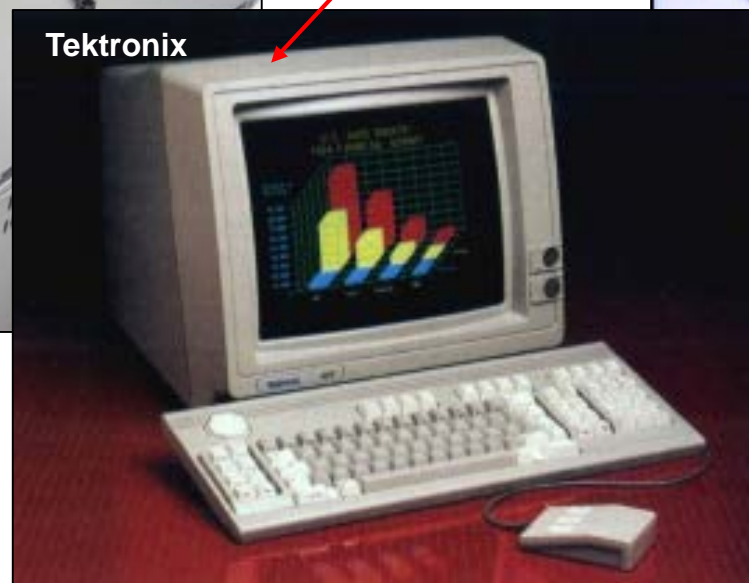
1980s

- 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**

20th Century Fox

Pixar

Pixar

Evans & Sutherland

Evans & Sutherland

Lorimar

JEN-HSUN HUANG

MAGI

LucasFilm

LucasFilm
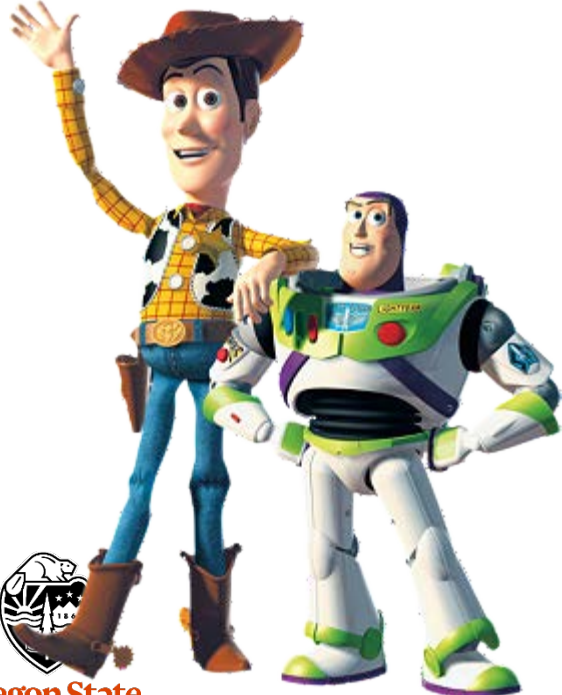
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1990s

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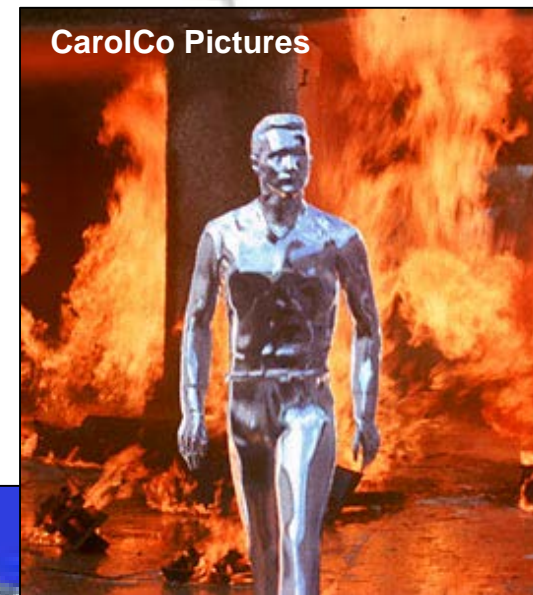
Nvidia

Amblin Entertainment

CarolCo Pictures

Pixar

LucasFilm

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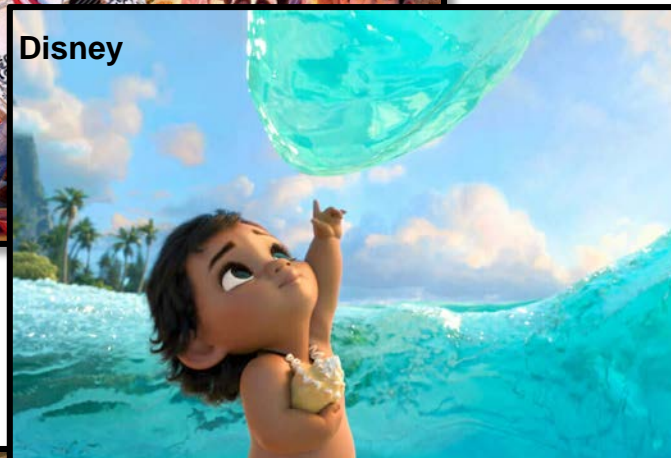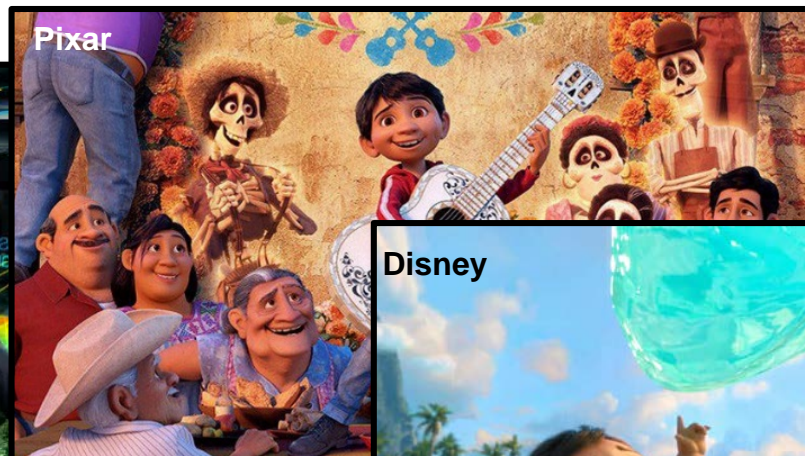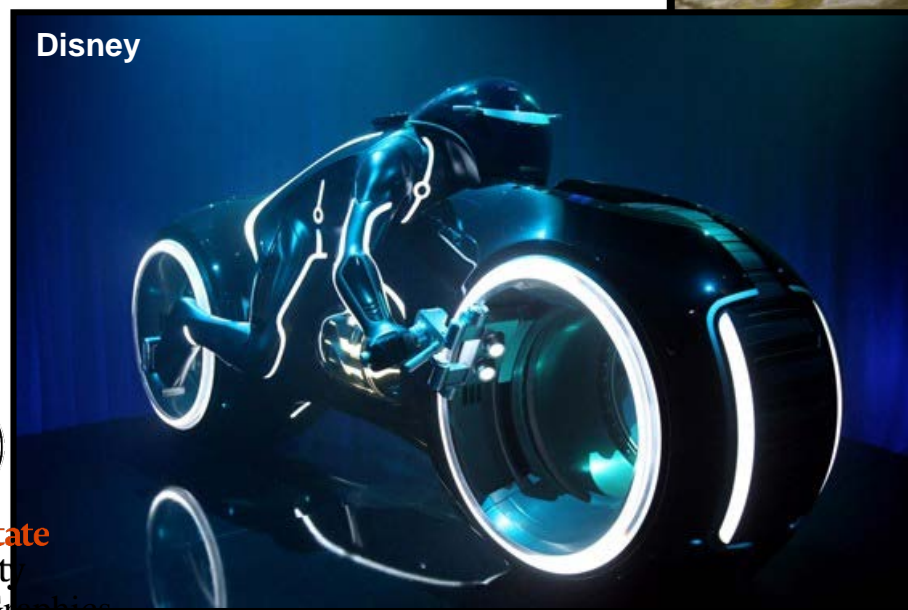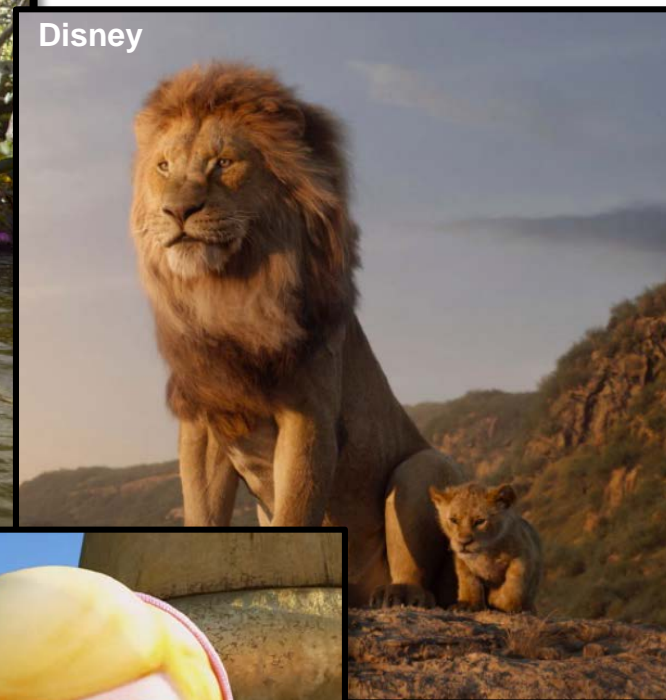
2000s

- 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 recognize it

Where Are We Now?

- Ongoing OpenGL-ES merger with OpenGL desktop

- Mobile platforms (tablets, phones)

- 3D movies

- Virtual and Augmented Reality

- Hardware support for ray-tracing

- Vulkan, DX12, Metal

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Uses for Computer Graphics

Animation

Training

Traffic

Navigation

Movies

History

Art

Simulation

TV

Games

Advertising

Architecture

Cartoons

Commercials

Cartography

City Planning

Planning

Biology

Education

Design

Scientific
Visualization

Styling

Amusement Parks

Chemistry

Data
Visualization

Medicine

Manufacturing

Land Use
Management

Construction

Construction

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