A Brief History of Shaders

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History of Shaders, I

1977: Star Wars IV: A New Hope

1979: Ed Catmull, Alvy Ray Smith, and others leave NYIT to form the Computer Division of Lucasfilm

1984: John Lassiter leaves Disney Animation to join Pixar

Image Processing

Digital Editing and Compositing

Effects

Image/Volume Rendering Hardware
History of Shaders, II

Image/Volume Rendering Hardware

Pixar Image Computer

Rendering Software

REYES

Star Trek II (1982)
Young Sherlock Holmes (1985)

RenderMan


Pixar Animation Studios

RIB

Shade Trees

prman
History of Shaders, III

Pixar Animation Studios

1986: Steve Jobs buys Pixar for $10M
Steve Jobs adds another $60M to keep Pixar running

1986: Luxo Jr.– Nominated for an Academy Award

1988: Tin Toy – won Academy Award for Best Animated Short

1993: RenderMan wins a Technical Academy Award

1995: Toy Story

1995: Pixar IPO -- Steve Jobs’s stake is now worth $1.2B

2004: Pixar bought by Disney for $7B, making Steve Jobs’s stake worth $3.5B
Steve Jobs’s estate is now Disney's largest shareholder (7%) – way ahead of even Roy Disney’s estate (1%)
## History of Shaders, IV

<table>
<thead>
<tr>
<th>Year</th>
<th>OpenGL Version</th>
<th>GLSL Version</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>2.0</td>
<td>1.10</td>
<td>Includes Vertex and Fragment Shaders</td>
</tr>
<tr>
<td>2008</td>
<td>3.0</td>
<td>1.30</td>
<td>Adds features left out before</td>
</tr>
<tr>
<td>2010</td>
<td>3.3</td>
<td>3.30</td>
<td>Adds Geometry Shaders</td>
</tr>
<tr>
<td>2010</td>
<td>4.0</td>
<td>4.00</td>
<td>Adds Tessellation Shaders</td>
</tr>
<tr>
<td>2012</td>
<td>4.3</td>
<td>4.30</td>
<td>Adds Compute Shaders</td>
</tr>
<tr>
<td>2017</td>
<td>4.6</td>
<td>4.60</td>
<td></td>
</tr>
</tbody>
</table>

There is lots more detail at:

History of Shaders, V

2014: Khronos starts Vulkan effort using GLSL and SPIR-V

2016: Vulkan 1.0

2016: Vulkan 1.1

2020: Vulkan 1.2

2022: Vulkan 1.3

2023: Vulkan 1.3 with new extensions

There is lots more detail at:

https://en.wikipedia.org/wiki/Vulkan_(API)