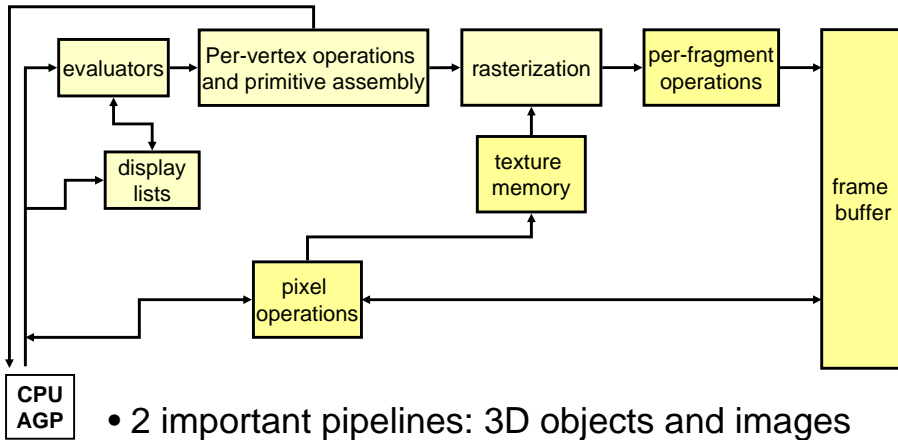




- white 3D, yellow 2D



A triangle's life in OpenGL.

- A Trip down the graphics pipeline (Jim Blinn's book)

- 1) OpenGL is informed triangles will be rendered
- 2) a vertex is passed inside and kept in *per-vertex primitive assembly*
- 3) another one, and another one
- 4) it is composed and passed to *rasterization*
- 5) *per fragment* checks visibility, alpha, stencil, etc.
- 6) the pixels in *FB* are set

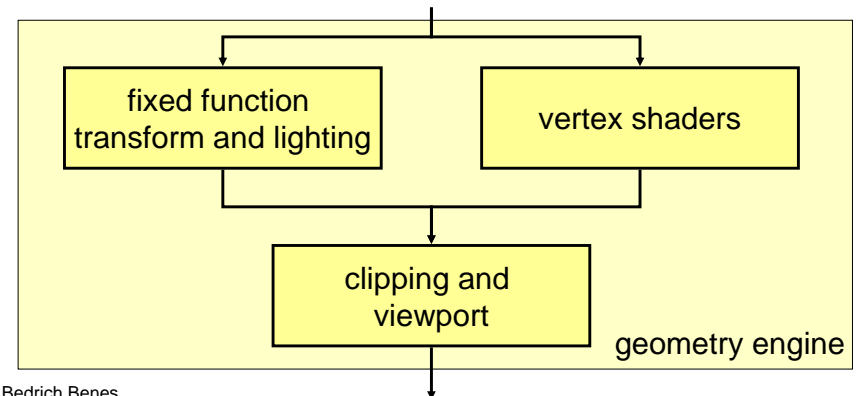


An image's life in OpenGL.

- 1) OpenGL is informed images will be rendered
- 2) an image enters
- 3) goes through the filters of *pixel operations*
- 4) the pixels in FB are set

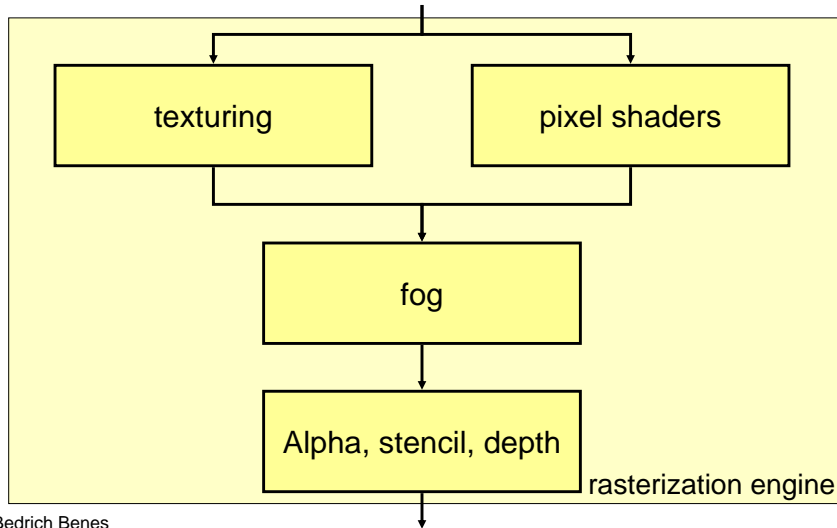


- This is called the *fixed function pipeline* and is **obsolete** (from 1999)
 - in these days (by Real-time rendering pp.214)
- Per vertex primitive and assembly





Rasterization stage



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Why pipeline?

It is the pipelining architecture known from CPU

Each operational unit can process chunk of data *in parallel* with another one

The *slowest* and most *demanding* is the rasterization unit

In some GPUs this unit is more times

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- Jackie Neider, Tom Davis, Mason Woo
OpenGL Programming Guide,
Addison-Wesley Publication Company
ON LINE at <http://www.opengl.org.ru/docs/>
- www.opengl.org/developers/code/tutorials.html
- SIGGRAPH 2001
An Interactive Introduction To OpenGL Programming
www.opengl.org/developers/code/s2001/index.html
- SIGGRAPH '99
Lighting and Shading Techniques for Interactive Applications
www.opengl.org/developers/code/sig99/index.html

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