* Graphics Pipeline

* What does C++ do

  per object info (triangle) modes, colors, shading info, transforms
  per vertex info
  may be shared among many triangles (in object)
  cannot specify per pixel/fragment info

  where can this info come from
  - global
  - per-object
  - NOT per-vertex
  - Interpolated from 3 vertices

  can draw many triangles

MULTI-PASS

  Draw Objects twice (or more)
  - combine in frame buffer (blend...)
  - shadow hack (objects in different place)
  - colors over textures
  - multiple lights
  - different texture

  Can achieve pretty much arbitrary effects
  (in theory)
Multi-Texture $\leftarrow$ each v/own texture coord

- Avoid redraw - efficiency, Z-precision issues, ...
- How many
- How to combine $A, B$ over $A, B$ replace $A, A$ switch $B.C, ...$

Cool tricks using multiple textures
(arbitrary polynomials)

Every card is different

What combiners -
fixed set
small program $\leftarrow$ 16 instructions of machine code