Designing Multimedia iOS Apps (with OpenGL ES / C++)

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How to teach OpenGL on iOS?

Common approach
——— 1) assume learner knows OpenGL basics
——— 2) enumerate ways iOS is similar/different

Today’s approach
1) assume you know nothing
2) build demo app using new technology
3) give taste of what’s possible + how to learn more on your own
OpenGL vs. OpenGL ES

OpenGL: Open Graphics Library
- Very widely used
- Very powerful
- Used to create many 3D apps you’ve used

OpenGL ES: OpenGL for Embedded Systems
- Subset of OpenGL
- Still extremely powerful + feature-rich
- Some frustrating things for OpenGL beginners
- Huge differences between ES 1.x/2.x
Today’s Demo

- Simple interactive graphics app
- How to compile C++ into iOS apps (Objective-C++)
- Use external framework for interaction (MoMu)
- OO-design best practices in a C++/OpenGL app
  - Majority of today’s demo involves this
Demo
More References

1) Useful Tutorials for OpenGL ES

2) Cocos2D : iOS Game Engine
   http://www.cocos2d-iphone.org

3) box2d : open-source C++ physics engine
   http://box2d.org/