

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 **E**Embedded **S**ystems

- 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

<http://iphonedevdevelopment.blogspot.com/2009/05/opengl-es-from-ground-up-table-of.html>

2) Cocos2D : iOS Game Engine

<http://www.cocos2d-iphone.org>

3) box2d : open-source C++ physics engine

<http://box2d.org/>