UE4 Mobile Tech Demos

Niklas Smedberg
Senior Engine Programmer, Epic Games
Recent Mobile Tech Demos

Android: “Soul”

- Large demo with big views and varying scenes
- Uses OpenGL ES 2 with some extensions
- Revealed GDC 2014
Android: Soul Demo
iOS: “Zen Garden”

- Uses new Metal API in iOS 8
- Metal is very efficient
  - Multithreaded driver automatically takes advantage of multi-core CPUs
  - 20x faster on renderthread
  - Supports precompiled shaders!
- Zen Garden:
  - Several thousand drawcalls per frame
  - MSAA 4x
- Revealed at WWDC 2014
iOS: Zen Garden Demo
iOS Metal API

- Supported in Unreal Engine 4 now!
- Requires Xcode iOS 8 beta 3
- Requires A7 device and up
  - 2013 iOS devices (iPhone 5S, iPad Air)
  - ImgTec Series 6 GPU (“Rogue”)
- Simpler than OpenGL
  - WYSIWYG: What You eXpect Is What You Get
  - More intuitive for graphics programmers like me
Android: “Rivalry”

- Uses Android Extension Pack (AEP) in Android “L”
- Rivalry uses the full UE4 desktop rendering pipeline on Android!
  - Deferred rendering with G-buffer
  - Physically-based shading
  - Image-based lighting
- Revealed at Google I/O 2014
Android Extension Pack

• Coming soon to Unreal Engine 4!
• OpenGL ES 3.1 plus a specific set of extensions
  – Compute shaders
  – Tessellation
  – ASTC texture compression
  – Etc...
• Google released new NDK last week
  – Android 64-bit is also of interest
UE4 Demo Questions?

Documentation, Tutorials and Help at:

- AnswerHub: http://answers.unrealengine.com
- Engine Documentation: http://docs.unrealengine.com
- Official Forums: http://forums.unrealengine.com
- Community Wiki: http://wiki.unrealengine.com
- YouTube Videos: http://www.youtube.com/user/UnrealDevelopmentKit
- Community IRC: #unrealengine on FreeNode

Unreal Engine 4 Roadmap

- lmgtfy.com/?q=Unreal+engine+Trello+