



# BUILDING APPS FOR APPLE TV

## IDEV 2016

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# Agenda

- Introduction
- Goals
- Apple TV History
- App Types
- iPhone Versus Apple TV
- Data Storage
- Let's build an app!
- Debugging
- Resources
- Q&A

# Introduction

- Bachelors in Computer Engineering from Georgia Tech and an MBA from Georgia State.
- Software development, primarily in the retail and food service technology space.
- Independent contractor, focusing entirely developing software for the mobile platform.



# Goals



- By the end of this session you will understand the basic concepts needed to develop apps for Apple TV.
- Know what has been removed or changed in tvOS versus iOS.
- Navigation via Apple TV Remote, focus engine, and other challenges from not having a touch screen.
- Challenges with web views, frameworks, and data storage.

# Apple TV History

- Gen 1 – 2007
  - Required Mac or PC with iTunes. Synced media.
- Gen 2 – 2010
  - iOS variant.
  - Streamed media.
- Gen 3 – 2012
  - 1080p support for iTunes & Netflix.
- Gen 4 – 2015
  - tvOS “The future of TV is apps.”



# App Types



- Traditional Apps
  - Focus of this presentation.
- Client-Server Apps
  - For streaming services (i.e. ABC, HBO GO, ESPN, etc.)
- Games
  - I will not be covering how to build games for the Apple TV today. There are a few available. It is TBD as to whether Apple TV will emerge as a significant player in the game console space.

# iPhone Versus Apple TV



- Keep in mind, frameworks that are built for other device architectures will not be available for tvOS. For example, Google has not yet released a build of their Analytics framework for tvOS (or watchOS).
- Local disk space.
- Web view limitations.
- No access to social accounts.

# Data Storage



- User defaults work the same as iOS.
- Apple provides two shared storage options for Apple TV: iCloud Key-Value Storage (KVS) and CloudKit.
  - KVS (<1MB)
  - CloudKit (>1MB)

# Let's build an app!

- To develop on the device you'll need a cable not included in the box.
  - USB-A to USB-C – Belkin F2CU032bt06-BLK (Amazon), F2CU025yw1M-WHT (Apple)
- Challenge! There is currently no simple method for enterprise (non-App Store) distribution. You must side-load apps using Xcode (not available in iTunes).
- Creating an Apple TV Project
  - <Demo>
  - Familiar territory...
    - App Delegate
    - View Controller
    - Main Storyboard



# Let's build an app! (Cont.)

- Icon and top shelf images – Multiple layers for Parallax effect.
  - App Icon – Large
    - Front – 1280x768
    - Middle – White image
    - Back – White image (opaque)
  - App Icon – Small
    - Front – 420x240
    - Middle – White image
    - Back – White image (opaque)
  - Top Shelf Image – 1920x720
- Navigating the simulator.
  - Use arrow, enter, long-press enter, and command-shift-h for home. The latter is the same as other Apple device simulators.

# Let's build an app! (Cont.)



- Let's add a menu bar at the top. We do this with the already-familiar UITabBarController. Make sure to set as initial view controller.
- Next, let's add a few view controllers.
  - Home
  - Dashboard
  - Settings
- Connect them all!
- Let's add some placeholder views.

# Let's build an app! (Cont.)

- Home
  - How to auto hide tab bar? Focus engine is the key!
  - Container View
    - Placeholder text
  - Table View
    - Twitter Feed
      - tvOS doesn't have access to a set of "social" accounts like iOS has.
  - Web View (Hack)
- Dashboard
  - Container View
    - Placeholder text
- Settings
  - Twitter Hash Tag

# Debugging



- Simulator
  - Be careful because it differs in some key ways from the actual device
    - No touch input.
- Debugging directly to the TV
  - <Demo>

# Resources

- <http://www.lowyoyo.com>
- <https://github.com/justindomnitz/idev2016>
- <http://stackoverflow.com/users/4877241/justin-domnitz>

# Q&A

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