



Integrating Ads with iAd

Overview, Implementation, and Best Practices

Wil Turner

iAd Framework Manager

Today's Agenda

- Advertising overview
- Using the iAd Framework
 - Putting ads in your app
 - Banner view lifecycle
 - Supporting multiple interface orientations
 - Responding to actions
- Becoming a publisher



Why iAd?

Reinventing Mobile Advertising

Advertising Status Quo

- Mobile
 - Somewhat interactive
 - Ads usually exit application
- Television
 - Emotion
 - Captive audience

iAd Rich Media Ads

Emotion + Interaction

- The best of both worlds
 - Media—video and audio
 - Interaction—motion and touch

iAd Rich Media Ads

Media made possible by HTML5

- `<audio>` and `<video>` tags
- Native parts of the content, not plugins

iAd Rich Media Ads

Interaction via CSS3 and Multitouch

- WebKit extensions
 - Animated transitions
 - Keyframe animations
 - Hardware accelerated
- Touches exposed as DOM events by WebKit

iAd Rich Media Ads

Optimal user experience

- User never leaves the app
- Background process runs the ad
- Displayed on top of the current app
- User dismisses any time

iAd Rich Media Ads

Changing the game

- Combining emotion and interactivity
- Doesn't leave the app

Advertising

Overview of advertising and where iAd fits

Advertising

Common roles

Customers

View advertisements and consume the advertised products

Customers

Publishers

Publishers

Display ads to customers

Ad Network

Aggregates and distributes advertisements to publishers

Ad Network

Ad Agencies

Ad Agencies

Develop creative concepts and advertisements

Advertisers

Create products and services to advertise

Advertisers

Advertising

Standard roles

Customers

View advertisements and consume the advertised products

Customers

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Ad Agencies

Ad Agencies

Develop creative concepts and advertisements

Advertisers

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Advertisers

Advertising

iAd and you



Advertising

Two moving parts

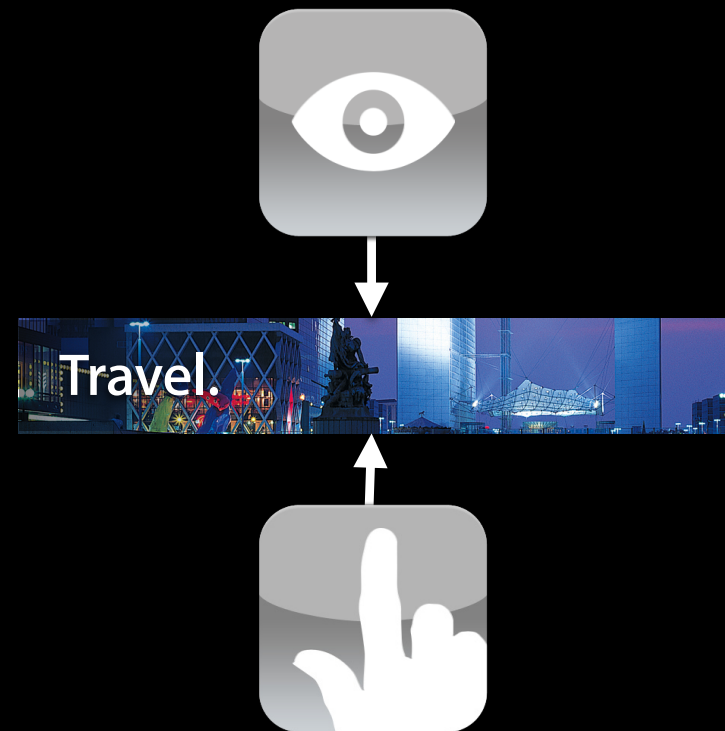
- Banners
 - Placed in conspicuous location
 - Contain a graphical call to action
- Actions—what happens after a tap
 - Typically redirected to a website



Advertising

Two common business models

- Impressions
 - Advertiser pays for each viewing
 - Referred to as “Cost Per Mille” (CPM)
- Clicks
 - Advertiser pays upon interaction
 - Referred to as “Cost Per Click” (CPC)



iAd Business Model

A hybrid approach

- Unique combination of CPC and CPM
- You are paid when a user:
 - Views a banner
 - Taps on a banner

iAd Framework

Overview and implementation

iAd Framework

Overview

- New in iOS 4
- Makes it easy to embed ads in your apps
- Promotes high-quality, rich media ads



iAd Framework Implementation

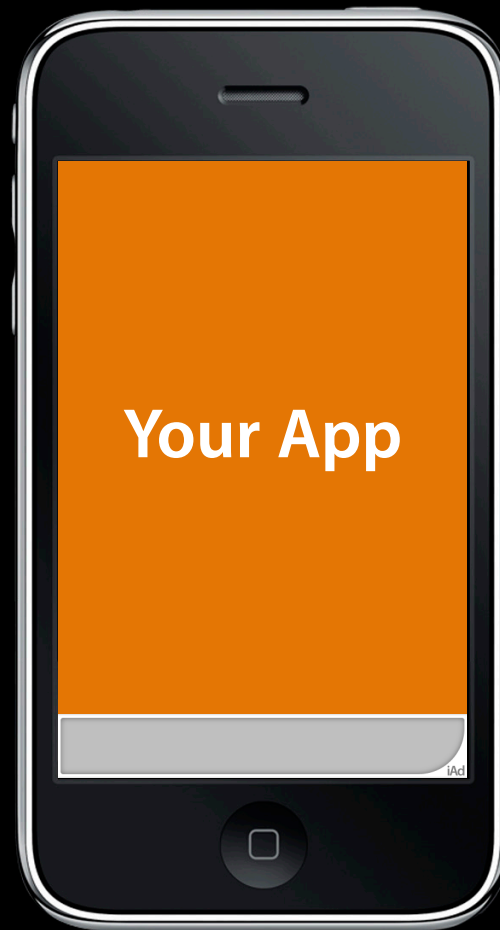
- Putting ads in your app
- Banner view lifecycle
- Supporting multiple interface orientations
- Responding to actions



Putting Ads in Your App

Using `ADBannerView`

Adding Ads



ADBannerView

It does the heavy lifting

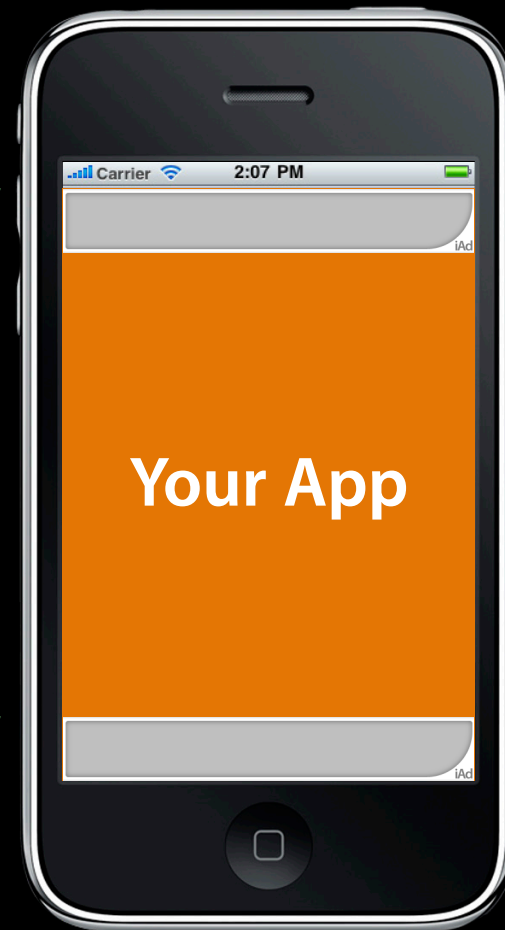
- Core class in iAd framework
- It's a view—just add it to your view hierarchy
 - Requires a view controller
- Retrieves and displays ads from the iAd Network
- Manages user interaction



ADBannerView

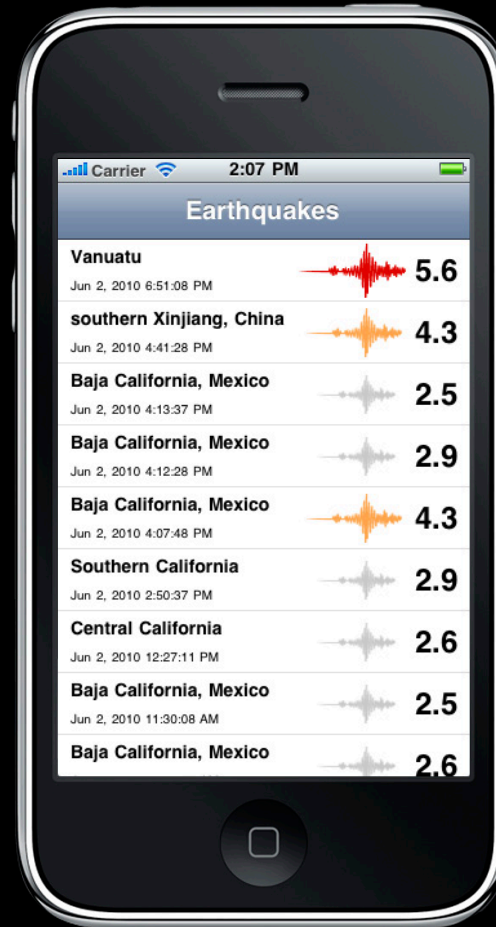
Your job

- Placement, placement, placement
- Balance user experience and promotion
- Optimal: top or bottom of screen










Adding iAds to an Existing Application

SeismicXML



SeismicXML

Creating a container view

| | | |
|---|---|------------|
| Vanuatu Jun 2, 2010 6:51:08 PM |  | 5.6 |
| southern Xinjiang, China Jun 2, 2010 4:41:28 PM |  | 4.3 |
| Baja California, Mexico Jun 2, 2010 4:13:37 PM |  | 2.5 |
| Baja California, Mexico Jun 2, 2010 4:12:28 PM |  | 2.9 |
| Baja California, Mexico Jun 2, 2010 4:07:48 PM |  | 4.3 |
| Southern California Jun 2, 2010 2:50:37 PM |  | 2.9 |
| Central California Jun 2, 2010 12:27:11 PM |  | 2.6 |
| Baja California, Mexico Jun 2, 2010 11:30:08 AM |  | 2.5 |

iAd



SeismicXML

Creating a container view



Demo

The simplest implementation

Juan Carlos Jimenez

iOS Engineer

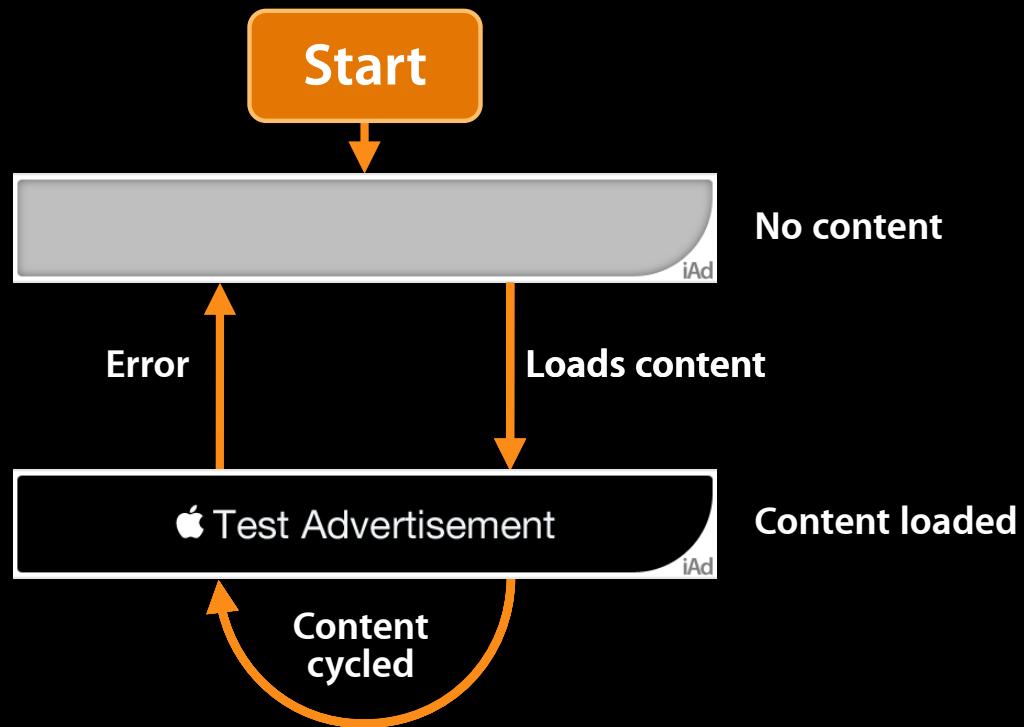
Banner View Lifecycle

Managing connectivity and inventory changes

ADBannerView Lifecycle

- ADBannerView may not always have ad content
 - Ad content comes from the iAd server
 - Network conditions and server inventory are dynamic
- Two basic lifecycle states
 - Loaded or not loaded

ADBannerView Lifecycle



ADBannerViewDelegate

Content lifecycle callbacks

- `bannerViewDidLoadAd:`
 - Has ad content
- `bannerView:didFailToReceiveAdWithError:`
 - Does not have ad content

Getting Ads

Network issues

- Mobile devices = dynamic network
- Users are on the move:
 - In a subway tunnel
 - Driving between cell areas
 - Inside a building with poor access
- Ads require a network connection



Getting Ads

No inventory

- Ad targeting
 - User response
 - Location
 - Application profile
 - etc.
- Inventory may not always be available

No Ads

Errors? Not really.

- Communicated through error callback
- Just part of normal operating conditions
 - Like memory warnings
- What matters is how you respond to them

Handling Ad Availability

Space has value

- Mobile ads are just a monetization of space
- If no ads are available, put the space to good use

Handling Ad Availability

A simple pattern

- Create banner views offscreen
- Animate them into view when they have ad content
- Hide them when they do not

Demo

The ideal implementation

Juan Carlos Jimenez

iOS Engineer

ADBannerViewDelegate

Recap

- Use ADBannerViewDelegate for ad content state
- Move banner view on/off screen accordingly
- Set banner view delegate to nil before releasing

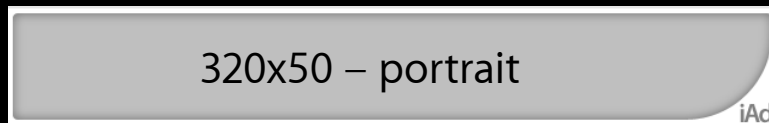
Multiple Interface Orientations

Ad content sizes

iAd Framework

Ad sizes

- ADBannerView manages view size
- Banner ads have fixed sizes



Dynamic Ad Sizing

Configuring ad sizes

- All possible sizes
 - `requiredContentSizeIdentifiers` property

```
myBannerView.requiredContentSizeIdentifiers = [NSSet setWithObjects:  
        ADBannerContentSizeIdentifier320x50,  
        ADBannerContentSizeIdentifier480x32, nil];
```

- Current size
 - `currentContentSizeIdentifier` property

```
myBannerView.currentContentSizeIdentifier = ADBannerContentSizeIdentifier480x32;
```

or

```
myBannerView.currentContentSizeIdentifier = ADBannerContentSizeIdentifier320x50;
```

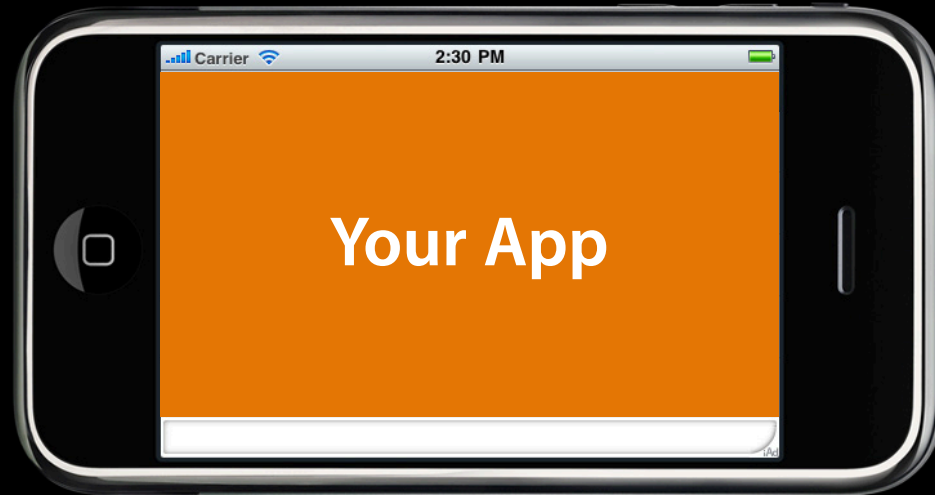
Dynamic Ad Sizing

Resizing for autorotation



Dynamic Ad Sizing

Resizing for autorotation



```
- (void)willRotateToInterfaceOrientation:(UIInterfaceOrientation)toOrientation
    duration:(NSTimeInterval)duration
{
    if (UIInterfaceOrientationIsLandscape(toInterfaceOrientation)) {
        myBannerView.currentContentSizeIdentifier = ADBannerContentSizeIdentifier480x32;
    } else {
        myBannerView.currentContentSizeIdentifier = ADBannerContentSizeIdentifier320x50;
    }
}
```

Demo

Supporting autorotation

Juan Carlos Jimenez

iOS Engineer

Responding to Ad Actions

State and resource consumption

Ad Actions

Entering the iAd rich media experience

- Banner leads to ad “action”
 - iAd Rich Media ad is displayed
 - iAd framework supports other actions



iAd Rich Media Ads

Recap

- Combining emotion and interactivity
- Doesn't leave the app

Responding to the Action

Reduce activity

- Pause:
 - Media
 - Network
 - Graphics
- Save minimal state
- Resume when action completes

User Interaction Lifecycle

ADBannerViewDelegate

- When user action begins:

```
- (BOOL)bannerViewActionShouldBegin:(ADBannerView *)banner  
    willLeaveApplication:(BOOL)willLeave {  
    [myMusic pause];  
    [myAnimation pause];  
    return YES;  
}
```

- When the action concludes:

```
- (void)bannerViewActionDidFinish:(ADBannerView *)banner {  
    [myMusic resume];  
    [myAnimation resume];  
}
```

- All UIApplication lifecycle messages still happen

Demo

Responding to Actions

Juan Carlos Jimenez

iOS Engineer

iAd Framework

Implementation review

- Putting ads in your app
- Banner view lifecycle
- Supporting multiple interface orientations
- Responding to actions



Publishing with iAd

Registration, configuration, and revenue

iTunes Connect

Portal for iAd



Sales and Trends

Preview or download your daily and weekly reports here.



Contracts, Tax, & Banking Information

Request Contracts and manage your contact, banking and tax information.



Payments and Reports

View and download your monthly financial reports.



Financial Reports

View and download your monthly financial reports.



Manage Users

Create and manage both iTunes Connect and In App Purchase Test User accounts.



Manage Your Applications

Add, view, and manage your applications in the iTunes Store.



Manage Your In App Purchases

Create and manage In App Purchases for paid applications.



iAd Network

View ad performance and manage the ads that appear in your apps.



Request Promotional Codes

Get codes that will give you free downloads of your applications.



Contact Us

Having a problem uploading your application? Can't find a Finance Report? Use our Contact Us system to find an answer to your question or to generate a question to an iTunes Rep

Become a Publisher Registration

- Paid App agreement
- iAd agreement

Request New Contracts

If you wish to make your applications available for sale on iTunes, you must agree to the Paid Applications agreement, presented below. Note: You can distribute your free applications without this agreement. Only individuals with the Legal role can request contracts.

| Request Contract | Contract Region | Contract Type | Legal Entity Name - Legal Entity Address |
|--------------------------|--------------------|-------------------|--|
| <input type="checkbox"/> | All (See Contract) | Paid Applications | ITMS1QW001-1 Infinite Loop Cupertino 95013 California US |

Request New Contracts

Select the agreements which you would like to enter into.

| Request Contract | Contract Region | Contract Type | Legal Entity Name - Legal Entity Address |
|--------------------------|-----------------|---------------|--|
| <input type="checkbox"/> | World | iAd Network | ITMS1QW001-1 Infinite Loop Cupertino 95013 California US |

Your Contracts In Effect

| Contract Number | Contract Region | Contract Type | Contract Download | Contact Info | Bank Info | Tax Info | Effective Date | Expiration Date | Contract in Effect |
|-----------------|-----------------|-------------------|-------------------|--------------|-----------|----------|------------------|------------------|-------------------------------------|
| MS1706725 | World | Free Applications | N/A | N/A | N/A | N/A | January 01, 2010 | January 01, 2011 | <input checked="" type="checkbox"/> |

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| MS1706725 | World | Free Applications | N/A | N/A | N/A | N/A | January 01, 2010 | January 01, 2011 | <input checked="" type="checkbox"/> |

Configure Applications

By App By Country

🔍

| | App | Revenue | eCPM | Requests | Impressions | Fill Rate | CTR | Ad Status | Actions |
|---|-------------------|----------|---------|----------|-------------|-----------|-------|------------|---------|
|  | Touch Fighter 2.0 | \$0.00 | \$0.00 | 0 | 0 | 0.00% | 0.00% | 🟡 Test Ads | View ▾ |
|  | Touch Fighter 1.0 | \$121.50 | \$59.10 | 10988 | 2022 | 5.00% | 0.00% | 🟢 Live Ads | View ▾ |

Learn more about the iAd Network in the [Glossary](#)

Application Information

The screenshot shows the iTunes Connect interface. At the top, there is a navigation bar with the Apple logo and tabs for Store, Mac, iPod + iTunes (selected), iPhone, Downloads, and Support. Below the navigation bar, the page title is 'iTunes Connect' and the environment is 'QA'. There is also a user identifier 'A B, ITMS1QW001' and a 'Sign Out' button.

The main content area is titled 'Enable iAd Advertising Network'. It contains a sub-section 'Enable Advertising for This Application' with the following text:

The iAd Network gives you an opportunity to earn advertising revenue through ads in your application. [Learn more.](#)

- Once your application has been submitted, iAd cannot be disabled. To remove ads from an application, you will need to submit a new binary with ad functionality removed.

My primary target audience is users under 17 years of age. **Yes** **No**

There is a blue 'Enable iAds' button.

At the bottom of the dialog, there are 'Cancel' and 'Continue' buttons.

Footer text includes: [Home](#) | [FAQs](#) | [Contact Us](#) | [Sign Out](#)
Copyright © 2010 Apple Inc. All rights reserved. [Terms of Service](#) | [Privacy Policy](#)

Exclusions

Keywords and URLs

App Information

Exclusions ▶

Exclusions

To make sure ads from competitors or other unwanted advertisers do not appear in your app, enter specific keywords, URLs, and Apple ID's for iTunes content that you want to exclude, then click Add. For example, if this was an Apple app, we may want to exclude ads in our app from competitors like RIM or Nokia.

A single keyword can be made up of multiple words. Separate multiple entries with a comma. Keywords are checked against the name of the advertiser as well as the attributes of the ad campaign. URLs are checked against the ad's destination URL, as provided by the advertiser.

(Examples: www.example.com, weapons, 123456)

Keywords to Exclude:

Currently Excluding:

- DeepSpace
- www.SpaceShipDeluxe.com

Configure Applications

- Indicate if target audience < 17 years old
- Keyword and URL-based exclusion

Monitoring Revenue

iTunes Connect iAd Network Sign Out

My Apps Messages Help

My Apps

Summary Download Report

From this page you can check ad revenue, key metrics, and ad performance by app or country. Ad revenue is determined by volume of ad requests (impressions), the perce [...More](#)

| Revenue Last 7 Days | Revenue Today | eCPM Average Last 7 Days | eCPM Average Today |
|---------------------|---------------|--------------------------|--------------------|
| \$121.50 | \$14.30 | \$59.10 | \$7.92 |

Summary

Integrating ads with iAd

- iAd promotes high-quality rich media ad experience
- Using the iAd Framework is easy
 - Insert ADBannerView into your view hierarchy
 - Configure content sizes
 - Respond to content and action lifecycles
- iTunes Connect for the business side
 - Registration
 - Configuration
 - Monitoring Revenue

More Information

Mark Malone

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mgm@apple.com

Documentation

iPhone Reference Library
<http://developer.apple.com/iphone>

Apple Developer Forums

<http://devforums.apple.com>

Related Sessions

Creating Content with iAd JS, Part I

Marina
Thursday 9:00AM

Creating Content with iAd JS, Part II

Marina
Thursday 10:15AM

App Publishing with iTunes Connect

Mission
Thursday 10:15AM

Labs

iAd Integration Lab

Application Frameworks Lab D
Wednesday 2:00PM

Q&A



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all