Mastering Xcode for iPhone OS Development

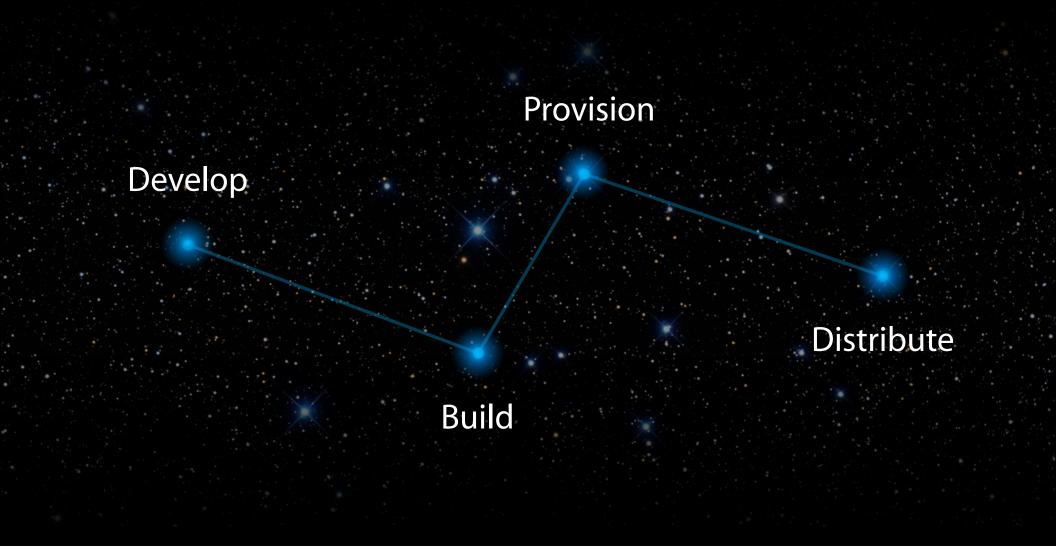
Part 2

Marc Verstaen Sr. Manager, iPhone Tools

Tale of Two Sessions

- Part 1: Orientation: Tour of complete development cycle
- Part 2: Mastery: Details of several critical areas

It's So Yesterday



Agenda

Targeting Older OS Versions

Application Life Cycle

Project Structure

Device Provisioning

Project Structure

Jacob Xiao iPhone Tools Engineer

Targeting Older OS Versions

Application Life Cycle

Project Structure

Device Provisioning

Project Structure

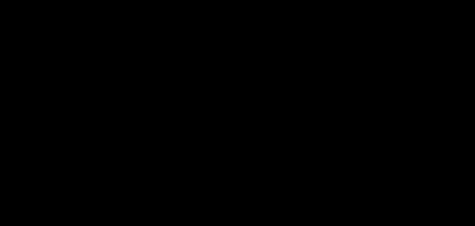
- Important project settings
- Bringing your app to iPhone and iPad

Project Settings

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iPhone OS De	ployment Target	iPhone OS 3.1		
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Base SDK

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▼Architectures Base SDK

iPhone OS Device SDKs iPhone Device 3.2 ✓ iPhone Device 4.0

Deployment Target

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▼ Deployment	
Targeted Device Family	iPhone
iPhone OS Deployment Target	Compiler Default
	iPhone OS 3.1.3
	iPhone OS 3.2
	✓ iPhone OS 4.0

Architectures

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Architectures	
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Base SDK	Optimized (armv7)
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	Other

Targeted Device Family

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iPhone OS Deployment Target	iPhone OS 3.1 💠 🔻
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▼ Deployment	
Targeted Device Family	^{iPh} iPhone
iPhone OS Deployment Target	^{iPh} iPad ^{OS} 4.0
	✓ iPhone/iPad

Example App

- Base SDK: 4.0
- Deployment Target: 3.1
- Architectures: Standard
- Targeted Device Family: iPhone/iPad

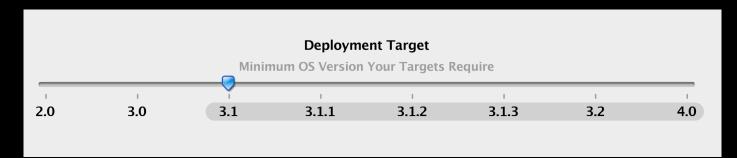
Example App

- Base SDK: 4.0
- Deployment Target: 3.1
- Architectures: Standard
- Targeted Device Family: iPhone/iPad

Deployment Target							
		Minin	num OS Version	Your Targets R	lequire		
2.0	3.0	3.1	3.1.1	3.1.2	3.1.3	3.2	4.0

Example App

- Base SDK: 4.0
- Deployment Target: 3.1
- Architectures: Standard
- Targeted Device Family: iPhone/iPad



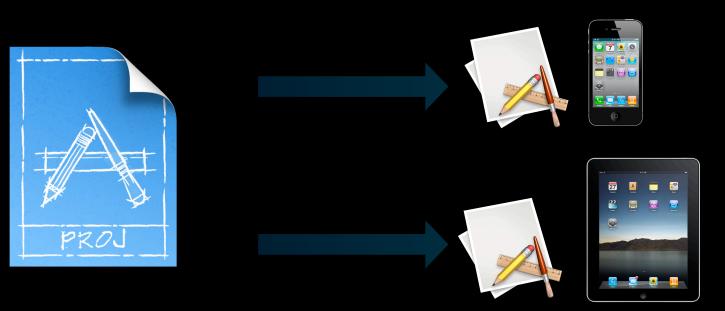
Universal Apps



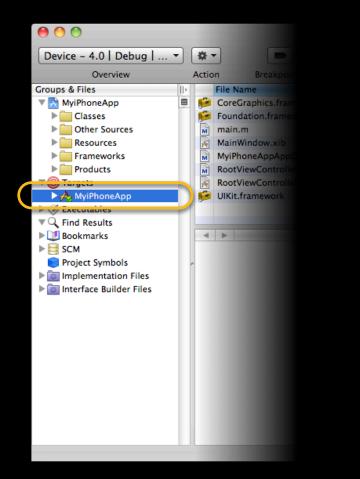




Multiple Apps



Upgrading a Project to iPad



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What's the Difference?

Universal

Multiple Apps



Demo Structuring Your Project

Summary

- Use the latest base SDK
- Set Deployment Target to earliest OS you want to support
- Use "Standard" Architectures
- Use Targeted Device Family to choose allowed devices
- Choose Universal or Multiple Apps

Targeting Multiple iPhone OS Versions

Clark Cox iPhone Tools Engineer

Targeting Older OS Versions

Application Life Cycle

Project Structure

Device Provisioning

Use New Classes, Selectors, and Symbols



Classes

Class myClass = NSClassFromString(@"UILocalNotification");

```
if(myClass) {
```

}

```
UILocalNotification *alarm = [[WyCdaa&Nallocdaindt]alloc] init];
...
[app scheduleLocalNotification: alarm];
[alarm release];
```

Methods

UIDevice *device = [UIDevice currentDevice];

BOOL multitaskingSupported = Ndevice isMultitaskingSupported];

if([device respondsToSelector: @selector(isMultitaskingSupported)) {

multitaskingSupported = [device isMultitaskingSupported];

}

Functions

if(&UIGraphicsBeginPDFContextToFile != NULL) {

if(UIGraphicsBeginPDFContextToFile(...)) {

•••

UIGraphicsEndPDFContext();

}

}

28

Constant Symbols

}

}

- (void)handleNotification:(NSNotification *)notification {

if(&UIApplicationDidEnterBackgroundNotification != NULL) {

NSString *name = [notification name];

if([name isEqualToString: UIApplicationDidEnterBackgroundNotification]) {

Always test on a device!

Targeting Older OS Versions

Application Life Cycle

Project Structure

Device Provisioning

Device Provisioning



- Automatic and custom provisioning profile
- Distribution provisioning profiles
- Developer profile (introduced in 3.2)

Automatic Provisioning Profile

- Create a CSR if required
- Create a team provisioning profile
- Download provisioning profiles







Custom Provisioning Profiles

- In App Purchase
- Push Notifications
- Game Center
- Keychain data sharing
- etc.



Developer Profile



Developer Profile







Production Push Notification SSL Certificate

Certificate



Certificate

iPhone





Developer Profile





Demo Automatic Provisioning Profile

Application Life Cycle

Chris Skogen iPhone Tools Engineer

Targeting Older OS Versions

Application Life Cycle

Project Structure

Device Provisioning

Application Life Cycle



- Build time validation
- Build and archive
- Online validation
- Submit to the store
- Use crash logs

Build Time Validation



- It's a build setting
- Do it all the time

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Run Static Analyze	r		
Scan All Source File	es for Includes		
Validate Built Pro	duct		
▼Code Signing			
Code Signing Entitlements			
Code Signing Ident	tity	\$	U
Any iPhone OS	Device ‡	iPhone Developer ÷	4
Code Signing Reso	urce Rules Path		Ŧ
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Build Time Validation

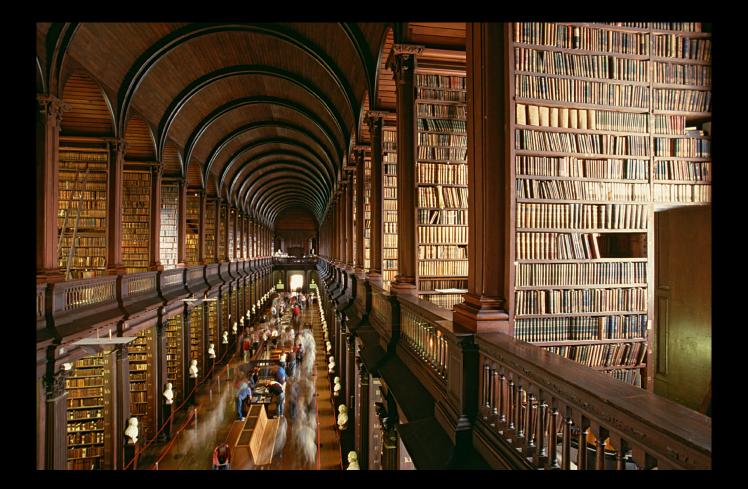


- Check icons
- Check plist
- Check Bundle ID



Archived Application





Archived Applications



- Build > Build and Archive
- Preserves app build and associated data
- Source for app distribution
- Needed throughout app life cycle

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Online Validation



- Application needs to be registered with iTunes Connect
- Distribution profile required
- Runs all automated App Store review tests

Validation Results

- Detects many different types of errors
 - Bundle version needs to be increased
 - Missing icon sizes
 - Incorrect bundle identifier
 - Code signing
 - Entitlements
 - And many more
- Suggests fixes

Uploading to the Store



- Same process as online validation
- Submit marketing info through iTunes Connect

Crash Reports

- Obtain from
 - iTunes Connect
 - Direct from app users
- Symbolicate in Xcode
 - Requires .dSYM file matching app
 - Archived application preserves for you
 - Drop crash log in Organizer

Demo App Distribution

Conclusion

Marc Verstaen Sr. Manager, iPhone Tools

Summary

- Take full advantage of Xcode
 - Structuring your project
 - Testing your app
 - Managing your app's entire life cycle

More Information

Michael Jurewitz

Developer Tools Evangelist jurewitz@apple.com

iPhone Dev Center iPhone Development Documentation and Resources http://developer.apple.com/iphone

Developer Forum iPhone Developer Tools Forum https://devforums.apple.com/community/iphone/devtools

Apple Developer Forums

http://devforums.apple.com

Related Sessions

Mastering Xcode for iPhone OS Development, Part 1	Mission Tuesday 2:00PM
Managing Mobile Devices	Nob Hill Tuesday 3:15PM
What's New in Instruments	Presidio Wednesday 11:30AM
Automating User Interface Testing with Instruments	Marina Wednesday 2:00PM
Designing Apps with Interface Builder	Mission Wednesday 2:00PM
Introducing Xcode 4	Mission Wednesday 3:15PM
App Publishing with iTunes Connect	Mission Thursday 10:15AM

Labs

Xcode for iPhone Development Lab	Developer Tools Lab B Wednesday 2:00PM
Automated User Interface Testing Lab	Developer Tools Lab A Wednesday 4:30PM
Interface Builder Lab	Developer Tools Lab B Thursday 9:00AM
Xcode 4 Lab	Developer Tools Lab A Wednesday 9:00AM
iPhone OS Performance Lab	Developer Tools Lab A Thursday 4:30PM





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