

What's New in Xcode 5

Session 400

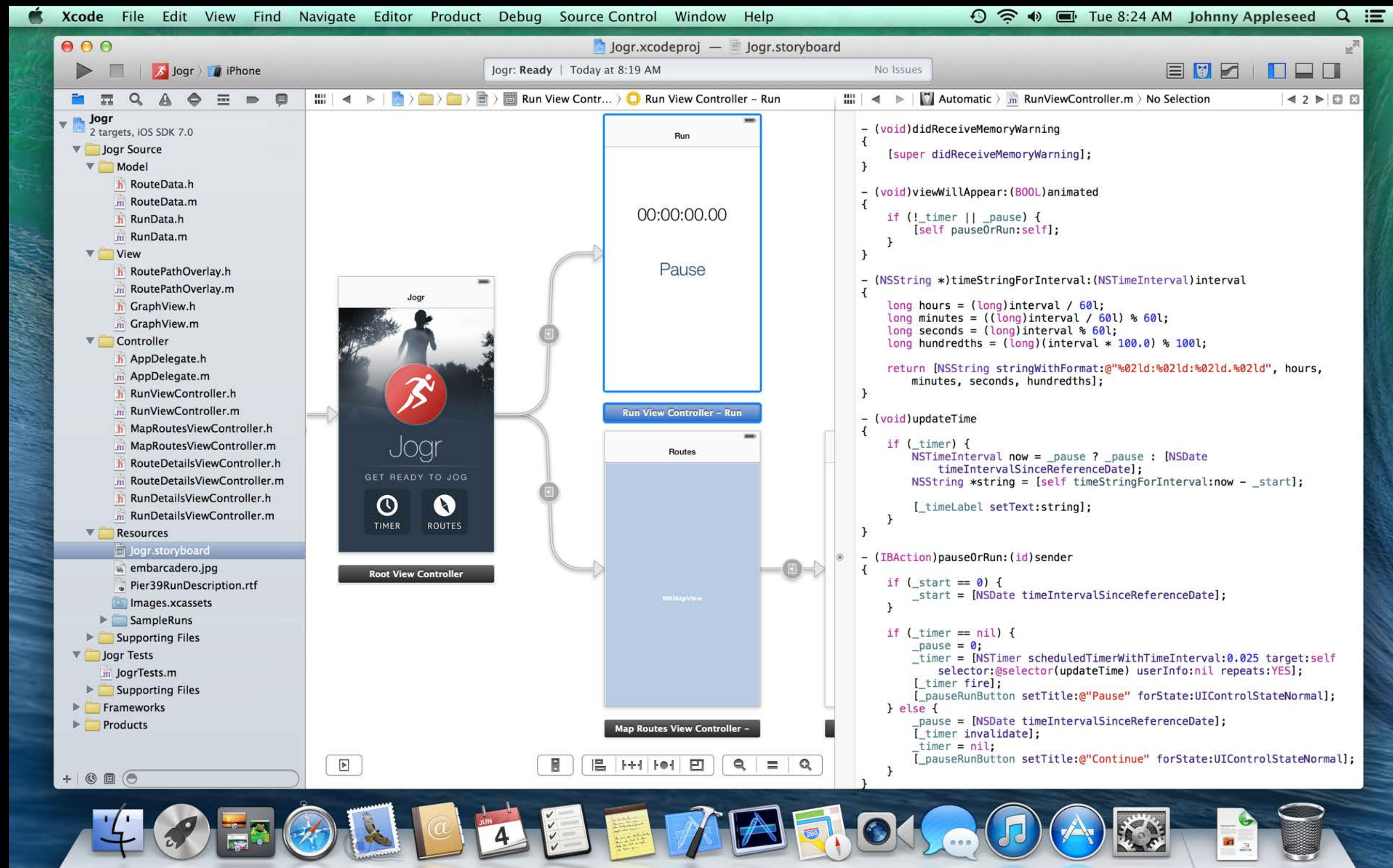
Chris Lattner

Director, Developer Tools

These are confidential sessions—please refrain from streaming, blogging, or taking pictures



Xcode 5



Jogr.xcodeproj — Jogr.storyboard

Jogr: Ready | Today at 8:19 AM | No Issues

Jogr > iPhone

Run View Contr... > Run View Controller - Run

Automatic > RunViewController.m > No Selection

2 targets, iOS SDK 7.0

Jogr Source

- Model
 - RouteData.h
 - RouteData.m
 - RunData.h
 - RunData.m
- View
 - RoutePathOverlay.h
 - RoutePathOverlay.m
 - GraphView.h
 - GraphView.m
- Controller
 - AppDelegate.h
 - AppDelegate.m
 - RunViewController.h
 - RunViewController.m
 - MapRoutesViewController.h
 - MapRoutesViewController.m
 - RouteDetailsViewController.h
 - RouteDetailsViewController.m
 - RunDetailsViewController.h
 - RunDetailsViewController.m
- Resources
 - Jogr.storyboard
 - embarcadero.jpg
 - Pier39RunDescription.rtf
 - Images.xcassets
 - SampleRuns
 - Supporting Files
- Jogr Tests
 - JogrTests.m
 - Supporting Files
- Frameworks
- Products

Run

00:00:00.00

Pause

Run View Controller - Run

Jogr

GET READY TO JOG

TIMER ROUTES

Root View Controller

Routes

MCMapView

Map Routes View Controller -

```
- (void)didReceiveMemoryWarning
{
    [super didReceiveMemoryWarning];
}

- (void)viewWillAppear:(BOOL)animated
{
    if (!_timer || _pause) {
        [self pauseOrRun:self];
    }
}

- (NSString *)timeStringForInterval:(NSTimeInterval)interval
{
    long hours = (long)interval / 60l;
    long minutes = ((long)interval / 60l) % 60l;
    long seconds = (long)interval % 60l;
    long hundredths = (long)(interval * 100.0) % 100l;

    return [NSString stringWithFormat:@"%02ld:%02ld:%02ld.%02ld", hours,
        minutes, seconds, hundredths];
}

- (void)updateTime
{
    if (_timer) {
        NSTimeInterval now = _pause ? _pause : [NSDate
            timeIntervalSinceReferenceDate];
        NSString *string = [self timeStringForInterval:now - _start];

        [_timeLabel setText:string];
    }
}

- (IBAction)pauseOrRun:(id)sender
{
    if (_start == 0) {
        _start = [NSDate timeIntervalSinceReferenceDate];
    }

    if (_timer == nil) {
        _pause = 0;
        _timer = [NSTimer scheduledTimerWithTimeInterval:0.025 target:self
            selector:@selector(updateTime) userInfo:nil repeats:YES];
        [_timer fire];
        [_pauseRunButton setTitle:@"Pause" forState:UIControlStateNormal];
    } else {
        _pause = [NSDate timeIntervalSinceReferenceDate];
        [_timer invalidate];
        _timer = nil;
        [_pauseRunButton setTitle:@"Continue" forState:UIControlStateNormal];
    }
}
```



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2 2

Jogr
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Storyboard:

- Root View Controller**: Jogr app icon, GET READY TO JOG, TIMER, ROUTES buttons.
- Run View Controller - Run**: Run timer (00:00:00.00), Pause button.
- Map Routes View Controller -**: HKMapView.

Code (RunViewController.m):

```

- (void)didReceiveMemoryWarning
{
    [super didReceiveMemoryWarning];
}

- (void)viewWillAppear:(BOOL)animated
{
    if (!_timer || _pause) {
        [self pauseOrRun:self];
    }
}

- (NSString *)timeStringForInterval:(NSTimeInterval)interval
{
    long hours = (long)interval / 60l;
    long minutes = ((long)interval / 60l) % 60l;
    long seconds = (long)interval % 60l;
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    return [NSString stringWithFormat:@"%02ld:%02ld:%02ld.%02ld", hours,
        minutes, seconds, hundredths];
}

- (void)updateTime
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        [_timeLabel setText:string];
    }
}

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    }

    if (_timer == nil) {
        _pause = 0;
        _timer = [NSTimer scheduledTimerWithTimeInterval:0.025 target:self
            selector:@selector(updateTime) userInfo:nil repeats:YES];
        [_timer fire];
        [_pauseRunButton setTitle:@"Pause" forState:UIControlStateNormal];
    } else {
        _pause = [NSDate timeIntervalSinceReferenceDate];
        [_timer invalidate];
        _timer = nil;
        [_pauseRunButton setTitle:@"Continue" forState:UIControlStateNormal];
    }
}
    
```

Jogr.xcodeproj — Jogr.storyboard

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Jogr > iPhone

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Run

00:00:00.00

Pause

Run View Controller - Run

Routes

HKMapView

Map Routes View Controller -

Root View Controller

```
- (void)didReceiveMemoryWarning
{
    [super didReceiveMemoryWarning];
}

- (void)viewWillAppear:(BOOL)animated
{
    if (!_timer || _pause) {
        [self pauseOrRun:self];
    }
}

- (NSString *)timeStringForInterval:(NSTimeInterval)interval
{
    long hours = (long)interval / 60l;
    long minutes = ((long)interval / 60l) % 60l;
    long seconds = (long)interval % 60l;
    long hundredths = (long)(interval * 100.0) % 100l;

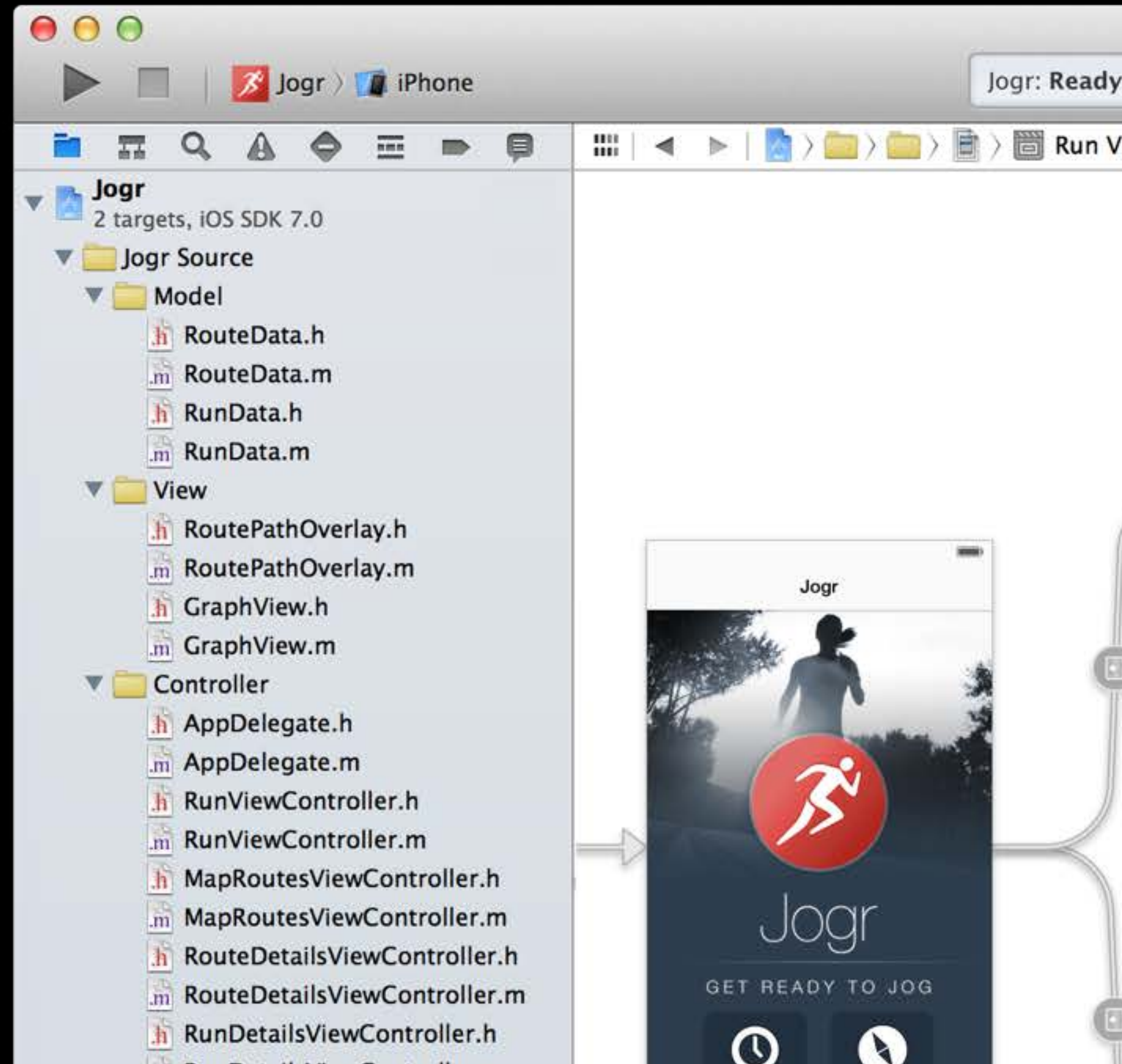
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{
    if (_timer) {
        NSTimeInterval now = _pause ? _pause : [NSDate
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        [_timeLabel setText:string];
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- (IBAction)pauseOrRun:(id)sender
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            selector:@selector(updateTime) userInfo:nil repeats:YES];
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    } else {
        _pause = [NSDate timeIntervalSinceReferenceDate];
        [_timer invalidate];
        _timer = nil;
        [_pauseRunButton setTitle:@"Continue" forState:UIControlStateNormal];
    }
}
```



inController.m

PM



Editor



Organizer

Counterparts > MainController.h > No Selection

```
/*
File: MainController.h
Abstract: n/a
Version: 1.1
*/

#import <Cocoa/Cocoa.h>

@class CFilter;
@class MyOpenGLView;

@interface MainController : NSResponder
{
    // Model
    BOOL layerBacked;
    CFilter *filter;
    BOOL isRotating;
    NSTimer *rotationTimer;
    CFAbsoluteTime timeBefore;

    // Views
    IBOutlet MyOpenGLView *openGLView;
    IBOutlet NSBox *controlBox;
}

- (BOOL)isFiltered;
- (void)setFiltered:(BOOL)flag;

@end
```

rolBox

k

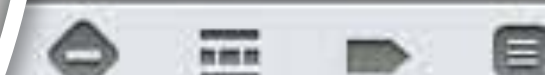
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in.



iPhone

Jogr: Ready

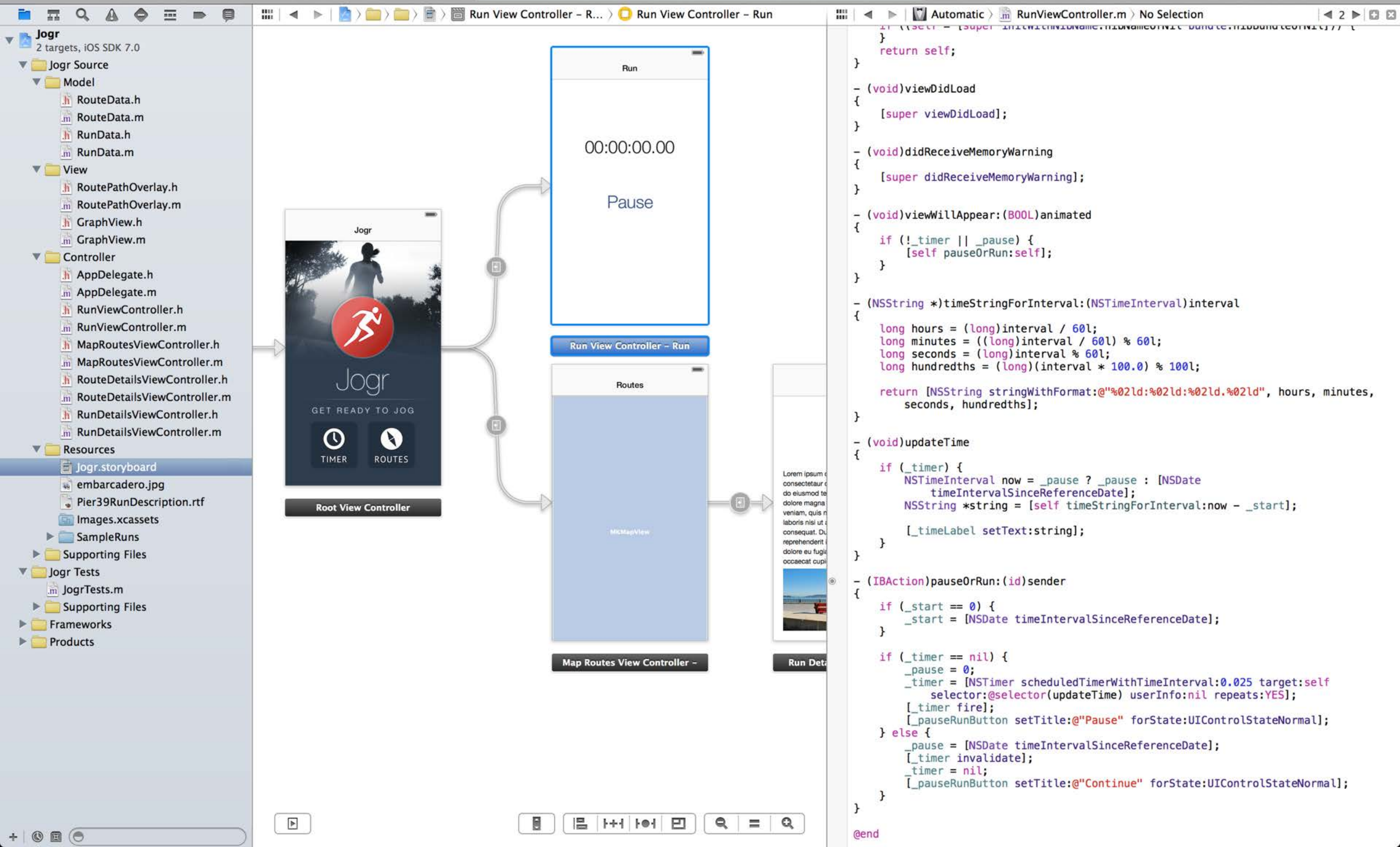


Run V

Jogr

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 - RouteDetailsViewController.h
 - RouteDetailsViewController.m
 - RunDetailsViewController.h





Documentation — Objective-C Runtime Reference

objective-c language

Objective-C Runtime ReferenceXcode Release Notes:Xcode User Guide: About XcodeWhat's New In Xcode: What's N...Source Control Management H...LLDB Quick Start Guide: Gettin...+

Next

Declared in

IONDRVLibraries.h
NSObjCRuntime.h
wintypes.h

Companion guides

[Objective-C Runtime Programming Guide](#)
The Objective-C Programming Language

Overview

This document describes the OS X Objective-C 2.0 runtime library support functions and data structures. The functions are implemented in the shared library found at `/usr/lib/libobjc.A.dylib`. This shared library provides support for the dynamic properties of the Objective-C language, and as such is linked to by all Objective-C applications.

This reference is useful primarily for developing bridge layers between Objective-C and other languages, or for low-level debugging. You typically do not need to use the Objective-C runtime library directly when programming in Objective-C.

The OS X implementation of the Objective-C runtime library is unique to the Mac. For other platforms, the GNU Compiler Collection provides a different implementation with a similar API. This document covers only the OS X implementation.

The low-level Objective-C runtime API is significantly updated in OS X version 10.5. Many functions and all existing data structures are replaced with new functions. The old functions and structures are deprecated in 32-bit and absent in 64-bit mode. The API constrains several values to 32-bit ints even in 64-bit mode—class count, protocol count, methods per class, ivars per class, arguments per method, `sizeof(all arguments)` per method, and class version number. In addition, the new Objective-C ABI (not described here) further constrains `sizeof(anInstance)` to 32 bits, and three other values to 24 bits—methods per class, ivars per class, and `sizeof(a single ivar)`. Finally, the obsolete `NXHashTable` and `NXMapTable` are limited to 4 billion items.

“Deprecated” below means “deprecated in OS X version 10.5 for 32-bit code, and disallowed for 64-bit code.”

Who Should Read This Document

The document is intended for readers who might be interested in learning about the Objective-C runtime.

Because this isn’t a document about C, it assumes some prior acquaintance with that language. However, it doesn’t have to be an extensive acquaintance.

Functions by Task

Working with Classes

`class_getName`
`class_getSuperclass`
`class_setSuperclass`

▼ Programming with Objective-C

Introduction

▼ Defining Classes

▼ Classes Are Blueprints for Objects

Mutability Determines Whether a Represented Value Can B...

Classes Inherit from Other Classes

The Root Class Provides Base Functionality

▼ The Interface for a Class Defines Expected Interactions

Basic Syntax

▼ Properties Control Access to an Object's Values

Property Attributes Indicate Data Accessibility and Stora...

▼ Method Declarations Indicate the Messages an Object Can...

Methods Can Take Parameters

Class Names Must Be Unique

▼ The Implementation of a Class Provides Its Internal Behavior

Basic Syntax

Implementing Methods

Objective-C Classes Are also Objects

Exercises

▼ Working with Objects

▼ Objects Send and Receive Messages

Use Pointers to Keep Track of Objects

You Can Pass Objects for Method Parameters

Methods Can Return Values

Objects Can Send Messages to Themselves

Objects Can Call Methods Implemented by Their Superclasses

▼ Objects Are Created Dynamically

Initializer Methods Can Take Arguments

Class Factory Methods Are an Alternative to Allocation and...

Use `new` to Create an Object If No Arguments Are Needed...

Literals Offer a Concise Object-Creation Syntax

▼ Objective-C Is a Dynamic Language

Determining Equality of Objects

Working with `nil`

Exercises

▼ Encapsulating Data

▼ Properties Encapsulate an Object's Values

Declare Public Properties for Exposed Data

Use Accessor Methods to Get or Set Property Values

Dot Syntax Is a Concise Alternative to Accessor Method Calls

▼ Most Properties Are Backed by Instance Variables

You Can Customize Synthesized Instance Variable Names



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Add Bookmark

Email Link

Message

Open PDF

Documentation — Objective-C Runtime Reference

Objective-C language

Xcode Release Notes: Xcode User Guide: About Xcode What's New In Xcode: What's N... Source Control Management H... LLDB Quick Start Guide: Gettin...

Next

Objective-C Runtime Reference

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Class Factory Methods Are an Alternative to Allocation and...

Use new to Create an Object If No Arguments Are Needed...

Literals Offer a Concise Object-Creation Syntax

Determining Equality of Objects

Working with nil

Exercises

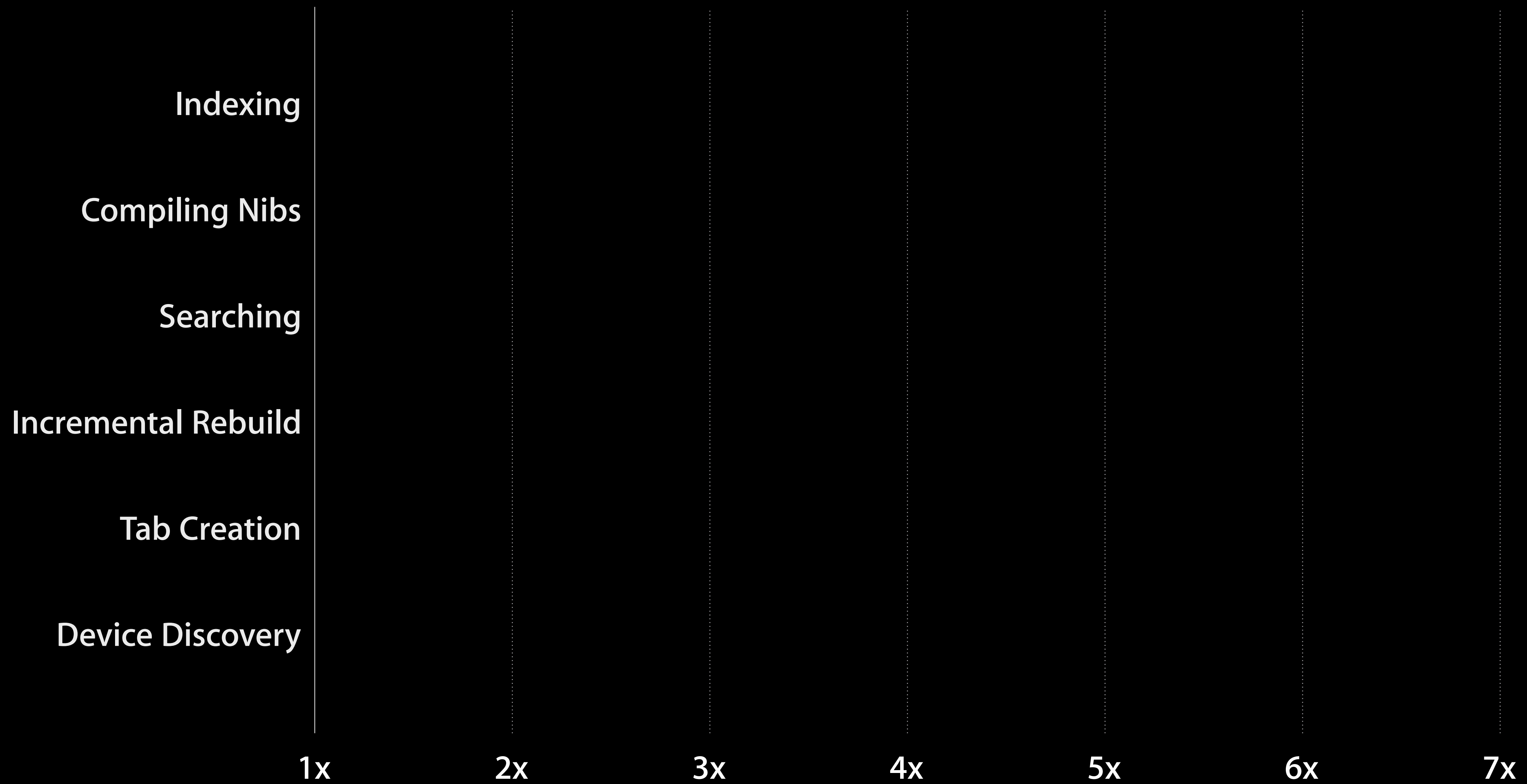
Declare Public Properties for Exposed Data

Use Accessor Methods to Get or Set Property Values

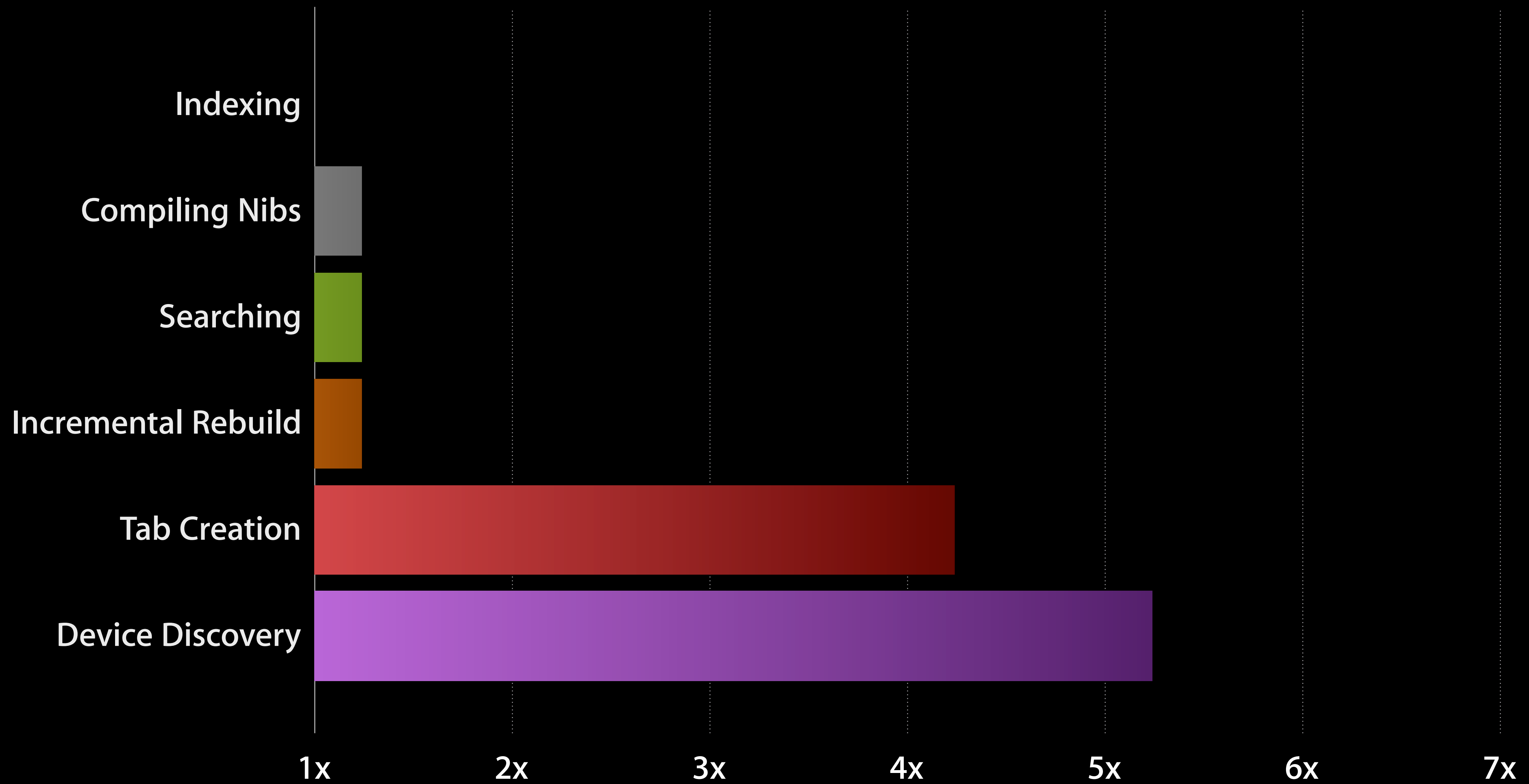
Dot Syntax Is a Concise Alternative to Accessor Method Calls

You Can Customize Synthesized Instance Variable Names

Performance



Performance



Performance



Source Control



Welcome to Xcode

Version 5.0 (5A11314I)



Create a new Xcode project

Start building a new iPhone, iPad or Mac application.



Check out an existing project

Start working on something from an SCM Repository.



Jogr

/Users/Shared/Projects



Bouncy Ball

/Users/Shared/Projects



CS 101 All Projects

/Users/Shared/Projects



CS 101 Demo1

/Users/Shared/Projects



CS 101 Demo2

/Users/Shared/Projects



TipCalculator

/Users/Shared/Projects



TextEdit

/Users/Shared/Projects



SlideShowApp

/Users/Shared/Projects



PhotoDaemonXPC

/Users/Shared/Projects



PhotosFramework

/Users/Shared/Projects



Open Other...



Welcome to Xcode

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/Users/Shared/Projects



SlideShowApp

/Users/Shared/Projects



PhotoDaemonXPC

/Users/Shared/Projects



PhotosFramework

/Users/Shared/Projects



Open Other...

Check Out

Choose an item:

	Recents	Favorites	Repositories	
	AwesomeApp			https://github.com/JohnnyApple/AwesomeApp.git
	RunningApp			https://github.com/JohnnyApple/RunningApp.git
★ 	SharedRepo.git			https://github.com/JohnnyApple/SharedRepo.git

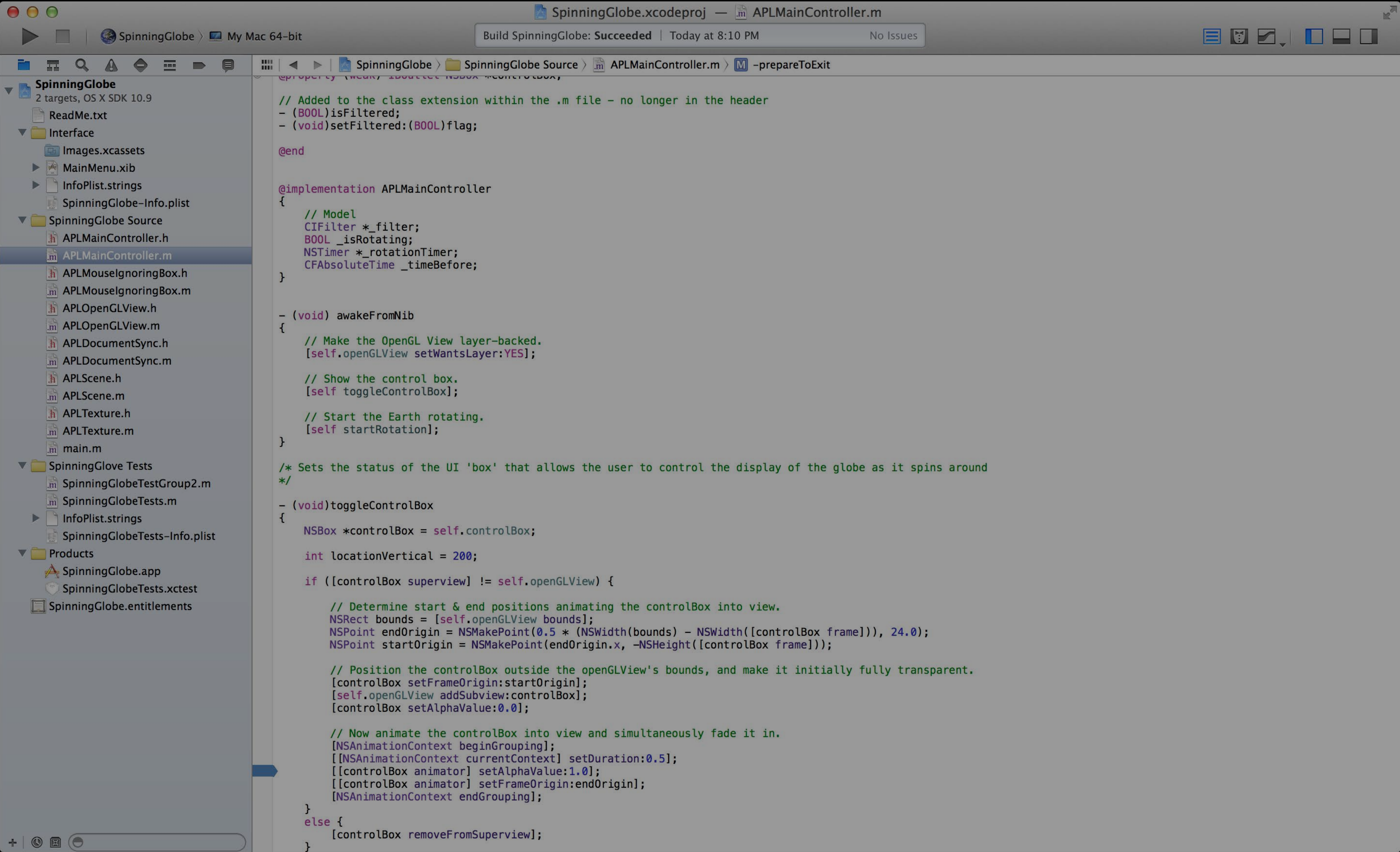
Or enter a repository location:

<https://johnnyapple@github.com/JohnnyApple/SharedRepo.git>

Cancel

Previous

Next



SpinningGlobe

2 targets, OS X SDK 10.9

ReadMe.txt

Interface

Images.xcassets

MainMenu.xib

InfoPlist.strings

SpinningGlobe-Info.plist

SpinningGlobe Source

APLMainController.h

APLMainController.m

APLMouseIgnoringBox.h

APLMouseIgnoringBox.m

APLOpenGLView.h

APLOpenGLView.m

APLDocumentSync.h

APLDocumentSync.m

APLScene.h

APLScene.m

APLTexture.h

APLTexture.m

main.m

SpinningGlove Tests

SpinningGlobeTestGroup2.m

SpinningGlobeTests.m

InfoPlist.strings

SpinningGlobeTests-Info.plist

Products

SpinningGlobe.app

SpinningGlobeTests.xctest

SpinningGlobe.entitlements

```
// Added to the class extension within the .m file - no longer in the header
- (BOOL)isFiltered;
- (void)setFiltered:(BOOL)flag;

@end

@implementation APLMainController
{
    // Model
    CIFilter *_filter;
    BOOL _isRotating;
    NSTimer *_rotationTimer;
    CFAbsoluteTime _timeBefore;
}

- (void) awakeFromNib
{
    // Make the OpenGL View layer
    [self.openGLView setWantsLayer:YES];

    // Show the control box
    [self toggleControlBox];

    // Start the Earth rotating.
    [self startRotation];
}

/* Sets the status of the control box
*/

- (void)toggleControlBox
{
    NSBox *controlBox = self.controlBox;

    int locationVertical = 0;

    if ([controlBox removeFromSuperview] != YES)
    {
        // Determine start & end positions animating the controlBox into view.
        NSRect bounds = [self.openGLView bounds];
        NSPoint endOrigin = NSMakePoint(0.5 * (NSwidth(bounds) - NSwidth([controlBox frame])), 24.0);
        NSPoint startOrigin = NSMakePoint(endOrigin.x, -NSHeight([controlBox frame]));

        // Position the controlBox outside the openGLView's bounds, and make it initially fully transparent.
        [controlBox setFrameOrigin:startOrigin];
        [self.openGLView addSubview:controlBox];
        [controlBox setAlphaValue:0.0];

        // Now animate the controlBox into view and simultaneously fade it in.
        [NSAnimationContext beginGrouping];
        [[NSAnimationContext currentContext] setDuration:0.5];
        [[controlBox animator] setAlphaValue:1.0];
        [[controlBox animator] setFrameOrigin:endOrigin];
        [NSAnimationContext endGrouping];
    }
    else {
        [controlBox removeFromSuperview];
    }
}
```

Working Copies

SpinningGlobe — master

Build SpinningGlobe succeeded - today at 6:10 PM

Check Out...

Commit... ⌘⌘C

Push...

Pull... ⌘⌘X

Refresh Status

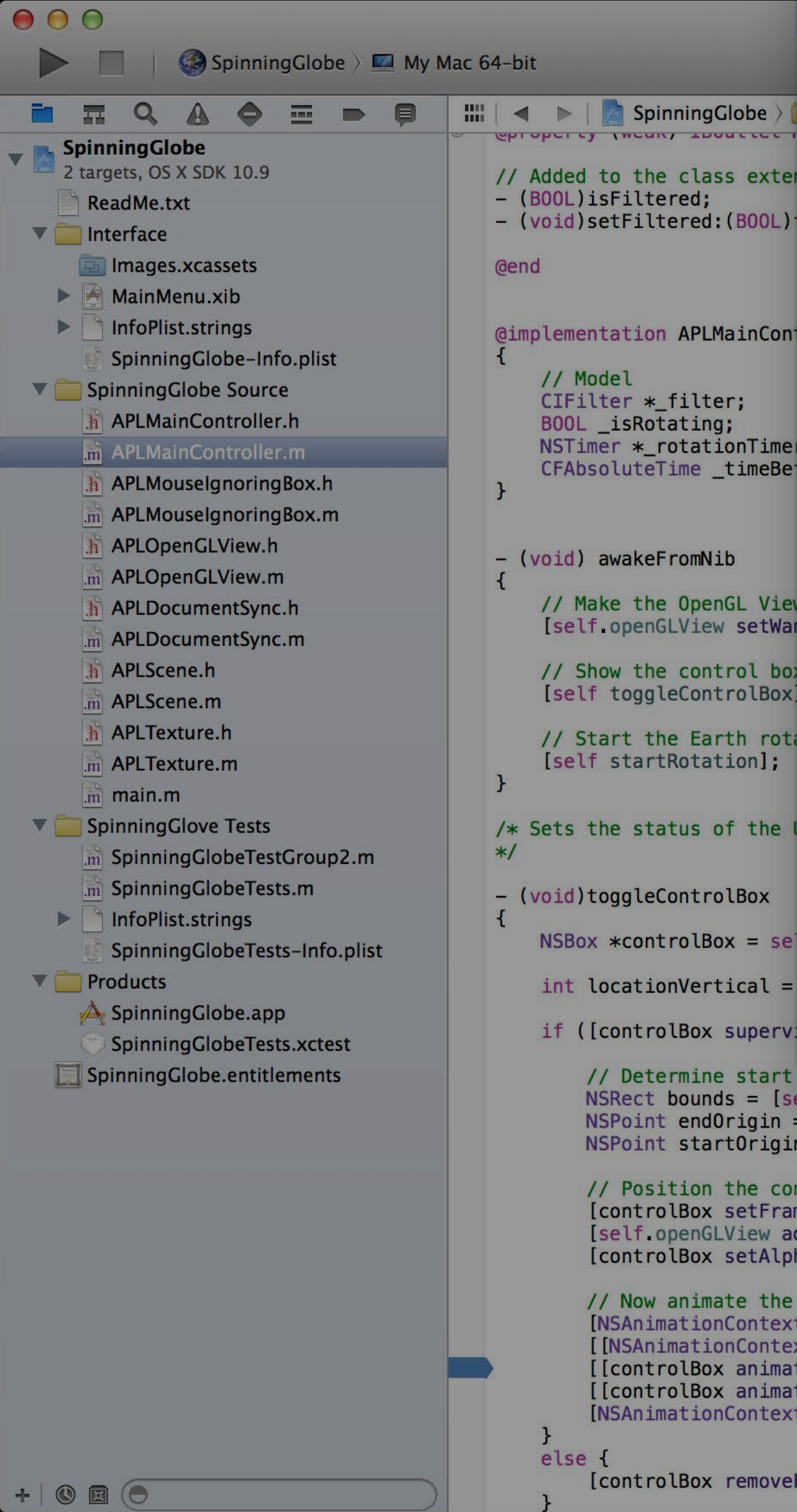
Discard All Changes...

Add Selected Files

Discard Changes in Selected Files...

Mark Selected Files as Resolved

History...



Working Copies

SpinningGlobe — master

Check Out...

Commit...

Push...

Pull...

Refresh Status

Discard All Changes...

Add Selected Files

Discard Changes in Selected Files...

Mark Selected Files as Resolved

History...

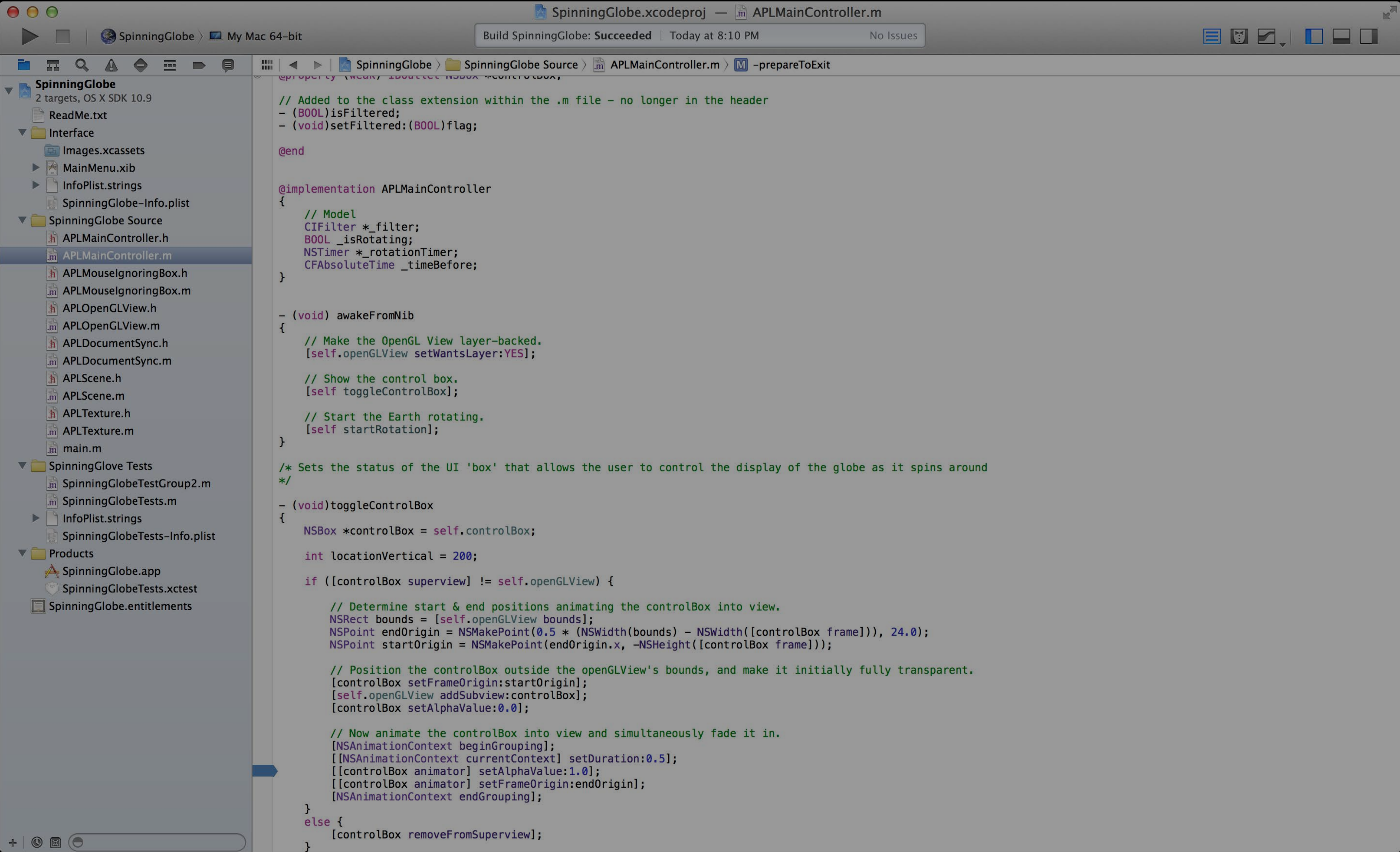
New Branch...

Switch to Branch...

Merge from Branch...

Merge into Branch...

Configure SpinningGlobe...



SpinningGlobe

2 targets, OS X SDK 10.9

ReadMe.txt

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Images.xcassets

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SpinningGlobe-Info.plist

SpinningGlobe Source

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Products

SpinningGlobe.app

SpinningGlobeTest.xctest

SpinningGlobe.entitlements

SpinningGlobe.xcodeproj — APLMainController.m

Build SpinningGlobe: Succeeded | Today at 8:10 PM | No Issues

SpinningGlobe > SpinningGlobe Source > APLMainController.m > -prepareToExit

```
@property (weak, nonatomic) IBOutlet NSBox *controlBox;

// Added to the class extension within the .m file - no longer in the header
- (BOOL)isFiltered;
- (void)setFiltered:(BOOL)flag;

@end

@implementation APLMainController
{
    // Model
    CIFilter *_filter;
    BOOL _isRotating;
    NSTimer *_rotationTimer;
    CFAbsoluteTime _timeBefore;
}

- (void) awakeFromNib
{
    // Make the OpenGL View layer-backed.
    [self.openGLView setWantsLayer:YES];

    // Show the control box.
    [self toggleControlBox];

    // Start the Earth rotating.
    [self startRotation];
}

/* Sets the status of the UI 'box' that allows the user to control the display of the globe as it spins around
*/

- (void)toggleControlBox
{
    NSBox *controlBox = self.controlBox;

    int locationVertical = 200;

    if ([controlBox.superview] != self.openGLView) {
        // Positions animating the controlBox into view bounds;
        // View bounds;
        int(0.5 * (NSwidth(self.openGLView.bounds) - [controlBox.frame].width));
        NSPoint startOrigin = NSMakePoint(endOrigin.x, -NSheight([controlBox.frame]));

        // Now animate the controlBox into view and simultaneously fade it in.
        [self animateControlBox];
        [controlBox animator] setAlphaValue:1.0;
        [controlBox animator] setFrameOrigin:endOrigin;
        [NSAnimationContext endGrouping];
    }
    else {
        [controlBox removeFromSuperview];
    }
}
```



Johnny Appleseed

Jun 3, 2013, 7:54 PM

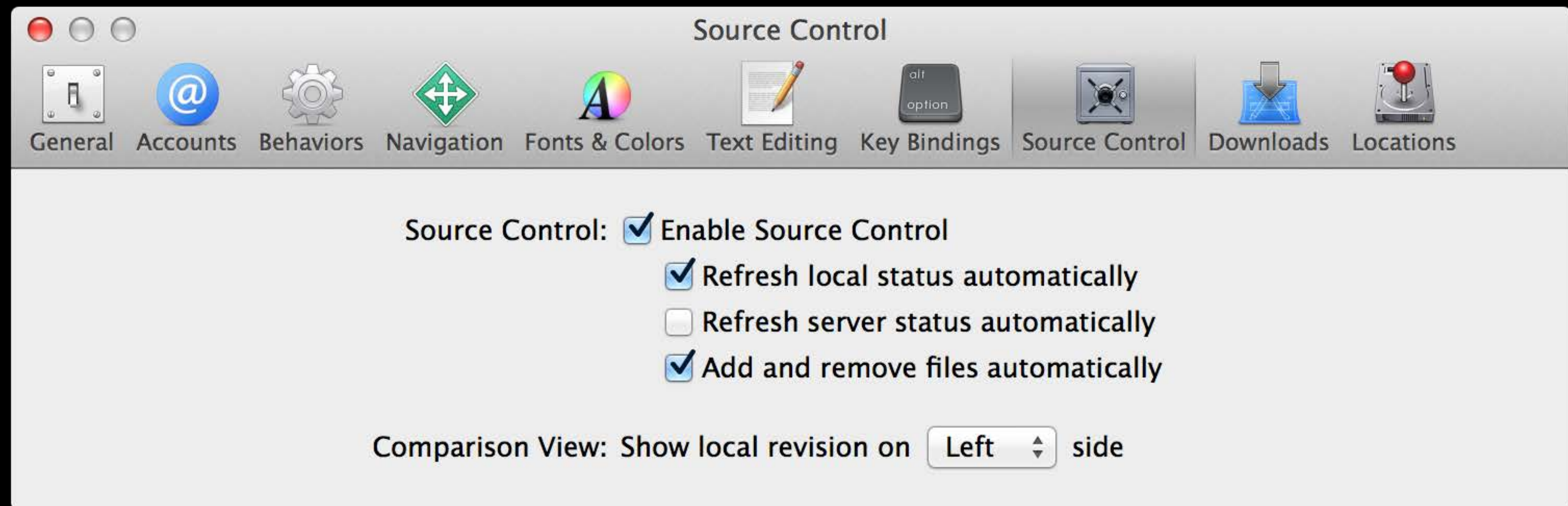
ceedd6178341

Show 3 modified files

Committing a new feature to do a proper zoom-in when the globe spins

Open in Blame

Open in Comparison





Automatic Configuration



Accounts



General



Accounts



Behaviors



Navigation



Fonts & Colors



Text Editing



Key Bindings



Source Control



Downloads



Locations

Apple IDs



Personal Developer Account

johnny_appleseed

Repositories



AwesomeApp

https://japlseed@github.com/Jo...



RunningApp

https://github.com/JohnnyApple...



SharedRepo.git

https://johnnyapple@github.co...

Servers



MacBook Pro Retina 15"

MacBook-Pro-Retina-15.local



Mini Bot Server

Mini-Bot-Server.local



Apple ID

Apple ID: johnny_appleseed

Password:

Description: Personal Developer Account

Name

iOS

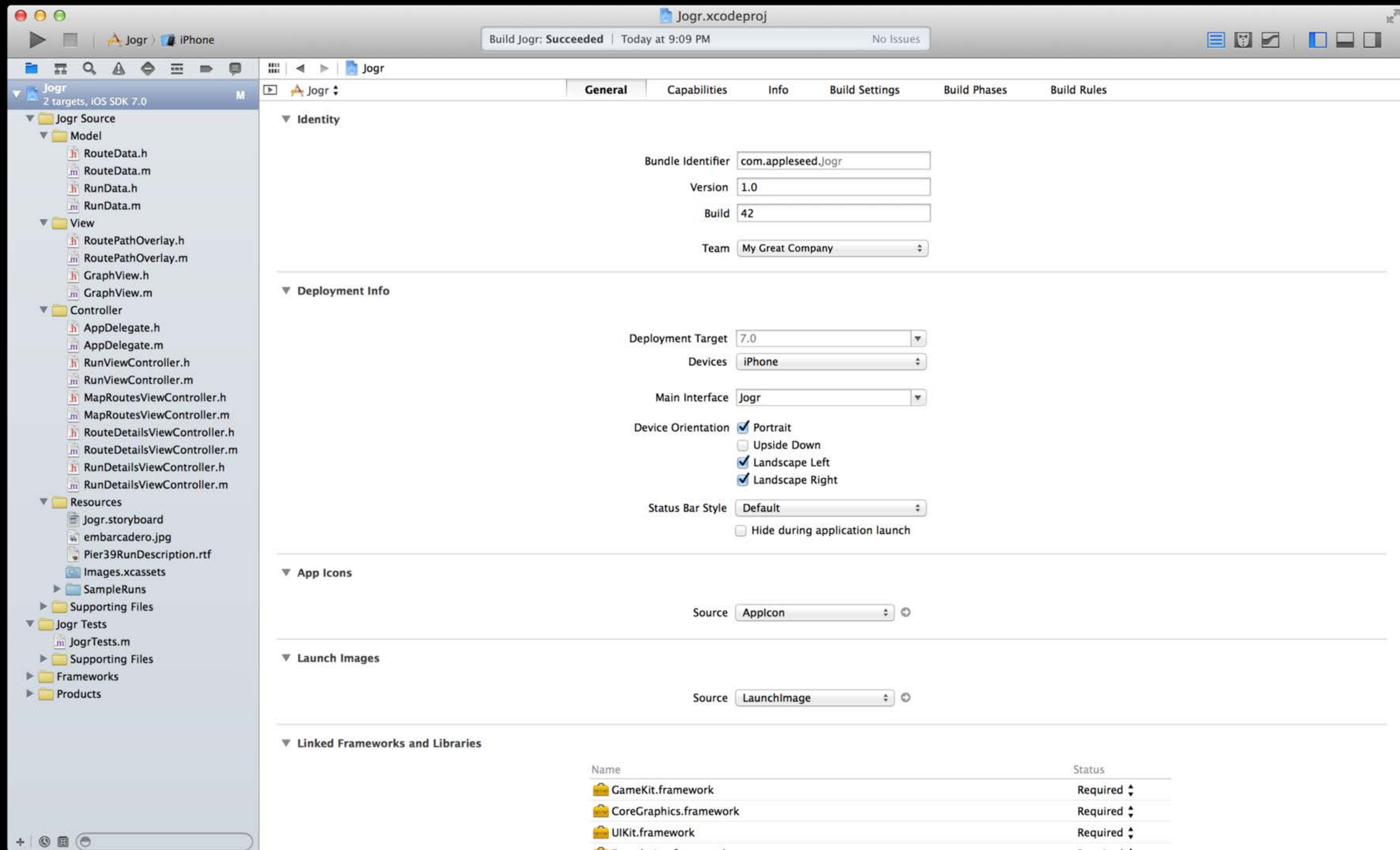
Mac

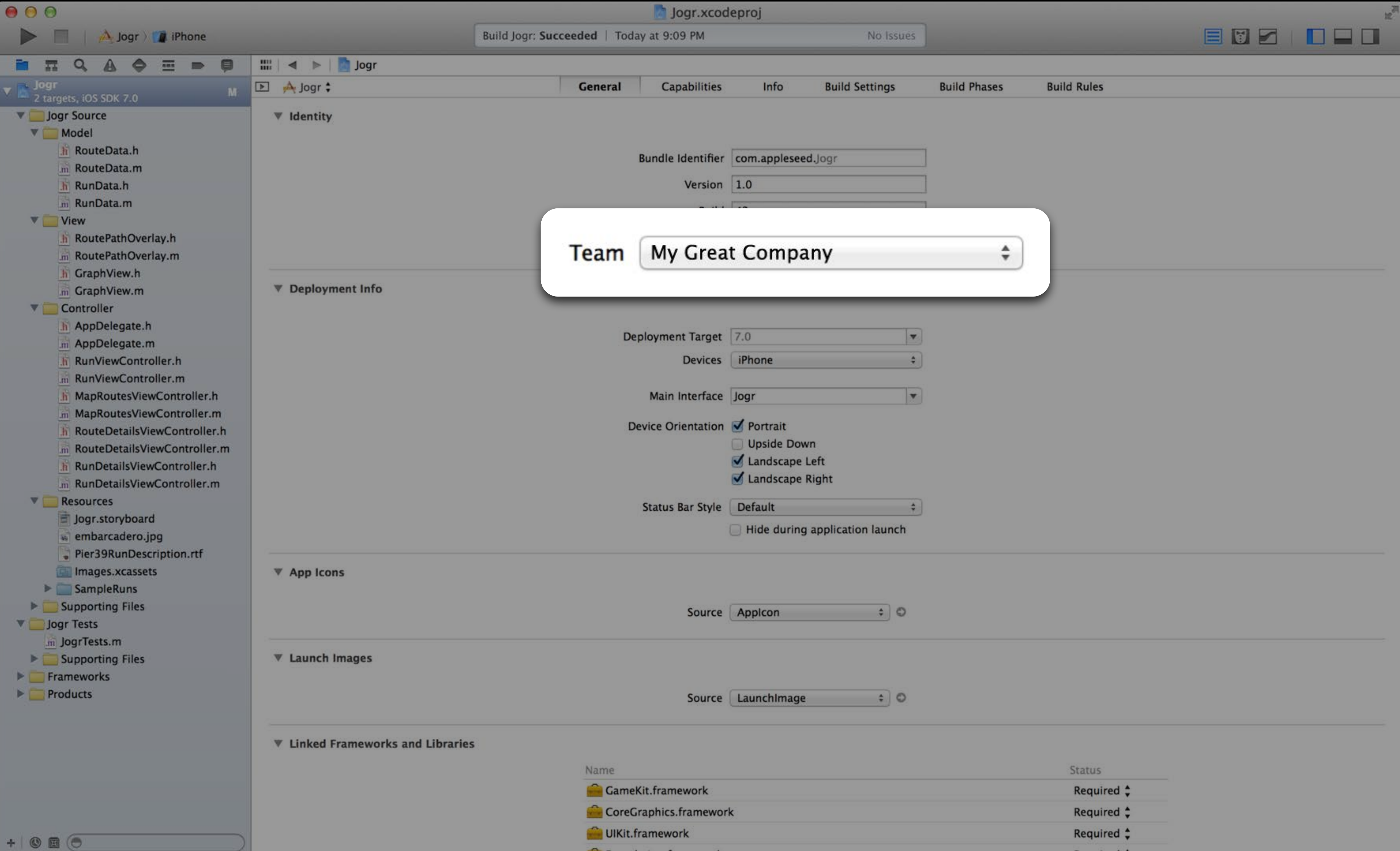
My Great Company

Agent

Agent

View Details...





Team My Great Company

▼ Identity

Bundle Identifier com.appleseed.Jogr
Version 1.0

▼ Deployment Info

Deployment Target 7.0
Devices iPhone
Main Interface Jogr
Device Orientation ☒ Portrait
☐ Upside Down
☒ Landscape Left
☒ Landscape Right
Status Bar Style Default
☐ Hide during application launch

▼ App Icons

Source AppIcon

▼ Launch Images

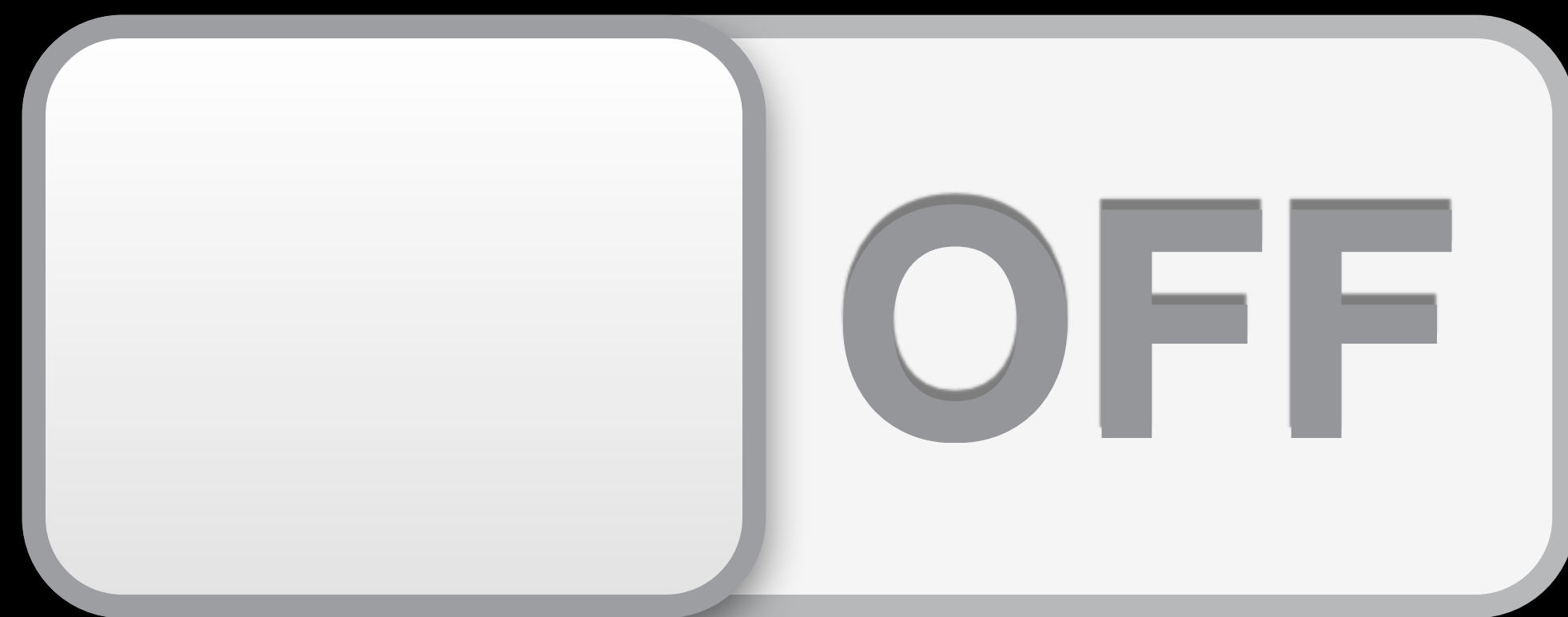
Source LaunchImage

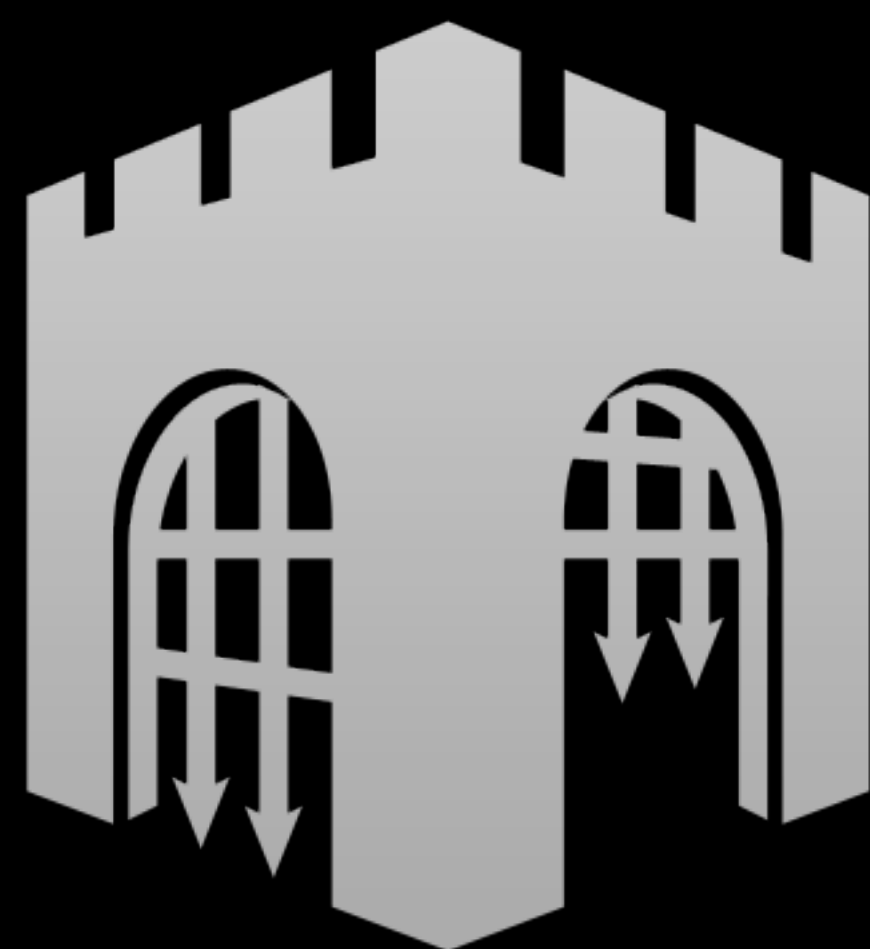
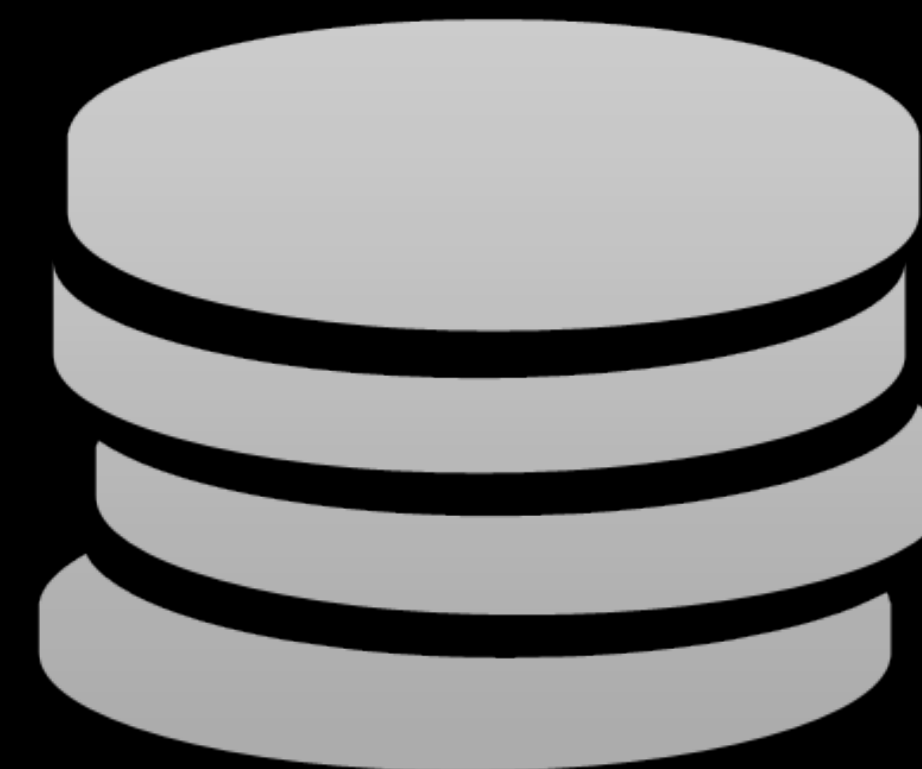
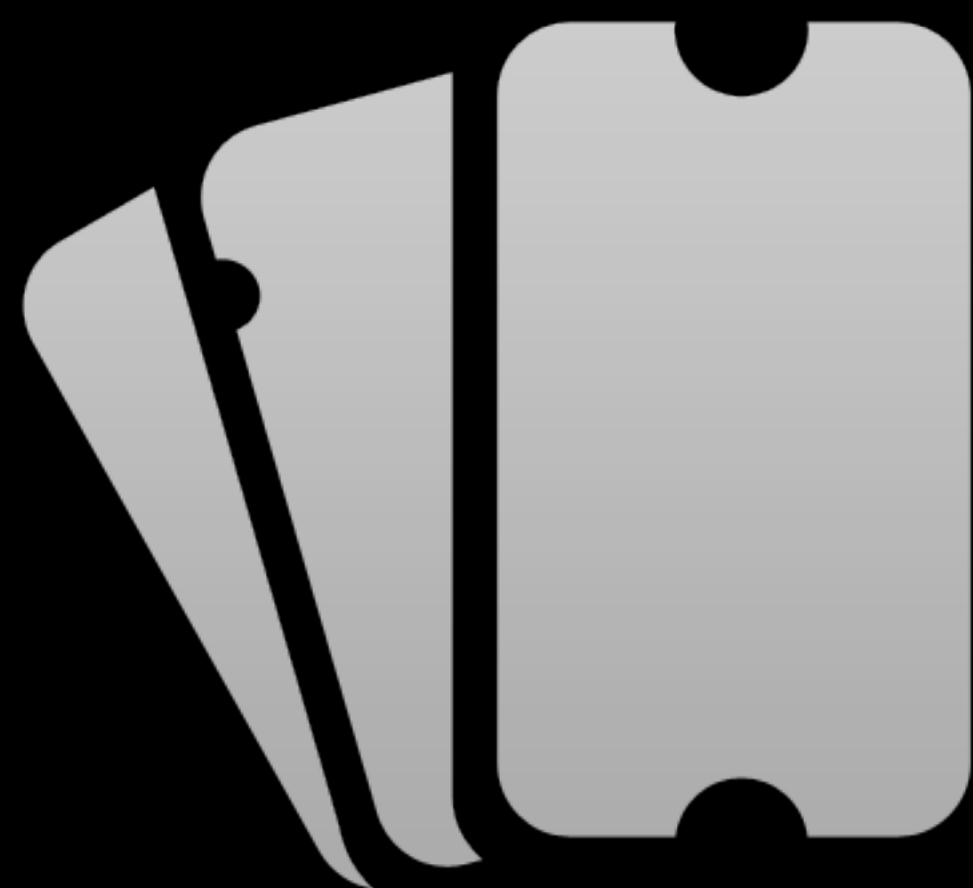
▼ Linked Frameworks and Libraries

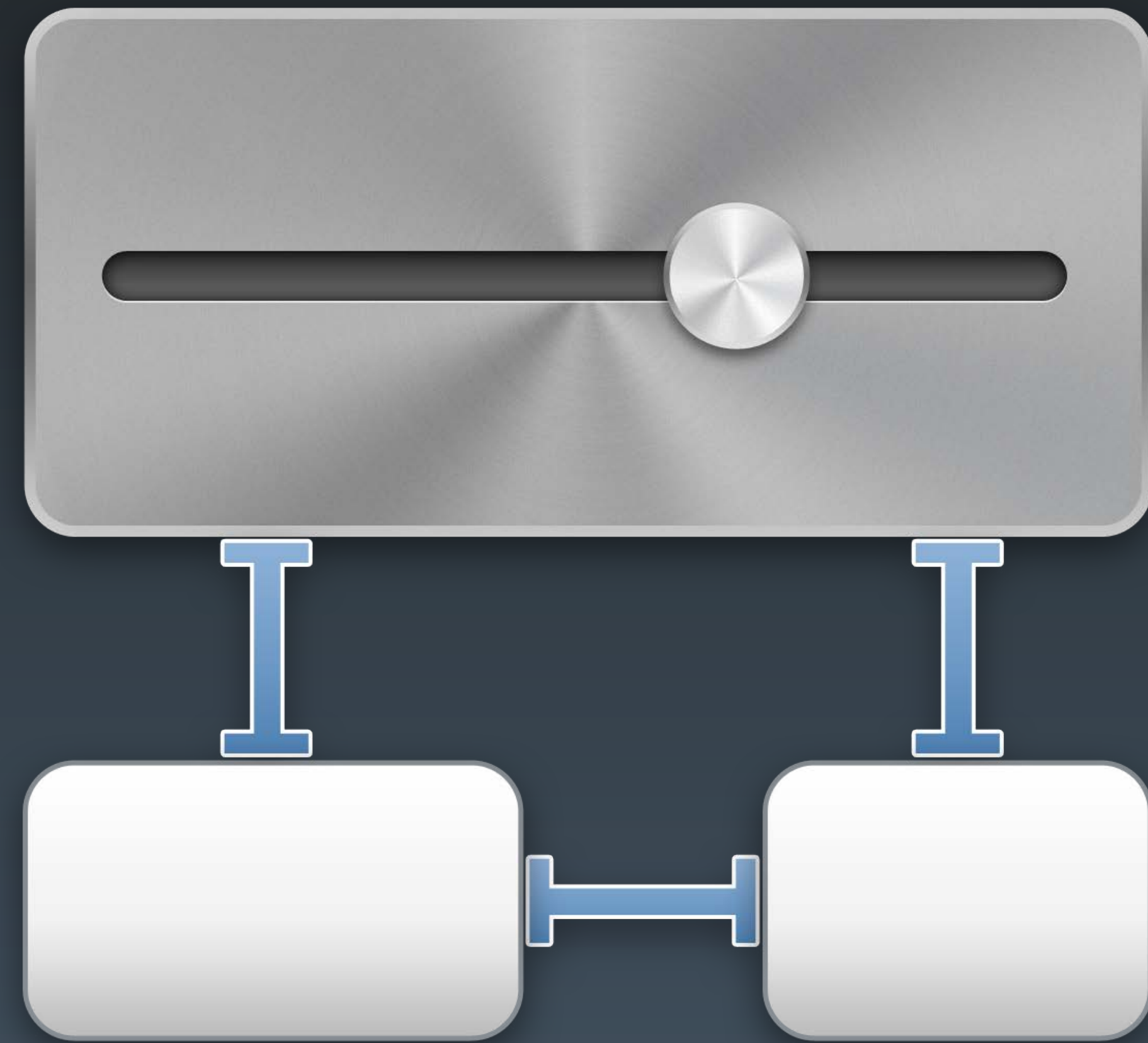
Name	Status
GameKit.framework	Required
CoreGraphics.framework	Required
UIKit.framework	Required



Capabilities







Interface Design





TimT: Can't get the button press to align properly in Keynote. May just need to highlight.



Run

Image Default Image

Background RoutesButton

Shadow Offset 0.0 0.0
Width Height

☐ Reverses On Highlight

Drawing ☐ Shows Touch On Highlight

☒ Highlighted Adjusts Image

☒ Disabled Adjusts Image

Line Break Truncate Middle

Edge Content

Inset 0 0
Top Bottom

0 0
Left Right

Control

Alignment

Horizontal

Vertical

Label Button 1 2 Text

Slider Toggle Loader Progress

Buttons: - +, list, list with separator



Run

Image Default Image

Background RoutesButton

Shadow Offset 0.0 0.0

Width Height

☐ Reverses On Highlight

Drawing ☐ Shows Touch On Highlight

☒ Highlighted Adjusts Image

☒ Disabled Adjusts Image

Line Break Truncate Middle

Edge Content

Inset 0 0

Top Bottom

0 0

Left Right

Control

Alignment

Horizontal

Vertical

Update Frames

Update Constraints

Add Missing Constraints

Reset to Suggested Constraints

Clear Constraints

Update All Frames in View Controller

Update All Constraints in View Controller

Add Missing Constraints in View Controller

Reset to Suggested Constraints in View Controller

Clear All Constraints in View Controller

TimT: Can't get the button press to align properly in Keynote. May just need to highlight.



Asset Catalog



Image Slicing

Demo

Moving your app to iOS 7

Jon Hess



Compiler and Language

Apple LLVM

llvm-gcc 4.2

Apple LLVM 5





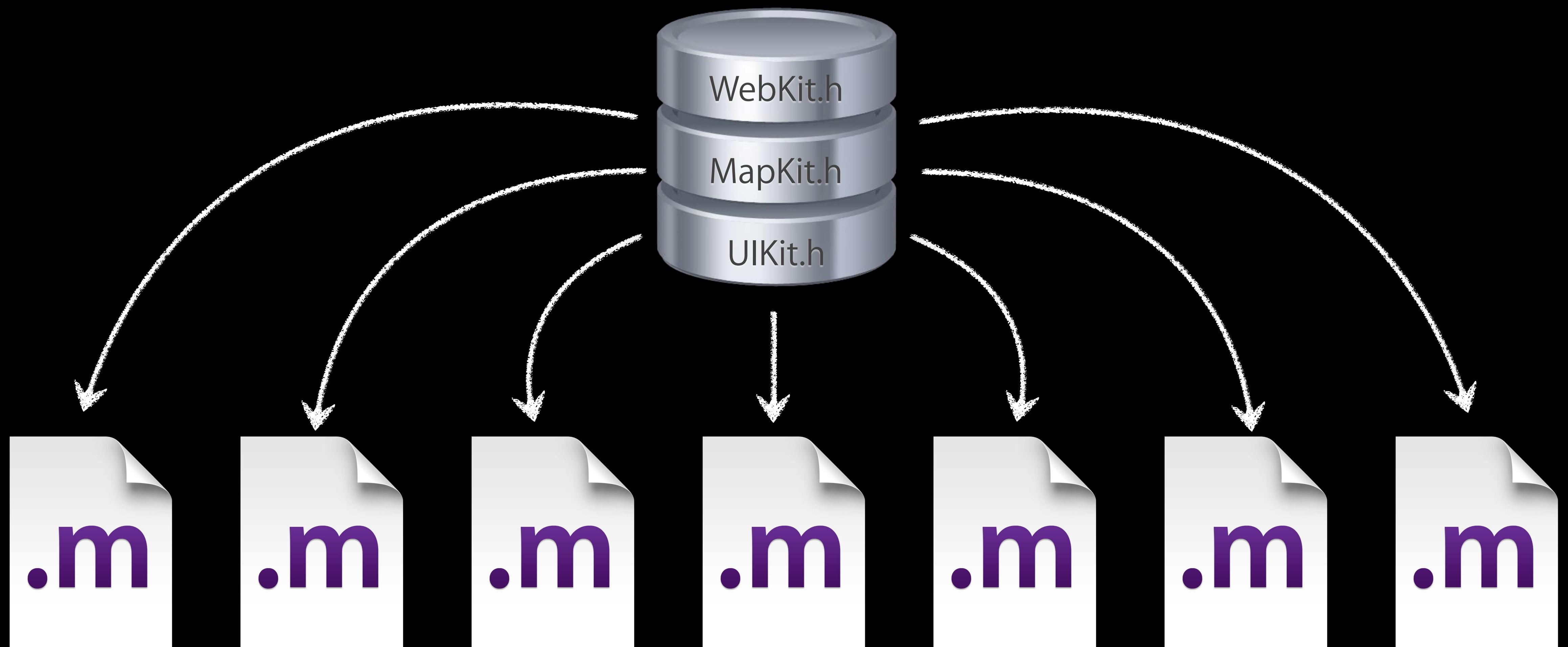


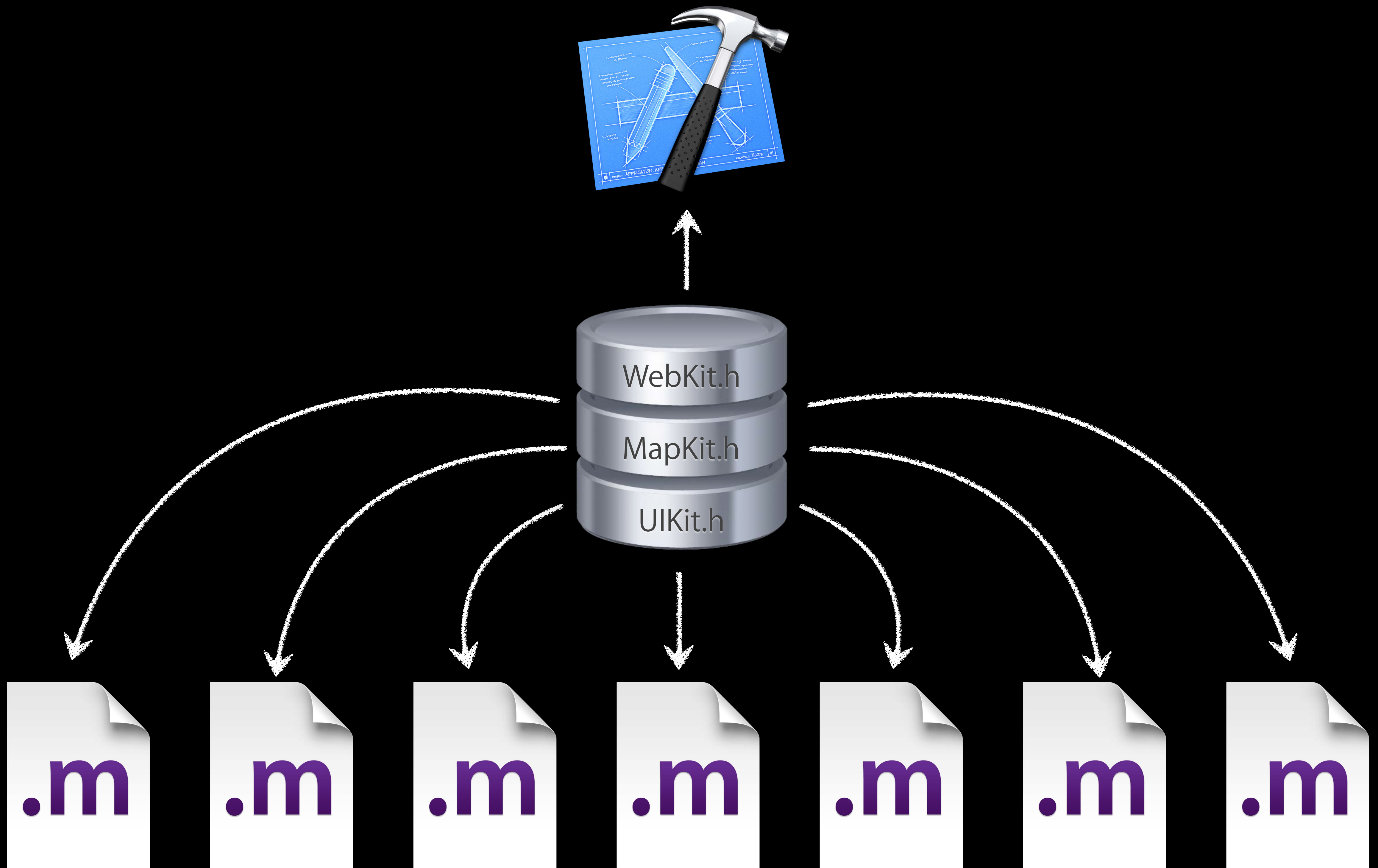


Modules











Reduced .pch management

Automatically link frameworks

Faster build, analyze & index

2.3x



Generalized attributes

User-defined literals

Inheriting constructors

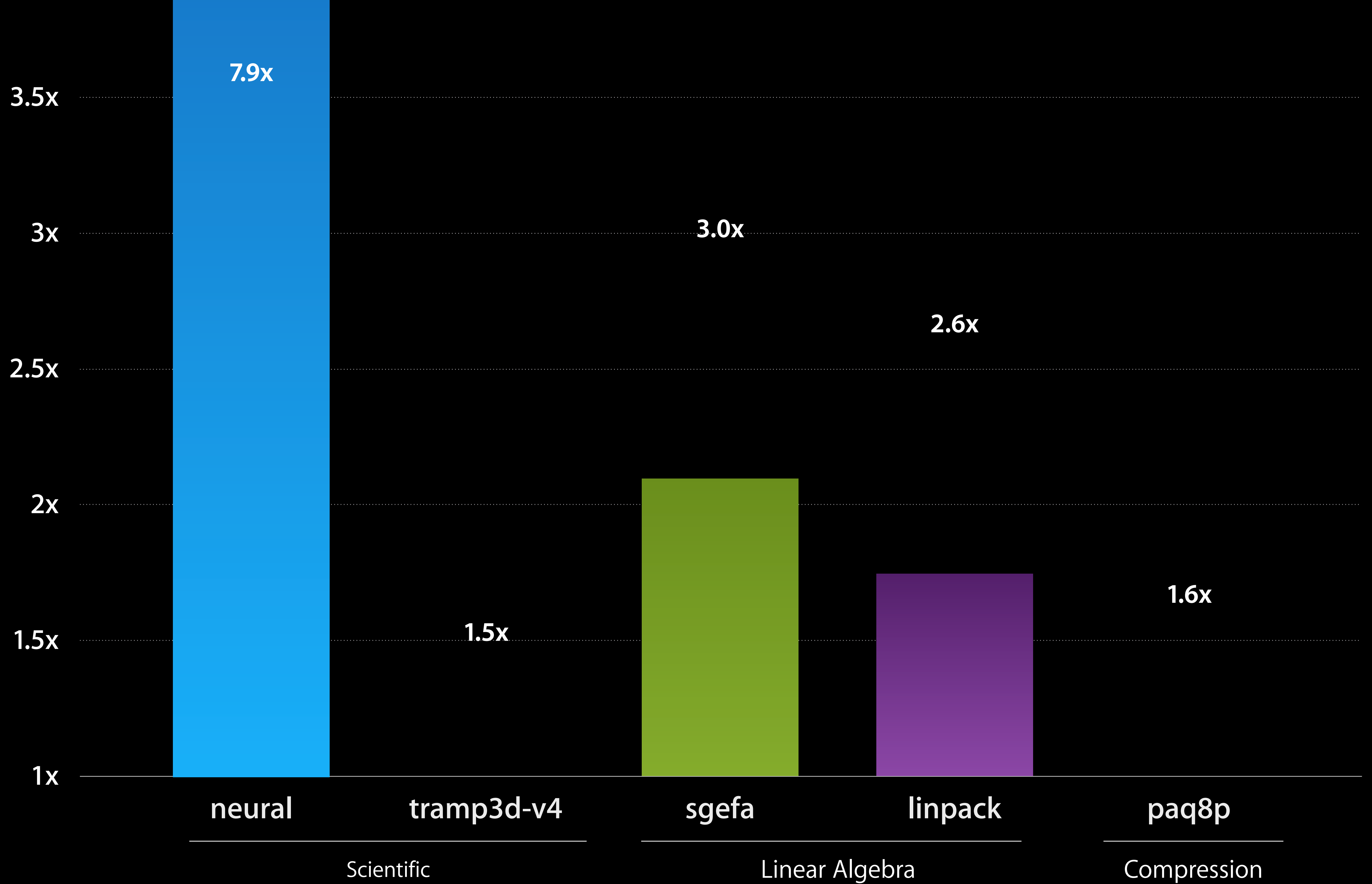
Alignment - alignof/alignas

Unrestricted unions

UCNs in literals

Auto-Vectorizer







Built right into OS X

No additional download

Unix tools upgraded with Xcode

```
/*! My custom code to remove evil strings from otherwise nice arrays.  
 * \param myArray An array that has some nasty string hiding inside  
 * \param myString A nasty string that must be removed from the array  
 * \returns A new array, copied from the passed array, minus the string  
*/  
- (NSArray*)filterArray:(NSArray*)myArray withString:(NSString*)myString;
```

```
/*! My custom code to remove evil strings from otherwise nice arrays.  
 * \param myArray An array that has some nasty string hiding inside  
 * \param myString A nasty string that must be removed from the array  
 * \returns A new array, copied from the passed array, minus the string  
 */  
- (NSArray*)filterArray:(NSArray*)myArray withString:(NSString*)myString;
```

Declaration - (NSArray *)filterArray:(NSArray *)myArray withString:(
NSString *)myString;

Description My custom code to remove evil strings from otherwise nice arrays.

Parameters myArray An array that has some nasty string hiding inside
myString A nasty string that must be removed from the array

Returns A new array, copied from the passed array, minus the string

Declared In [APLMainController.h](#)

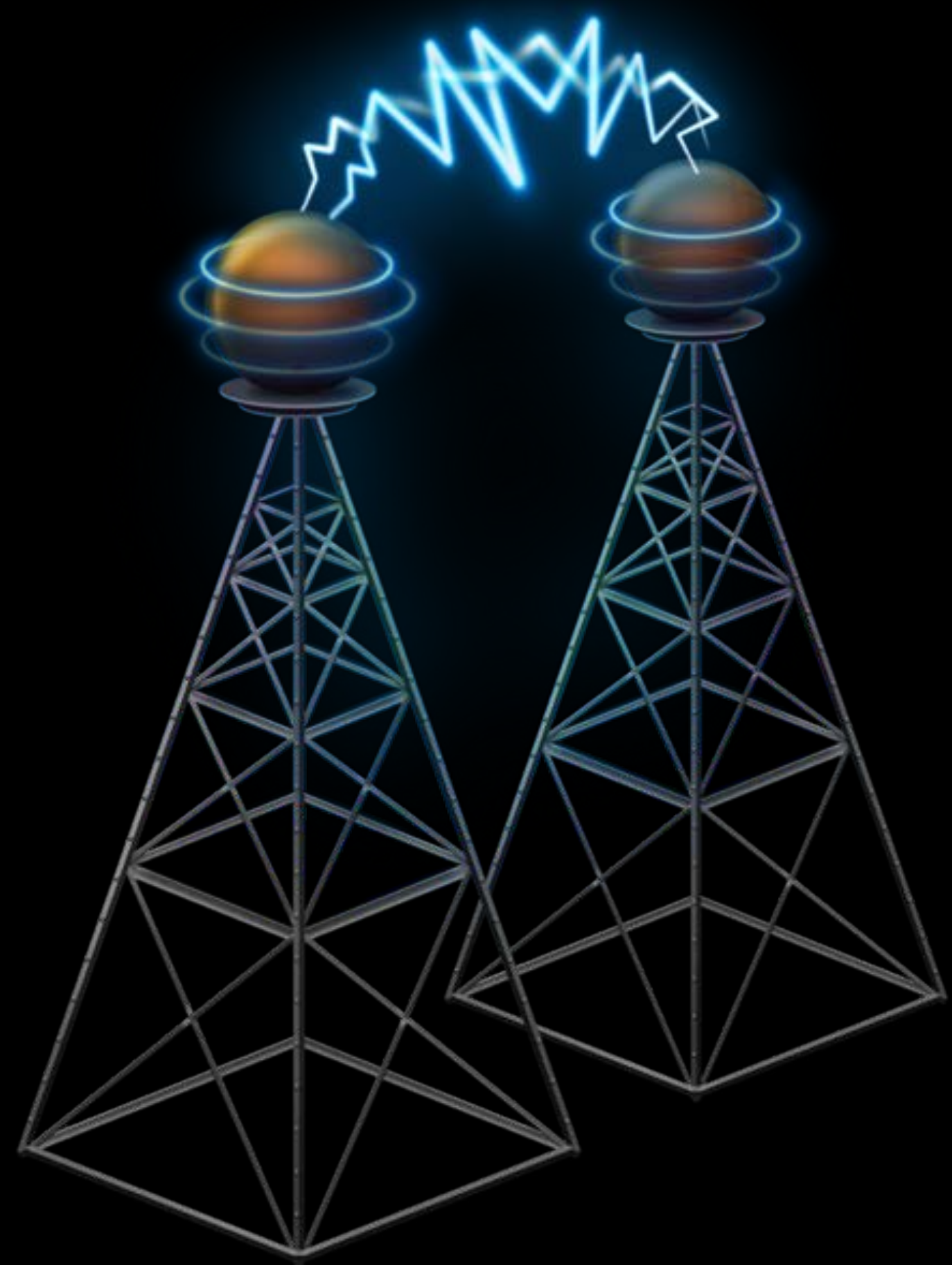


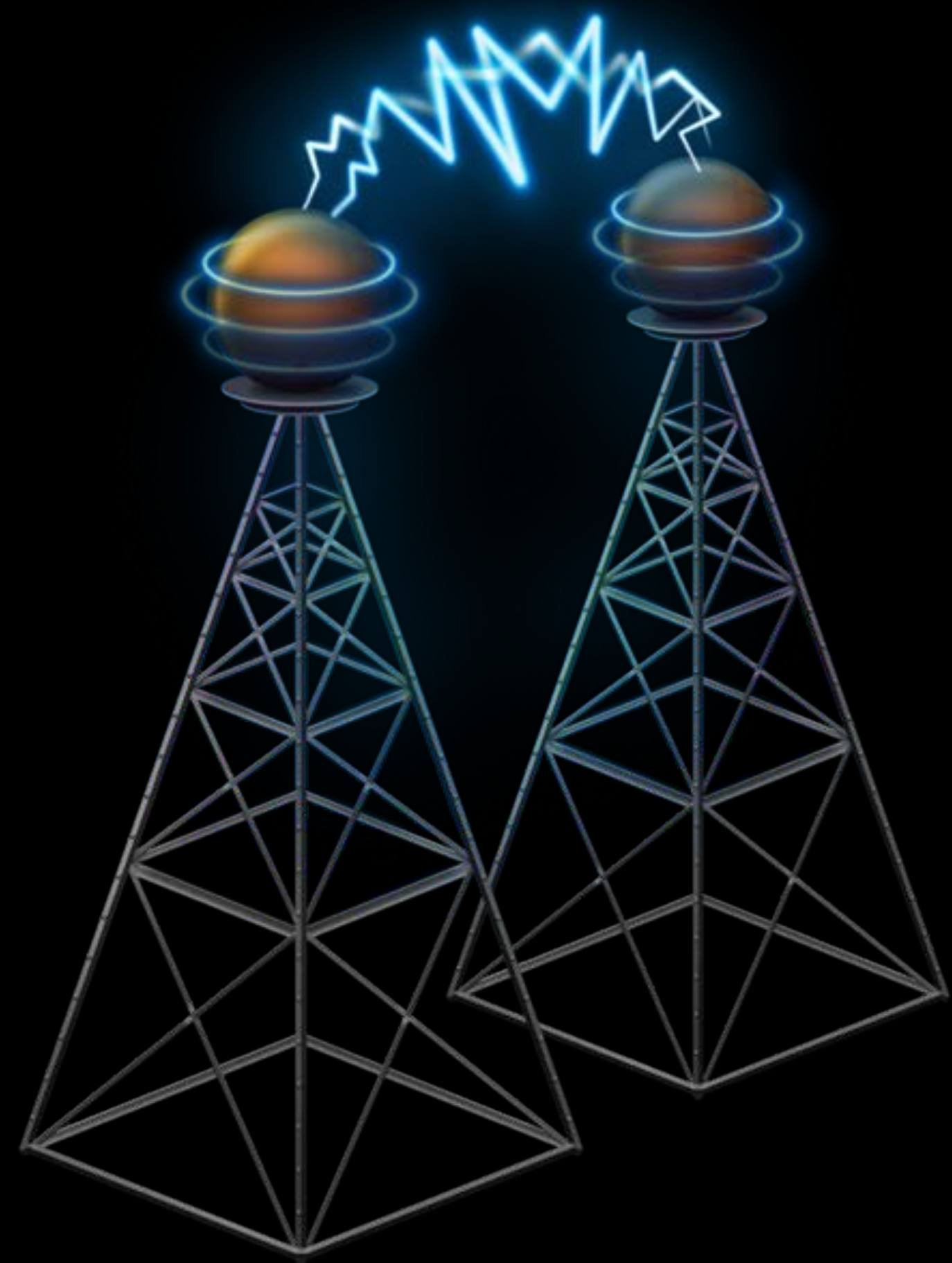
New analysis checks

Deeper Objective-C analysis

C++ constructors

Analyze a single file







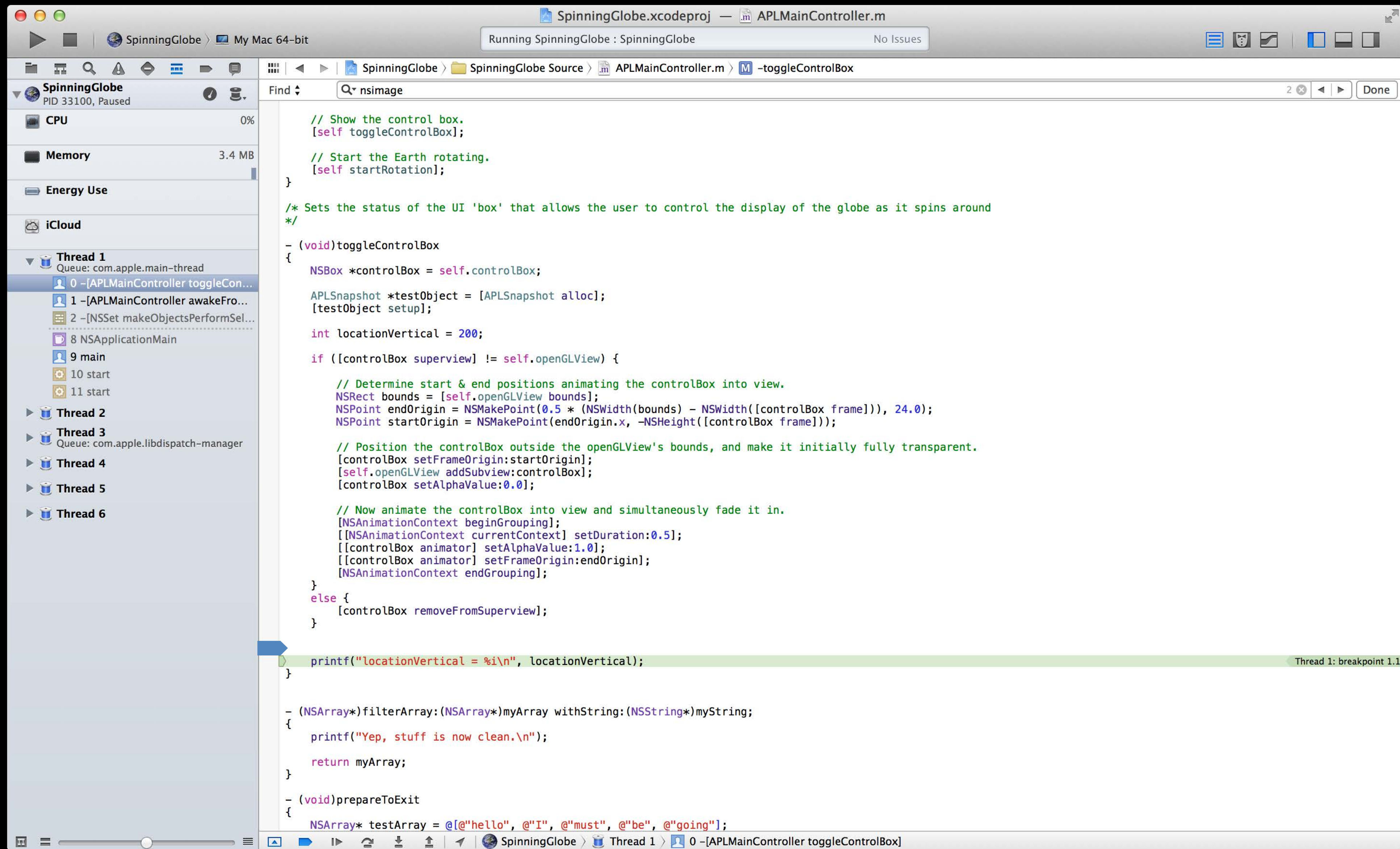


Xcode Debugger



gdb





▶ CPU0%

▶ Memory3.4 MB

▶ Energy Use

▶ iCloud

▶ Thread 1
Queue: com.apple.main-thread

- 0 -[APLMainController toggleCon...
- 1 -[APLMainController awakeFro...
- 2 -[NSSet makeObjectsPerformSel...
- 8 NSApp
- 9 main
- 10 start
- 11 start

▶ Thread 2

▶ Thread 3
Queue: com.apple.libdispatch-manager

▶ Thread 4

▶ Thread 5

▶ Thread 6

SpinningGlobe.xcodeproj — APLMainController.m

Running SpinningGlobe : SpinningGlobeNo Issues

Findnsimage2x◀▶Done

```
// Show the control box.
[self toggleControlBox];

// Start the Earth rotating.
[self startRotation];
}

/* Sets the status of the UI 'box' that allows the user to control the display of the globe as it spins around
*/

- (void)toggleControlBox
{
    NSBox *controlBox = self.controlBox;

    APLSnapshot *testObject = [APLSnapshot alloc];
    [testObject setup];

    // Determine start & end positions animating the controlBox into view.
    NSRect bounds = [self.openGLView bounds];
    NSPoint endOrigin = NSMakePoint(0.5 * (NSWidth(bounds) - NSWidth([controlBox frame])), 24.0);
    NSPoint startOrigin = NSMakePoint(endOrigin.x, -NSHeight([controlBox frame]));

    // Position the controlBox outside the openGLView's bounds, and make it initially fully transparent.
    [controlBox setFrameOrigin:startOrigin];
    [self.openGLView addSubview:controlBox];
    [controlBox setAlphaValue:0.0];

    // Now animate the controlBox into view and simultaneously fade it in.
    [NSAnimationContext beginGrouping];
    [[NSAnimationContext currentContext] setDuration:0.5];
    [[controlBox animator] setAlphaValue:1.0];
    [[controlBox animator] setFrameOrigin:endOrigin];
    [NSAnimationContext endGrouping];
}
else {
    [controlBox removeFromSuperview];
}

printf("locationVertical = %i\n", locationVertical);
}

- (NSArray*)filterArray:(NSArray*)myArray withString:(NSString*)myString;
{
    printf("Yep, stuff is now clean.\n");

    return myArray;
}

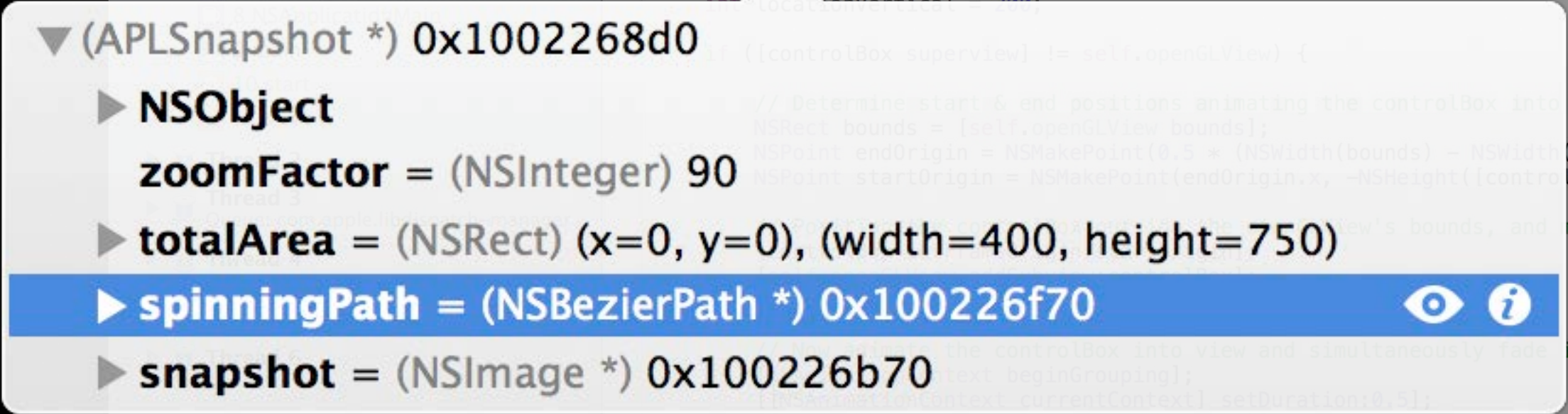
- (void)prepareToExit
{
    NSArray* testArray = @[@"hello", @"I", @"must", @"be", @"going"];

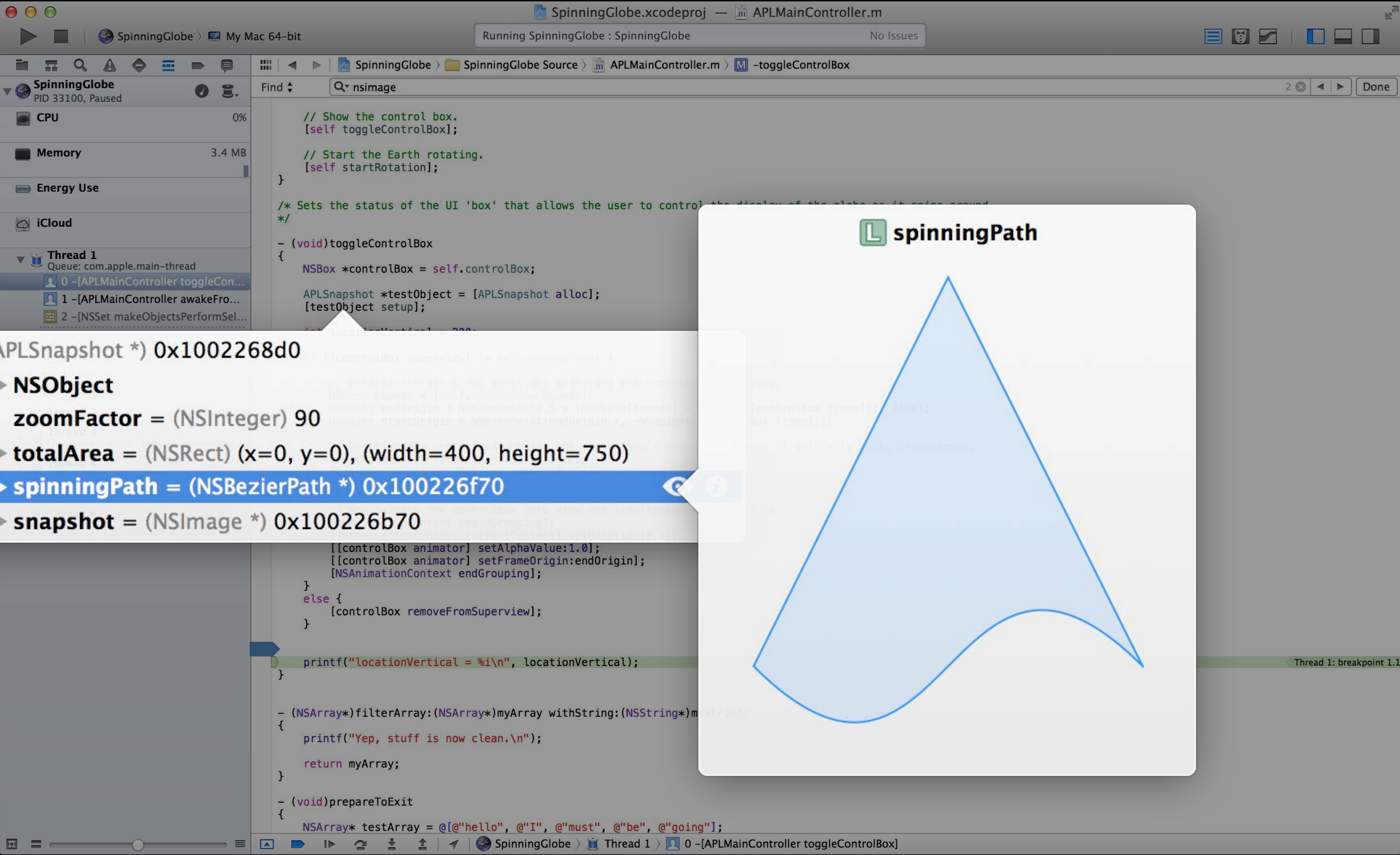
```

▶ (APLSnapshot *) 0x1002268d0 ⓘ

Thread 1: breakpoint 1.1

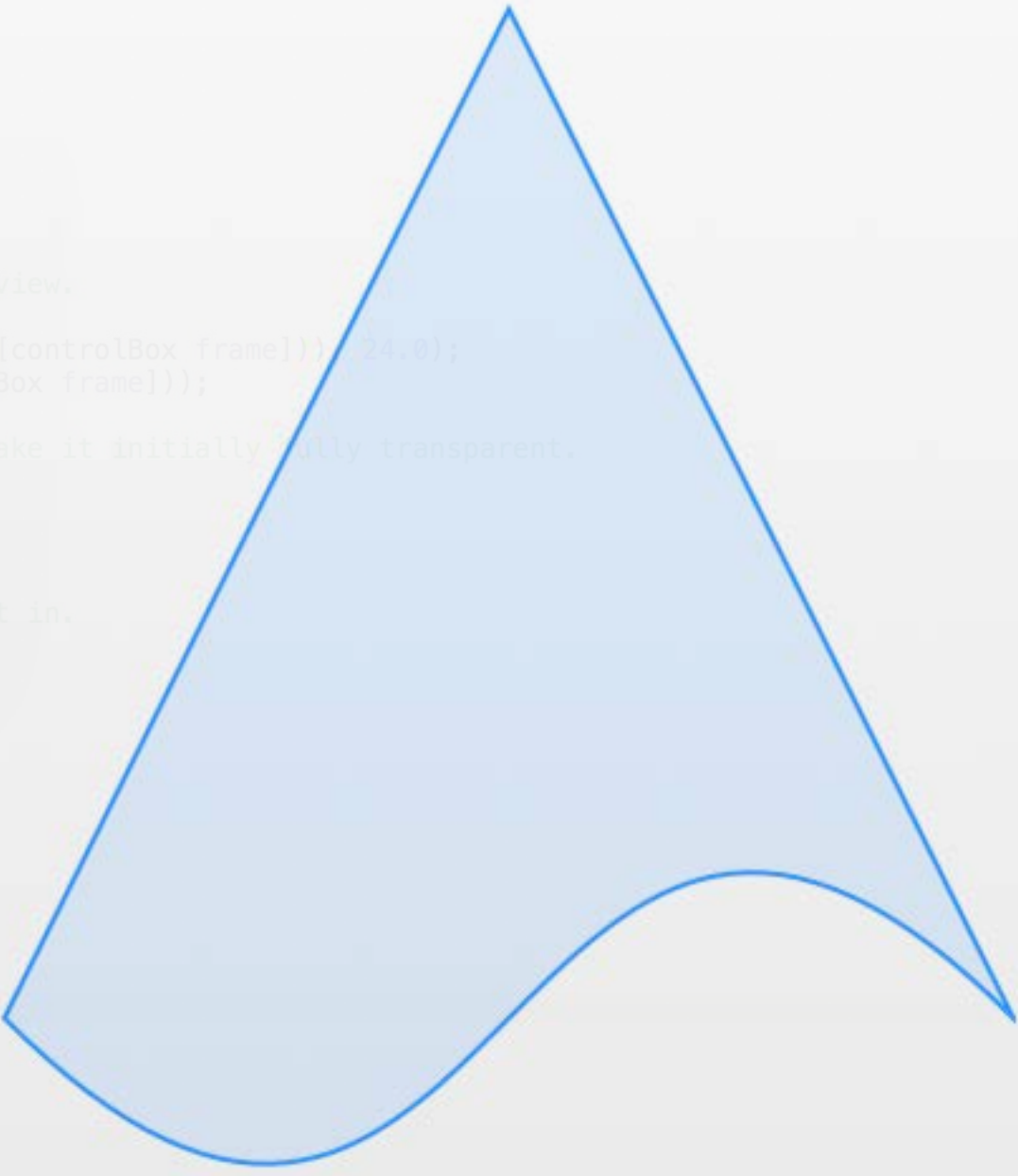
SpinningGlobe > Thread 1 > 0 -[APLMainController toggleControlBox]

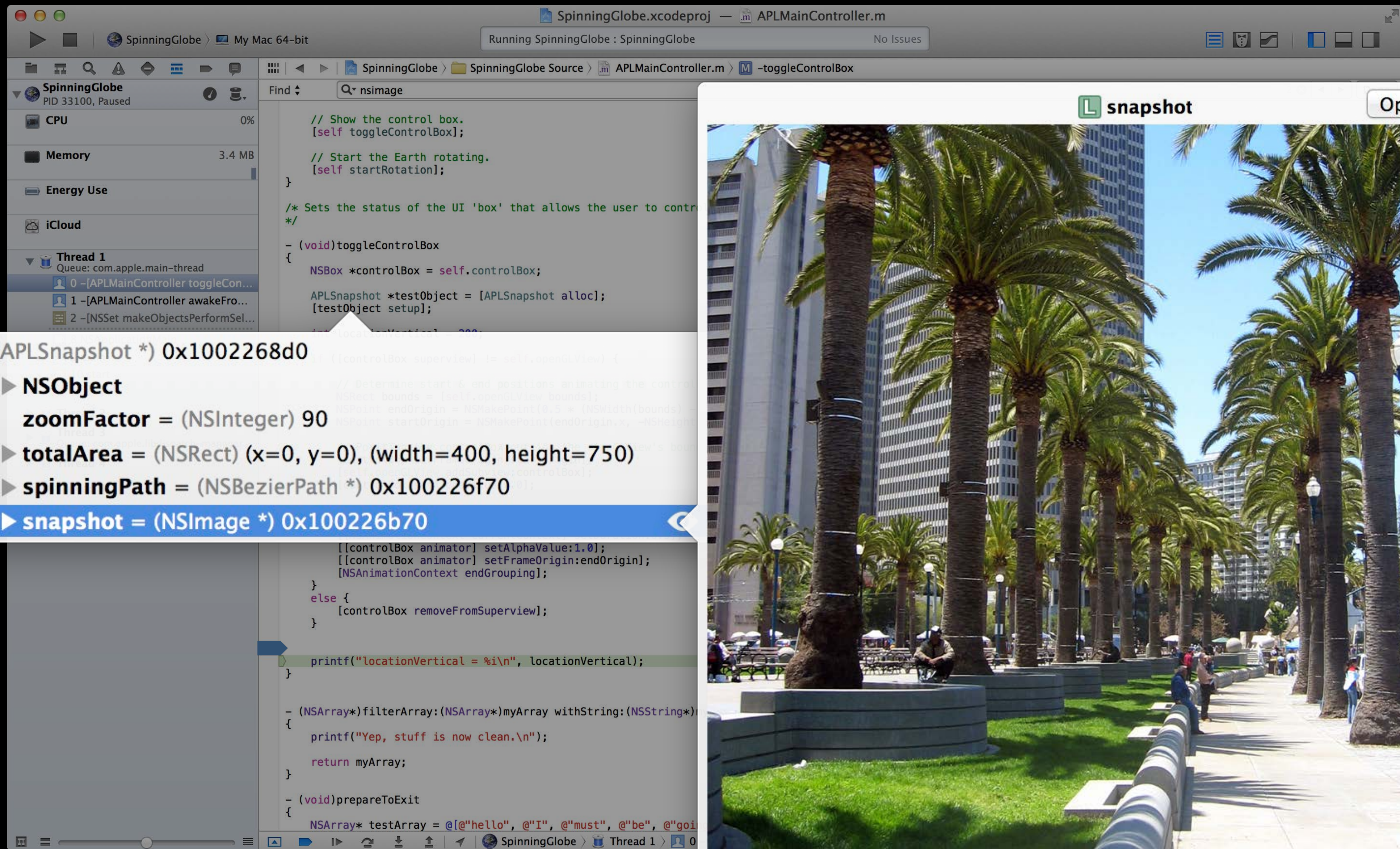




- ▼ (APLSnapshot *) 0x1002268d0
 - ▶ NSObject
 - zoomFactor = (NSInteger) 90
 - totalArea = (CGRect) (x=0, y=0), (width=400, height=750)
 - ▶ spinningPath = (NSBezierPath *) 0x100226f70
 - ▶ snapshot = (UIImage *) 0x100226b70

spinningPath





▼ (APLSnapshot *) 0x1002268d0

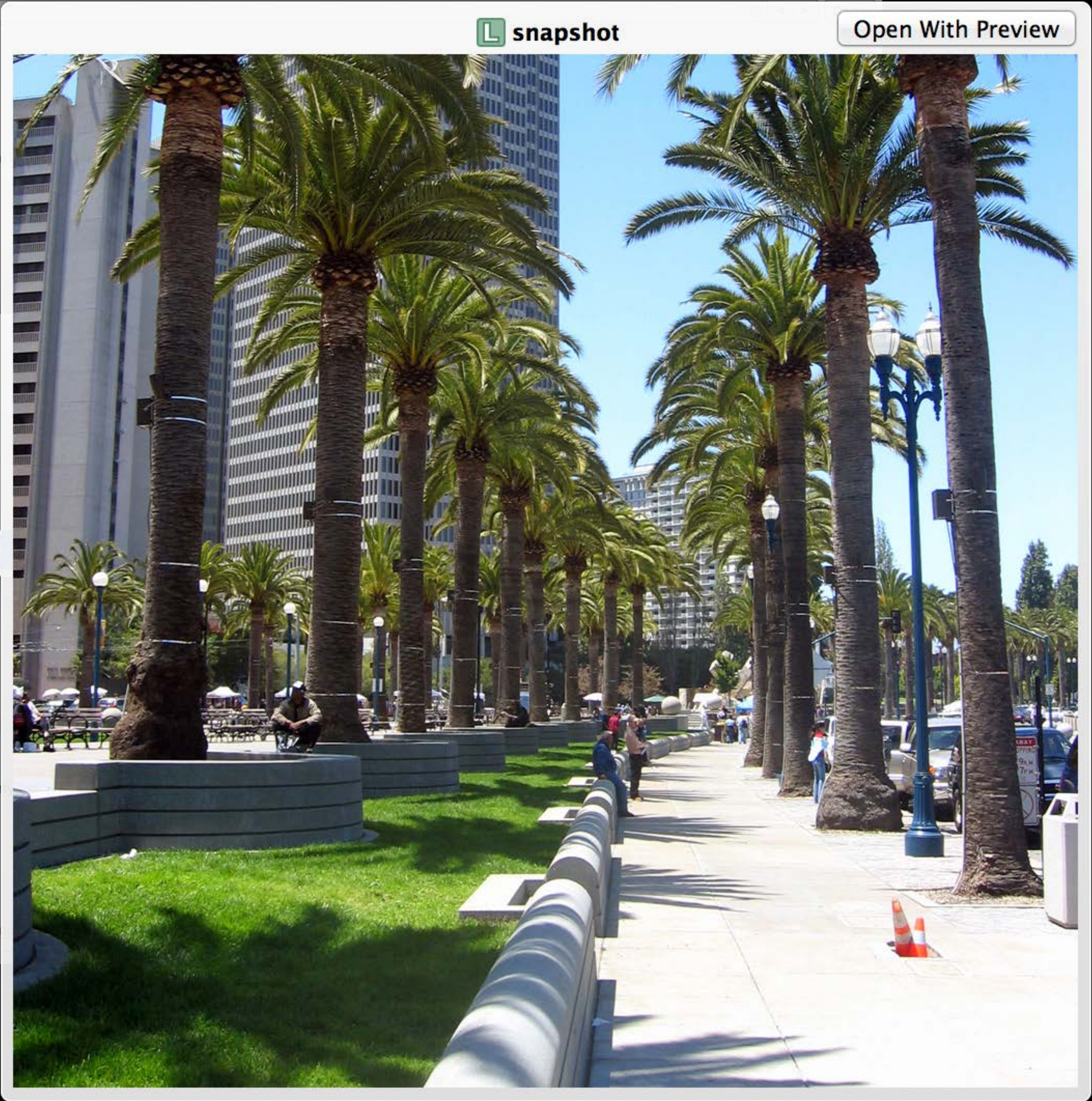
▶ NSObject

zoomFactor = (NSInteger) 90

▶ totalArea = (CGRect) (x=0, y=0), (width=400, height=750)

▶ spinningPath = (NSBezierPath *) 0x100226f70

▶ snapshot = (UIImage *) 0x100226b70







☒ APLMainController.m:68

Condition

Ignore   times before stopping

Action

Options ☐ Automatically continue after evaluating



☒ **APLMainController.m:58**

Condition

Ignore times before stopping

Action



User crossed vertical limit - value is @locationVertical@

☒ Log message to console

@exp@ = expression

☐ Speak message

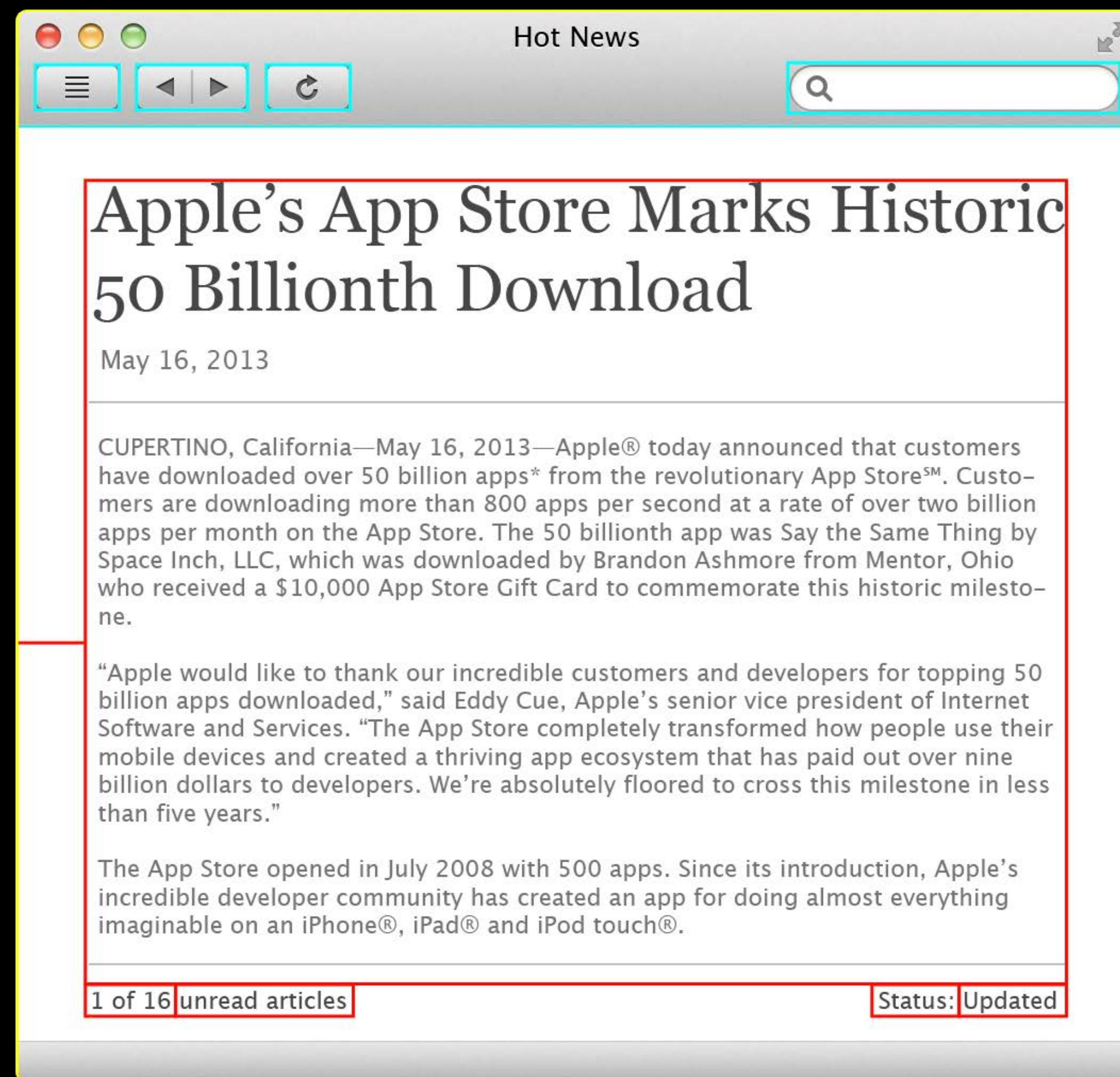
%B = breakpoint name

%H = breakpoint hit count

Options ☐ Automatically continue after evaluating



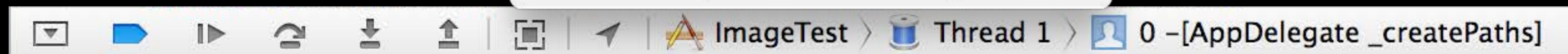


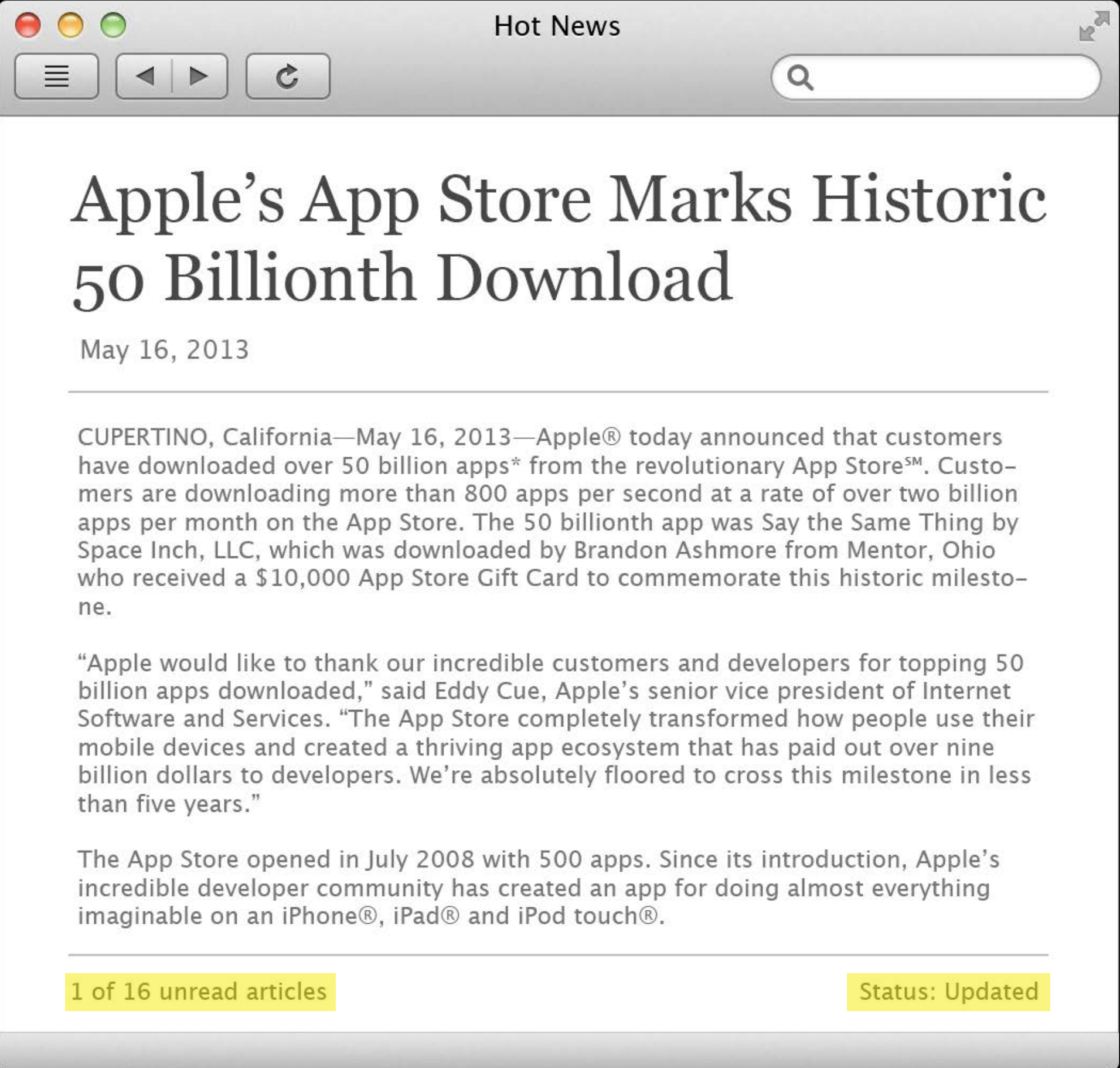


- ✓ Show View Frames
- Show Alignment Rectangles
- Show View Drawing
- Show Responsive Scrolling Status



- Show View Frames
- Show Alignment Rectangles
- ✓ Show View Drawing
- Show Responsive Scrolling Status





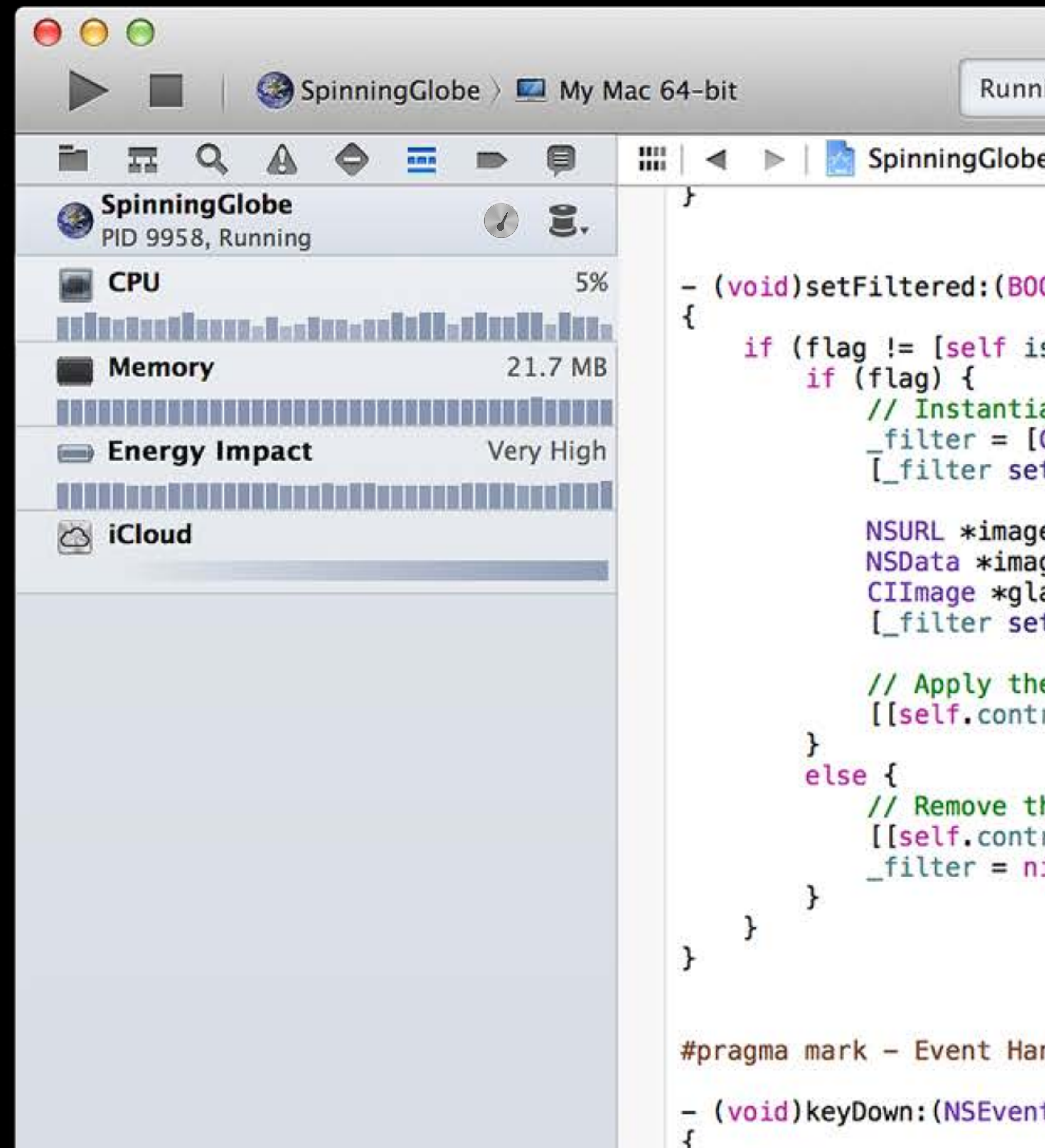
- Show View Frames
- Show Alignment Rectangles
- ✓ Show View Drawing
- Show Responsive Scrolling Status



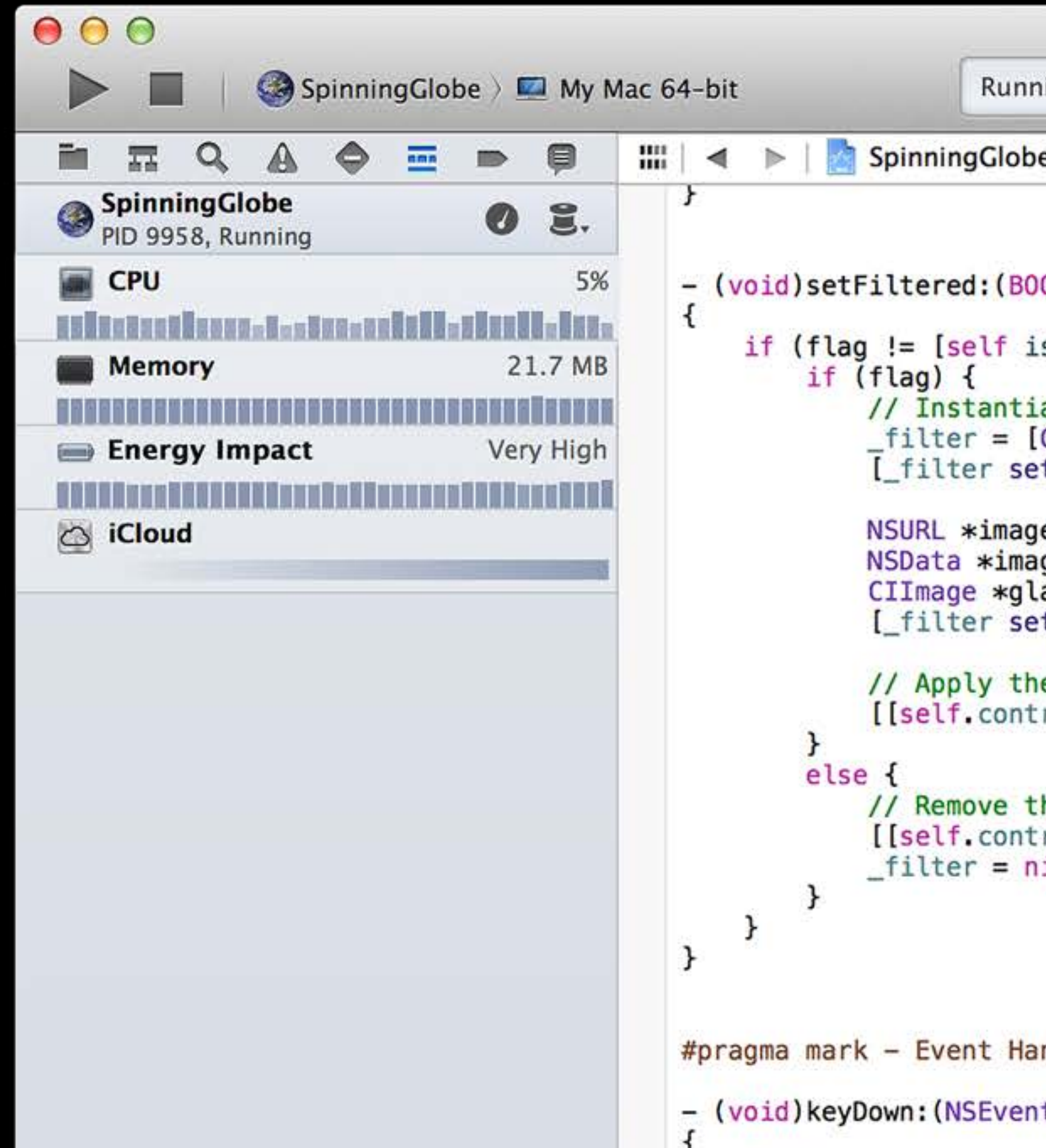


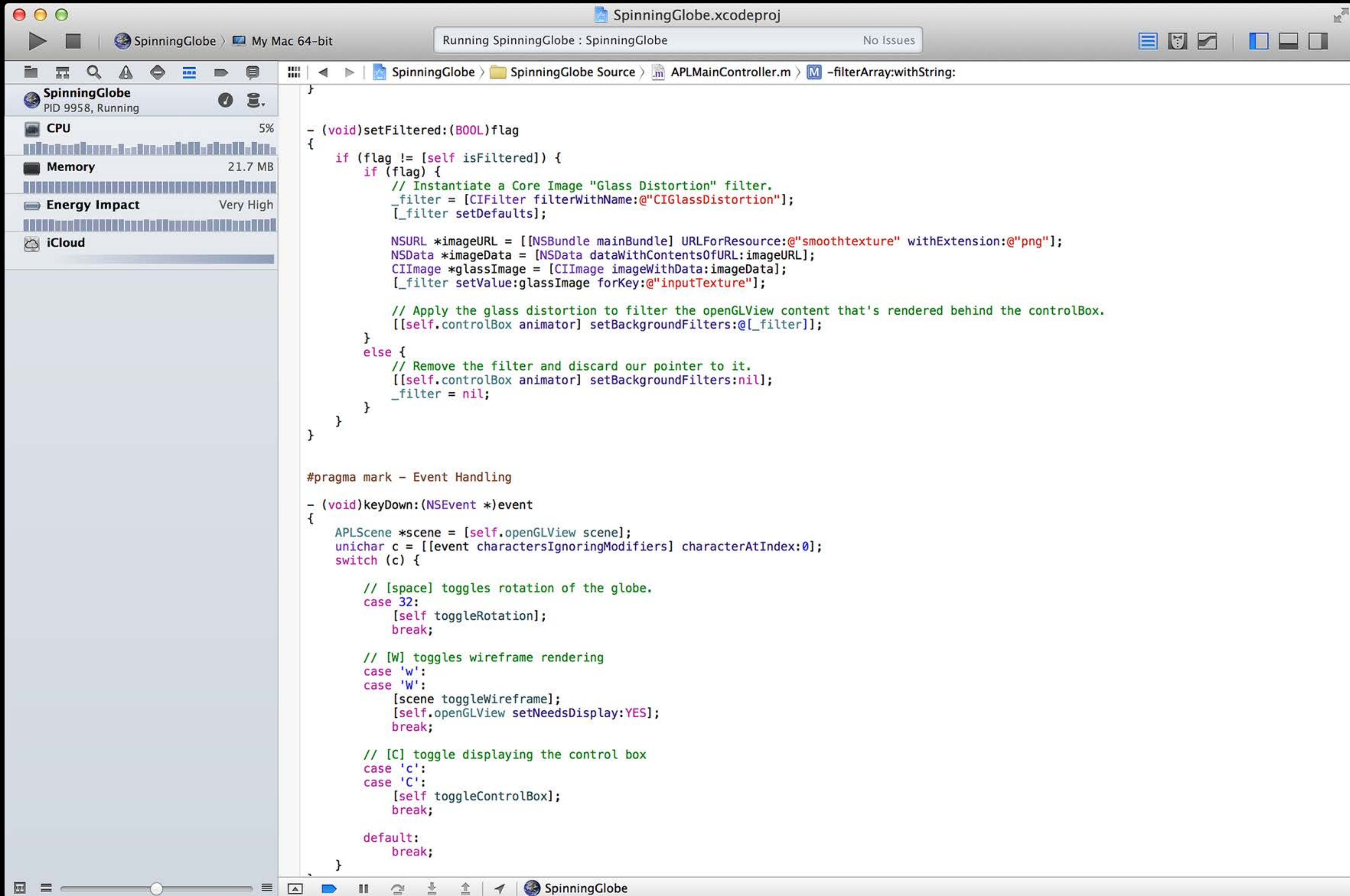
Debug Gauges

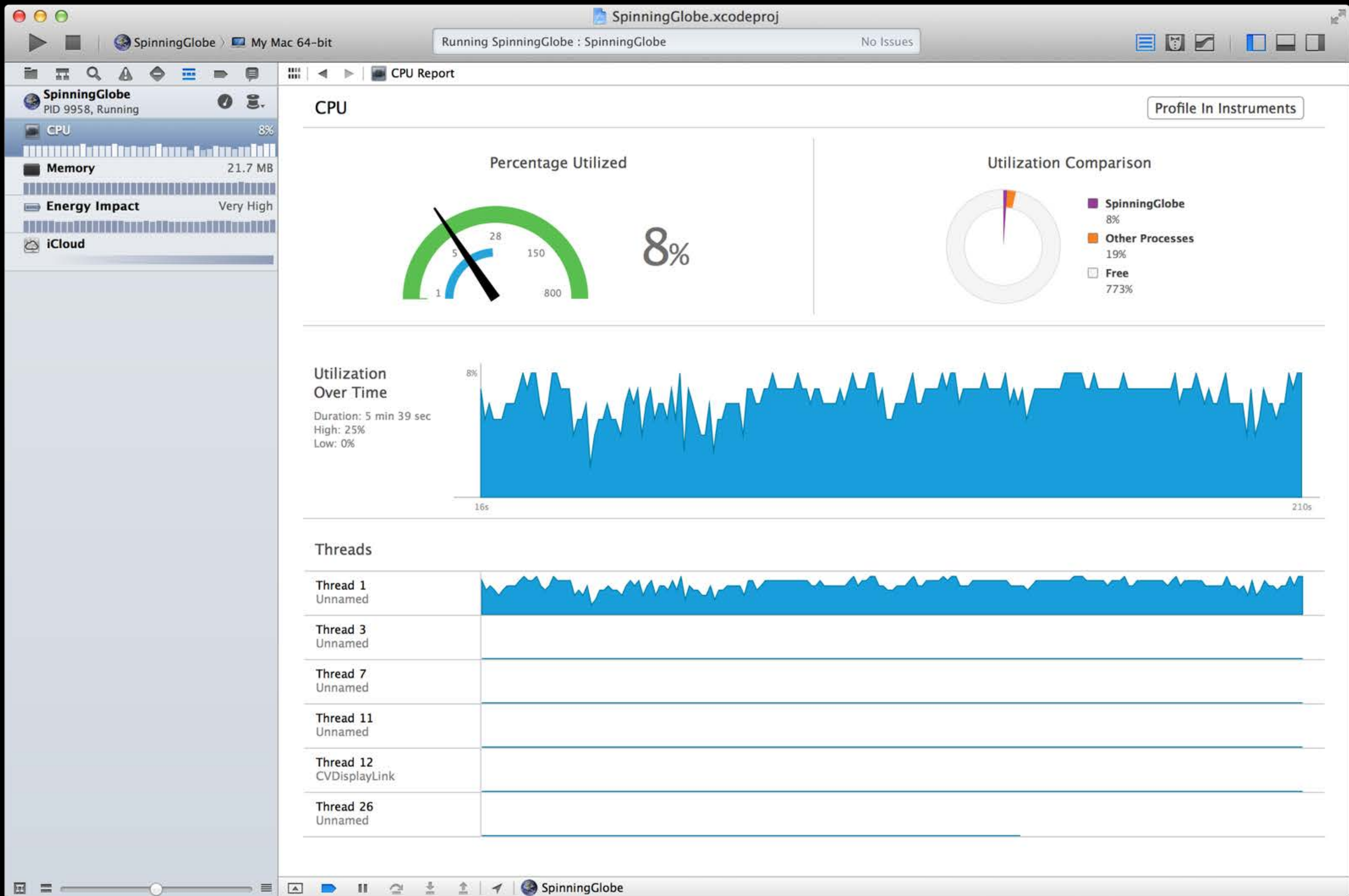
CPU
Memory
iCloud
Energy
OpenGL ES

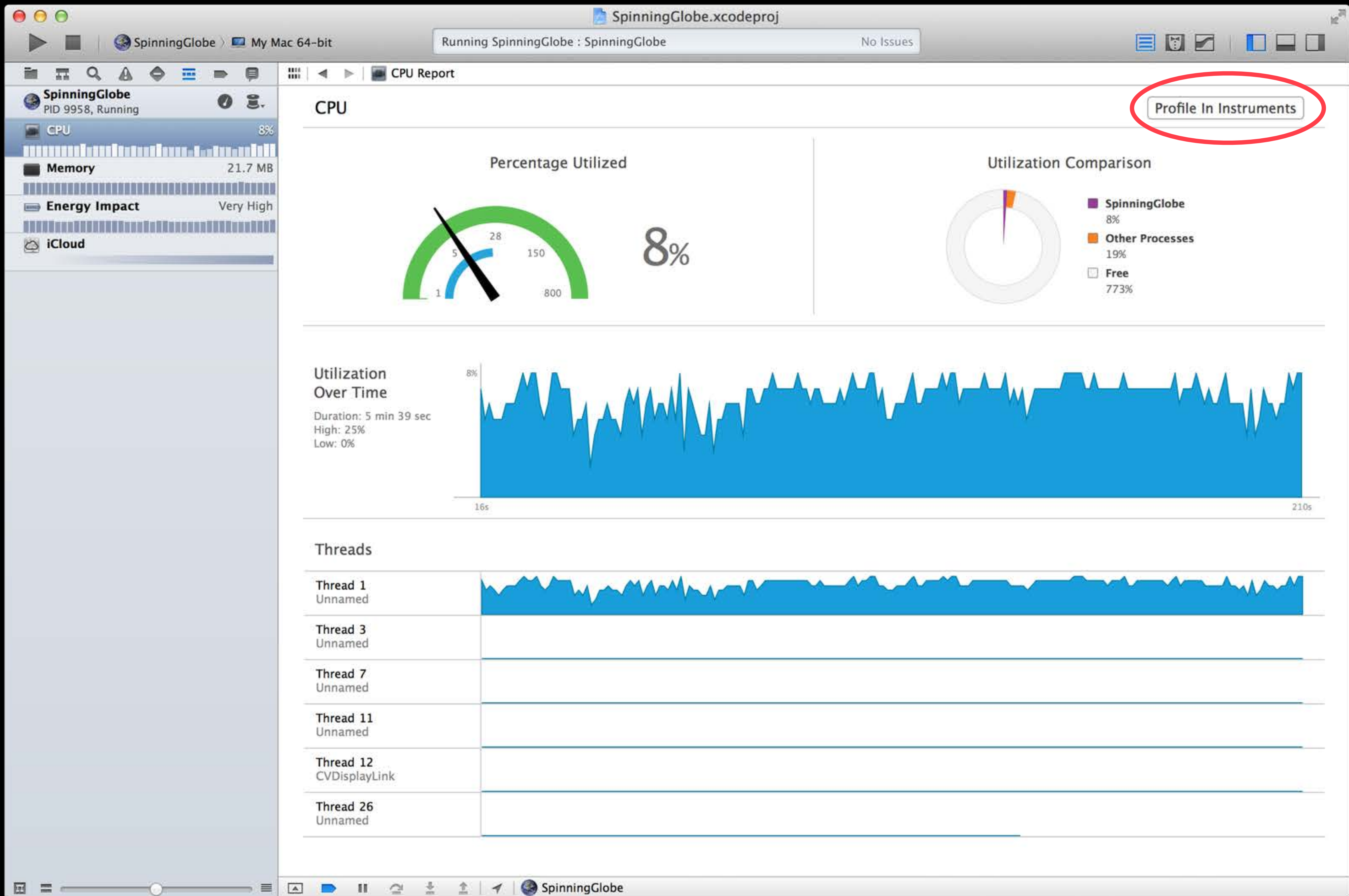


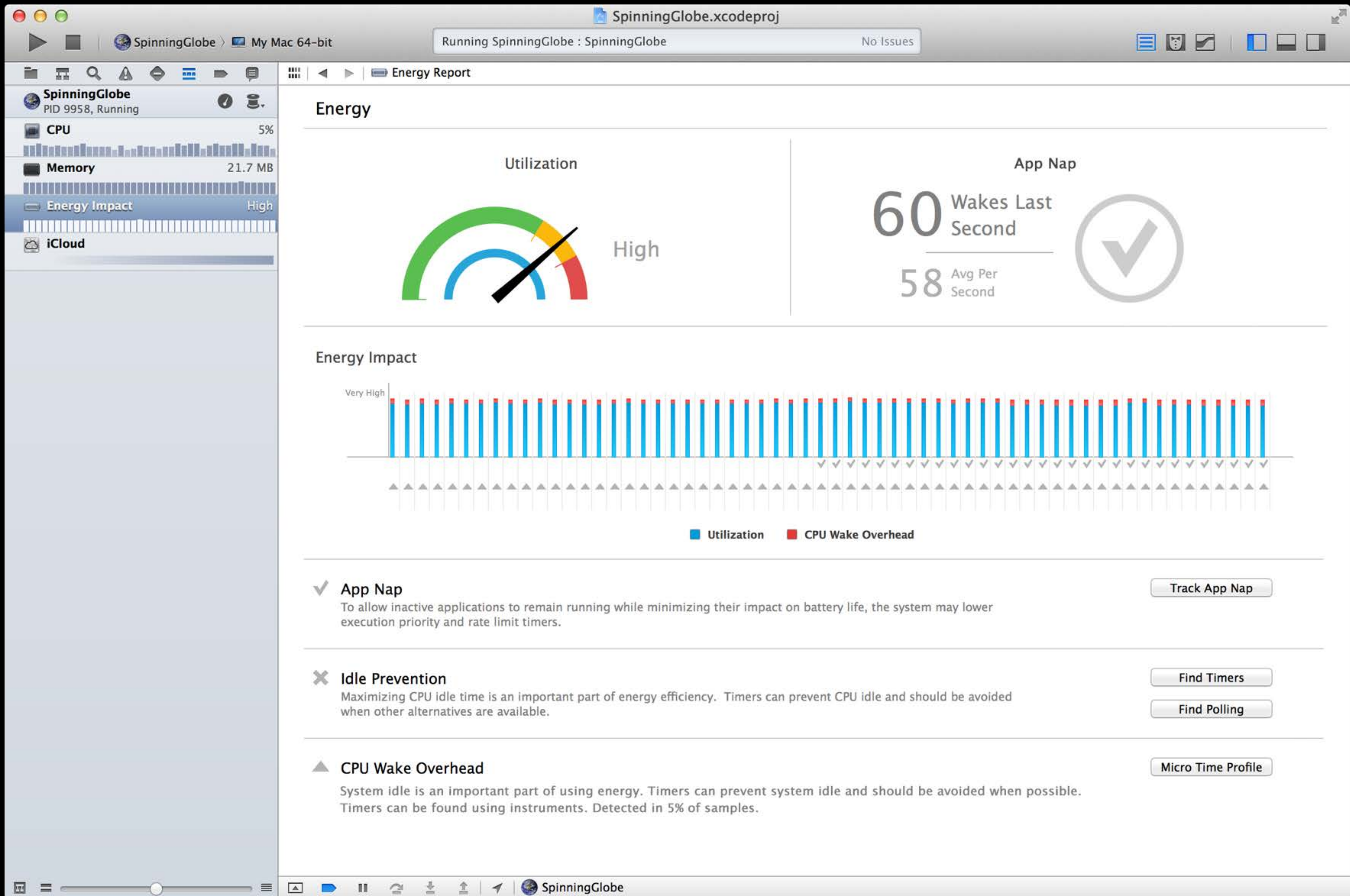
CPU
Memory
iCloud
Energy
OpenGL ES











Demo

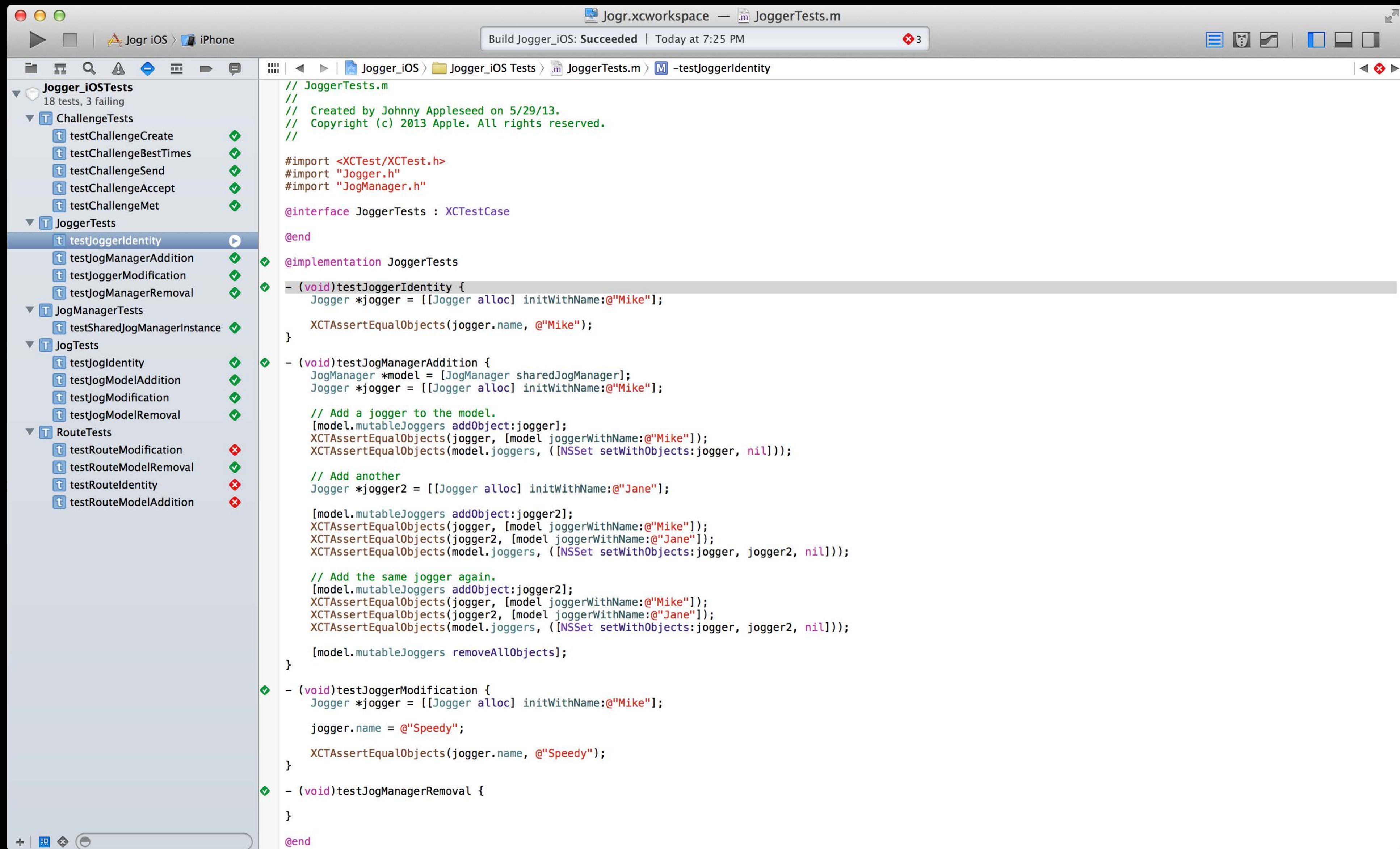
Debugging enhancements

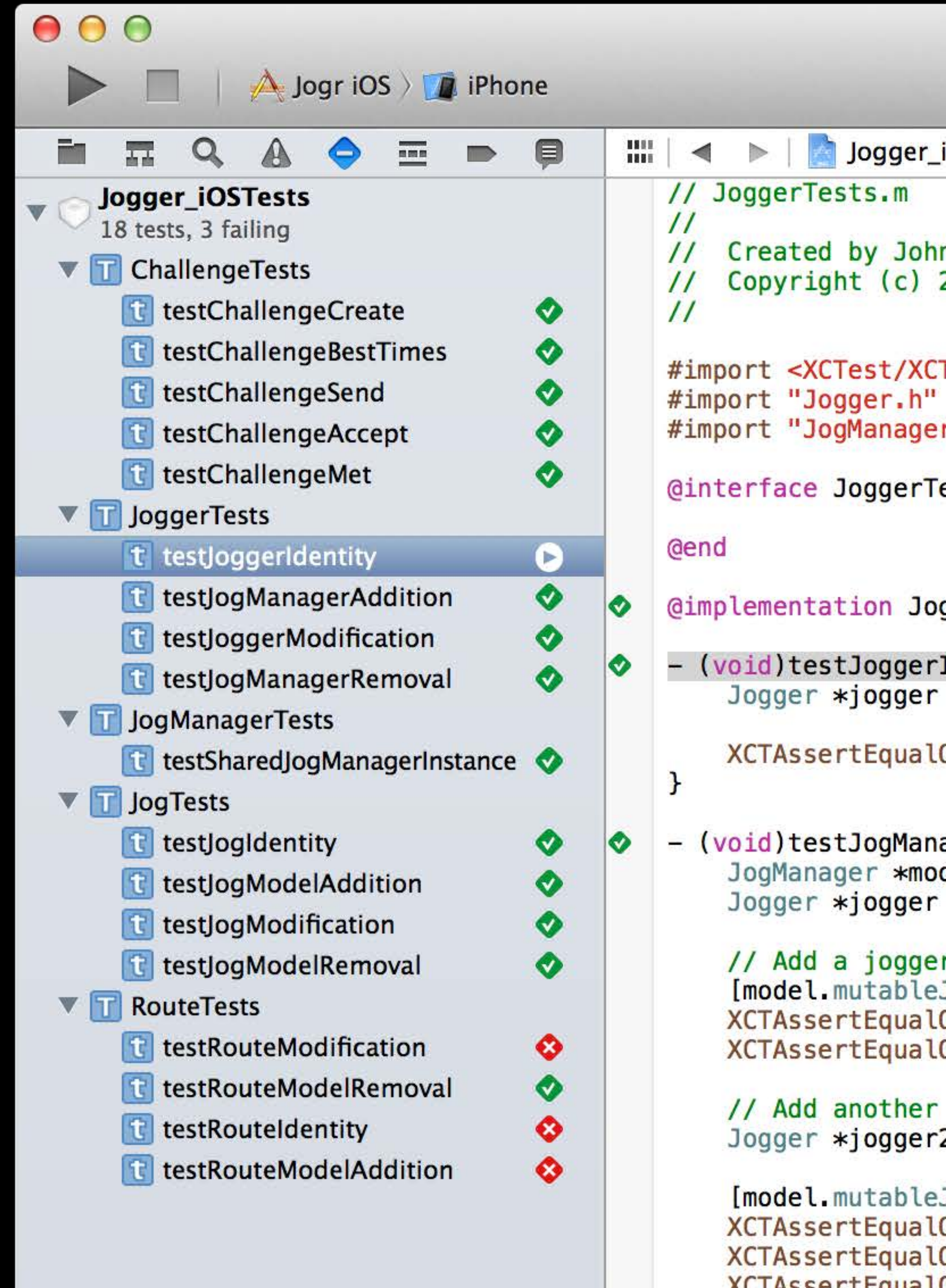
Ken Orr



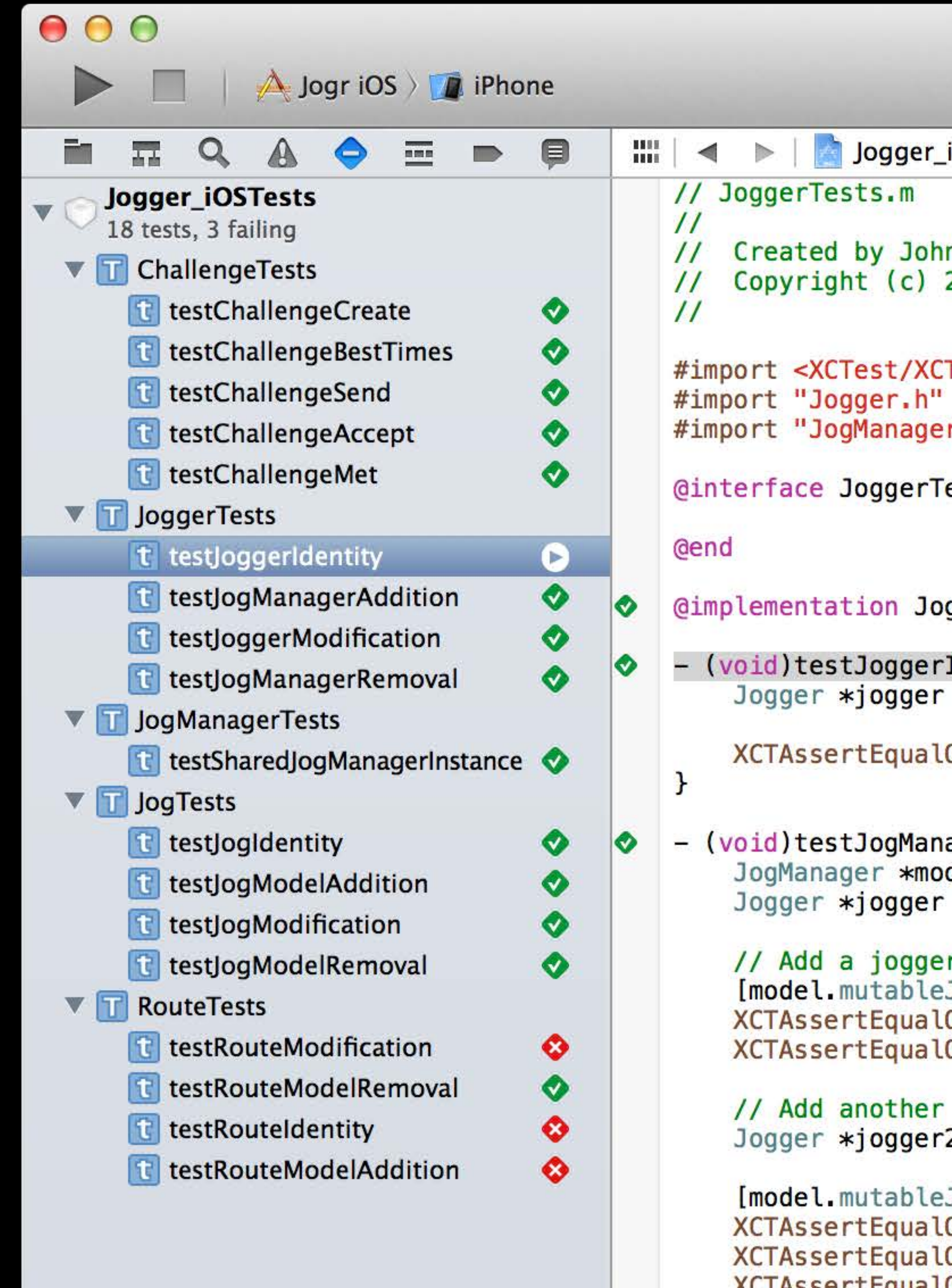


Test Navigator

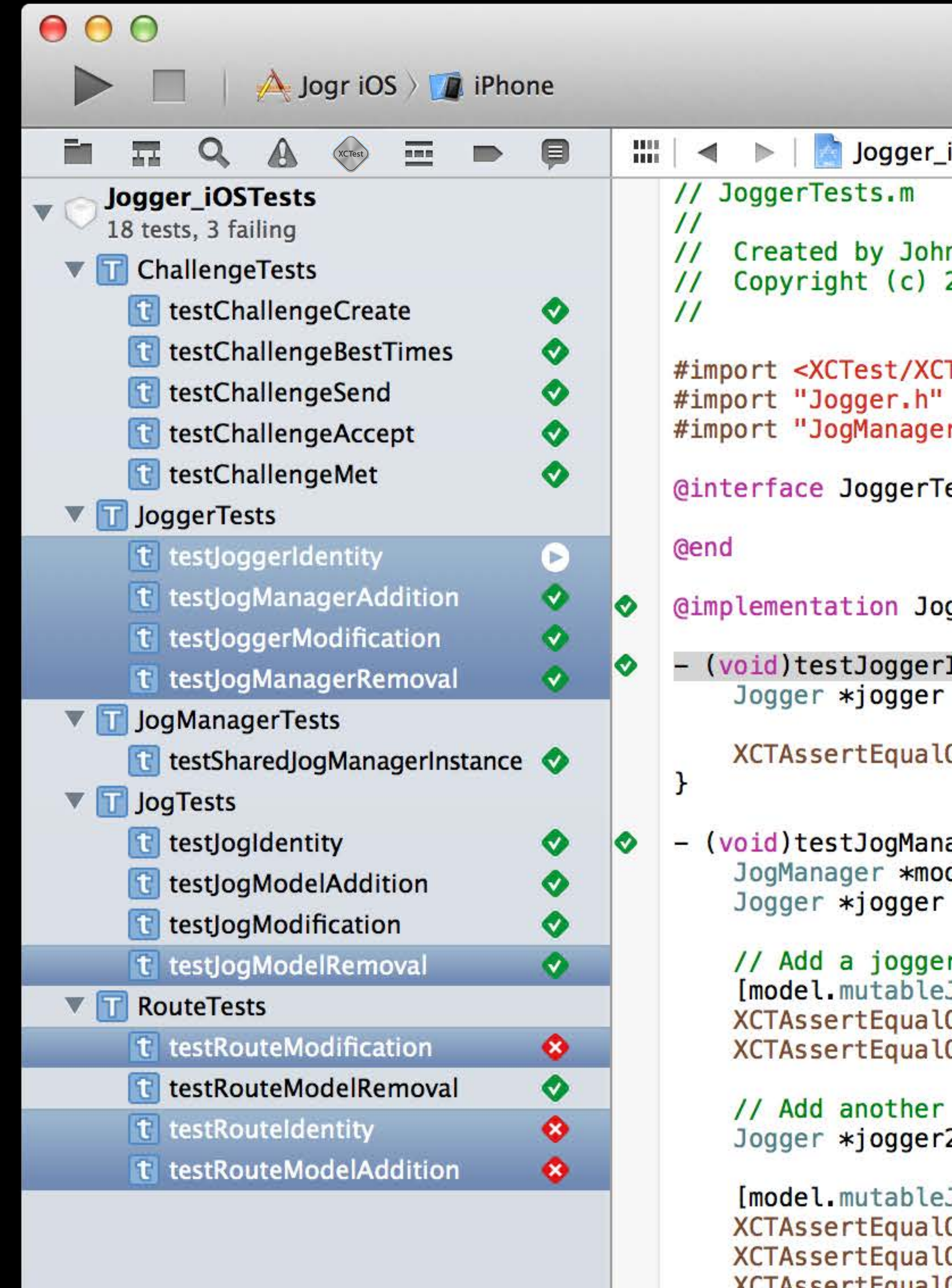




Run one
Run some
Run them all



Run one
Run some
Run them all



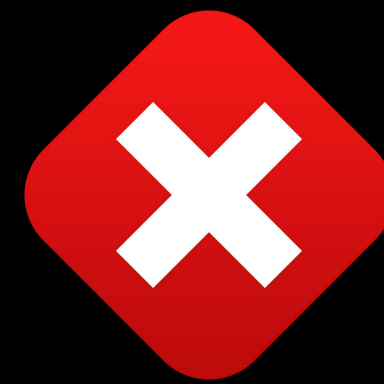


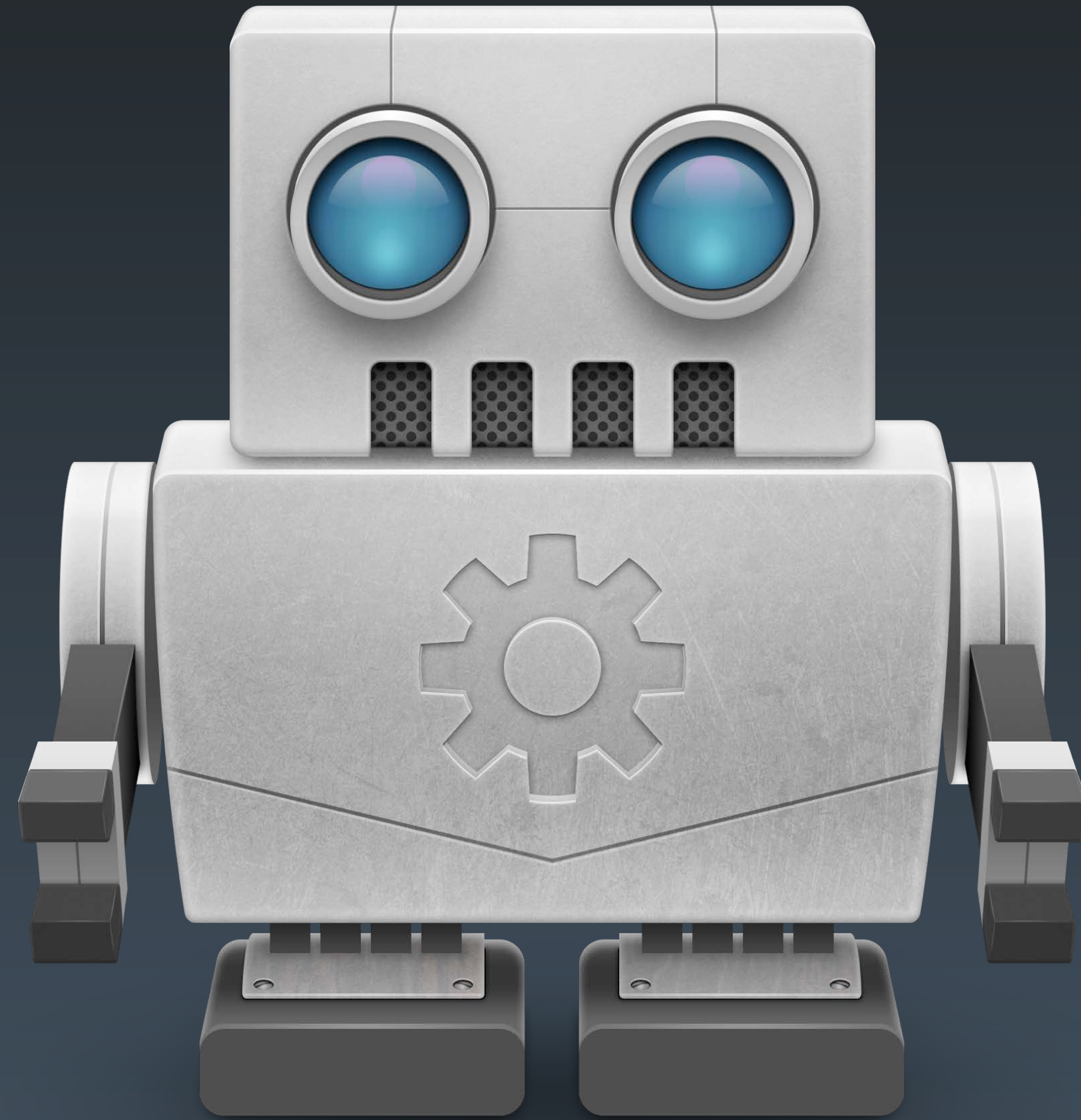
XC Test











Bots

Bubblegum > iPhone

Bubblegum: Ready | Today at 1:06 PM

2

1

1

By Group

By Time

Project

Yesterday, 6:41 PM

Push Bubblegum

Yesterday, 6:41 PM

Bubblegum

Xcode Server Demo

Integrate (298)

Yesterday, 6:41 PM

Integrate (297)

Yesterday, 6:26 PM

Integrate (296)

Yesterday, 6:13 PM

Integrate (295)

Yesterday, 6:12 PM

Integrate (294)

Yesterday, 6:11 PM

Integrate (293)

Yesterday, 6:10 PM

Integrate (289)

Yesterday, 6:06 PM

Integrate (288)

Yesterday, 6:05 PM

Integrate (287)

Yesterday, 6:04 PM

Integrate (286)

Yesterday, 5:54 PM

Load More...

282 more integrations on server

Summary

Tests

Bubblegum

Integrate Now

Integration Results

Finished with test failures

Start: 6/7/13, 6:41 PM

Duration: 53 seconds

0

Errors

1

Warning

1

Analysis

4

Tests Failed

Build History

Errors

Warnings

Analysis Issues

No Issues

No Issues

267 268 269 270 271 272 273 274 275 276 277 278 281 282 283 284 285 286 287 288 289 293 294 295 296 297 298

Test History

Failure

Success

267 268 269 270 271 272 273 274 275 276 277 278 281 282 283 284 285 286 287 288 289 293 294 295 296 297 298

Integration Details

Warnings

Add suggested flavors here some day

Bubblegum — BubblegumFactory.m

Analysis Issues

Value stored to 'flavors' during its initialization is never read

Bubblegum — BubblegumFactory.m

Test Failures

'0' should be equal to '4': Expected 4 flavors after initializing the factory.

Bubblegum > iPhone

Bubblegum: Ready | Today at 1:06 PM

2

1

1

By Group

By Time

Project

Yesterday, 6:41 PM

Push Bubblegum

Yesterday, 6:41 PM

Bubblegum

Xcode Server Demo

Integrate (298)

Yesterday, 6:41 PM

Integrate (297)

Yesterday, 6:26 PM

Integrate (296)

Yesterday, 6:13 PM

Integrate (295)

Yesterday, 6:12 PM

Integrate (294)

Yesterday, 6:11 PM

Integrate (293)

Yesterday, 6:10 PM

Integrate (289)

Yesterday, 6:06 PM

Integrate (288)

Yesterday, 6:05 PM

Integrate (287)

Yesterday, 6:04 PM

Integrate (286)

Yesterday, 5:54 PM

Load More...

282 more integrations on server

Summary

Tests

Commits

Logs

Test Results

Start: 6/7/13, 6:41 PM

Duration: 53 seconds

27

Tests Total

23

Tests Passed

4

Tests Failed

Device Summary

4 Devices Tested

1/1 iPads Failed

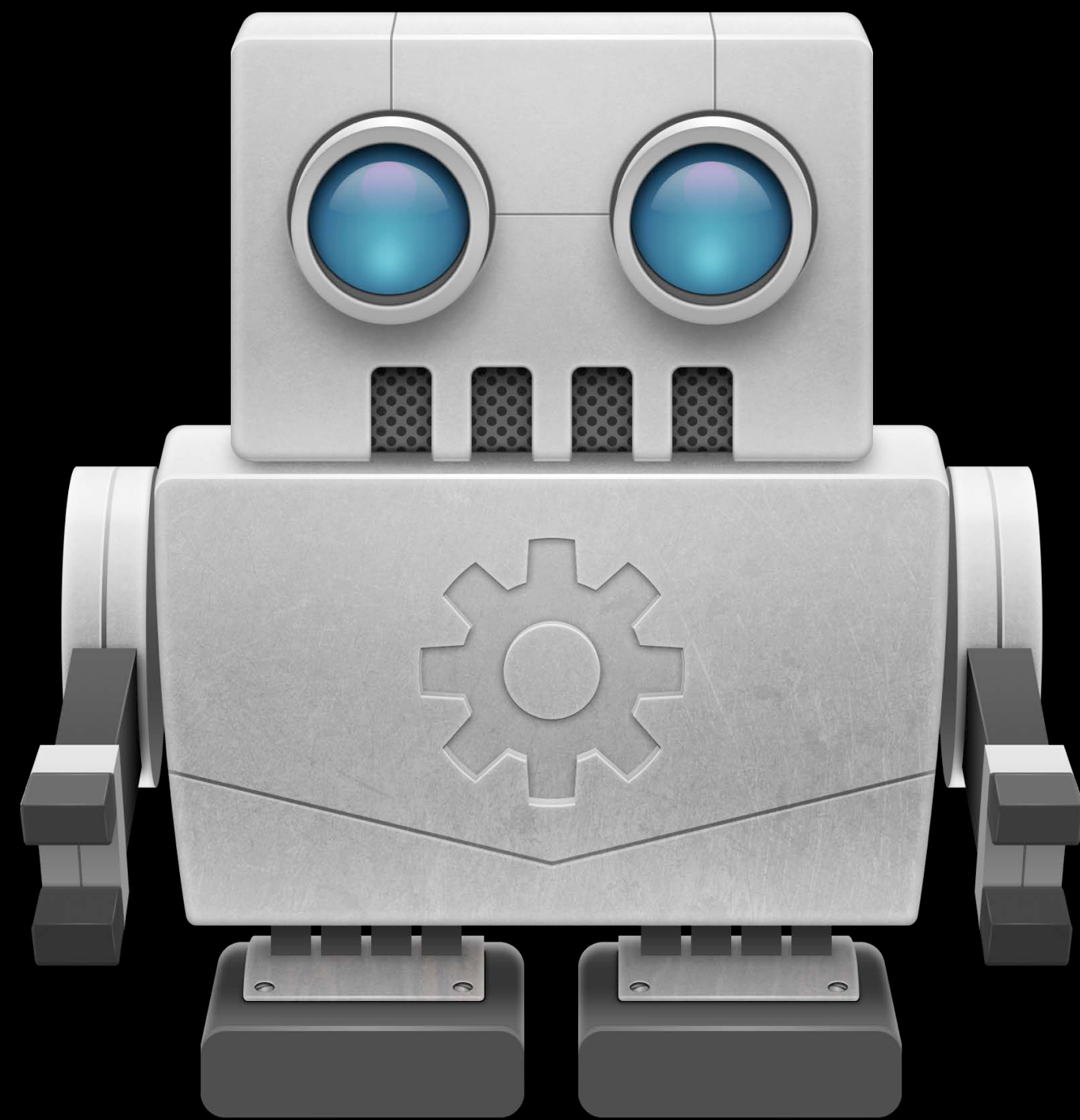
3/3 iPhones Failed

Device

OS

Processor

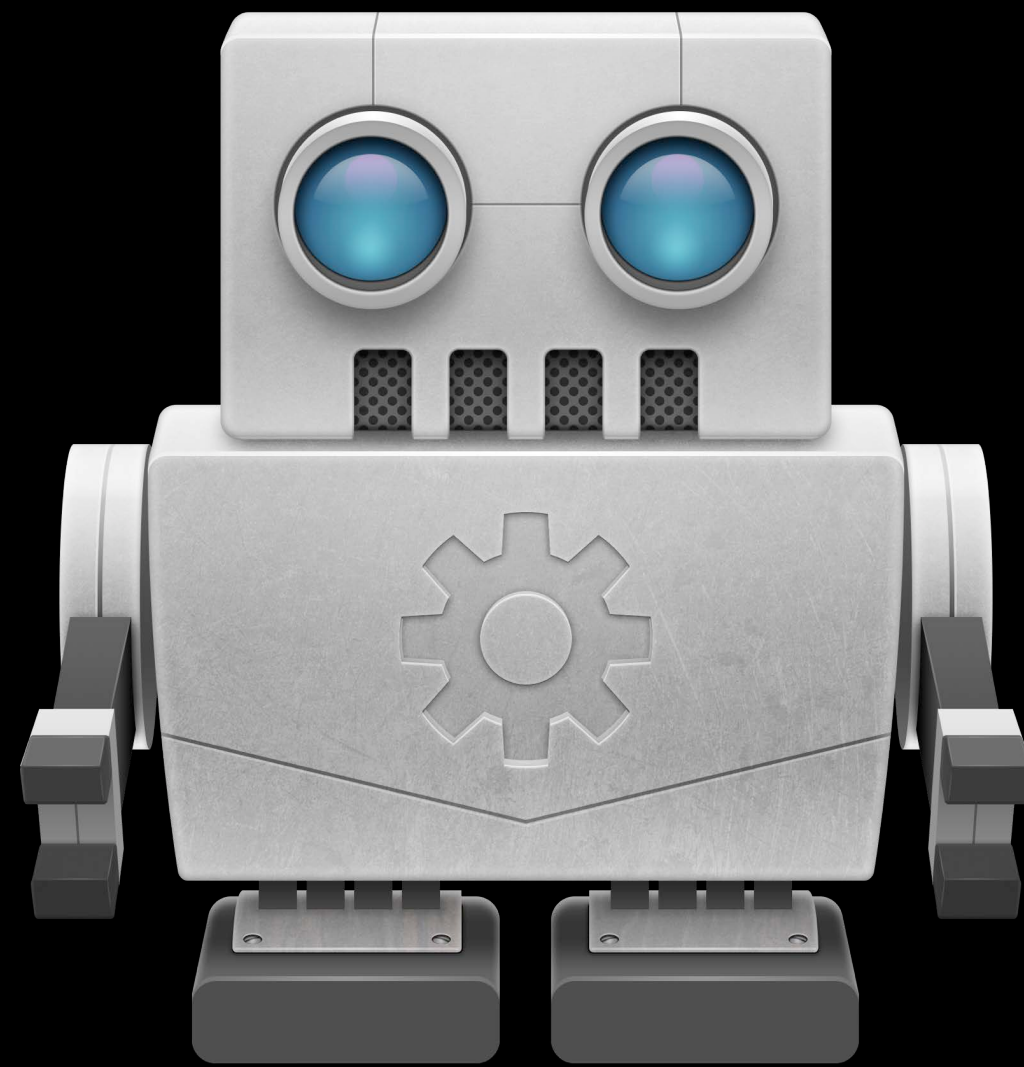
Device	iPad mini (Model A1...	iPod touch (4th gen...	iPod touch (5th generation)	
Model	Cheesecake 7.0 / armv7f	Uproar 7.0 / armv7f	Hubbub 6.1.3 / armv7f	Din 6.1.3 / armv7
Tests	27	27	27	27
Failed	4	4	4	4
-[Bubblegu...ourceDealloc]				
-[Bubblegu...eDereference]				
-[Bubblegu...ataSourceInit]				
-[Bubblegu...eInitWithData]				
-[Bubblegu...rceInitWithNil]				
-[Bubblegu...ts testDealloc]				
-[Bubblegu...tDereference]				
-[Bubblegu...ocatorDealloc]				
-[Bubblegu...rDereference]				
-[Bubblegu...PSLocatorInit]				
-[Bubblegu...rInitWithData]				
-[Bubblegu...torInitWithNil]				
-[BubblegumTests testInit]				



Fast incremental builds

Find regressions fast

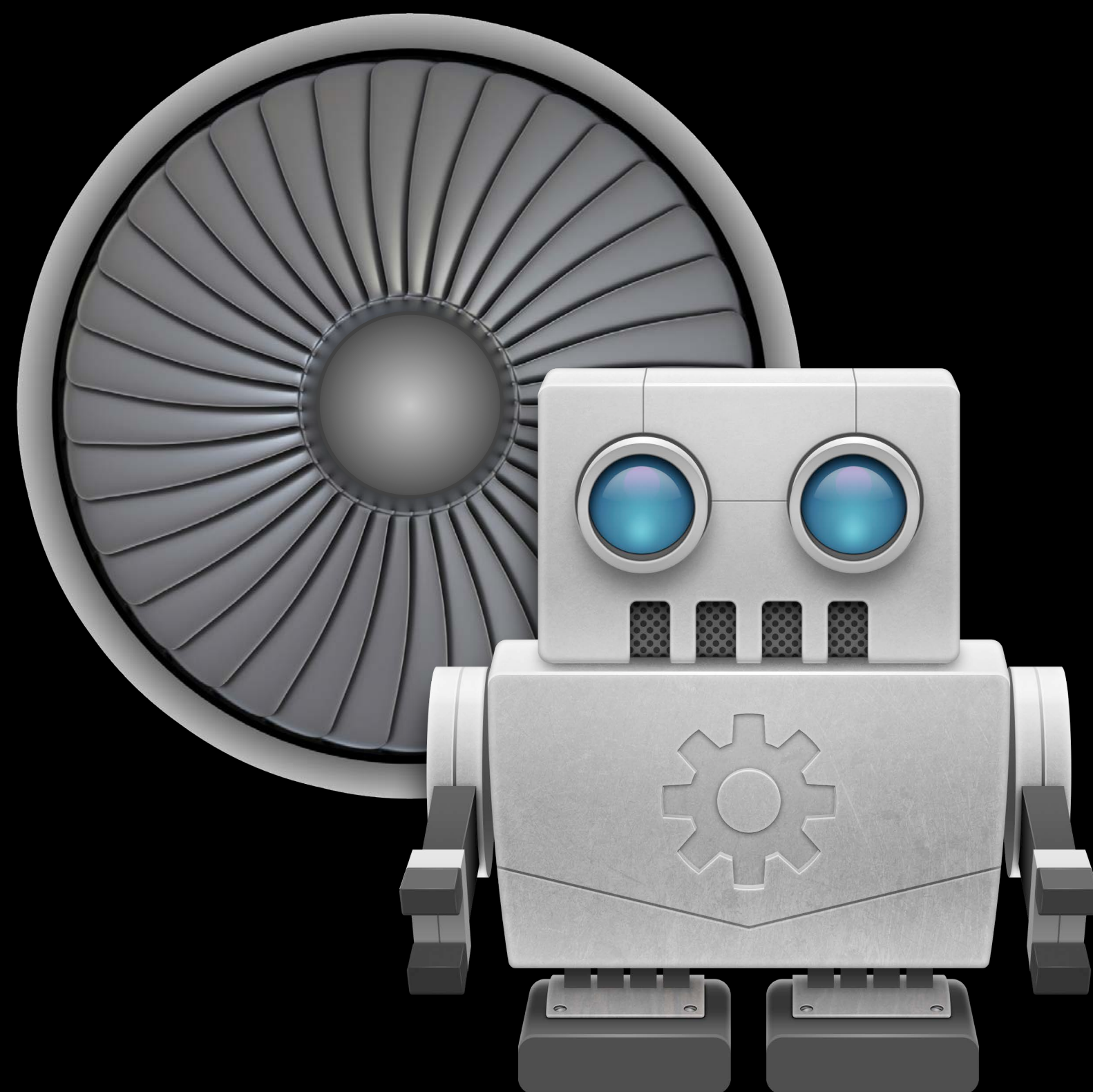
Analyze entire codebase



Repeatable

Signed archive

Great for QA teams



Repeatable

Signed archive

Great for QA teams



Logs saved over time

Archived builds

Devices for testing

Demo

Testing and continuous integration

Mike Ferris

⚠ Game Play Tests 25 min ago

↗ Nightly QA Bot 33 min ago

⚠ Quick Tests 2 hrs ago

✓ Release Bot 3 hrs ago

⚠ Daily Build 1 day ago

↗ Test Bot 2 days ago

⚠ Jogr Bot 3 days ago

↗ Full Integration 4 days ago

⚠ Long Running Tests 6 day ago

↑ Integration 62

0

Errors

2

Warnings

3

Analysis

5/40

Tests Failed

5 Committers

Added tests for newly-added iOS 7 background fetch, and dynamic text sizing functionality. These new iOS 7 APIs are great!



John Appleseed
Yesterday 10:15 AM

27 Files Modified

5 Devices



iPhone 4



iPhone 4S



iPhone 5



iPod





Xcode 5 Developer Preview



Xcode 5 and OS X Server



Xcode 5 and OS X Server



Xcode 5 and OS X Server

 WWDC2013