

# iOS 7

What You Need to Know



**TRIFORK.**  
*...think software*

- GOTO Conference
- GOTO night
- Training

# Modules

@import

Demo!

# Modules

- Easier to use
- No namespace pollution
- You get it for free
- Performance (build time and indexing)

# Modules

- Caveats
  - Requires iOS7 / OS X 10.9 SDK
  - Not available for user frameworks

# Modules



404 Advances in Objective-C



# Unit Testing in Xcode 5

...finally being taken seriously

Demo!

- SenTest- and XCTest can co-exist
- New in Xcode 5
  - Migration tool
  - Test failure break-point
  - Test assistant categories
  - Test again command

# More on Unit Testing



409 Testing in Xcode 5

# Test Bots

# No Demo!

:-)



# Bots

- Test on simulator and physical devices
- Deep integration with Xcode
- Good terminal support



# More on Bots and CI



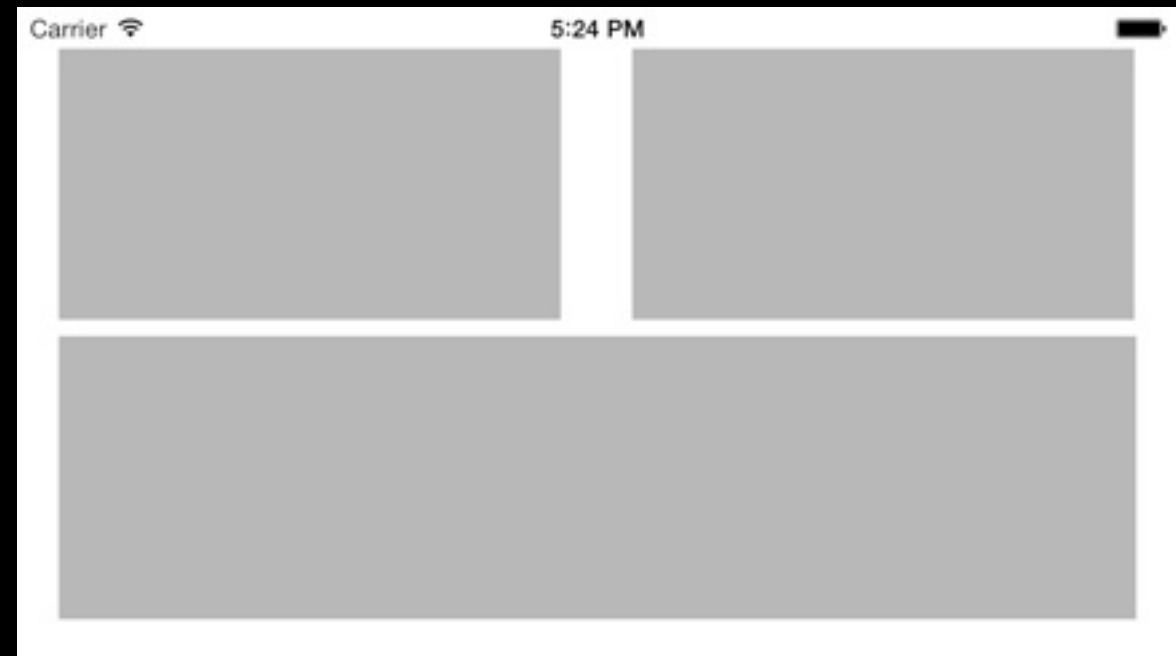
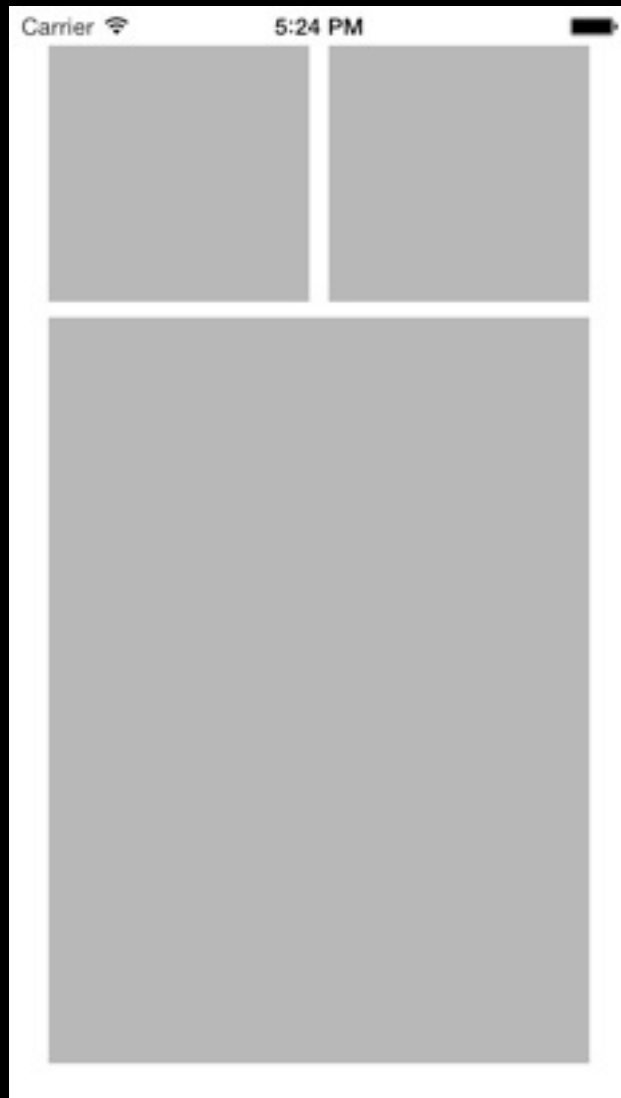
412 Continuous Integration with Xcode 5

# Auto Layout

They fixed it !

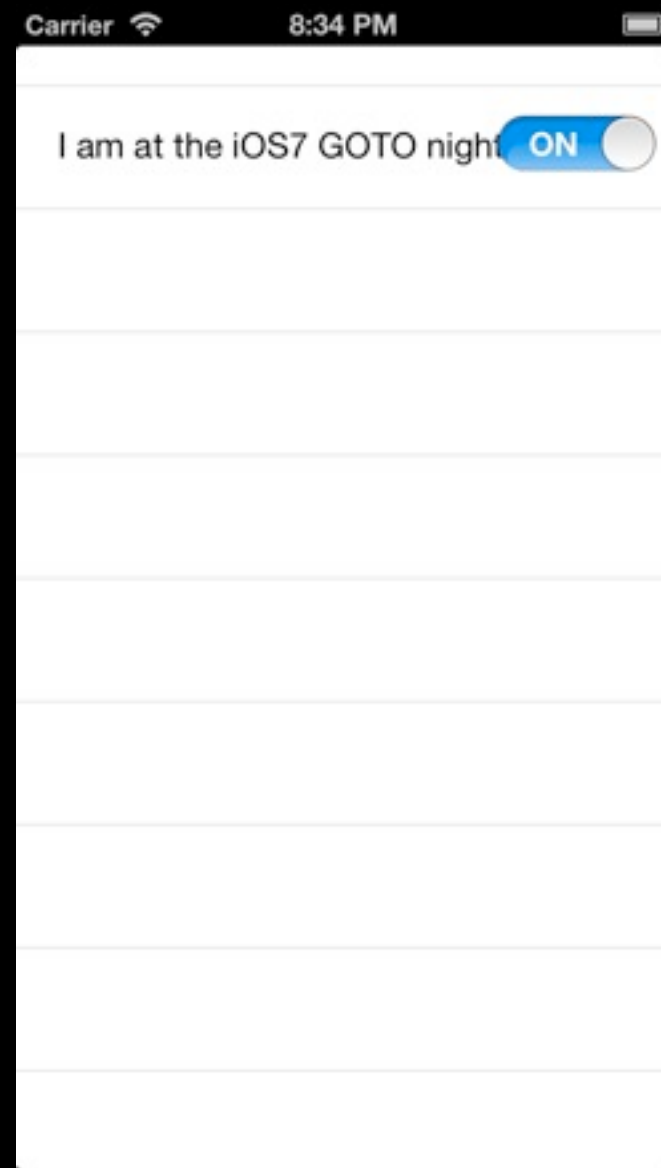
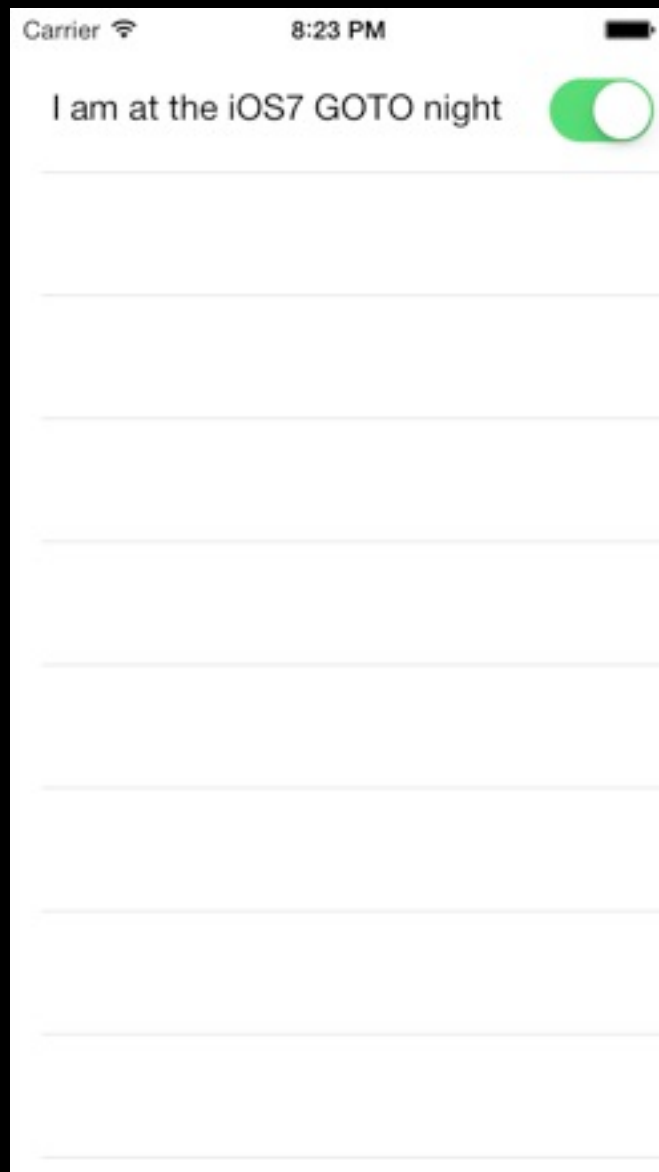
# Springs and Struts

why not?



# Springs and Struts

why not?





Auto Layout in iOS6 IB

Demo!



## 406 Taking Control of Autolayout in Xcode 5

# Xcode 5

Other enhancements



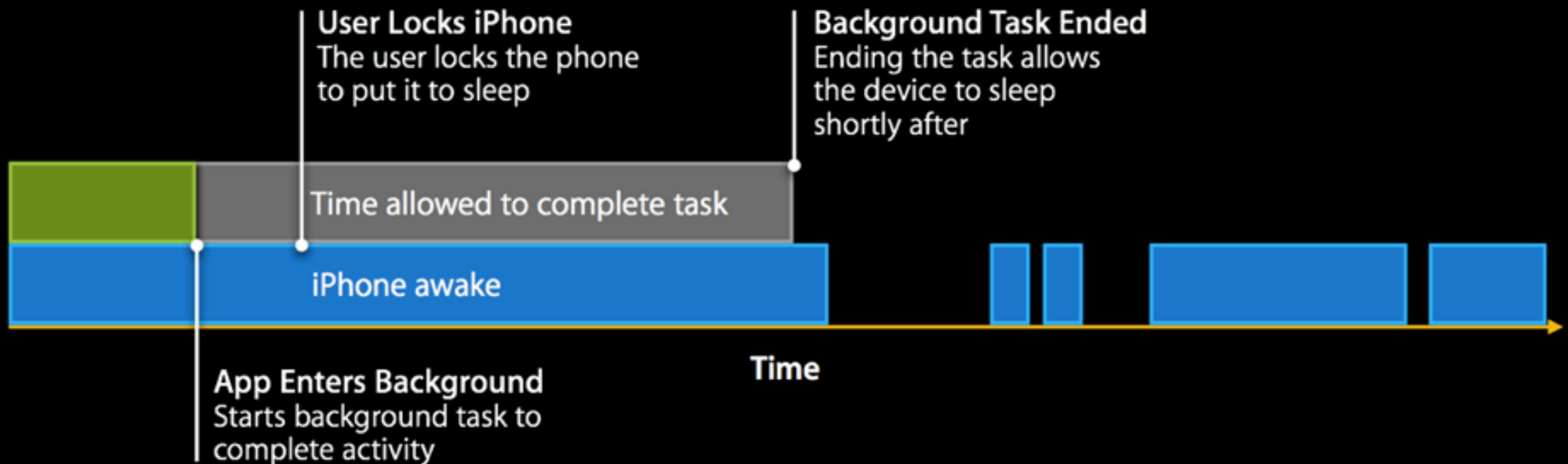
- Capabilities
- Images.xcassets

Sandwich

# Multitasking

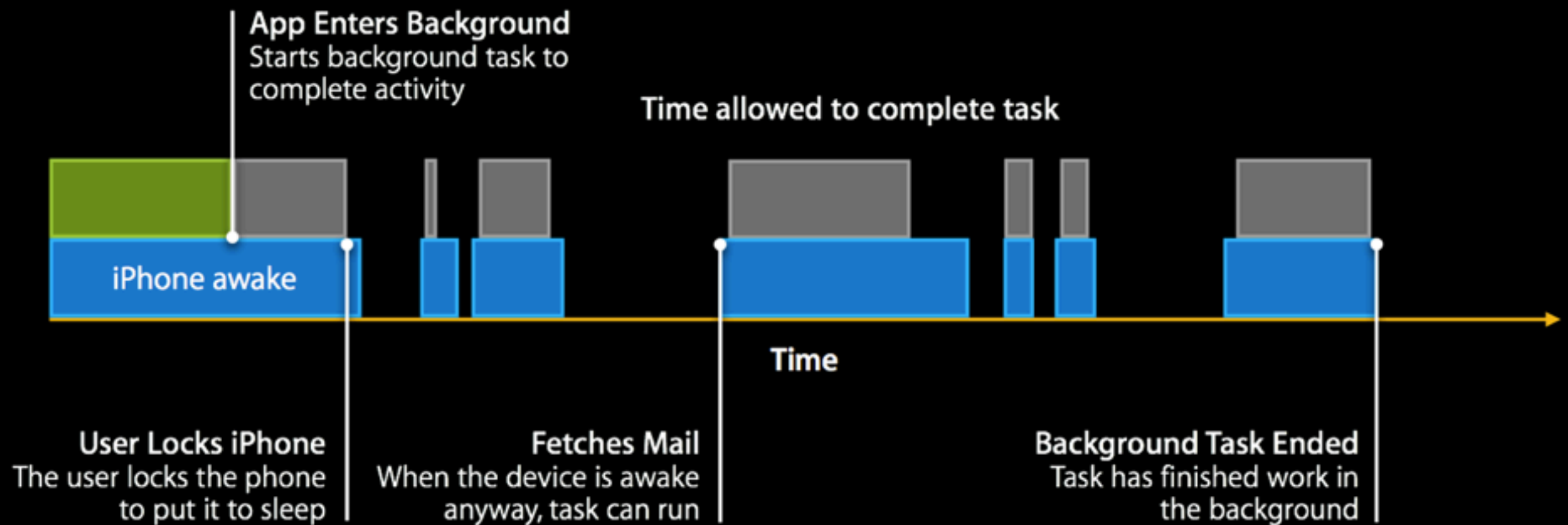
# Background Task Changes

In iOS 6



# Background Task Changes

In iOS 7



# New multitasking APIs

- Background Fetch
- Remote Notifications
- Background Transfer Service

# Background Fetch

- Update your tweets or Facebook posts while app is backgrounded

Demo!



# Background Fetch

- Update you social media data
- But what else?
  - Simulate remote notifications
  - What are the constraints ?

# Background Fetch

- System scheduled (coalesced)
- Adapts from usage pattern

# Remote Notifications

## Motivation

- Update the App Content before the user opens the App.

# Remote Notifications

1. Set the Background mode
2. Implement the AppDelegate callback

# Remote Notifications

```
aps {  
  content-available: 1  
  alert: {...}  
}
```

Omit for silent notification



# Background Transfer Service

## Motivation

- Upload/download large files
- Continue even after app exists
- Enqueue from background and foreground

Demo!

# Use case example

1. New content available
2. Server sends silent push notification
3. App starts background transfer service
4. Transfer completes and App presents a local notification





# 204 Whats new With Multitasking

# JavaScript Core

```
JSVirtualMachine *vm = [JSVirtualMachine new]
JSContext *context = [[JSContext alloc] initWithVirtualMachine:vm];
context[@"a"] = @5;
```

```
JSValue *aValue = context[@"a"];
double a = [aValue toDouble];
NSLog(@"%.0f", a); // => 5
```

```
[context evaluateScript:@"a = 10"];
JSValue *newAValue = context[@"a"];
NSLog(@"%.0f", [newAValue toDouble]); // => 10
```

# JavaScript Core

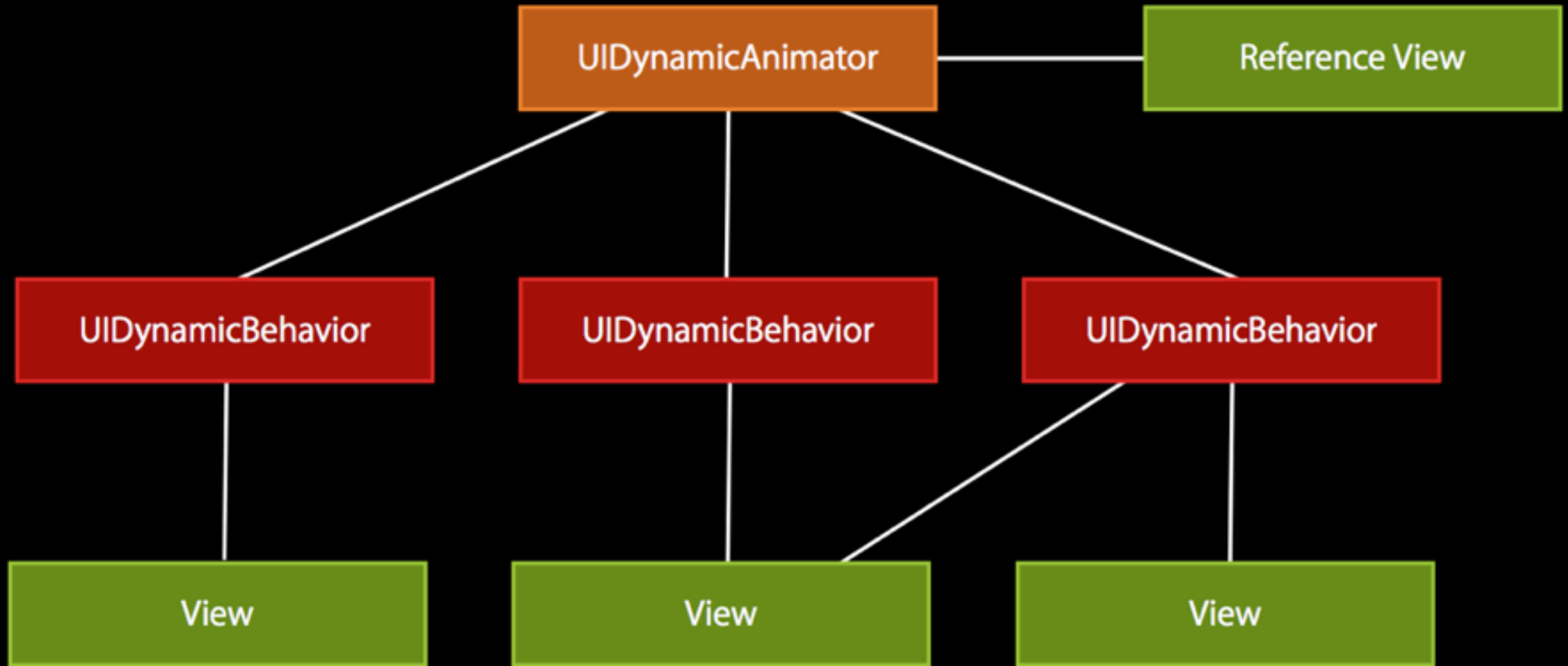
## Object Bridging

```
Person *person = [[Person alloc] init];  
person.name = @"Søren";  
context[@"person"] = person;
```

- Create a PersonExports <JSExports> protocol
- @property => JavaScript getter/setter
- instance method => JavaScript function

# UIKit Dynamics

# Architecture



```
animator = [[UIDynamicAnimator alloc] initWithReferenceView:referenceView];  
[animator addBehavior:...];  
[animator addBehavior:...];
```

# Predefined Behaviors

- Gravity
- Collision
- Attachments (and Springs)
- Snap
- Forces (Push)
- Item Properties



Demo!



## 206 Getting Started with UIKit Dynamics

# Sprite Kit

# Declarative

```
SKSpriteNode *sprite = [SKSpriteNode spriteNodeWithImageNamed:@"hero.png"];  
[sprite runAction:[SKAction fadeOutWithDuration:1.0]];
```

# Composable Actions

```
[myNode runAction:[SKAction sequence:@[action1, action2, action3]]]
```

# Cool

```
[SKVideoNode videoNodeWithVideoFileNamed:@"video.mp4"];
```

# Integrated physics

```
SKSpriteNode *sprite = [SKSpriteNode spriteNodeWithImageNamed:@"ball.png"];  
sprite.physicsBody = [SKPhysicsBody bodyWithCircleOfRadius:sprite.size.width * 0.5];
```

```
moveByX:(CGFloat)deltaX y:(CGFloat)deltaY duration:(NSTimeInterval)sec;
moveTo:(CGPoint)location duration:(NSTimeInterval)sec;
moveToX:(CGFloat)x duration:(NSTimeInterval)sec;
moveToY:(CGFloat)y duration:(NSTimeInterval)sec;
rotateByAngle:(CGFloat)radians duration:(NSTimeInterval)sec;
rotateToAngle:(CGFloat)radians duration:(NSTimeInterval)sec;
resizeByWidth:(CGFloat)width height:(CGFloat)height duration:(NSTimeInterval)sec;
resizeToWidth:(CGFloat)width height:(CGFloat)height duration:(NSTimeInterval)sec;
resizeToWidth:(CGFloat)width duration:(NSTimeInterval)duration;
resizeToHeight:(CGFloat)height duration:(NSTimeInterval)duration;
scaleBy:(CGFloat)scale duration:(NSTimeInterval)sec;
scaleXBy:(CGFloat)xScale y:(CGFloat)yScale duration:(NSTimeInterval)sec;
scaleTo:(CGFloat)scale duration:(NSTimeInterval)sec;
scaleXTo:(CGFloat)xScale y:(CGFloat)yScale duration:(NSTimeInterval)sec;
scaleXTo:(CGFloat)scale duration:(NSTimeInterval)sec;
scaleYTo:(CGFloat)scale duration:(NSTimeInterval)sec;
sequence:(NSArray *)actions;
group:(NSArray *)actions;
repeatAction:(SKAction *)action count:(NSUInteger)count;
repeatActionForever:(SKAction *)action;
fadeInWithDuration:(NSTimeInterval)sec;
fadeOutWithDuration:(NSTimeInterval)sec;
fadeAlphaBy:(CGFloat)factor duration:(NSTimeInterval)sec;
fadeAlphaTo:(CGFloat)alpha duration:(NSTimeInterval)sec;
setTexture:(SKTexture *)texture;
animateWithTextures:(NSArray *)textures timePerFrame:(NSTimeInterval)sec;
```



## 502 Introduction to Sprite Kit

...and the rest

# Other API Goodies

- Add attachments to mail (Message UI Framework)
- Base64Encode NSData
- [NSArray firstObject]
- Barcode Scanner (AVFoundation)
- AVSpeechSynthesizer
- MKDistanceFormatter
- [UIView snapshotView...]



# NSURLComponents and NSCharacterSet (NSURLUtilities)

```
NSURLComponents *components =  
    [NSURLComponents componentsWithString:@"http://nshipster.com"];  
components.path = @"/iOS7";  
components.query = @"foo=bar"  
  
//http://nshipster.com/iOS7?foo=bar
```

# NSURLComponents and NSCharacterSet (NSURLUtilities)

```
NSCharacterSet
+ (id)URLUserAllowedCharacterSet
+ (id)URLPasswordAllowedCharacterSet
+ (id)URLHostAllowedCharacterSet
+ (id)URLPathAllowedCharacterSet
+ (id)URLQueryAllowedCharacterSet
+ (id)URLFragmentAllowedCharacterSet
```

I'm sorry....

UIKit

Custom View  
Controller Transition

Multipeer  
Connectivity

App Transfer

Core Bluetooth