What’s New in Cocoa Touch

Session 107

Jason Beaver  Senior Engineering Manager, iOS Platform Technologies
Dynamic Type
Adaptivity
Adaptivity

Size Classes
Adaptivity

Size Classes

Regular Height

Compact Width

Regular Width
Adaptivity

Size Classes
Adaptivity

Size Classes
View Controllers
Adaptivity

Size Classes
View Controllers
View Controller Presentations
Adaptivity

Size Classes
View Controllers
View Controller Presentations
Search Results
Adaptivity

Size Classes
View Controllers
View Controller Presentations
Search Results
Action Sheets
Multitasking in iOS
Sarah Castelblanco

Not the same without you
Today at 9:14 AM

I just walked by your old cube and looked to see if you were in there. Not sure when I'll stop doing that. I just know that the guy who's sitting there now is probably starting to get annoyed with me. What can I say? We miss you. All of us. Especially me. Although I'm probably more productive new without you and your seemingly endless supply of office gossip.

Work is pretty much the same. I switched cubes and have gotten closer to an actual window. That's the good part. The bad part is that I'm directly across from Larry. You know, the guy with the terrific hair and the terrible taste in music. I actually caught myself singing along to the music coming from his office the other day. It definitely wasn't my proudest moment.

I've been traveling a bit more. Managed to parlay into a week's worth of shows and see nearly every one of the adventure. You'd have loved it.

I'm eager to hear what's going on. Advancement is worth not being alive.

Sarah
## Multitasking in iOS

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<th>Session Title</th>
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<td>Tuesday 4:30PM</td>
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<tr>
<td>Optimizing Your App for Multitasking on iPad in iOS 9</td>
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Auto Layout
Layout Guides
Layout Guides

UILayoutGuide
Layout Guides

UILayoutGuide

UIView
Layout Guides

UILayoutGuide
  UIView
    var layoutMarginsGuide
Layout Guides

UILayoutGuide

UIView

var layoutMarginsGuide

var readableContentGuide
Layout Guides
Readable content margin
Lorem ipsum dolor sit er elit lamet, consectetur cillum adipisicing pecu, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum. Neque porro
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Layout Guides
Readable content margin
Layout Guides
Readable content margin
Lorem ipsum dolor sit er elit lamet, consectetur cillum adipiscing pecu, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum. Nemo litora...
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Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum. Nam liber te conscient to factor turn poen legum odioque viriut.
Layout Guides
Readable content margin
Layout Guides
Layout Guides
Layout Guides
Layout Guides
UIStackView

![StackView Diagram]
UIStackView
UIStackView
Mysteries of Auto Layout, Part 1

Mysteries of Auto Layout, Part 2
Shortcuts Bar
Shortcuts Bar
Shortcuts Bar
Shortcuts Bar

UITextView
Shortcuts Bar

UITextView
  func inputAssistantItem
Shortcuts Bar

UITextInput
  func inputAssistantItem

UITextInputAssistantItem
Shortcuts Bar

UITextInput
  func `inputAssistantItem`

UITextInputAssistantItem
  var `leadingBarButtonGroups`: [UIBarButtonGroup]
Shortcuts Bar

UITextInput

    func inputAssistantItem

UITextInputAssistantItem

    var leadingBarButtonGroups: [UIBarButtonGroup]
    var trailingBarButtonGroups: [UIBarButtonGroup]
Storyboards
Storyboards

Organizing your storyboards
Organizing your storyboards

Unwinding segues
Organizing your storyboards
Unwinding segues
Right-to-Left
Right-to-Left
Right-to-Left
Right-to-Left
Right-to-Left
UIViewController
    var semanticContentAttribute

UIView
    var semanticContentAttribute
UIViewController

var semanticContentAttribute

UIView

var semanticContentAttribute
static func userInterfaceLayoutDirectionForSemanticContentAttribute
Right-to-Left
Right-to-Left

UISemanticContentAttribute
UISemanticContentAttributeUnspecified
Right-to-Left

UISemanticContentAttribute
  UISemanticContentAttribute Unspecified
  UISemanticContentAttribute Playback
Right-to-Left

UISemanticContentAttribute
UISemanticContentAttributeUnspecified
UISemanticContentAttributePlayback
UISemanticContentAttributeSpatial
Right-to-Left

UISemanticContentAttribute
UISemanticContentAttributeUnspecified
UISemanticContentAttributePlayback
UISemanticContentAttributeSpatial
UISemanticContentAttributeForceLeftToRight
UISemanticContentAttributeForceRightToLeft
Right-to-Left
Right-to-Left

UIImage
Right-to-Left

UIImage

func imageFlippedForRightToLeft
UIImage

func imageFlippedForRightToLeft
var isFlippedInRightToLeft
Right-to-Left

UIImage

func imageFlippedForRightToLeft
var isFlippedInRightToLeft

New UIKit Support for International User Interfaces  Nob Hill  Thursday 2:30PM
Accessibility
Accessibility

Changes to AVSpeechSynthesis
Accessibility

Changes to AVSpeechSynthesis
Text Editing Gestures
Text Editing Gestures
Keyboard Commands
Touch Events
Touch Events
Touch Events
Touch Events
Touch Events
Touch Events
Touch Events

Advanced Touch Input on iOS
UIKit Dynamics
UIKit Dynamics

Support for non-rectangular collision bounds

enum UIDynamicItemCollisionBoundsType : UInt {
    case Rectangle
    case Ellipse
    case Path
}
UIKit Dynamics

Support for non-rectangular collision bounds

enum UIDynamicItemCollisionBoundsType : UInt {
    case Rectangle
    case Ellipse
    case Path
}

![Diagram showing various shapes including rectangles, ellipses, and paths for collision bounds.](image-url)
UIKit Dynamics

UIFieldBehavior

Adds support for vector force fields
Several built-in field types
• Linear and Radial Gravity
• Spring
• Drag and Velocity
• Noise and Turbulance
• Electric and Magnetic
Custom field evaluator to create your own field
UIKit Dynamics
UIFieldBehavior

Adds support for vector force fields
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• Linear and Radial Gravity
• Spring
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Custom field evaluator to create your own field
UIKit Dynamics
UIFieldBehavior

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Custom field evaluator to create your own field
UIKit Dynamics

UIFieldBehavior

Adds support for vector force fields

Several built-in field types

• Linear and Radial Gravity
• Spring
• Drag and Velocity
• Noise and Turbulance
• Electric and Magnetic

Custom field evaluator to create your own field
UIKit Dynamics

UIAttachmentBehavior

Support for additional attachment types

- Fixed
- Sliding
- Pin
- Limit
UIKit Dynamics

UIAttachmentBehavior

Support for additional attachment types

• Fixed
• Sliding
• Pin
• Limit
Visual Effects
Visual Effects
| What's New in UIKIT Dynamics and Visual Effects | Mission | Friday 10:00AM |
API Optimizations for Swift
API Optimizations for Swift

Nullability
API Optimizations for Swift

Nullability
Lightweight Generics
API Optimizations for Swift

Nullability

Lightweight Generics
Notifications
Notifications

UIUserNotificationAction
Notifications

UIUserNotificationAction

var behavior
Notifications

UIUserNotificationAction

var behavior
Notifications

UIUserNotificationAction

var behavior
var actionParameters
Notifications

UIUserNotificationAction
  var behavior
  var actionParameters
Safari
Safari

SFSafariViewController
Safari

SFSafariViewController
Introducing Safari View Controller

Nob Hill
Tuesday 1:30PM
New Extension Points
New Extension Points

VPN
New Extension Points

VPN

Packet tunnel provider
New Extension Points

VPN

Packet tunnel provider
App proxy provider
New Extension Points

VPN

Packet tunnel provider
App proxy provider
Filter control provider/filter data provider
New Extension Points

VPN

Packet tunnel provider
App proxy provider
Filter control provider/filter data provider
New Extension Points

Safari
New Extension Points
Safari

Shared Links
New Extension Points

Safari

Shared Links
Content blocking
New Extension Points

Safari

Shared Links
Content blocking
New Extension Points
Spotlight
New Extension Points

Spotlight

Indexing of application data
New Extension Points

Spotlight

Indexing of application data
Index maintenance
New Extension Points

Spotlight

Indexing of application data
Index maintenance

Introducing App Search
New Extension Points
Audio Units
New Extension Points

Audio Units

Audio Unit Extensions

Nob Hill

Thursday 11:00AM
Contacts

New Swift and Objective-C API
Introducing the Contacts Framework for iOS & OS X

New Swift and Objective-C API

Pacific Heights
Thursday 3:30PM
Wallet and PassKit
Wallet and PassKit

Card provisioning
Wallet and PassKit

Card provisioning
Apple Pay suppression
Wallet and PassKit

Card provisioning
Apple Pay suppression
Core Location
Core Location

Updates to background location tracking
Core Location

Updates to background location tracking
New API
Core Location

Updates to background location tracking

New API

**CLLocationManager**
Updates to background location tracking
New API

```swift
CLLocationManager
    func requestLocation
```
Updates to background location tracking

New API

```swift
CLLocationManager
    func requestLocation
```
MapKit
MapKit

Access to 3D Flyover view
MapKit

Access to 3D Flyover view
Show traffic
MapKit

Access to 3D Flyover view
Show traffic
Show compass and scale
MapKit

Access to 3D Flyover view
Show traffic
Show compass and scale
Create custom callouts
MapKit

Access to 3D Flyover view
Show traffic
Show compass and scale
Create custom callouts

What's New in MapKit

Nob Hill	Tuesday 4:30PM
HealthKit
HealthKit

Direct support in watchOS 2
HealthKit

Direct support in watchOS 2
New data types
HealthKit

Direct support in watchOS 2
New data types
New APIs for activity apps in watchOS 2
HealthKit

Direct support in watchOS 2
New data types
New APIs for activity apps in watchOS 2

What's New in HealthKit

Pacific Heights  Tuesday 11:00AM
ResearchKit

iPad support
ResearchKit

iPad support
New active tasks
ResearchKit

iPad support
New active tasks
New image capture step
ResearchKit

iPad support
New active tasks
New image capture step

Building Apps with ResearchKit

Mission
Wednesday 4:30PM
HomeKit
HomeKit

Detailed change notifications
HomeKit

Detailed change notifications
Predefined scenes
HomeKit

Detailed change notifications
Predefined scenes
Expanded trigger support
HomeKit

Detailed change notifications
Predefined scenes
Expanded trigger support
watchOS 2 support
HomeKit

- Detailed change notifications
- Predefined scenes
- Expanded trigger support
- watchOS 2 support
- Remote access
HomeKit

Detailed change notifications
Predefined scenes
Expanded trigger support
watchOS 2 support
Remote access
New standard profiles
HomeKit

Detailed change notifications
Predefined scenes
Expanded trigger support
watchOS 2 support
Remote access
New standard profiles

What's New in HomeKit
CloudKit
CloudKit

Updated limits and pricing for public databases
CloudKit

Updated limits and pricing for public databases

CloudKit web services to integrate with your web application
Updated limits and pricing for public databases

CloudKit web services to integrate with your web application

What’s New in CloudKit
Mission        Tuesday 3:30PM

CloudKit Tips and Tricks
Pacific Heights Thursday 4:30PM
UIDocument
UIDocument

Open in Place
UIDocument

Open in Place

Building Document Based Apps
On Demand Resources

Hosted on the App Store
On Demand Resources

Hosted on the App Store
Dynamically loaded content
On Demand Resources

Hosted on the App Store
Dynamically loaded content
Intelligent caching
On Demand Resources
On Demand Resources

Initial Install Tags (13 KB)
- all effects (13 KB)
  - FlameEffect.sks
  - SmokeEffect.sks
  - spark.png

Prioritized Tag Download Order (29 KB)
- chess pieces (17 KB)
- flame effect (9 KB)
- red tint pawn (3 KB)

Download Only On Demand (645 KB)
- black knight (2 KB)
- dice set (264 KB)
- fpp (4 KB)
- kings (4 KB)
- ripple (5 KB)
- smoke effect (9 KB)
- soccer universal (128 KB)
On Demand Resources
On Demand Resources

Introducing On Demand Resources

Pacific Heights  Wednesday 4:30PM
App Slicing
App Slicing

Automatically tailors your application
App Slicing

Automatically tailors your application
New NSAsset class
App Slicing

Automatically tailors your application

New NSDataAsset class
Game Center
Game Center

Guest players
Game Center

Guest players
Unified environment
Game Center
ReplayKit

Going Social with ReplayKit and Game Center
SpriteKit
SpriteKit

Metal backed
SpriteKit

Metal backed
All new action editor
SpriteKit

Metal backed
All new action editor
Integrated with On Demand Resources
SpriteKit

Metal backed
All new action editor
Integrated with On Demand Resources

What's New in SpriteKit

Mission
Wednesday 10:00AM
New Scene Editor
Available in Xcode 7
SceneKit
New features
SceneKit
New features
Scene transitions
SceneKit
New features
Scene transitions
Audio nodes
SceneKit
New features
Scene transitions
Audio nodes
Model I/O
SceneKit

New features

Scene transitions
Audio nodes
Model I/O
Ambient occlusion and light maps
SceneKit

New features

Scene transitions
Audio nodes
Model I/O
Ambient occlusion and light maps
Physics collision tests
SceneKit

New features

Scene transitions
Audio nodes
Model I/O
Ambient occlusion and light maps
Physics collision tests
Billboards
SceneKit

New features

Scene transitions
Audio nodes
Model I/O
Ambient occlusion and light maps
Physics collision tests
Billboards
Blend modes
SceneKit

New features

Scene transitions
Audio nodes
Model I/O
Ambient occlusion and light maps
Physics collision tests
Billboards
Blend modes
Debug layers
SceneKit

New features

Scene transitions
Audio nodes
Model I/O
Ambient occlusion and light maps
Physics collision tests
Billboards
Blend modes
Debug layers

Enhancements to SceneKit
GamePlayKit

Entities and components
GamePlayKit

Entities and components
Agents
GamePlayKit

Entities and components
Agents
Path finding
GamePlayKit

Entities and components
Agents
Path finding
AI
GamePlayKit

Entities and components
Agents
Path finding
AI
Rule systems
GamePlayKit

Entities and components
Agents
Path finding
AI
Rule systems
State machines
GamePlayKit

Entities and components
Agents
Path finding
AI
Rule systems
State machines
Random sources
GamePlayKit

Entities and components
Agents
Path finding
AI
Rule systems
State machines
Random sources

Introducing GameplayKit
watchOS 2
Introducing WatchKit for watchOS 2
More Information

Documentation
What’s New in iOS
Start Developing iOS Apps
iOS App Programming Guide
Adopting Multitasking Enhancements on iPad

developer.apple.com/library/

Technical Support
Apple Developer Forums
developer.apple.com/forums
Developer Technical Support
developer.apple.com/support/technical

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