

What's New in Cocoa Touch

Session 100

Chris Parker

iOS Frameworks Engineer

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

Getting Numeric Input

UIStepper

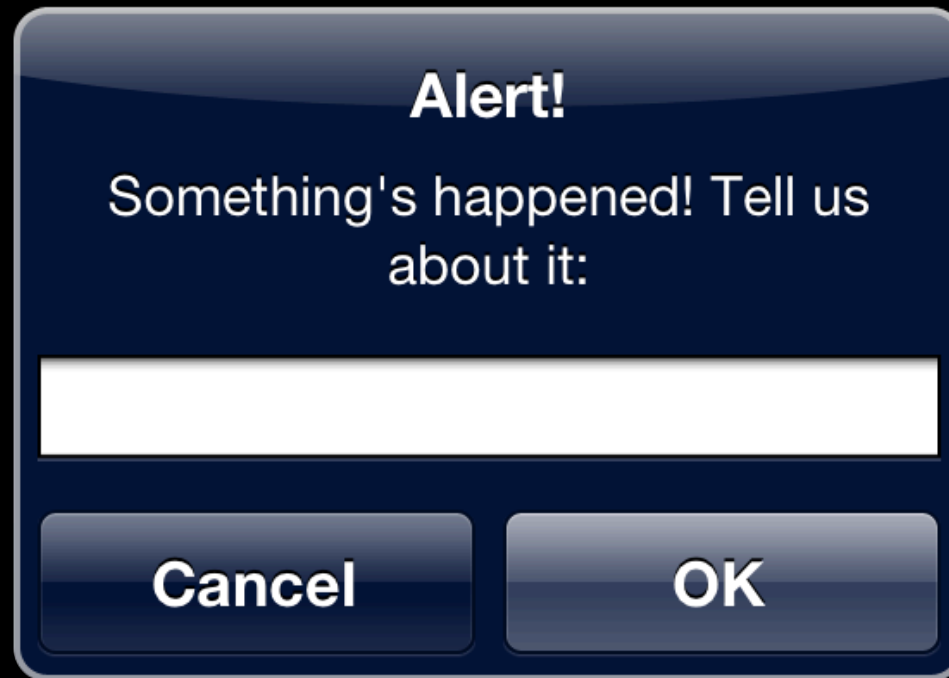


`minimumValue`
`maximumValue`
`stepValue`
`value`

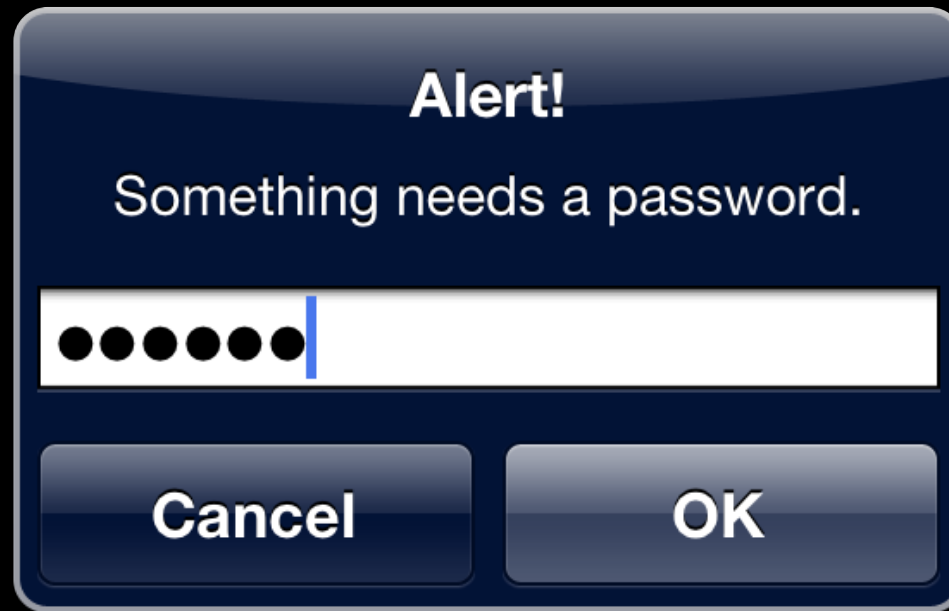
`continuous`
`autorepeat`
`wraps`



`UIAlertVisualStyleDefault`



`UIAlertVisualStylePlainTextInput`



UIAlertVisualStyleSecureTextInput

Login

Enter your login information:

Login

Password

Cancel **Login**

UIAlertVisualStyleLoginAndPasswordInput

Getting Input from Users

UIAlertView styles

```
typedef enum {  
    UIAlertViewStyleDefault = 0,  
    UIAlertViewStyleSecureTextInput,  
    UIAlertViewStylePlainTextInput,  
    UIAlertViewStyleLoginAndPasswordInput  
} UIAlertViewStyle;
```

```
@property(n nonatomic, assign) UIAlertViewStyle alertViewStyle;  
- (UITextField *)textFieldAtIndex:(NSInteger)textFieldIndex
```

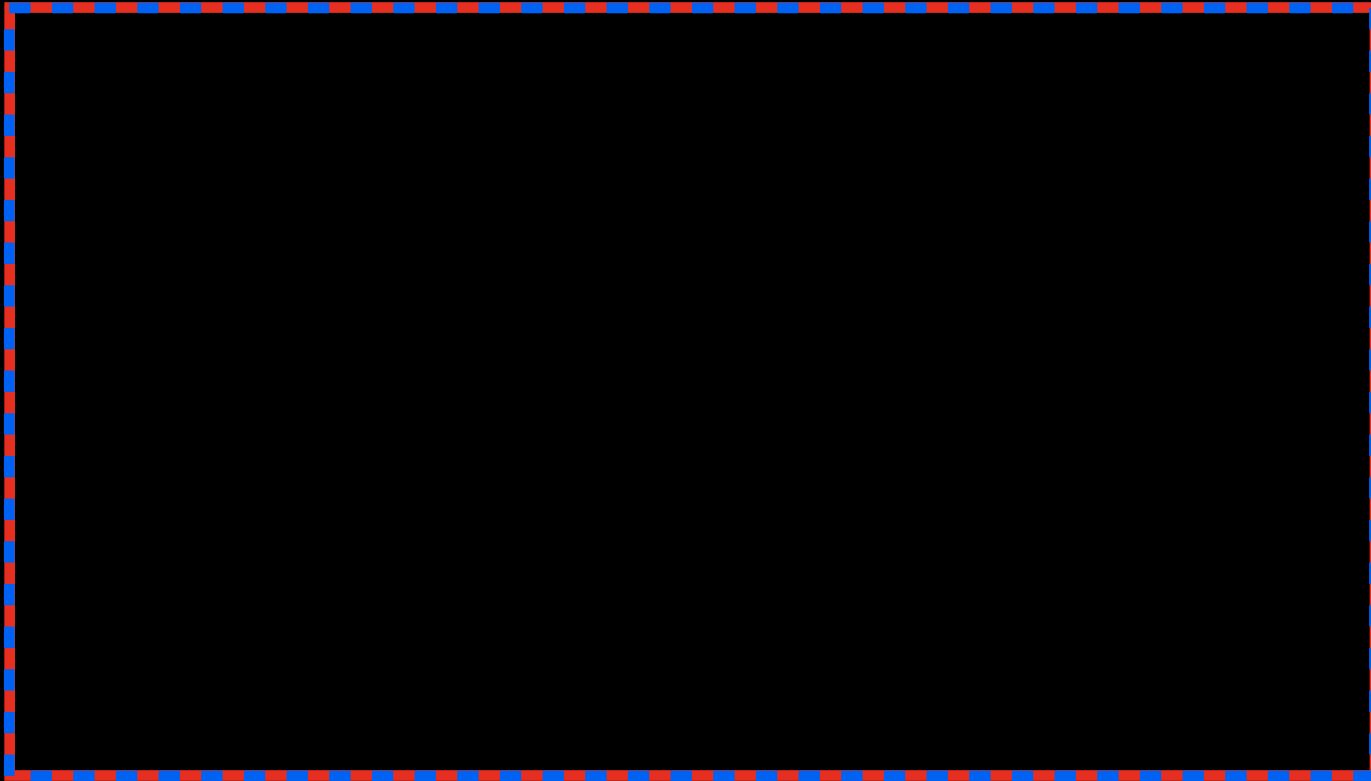






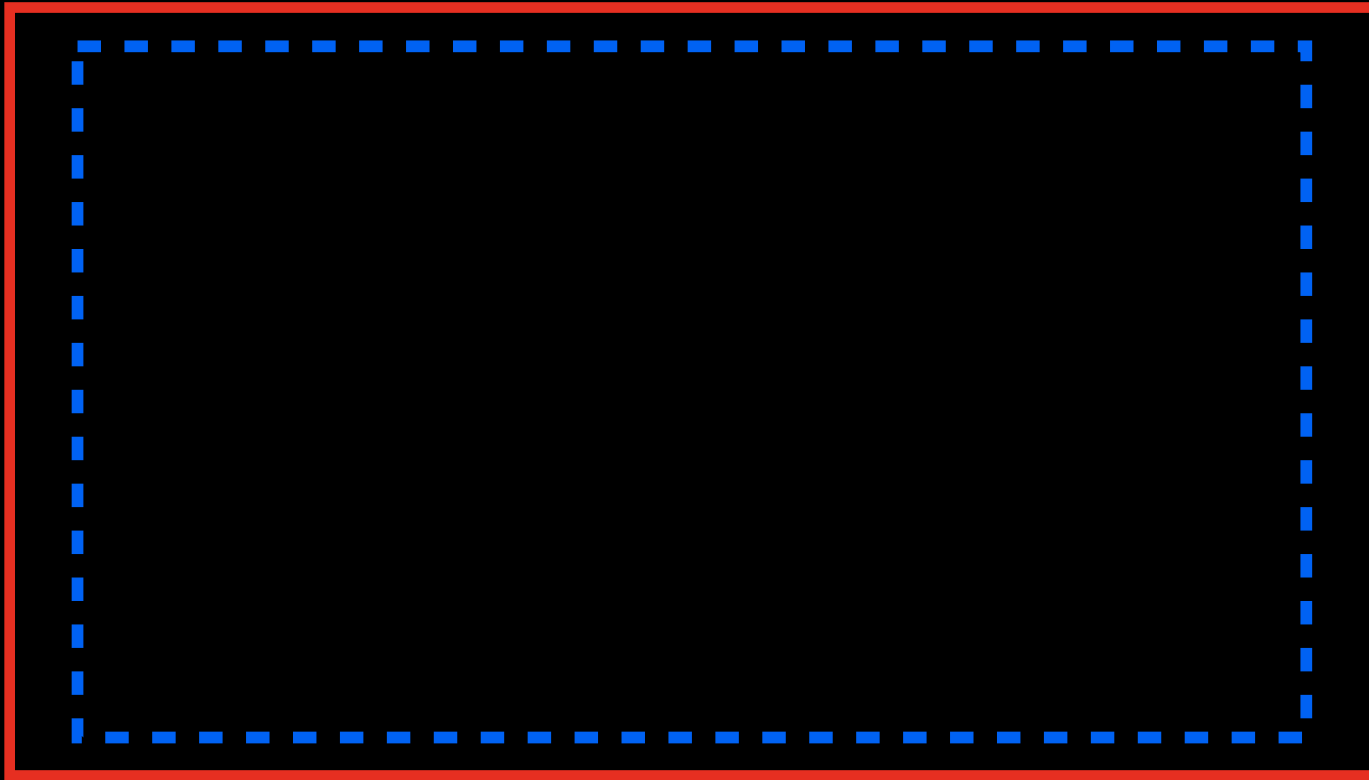
Screens and Application Frames

UIScreen



Screens and Application Frames

UIScreen



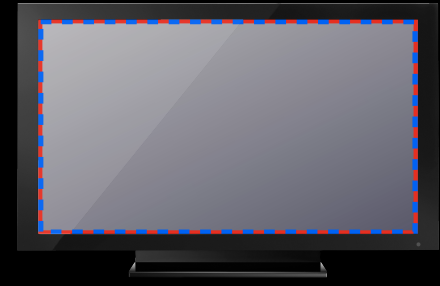
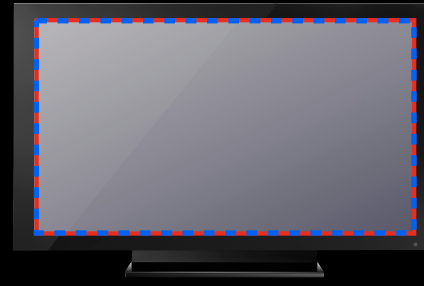
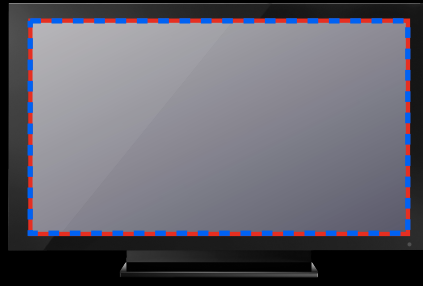
Compensating for Overscan

Scale

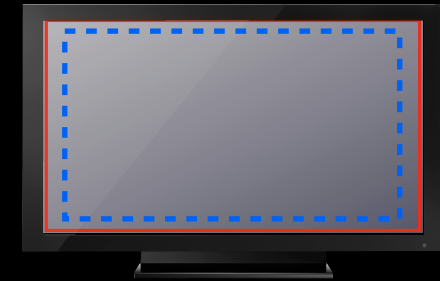
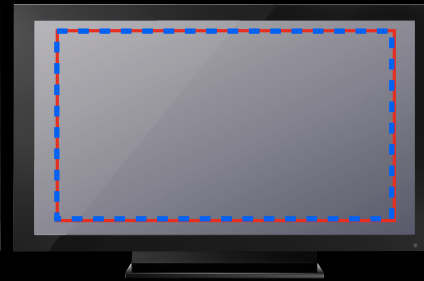
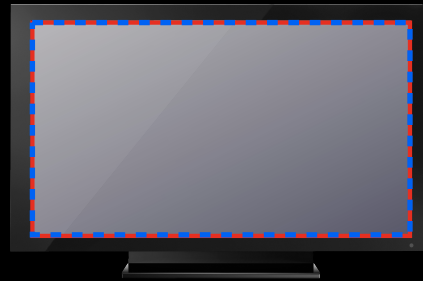
Inset Bounds

Inset App Frame

720p



720p
Overscanning

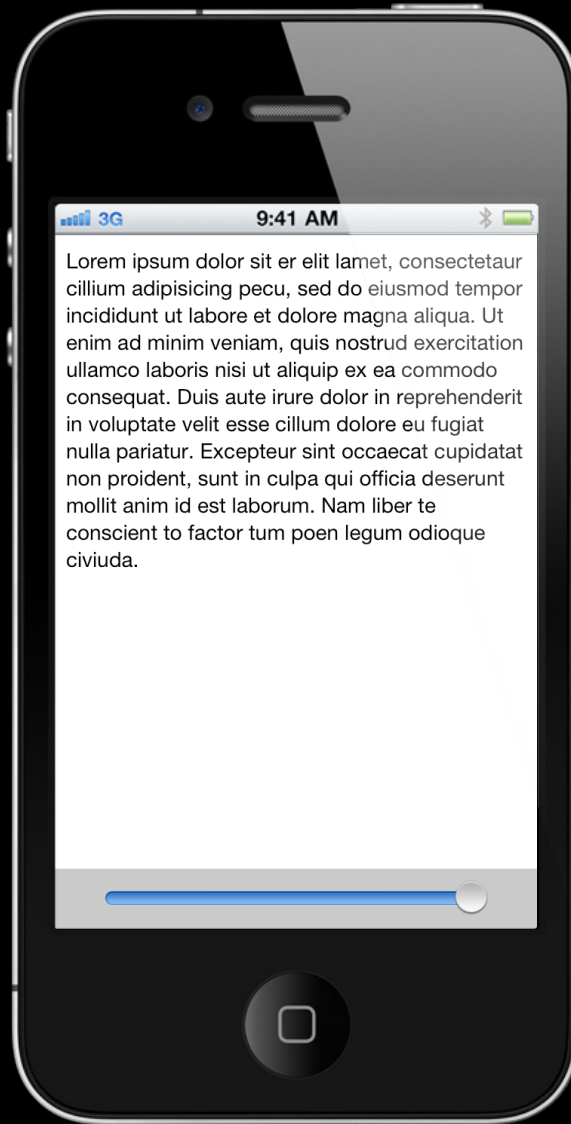


Compensating for Overscan

UIScreenOverscanCompensation

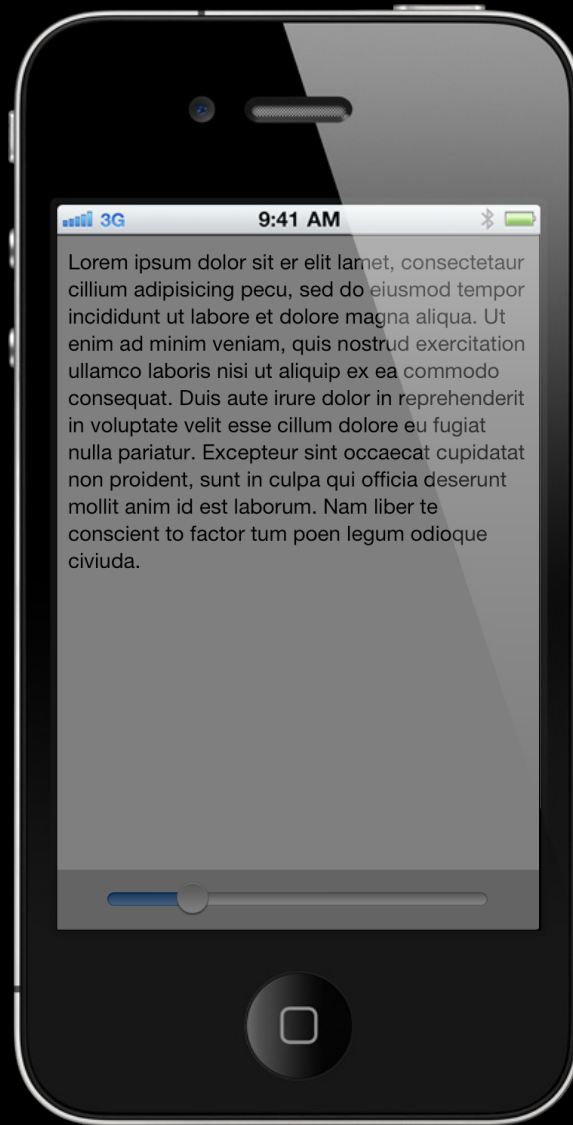
```
typedef enum {  
    UIScreenOverscanCompensationScale,  
    UIScreenOverscanCompensationInsetBounds,  
    UIScreenOverscanCompensationInsetApplicationFrame  
} UIScreenOverscanCompensation;
```

```
@property(nonatomic) UIScreenOverscanCompensation  
overscanCompensation;
```



3G 9:41 AM

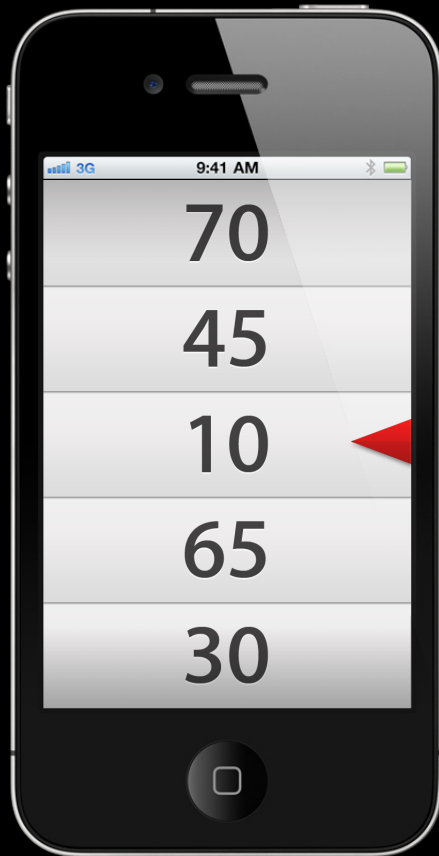
Lorem ipsum dolor sit er elit lamet, consectetaur
cillium adipisicing pecu, sed do eiusmod tempor
incididunt ut labore et dolore magna aliqua. Ut
enim ad minim veniam, quis nostrud exercitation
ullamco laboris nisi ut aliquip ex ea commodo
consequat. Duis aute irure dolor in reprehenderit
in voluptate 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. Nam liber te
conscient to factor tum poen legum odioque
civiuda.

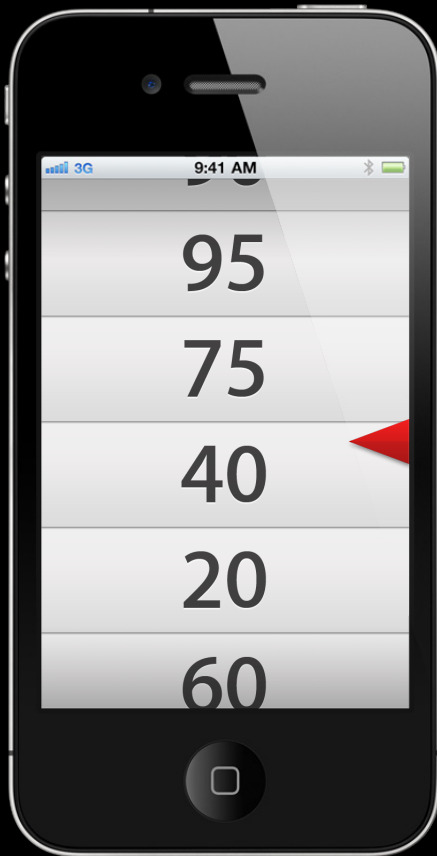


Dimming the Screen

UIScreen

```
@property (nonatomic) CGFloat brightness;  
@property (nonatomic) BOOL wantsSoftwareDimming;
```

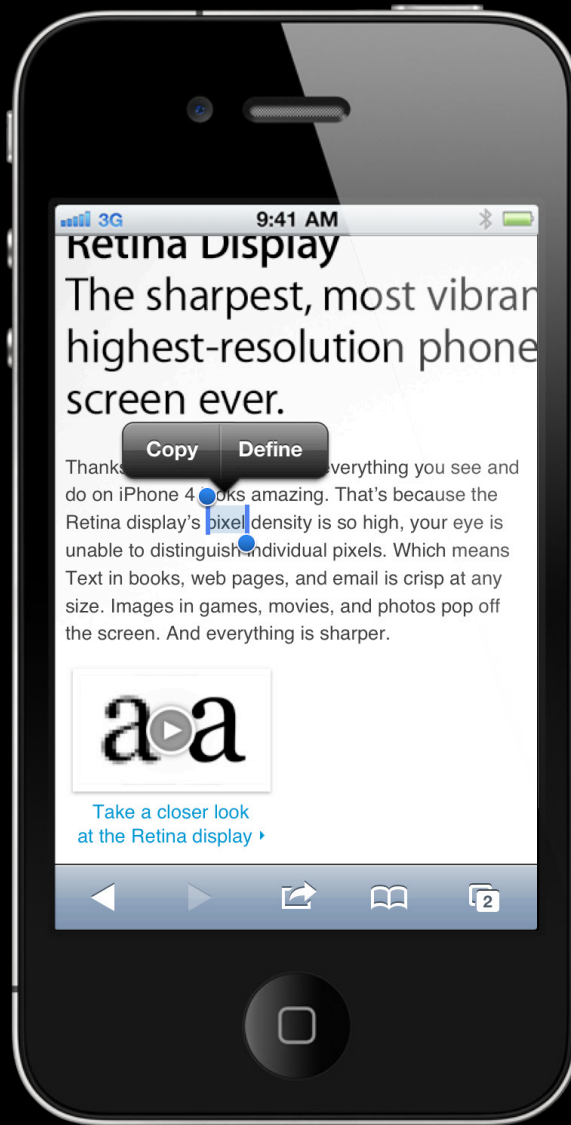


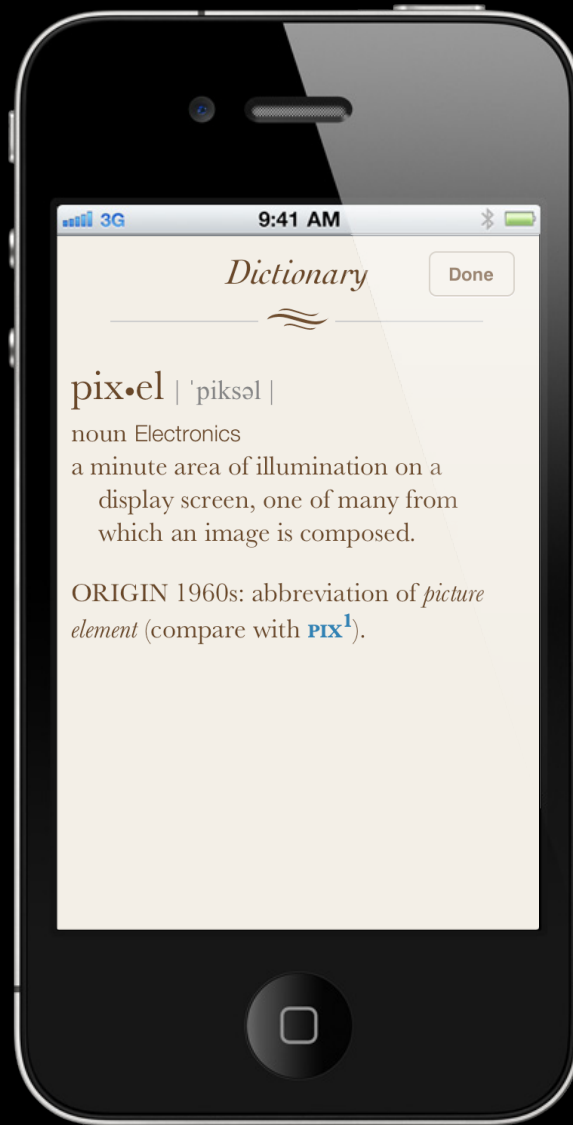


Controlling Scroll Destination

UIScrollView delegate

```
- (void)scrollViewWillEndDragging:(UIScrollView *)sv  
    withVelocity:(CGPoint)velocity  
    targetContentOffset:(inout CGPoint *)tCO;
```







The sharpest, most vibrant, highest-resolution phone screen

Thanks to the do on iPhone Retina display unable to disti Text in books, size. Images in the screen. Ar

mean ¹ | mēn |
verb (past and past participle **meant** | ment |) [with obj.]
1 intend to convey, indicate, or refer to (a particular thing or notion); signify: *I don't know what you mean* | *he was asked to clarify what his remarks meant* | *I meant you, not Jones* .
• (of a word) have (something) as its signification in the same language or its equivalent in another language: *its name means "painted rock" in Cherokee* .
• genuinely intend to convey or express (something): *when she said that before, she meant it* .
• (**mean something to**) be of some specified importance to (someone), esp. as a source of benefit or object of affection: *animals have always meant more to him than people* .
2 intend (something) to occur or be the

u see and use the r eye is means o at any pop off



Displaying Word Definitions

UIReferenceLibraryViewController

- (id) initWithTerm: (NSString *) term;
- + (BOOL) dictionaryHasDefinitionForTerm: (NSString *) term;

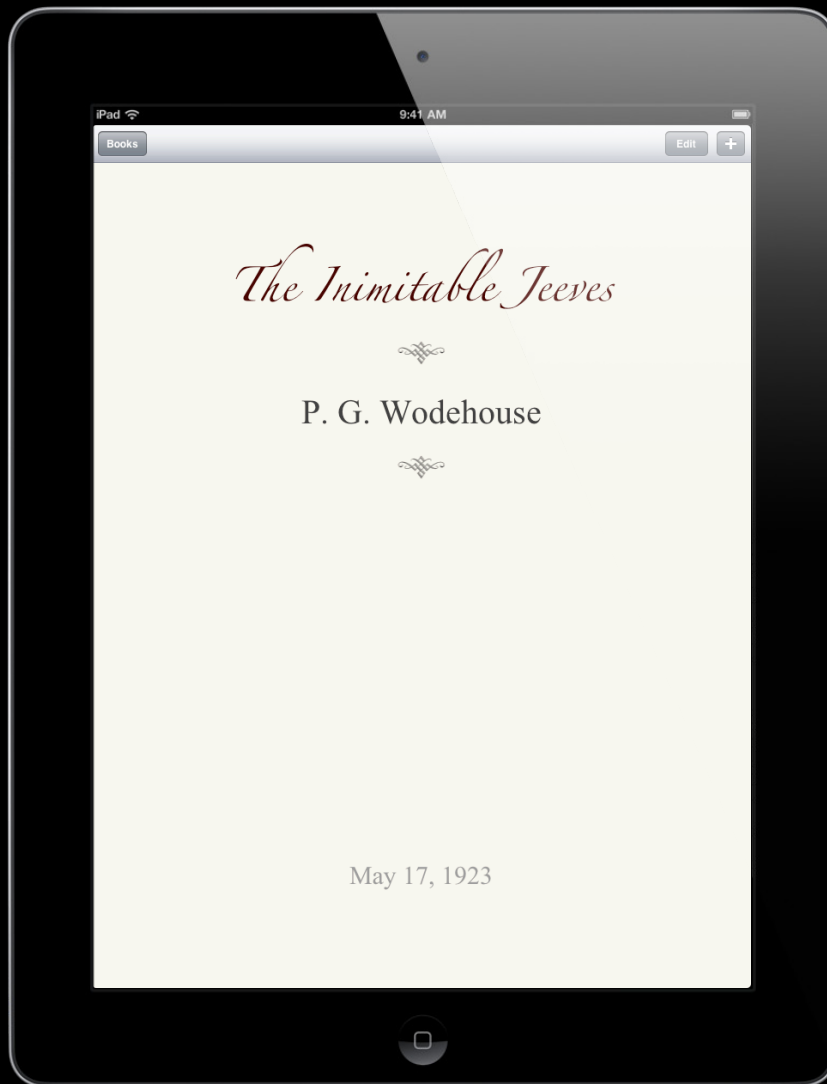
Displaying Word Definitions

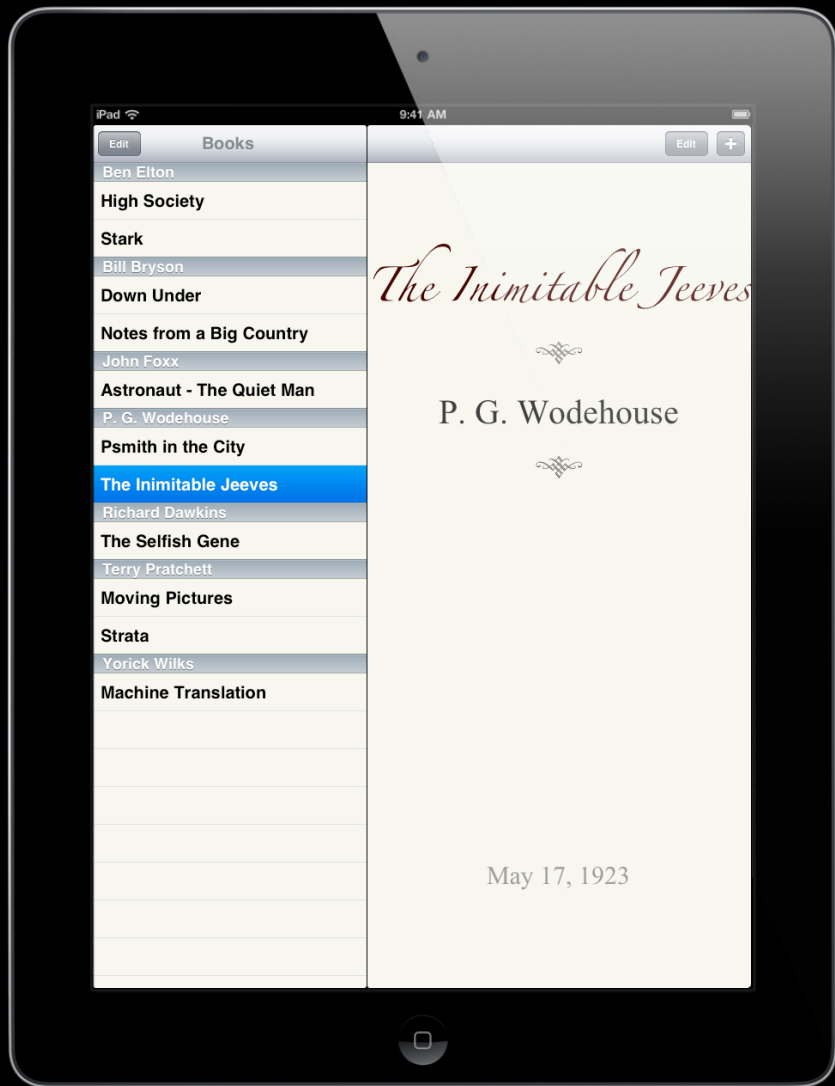
UIReferenceLibraryViewController

```
- (id)initWithTerm:(NSString *)term;
```

```
+ (BOOL)dictionaryHasDefinitionForTerm:(NSString *)term;
```







Books

- Ben Elton
- High Society
- Stark
- Bill Bryson
- Down Under
- Notes from a Big Country
- John Foxx
- Astronaut - The Quiet Man
- P. G. Wodehouse
- Psmith in the City
- The Inimitable Jeeves**
- Richard Dawkins
- The Selfish Gene
- Terry Pratchett
- Moving Pictures
- Strata
- Yorick Wilks
- Machine Translation

The Inimitable Jeeves

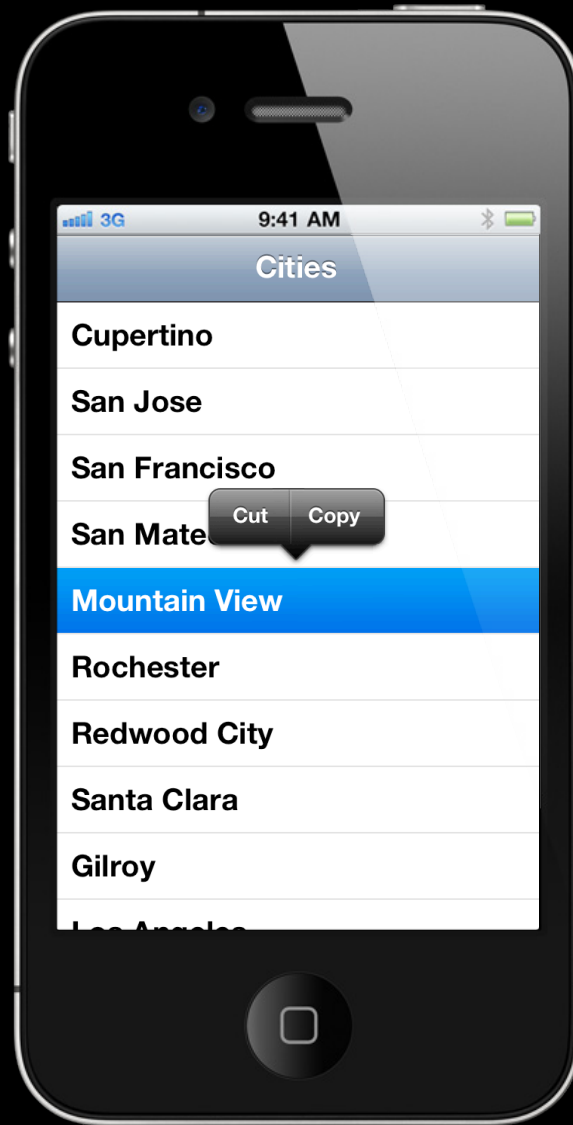
P. G. Wodehouse

May 17, 1923

Controlling View Controller Visibility

UISplitViewController delegate

- (BOOL)splitViewController:(UISplitViewController *)svc
shouldHideViewController:(UIViewController *)vc
inOrientation:(UIInterfaceOrientation)orientation;



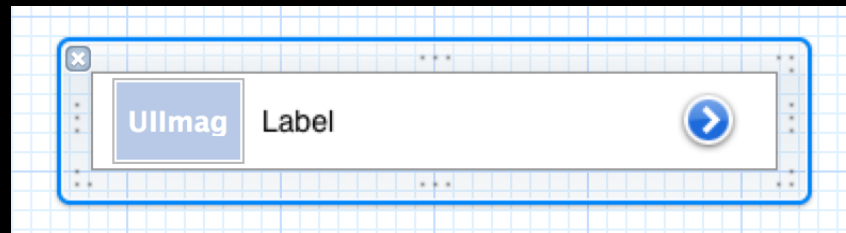
Copying and Pasting with Table View Cells

UITableView delegate

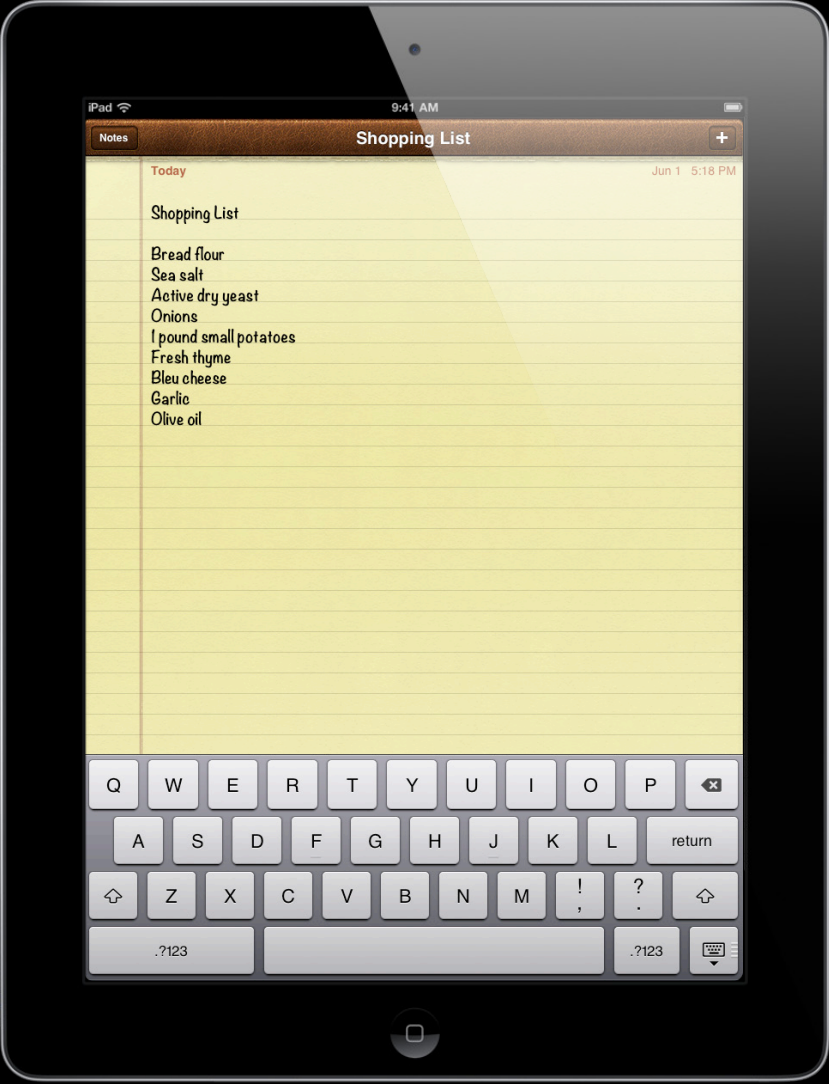
- (BOOL)tableView:(UITableView *)tv
shouldShowMenuForRowAtIndexPath:(NSIndexPath *)ip;
- (BOOL)tableView:(UITableView *)tv
canPerformAction:(SEL)action
forRowAtIndexPath:(NSIndexPath *)ip;
- (void)tableView:(UITableView *)tv
performAction:(SEL)action
forRowAtIndexPath:(NSIndexPath *)indexPath;

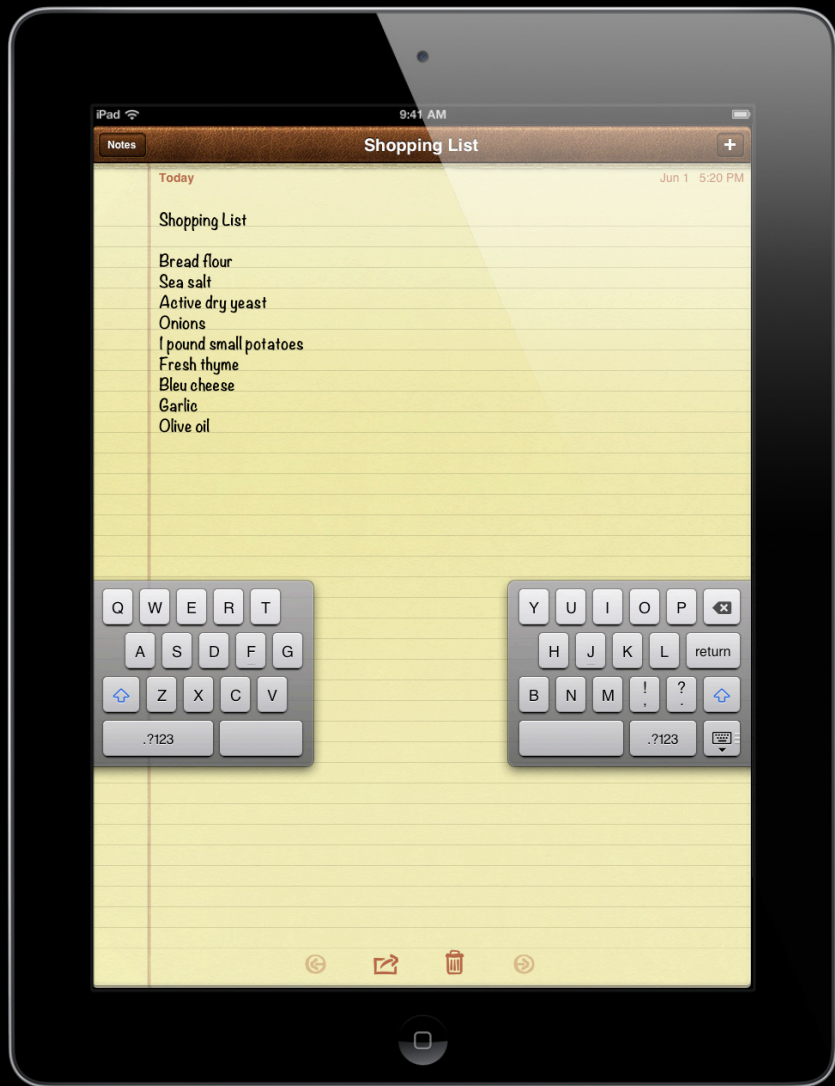
Reusing Cells with NIBs

UITableViewCell



```
- (void)registerNib:(UINib *)nib  
forCellReuseIdentifier:(NSString *)identifier;
```



Finding the Keyboard

UIWindow keyboard notifications

```
NSString *const UIKeyboardWillChangeFrameNotification;  
NSString *const UIKeyboardDidChangeFrameNotification;
```

Animating Images

UIImage

```
+ (UIImage *)animatedImageNamed:(NSString *)name
    duration:(NSTimeInterval)duration;

+ (UIImage *)animatedImageWithImages:(NSArray *)images
    duration:(NSTimeInterval)duration;

@property (nonatomic, readonly) NSArray *images;
@property (nonatomic, readonly) NSTimeInterval duration;
```

Stretching and Tiling Images

UIImage

```
-(UIImage *)resizableImageWithCapInsets:(UIEdgeInsets)i;
```

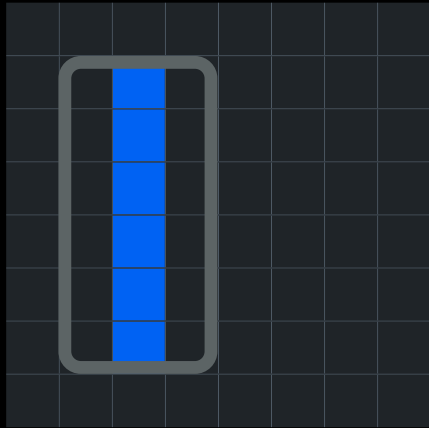


{0, 1, 0, 1}

Stretching and Tiling Images

UIImage

```
-(UIImage *)resizableImageWithCapInsets:(UIEdgeInsets)i;
```

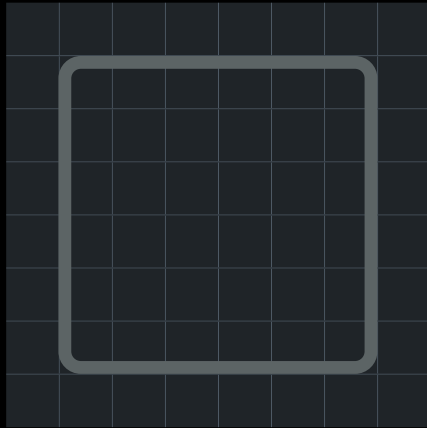


{0, 1, 0, 1}

Stretching and Tiling Images

UIImage

```
-(UIImage *)resizableImageWithCapInsets:(UIEdgeInsets)i;
```

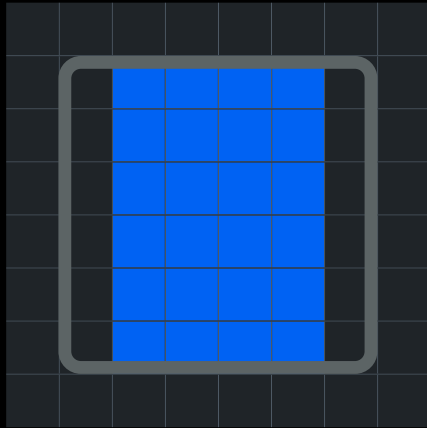


{0, 1, 0, 1}

Stretching and Tiling Images

UIImage

```
-(UIImage *)resizableImageWithCapInsets:(UIEdgeInsets)i;
```

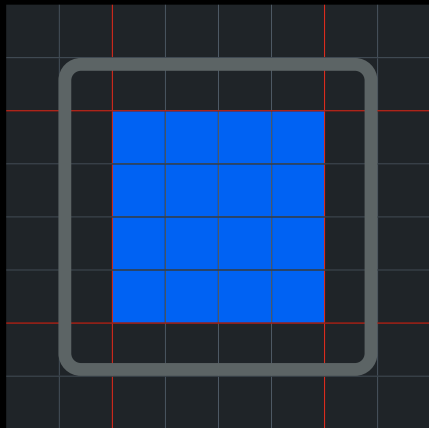


{0, 1, 0, 1}

Stretching and Tiling Images

UIImage

```
-(UIImage *)resizableImageWithCapInsets:(UIEdgeInsets)i;
```



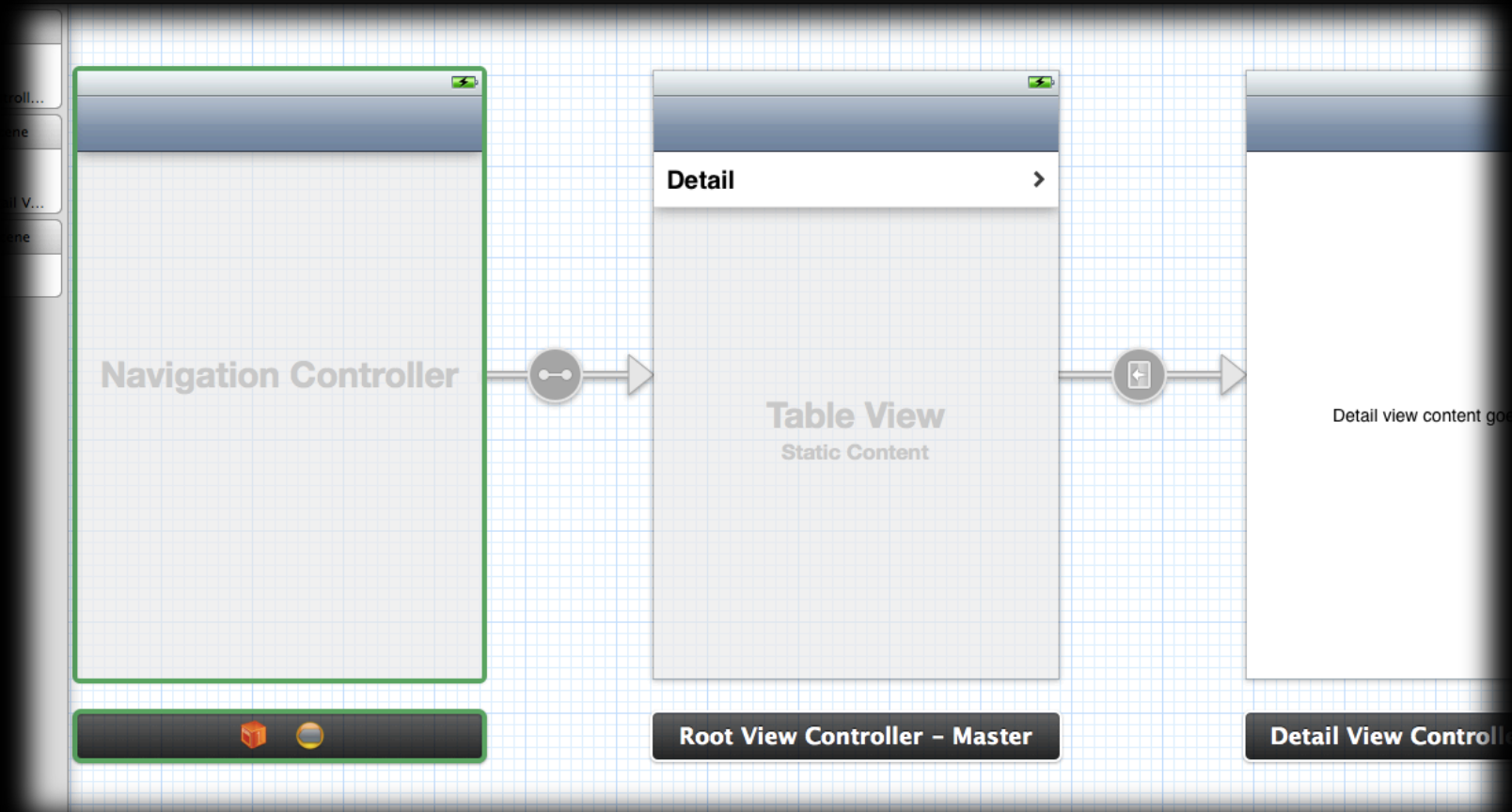
```
{1, 1, 1, 1}
```

```
+(UIImage *)animatedResizableImageNamed:(NSString *)name  
capInsets:(UIEdgeInsets)capInsets  
duration:(NSTimeInterval)duration;
```

```
- (void)onButtonTouch:(id)sender {
    UINavigationController *navC =
        [self navigationController];
    NewViewController *newVC = ...;
    [navC pushViewController:newVC animated:YES];
}
```

Storyboarding Your Application

UIStoryboard



Getting Storyboard Events

UIStoryboard

```
@property (readonly, retain) UIStoryboard *storyboard;
```

- (void)performSegueWithIdentifier:(NSString *)id
sender:(id)sender;
- (void)prepareForSegue:(UIStoryboardSegue *)segue
sender:(id)sender;

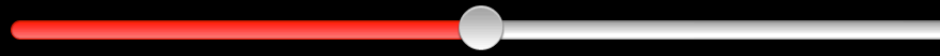
Getting Storyboard Events

UIStoryboard

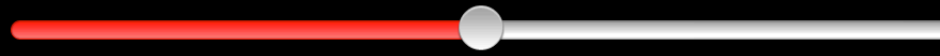
```
@property (readonly, retain) UIStoryboard *storyboard;
```

- (void)performSegueWithIdentifier:(NSString *)id
sender:(id)sender;
- (void)prepareForSegue:(UIStoryboardSegue *)segue
sender:(id)sender;

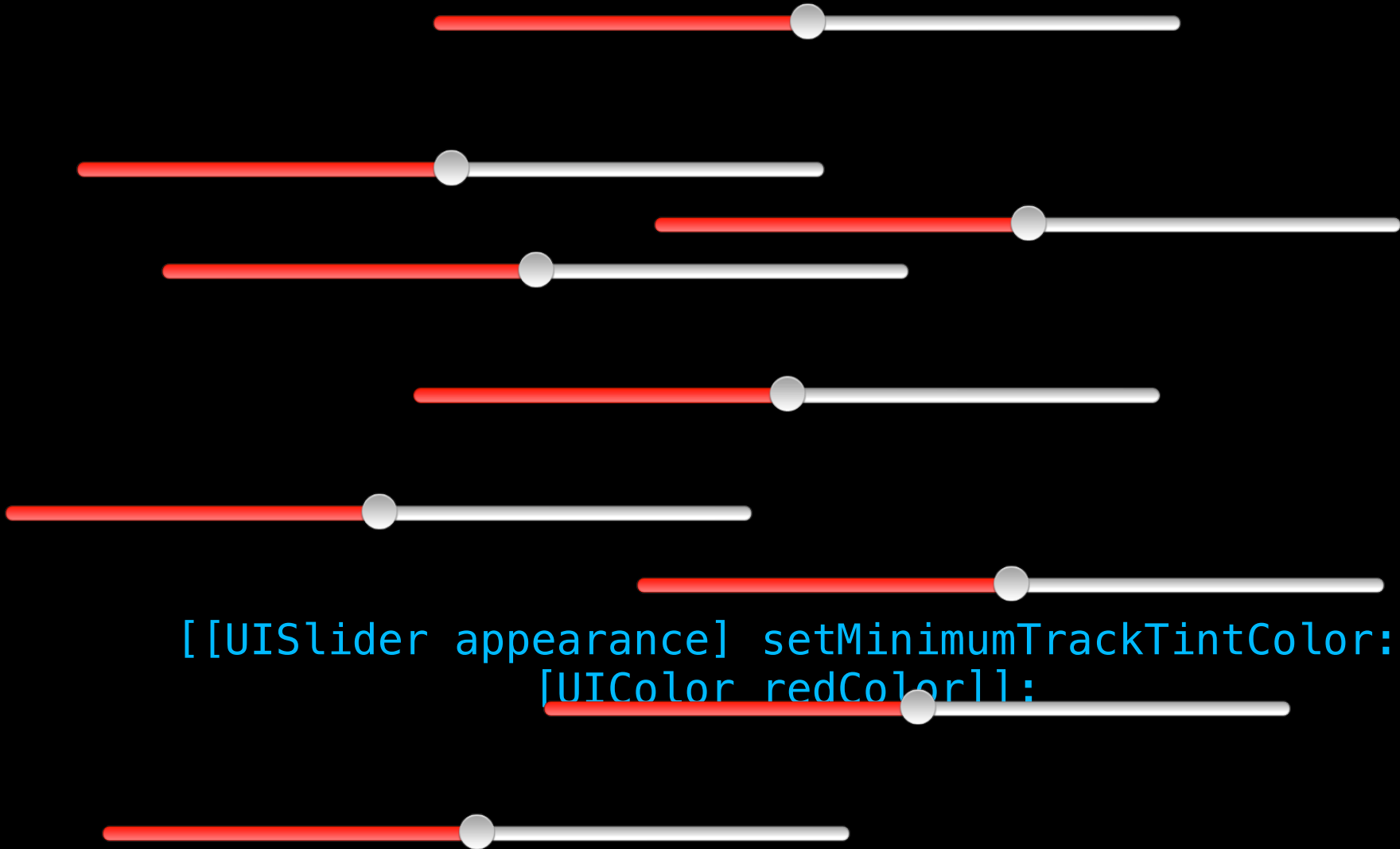




```
[aSlider setMinimumTrackTintColor:[UIColor redColor]];
```



```
[[UISlider appearance] setMinimumTrackTintColor:  
    [UIColor redColor]];
```

```
[[UISlider appearance] setMinimumTrackTintColor:  
[UIColor redColor];
```

```
[[UISlider appearance] setMinimumTrackTintColor:  
    [UIColor redColor]];
```

Appearance Proxy

UIAppearance.h

```
@protocol UIAppearance <NSObject>
```

```
+ (id)appearance;
```

```
...
```

```
@end
```

Appearance Proxy

UIAppearance.h

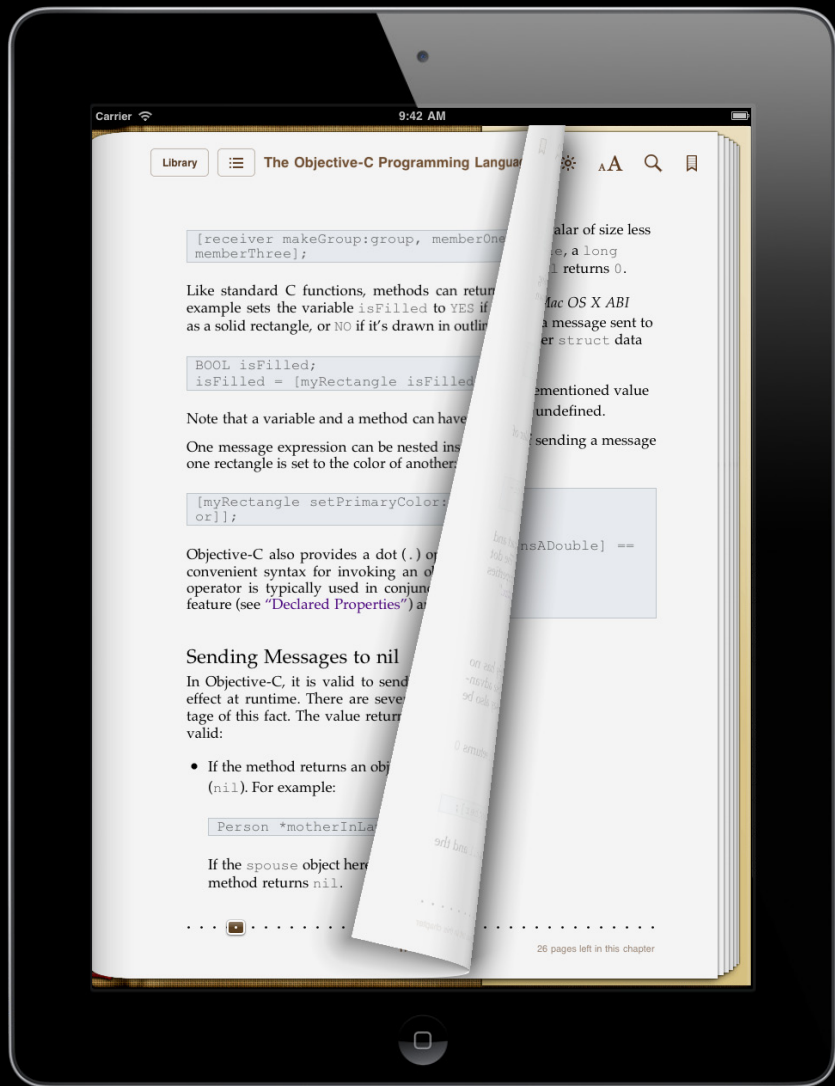
```
@protocol UIAppearance <NSObject>
```

```
+ (id)appearance;
```

```
...
```

```
@end
```

```
#define UI_APPEARANCE_SELECTOR
```



Carrier 9:42 AM

Library The Objective-C Programming Language

```
{receiver makeGroup:group, memberOne:memberOne, memberTwo:memberTwo, memberThree:memberThree};
```

Like standard C functions, methods can return a value. For example, the `isFilled` method in the following example sets the variable `isFilled` to YES if the rectangle is drawn in outline, and NO if it's drawn in solid.

```
BOOL isFilled;
isFilled = [myRectangle isFilled];
```

Note that a variable and a method can have the same name.

One message expression can be nested inside another. For example, the following message expression sets the color of one rectangle to the color of another:

```
[myRectangle setPrimaryColor:[anotherRectangle primaryColor]];
```

Objective-C also provides a dot (`.`) operator as a convenient syntax for invoking an object's method. The dot operator is typically used in conjunction with the `isKindOfClass:` method (see "Declared Properties") and the `isKindOfClass:` method.

Sending Messages to nil

In Objective-C, it is valid to send a message to `nil`. This has no effect at runtime. There are several reasons for this. One of the advantages of this fact is that the value returned by a message sent to `nil` is always `nil`:

- If the method returns an object, the object is `nil`. For example:

```
Person *motherInLaw = [person motherInLaw];
```

If the `spouse` object here is `nil`, the `motherInLaw` method returns `nil`.

26 pages left in this chapter

Demo

Creating a UIPageViewController

```
- (id)initWithTransitionStyle:  
    (UIPageViewControllerTransitionStyle)style  
    navigationOrientation:  
    (UIPageViewControllerNavigationOrientation)orientation  
    options:(NSDictionary *)options;
```

```
id <UIPageViewControllerDelegate> delegate;  
id <UIPageViewControllerDataSource> dataSource;
```

Finding Out What Happened

UIPageViewControllerDelegate

- (void)pageViewController:(UIPageViewController *)pvc
 didFinishAnimating:(BOOL)finished
 previousViewControllers:(NSArray *)prevViewCs
 transitionCompleted:(BOOL)completed;

Finding Out What Happened

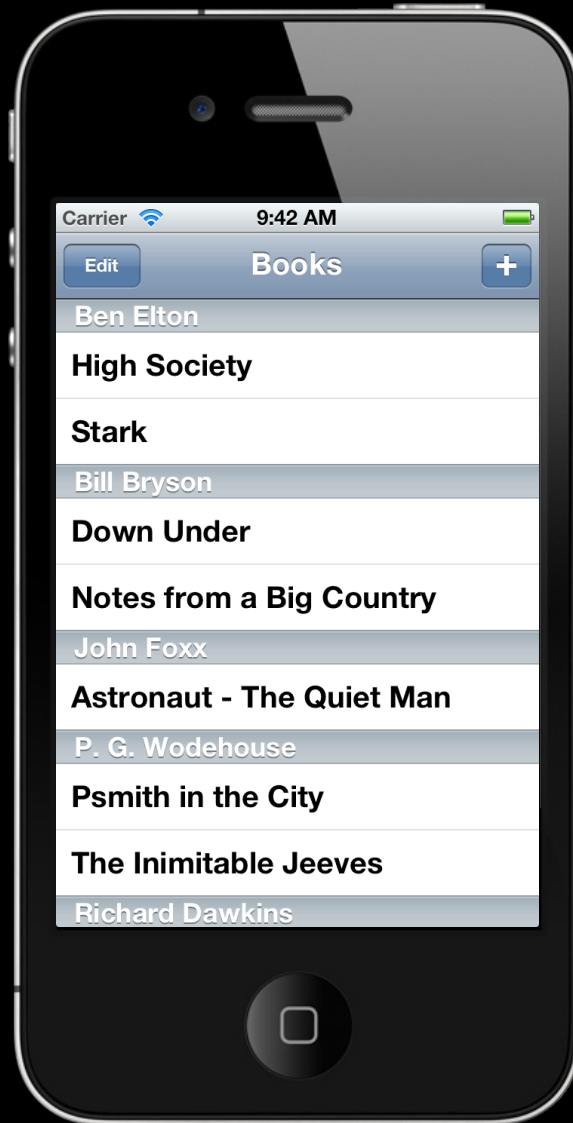
UIPageViewControllerDelegate

- (void)pageViewController:(UIPageViewController *)pvc
didFinishAnimating:(BOOL)finished
previousViewControllers:(NSArray *)prevViewCs
transitionCompleted:(BOOL)completed;
- (UIPageViewControllerSpineLocation)
pageViewController:(...)pvc
spineLocationForInterfaceOrientation:(...)o;

Getting View Controllers

UIPageViewControllerDataSource

```
- (UIViewController *)  
    pageViewController:(UIPageViewController *)pvc  
viewControllerBeforeViewController:(UIViewController*)c;  
  
- (UIViewController *)  
    pageViewController:(UIPageViewController *)pvc  
viewControllerAfterViewController:(UIViewController *)c;
```





Carrier 9:42 AM

Books Edit +

- Ben Elton
- High Society**
- Stark**
- Bill Bryson
- Down Under**
- Notes from a Big Country**
- John Fox
- Astronaut - The Quiet Man**
- P. G. Wodehouse
- Psmith in the City**
- The Inimitable Jeeves**
- Richard Dawkins
- The Selfish Gene**
- Terry Pratchett
- Moving Pictures**
- Strata**
- Yorick Wilks
- Machine Translation**

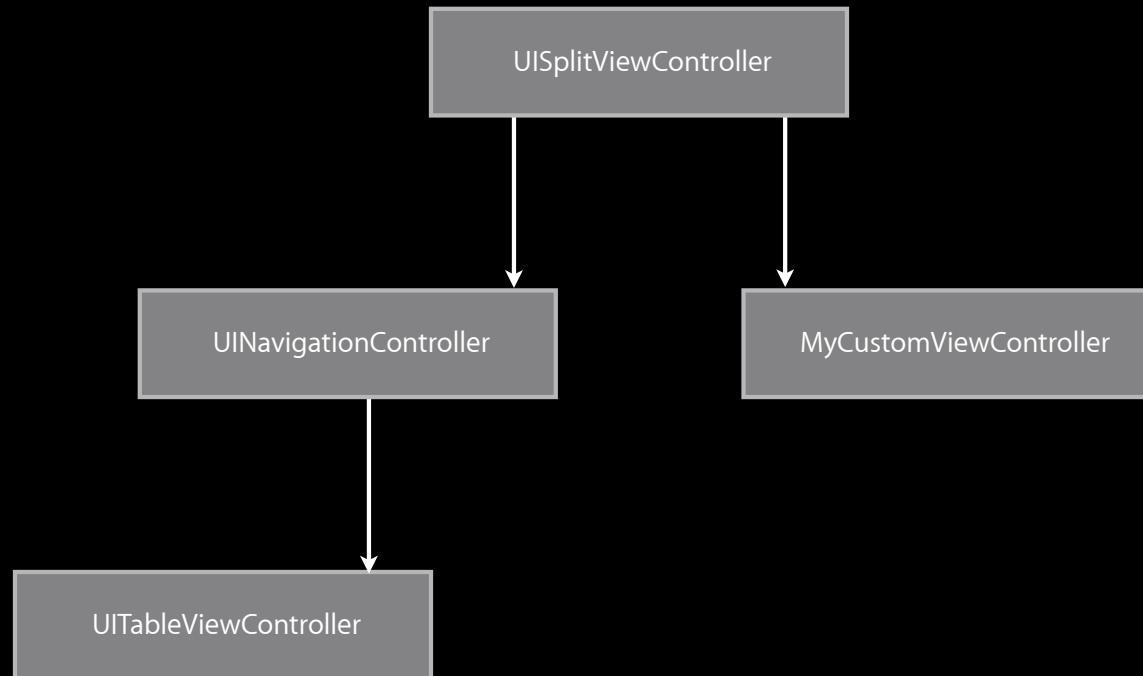
The Inimitable Jeeves

P. G. Wodehouse

May 17, 1923

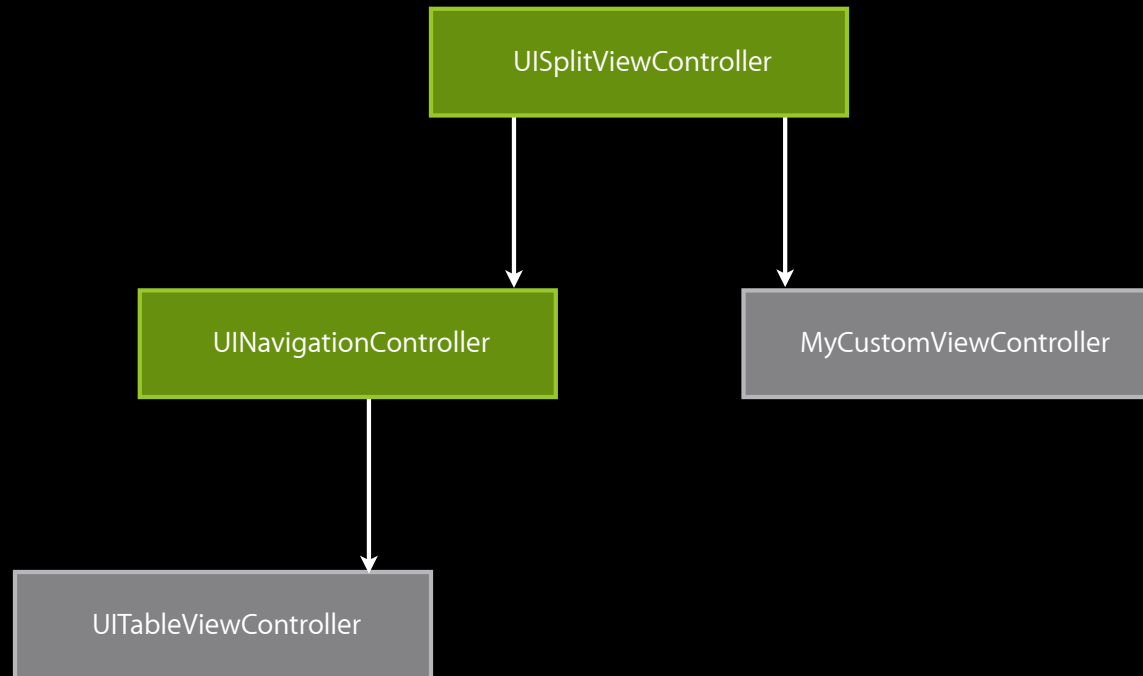
View Controller Containment

UIViewController



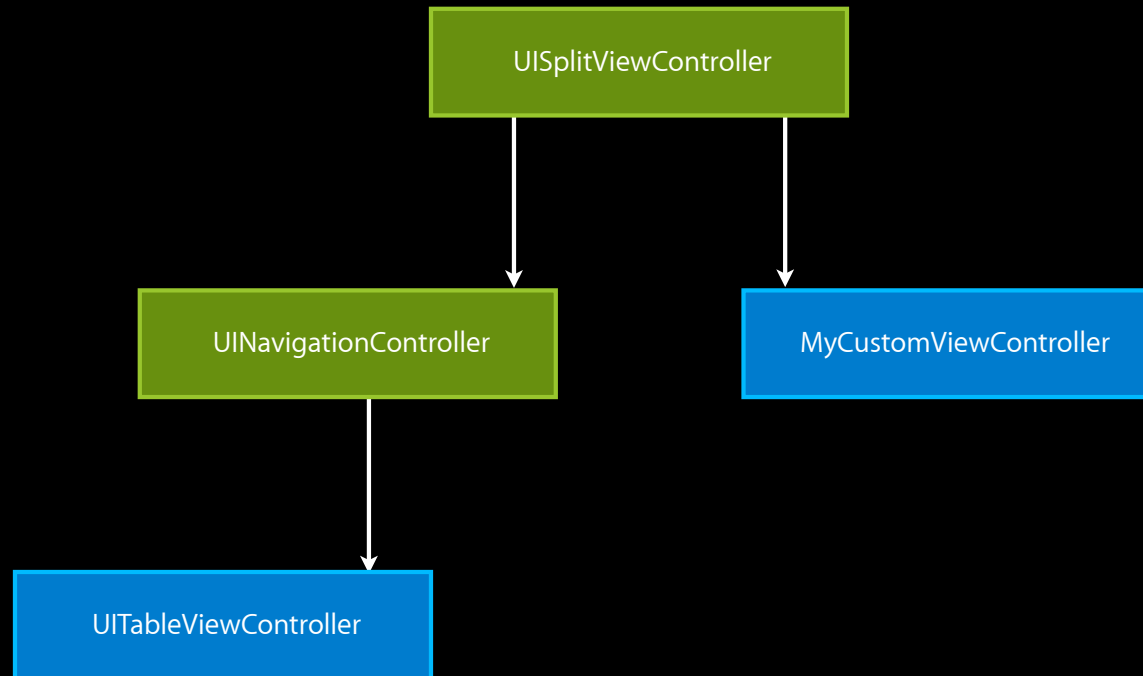
View Controller Containment

UIViewController



View Controller Containment

UIViewController



Writing a Container

UIViewController

```
-(void)addChildViewController:(UIViewController *)cvc;  
-(void)removeFromParentViewController;  
  
@property (readonly) NSArray *childViewControllers;
```


Writing a Container

UIViewController

```
-(void)transitionFromViewController:(UIViewController *)fvc  
    toViewController:(UIViewController *)toViewController  
    duration:(NSTimeInterval)duration  
    options:(UIViewAnimationOptions)options  
    animations:(void (^)(void))animations  
    completion:(void (^)(BOOL finished))completion;
```

Working with Documents

UIDocument

```
- (id)initWithFileURL:(NSURL *)url;

@property (readonly) NSURL *fileURL;
@property (readonly, copy) NSString *localizedName;
@property (readonly, copy) NSString *fileType;
@property (copy) NSDate *fileModificationDate;

@property (retain) NSUndoManager *undoManager;
```

Working with Documents

UIDocument

- (void)openWithCompletionHandler:
 (void (^)(BOOL success))completionHandler;
- (void)closeWithCompletionHandler:
 (void (^)(BOOL success))completionHandler;
- (BOOL)loadFromContents:(id)contents
 ofType:(NSString *)typeName
 error:(NSError **)outError;
- (id)contentsForType:(NSString *)typeName
 error:(NSError **)outError;

Working with Document Errors

UIDocument

- (void)handleError:(NSError *)error
userInteractionPermitted:(BOOL)interactionPermitted;
- (void)finishedHandlingError:(NSError *)error
recovered:(BOOL)recovered;
- (void)userInteractionNoLongerPermittedForError:
(NSError *)error;

Working with Document States

UIDocument

```
enum {
    UIDocumentStateNormal,
    UIDocumentStateClosed = 1 << 0,
    UIDocumentStateInConflict = 1 << 1,
    UIDocumentStateSavingError = 1 << 2,
    UIDocumentStateEditingDisabled = 1 << 3
};
typedef NSInteger UIDocumentState;

@property (readonly) UIDocumentState documentState;
NSString *const UIDocumentStateChangedNotification;
```

AssetsLibrary

Managing libraries and albums

- ALAssetsLibrary

- (void)addAssetsGroupAlbumWithName:(NSString *)name
resultBlock:(ALAssetsLibraryGroupResultBlock)r;

- ALAssetsGroup

- (BOOL)addAsset:(ALAsset *)asset;

AssetsLibrary

Modifying assets

```
-(void)writeModifiedImageDataToSavedPhotosAlbum:(NSData *)data  
    metadata:(NSDictionary *)metadata  
    completionBlock:  
        (ALAssetsLibraryWriteImageCompletionBlock)block;
```

```
-(void)setImageData:(NSData *)data  
    metadata:(NSDictionary *)metadata  
    completionBlock:  
        (ALAssetsLibraryWriteImageCompletionBlock)block;
```

GameKit



- Default leaderboard support
- Player photos
- Turn-based multiplayer games

Core Data



- Compound index support for entities
- Incremental stores
- Store-specific migrations
- iCloud support

What's New in Core Data on iOS

Mission
Tuesday 3:15–4:15PM

NewsstandKit

Newspaper and magazine subscriptions



- Library per application
- Managing issues
- Downloading new issues
 - Per-issue assets
 - Background downloading

Building Newsstand Apps

Marina
Tuesday 4:30–5:30PM

Twitter



- Timeline
- Direct messages
- Searching
- Authorization

Twitter Integration

Presidio
Thursday 2:00–3:00PM

CoreImage

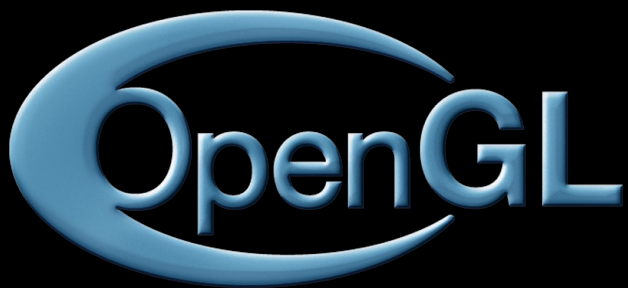


- Filters
- Vectors
- Colors
- Detectors
 - Faces
 - Image orientation

Using Core Image on iOS & Mac OS X

Mission
Thursday 2:00–3:00PM

GLKit



- Objective C
- Lower barrier to OpenGL
- GLKView
- GLKViewController

Advances in OpenGL ES for iOS 5

Mission
Wednesday 2:00–3:00PM

Labs

Labs

Tuesday

2:00PM

Wednesday

2:0PM

Thursday

9:00PM

Friday

9:00PM

Related Sessions

iOS Printing System

Russian Hill
Tuesday 3:15–4:15PM

Polishing Your App: Tips and Tricks

Mission
Tuesday 2:00–3:00PM

More Information

Bill Dudney

Application Frameworks Evangelist
dudney@apple.com

Documentation

iOS Dev Center
<http://developer.apple.com/devcenter/ios/>

Apple Developer Forums

<http://devforums.apple.com>

