
iAd Framework Reference

User Experience



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Introduction

Framework	/System/Library/Frameworks/AdLib.framework
Header file directories	/System/Library/Frameworks/AdLib.framework/Headers
Companion guide	iAd Programming Guide
Declared in	ADBannerView.h

iAd allows your application to earn revenue by displaying advertisements to the user. Your application dedicates a portion of its user interface to display banner advertisements.

While you are developing your application, iAd sends test advertisements to help you verify your implementation is correct. To receive advertisements from iAd in a shipping application, you need to select the advertising network option for your application. Information on how to enable advertising in your shipping application will be available prior to the release of iOS 4.0.

Classes

ADBannerView Class Reference

Inherits from	UIView : UIResponder : NSObject
Conforms to	NSCoding (UIView) NSObject (NSObject)
Framework	/System/Library/Frameworks/iAd.framework
Availability	Available in iOS 4.0 and later.
Declared in	ADBannerView.h
Companion guide	iAd Programming Guide

Overview

The `ADBannerView` class provides a view that displays banner advertisements to the user. When the user taps a banner view, the view triggers an action programmed into the advertisement. For example, an advertisement might show a movie, present a modal advertisement, or launch Safari to show a webpage. Your application is notified when an action starts and stops, but does not otherwise interact with the advertisement. You receive revenue when users see new advertisements or trigger their actions.

The banner view's delegate is called when a banner view cycles to show a new advertisement as well as when the user interacts with the banner view. For example, your delegate typically pauses your application's activities when a user taps an advertisement and restores those activities when the user finishes interacting with the advertisement.

A banner view must always use one of the standard sizes defined in “[Content Size Identifiers](#)” (page 14). This is to ensure that the advertisement is drawn correctly. You configure the banner view's `requiredContentSizeIdentifiers` (page 12) property with all the possible sizes your view may take in your application. To change the size of the banner view, set the `currentContentSizeIdentifier` (page 11) to match one of the size identifiers included in that set.

Tasks

Setting and Getting the Delegate

`delegate` (page 12) *property*

The delegate of the banner view.

Configuring the Advertising Shown in a Banner View

`advertisingSection` (page 10) *property*

Reserved for future use.

`requiredContentSizeIdentifiers` (page 12) *property*

A set of identifiers for the sizes of advertisements that the banner view can display.

Resizing a Banner View

`currentContentSizeIdentifier` (page 11) *property*

A string that identifies the current size of the advertisement displayed in the banner view.

+ `sizeFromBannerContentSizeIdentifier:` (page 13)

Converts a banner content size identifier into its physical size.

Determining If a Banner View Is Showing an Advertisement

`bannerLoaded` (page 11) *property*

A Boolean value that states whether the banner view has downloaded an advertisement. (read-only)

Banner Actions

`bannerViewActionInProgress` (page 11) *property*

A Boolean value that states whether the banner is currently executing an user-triggered action. (read-only)

- `cancelBannerViewAction` (page 13)

Cancels an executing banner view action.

Properties

For more about Objective-C properties, see “Properties” in *The Objective-C Programming Language*.

advertisingSection

Reserved for future use.

```
@property(nonatomic, copy) NSString *advertisingSection
```

Discussion

This property is reserved for future use.

Availability

Available in iOS 4.0 and later.

Declared In

ADBannerView.h

bannerLoaded

A Boolean value that states whether the banner view has downloaded an advertisement. (read-only)

```
@property(n nonatomic, readonly, getter=isBannerLoaded) BOOL bannerLoaded
```

Discussion

Banner views automatically download new advertisements in the background. This property returns YES if an advertisement is loaded; NO otherwise.

Availability

Available in iOS 4.0 and later.

Declared In

ADBannerView.h

bannerViewActionInProgress

A Boolean value that states whether the banner is currently executing an user-triggered action. (read-only)

```
@property(n nonatomic, readonly, getter=isBannerViewActionInProgress) BOOL  
    bannerViewActionInProgress
```

Discussion

Advertisements have an action that is triggered when the user taps the banner. Some actions remain in the application, covering the application's user interface until the action completes. The value of this property is YES when such an action is running; otherwise it is NO.

Your application should avoid polling this property. Instead, implement the delegate methods to detect when an action begins or ends.

Availability

Available in iOS 4.0 and later.

Declared In

ADBannerView.h

currentContentSizeIdentifier

A string that identifies the current size of the advertisement displayed in the banner view.

```
@property (n nonatomic, copy) NSString *currentContentSizeIdentifier
```

Discussion

Your application should never directly change the size of the banner view. Instead, set the `currentContentSizeIdentifier` property to a known advertising size. The view is automatically resized to match the new content size. The default value is `ADBannerContentSizeIdentifier320x50` (page 14), which corresponds to an image 320 points by 50 points in size.

The identifier placed in the `currentContentSizeIdentifier` property must be included in the set of identifiers stored in the `requiredContentSizeIdentifiers` property. This ensures that an advertisement displayed by the view can still be displayed after the view's size changes. Setting a value not included in the `requiredContentSizeIdentifiers` property causes an exception to be thrown.

Availability

Available in iOS 4.0 and later.

See Also

[@property requiredContentSizeIdentifiers](#) (page 12)

Declared In

ADBannerView.h

delegate

The delegate of the banner view.

```
@property(n nonatomic, assign) id<ADBannerViewDelegate> delegate
```

Discussion

Important: Before releasing an instance of `ADBannerView` for which you have set a delegate, you must first set its delegate property to `nil`. This can be done, for example, in your `dealloc` method.

Availability

Available in iOS 4.0 and later.

Declared In

ADBannerView.h

requiredContentSizeIdentifiers

A set of identifiers for the sizes of advertisements that the banner view can display.

```
@property(n nonatomic, copy) NSSet *requiredContentSizeIdentifiers
```

Discussion

Banner views must always have dimensions that match the size of a known advertising format. Your application sets the `requiredContentSizeIdentifiers` property so that the banner view can download advertisements that provide artwork for those sizes. The known sizes are listed in [“Content Size Identifiers”](#) (page 14). The default value is `ADBannerContentSizeIdentifier320x50` (page 14), which corresponds to an image 320 points by 50 points in size.

If the set includes a single identifier, then advertisements downloaded by the banner view have a banner image with that size. If the set includes multiple identifiers, advertisements downloaded by the banner view include images for *all* sizes specified in the set. This allows the banner view to be resized without having to download additional images. Do not include identifiers for sizes that your application does not use, as it may unnecessarily restrict the inventory of advertisements available to your application.

Setting the `requiredContentSizeIdentifiers` property does not resize the banner view. To change the size of the banner view, your application sets the `currentContentSizeIdentifier` property.

Availability

Available in iOS 4.0 and later.

See Also

[@property currentContentSizeIdentifier](#) (page 11)

Declared In

ADBannerView.h

Class Methods

sizeFromBannerContentSizeIdentifier:

Converts a banner content size identifier into its physical size.

```
+ (CGSize)sizeFromBannerContentSizeIdentifier:(NSString *)contentSizeIdentifier
```

Parameters

contentSizeIdentifier

A string that identifies a banner content size. See “[Content Size Identifiers](#)” (page 14) for possible values.

Return Value

The dimensions of that content size in points.

Availability

Available in iOS 4.0 and later.

Declared In

ADBannerView.h

Instance Methods

cancelBannerViewAction

Cancels an executing banner view action.

```
- (void)cancelBannerViewAction
```

Discussion

A banner view action can cover your application’s user interface. However, your application continues to run, and receives events normally. If your application receives an event that requires the user’s attention, it can programmatically cancel the action and uncover its interface by calling `cancelBannerViewAction`. Canceling actions frequently can cause a loss of revenue for your application.

Availability

Available in iOS 4.0 and later.

Declared In

ADBannerView.h

Constants

Content Size Identifiers

These strings are used to identify the size of an advertisement.

```
extern NSString * const ADBannerContentSizeIdentifier320x50;  
extern NSString * const ADBannerContentSizeIdentifier480x32;
```

Constants

ADBannerContentSizeIdentifier320x50

Indicates that the banner view is 320 points by 50 points in size. This size is used on iPhone for portrait advertisements.

Available in iOS 4.0 and later.

Declared in ADBannerView.h.

ADBannerContentSizeIdentifier480x32

Indicates that the banner view is 480 points by 32 points in size. This size is used on iPhone for landscape advertisements.

Available in iOS 4.0 and later.

Declared in ADBannerView.h.

ADErrorDomain

This constant defines the iAd framework error domain.

```
extern NSString * const ADErrorDomain;
```

Constants

ADErrorDomain

Indicates an error occurred in iAd.

Available in iOS 4.0 and later.

Declared in ADBannerView.h.

ADError

Error codes for the iAd error domain.

```
enum {  
    ADErrorUnknown = 0,  
    ADErrorServerFailure = 1,  
    ADErrorLoadingThrottled = 2,  
    ADErrorInventoryUnavailable = 3  
};  
typedef NSUInteger ADError;
```

Constants

ADErrorUnknown

Indicates that an unknown or unexpected error occurred.

Available in iOS 4.0 and later.

Declared in `ADBannerView.h`.

ADErrorServerFailure

Indicates that the connection to the advertisements server failed.

Available in iOS 4.0 and later.

Declared in `ADBannerView.h`.

ADErrorLoadingThrottled

Indicates that the download from the advertisements server is currently being throttled.

Available in iOS 4.0 and later.

Declared in `ADBannerView.h`.

ADErrorInventoryUnavailable

Indicates that no advertisements are currently available to download.

Available in iOS 4.0 and later.

Declared in `ADBannerView.h`.

Availability

Available in iOS 4.0 and later.

Declared In

`ADBannerView.h`

Protocols

ADBannerViewDelegate Protocol Reference

Conforms to	NSObject
Framework	/System/Library/Frameworks/iAd.framework
Availability	Available in iOS 4.0 and later.
Declared in	ADBannerView.h
Companion guide	iAd Programming Guide

Overview

The `ADBannerViewDelegate` protocol is implemented by an object to react to changes in an `ADBannerView` object. The banner view calls its delegate when a new advertisement is loaded, when the user interacts with an advertisement, and when errors occur.

Tasks

Detecting When New Advertisements Are Shown

- [bannerViewDidLoadAd:](#) (page 21)
Called when a new banner advertisement is loaded.

Detecting When a User Interacts With an Advertisement

- [bannerViewActionShouldBegin:willLeaveApplication:](#) (page 20)
Called before a banner view executes an action.
- [bannerViewActionDidFinish:](#) (page 20)
Called after a banner view finishes executing an action that covered your application's user interface.

Detecting Errors

- [bannerView:didFailToReceiveAdWithError:](#) (page 20)
Called when a banner view fails to load a new advertisement.

Instance Methods

bannerView:didFailToReceiveAdWithError:

Called when a banner view fails to load a new advertisement.

```
- (void)bannerView:(ADBannerView *)banner didFailToReceiveAdWithError:(NSError *)error
```

Parameters

banner

The banner view that failed to load an advertisement.

error

The error object that describes the problem.

Availability

Available in iOS 4.0 and later.

Declared In

ADBannerView.h

bannerViewActionDidFinish:

Called after a banner view finishes executing an action that covered your application's user interface.

```
- (void)bannerViewActionDidFinish:(ADBannerView *)banner
```

Parameters

banner

The banner view that finished executing an action.

Discussion

If your delegate paused activities before allowing an action to run, it should resume those activities when this method is called.

Availability

Available in iOS 4.0 and later.

See Also

- [bannerViewActionShouldBegin:willLeaveApplication:](#) (page 20)

Declared In

ADBannerView.h

bannerViewActionShouldBegin:willLeaveApplication:

Called before a banner view executes an action.

```
- (BOOL)bannerViewActionShouldBegin:(ADBannerView *)banner  
willLeaveApplication:(BOOL)willLeave
```

Parameters*banner*

The banner view that the user tapped.

willLeave

YES if another application will be launched to execute the action; NO if the action is going to be executed inside your application.

Return Value

Your delegate returns YES if the banner action should execute; NO to prevent the banner action from executing.

Discussion

This method is called when the user taps the banner view. Your application controls whether the action is triggered. To allow the action to be triggered, return YES. To suppress the action, return NO. Your application should almost always allow actions to be triggered; preventing actions may alter the advertisements your application sees and reduce the revenue your application earns through iAd.

If the *willLeave* parameter is YES, then your application is moved to the background shortly after this method returns. In this situation, your method implementation does not need to perform additional work. If *willLeave* is set to NO, then the triggered action will cover your application's user interface to show the advertising action. Although your application continues to run normally, your implementation of this method should disable activities that require user interaction while the action is executing. For example, a game might pause its game play until the user finishes watching the advertisement.

Availability

Available in iOS 4.0 and later.

See Also

- [bannerViewActionDidFinish:](#) (page 20)

Declared In

ADBannerView.h

bannerViewDidLoadAd:

Called when a new banner advertisement is loaded.

```
- (void)bannerViewDidLoadAd:(ADBannerView *)banner
```

Parameters*banner*

The banner view that loaded a new advertisement.

Discussion

Your application implements this method to be notified when a new advertisement is ready for display.

Availability

Available in iOS 4.0 and later.

Declared In

ADBannerView.h

Document Revision History

This table describes the changes to *iAd Framework Reference*.

Date	Notes
2010-06-14	New document describing classes in the iAd framework, which are used to display advertisements to users.

REVISION HISTORY

Document Revision History