

iAd Integration and Best Practices

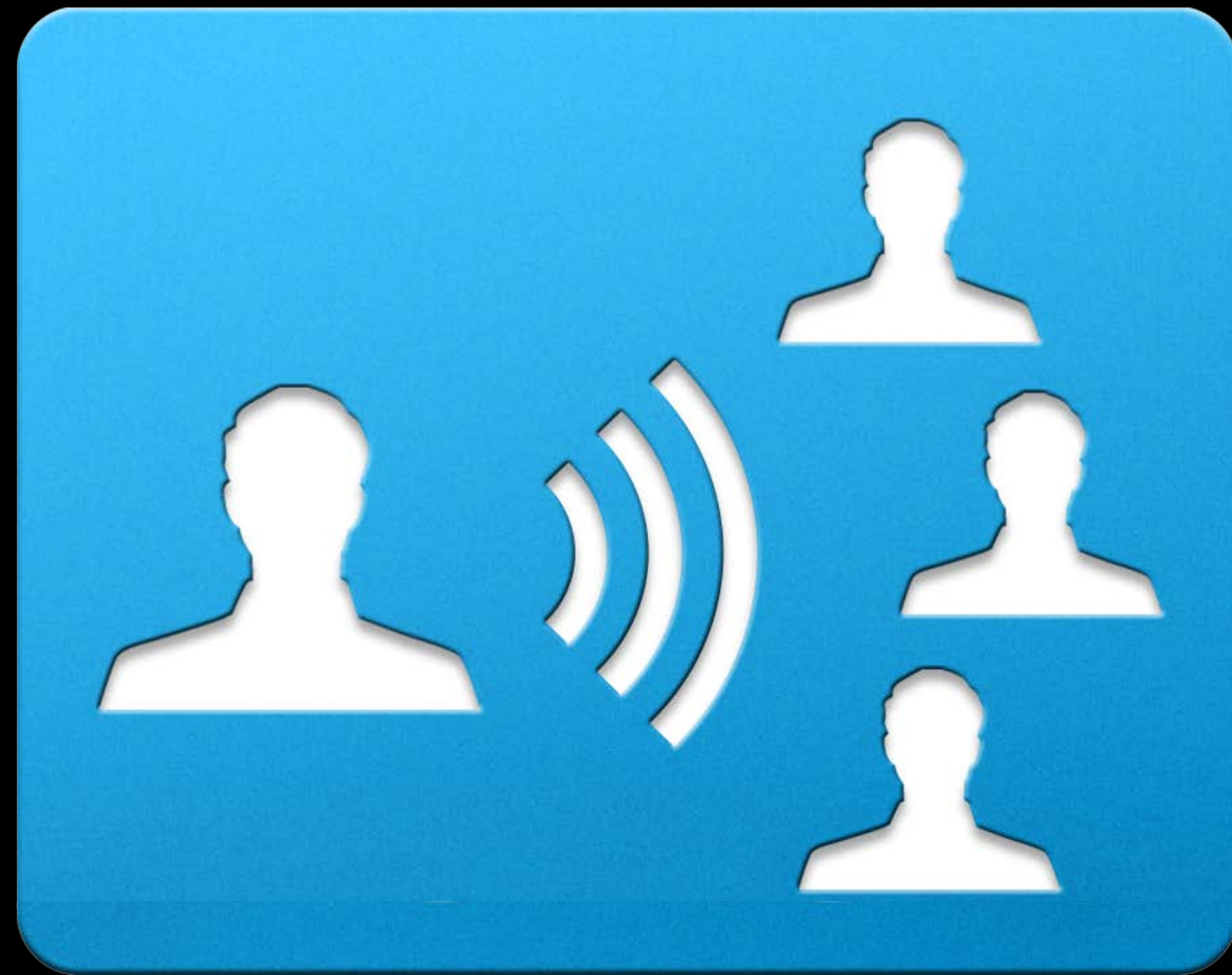
Session 613

Nathan de Vries

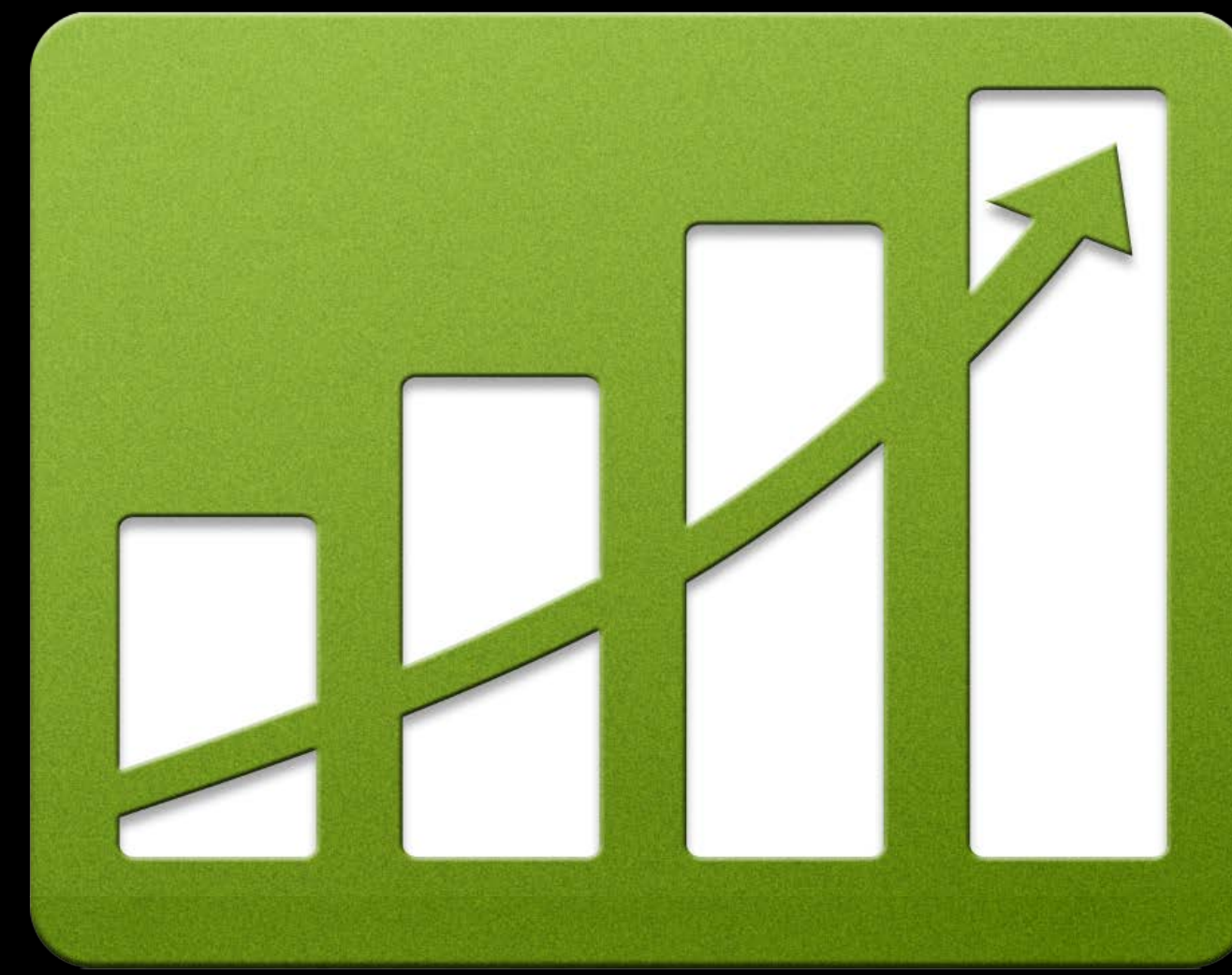
iOS Apps and Frameworks

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

Apple iAd



Promotion



Revenue

 iAd



Revenue

Developer Benefits

Core Concepts

Optimizing Ad Performance

Joining iAd App Network

App Integration

Developer Benefits

Core Concepts

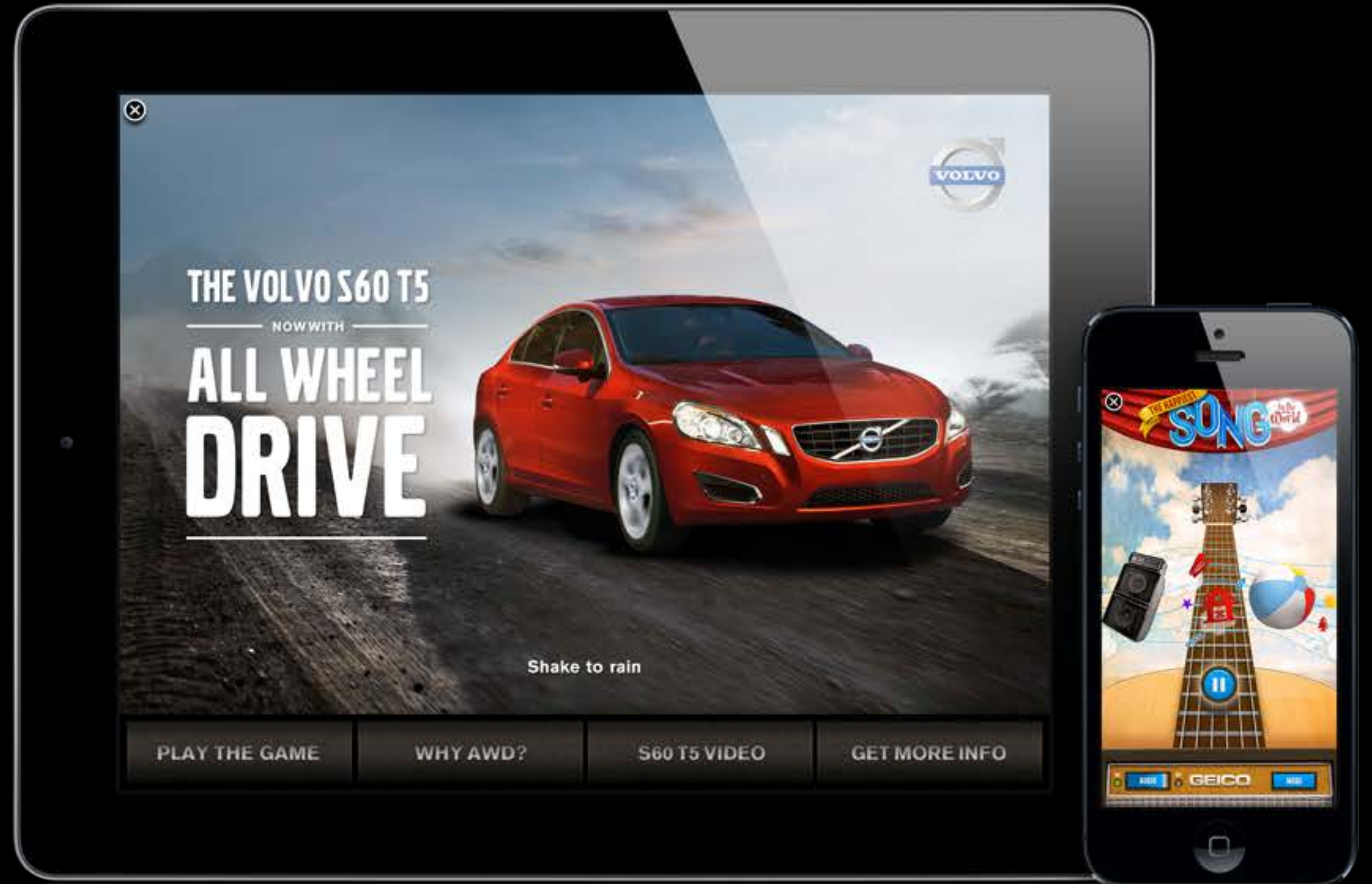
Optimizing Ad Performance

Joining iAd App Network

App Integration

Developer Benefits

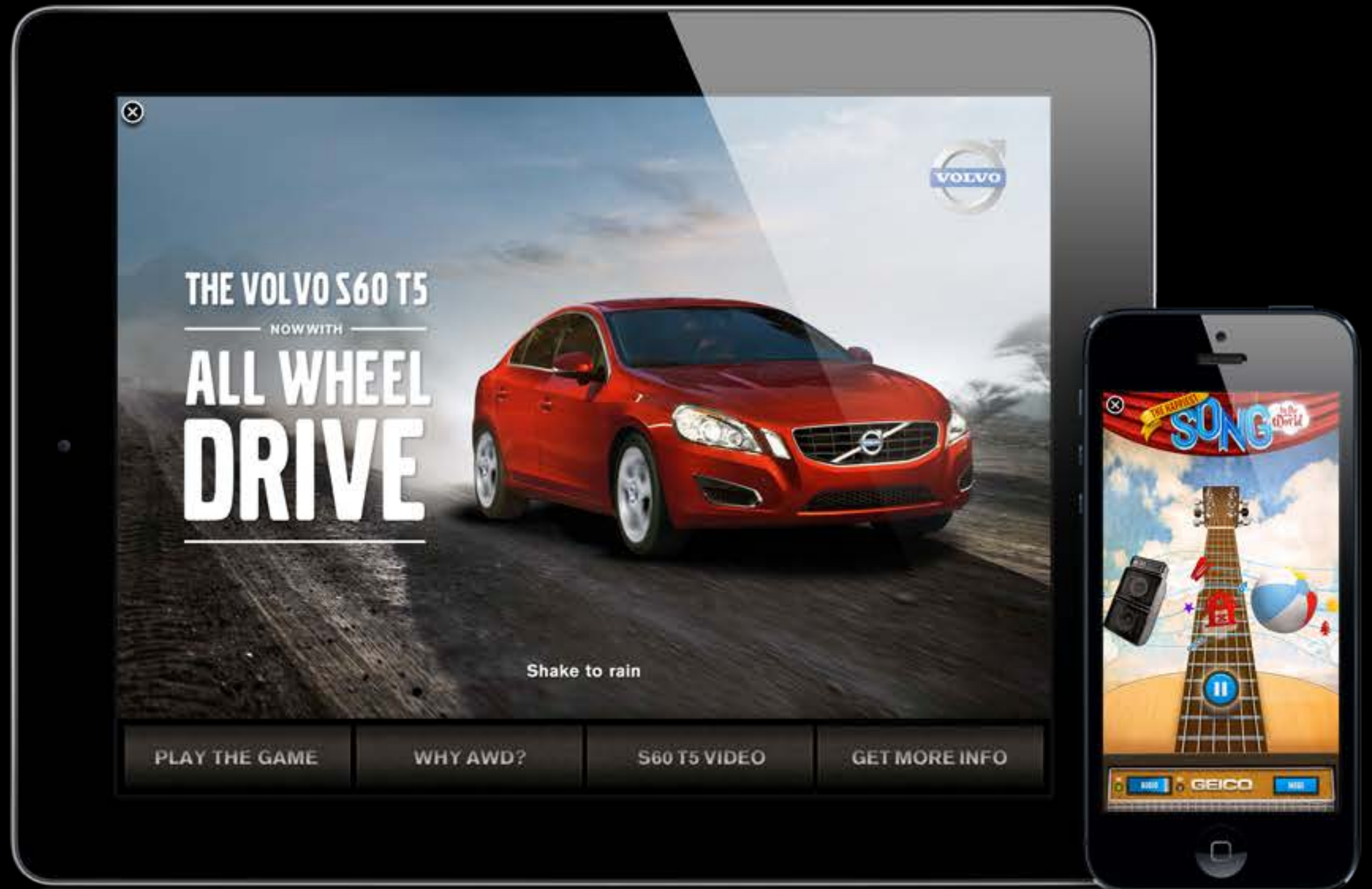
Delights your customers



Developer Benefits

Delights your customers

- High production values



Developer Benefits

Delights your customers

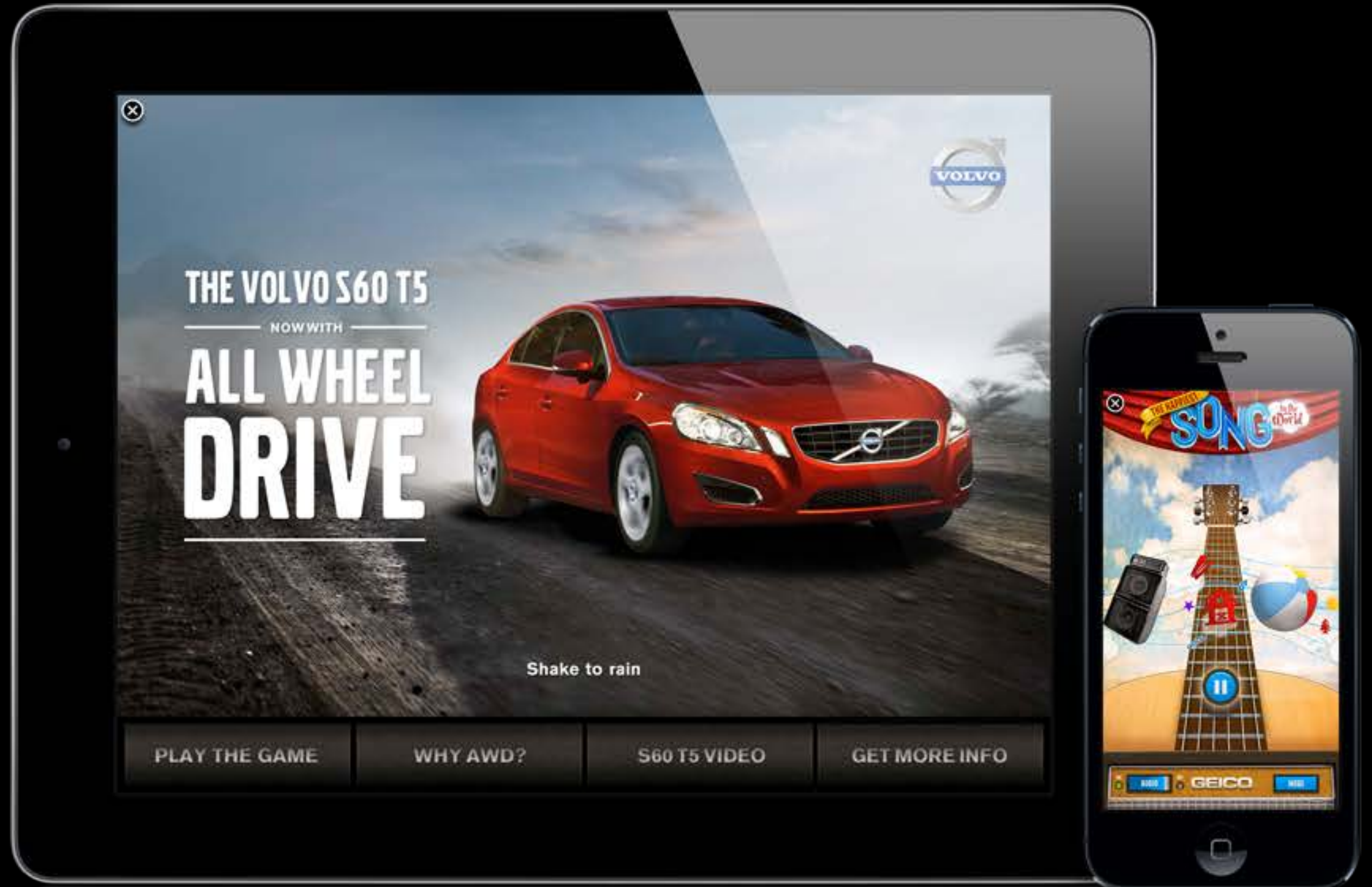
- High production values
- Rich media



Developer Benefits

Delights your customers

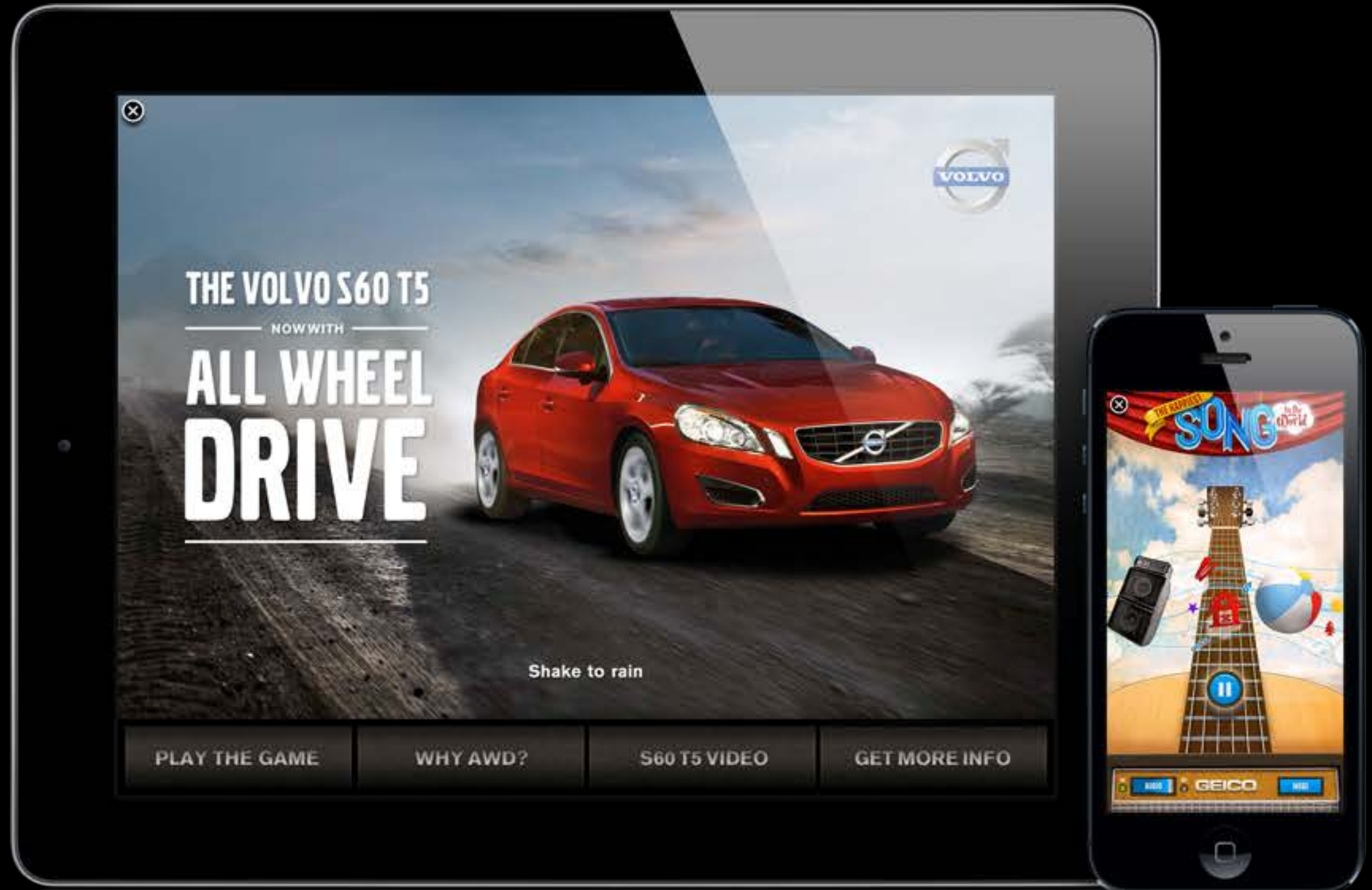
- High production values
- Rich media
- Seamless integration



Developer Benefits

Delights your customers

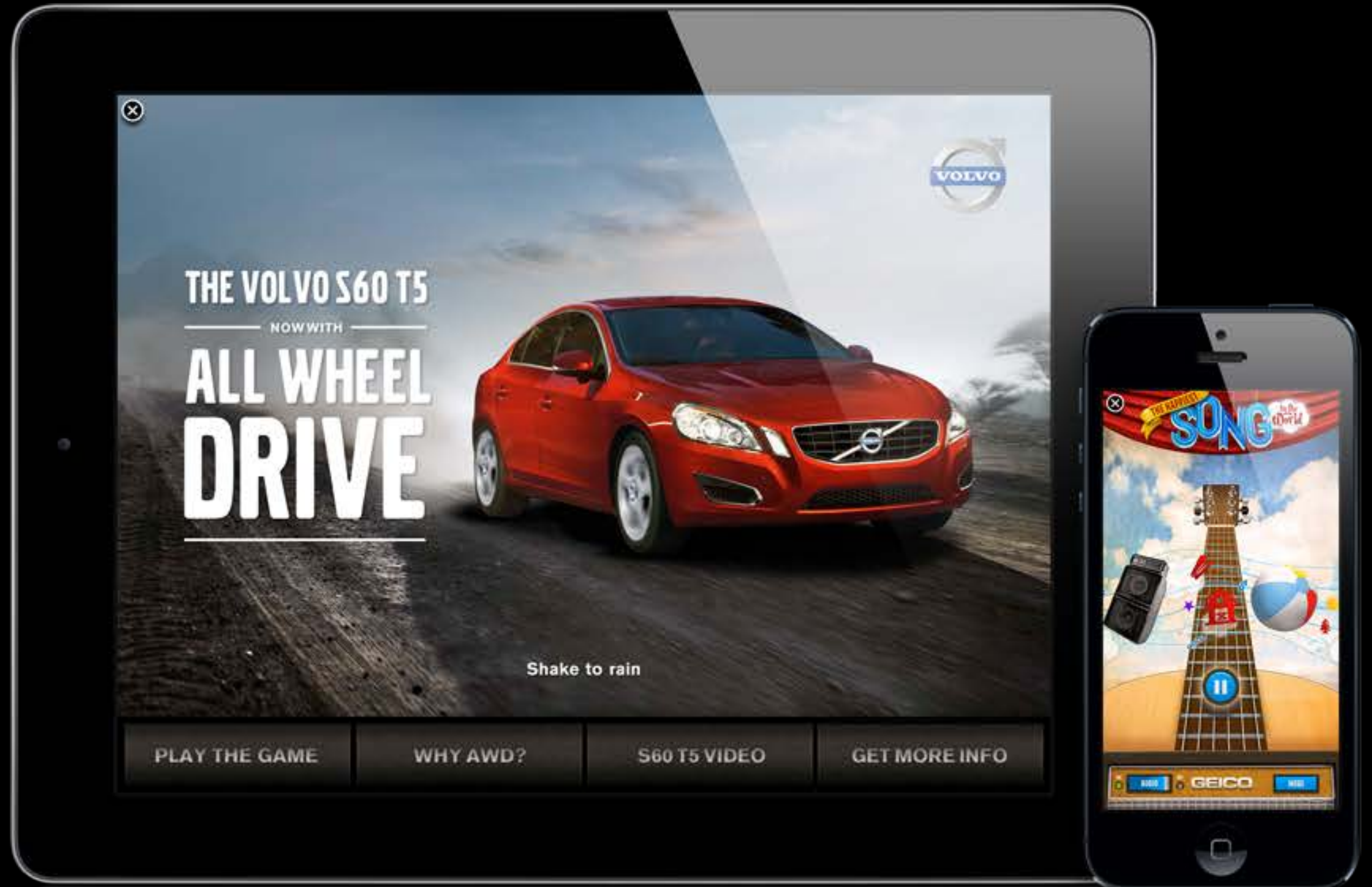
- High production values
- Rich media
- Seamless integration
- Immersive



Developer Benefits

Delights your customers

- High production values
- Rich media
- Seamless integration
- Immersive
- Stay in your app



Developer Benefits

Preserves privacy

Developer Benefits

Preserves privacy



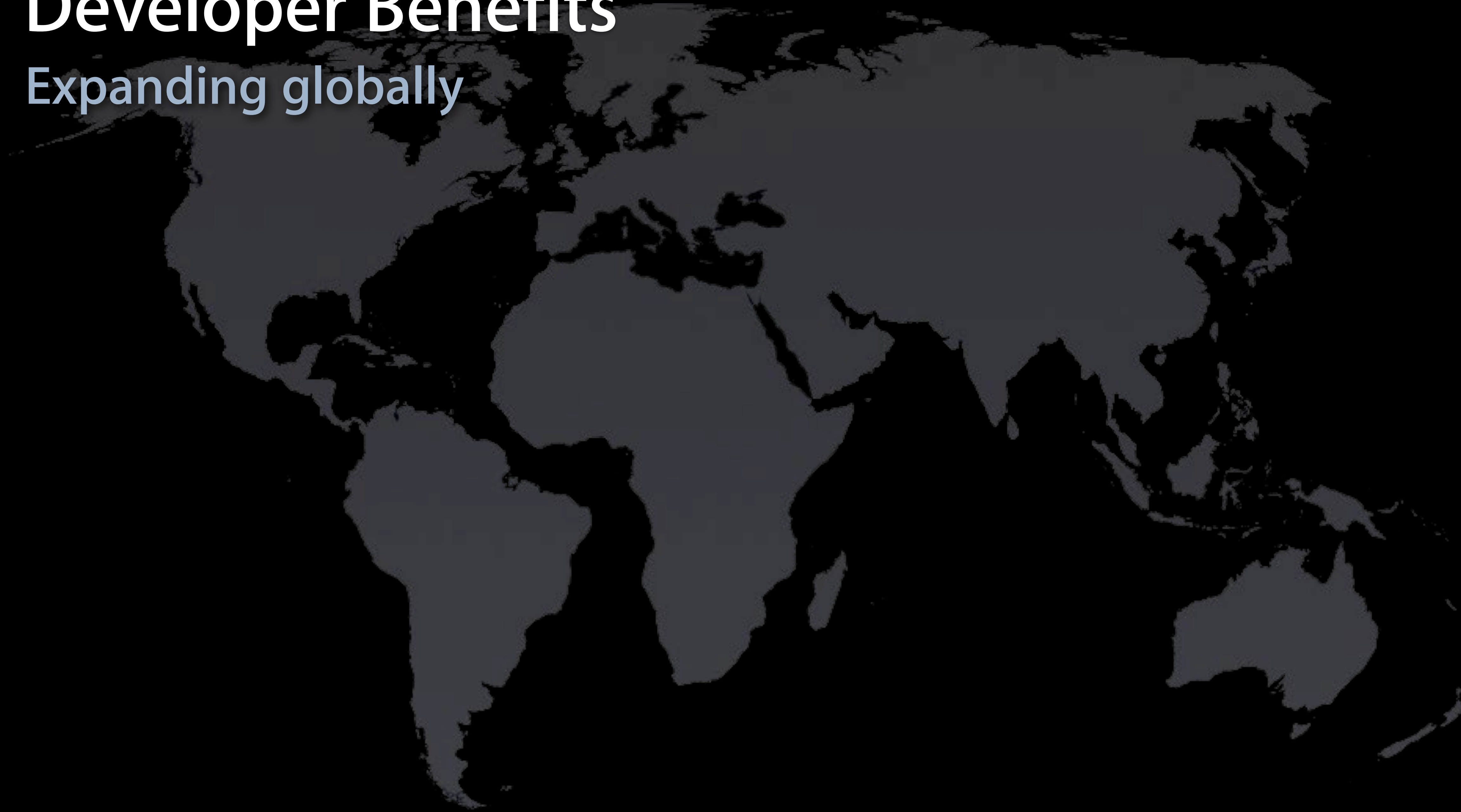
Developer Benefits

World's best brands

The image shows two mobile devices. The iPad in the background displays an advertisement for the Audi A6. The ad features a silver Audi A6 sedan in the center. Above the car, the text reads "Decision No. 2,000 /" with a red slash, and "The new Audi A6. The road is now an intelligent place." To the right of the car, there is a vertical progress indicator with five dots, the top one being red and labeled "2,000". At the bottom of the ad, there are three buttons: "A6", "Download the new A6 iPad app", and "Find a dealer". The Audi logo and "Truth in Engineering" slogan are in the bottom right corner. The iPhone in the foreground displays a loading screen for the Disney Pixar movie "Brave". The screen shows the title "BRAVE" in large letters, "NOW PLAYING" below it, and "LOADING..." with a circular progress indicator. The character Merida is visible in the bottom right corner of the screen.

Developer Benefits

Expanding globally



Developer Benefits

Expanding globally



US



UK



FR



DE



IT



ES



JP



CA



AU



NZ



MX

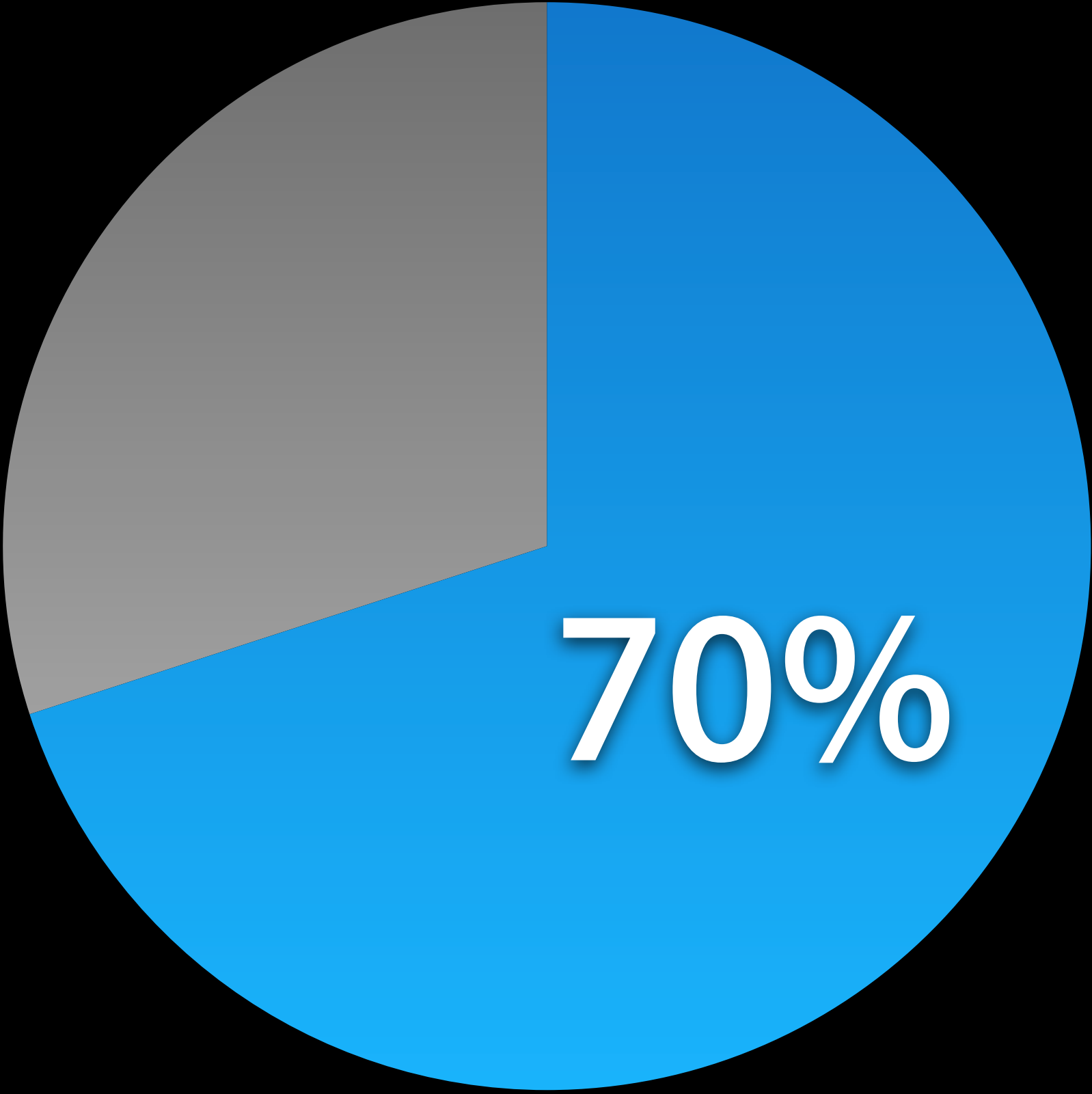
Developer Benefits

Path to revenue

Developer Benefits

Path to revenue

Your Share



Developer Benefits

Easy to implement



Developer Benefits

Easy to implement

- No additional SDKs



Developer Benefits

Easy to implement

- No additional SDKs
- Up and running with minimal code



Developer Benefits

Easy to implement

- No additional SDKs
- Up and running with minimal code
- Great documentation and sample code



Developer Benefits

Easy to implement

- No additional SDKs
- Up and running with minimal code
- Great documentation and sample code
- Even easier with iOS 7!



Developer Benefits

Core Concepts

Optimizing Ad Performance

Joining iAd App Network

App Integration

Developer Benefits

Core Concepts

Optimizing Ad Performance

Joining iAd App Network

App Integration

Core Concepts

iAd app network



Core Concepts

iAd app network



Apple + Brands + Developers + You

Core Concepts

Ad requests

Core Concepts

Ad requests



iAd Framework

 iAd

Core Concepts

Ad requests



iAd Framework

 iAd

Core Concepts

Ad requests



iAd Framework

Ad Request



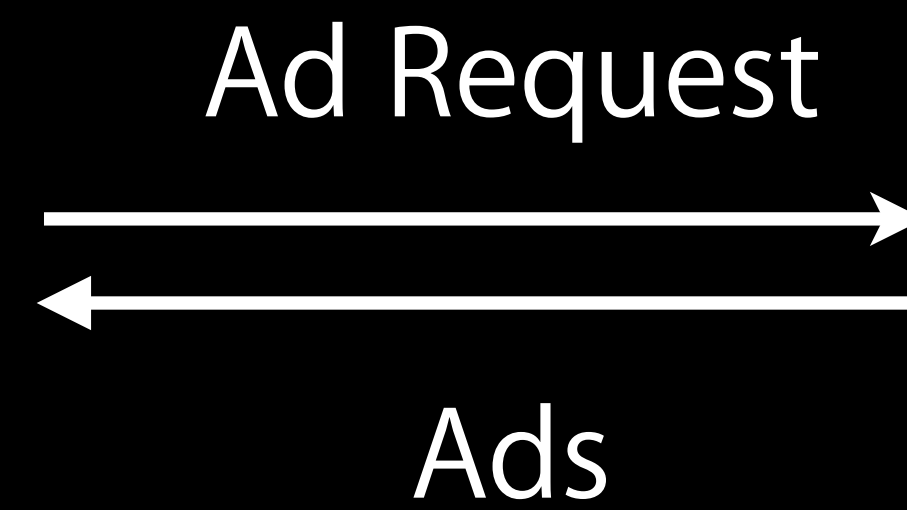
 iAd

Core Concepts

Ad requests



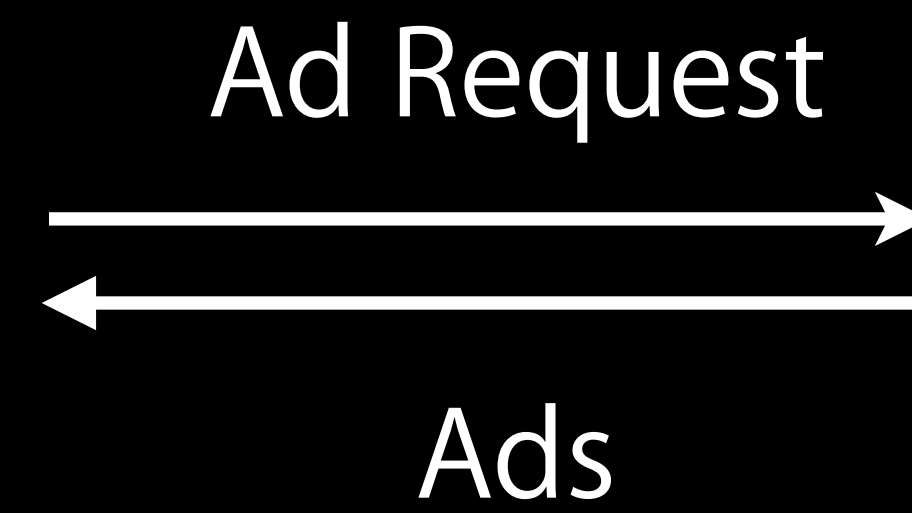
iAd Framework



 iAd

Core Concepts

Fill rate



Core Concepts

Fill rate

Ads Delivered

Ad Requests

Core Concepts

Impressions and tap-through



Core Concepts

Tap-through rate



Core Concepts

Tap-through rate

Tap-throughs

Impressions

Developer Benefits

Core Concepts

Optimizing Ad Performance

Joining iAd App Network

App Integration

Developer Benefits

Core Concepts

Optimizing Ad Performance

Joining iAd App Network

App Integration

Optimizing Ad Performance

Focus on the customer



Optimizing Ad Performance

Focus on the customer

- Utility and usefulness



Optimizing Ad Performance

Focus on the customer

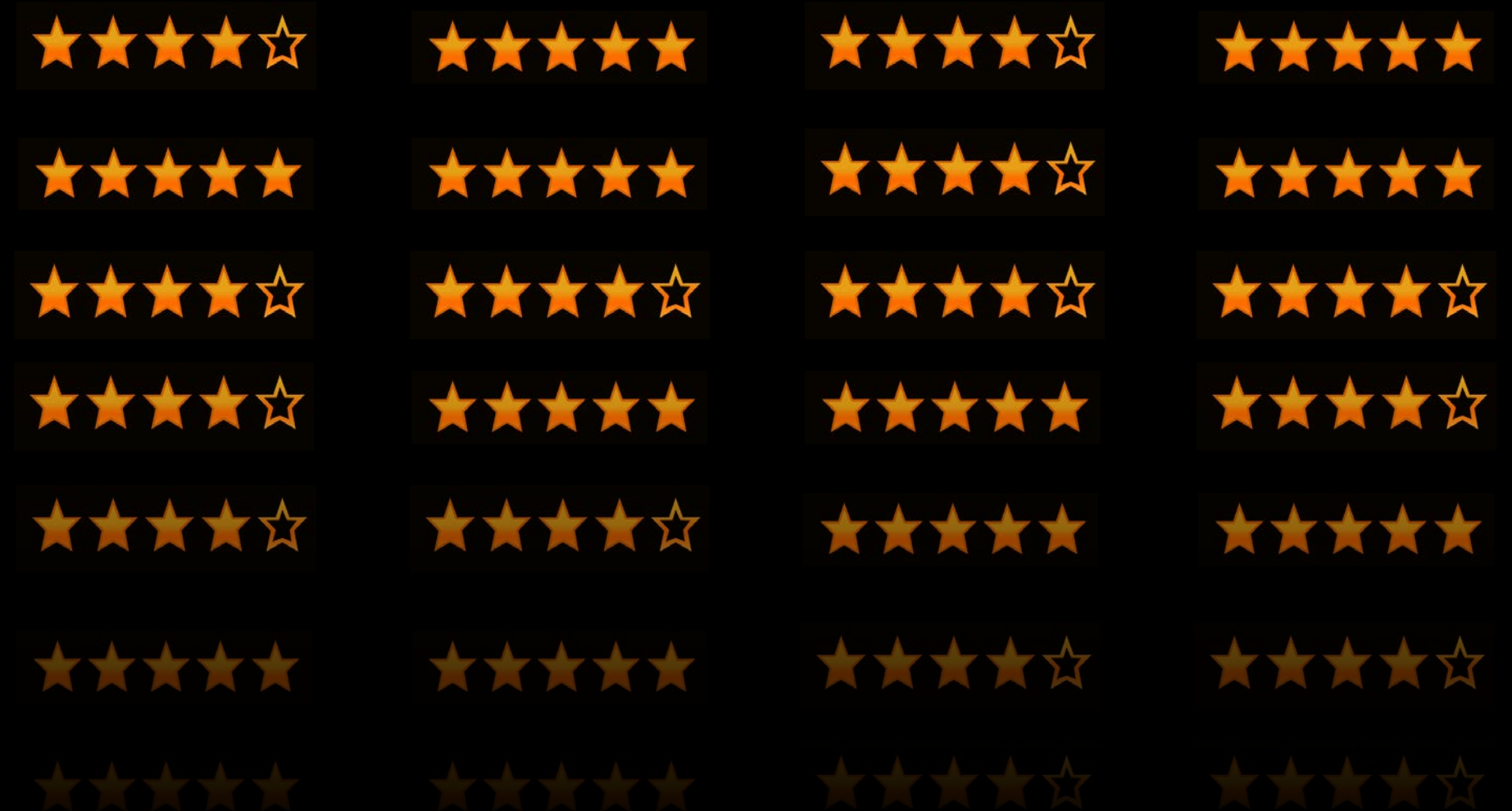
- Utility and usefulness
- Encourage loyalty



Optimizing Ad Performance

Focus on the customer

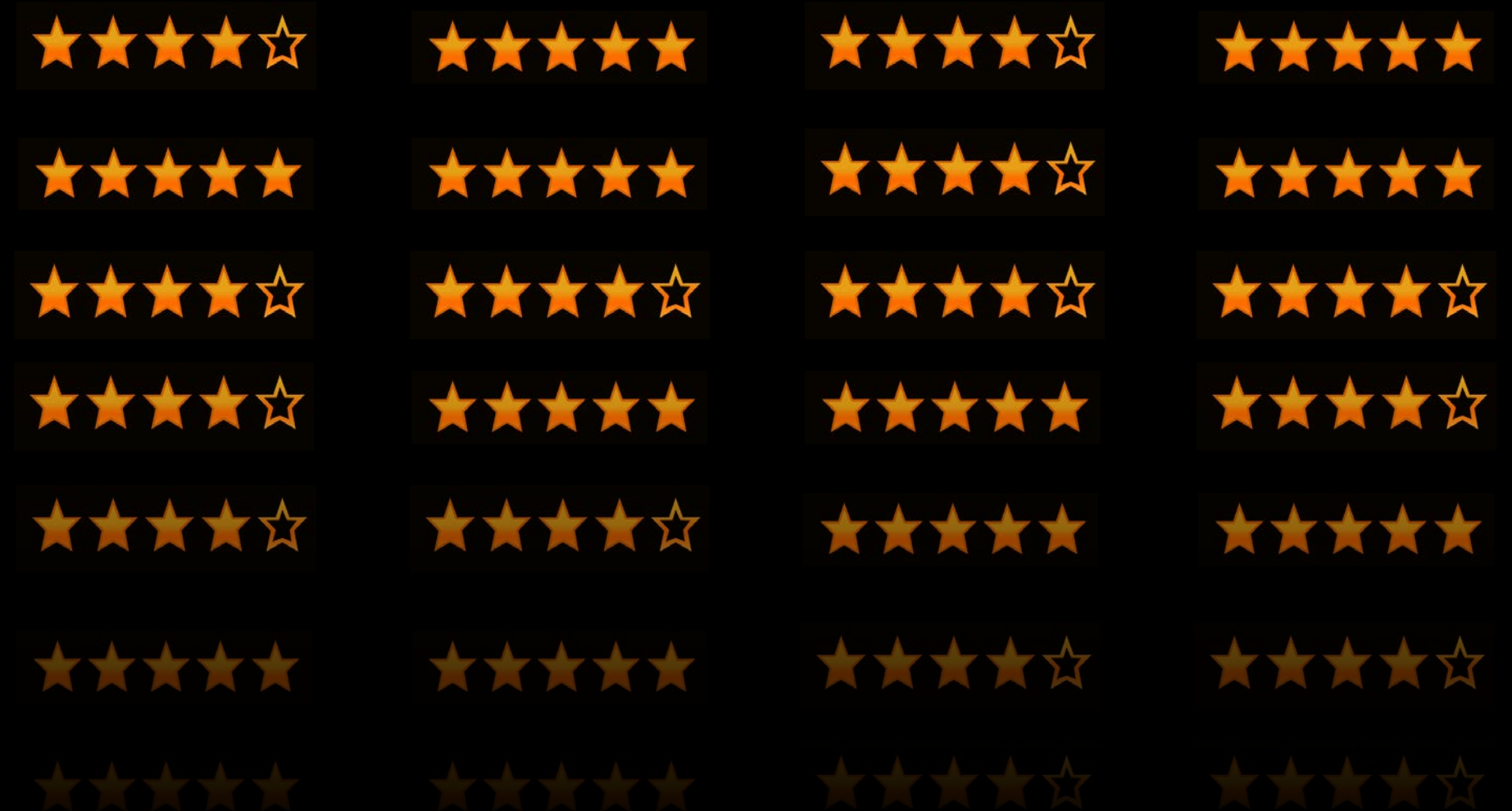
- Utility and usefulness
- Encourage loyalty
- Network effects



Optimizing Ad Performance

Focus on the customer

- Utility and usefulness
- Encourage loyalty
- Network effects
- Results in more requests



Optimizing Ad Performance

Place ads smartly

Optimizing Ad Performance

Place ads smartly

- Recognize high-use areas

Optimizing Ad Performance

Place ads smartly

- Recognize high-use areas
- Avoid accidental taps

Optimizing Ad Performance

Place ads smartly

- Recognize high-use areas
- Avoid accidental taps
- User context is important

Optimizing Ad Performance

Consider customer location

Optimizing Ad Performance

Consider customer location

- Sell to iAd App Network countries



Optimizing Ad Performance

Consider customer location

- Sell to iAd App Network countries
- Target your marketing



Optimizing Ad Performance

Consider customer location

- Sell to iAd App Network countries
- Target your marketing
- Localize your apps



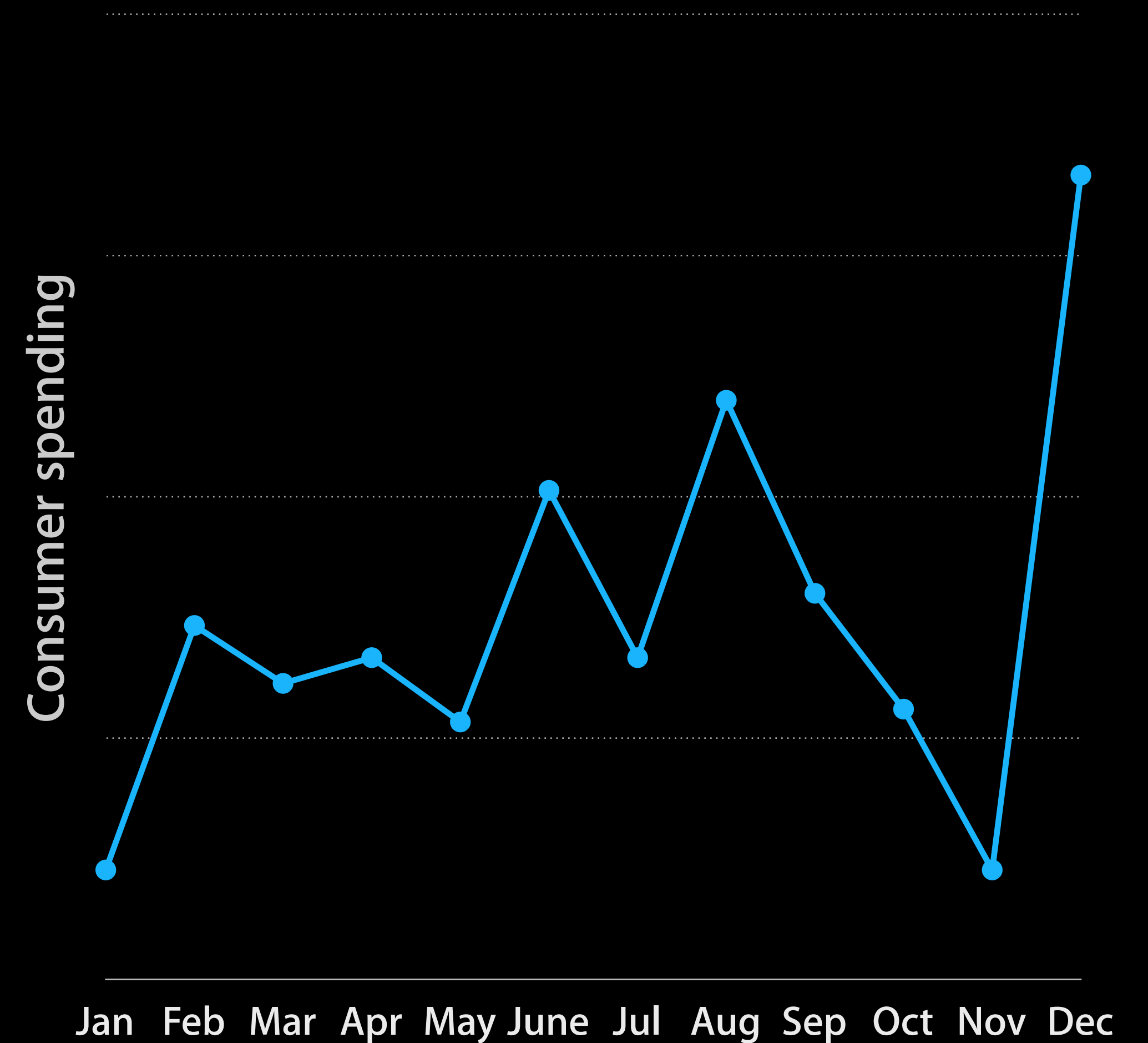
Optimizing Ad Performance

Seasonality

Optimizing Ad Performance

Seasonality

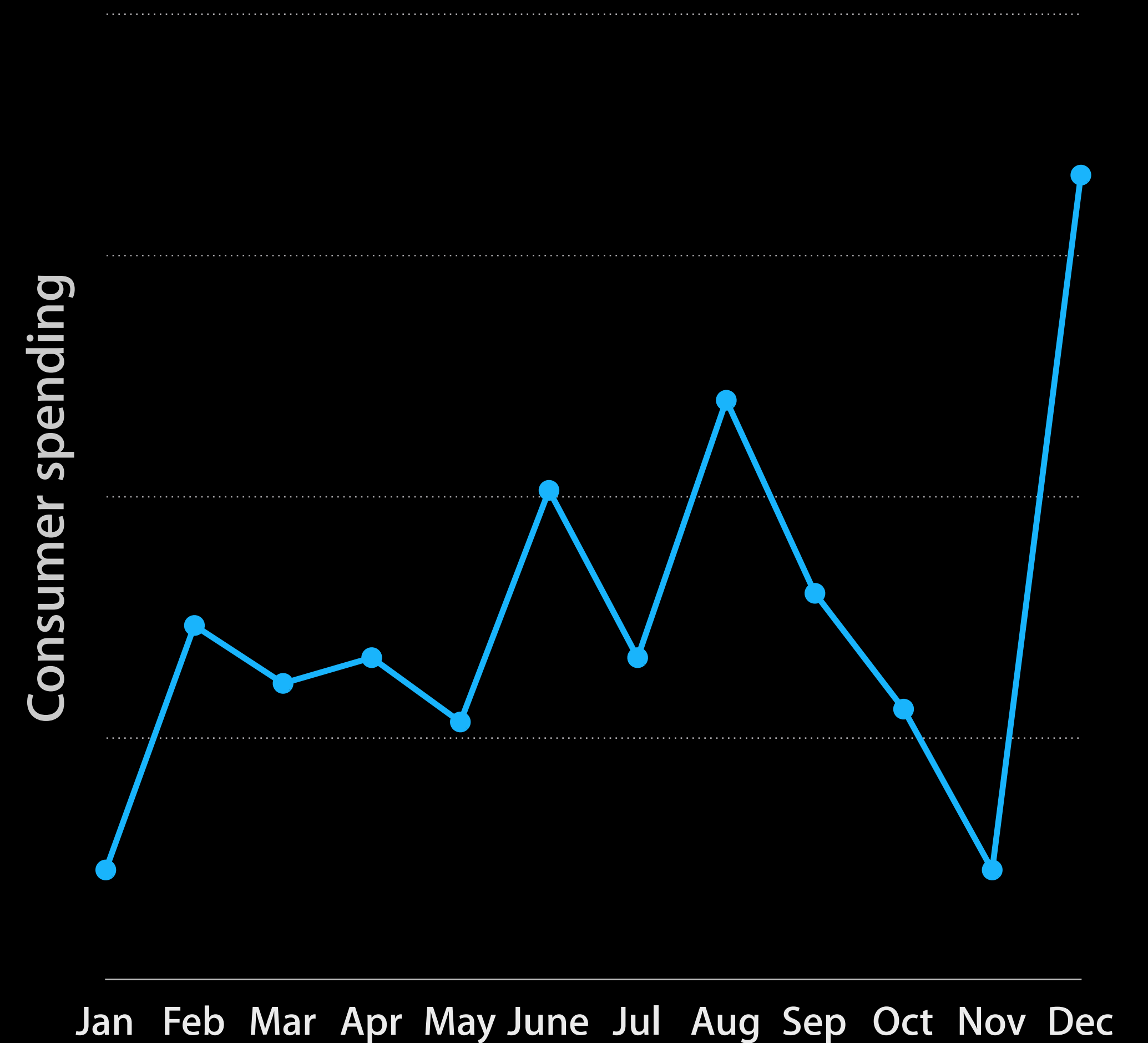
- Consumer spending is seasonal



Optimizing Ad Performance

Seasonality

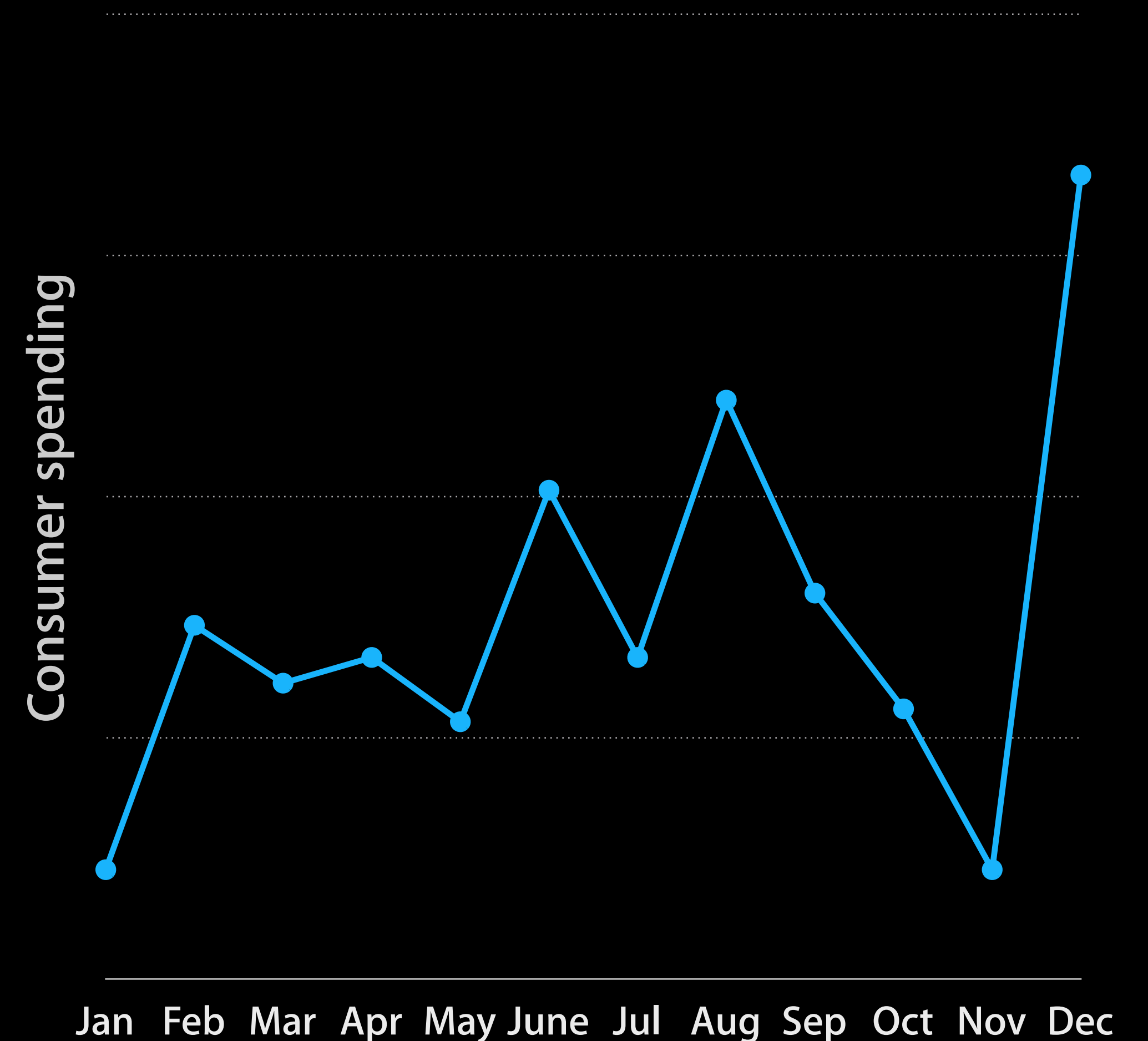
- Consumer spending is seasonal
- So is advertiser spending



Optimizing Ad Performance

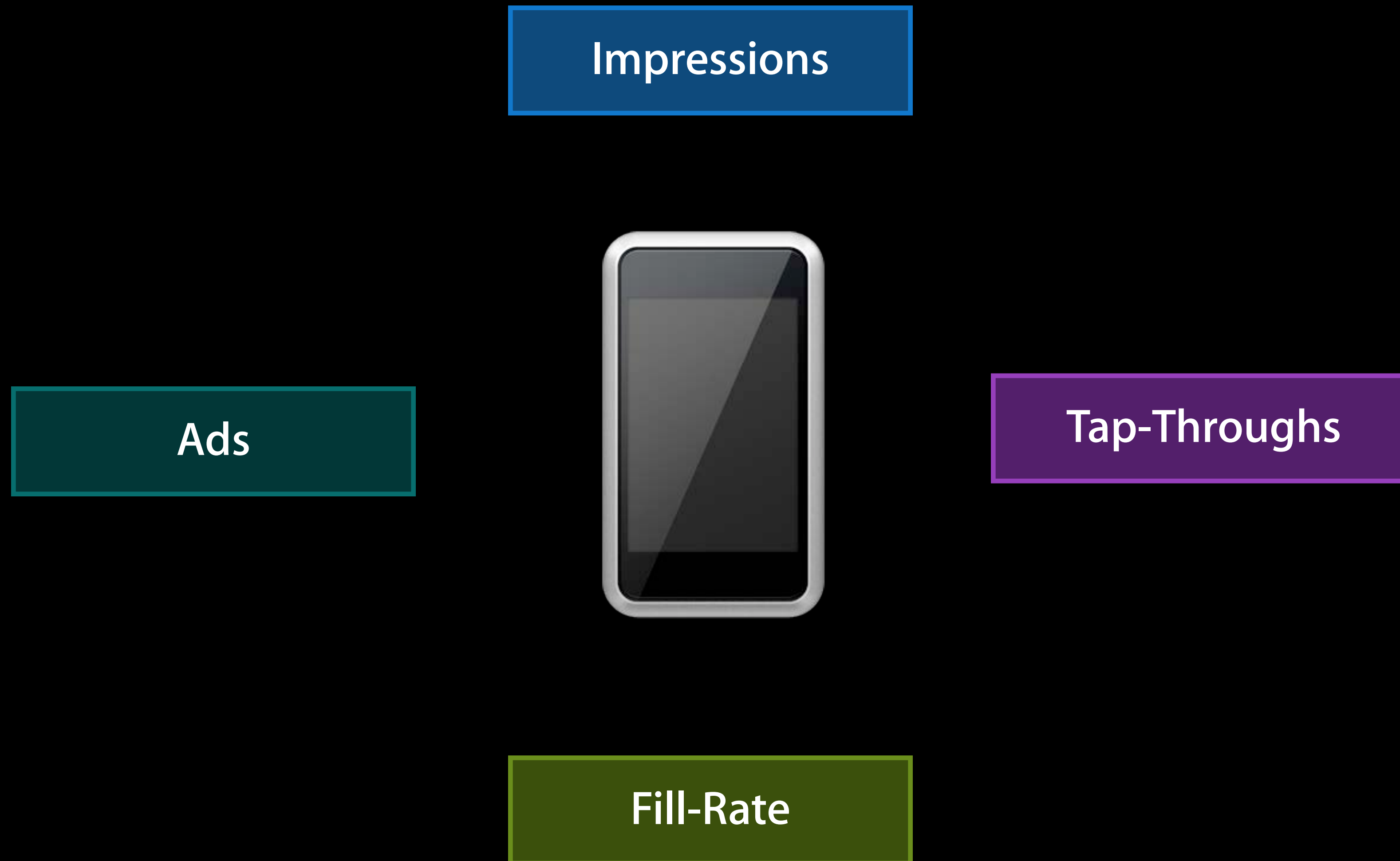
Seasonality

- Consumer spending is seasonal
- So is advertiser spending
- Market accordingly:
 - Start of summer
 - Back to school
 - Holiday seasons



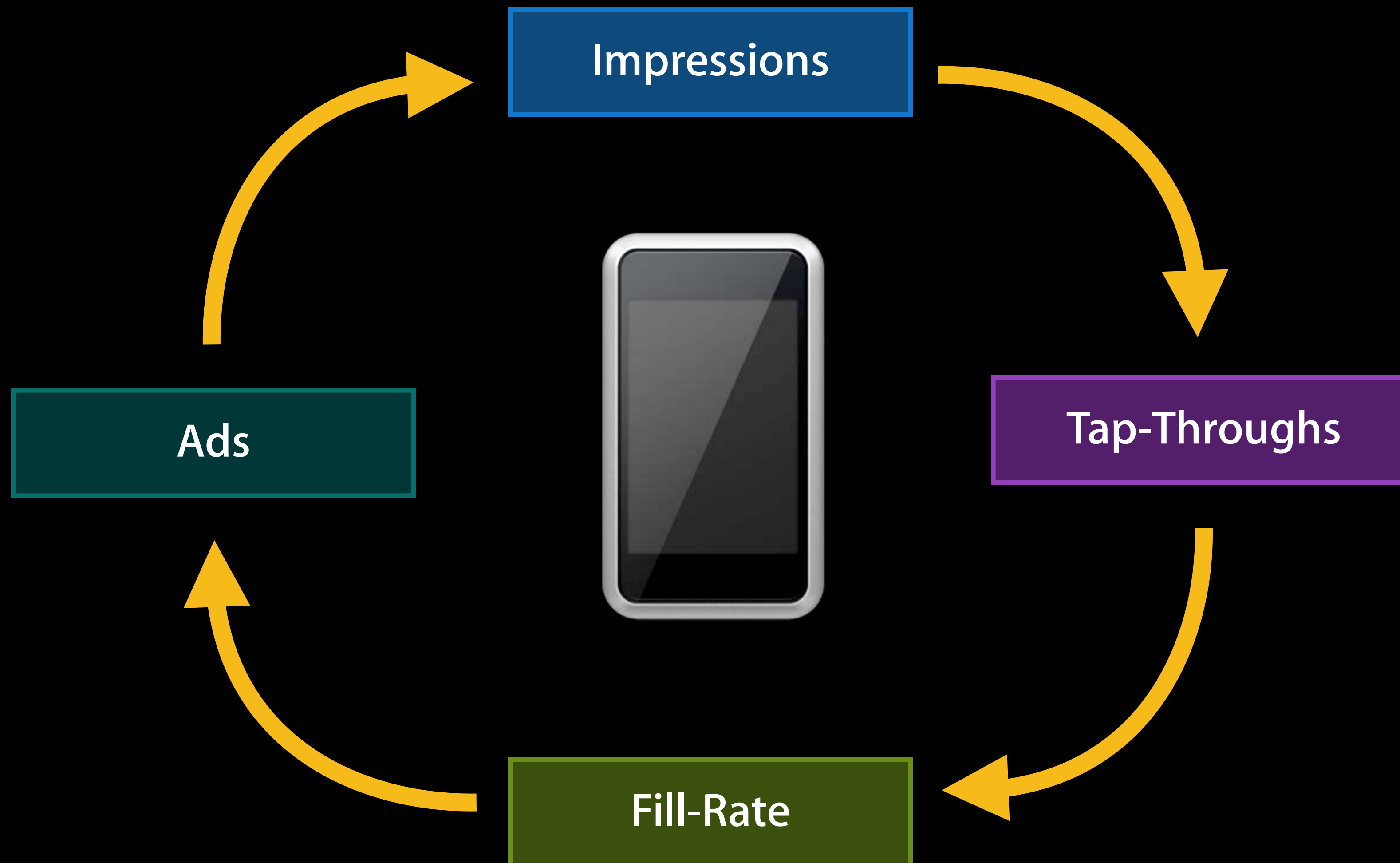
Optimizing Ad Performance

The feedback loop



Optimizing Ad Performance

The feedback loop



Developer Benefits

Core Concepts

Optimizing Ad Performance

Joining iAd App Network

App Integration

Developer Benefits

Core Concepts

Optimizing Ad Performance

Joining iAd App Network

App Integration

Joining iAd App Network

<http://itunesconnect.apple.com/>

Joining iAd App Network

<http://itunesconnect.apple.com/>

**Complete iAd
contract**

**Enable iAd for
your app**

**Submit your
app for review**

Developer Benefits

Core Concepts

Optimizing Ad Performance

Joining iAd App Network

App Integration

Developer Benefits

Core Concepts

Optimizing Ad Performance

Joining iAd App Network

App Integration

Banner

App Integration

Banner



Banner

- Slim device width view



Banner

- Slim device width view
- Placed at bottom of content



Banner

- Slim device width view
- Placed at bottom of content
- Continuous ad loading



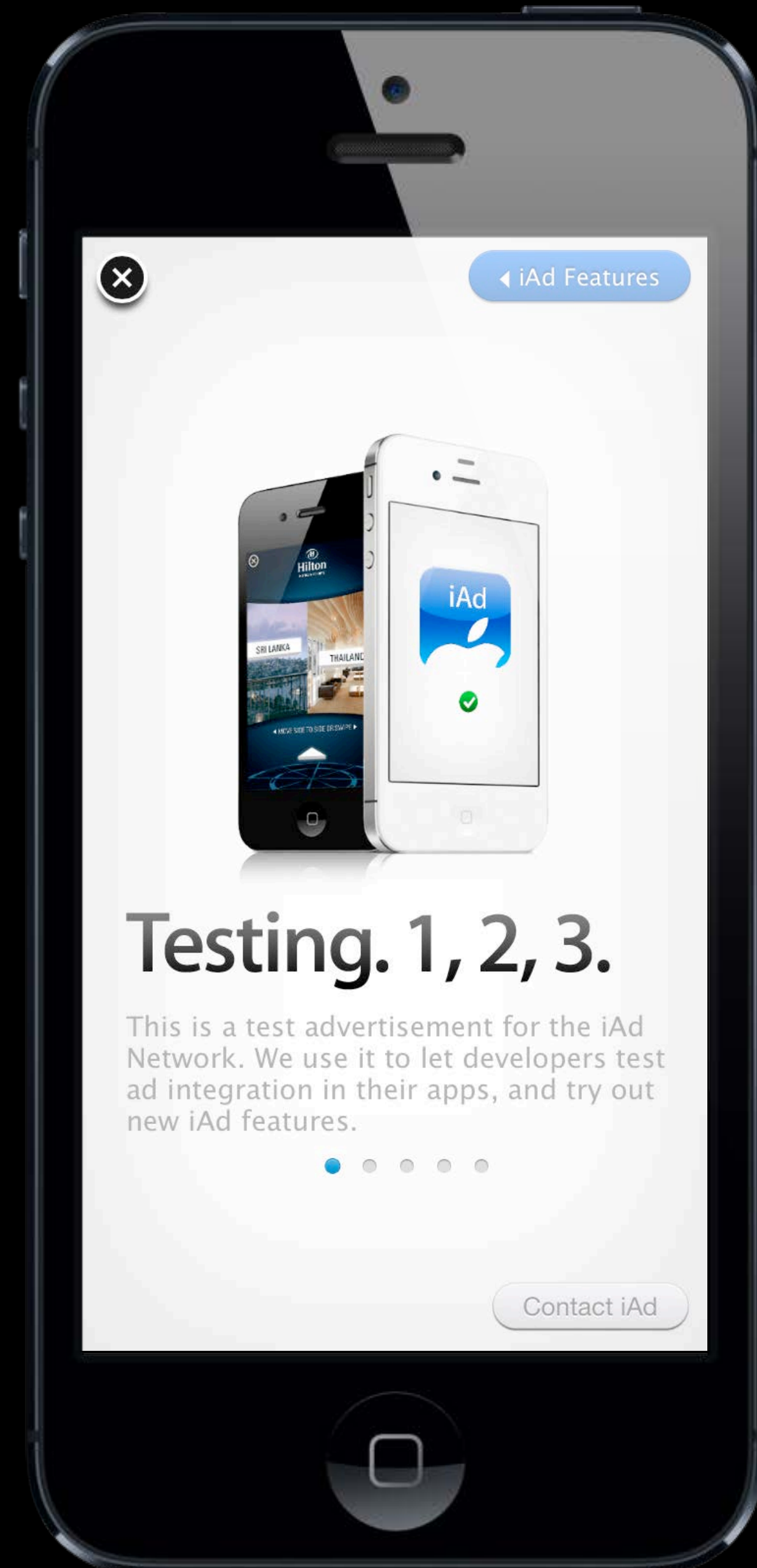
Banner

- Slim device width view
- Placed at bottom of content
- Continuous ad loading
- Fullscreen on tap



Banner

- Slim device width view
- Placed at bottom of content
- Continuous ad loading
- Fullscreen on tap
- iPhone and iPad support



Banner

Three easy steps

Banner

Three easy steps

1. Link iAd framework

Banner

Three easy steps

1. Link iAd framework
2. Import iAd header

```
#import <iAd/iAd.h>
```

```
MyViewController *myViewController = ...  
myViewController.canDisplayBannerAds = YES;
```

Banner

Three easy steps

1. Link iAd framework
2. Import iAd header
3. Configure view controllers

```
#import <iAd/iAd.h>
```

```
MyViewController *myViewController = ...  
myViewController.canDisplayBannerAds = YES;
```

Banner

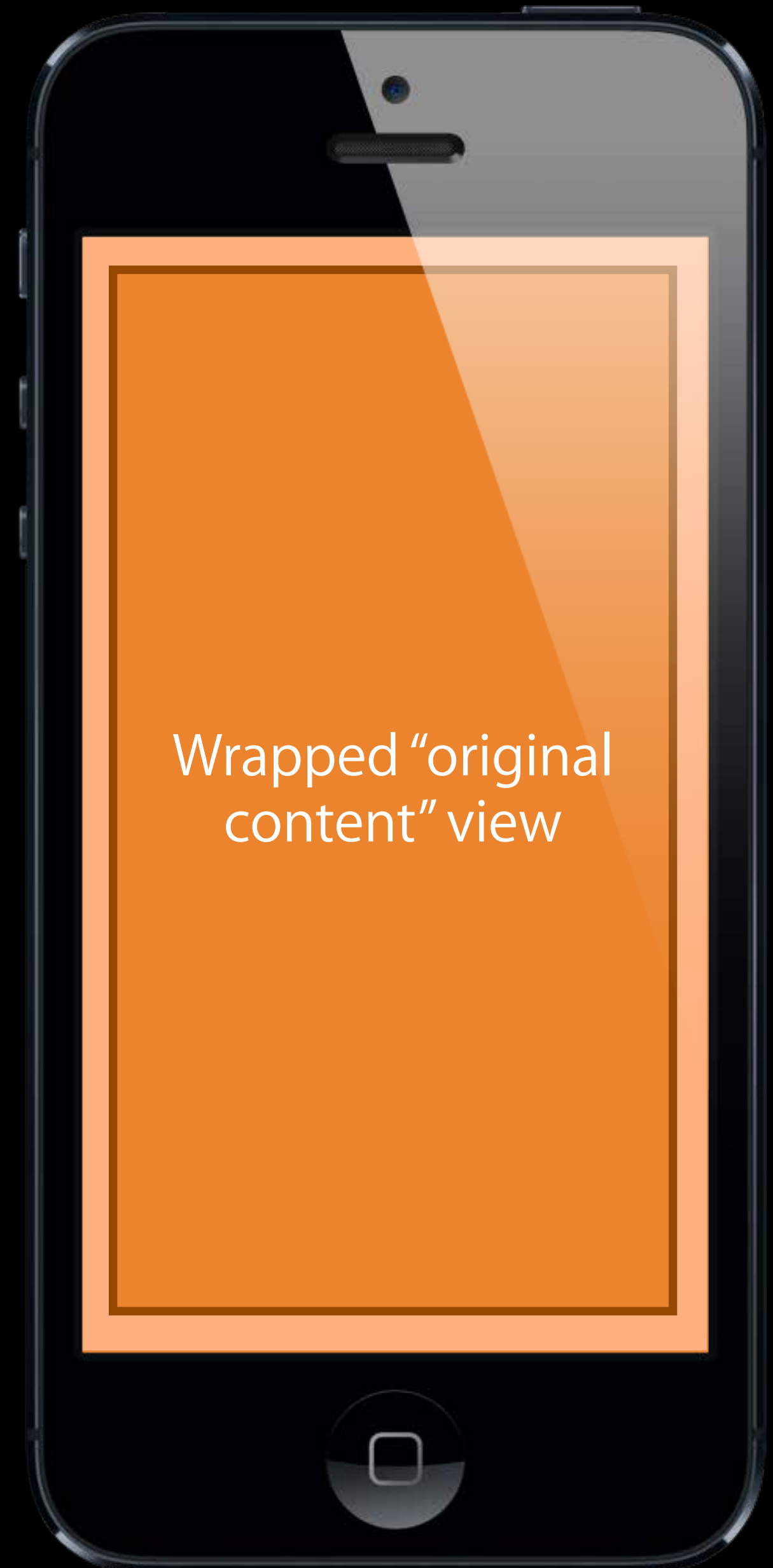
Ad load and display



Banner

Ad load and display

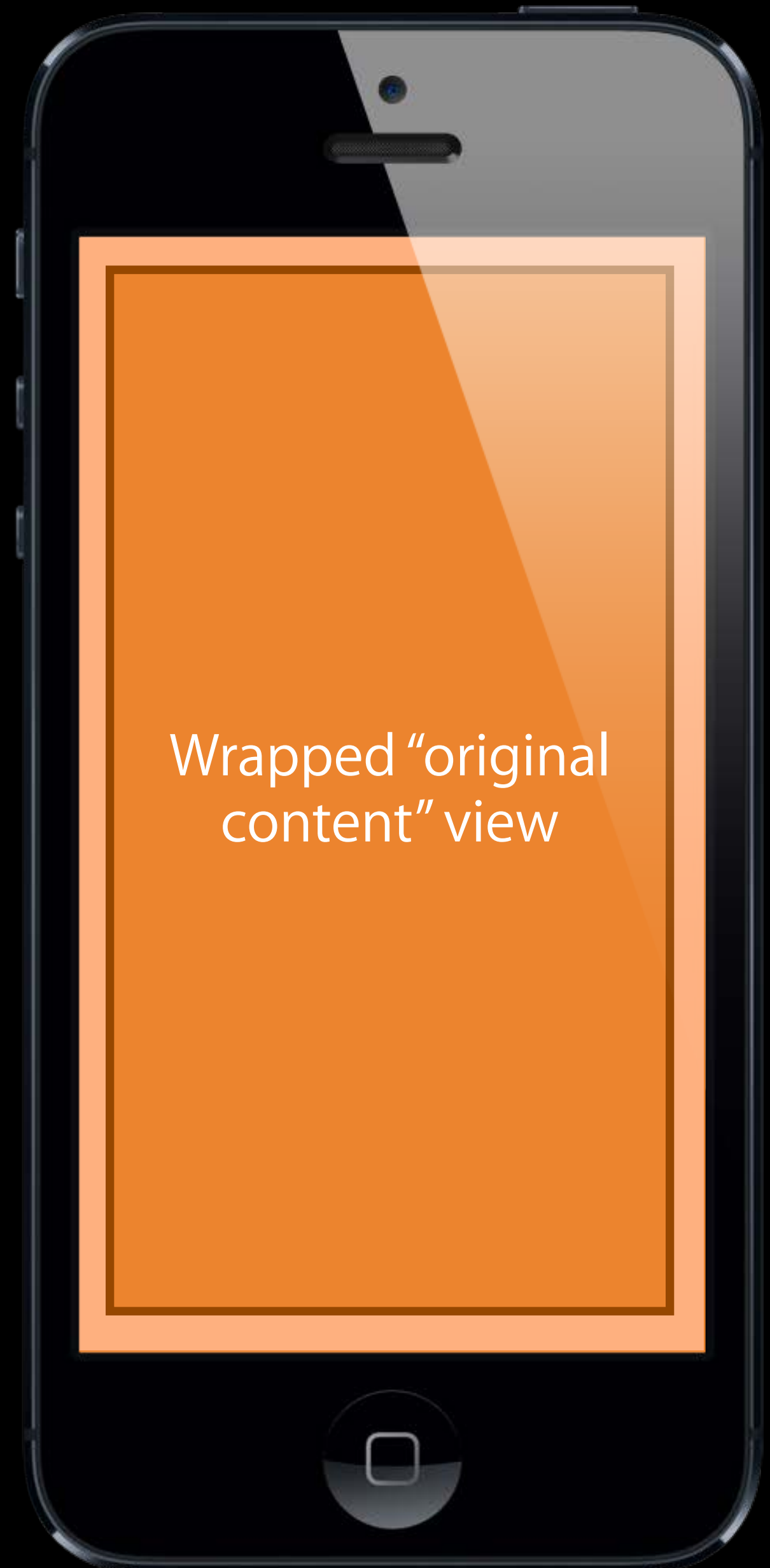
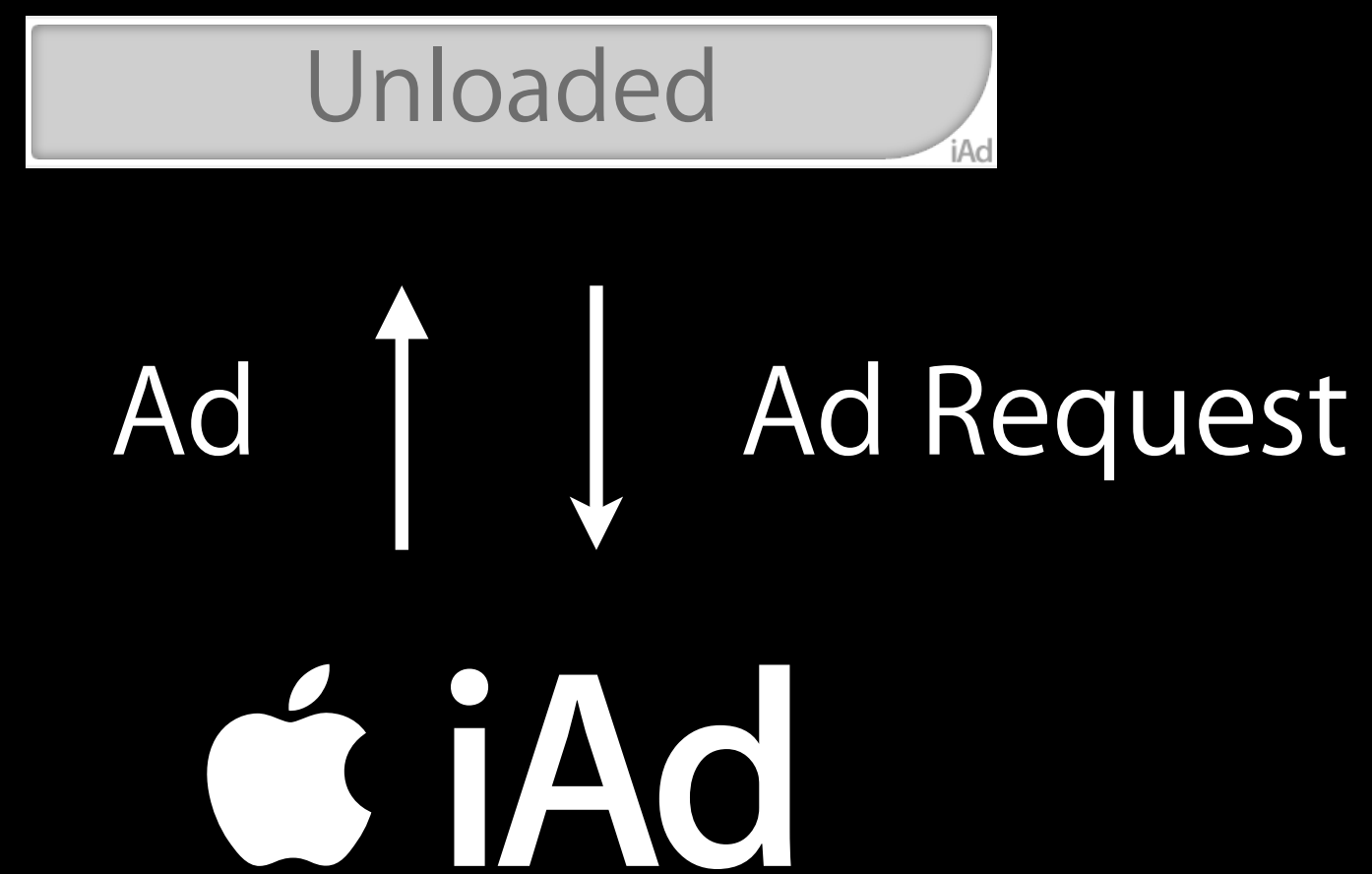
- view becomes `originalContentView`



Banner

Ad load and display

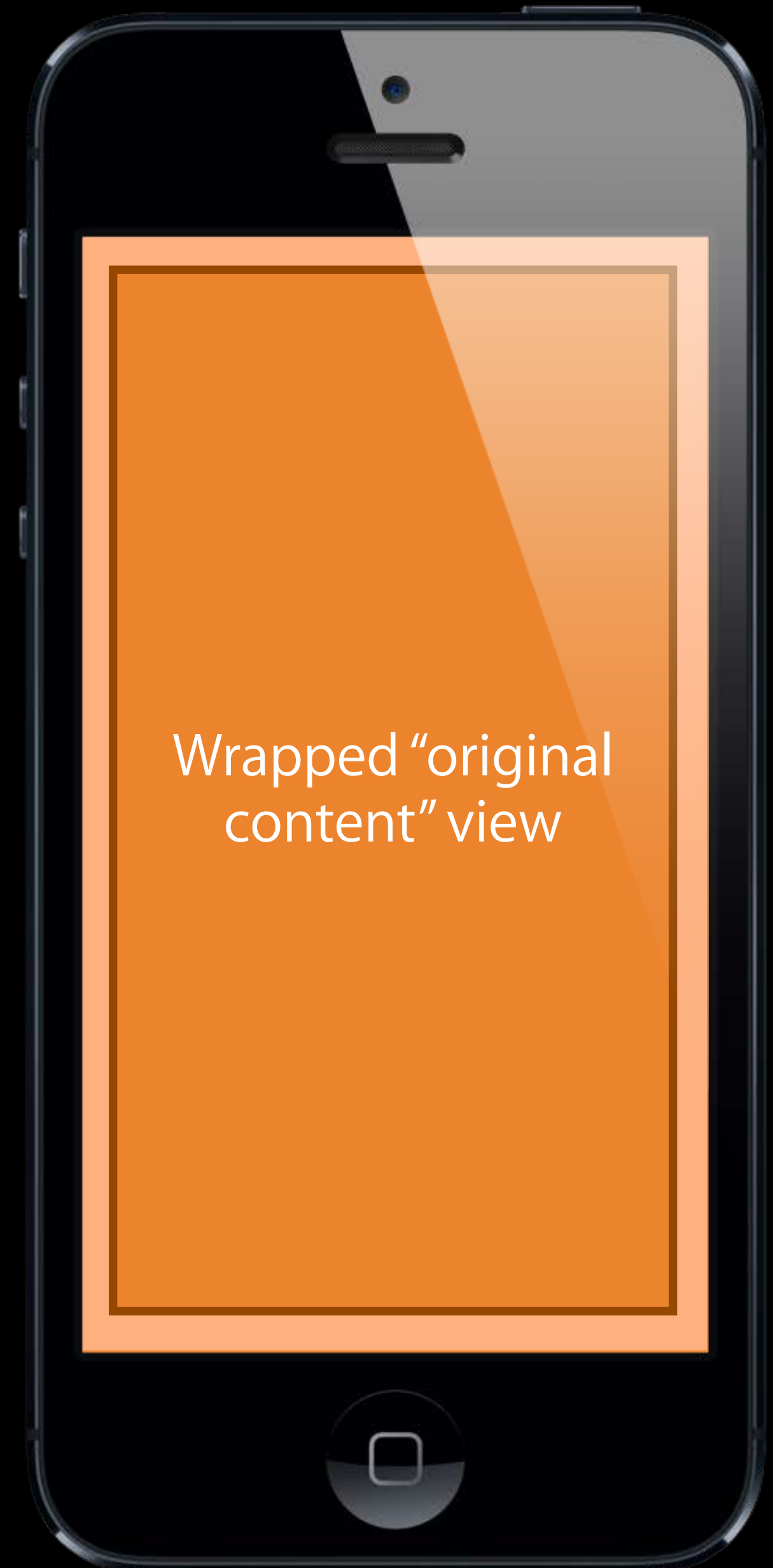
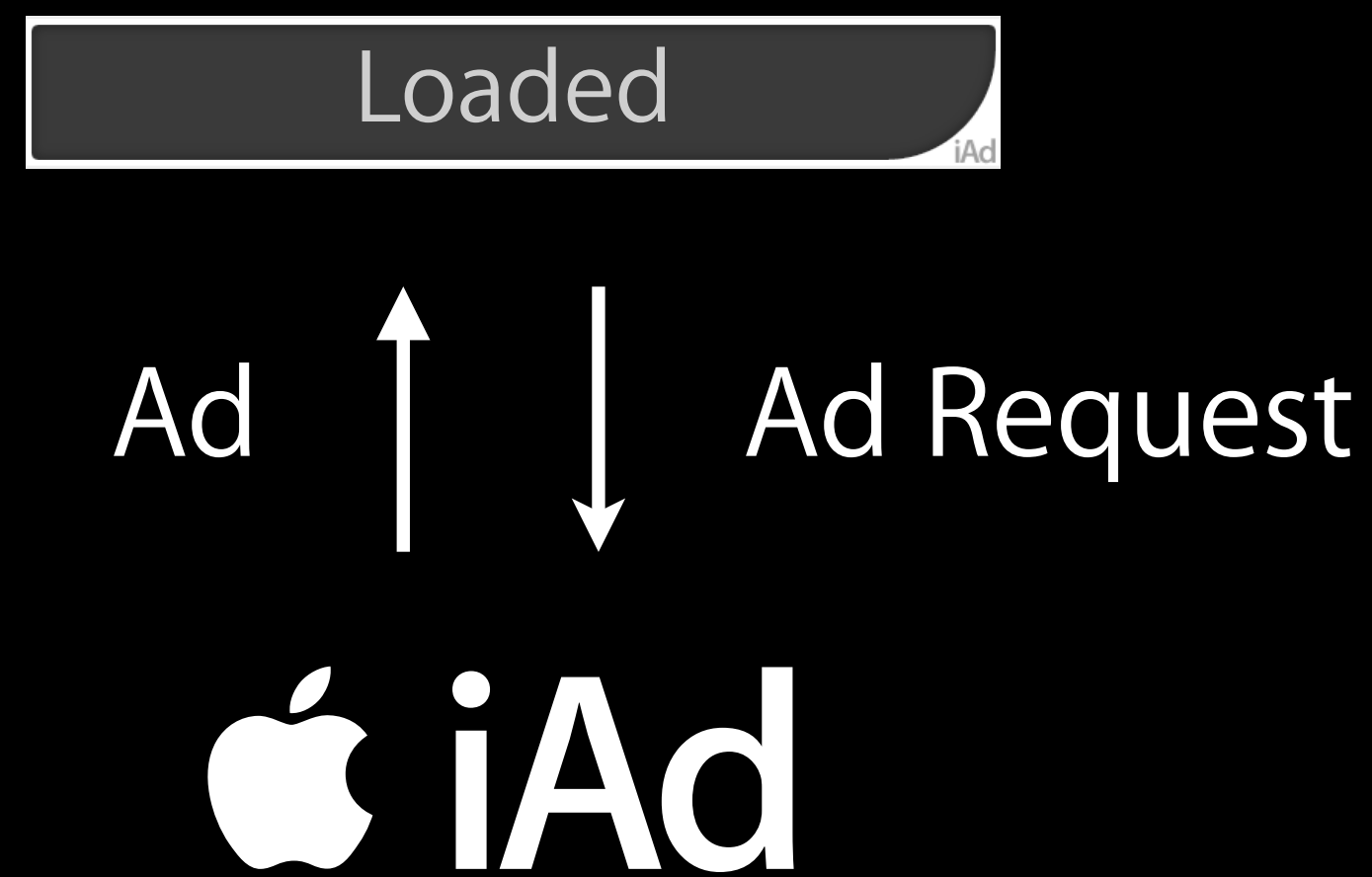
- view becomes `originalContentView`
- Ad requests sent



Banner

Ad load and display

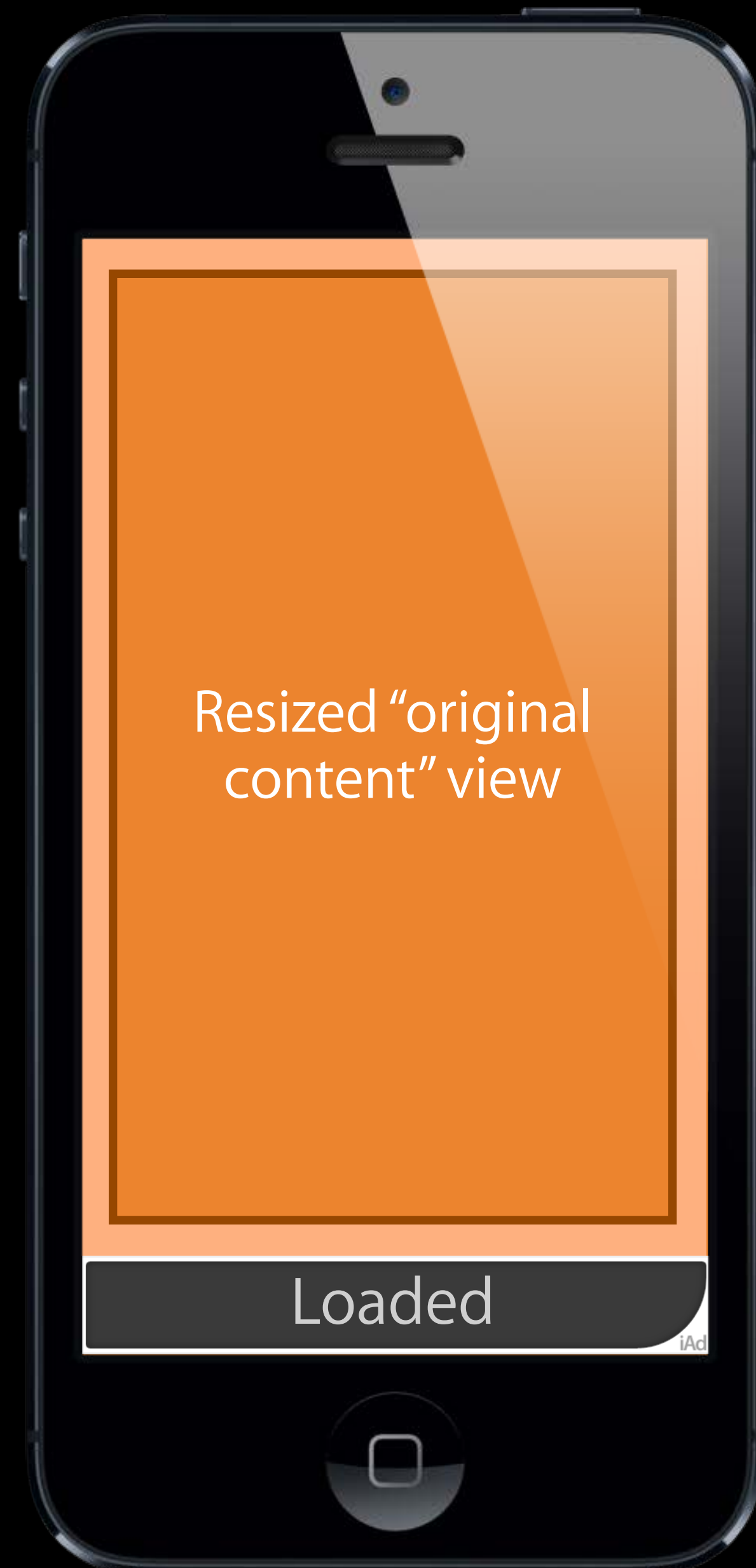
- view becomes `originalContentView`
- Ad requests sent
- Banner loads



Banner

Ad load and display

- view becomes `originalContentView`
- Ad requests sent
- Banner loads
- Banner moves on-screen and `originalContentView` resizes



Banner

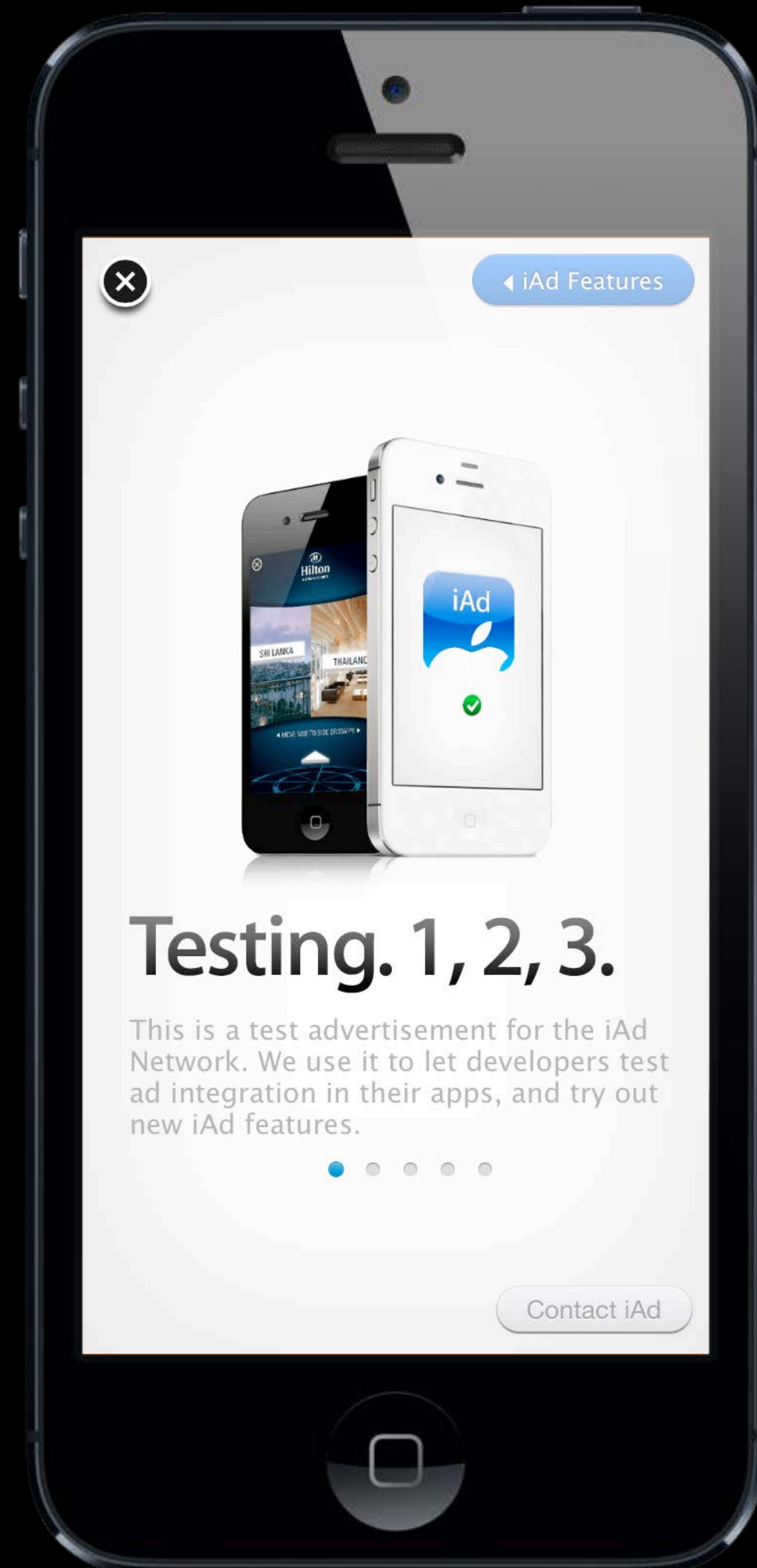
Tap-through



Banner

Tap-through

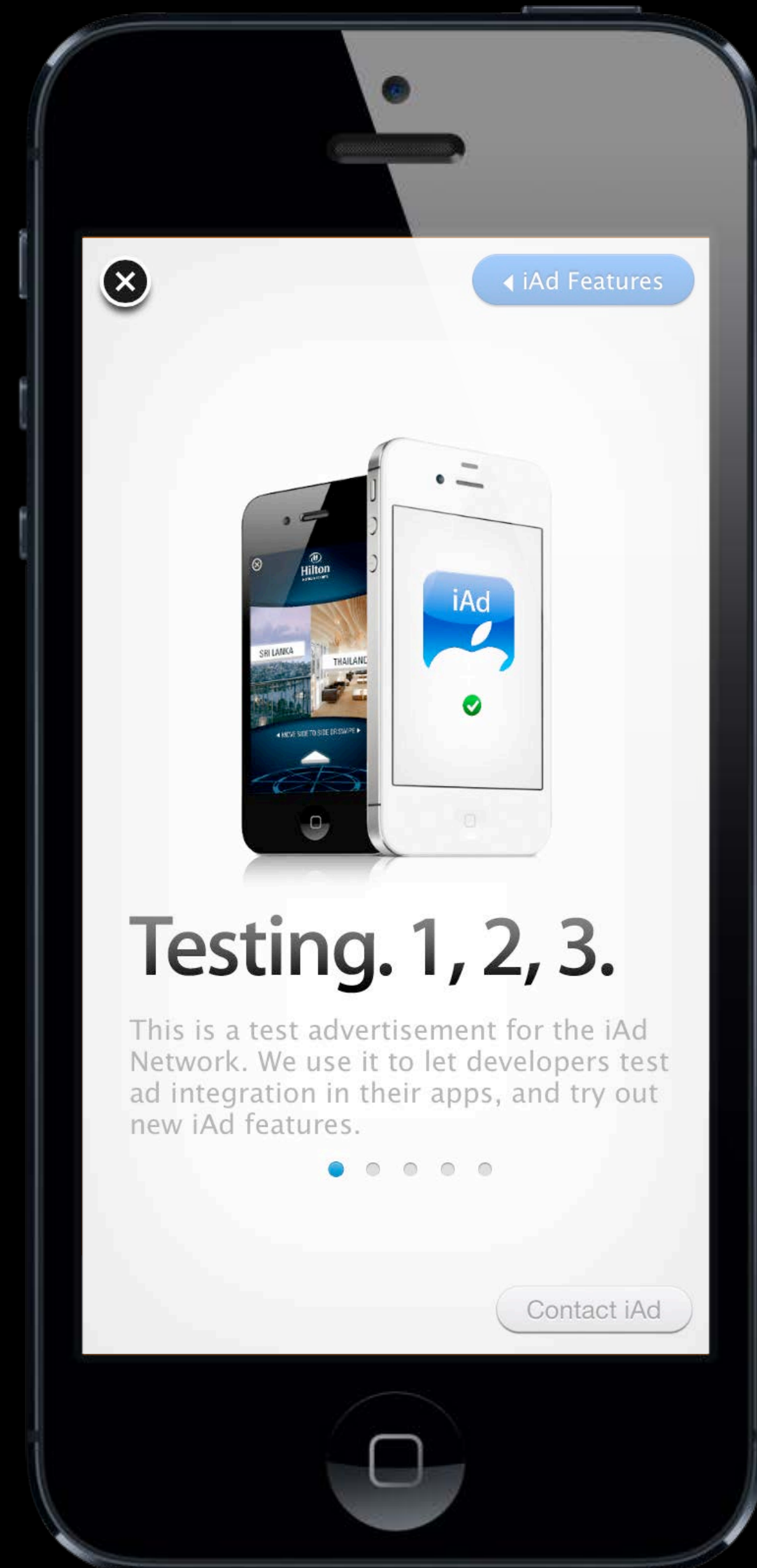
- Fullscreen ad on tap



Banner

Tap-through

- Fullscreen ad on tap
- Pause media in `-viewWillAppear:`



Banner

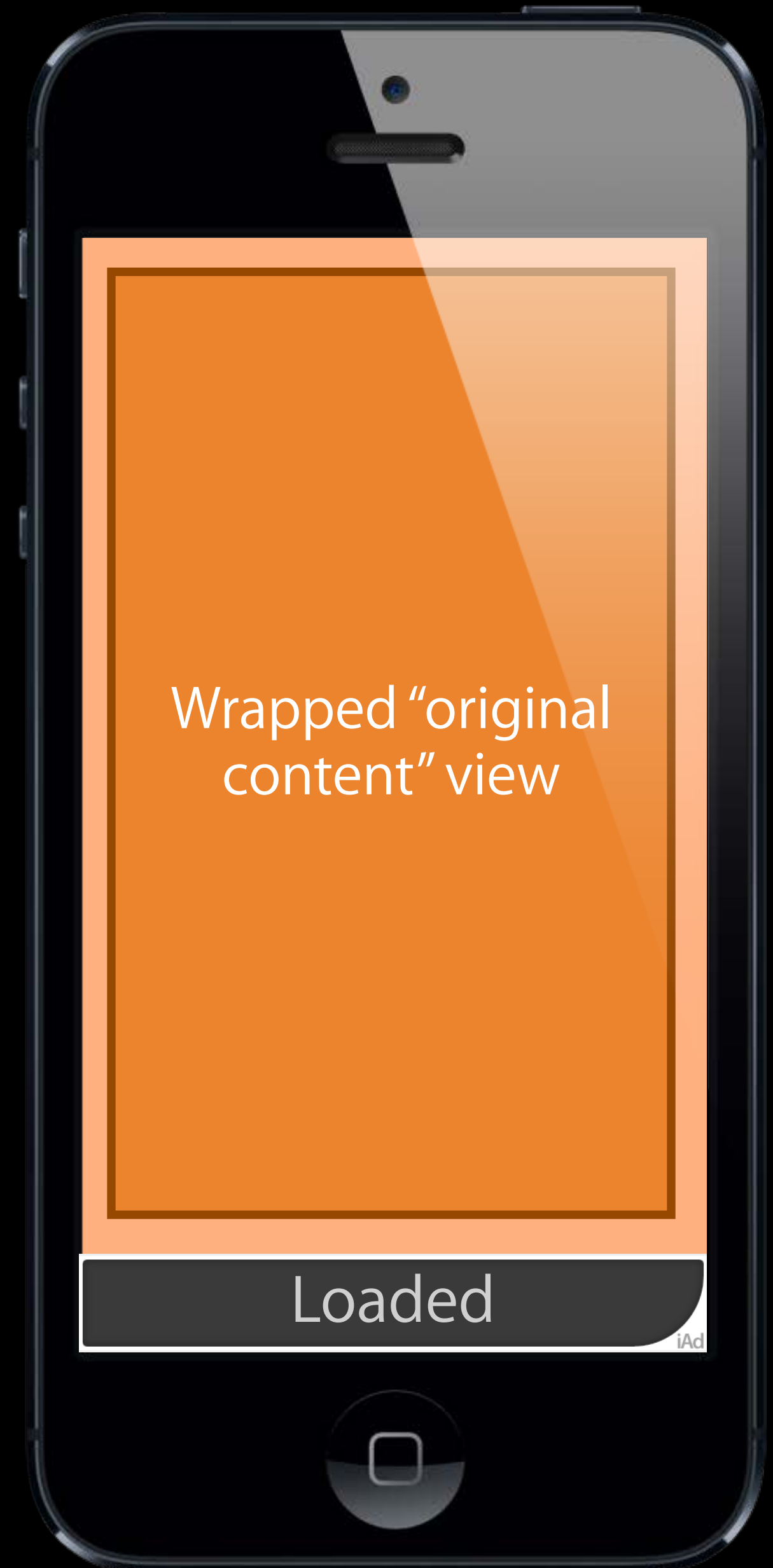
Tap-through

- Fullscreen ad on tap
- Pause media in `-viewWillDisappear:`
- Resume media in `-viewDidAppear:`



Banner

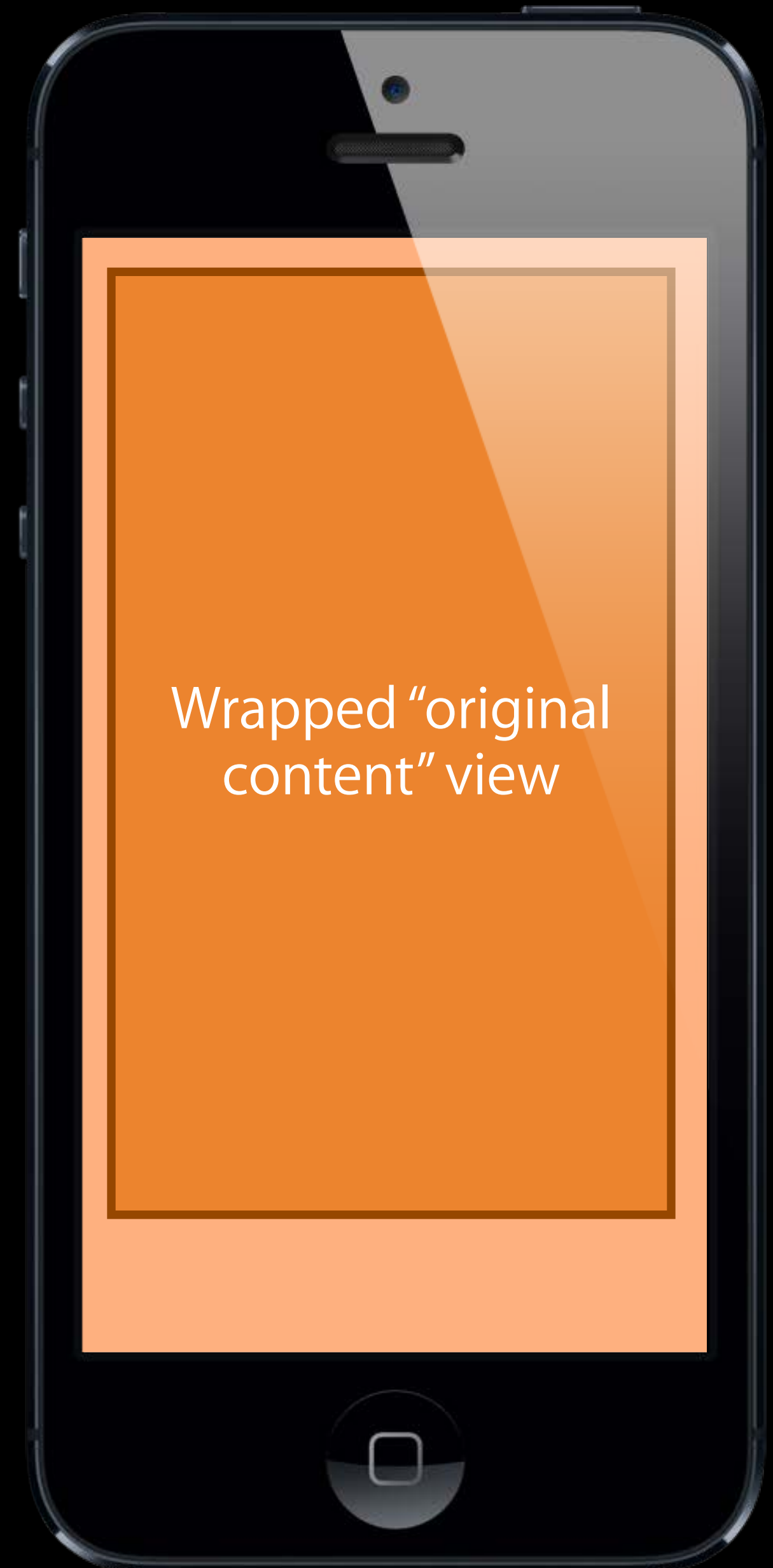
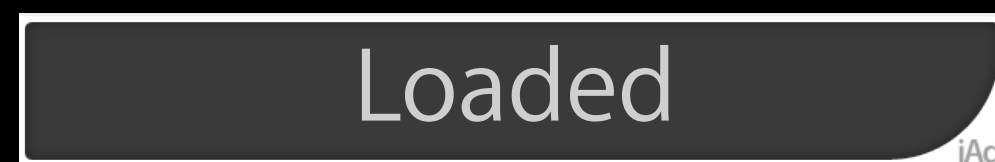
Ad unload and hiding



Banner

Ad unload and hiding

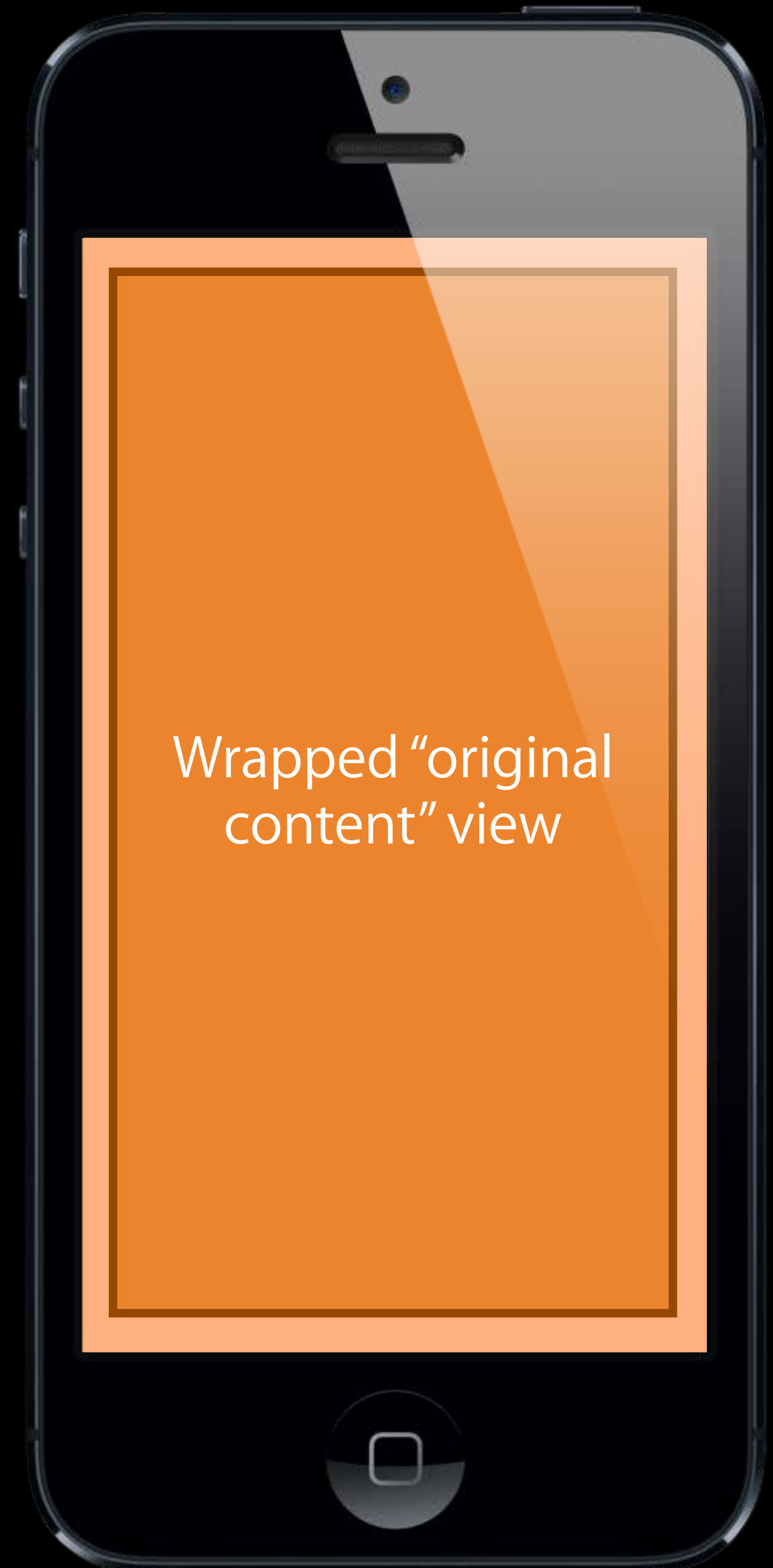
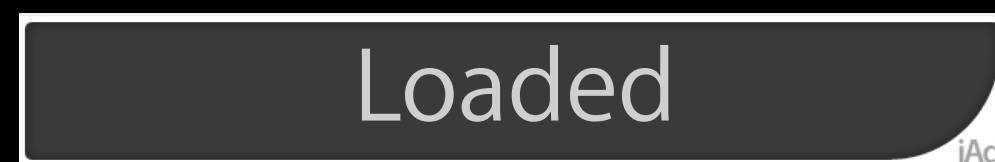
- Banner moves off-screen



Banner

Ad unload and hiding

- Banner moves off-screen
- `originalContentView` resized



Banner

Toggling display on and off

```
// Game started  
viewController.canDisplayBannerAds = NO;  
  
// Game paused, menu showing  
viewController.canDisplayBannerAds = YES;
```


Banner

Toggling display on and off

- Disable based on app context

```
// Game started  
viewController.canDisplayBannerAds = NO;  
  
// Game paused, menu showing  
viewController.canDisplayBannerAds = YES;
```

Banner

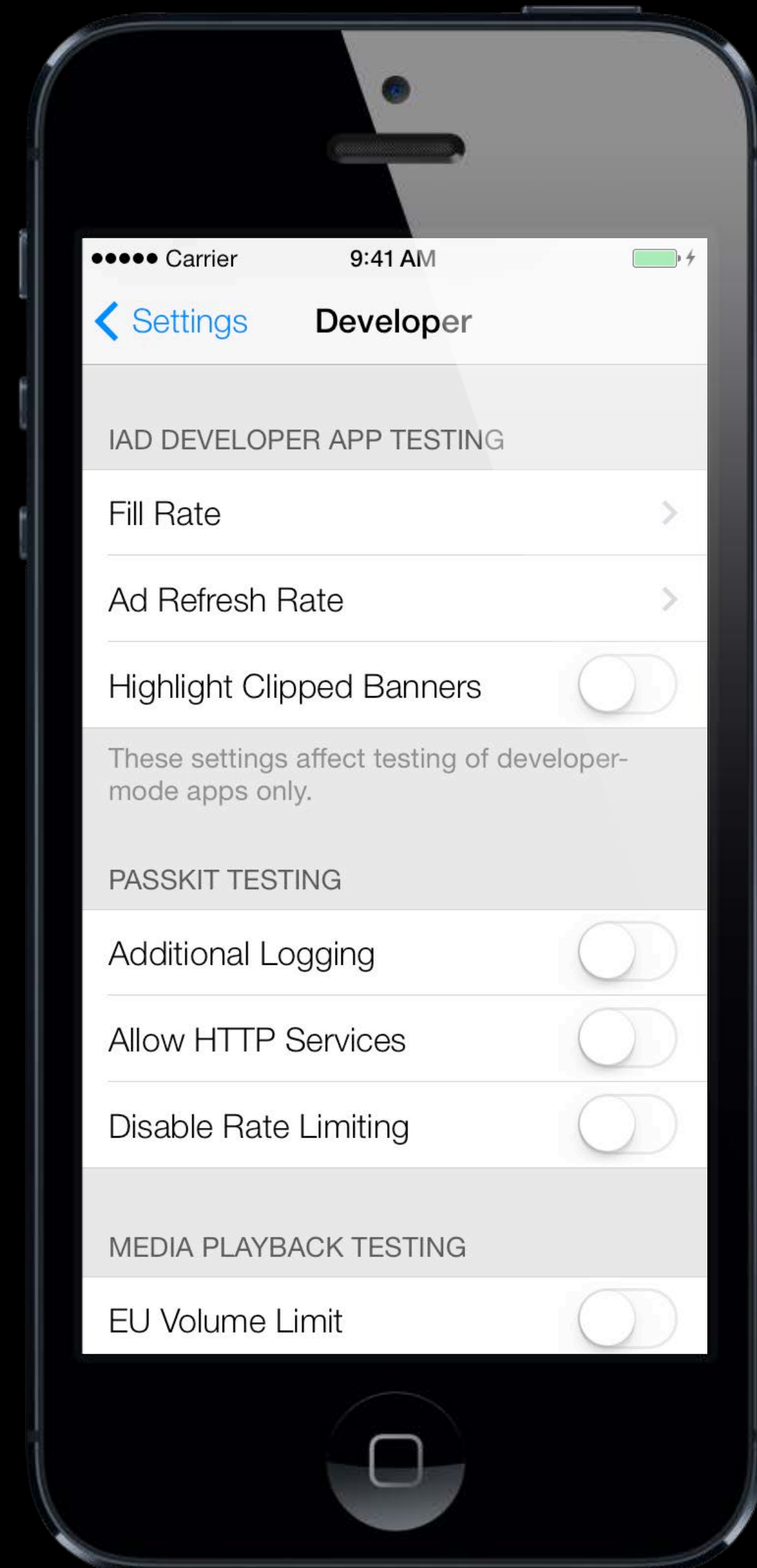
Toggling display on and off

- Disable based on app context
- Remember to re-enable!

```
// Game started  
viewController.canDisplayBannerAds = NO;  
  
// Game paused, menu showing  
viewController.canDisplayBannerAds = YES;
```

Banner

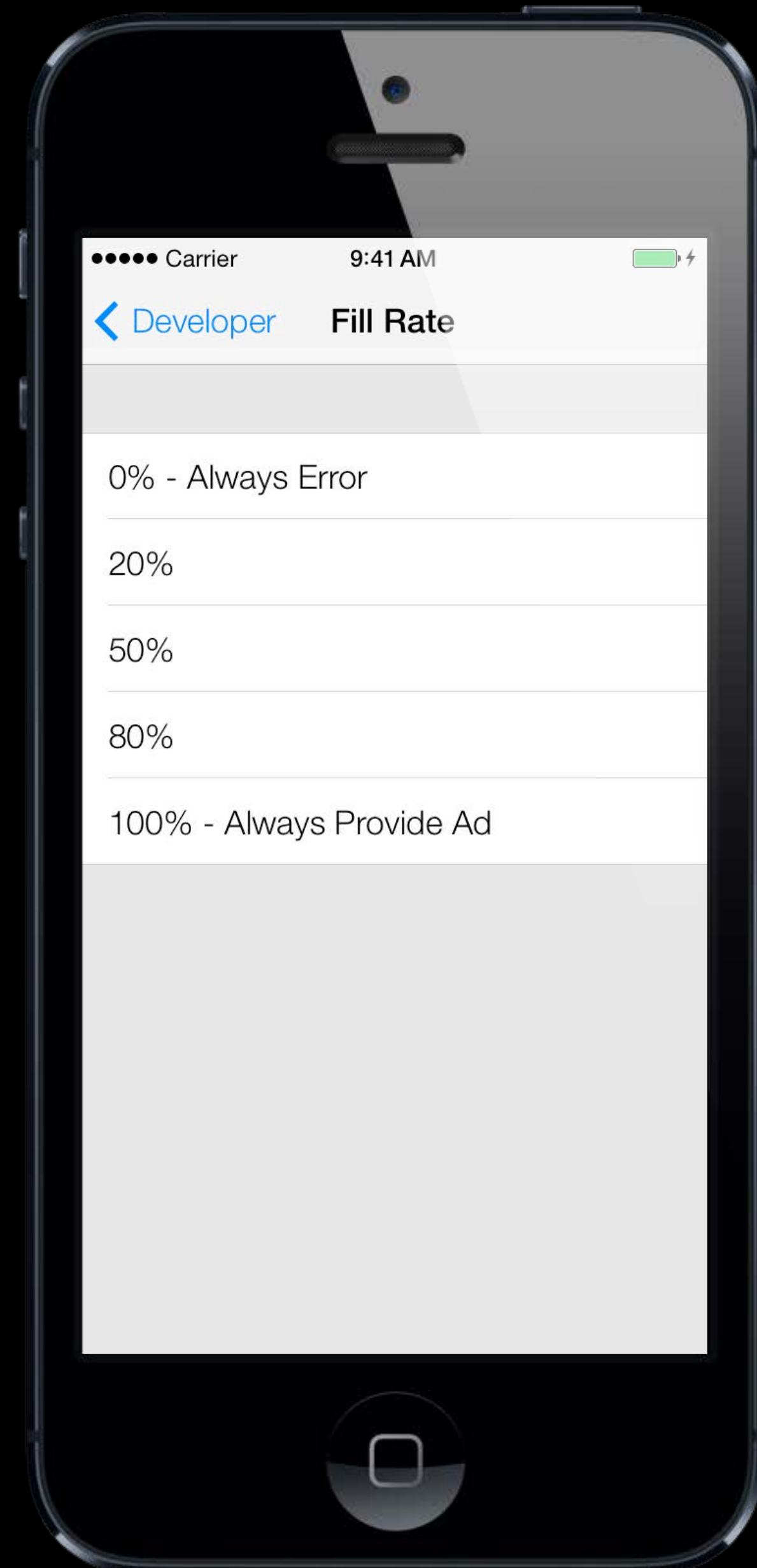
Testing integration



Banner

Testing integration

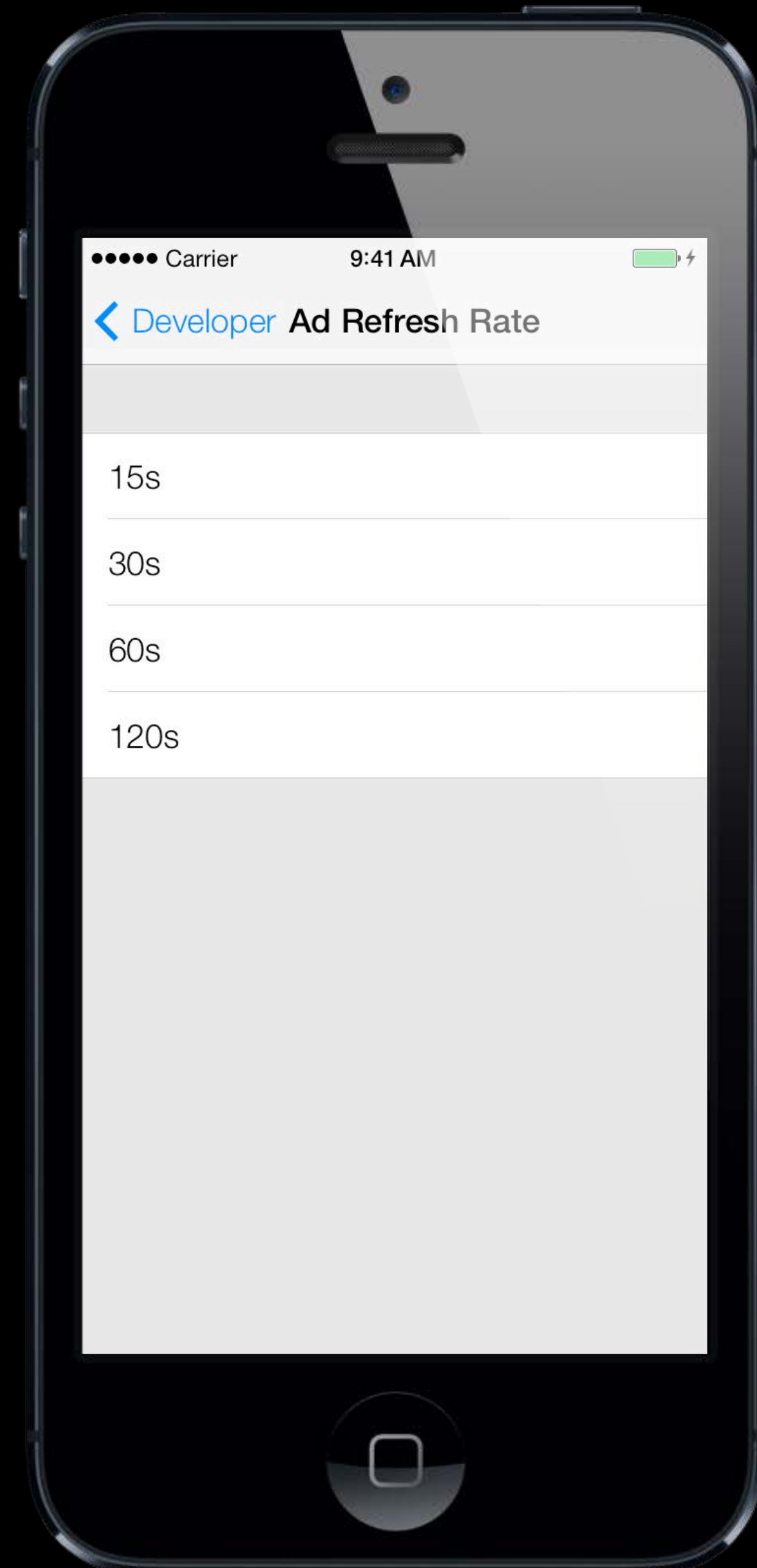
- Adjust fill rate



Banner

Testing integration

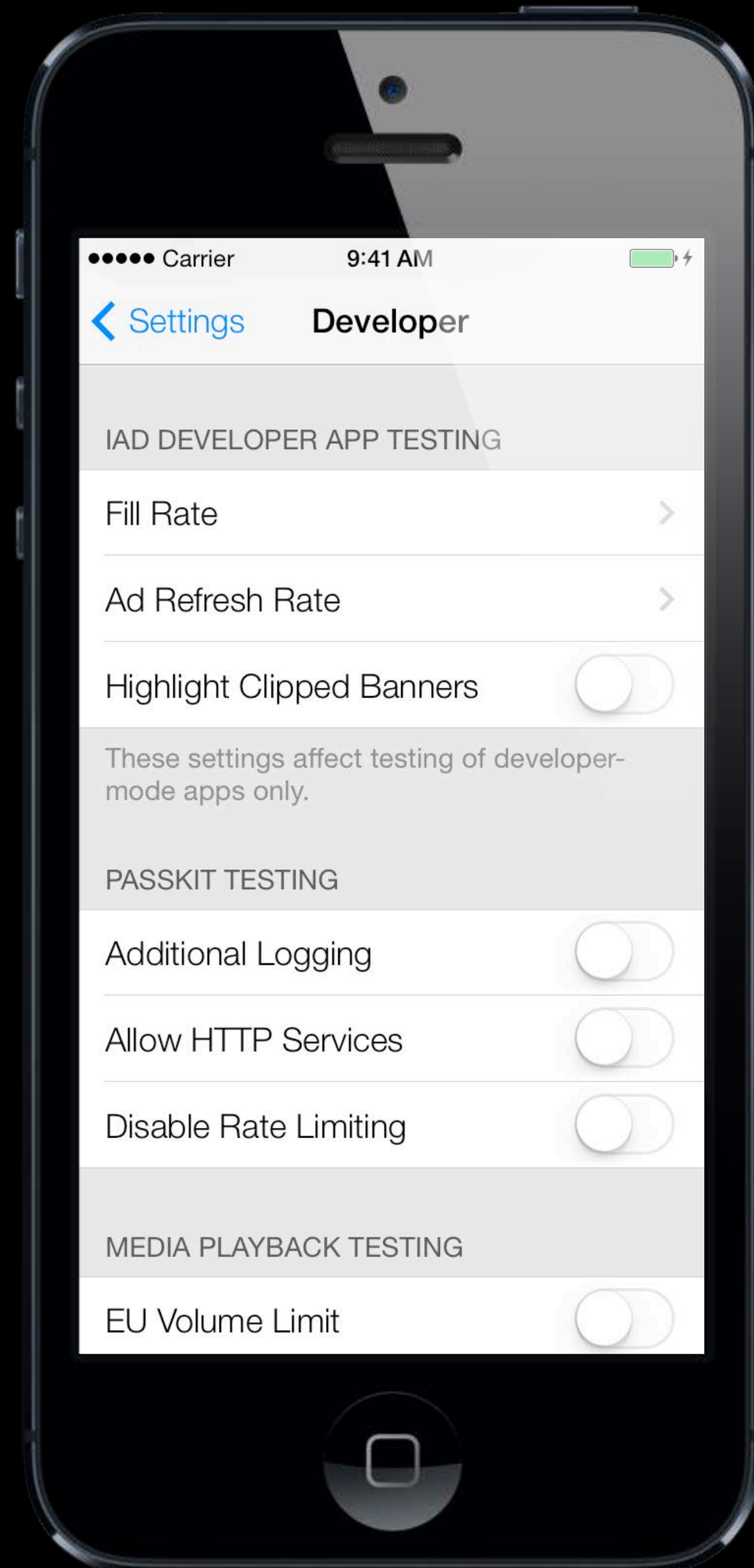
- Adjust fill rate
- Adjust ad refresh rate



Banner

Testing integration

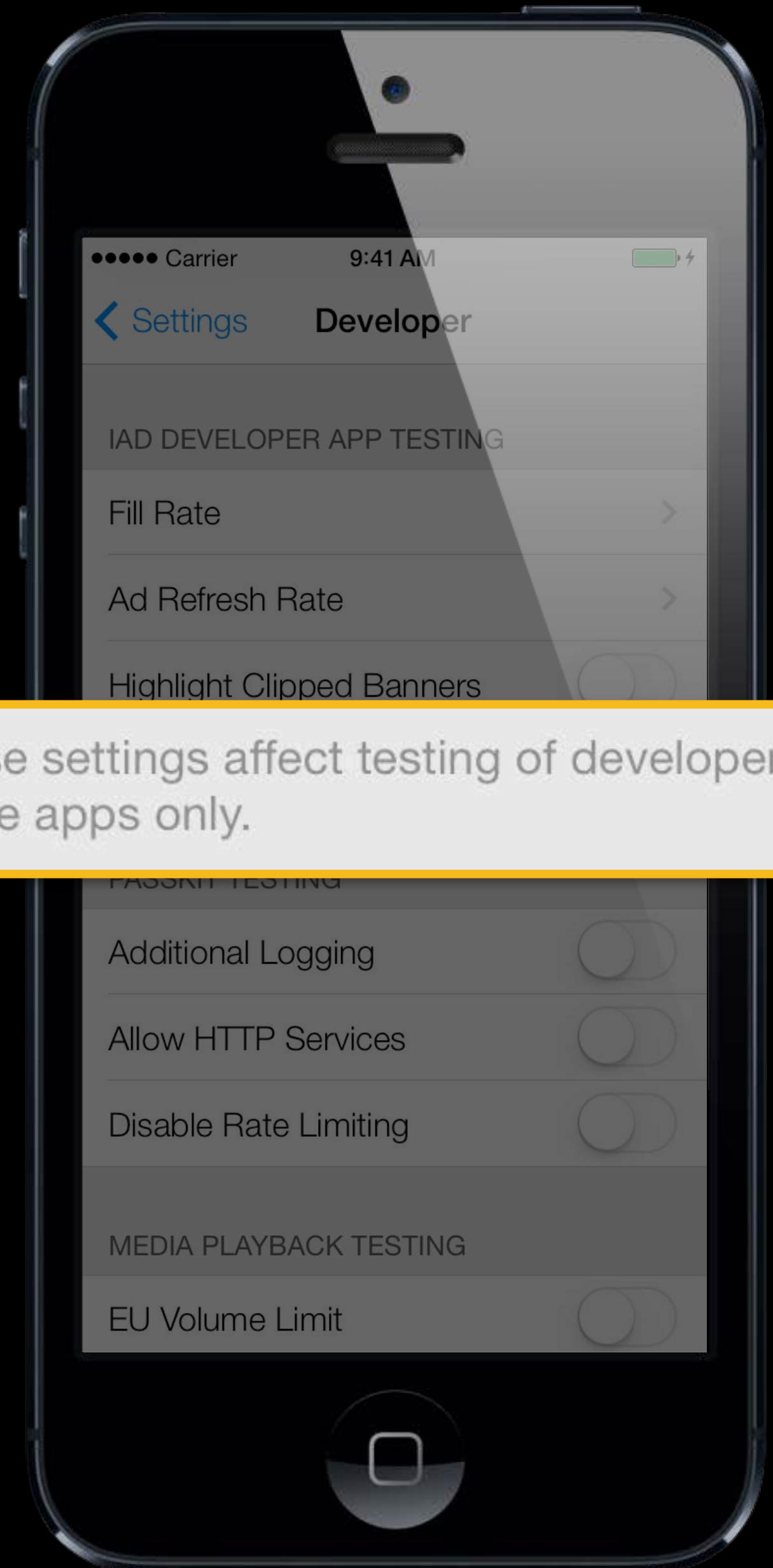
- Adjust fill rate
- Adjust ad refresh rate
- Only affects your apps



Banner

Testing integration

- Adjust fill rate
- Adjust ad refresh rate
- Only affects your apps



These settings affect testing of developer-mode apps only.

Demo

Banner Integration

David Wilson

iOS Apps and Frameworks

Interstitial

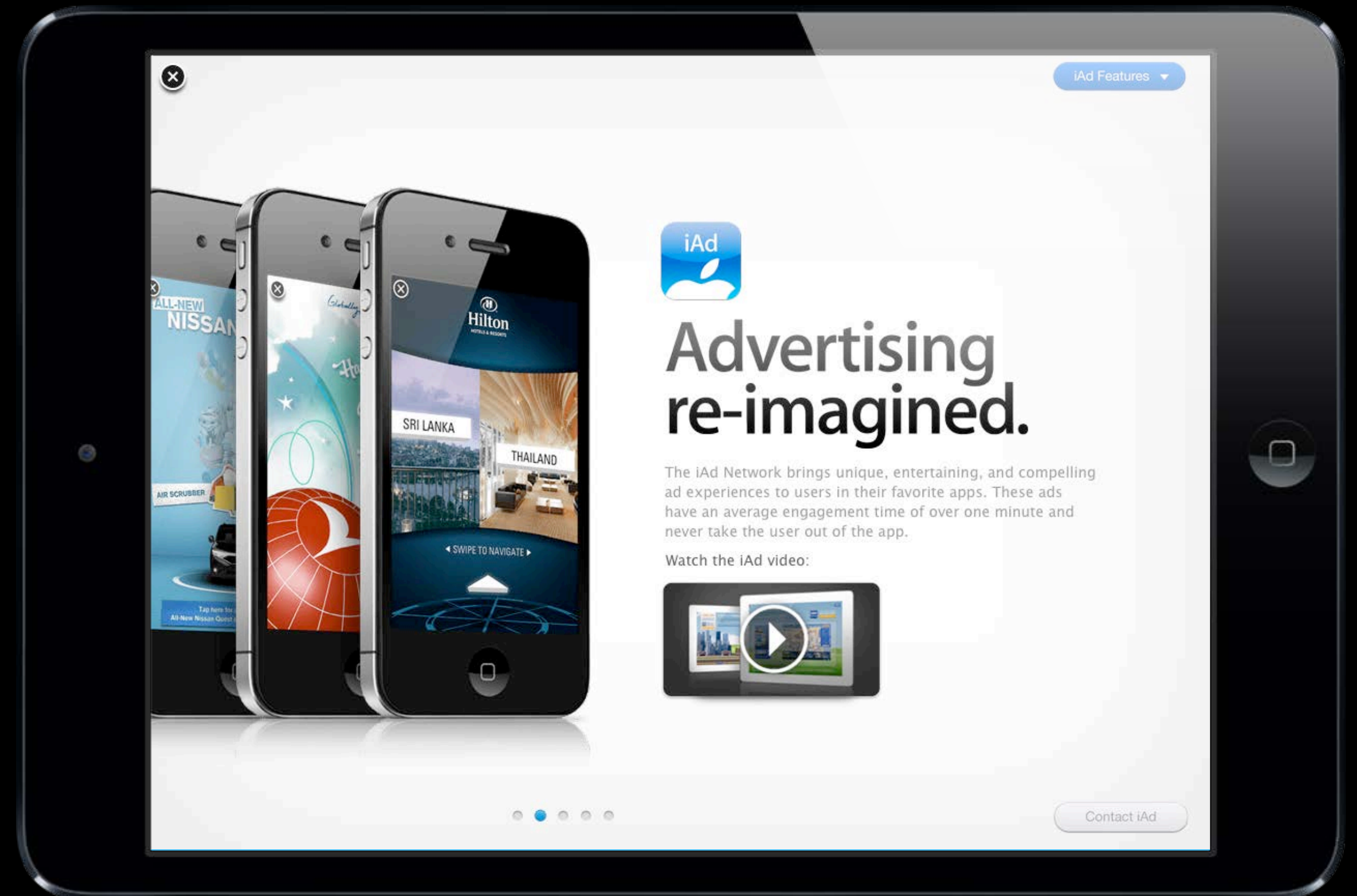
App Integration

Interstitial



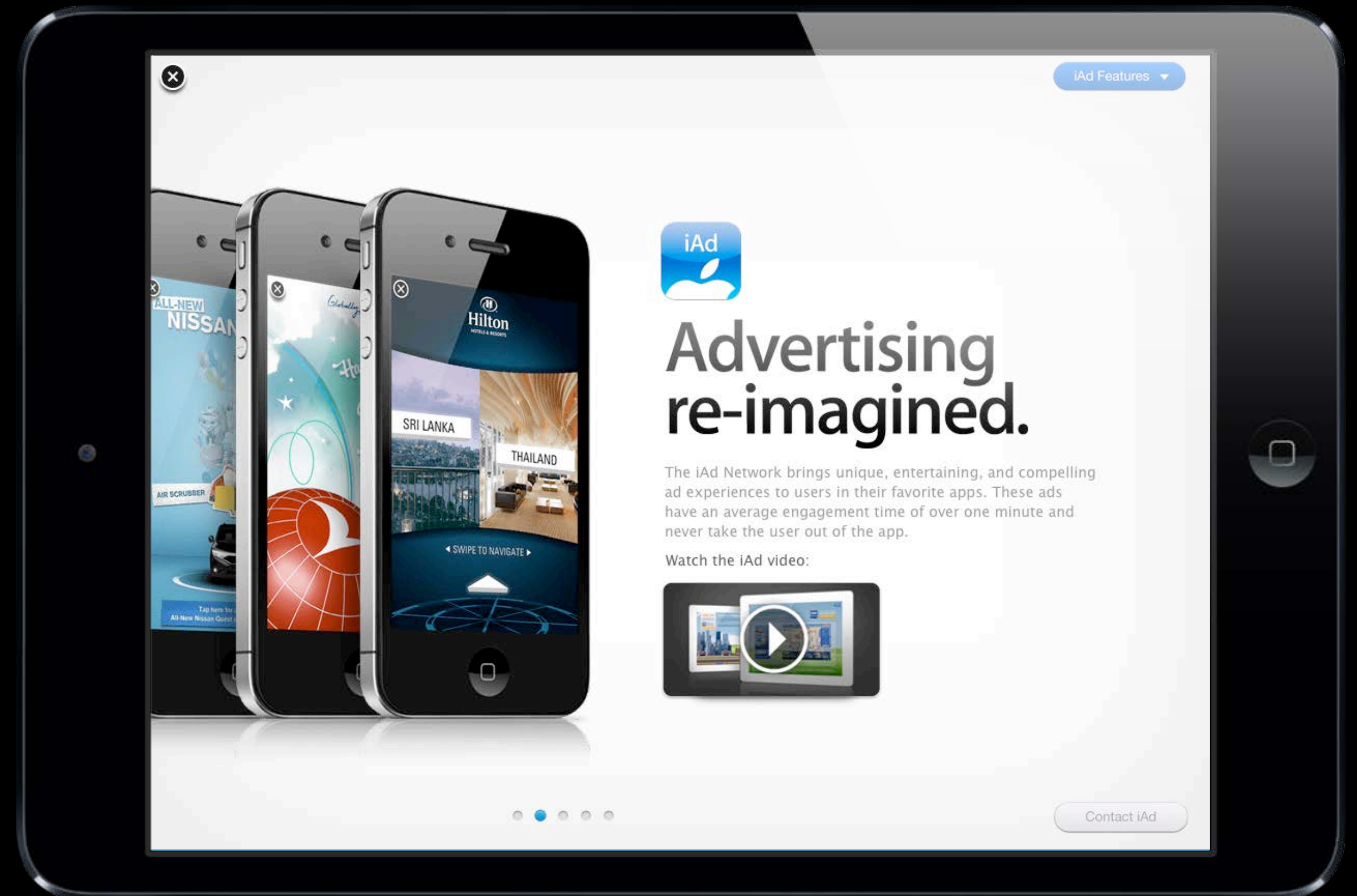
Interstitial

- Immediate fullscreen display



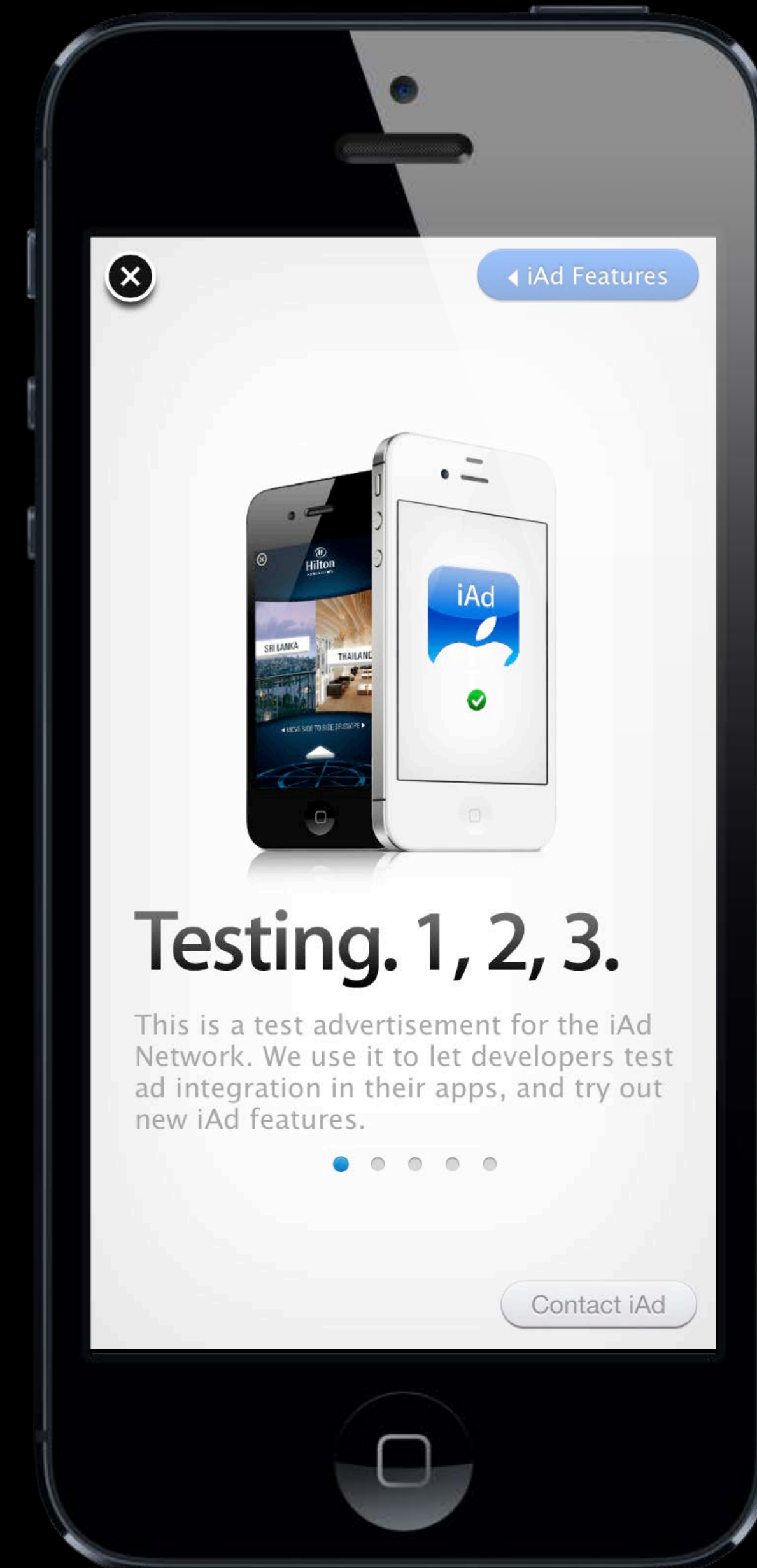
Interstitial

- Immediate fullscreen display
- iPad since iOS 4.3



Interstitial

- Immediate fullscreen display
- iPad since iOS 4.3
- iPhone in iOS 7



Interstitial

Automatic presentation

```
nextController.interstitialPresentationPolicy = ADInterstitialPresentationPolicyAutomatic;  
[currentController.navigationController pushViewController:nextController animated:YES];
```



Interstitial

Automatic presentation

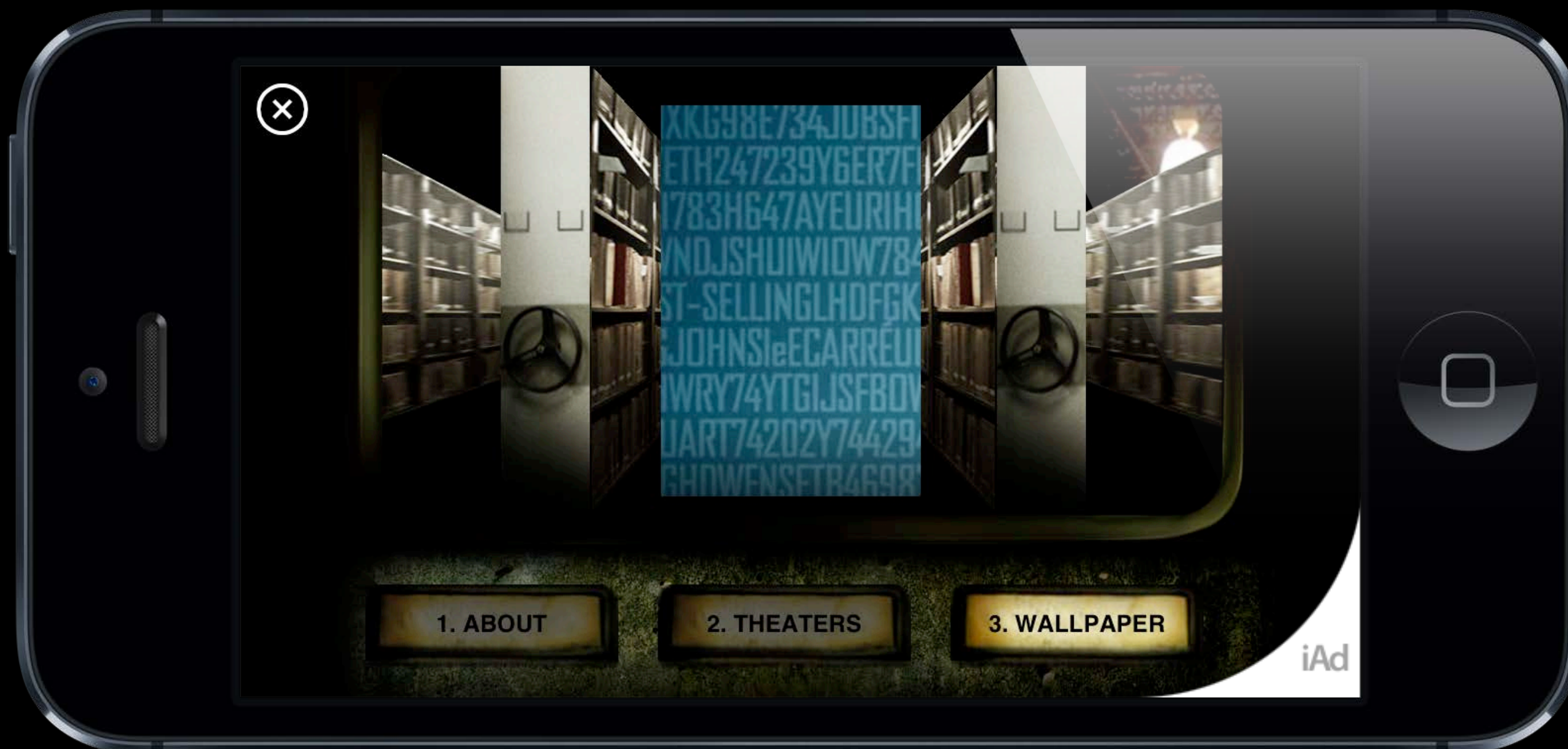
```
nextController.interstitialPresentationPolicy = ADInterstitialPresentationPolicyAutomatic;  
[currentController.navigationController pushViewController:nextController animated:YES];
```



Interstitial

Automatic presentation

```
nextController.interstitialPresentationPolicy = ADInterstitialPresentationPolicyAutomatic;  
[currentController.navigationController pushViewController:nextController animated:YES];
```



Interstitial

Manual presentation

```
controller.interstitialPresentationPolicy = ADInterstitialPresentationPolicyManual;
```

```
(...time passes...)
```

```
[controller requestInterstitialAdPresentation];
```



Interstitial

Manual presentation

```
controller.interstitialPresentationPolicy = ADInterstitialPresentationPolicyManual;
```

```
(...time passes...)
```

```
[controller requestInterstitialAdPresentation];
```



Interstitial

Manual presentation

```
controller.interstitialPresentationPolicy = ADInterstitialPresentationPolicyManual;
```

(...time passes...)

```
[controller requestInterstitialAdPresentation];
```



Interstitial

Preparing early

Interstitial

Preparing early

- Don't miss early impressions!

Interstitial

Preparing early

- Don't miss early impressions!
- Start ad requests early

```
- (BOOL)application:(UIApplication *)application
didFinishLaunchingWithOptions:(NSDictionary *)launchOptions {
    ...
    [UIViewController prepareInterstitialAds];
    ...
}
```

Interstitial

Preparing early

- Don't miss early impressions!
- Start ad requests early

```
- (BOOL)application:(UIApplication *)application
didFinishLaunchingWithOptions:(NSDictionary *)launchOptions {
    ...
    [UIViewController prepareInterstitialAds];
    ...
}
```

Demo

Interstitial Integration

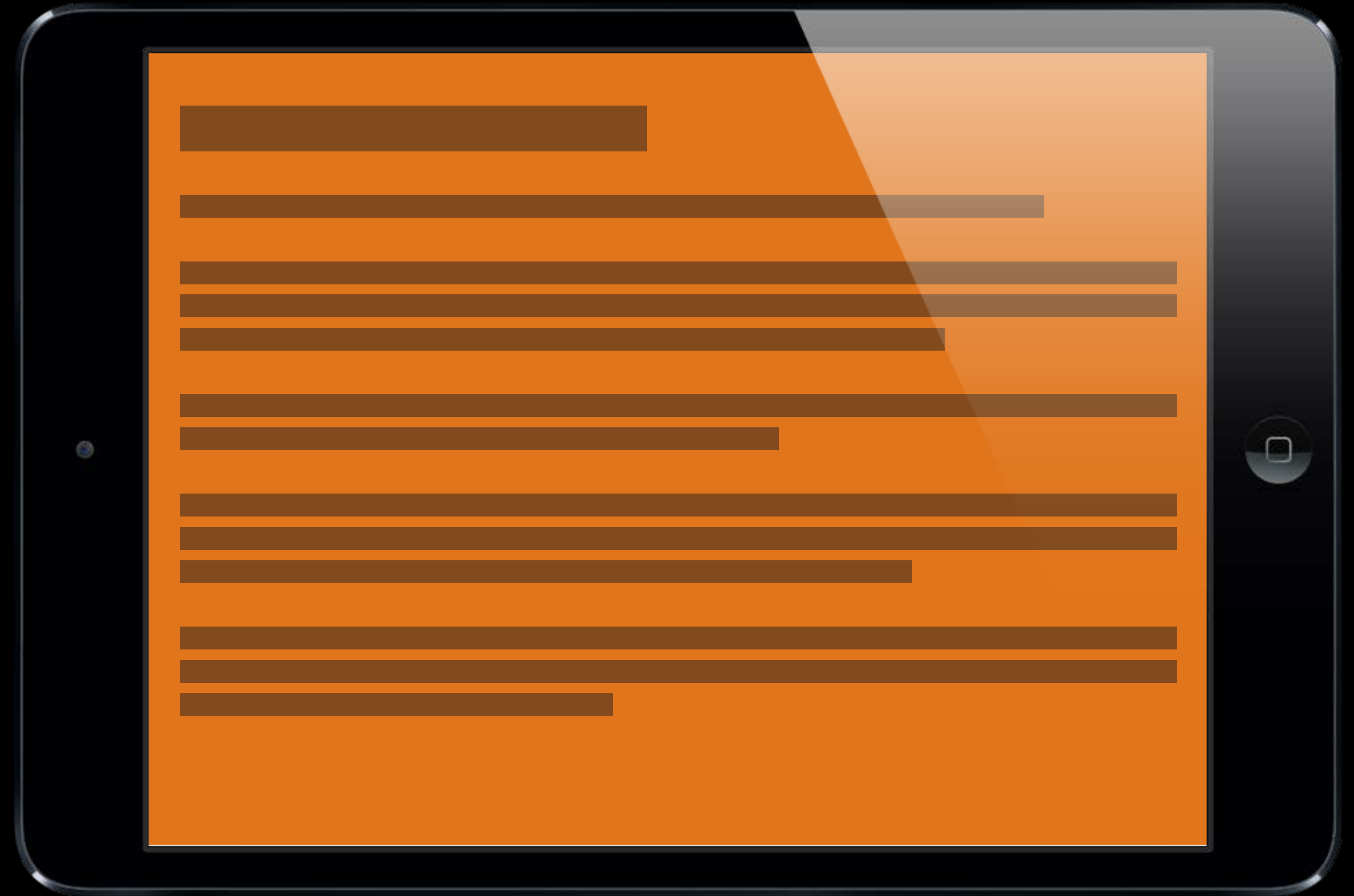
David Wilson

iOS Apps and Frameworks

IAB “Medium Rectangle”

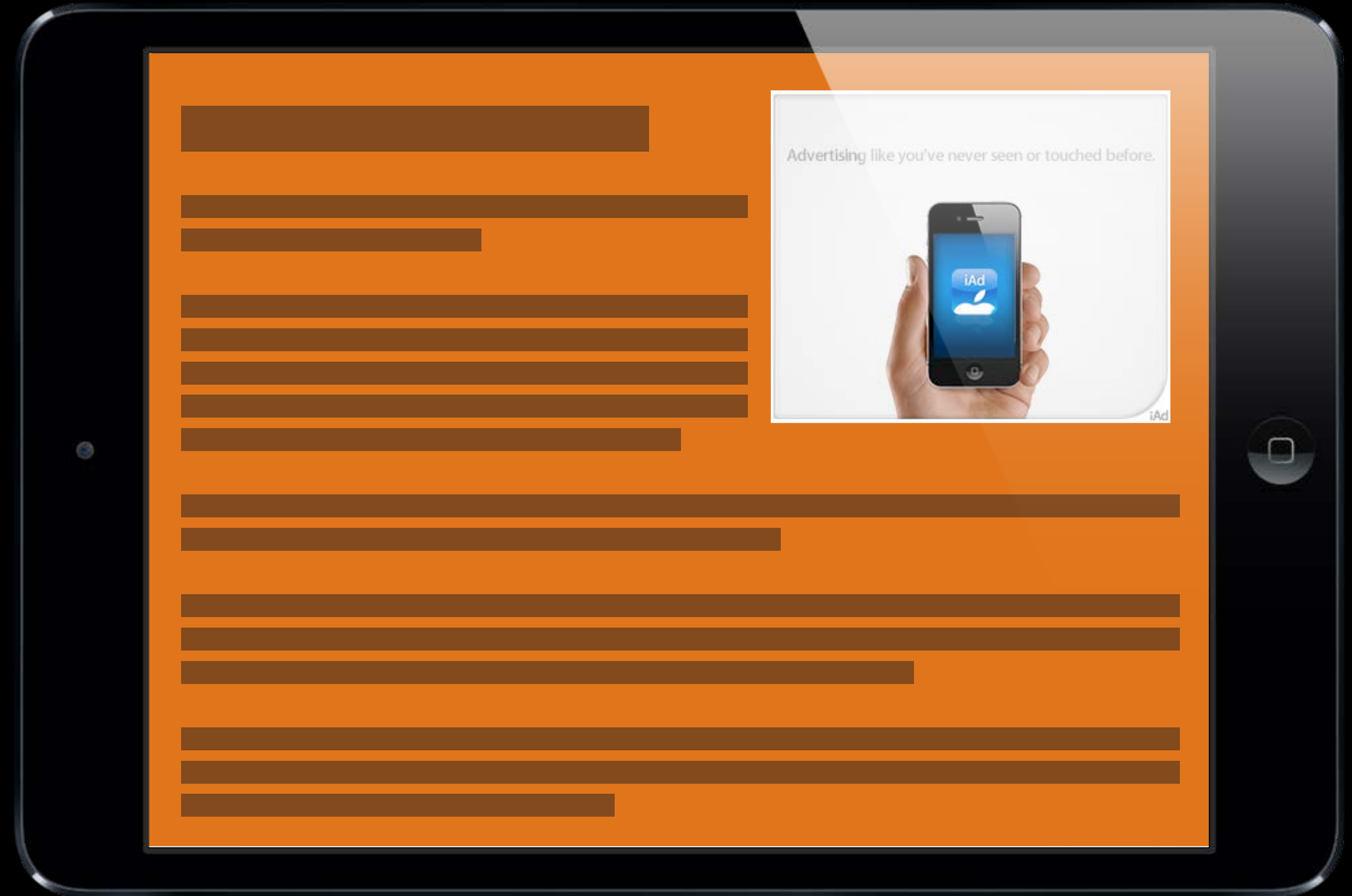
App Integration

IAB "Medium Rectangle"



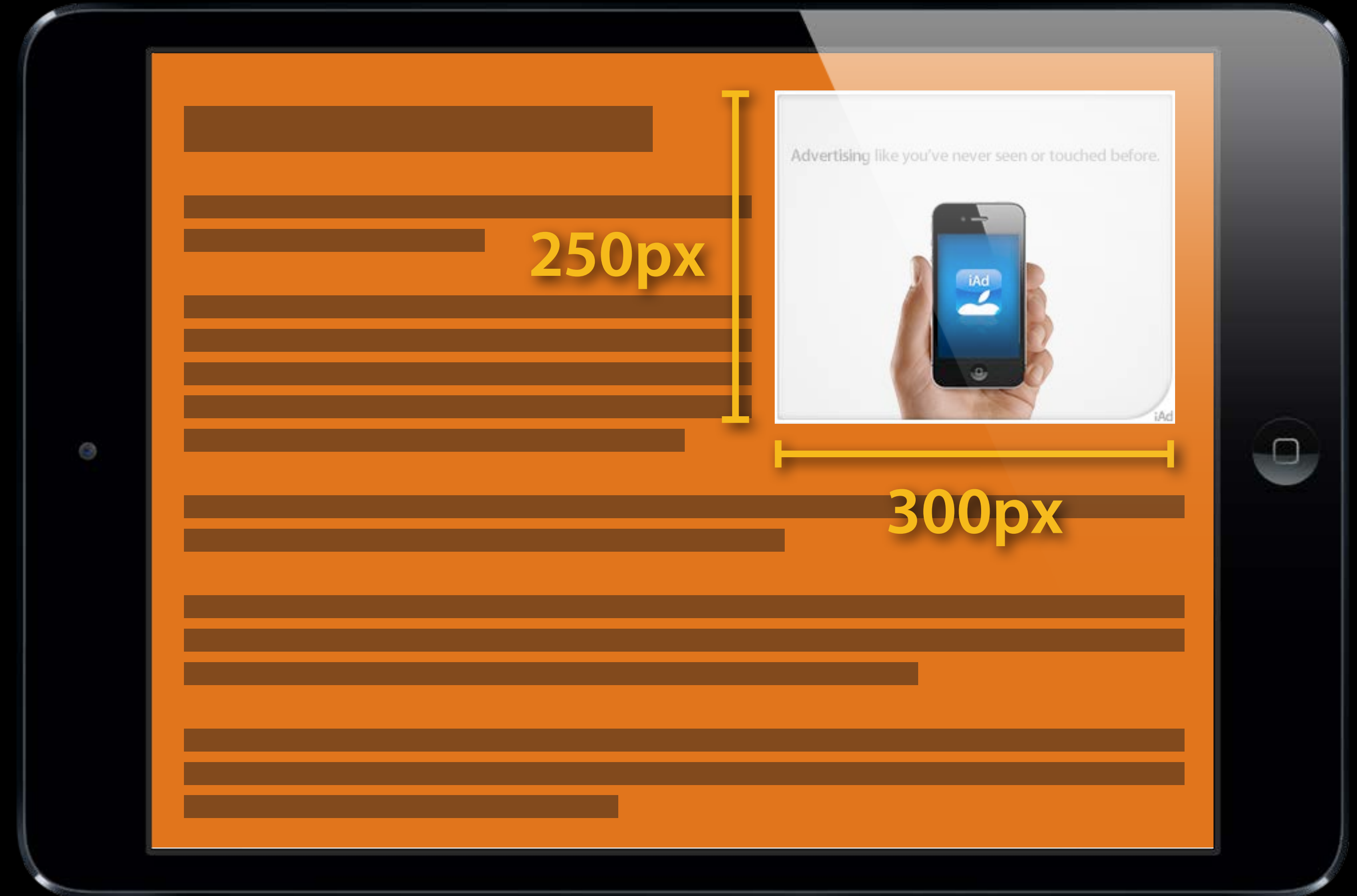
IAB "Medium Rectangle"

- Positioned inline



IAB "Medium Rectangle"

- Positioned inline
- Standardized "IAB" size



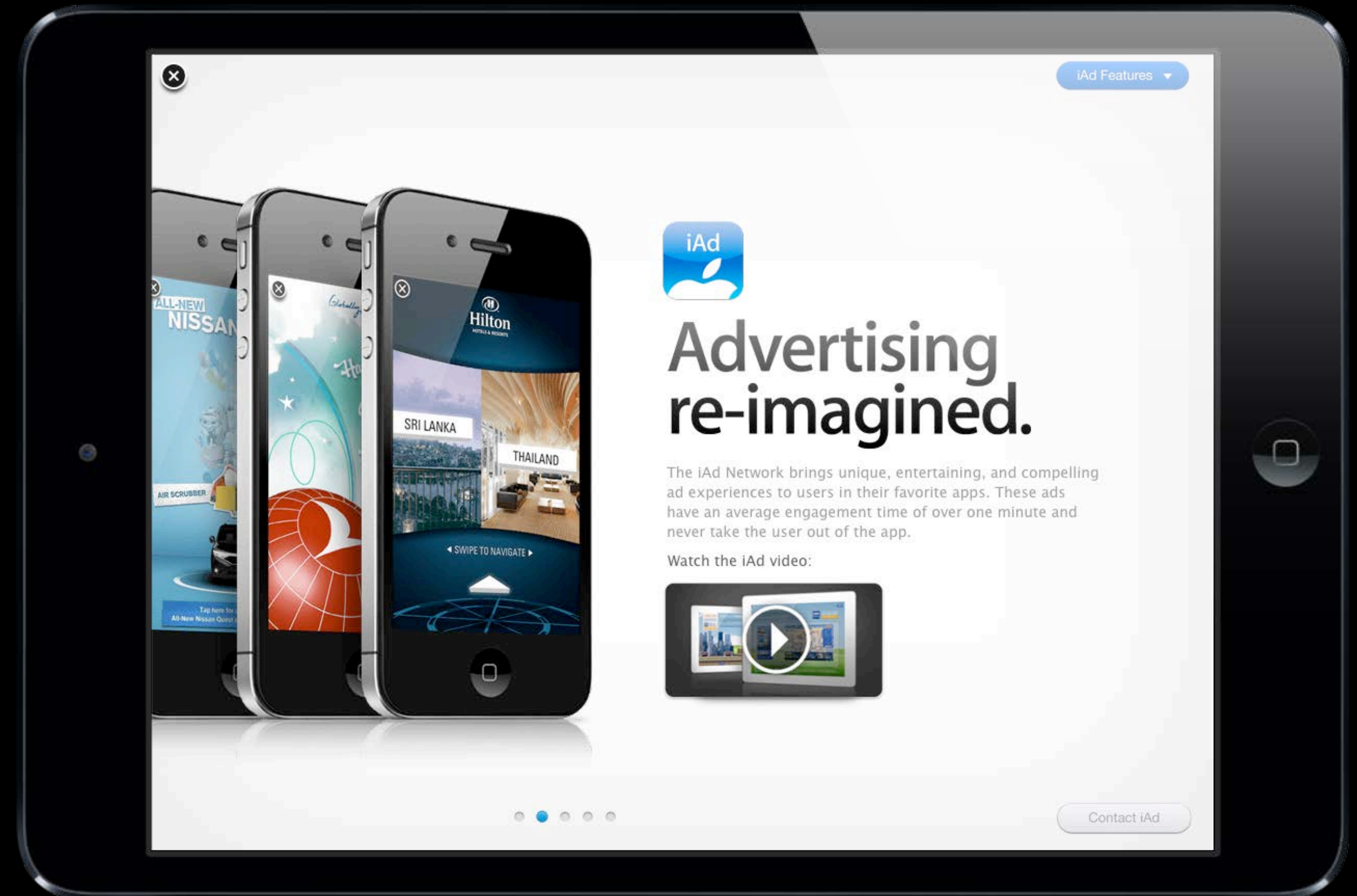
IAB “Medium Rectangle”

- Positioned inline
- Standardized “IAB” size
- Automatic cycling



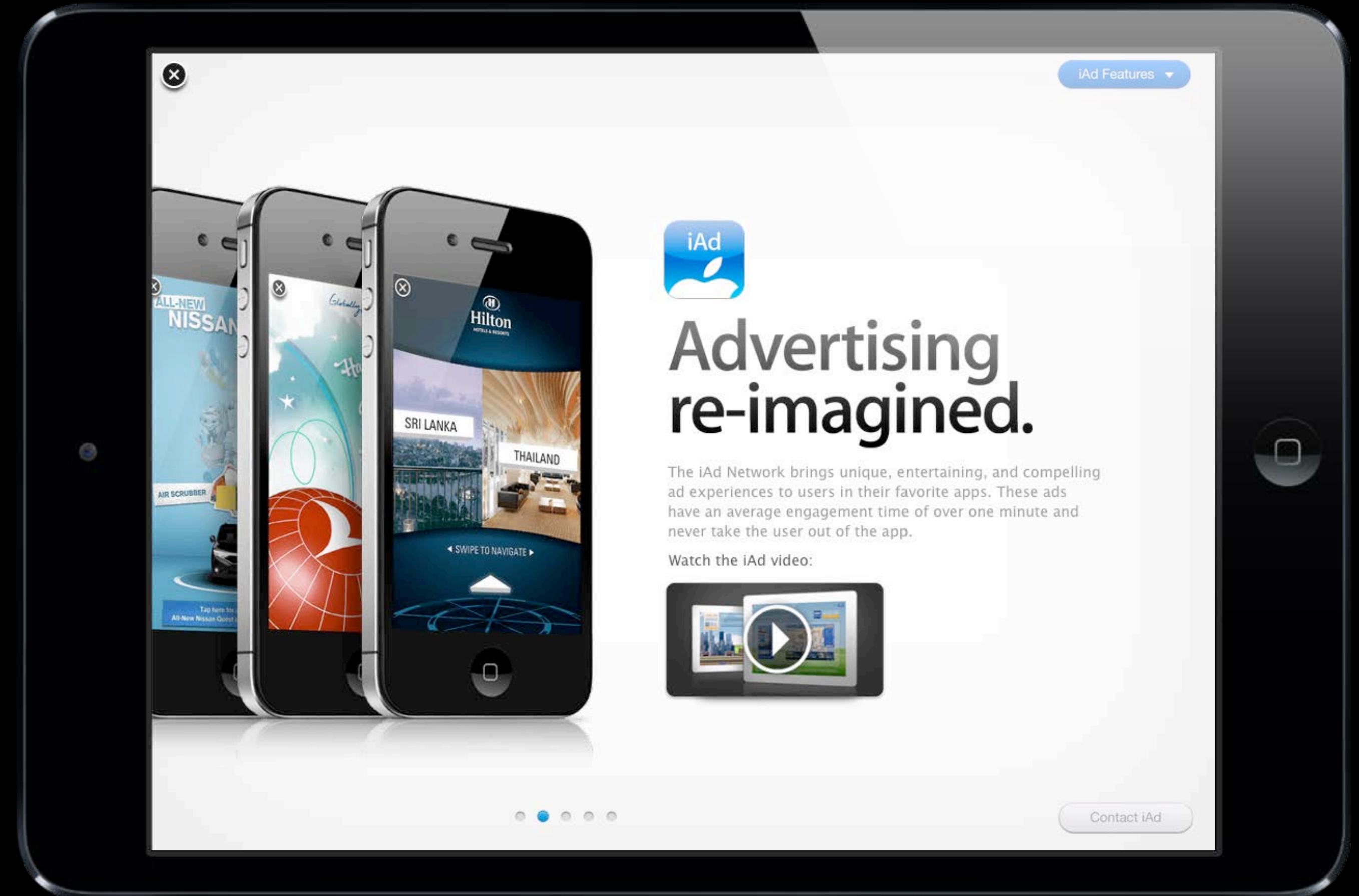
IAB “Medium Rectangle”

- Positioned inline
- Standardized “IAB” size
- Automatic cycling
- Fullscreen ad on tap



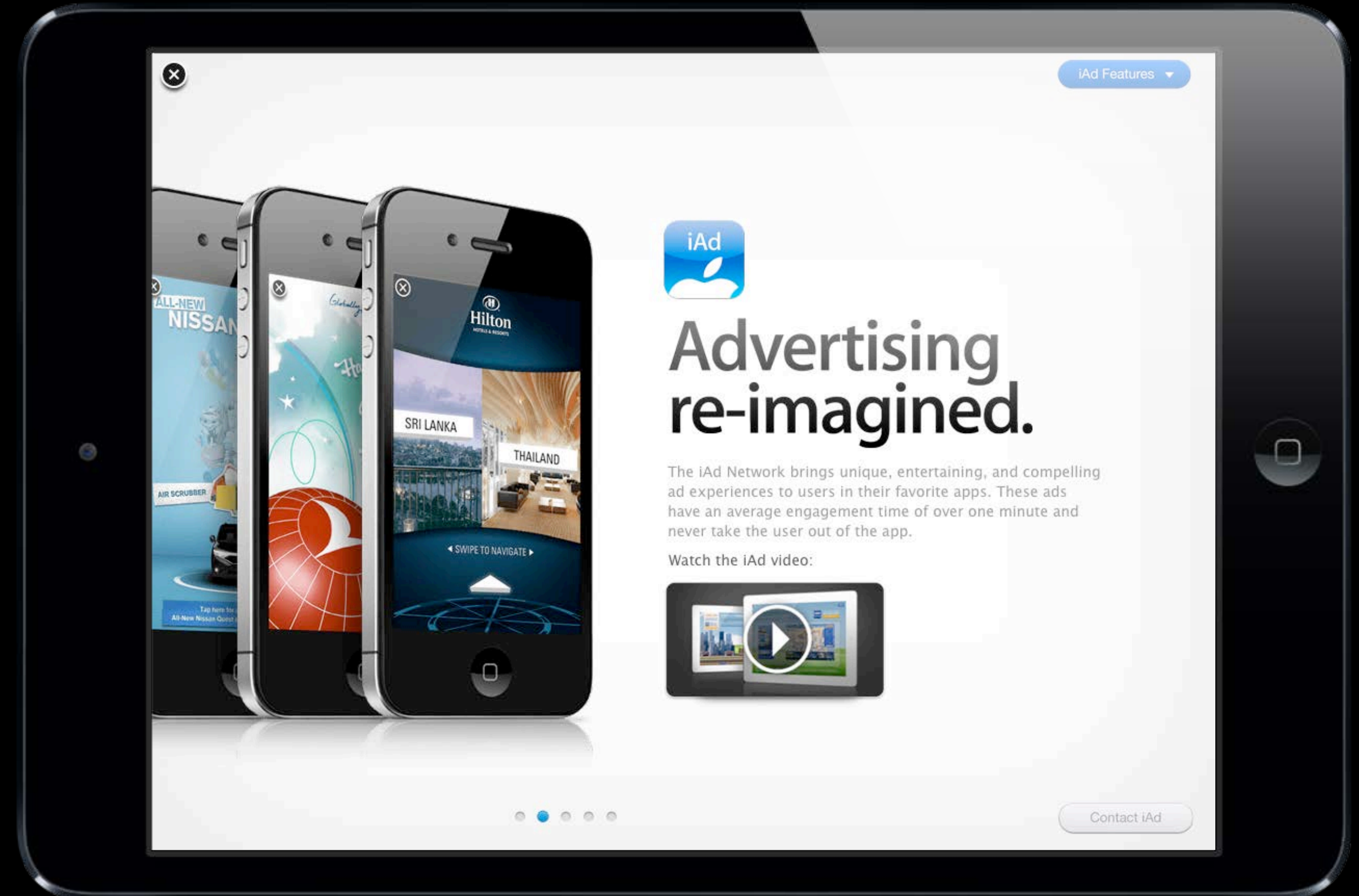
IAB “Medium Rectangle”

- Positioned inline
- Standardized “IAB” size
- Automatic cycling
- Fullscreen ad on tap
- Introduced in iOS 6



IAB “Medium Rectangle”

- Positioned inline
- Standardized “IAB” size
- Automatic cycling
- Fullscreen ad on tap
- Introduced in iOS 6
- iPad only



Medium Rectangle

View creation

Medium Rectangle

View creation

```
#import <iAd/iAd.h>
```

```
adView = [[ADBannerView alloc]  
          initWithAdType:ADAdTypeMediumRectangle];
```

```
adView.delegate = self;
```

```
...
```

```
@interface MyViewController :  
    UIViewController <ADBannerViewDelegate>
```

```
@end
```

Medium Rectangle

View creation

```
#import <iAd/iAd.h>
```

```
adView = [[ADBannerView alloc]  
          initWithAdType:ADAdTypeMediumRectangle];
```

```
adView.delegate = self;
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```
...
```

```
@interface MyViewController :  
    UIViewController <ADBannerViewDelegate>
```

```
@end
```

Medium Rectangle

View creation

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#import <iAd/iAd.h>
```

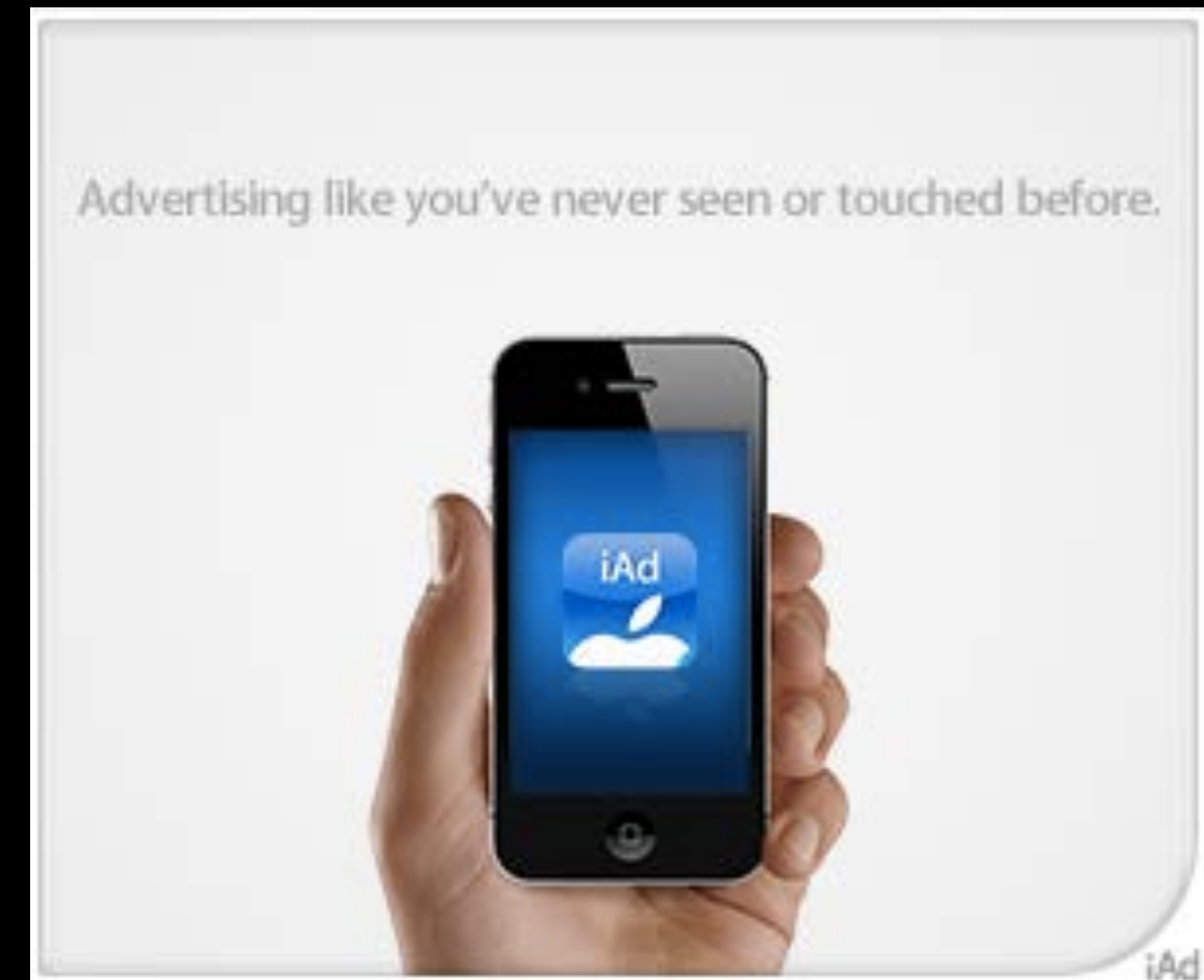
```
adView = [[ADBannerView alloc]  
          initWithAdType:ADAdTypeMediumRectangle];
```

```
adView.delegate = self;
```

```
...
```

```
@interface MyViewController :  
    UIViewController <ADBannerViewDelegate>
```

```
@end
```



Medium Rectangle

View creation

```
#import <iAd/iAd.h>

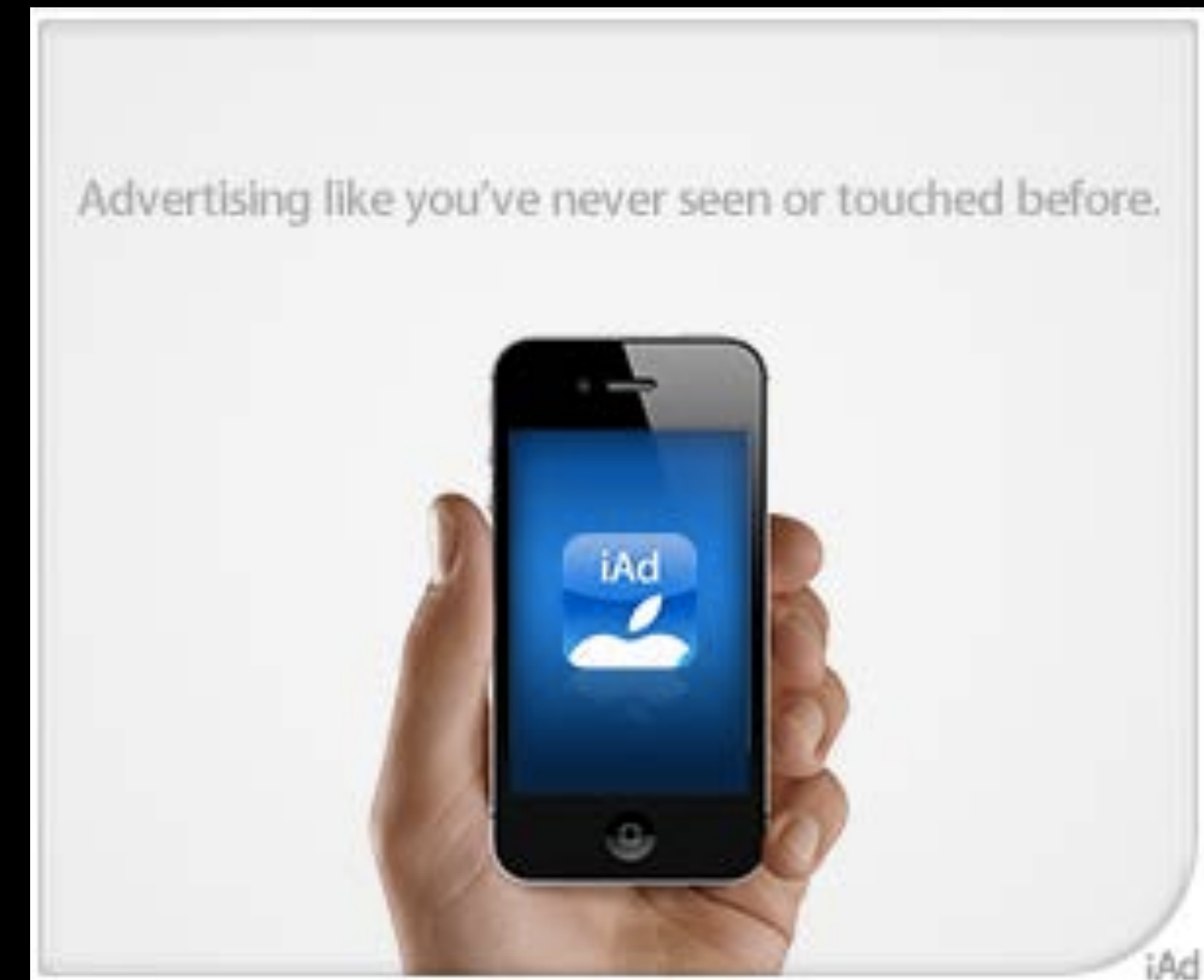
adView = [[ADBannerView alloc]
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adView.delegate = self;

...

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    UIViewController <ADBannerViewDelegate>

@end
```



Medium Rectangle

View creation

```
#import <iAd/iAd.h>

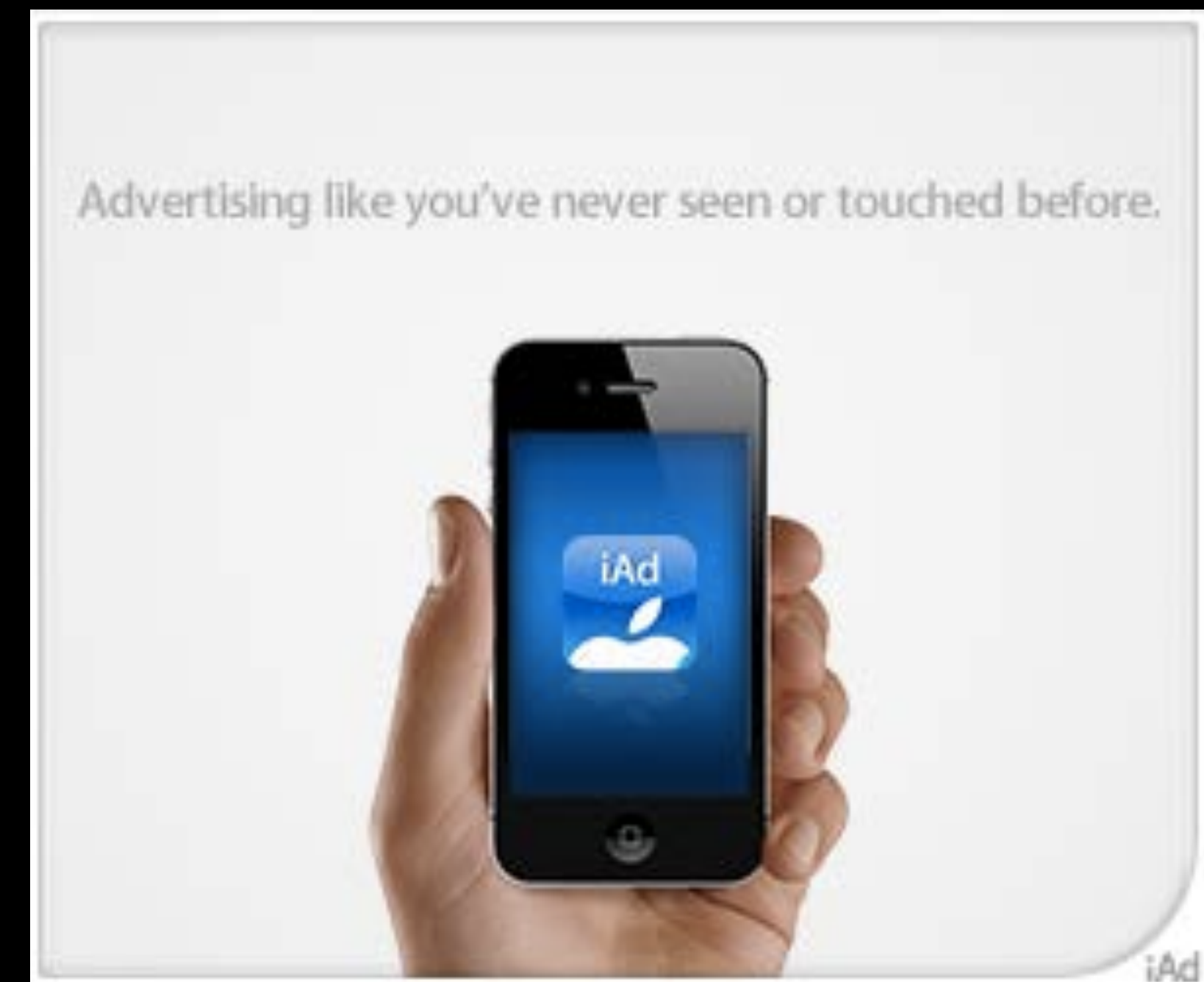
adView = [[ADBannerView alloc]
           initWithAdType:ADAdTypeMediumRectangle];

adView.delegate = self;

...
```

```
@interface MyViewController :
    UIViewController <ADBannerViewDelegate>

@end
```



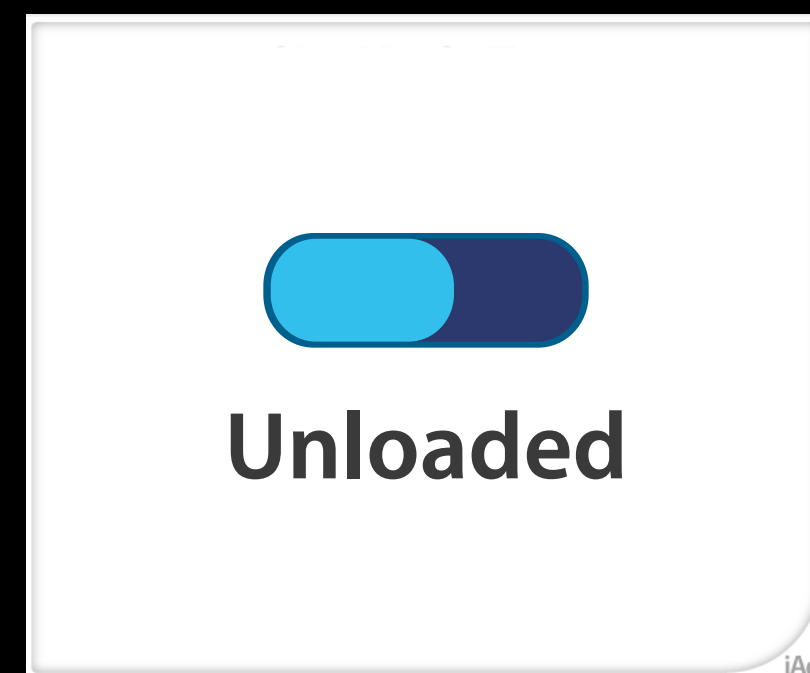
Medium Rectangle

Load and display

```
@implementation MyViewController
```

```
...
```

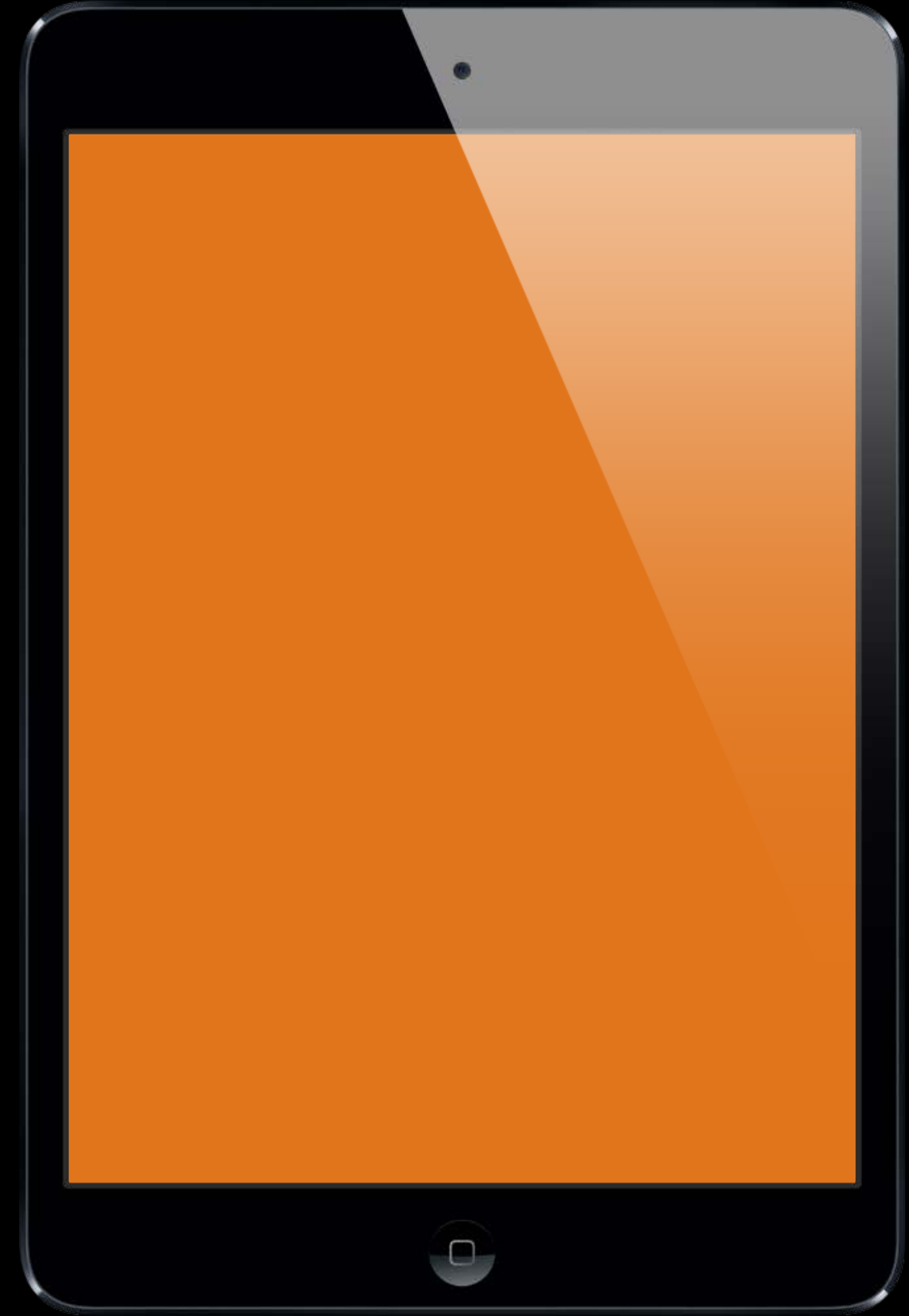
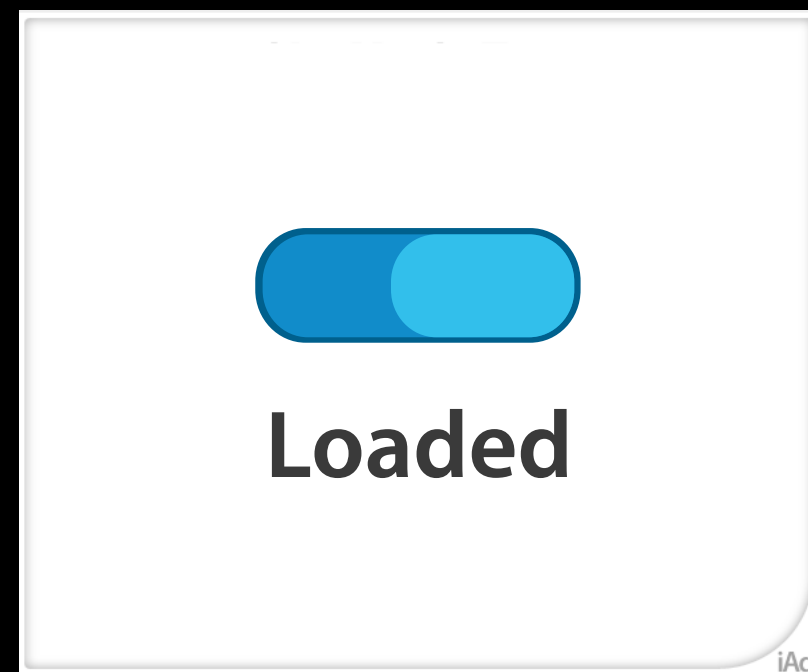
```
@end
```



Medium Rectangle

Load and display

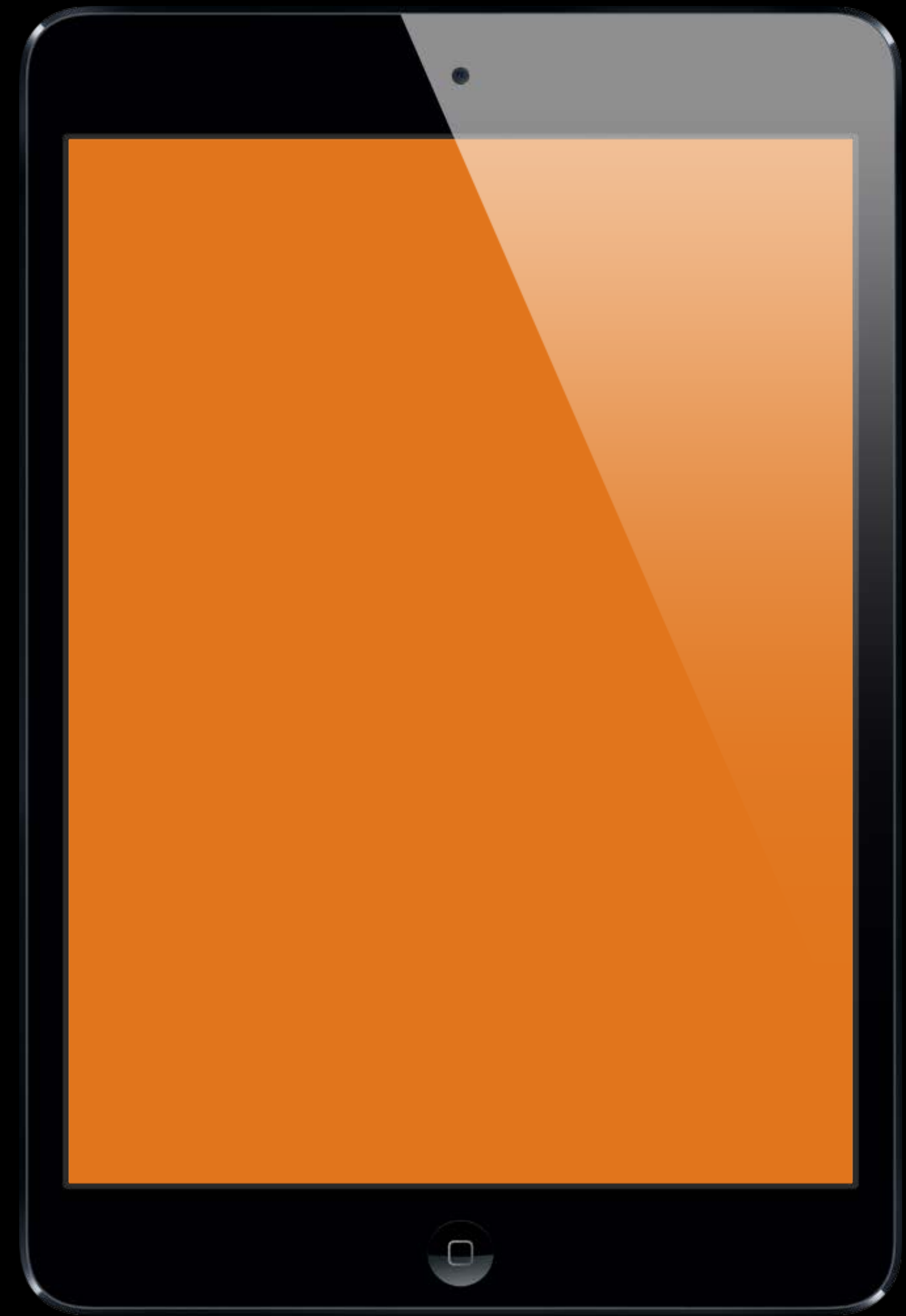
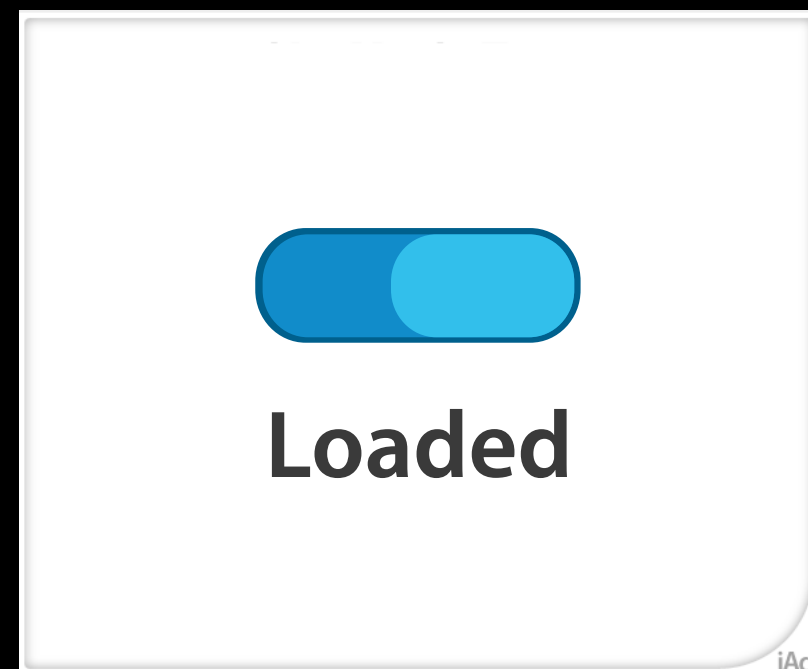
```
@implementation MyViewController  
  
- (void)bannerViewDidLoadAd:(ADBannerView  
*)banner  
{  
  
}  
  
@end
```



Medium Rectangle

Load and display

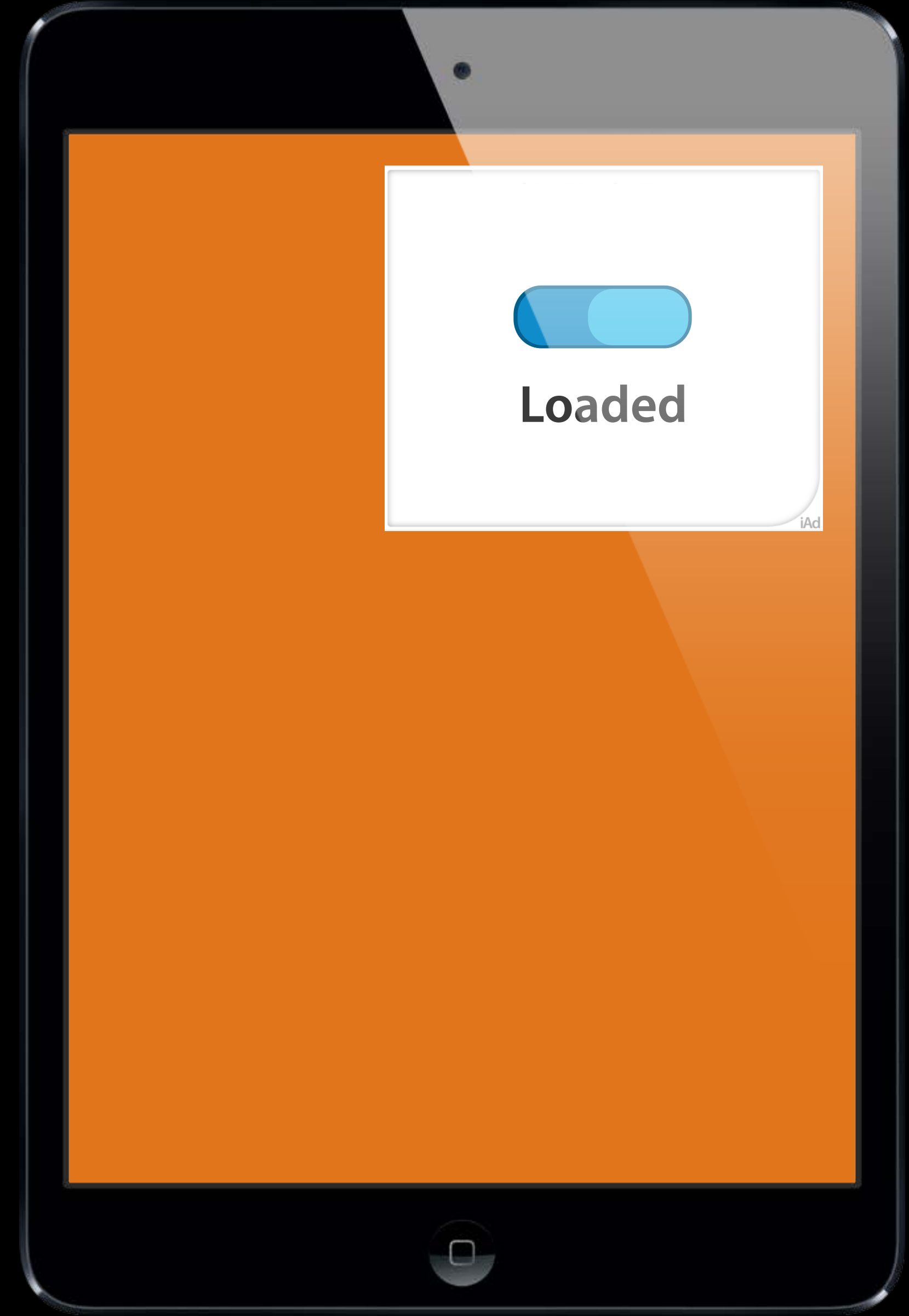
```
@implementation MyViewController  
  
- (void)bannerViewDidLoadAd:(ADBannerView  
*)banner  
{  
    [self.view addSubview:banner];  
    [self.view layoutIfNeeded];  
}  
  
@end
```



Medium Rectangle

Load and display

```
@implementation MyViewController  
  
- (void)bannerViewDidLoadAd:(ADBannerView  
*)banner  
{  
    [self.view addSubview:banner];  
    [self.view layoutIfNeeded];  
}  
  
@end
```



Medium Rectangle

Tap-through

Medium Rectangle

Tap-through

- Fullscreen ad on tap

Medium Rectangle

Tap-through

- Fullscreen ad on tap
- Pause media in `-viewWillDisappear:`

Medium Rectangle

Tap-through

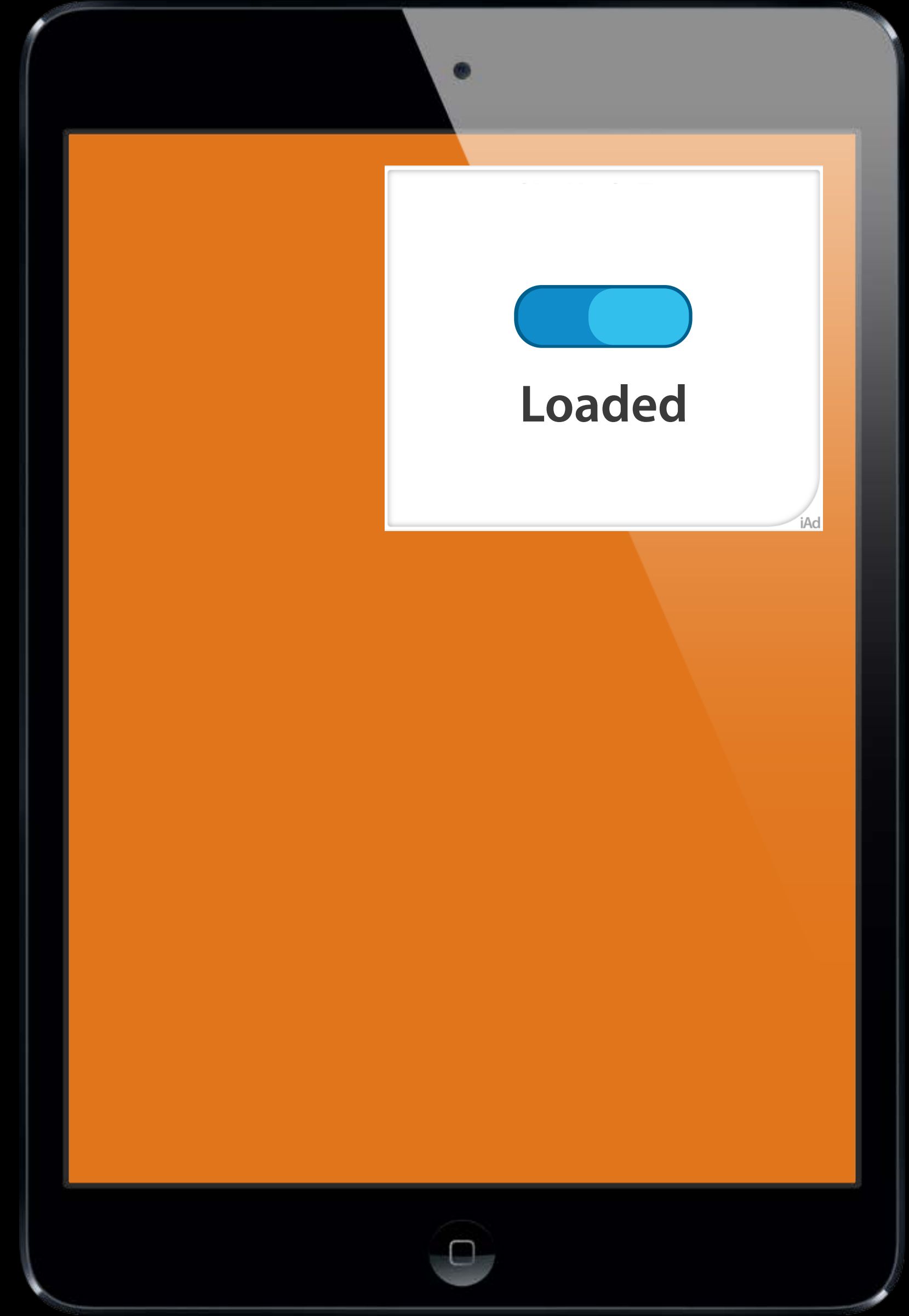
- Fullscreen ad on tap
- Pause media in `-viewWillDisappear:`
- Resume media in `-viewDidAppear:`

Medium Rectangle Unload

```
@implementation MyViewController
```

```
...
```

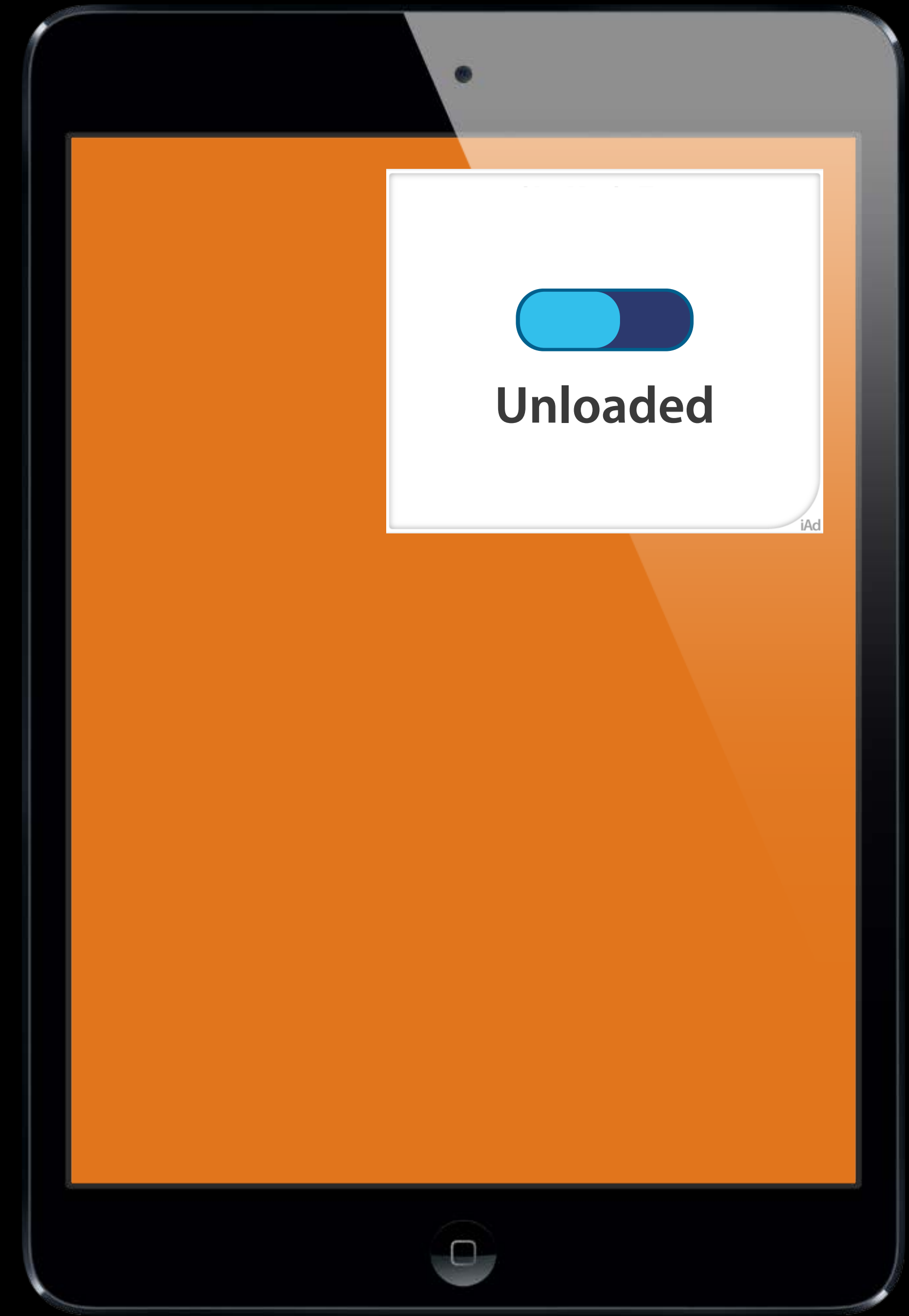
```
@end
```



Medium Rectangle

Unload

```
@implementation MyViewController  
  
- (void)bannerView:(ADBannerView *)banner  
didFailToReceiveAdWithError:(NSError *)error  
{  
  
}  
  
@end
```



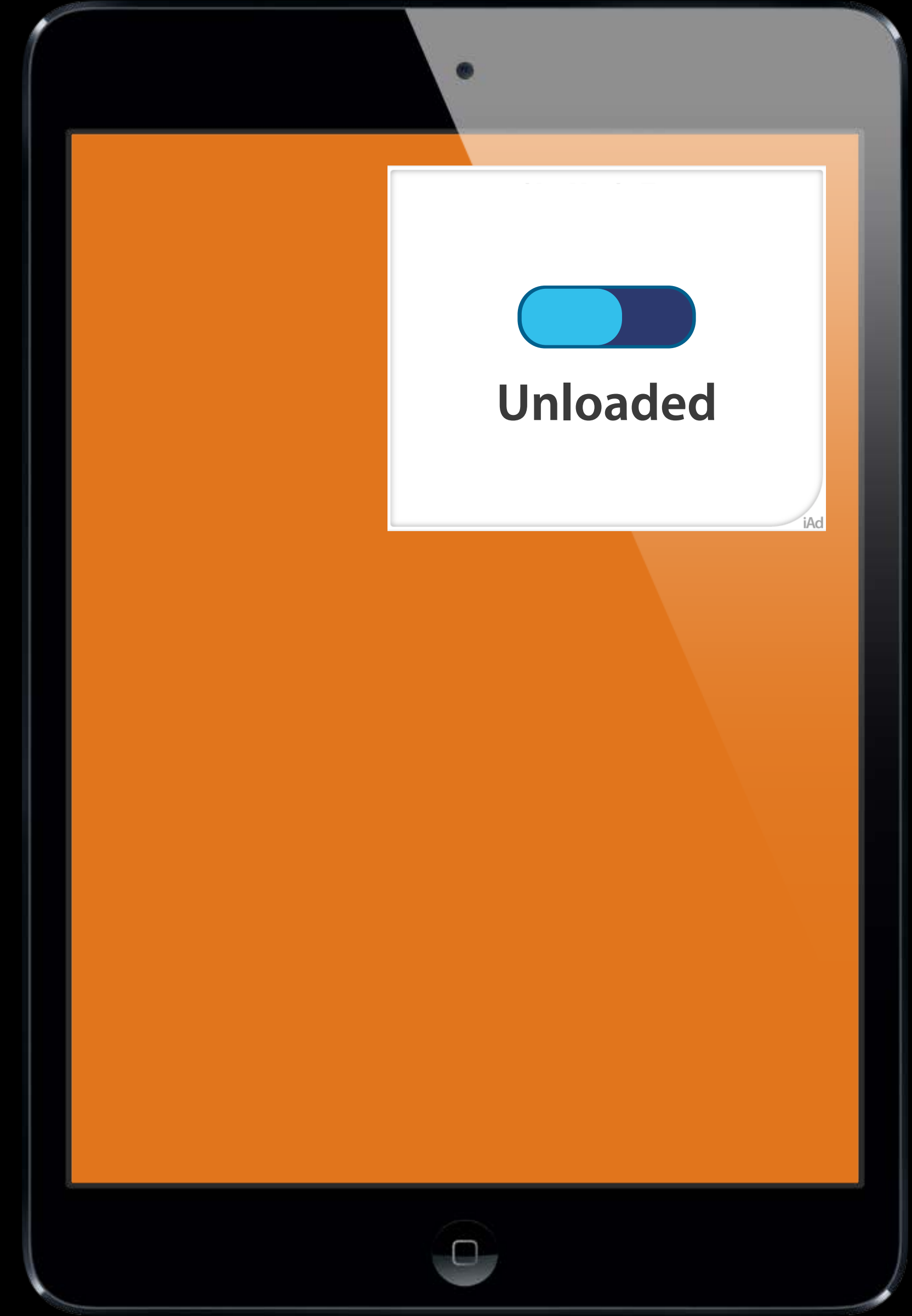
Medium Rectangle

Unload

```
@implementation MyViewController

- (void)bannerView:(ADBannerView *)banner
didFailToReceiveAdWithError:(NSError *)error
{
    [banner removeFromSuperview];
    [self.view layoutIfNeeded];
}

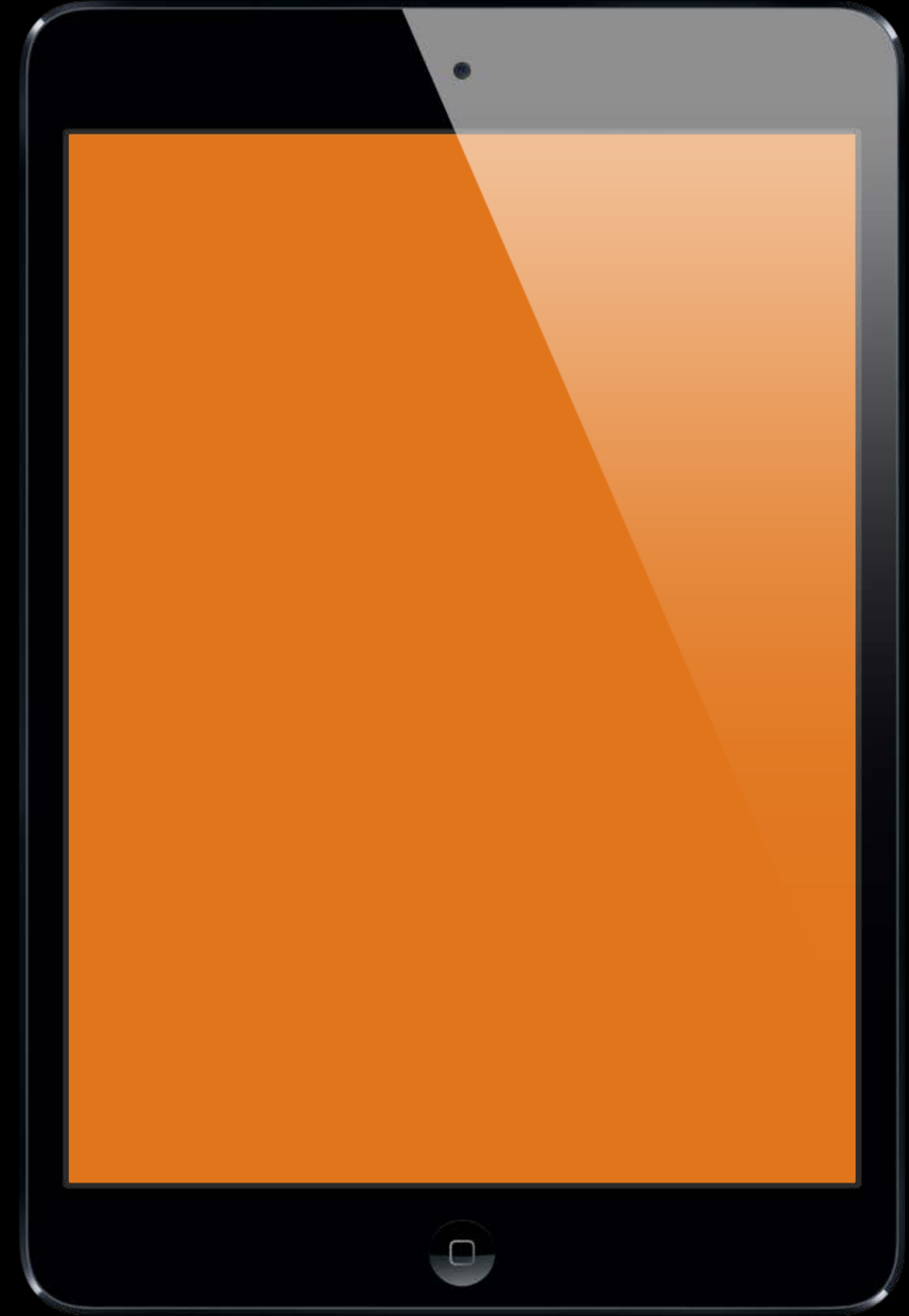
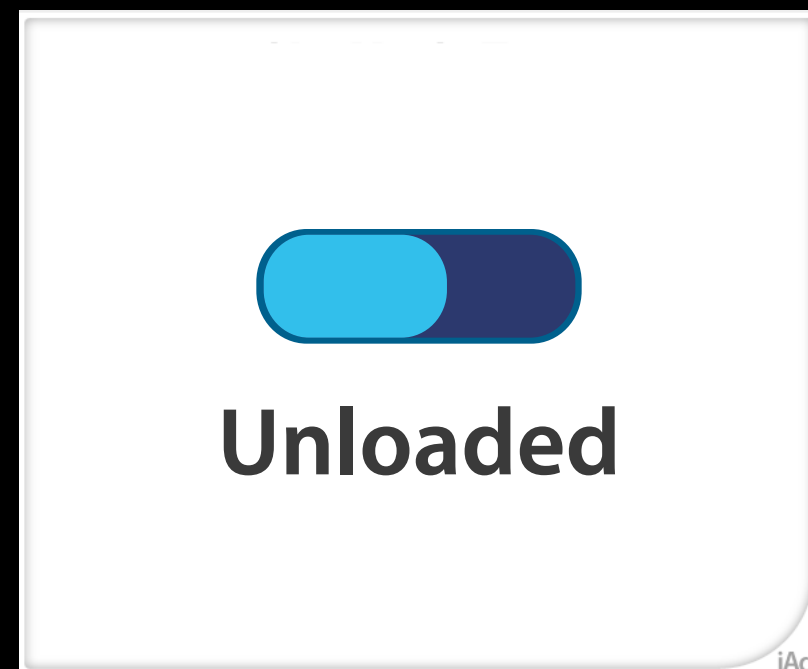
@end
```



Medium Rectangle

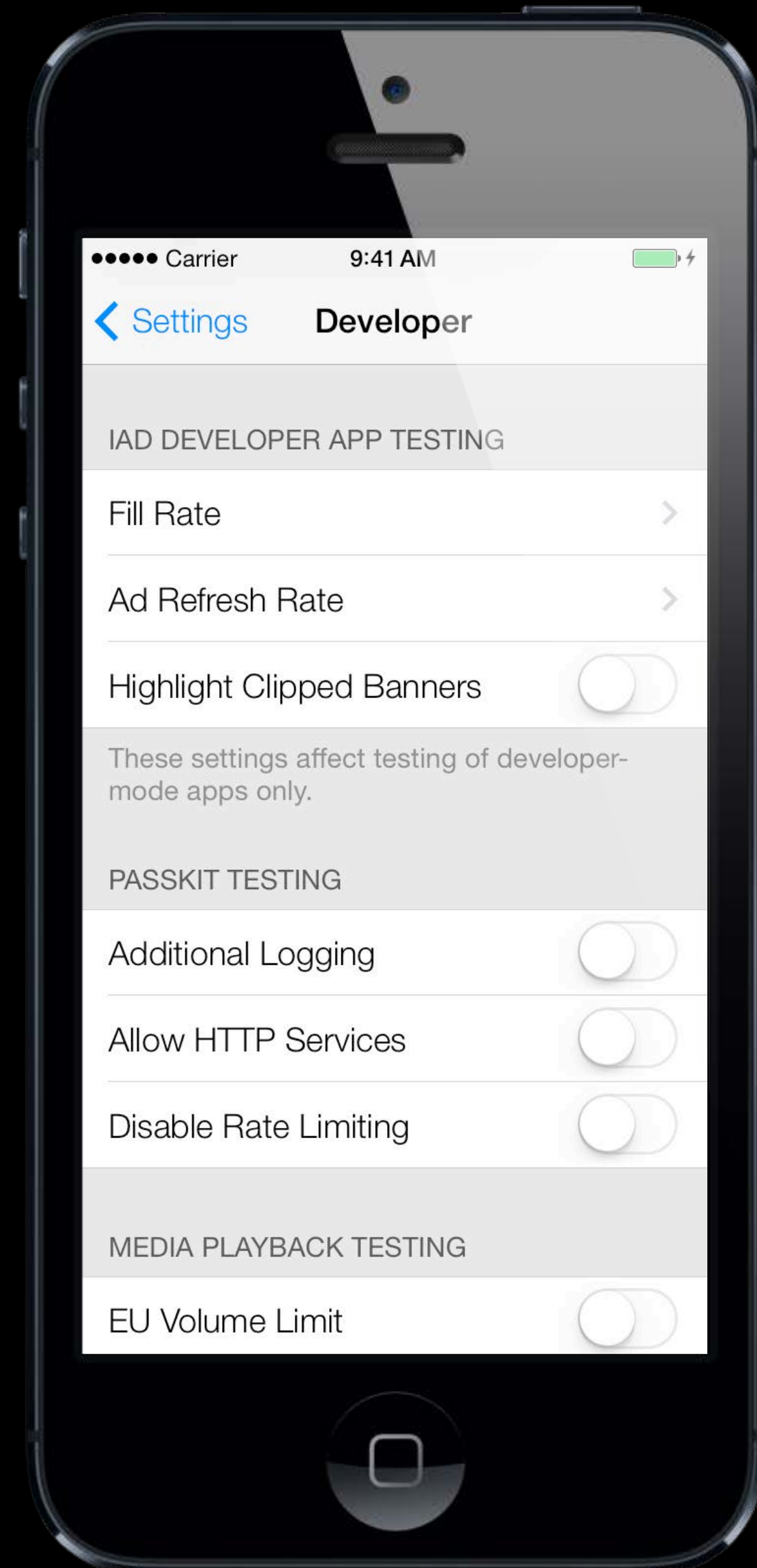
Unload

```
@implementation MyViewController  
  
- (void)bannerView:(ADBannerView *)banner  
didFailToReceiveAdWithError:(NSError *)error  
{  
    [banner removeFromSuperview];  
    [self.view layoutIfNeeded];  
}  
  
@end
```



Medium Rectangle

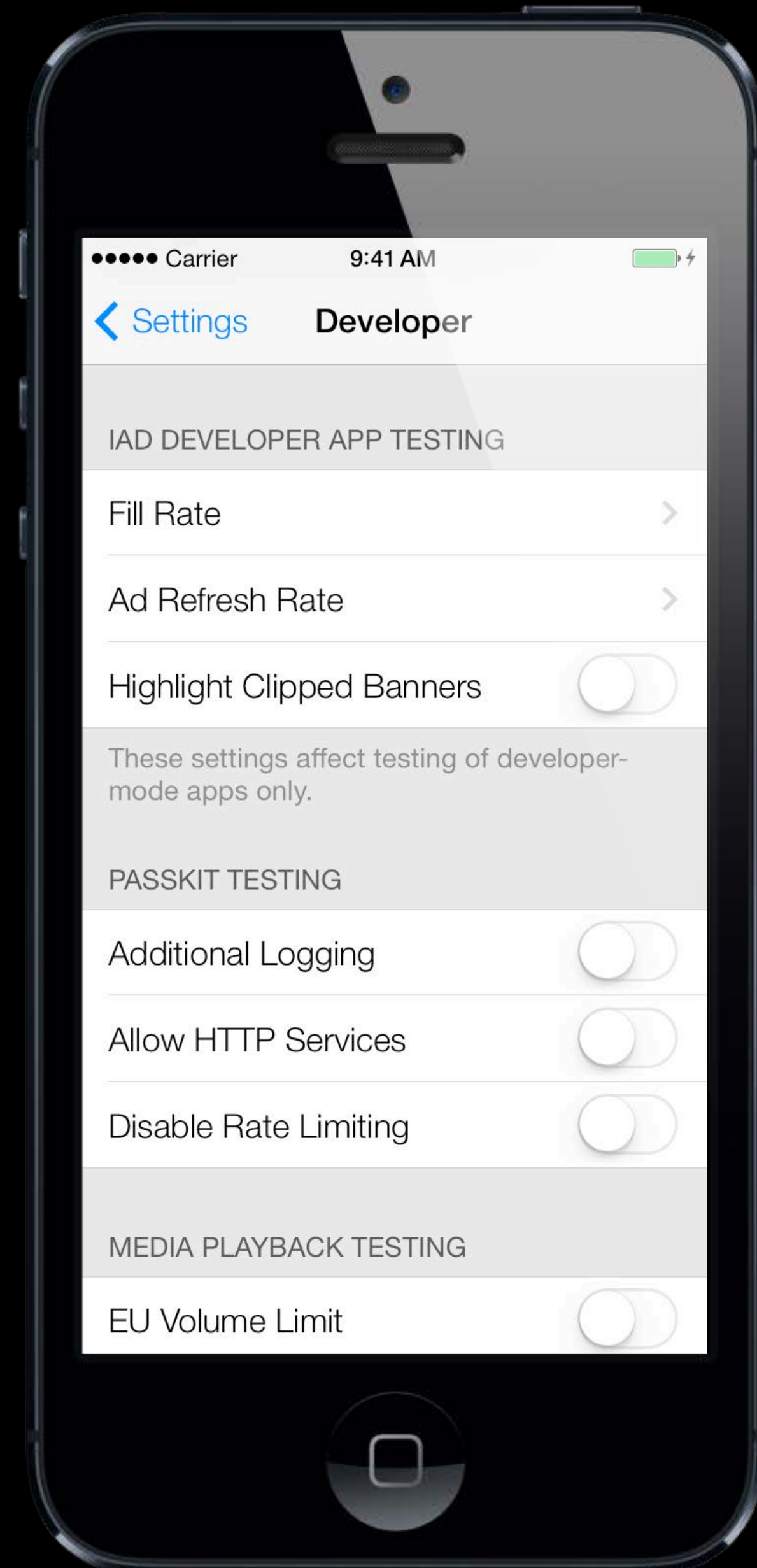
Testing integration



Medium Rectangle

Testing integration

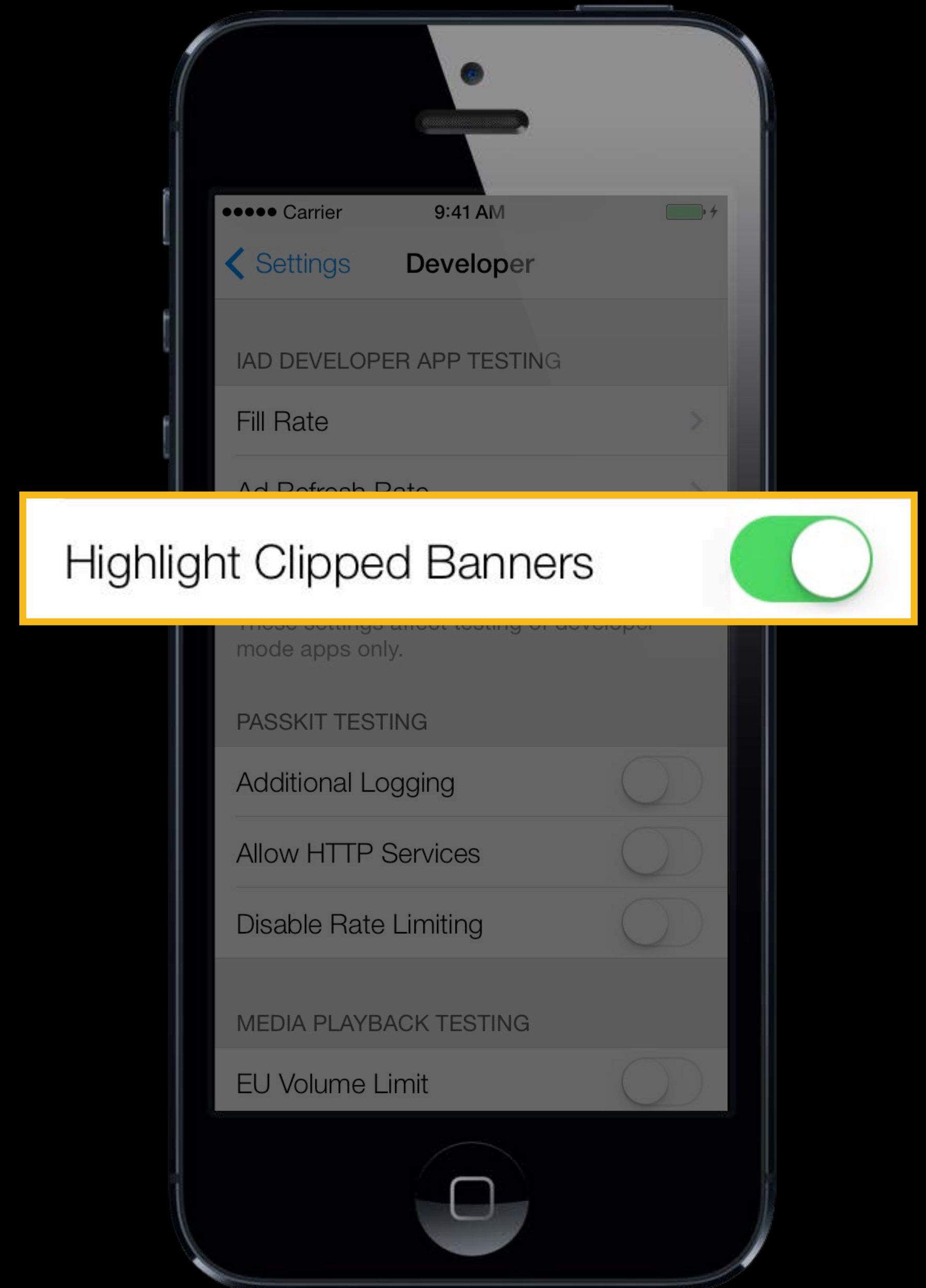
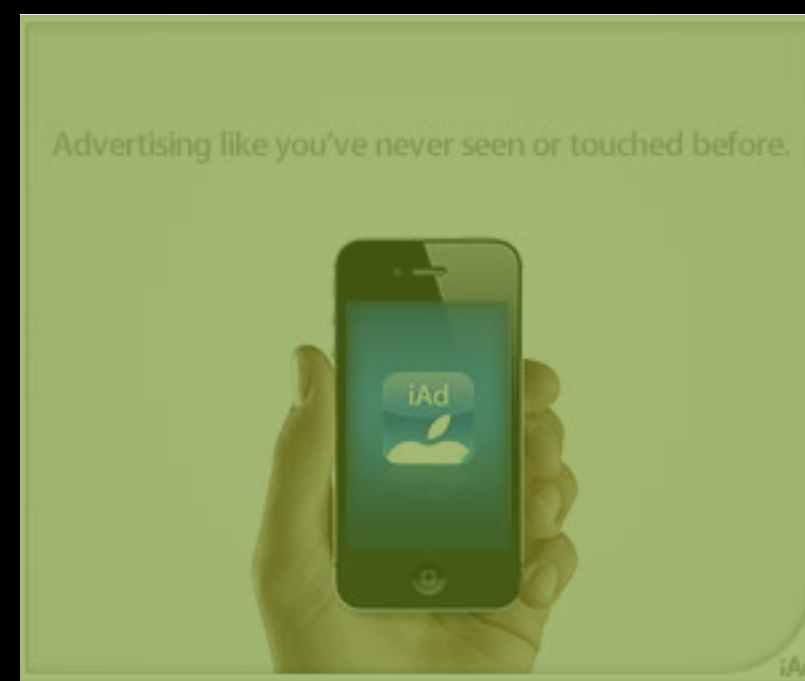
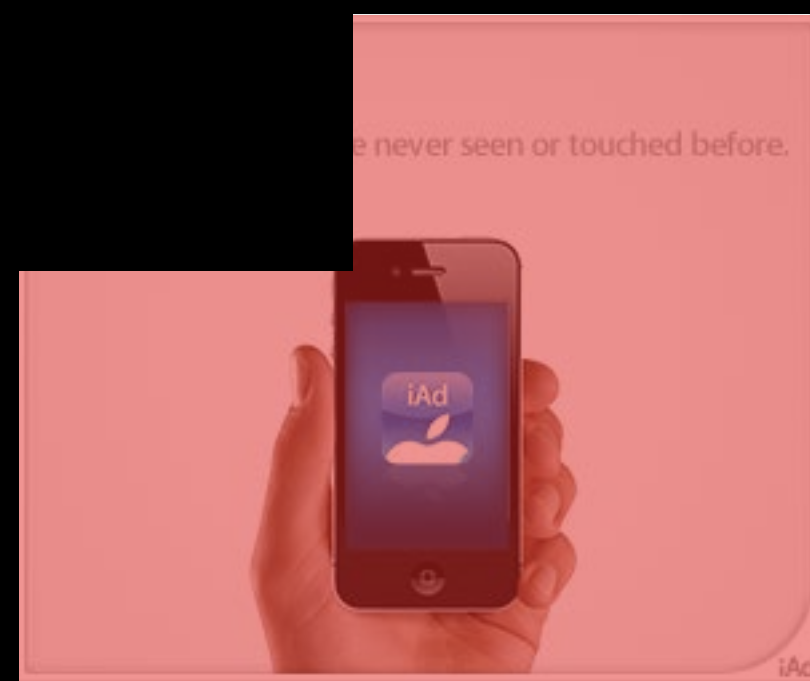
- Adjust fill rate
- Adjust ad refresh rate



Medium Rectangle

Testing integration

- Adjust fill rate
- Adjust ad refresh rate
- Ensure there's no clipping



Demo

Medium Rectangle Integration

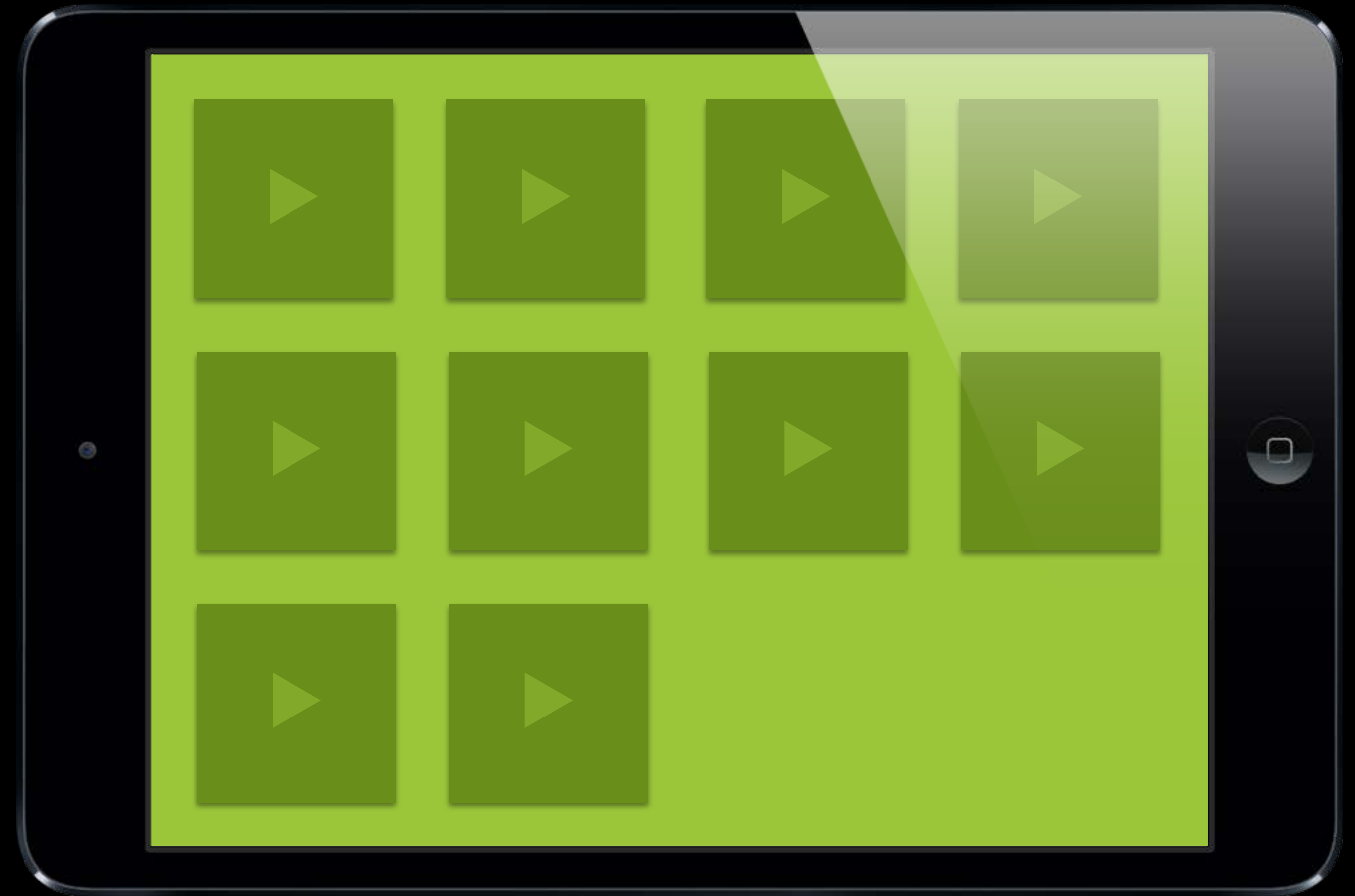
David Wilson

iOS Apps and Frameworks

Pre-Roll Video

App Integration

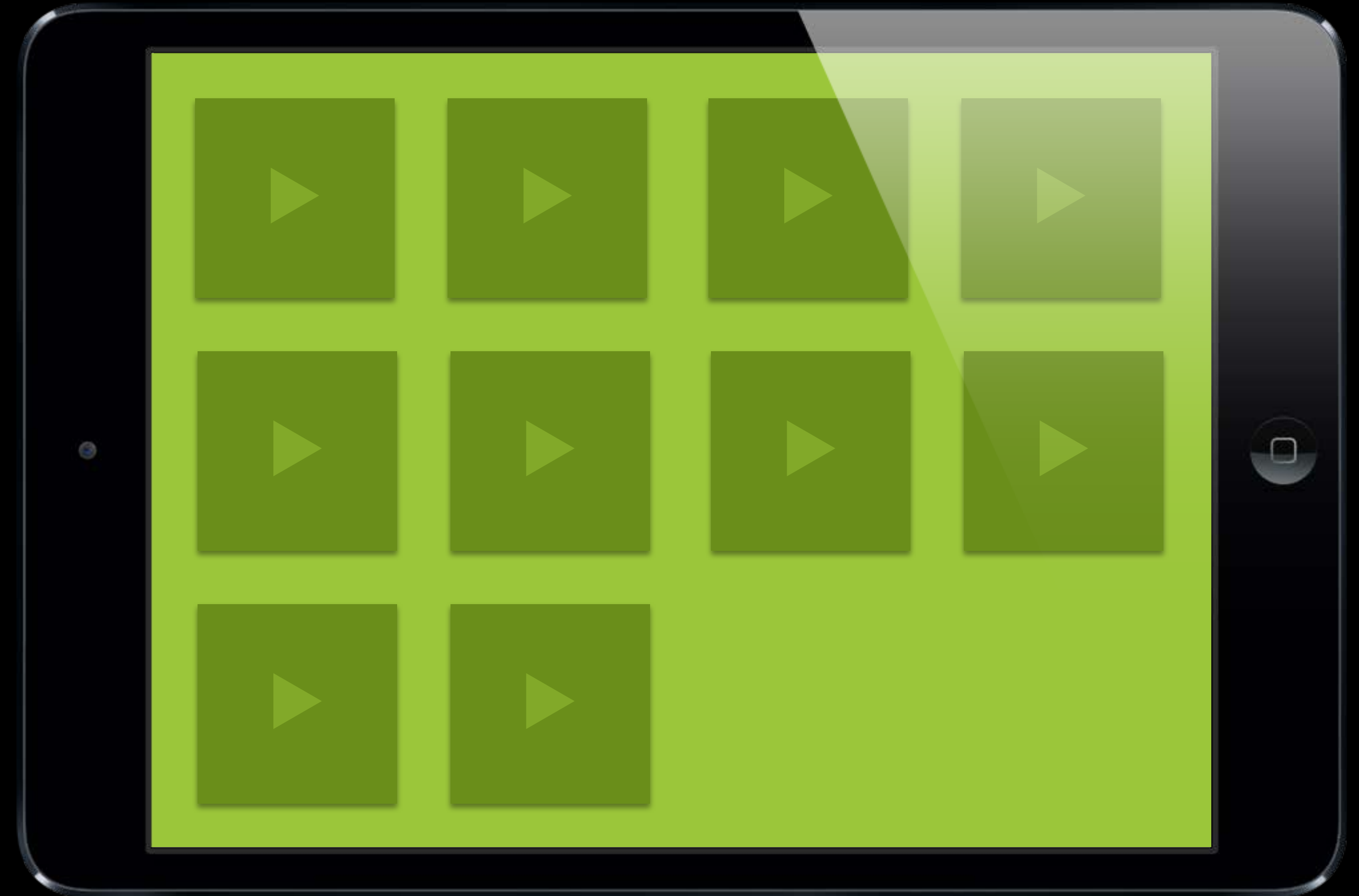
Pre-Roll Video



Pre-Roll Video



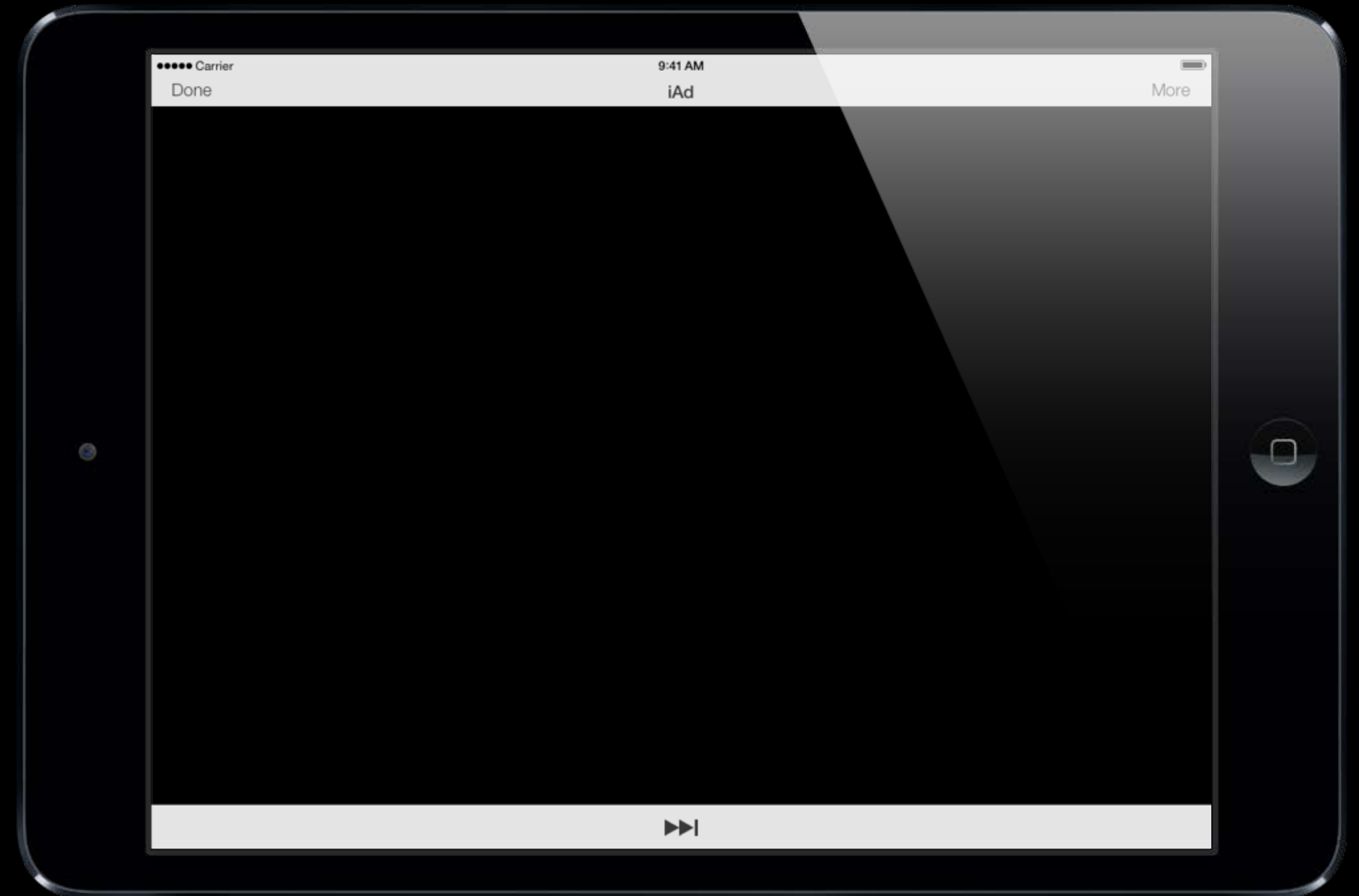
- New on iOS 7



Pre-Roll Video



- New on iOS 7
- Integrated with media player



Pre-Roll Video



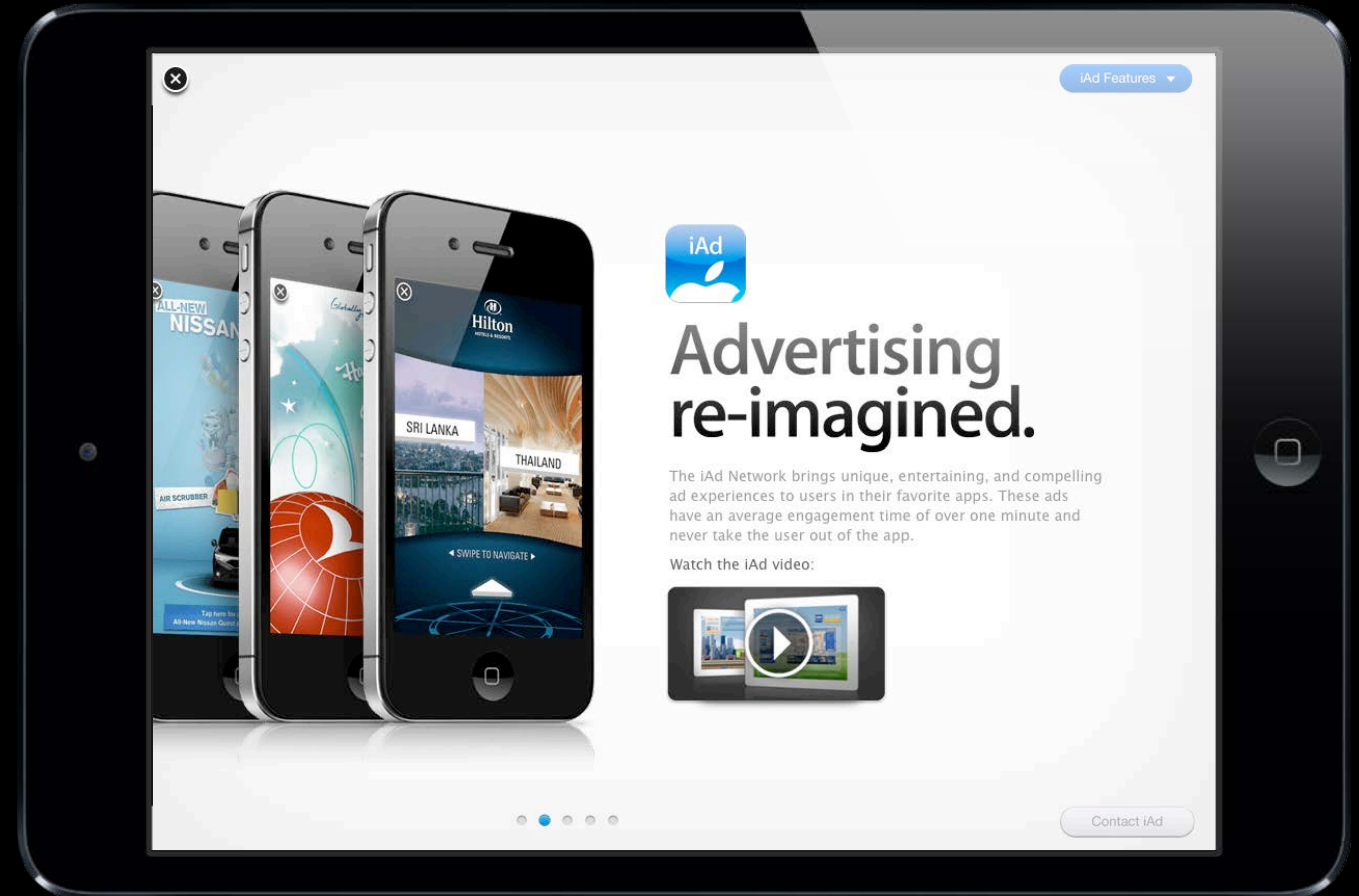
- New on iOS 7
- Integrated with media player
- Plays before regular video



Pre-Roll Video



- New on iOS 7
- Integrated with media player
- Plays before regular video
- Fullscreen ad on tap



Pre-Roll Video



- New on iOS 7
- Integrated with media player
- Plays before regular video
- Fullscreen ad on tap
- Inline playback supported



Pre-Roll Video



- New on iOS 7
- Integrated with media player
- Plays before regular video
- Fullscreen ad on tap
- Inline playback supported
- iPhone and iPad



Pre-Roll Video

Creating and playing

Pre-Roll Video

Creating and playing

```
#import <MediaPlayer/MediaPlayer.h>  
#import <iAd/iAd.h>
```

Pre-Roll Video

Creating and playing

```
#import <MediaPlayer/MediaPlayer.h>
```

```
#import <iAd/iAd.h>
```

```
moviePlayer = [MPMoviePlayerController new];
```

```
moviePlayer.contentURL = [NSURL URLWithString:@"..."];
```

Pre-Roll Video

Creating and playing

```
#import <MediaPlayer/MediaPlayer.h>
```

```
#import <iAd/iAd.h>
```

```
moviePlayer = [MPMoviePlayerController new];
```

```
moviePlayer.contentURL = [NSURL URLWithString:@"..."];
```

```
[moviePlayer playPrerollAdWithCompletionHandler:^(NSError *error) {  
    // Check if error is non-nil during development  
    [moviePlayer play];  
}];
```

Pre-Roll Video

Creating and playing

```
#import <MediaPlayer/MediaPlayer.h>
```

```
#import <iAd/iAd.h>
```

```
moviePlayer = [MPMoviePlayerController new];
```

```
moviePlayer.contentURL = [NSURL URLWithString:@"..."];
```

```
[moviePlayer playPrerollAdWithCompletionHandler:^(NSError *error) {
```

```
    // Check if error is non-nil during development
```

```
    [moviePlayer play];
```

```
};
```

Pre-Roll Video

Creating and playing

```
#import <MediaPlayer/MediaPlayer.h>
```

```
#import <iAd/iAd.h>
```

```
moviePlayer = [MPMoviePlayerController new];
```

```
moviePlayer.contentURL = [NSURL URLWithString:@"..."];
```

```
[moviePlayer playPrerollAdWithCompletionHandler:^(NSError *error) {
```

```
    // Check if error is non-nil during development
```

```
    [moviePlayer play];
```

```
}];
```

```
[self.view addSubview:moviePlayer.view];
```

```
[self.view layoutIfNeeded];
```

Pre-Roll Video

Conditional pre-roll

Pre-Roll Video

Conditional pre-roll

```
if ([user isPaidSubscriber]) {  
    [moviePlayer play];  
} else {  
    [moviePlayer playPrerollAdWithCompletionHandler:^(NSError *error) {  
        [moviePlayer play];  
    }];  
}
```

Pre-Roll Video

Conditional pre-roll

```
if ([user isPaidSubscriber]) {  
    [moviePlayer play];  
} else {  
    [moviePlayer playPrerollAdWithCompletionHandler:^(NSError *error) {  
        [moviePlayer play];  
    }];  
}
```

Pre-Roll Video

Conditional pre-roll

```
if ([user isPaidSubscriber]) {  
    [moviePlayer play];  
} else {  
    [moviePlayer playPrerollAdWithCompletionHandler:^(NSError *error) {  
        [moviePlayer play];  
    }];  
}
```

Pre-Roll Video

Conditional pre-roll

```
if ([user isPaidSubscriber]) {  
    [moviePlayer play];
```

```
} else {
```

```
    [moviePlayer playPrerollAdWithCompletionHandler:^(NSError *error) {
```

```
        [moviePlayer play];
```

```
    }];
```

```
}
```

Pre-Roll Video

Preparing early

Pre-Roll Video

Preparing early

- Don't miss early impressions!

Pre-Roll Video

Preparing early

- Don't miss early impressions!
- Start ad requests early

```
- (BOOL)application:(UIApplication *)application
didFinishLaunchingWithOptions:(NSDictionary *)launchOptions {
    ...
    [MPMoviePlayerController preparePrerollAds];
    ...
}
```

Pre-Roll Video

Preparing early

- Don't miss early impressions!
- Start ad requests early

```
- (BOOL)application:(UIApplication *)application
didFinishLaunchingWithOptions:(NSDictionary *)launchOptions {
    ...
    [MPMoviePlayerController preparePrerollAds];
    ...
}
```

Pre-Roll Video

Tips and gotchas

Pre-Roll Video

Tips and gotchas

- Don't play content video until ad completes

Pre-Roll Video

Tips and gotchas

- Don't play content video until ad completes
- Defer notification handling
 - `MPMoviePlayerReadyForDisplayDidChangeNotification`
 - `MPMoviePlayerLoadStateDidChangeNotification`

Pre-Roll Video

Tips and gotchas

- Don't play content video until ad completes
- Defer notification handling
 - `MPMoviePlayerReadyForDisplayDidChangeNotification`
 - `MPMoviePlayerLoadStateDidChangeNotification`
- Defer UI customization

Demo

Pre-roll video integration

David Wilson

iOS Apps and Frameworks

Wrapping Up

Wrapping Up

- New pre-roll video ads



Wrapping Up

- New pre-roll video ads
- Medium rectangle ads



Wrapping Up

- New pre-roll video ads
- Medium rectangle ads
- Interstitials on iPhone



Wrapping Up

- New pre-roll video ads
- Medium rectangle ads
- Interstitials on iPhone
- New view controller banner APIs



Wrapping Up

- New pre-roll video ads
- Medium rectangle ads
- Interstitials on iPhone
- New view controller banner APIs
- Optimize your app's ad performance

More Information

John Geleynse

Director, Technology Evangelism
geleynse@apple.com

Documentation

iOS SDK Library
<http://developer.apple.com/ios>

Apple Developer Forums

<http://devforums.apple.com>

Related Sessions

Introducing iAd Workbench, The Best Way to Market Your App

Russian Hill
Tuesday 3:15pm


Introduction to iBooks Author Widget and
iAd Rich Media Ad Development with iAd Producer 4

Russian Hill
Wednesday 11:30am

Building Advanced iBooks HTML 5 Widgets and iAd Rich Media Ads

Russian Hill
Wednesday 3:15pm

Labs

iAd Technologies Lab	Media Lab A Thursday 3:15pm	
iTunes Connect Lab	Services Lab B Friday 10:15am	
Internationalization Lab	Frameworks Lab B Friday 11:30am	

 WWDC2013