

# What's New in Passbook

Session 302

**Noah Witherspoon**

iOS Engineer

**Nicholas Circosta**

iOS Engineer

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

# Overview



# Overview

- The Passbook ecosystem



# Overview

- The Passbook ecosystem
- What's new



# Overview

- The Passbook ecosystem
- What's new
- Tips and tricks



# The Passbook Ecosystem

# What Is a Pass?



# What Is a Pass?

- Information





# What Is a Pass?

- Information
- Relevant to a time/place



# What Is a Pass?

- Information
- Relevant to a time/place
- Can be used in the real world



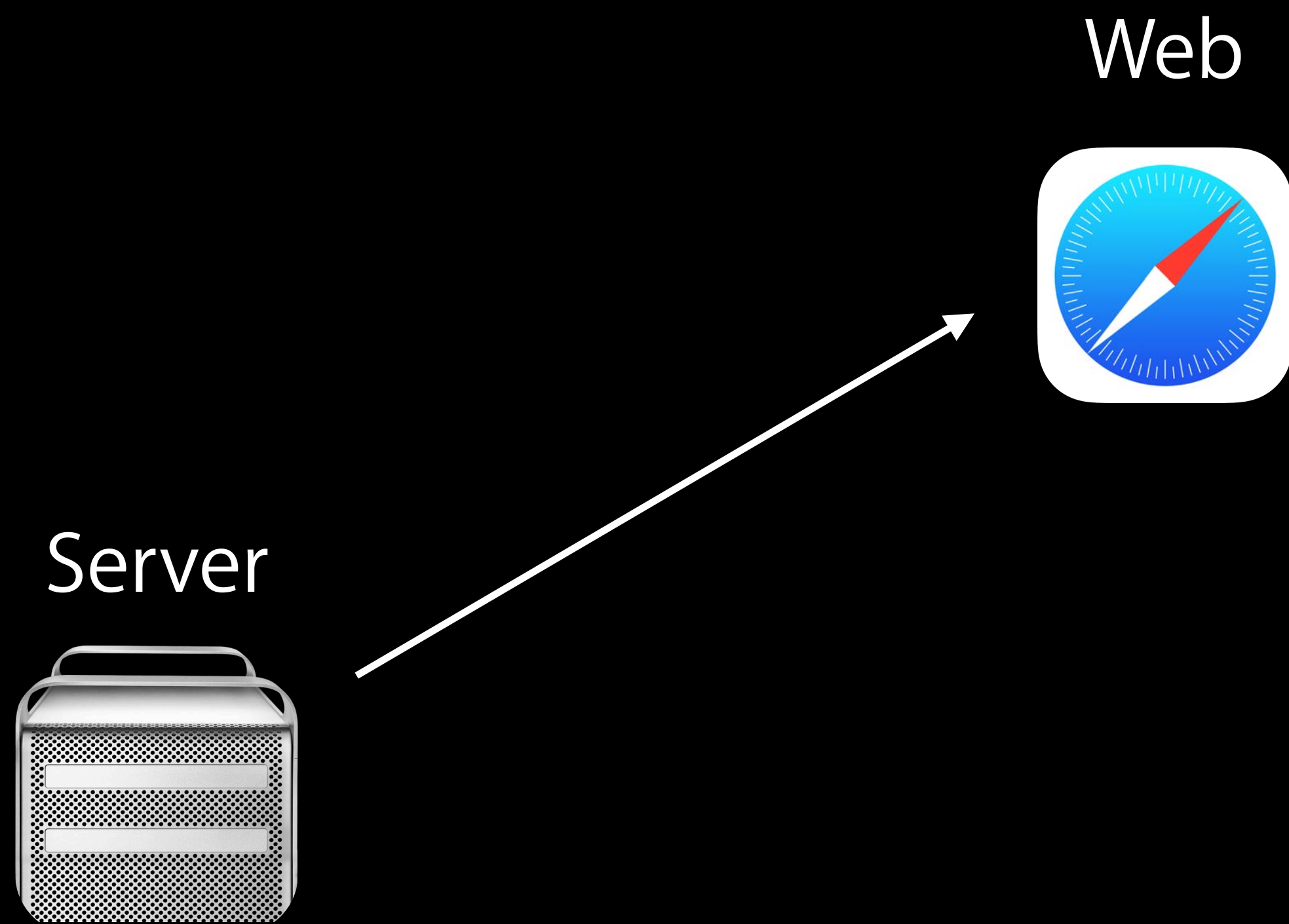
# Distributing a Pass

# Distributing a Pass

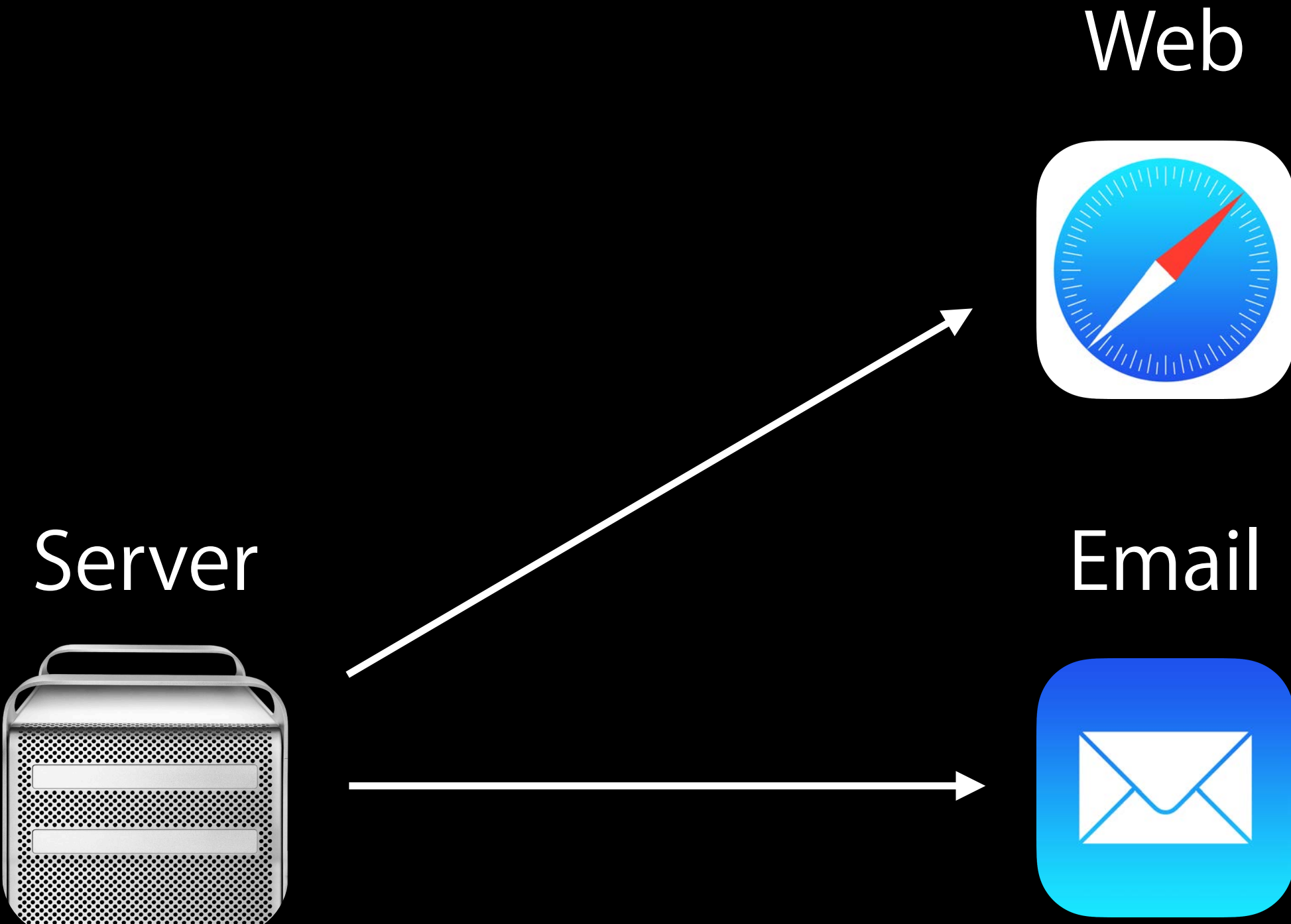
Server



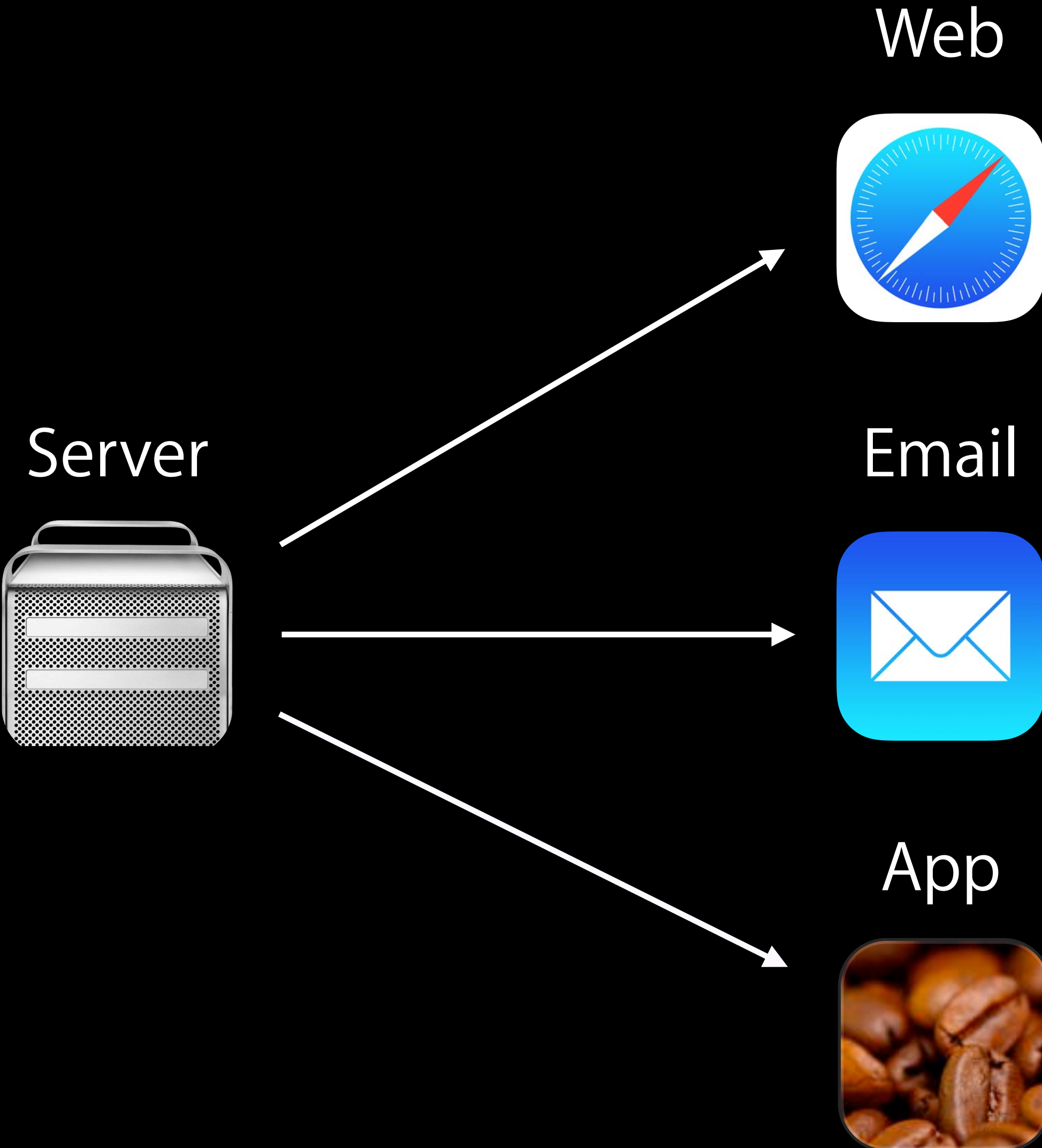
# Distributing a Pass



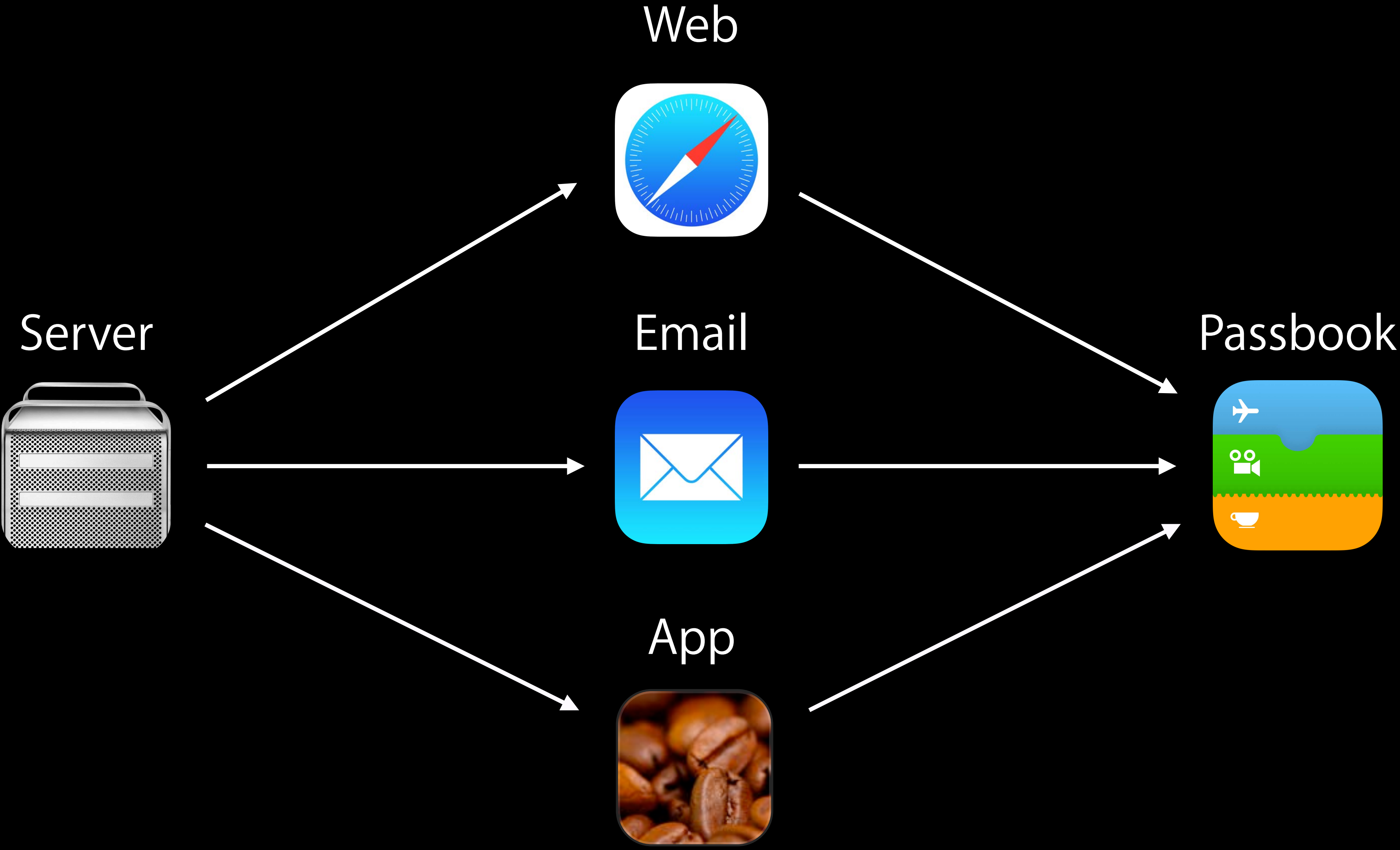
# Distributing a Pass



# Distributing a Pass



# Distributing a Pass





# Updating a Pass

Server



Passbook



# Updating a Pass

Server



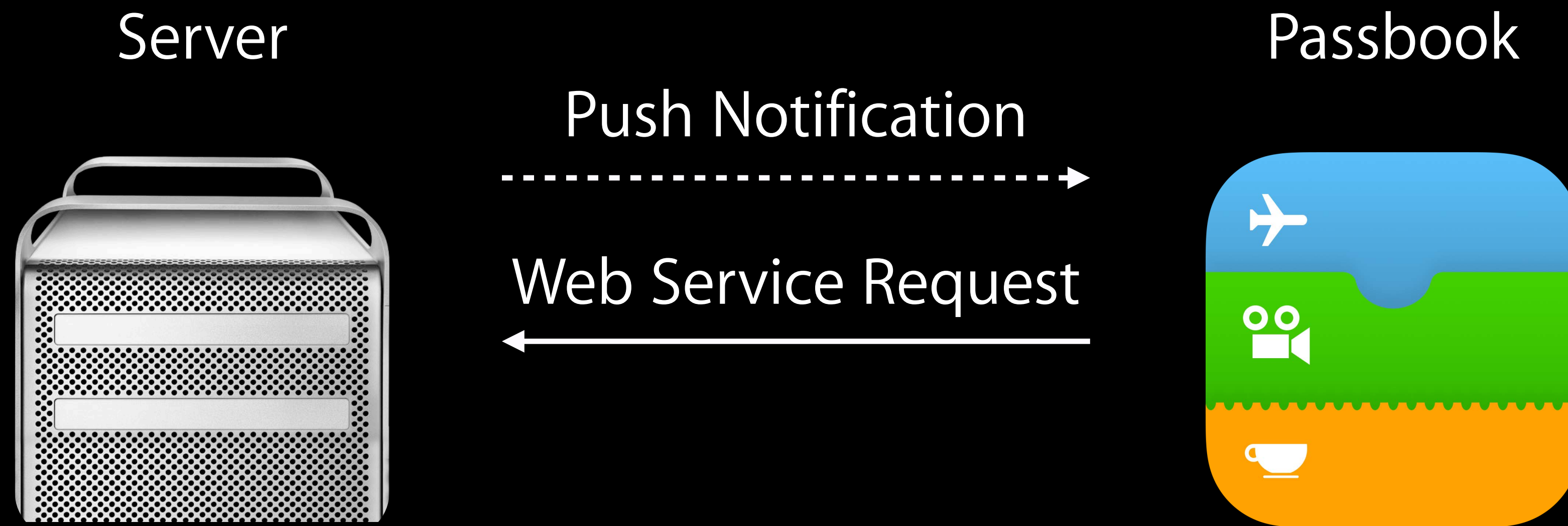
Push Notification



Passbook



# Updating a Pass



# Updating a Pass

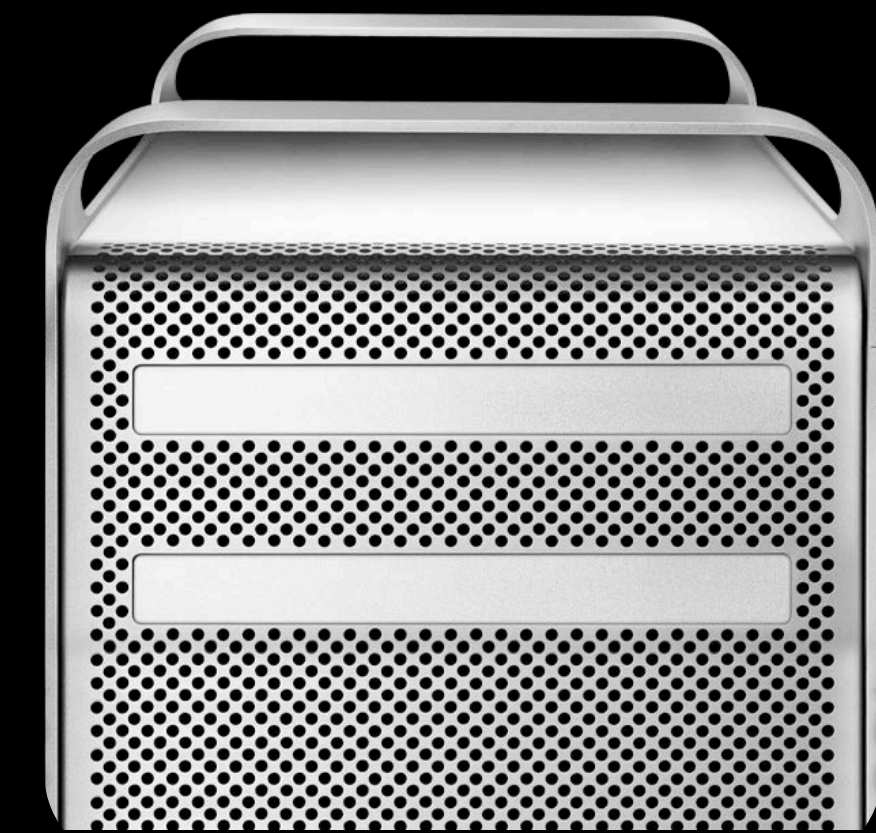


# Using a Pass

Scanner/  
Point of Sale

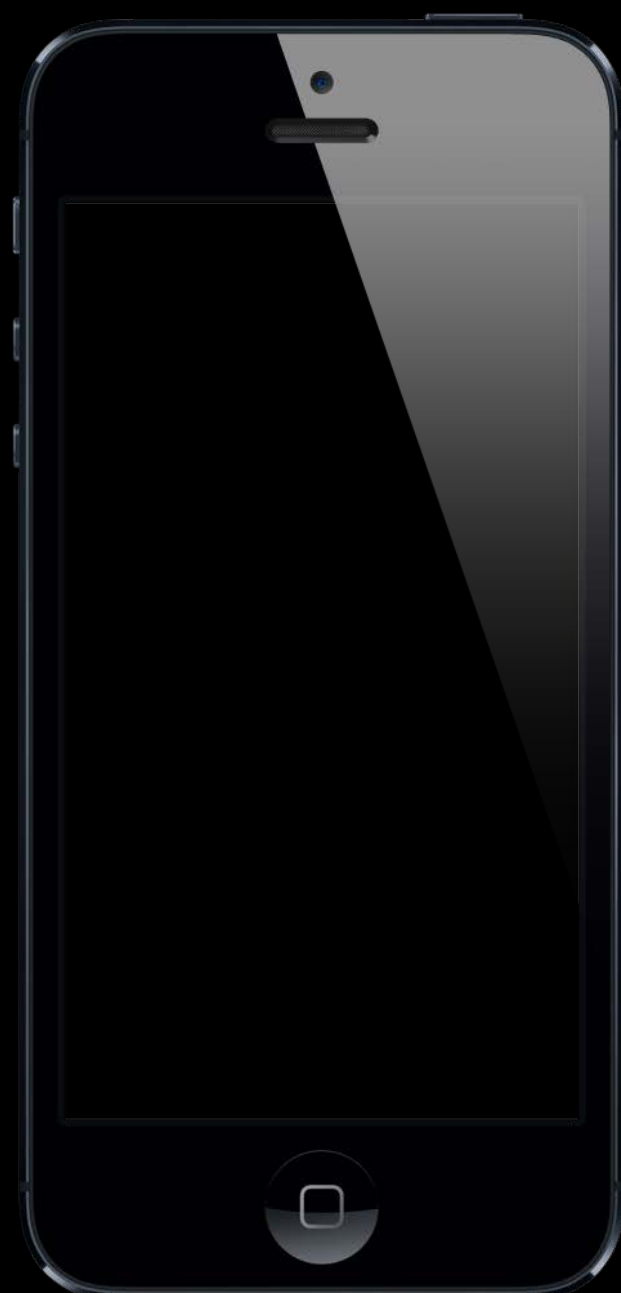


Server



# Using a Pass

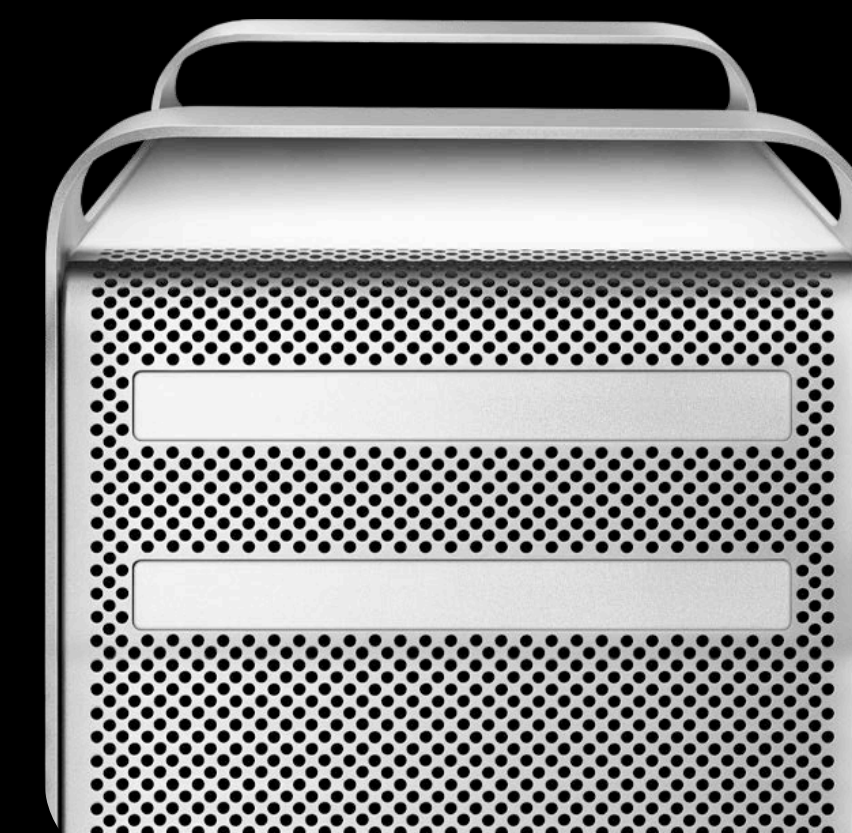
Device



Scanner/  
Point of Sale

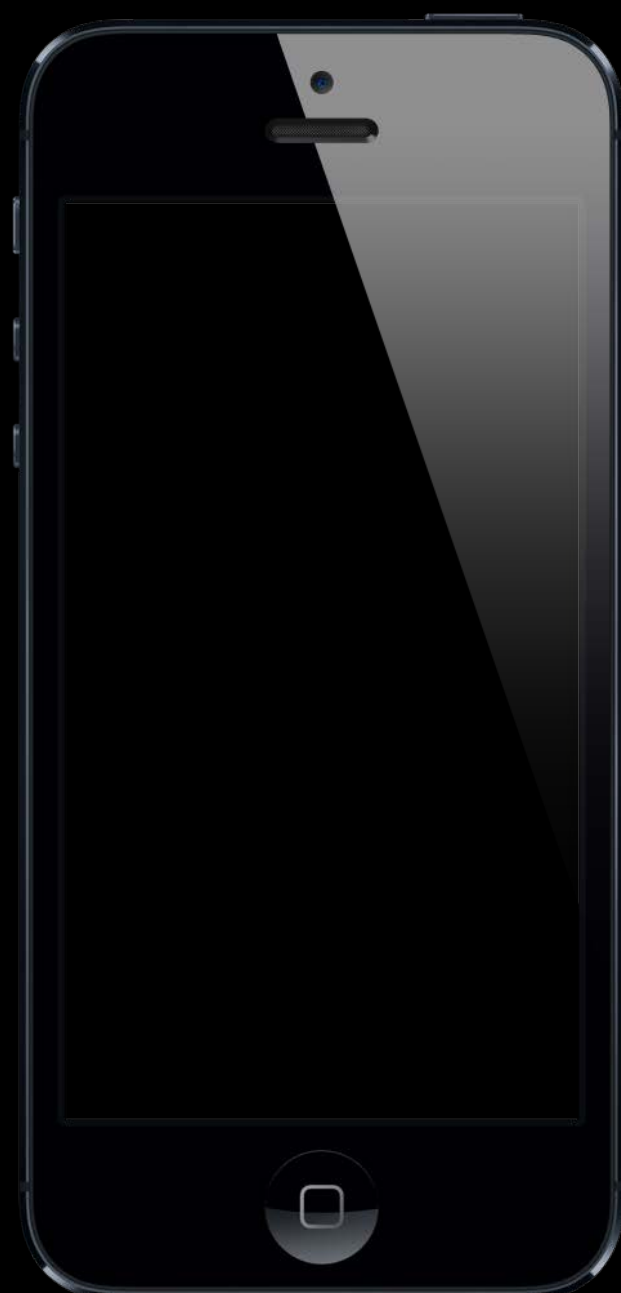


Server



# Using a Pass

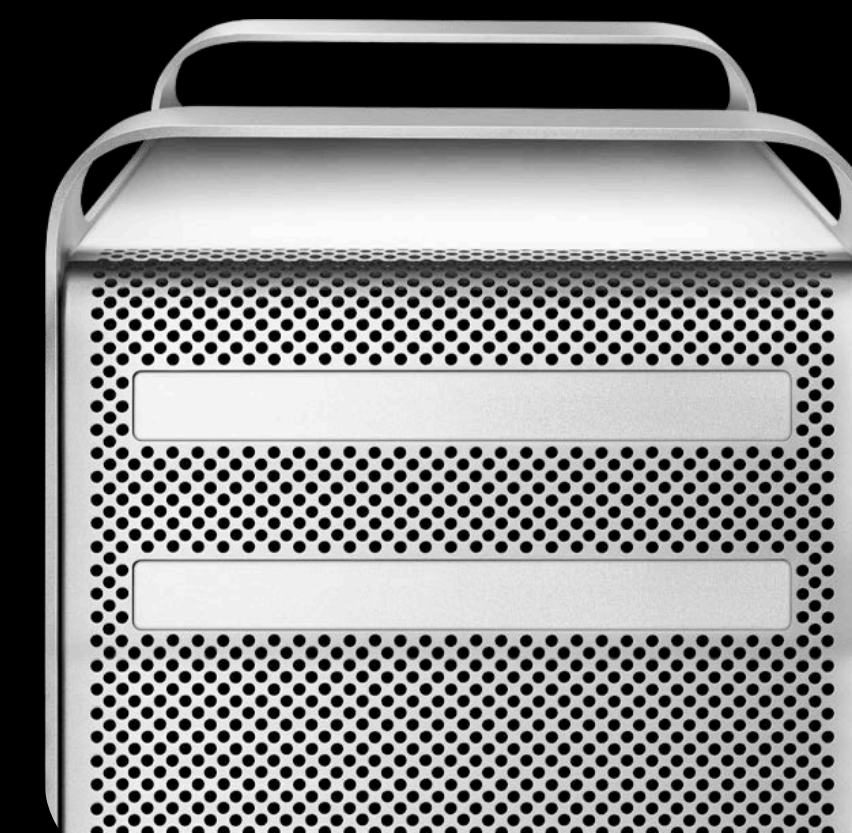
Device



Scanner/  
Point of Sale

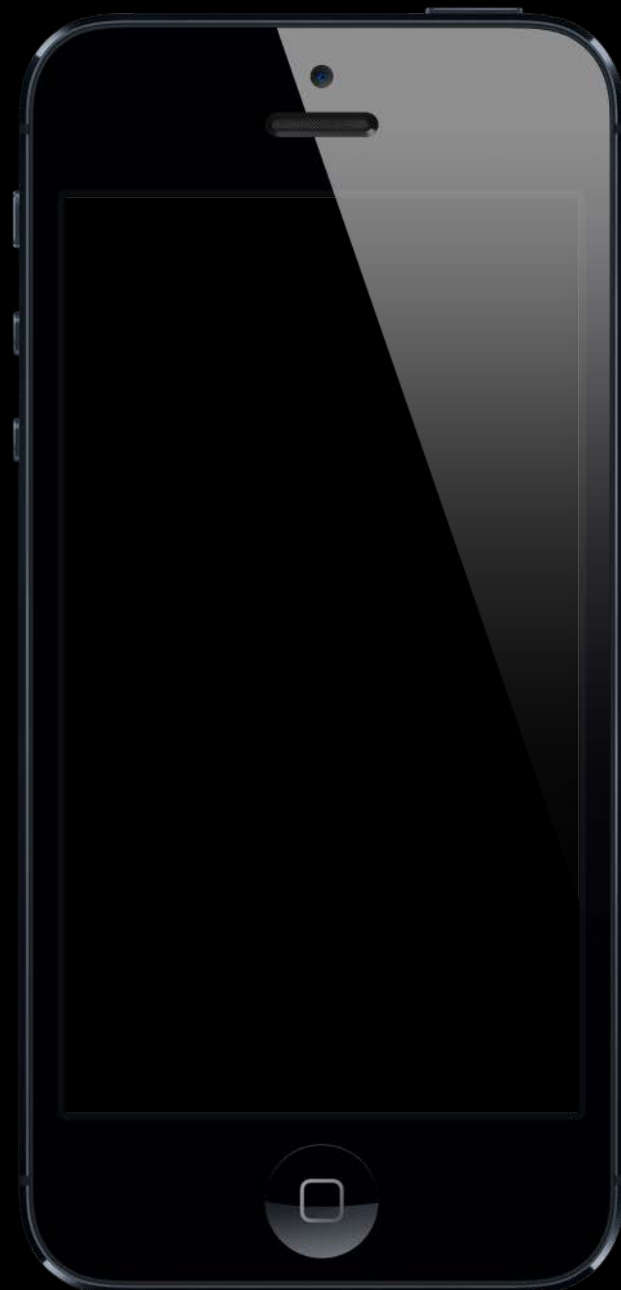


Server



# Using a Pass

Device



Scanner/  
Point of Sale



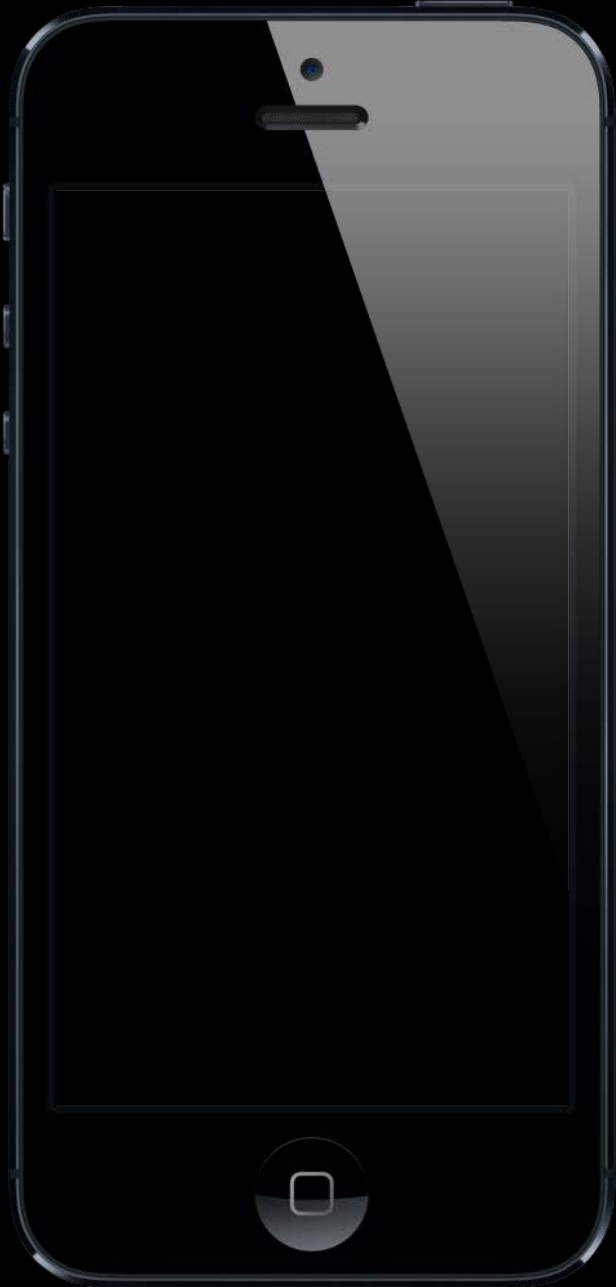
Server





# Using a Pass

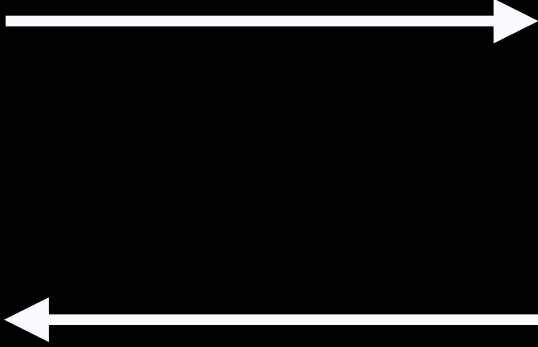
Device



Scanner/  
Point of Sale

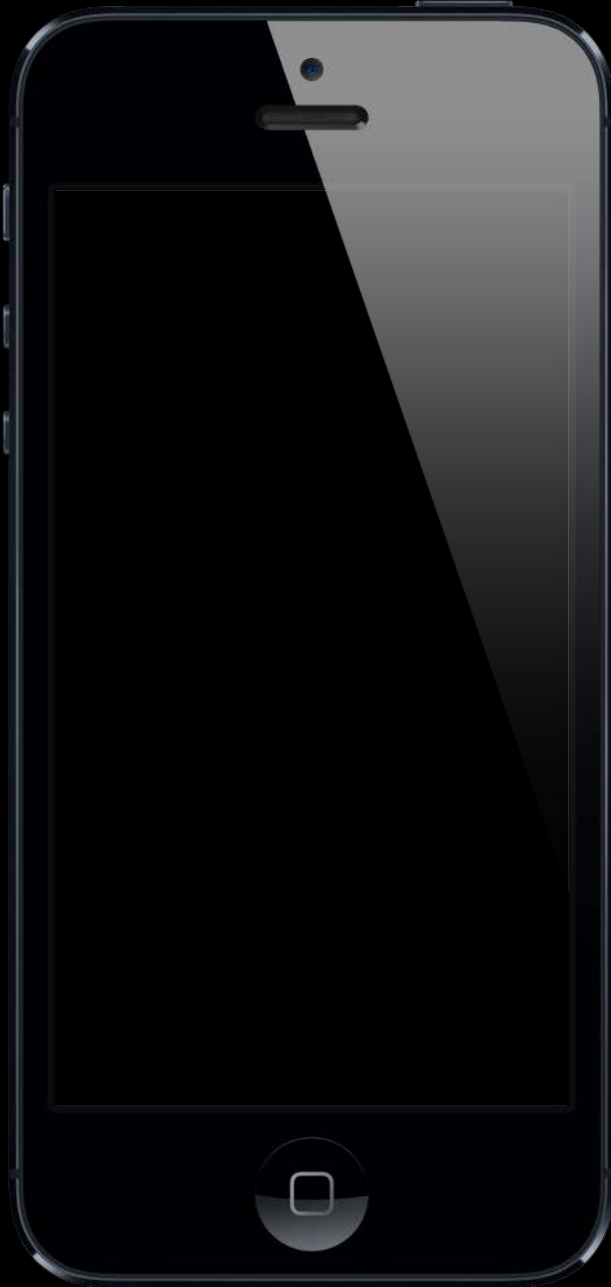


Server



# Using a Pass

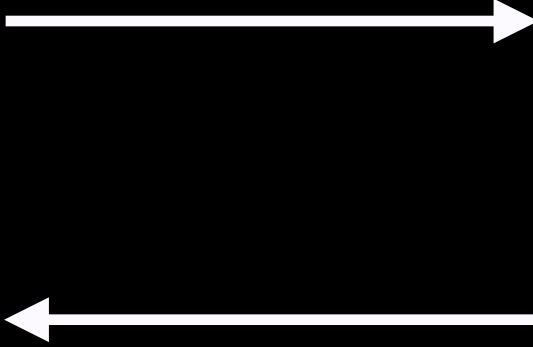
Device



Scanner/  
Point of Sale



Server



# The Passbook Ecosystem

Review

# The Passbook Ecosystem

## Review

- Passes are information that can be used in the real world

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## Review

- Passes are information that can be used in the real world
- Produced by your server

# The Passbook Ecosystem

## Review

- Passes are information that can be used in the real world
- Produced by your server
- Added to user's pass library

# The Passbook Ecosystem

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- Passes are information that can be used in the real world
- Produced by your server
- Added to user's pass library
  - Your app

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## Review

- Passes are information that can be used in the real world
- Produced by your server
- Added to user's pass library
  - Your app
  - Mail/Safari



# The Passbook Ecosystem

## Review

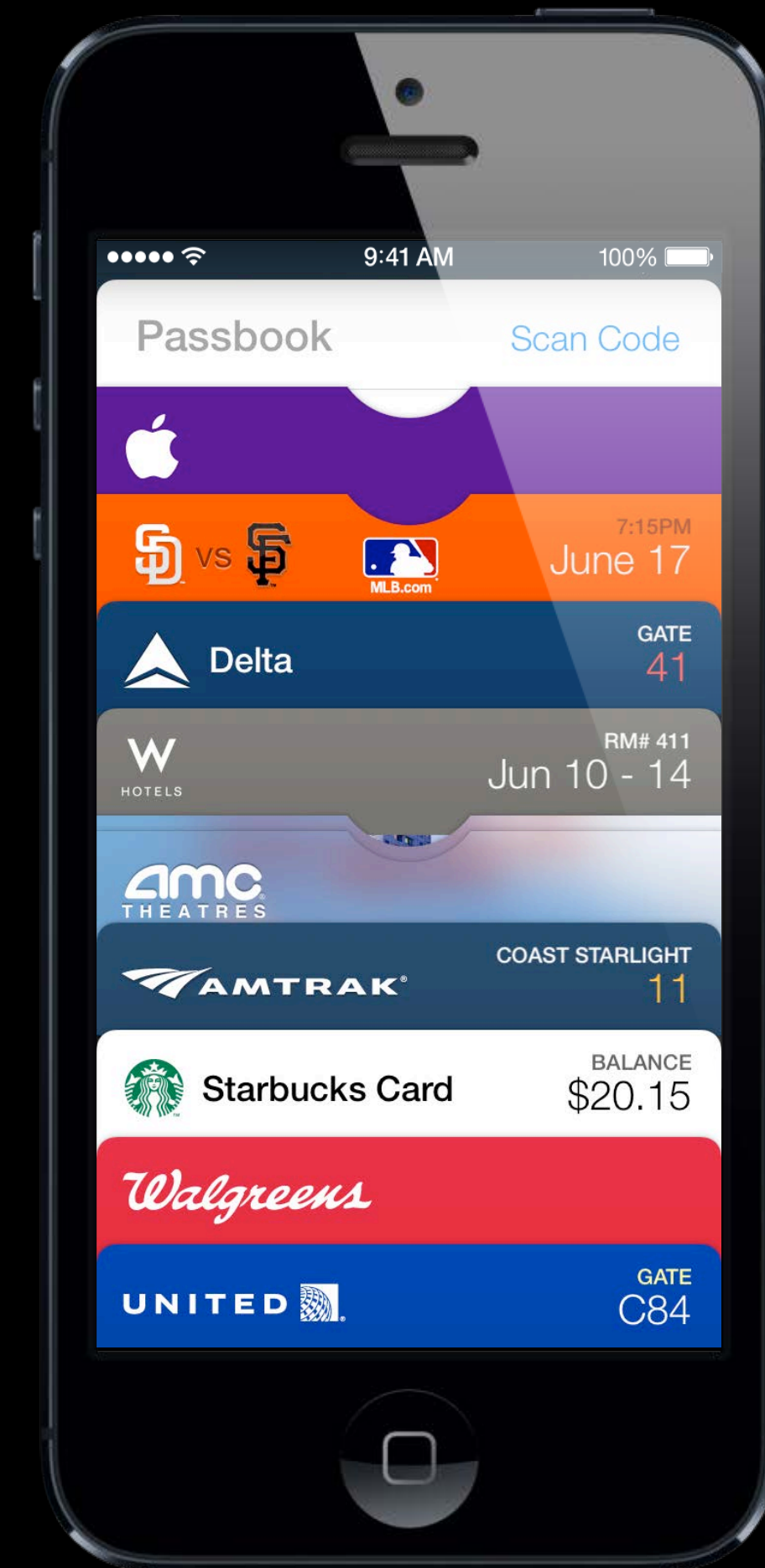
- Passes are information that can be used in the real world
- Produced by your server
- Added to user's pass library
  - Your app
  - Mail/Safari
- Used by scanning barcode and verifying with server

# The Passbook Ecosystem

## Review

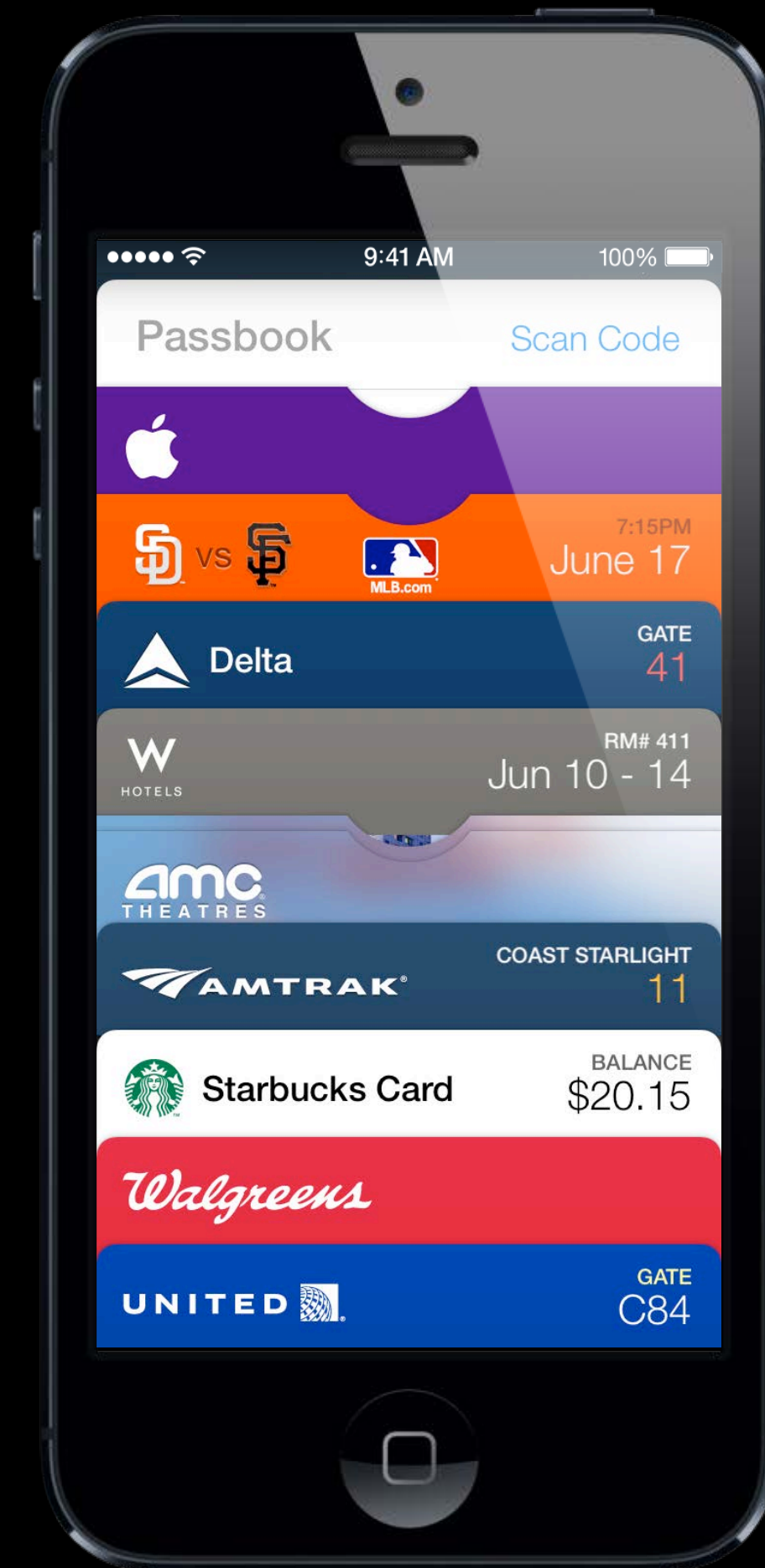
- Passes are information that can be used in the real world
- Produced by your server
- Added to user's pass library
  - Your app
  - Mail/Safari
- Used by scanning barcode and verifying with server
- Updated via push

# What's New



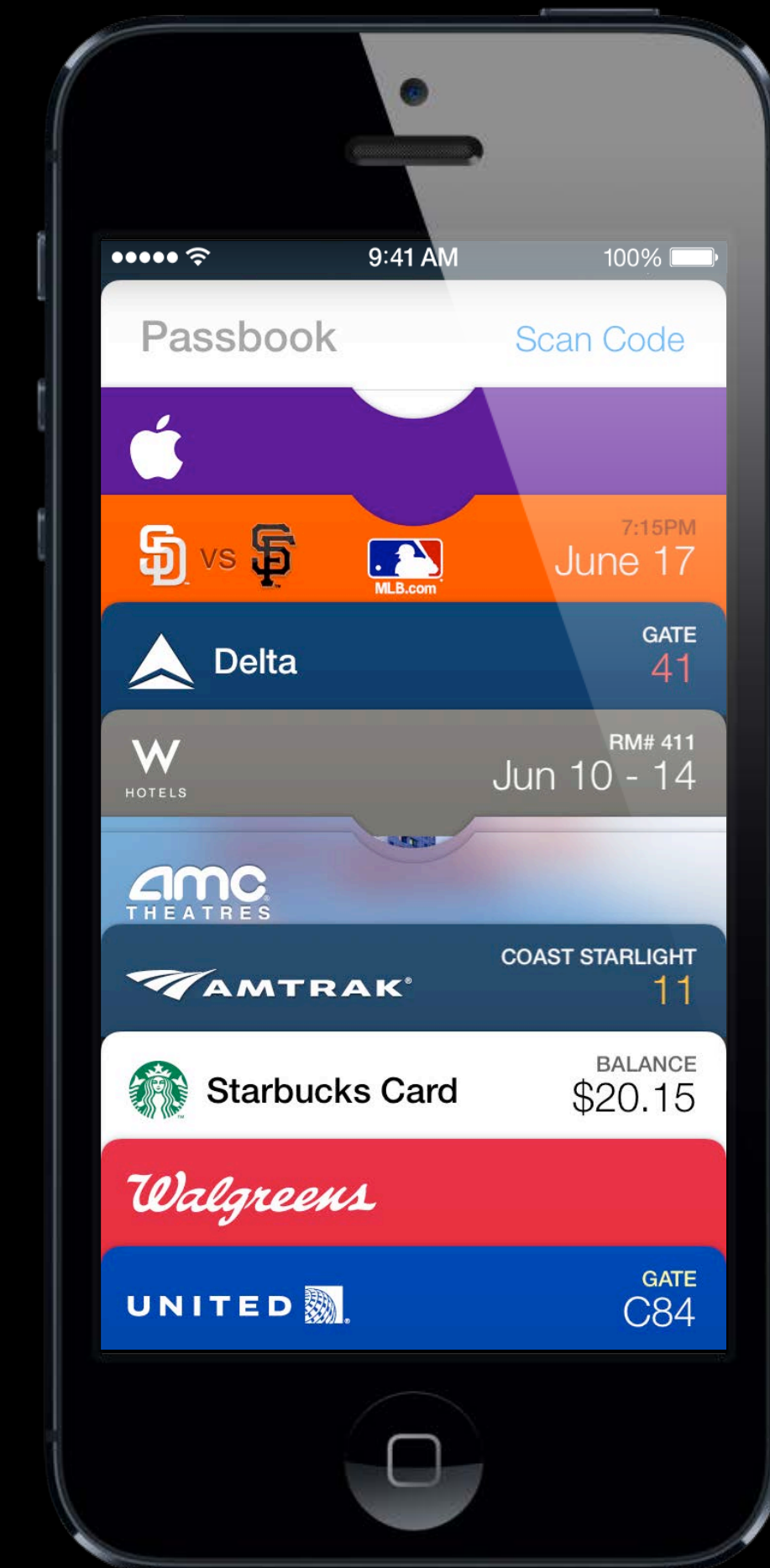
# What's New

- Richer pass content



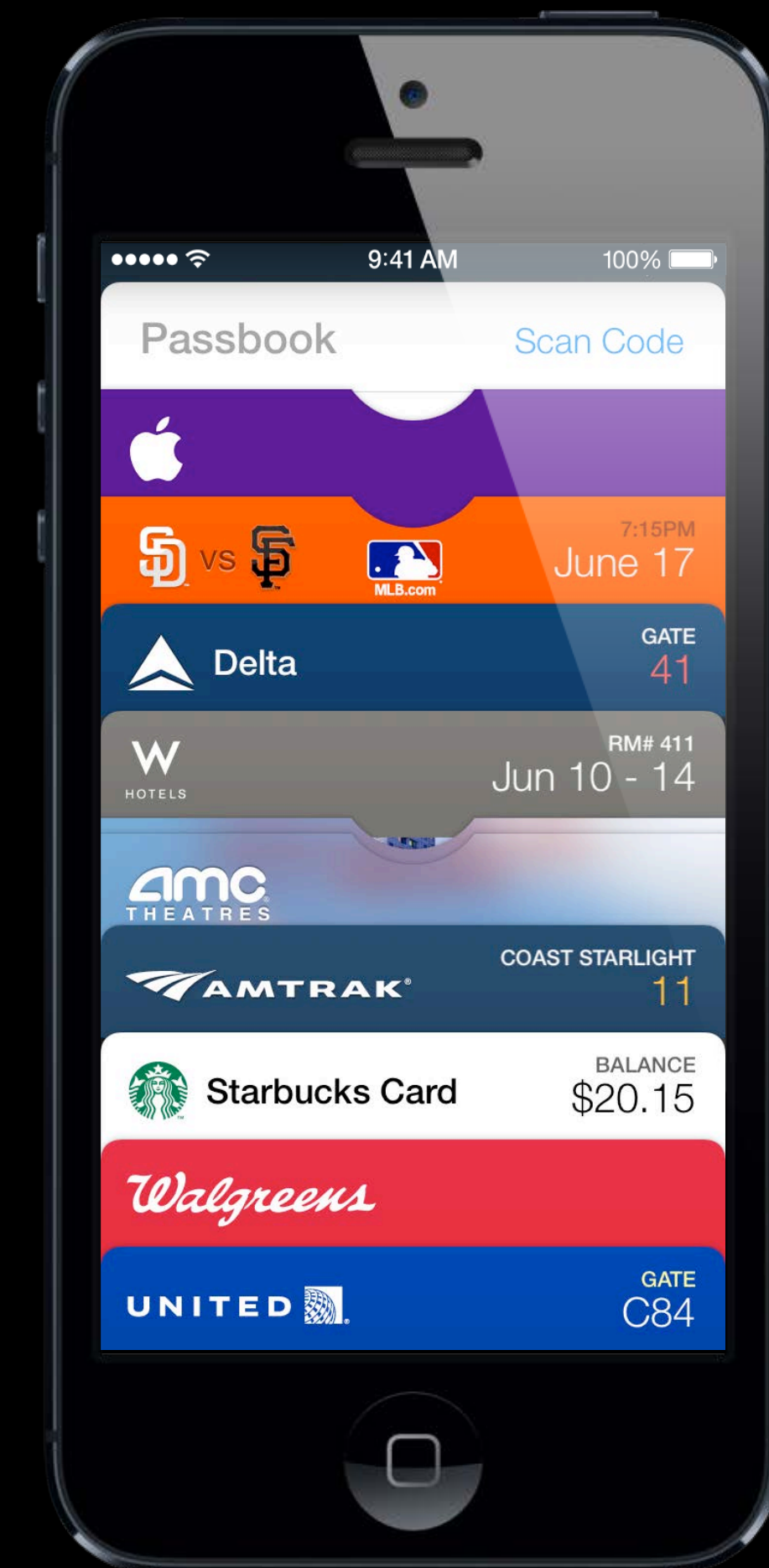
# What's New

- Richer pass content
- Easier ways to get passes



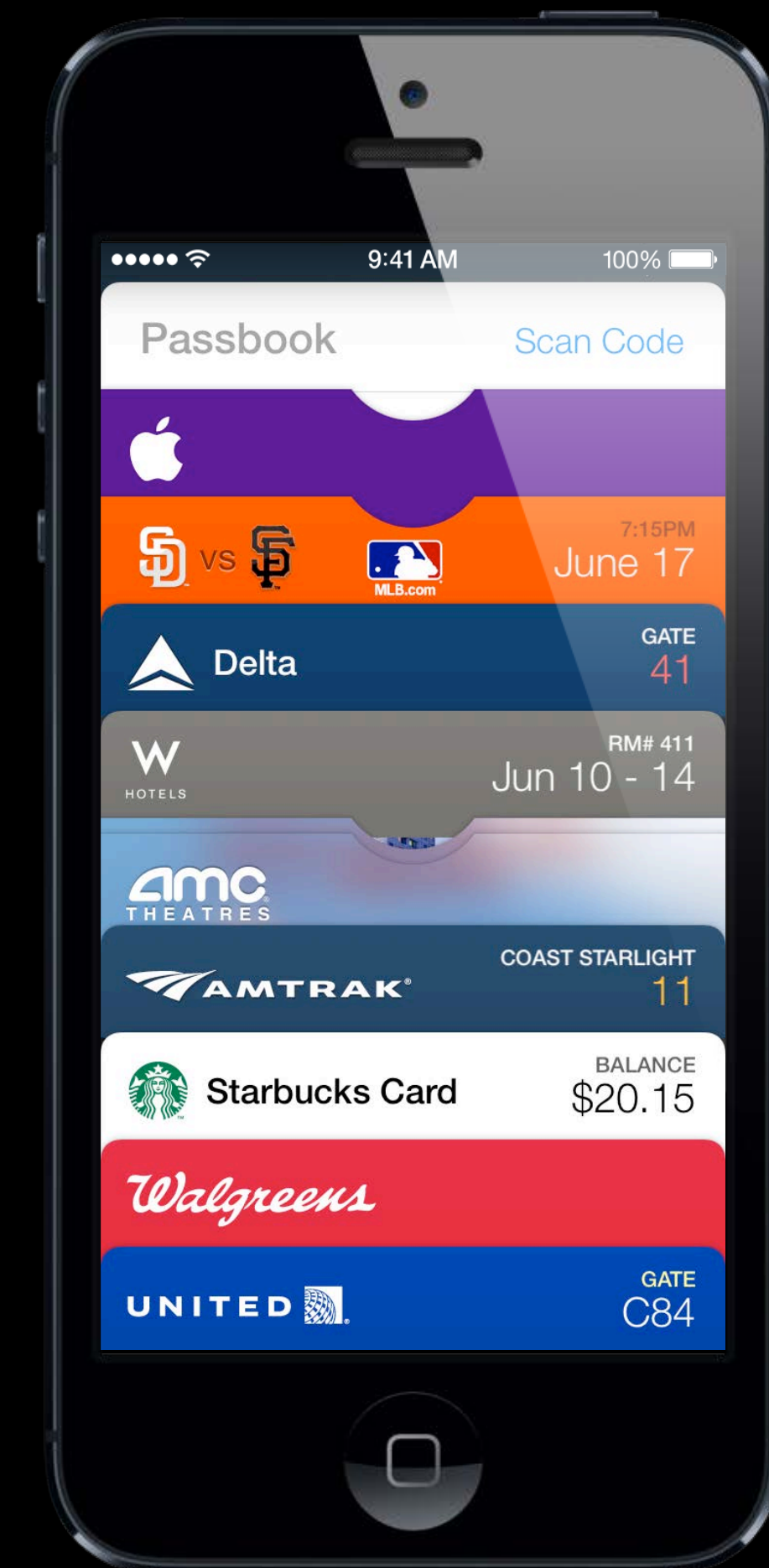
# What's New

- Richer pass content
- Easier ways to get passes
- More control over pass relevance



# What's New

- Richer pass content
- Easier ways to get passes
- More control over pass relevance
- Better support for using passes



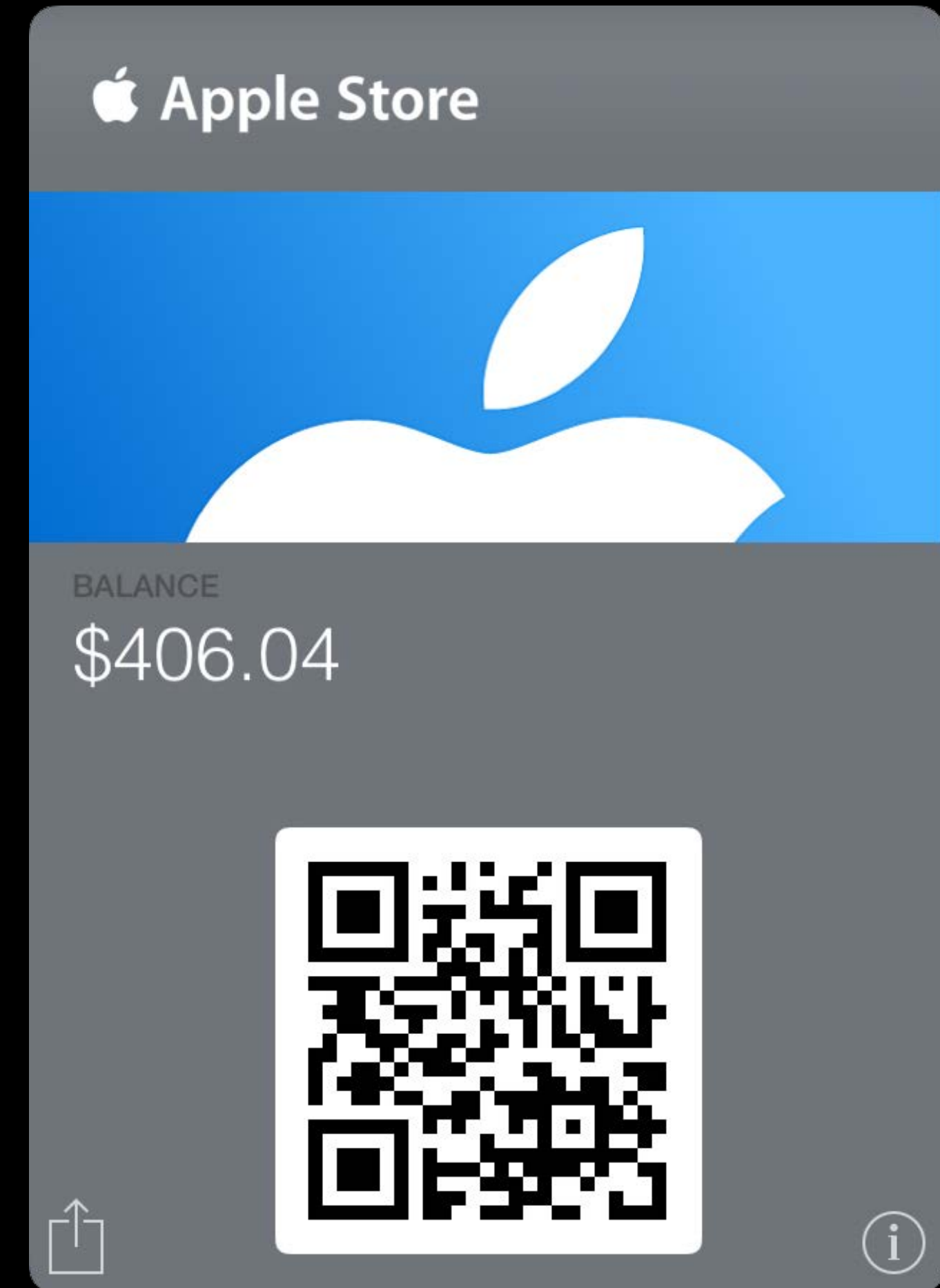
# Pass Content

What's in a pass?



# Overview

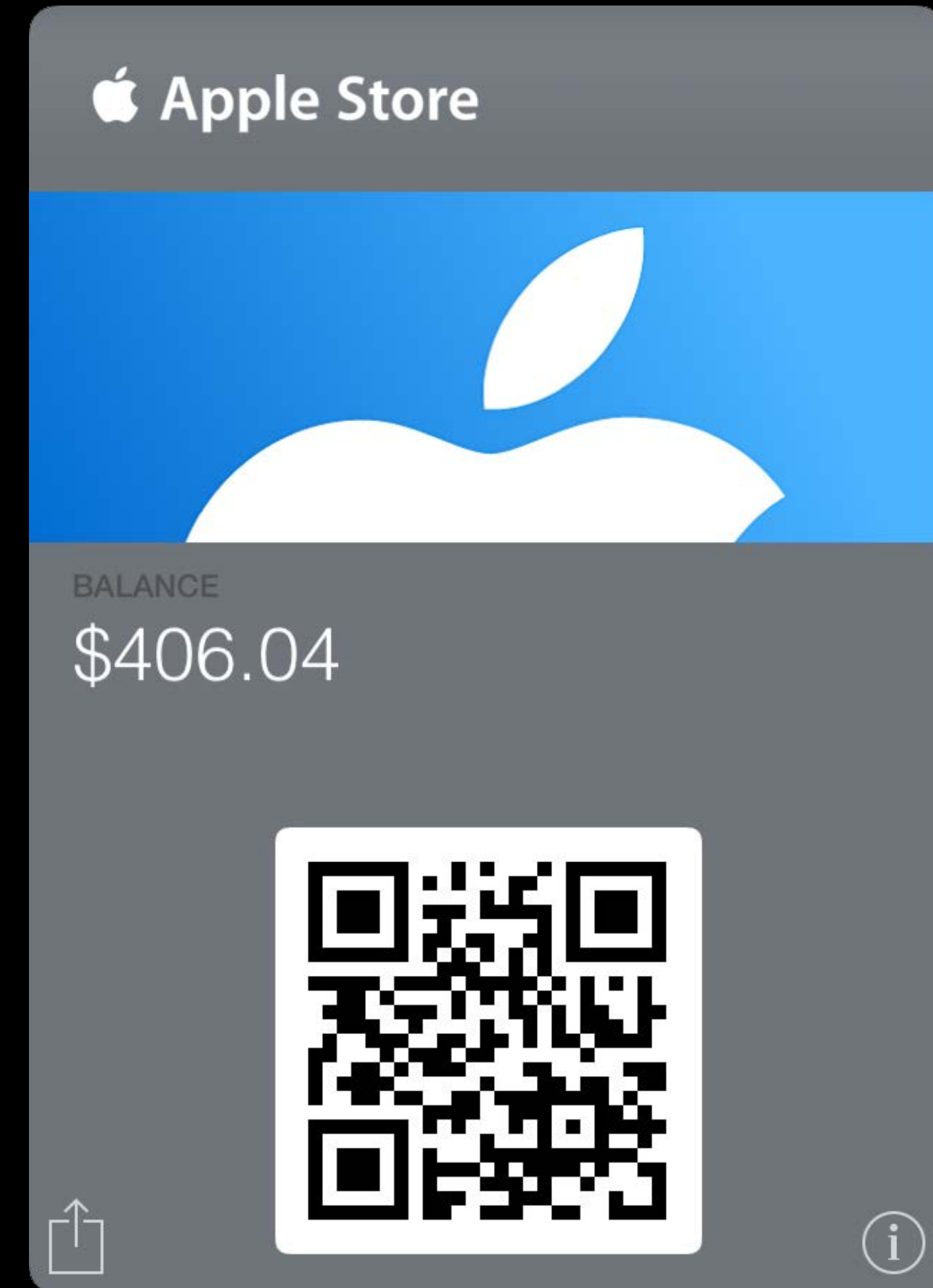
Pass content



# Overview

## Pass content

- Similar to an app bundle



# Overview

## Pass content

- Similar to an app bundle

### Pass



# Overview

## Pass content

- Similar to an app bundle
  - pass.json

### Pass

```
graph TD; Pass --- pass.json; Pass --- fr.lproj; Pass --- de.lproj; Pass --- icon.png; Pass --- icon@2x.png; Pass --- logo.png; Pass --- logo@2x.png; Pass --- manifest.json; Pass --- signature; fr.lproj --- pass_strings_fr[pass.strings]; de.lproj --- pass_strings_de[pass.strings];
```

- pass.json
- fr.lproj
  - └ pass.strings
- de.lproj
  - └ pass.strings
- icon.png
- icon@2x.png
- logo.png
- logo@2x.png
- manifest.json
- signature

# Overview

## Pass content

- Similar to an app bundle
  - pass.json
  - Localized strings

### Pass

```
graph TD; Pass --- pass.json; Pass --- fr.lproj; Pass --- de.lproj; Pass --- icon.png; Pass --- icon@2x.png; Pass --- logo.png; Pass --- logo@2x.png; Pass --- manifest.json; Pass --- signature; fr.lproj --- pass.strings; de.lproj --- pass.strings;
```

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- fr.lproj
  - └ pass.strings
- de.lproj
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- logo@2x.png
- manifest.json
- signature

# Overview

## Pass content

- Similar to an app bundle
  - pass.json
  - Localized strings
  - Icons

### Pass

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graph TD; Pass --- pass.json; Pass --- fr.lproj; Pass --- de.lproj; Pass --- icon.png; Pass --- icon@2x.png; Pass --- logo.png; Pass --- logo@2x.png; Pass --- manifest.json; Pass --- signature; fr.lproj --- pass.strings; de.lproj --- pass.strings;
```

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- fr.lproj
  - └ pass.strings
- de.lproj
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- logo.png
- logo@2x.png
- manifest.json
- signature

# Overview

## Pass content

- Similar to an app bundle
  - pass.json
  - Localized strings
  - Icons
  - Images

### Pass

```
graph TD; Pass --- pass.json; Pass --- fr.lproj; Pass --- de.lproj; Pass --- icon.png; Pass --- icon@2x.png; Pass --- logo.png; Pass --- logo@2x.png; Pass --- manifest.json; Pass --- signature; fr.lproj --- pass.strings; de.lproj --- pass.strings;
```

- pass.json
- fr.lproj
  - └ pass.strings
- de.lproj
  - └ pass.strings
- icon.png
- icon@2x.png
- logo.png
- logo@2x.png
- manifest.json
- signature

# Overview

## Pass content

- Similar to an app bundle
  - pass.json
  - Localized strings
  - Icons
  - Images
- Signed and zipped

### Pass

```
graph TD; Pass --- pass.json; Pass --- fr.lproj; Pass --- de.lproj; Pass --- icon.png; Pass --- icon@2x.png; Pass --- logo.png; Pass --- logo@2x.png; Pass --- manifest.json; Pass --- signature; fr.lproj --- pass.strings; de.lproj --- pass.strings;
```

- pass.json
- fr.lproj
  - └ pass.strings
- de.lproj
  - └ pass.strings
- icon.png
- icon@2x.png
- logo.png
- logo@2x.png
- manifest.json
- signature



# Appearance



# Appearance

- New look



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- Matching iOS 6 style will look wrong now



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- Provide unaltered images/colors



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- Passes are full width



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  - Strip images: 320pt (up from 312)



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- No logo etching



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- New look
- Matching iOS 6 style will look wrong now
- Provide unaltered images/colors
- Passes are full width
  - Strip images: 320pt (up from 312)
- No logo etching
- Provide 1x images for pre-iOS 7





# Grouping

# Grouping

- Passes group automatically

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- Passes group automatically
- Control grouping
  - "groupingIdentifier": "jappleseed"

# Grouping

- Passes group automatically
- Control grouping
  - "groupingIdentifier": "jappleseed"
- Event tickets and boarding passes

# Grouping

- Passes group automatically
- Control grouping
  - `"groupingIdentifier": "jappleseed"`
- Event tickets and boarding passes
  - Itineraries

# Grouping

- Passes group automatically
- Control grouping
  - "groupingIdentifier": "jappleseed"
- Event tickets and boarding passes
  - Itineraries
  - Multi-day events

# Better Date Fields



# Better Date Fields



- Passbook adjusts date fields for time zone changes



# Better Date Fields



- Passbook adjusts date fields for time zone changes
- Sometimes you just want a static time

# Better Date Fields



- Passbook adjusts date fields for time zone changes
- Sometimes you just want a static time
- Using text fields can break in other locales
  - "3 PM" vs. "15.00"

# Better Date Fields



# Better Date Fields



- Disable time zone adjustment

# Better Date Fields



- Disable time zone adjustment

```
{  
  "key": "departureTime",  
  "value": "2013-08-19T15:00-08:00",  
  "timeStyle": "PKTimeStyleShort",  
  "ignoresTimeZone": true  
}
```

# Better Date Fields



- Disable time zone adjustment

```
{  
  "key": "departureTime",  
  "value": "2013-08-19T15:00-08:00",  
  "timeStyle": "PKTimeStyleShort",  
  "ignoresTimeZone": true  
}
```

- Time format hasn't changed

# Better Date Fields

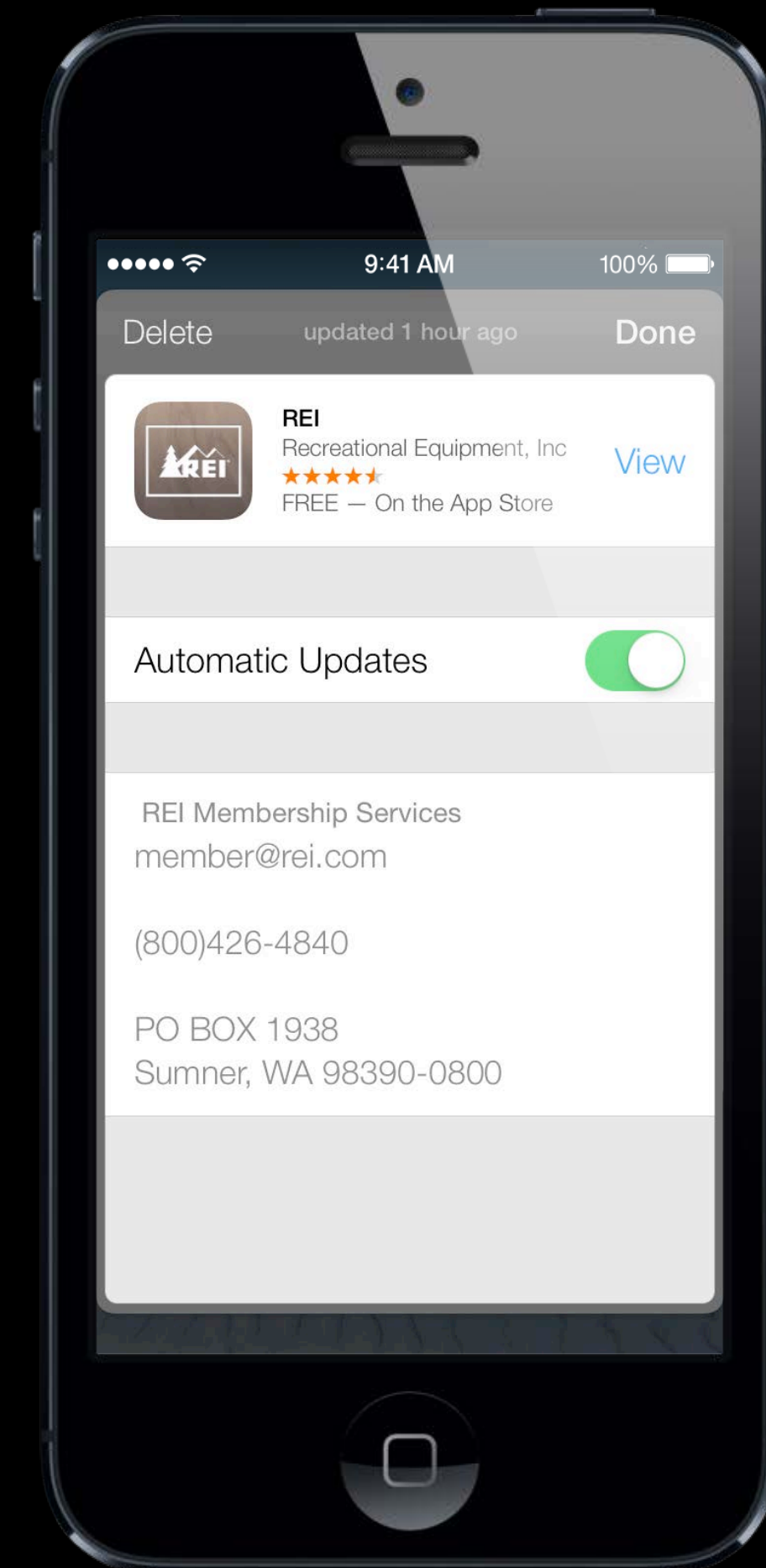


- Disable time zone adjustment

```
{  
  "key": "departureTime",  
  "value": "2013-08-19T15:00-08:00",  
  "timeStyle": "PKTimeStyleShort",  
  "ignoresTimeZone": true  
}
```

- Time format hasn't changed
  - Provide local time zone

# App Links

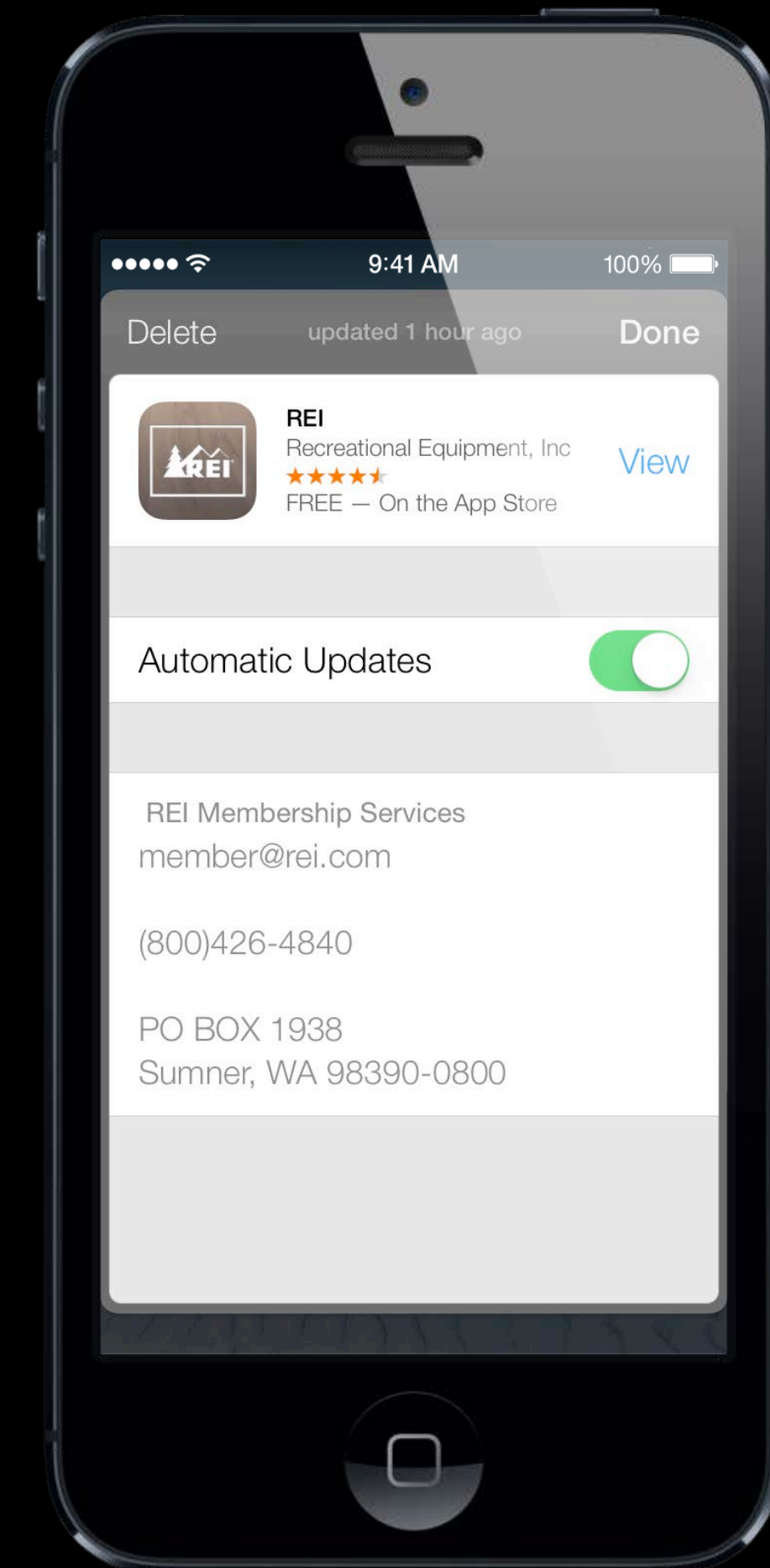




# App Links



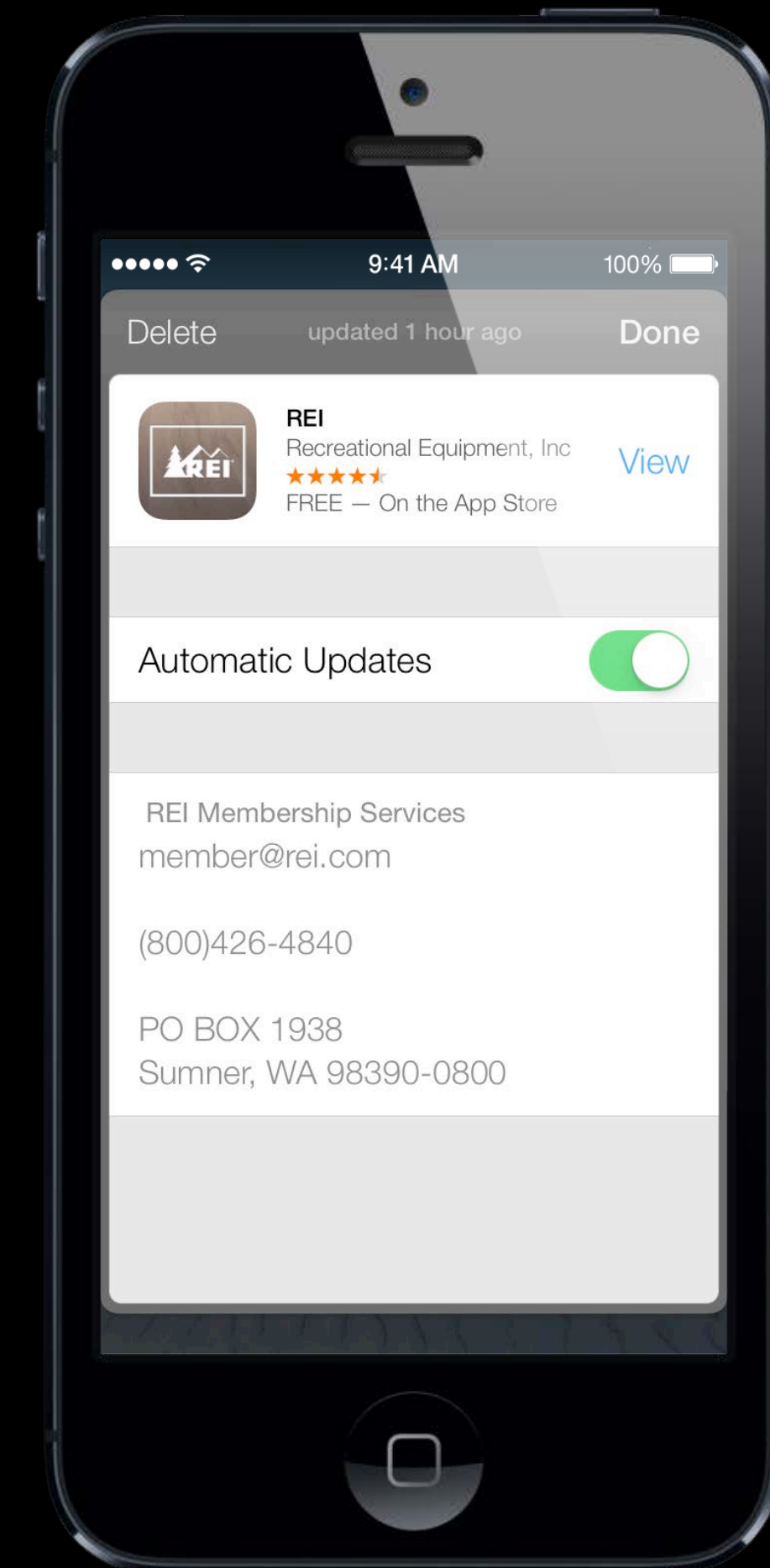
- Easy access to your app



# App Links



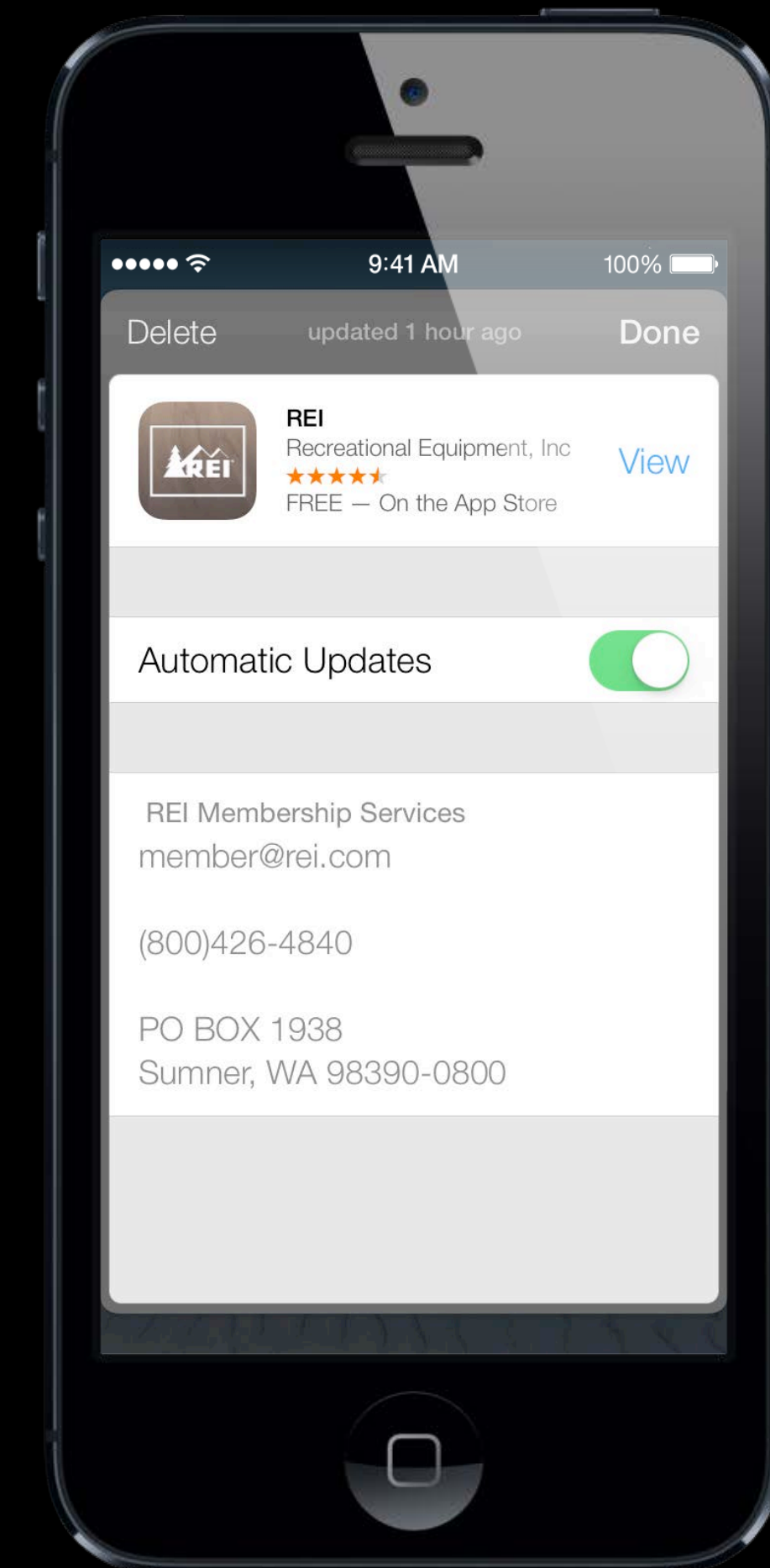
- Easy access to your app
- Which pass did this come from?



# App Links



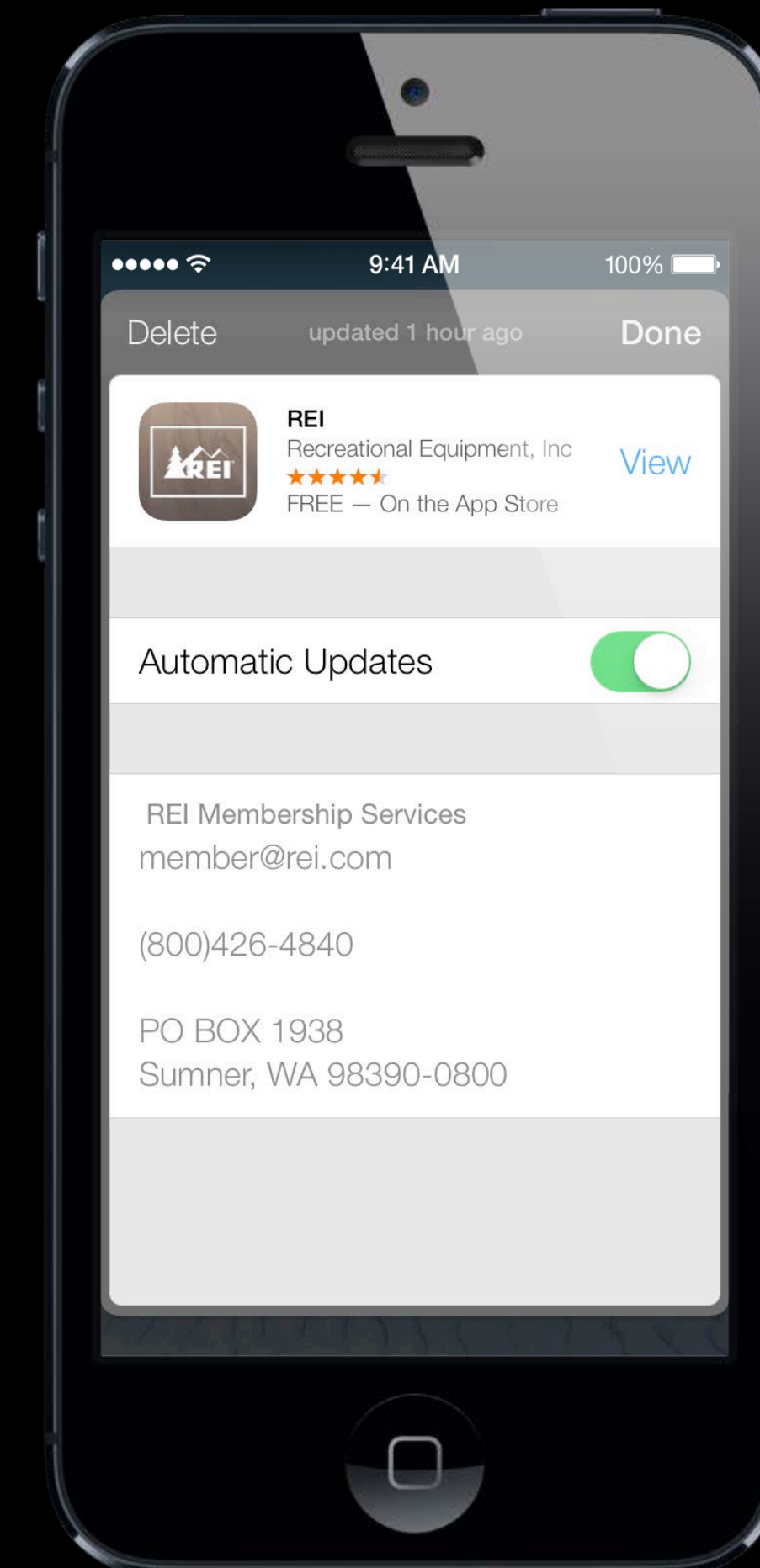
- Easy access to your app
  - Which pass did this come from?
  - Context URL
- `"appLaunchURL": "myapp://pass/1A629"`



# App Links



- Easy access to your app
- Which pass did this come from?
- Context URL
  - "appLaunchURL": "myapp://pass/1A629"
- Supplied to your app delegate



# Metadata



# Metadata



- Arbitrary info dictionary

```
"userInfo":{  
  "aKey":"aValue",  
  "hint":6  
}
```

# Metadata



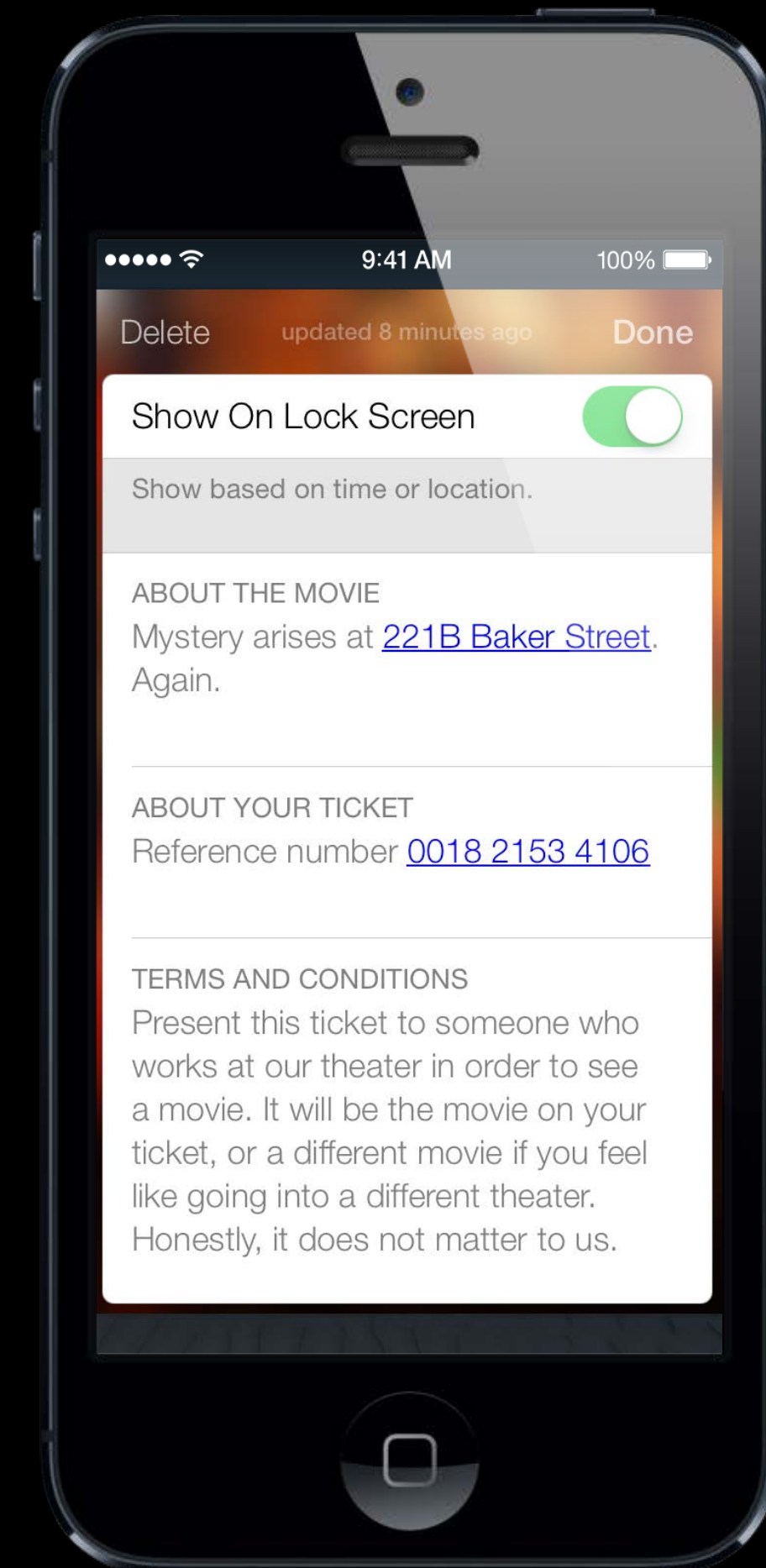
- Arbitrary info dictionary

```
"userInfo":{  
    "aKey":"aValue",  
    "hint":6  
}
```

- Apps can access this on any pass from their pass library

```
– (NSDictionary *)userInfo;
```

# Text Links

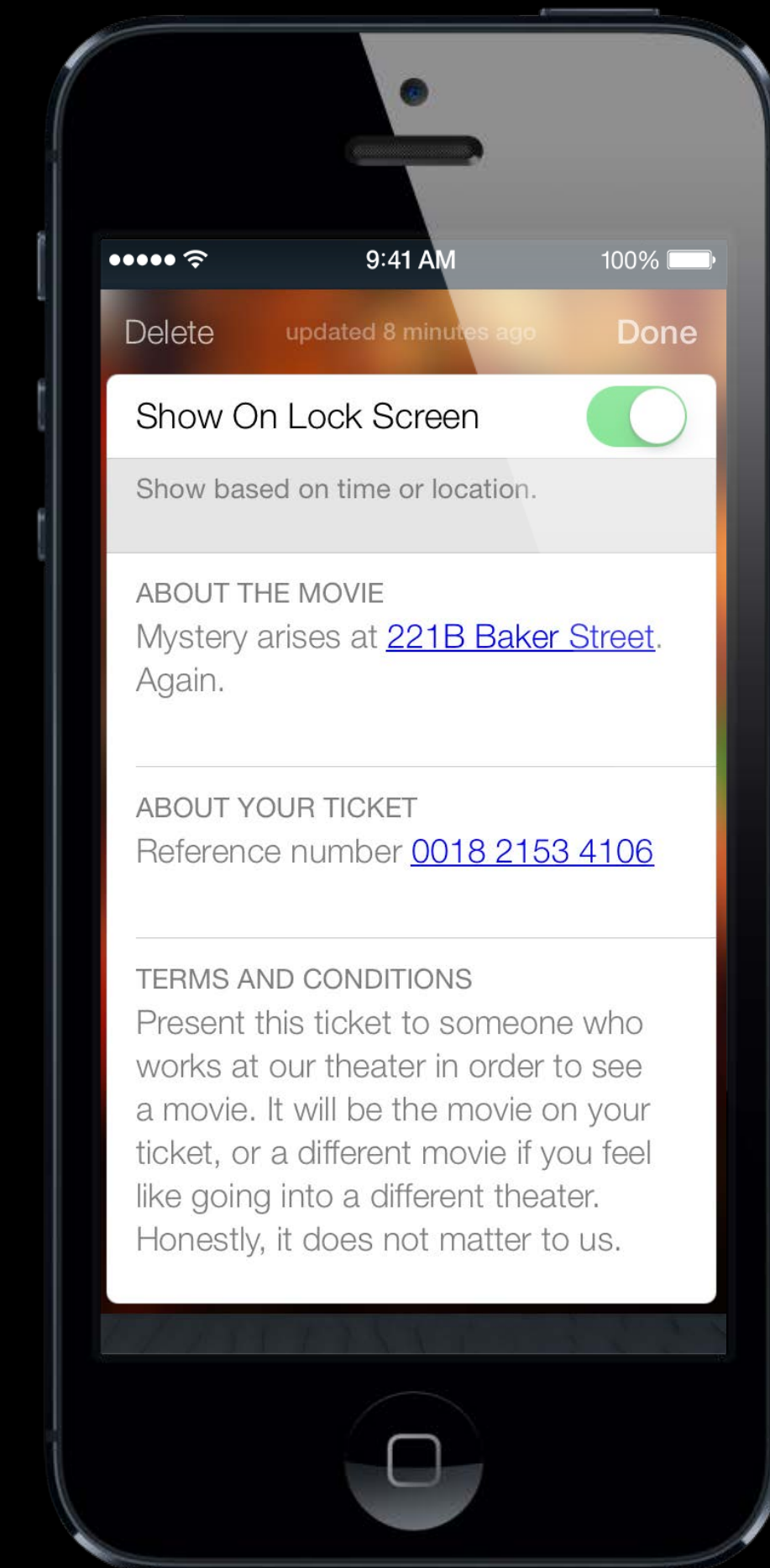




# Text Links



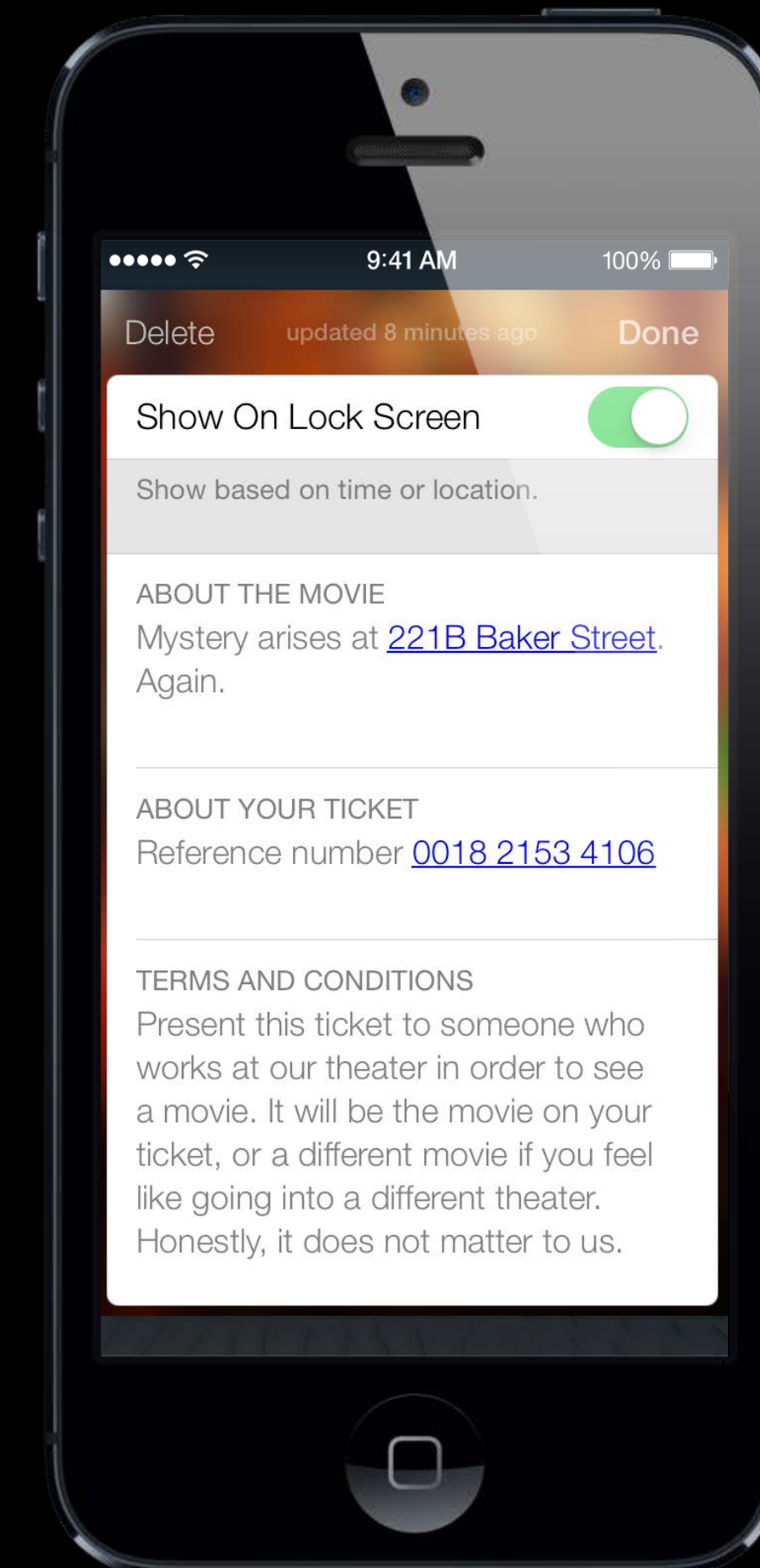
- Provide pass-related information



# Text Links



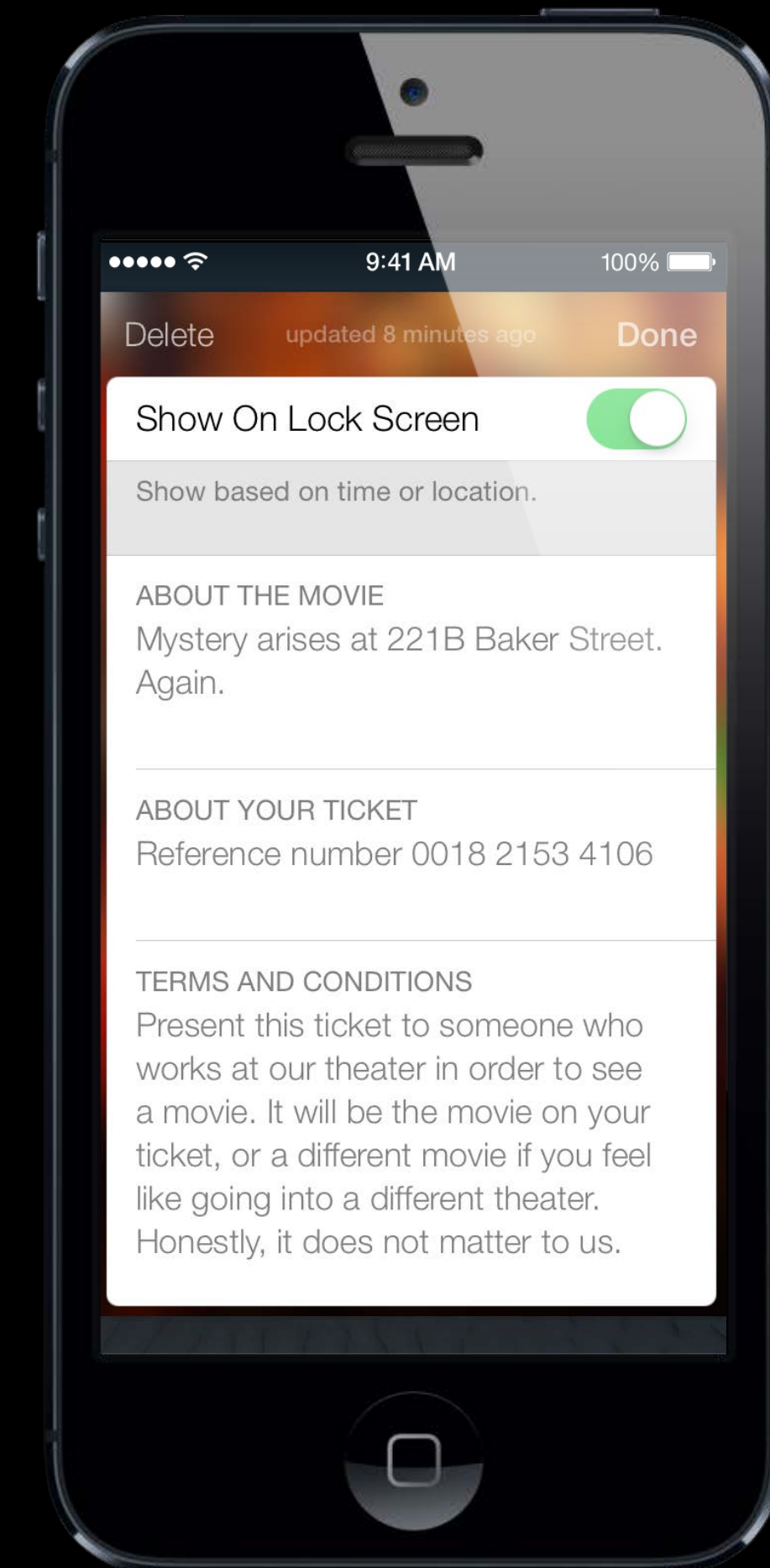
- Provide pass-related information
- Standard UIKit data detectors



# Text Links



- Provide pass-related information
- Standard UIKit data detectors
- Set what kind of data can be detected



# Text Links

Data detector control

# Text Links

## Data detector control

- `"dataDetectorTypes": [...]`

# Text Links

## Data detector control

- `"dataDetectorTypes": [...]`
  - Phone, address, email, URL

# Text Links

## Data detector control

- `"dataDetectorTypes": [...]`
  - Phone, address, email, URL
  - Default: all

# Text Links

## Data detector control

- `"dataDetectorTypes": [...]`
  - Phone, address, email, URL
  - Default: all
- `"backFields": [{`



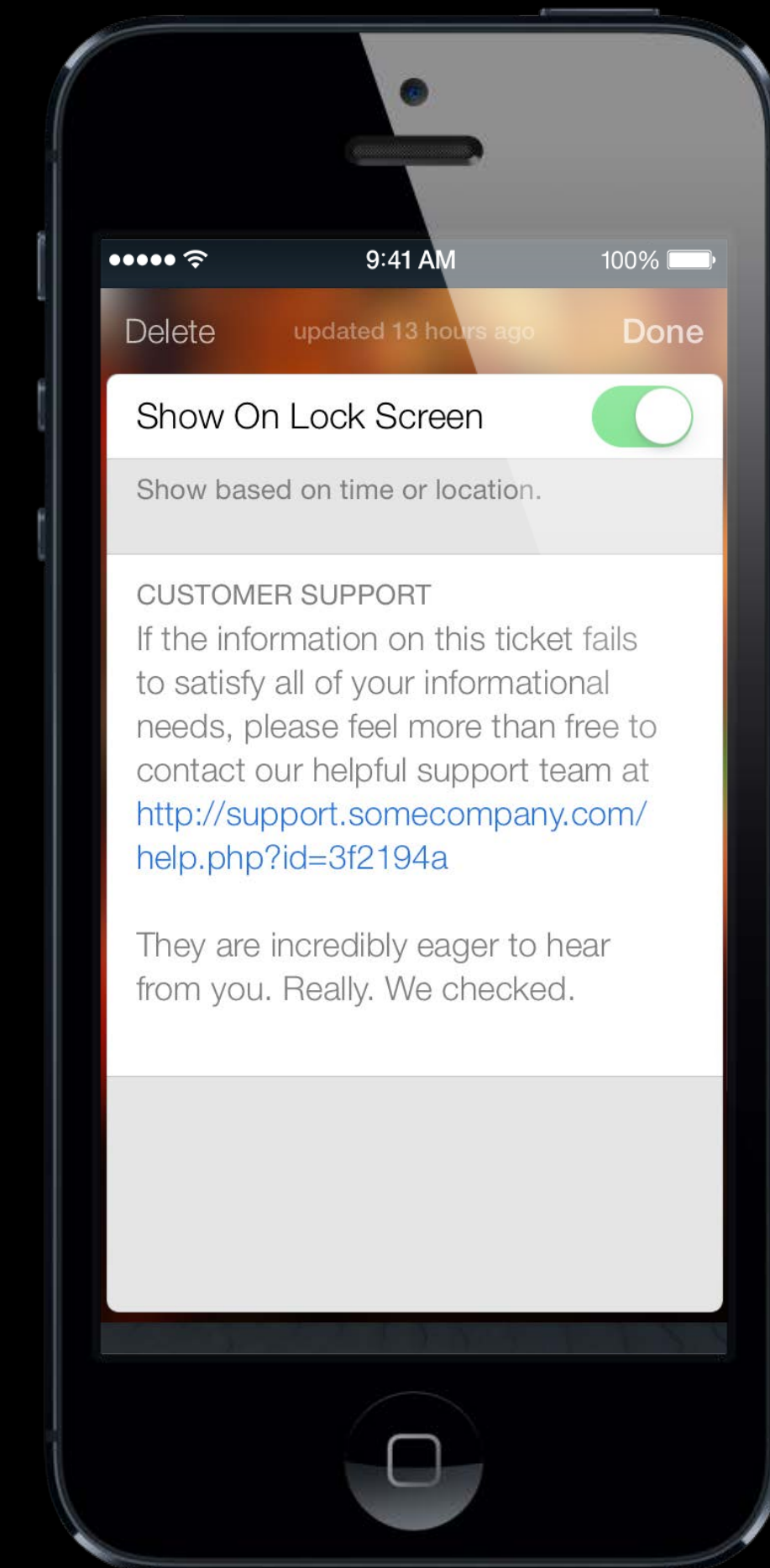
# Text Links

## Data detector control

- `"dataDetectorTypes": [...]`
  - Phone, address, email, URL
  - Default: all

```
"backFields": [{  
  ...  
  "value": "1 Infinite Loop, Cupertino, CA",  
  "dataDetectorTypes": ["PKDataDetectorTypeNone"]  
}]
```

# Text Links

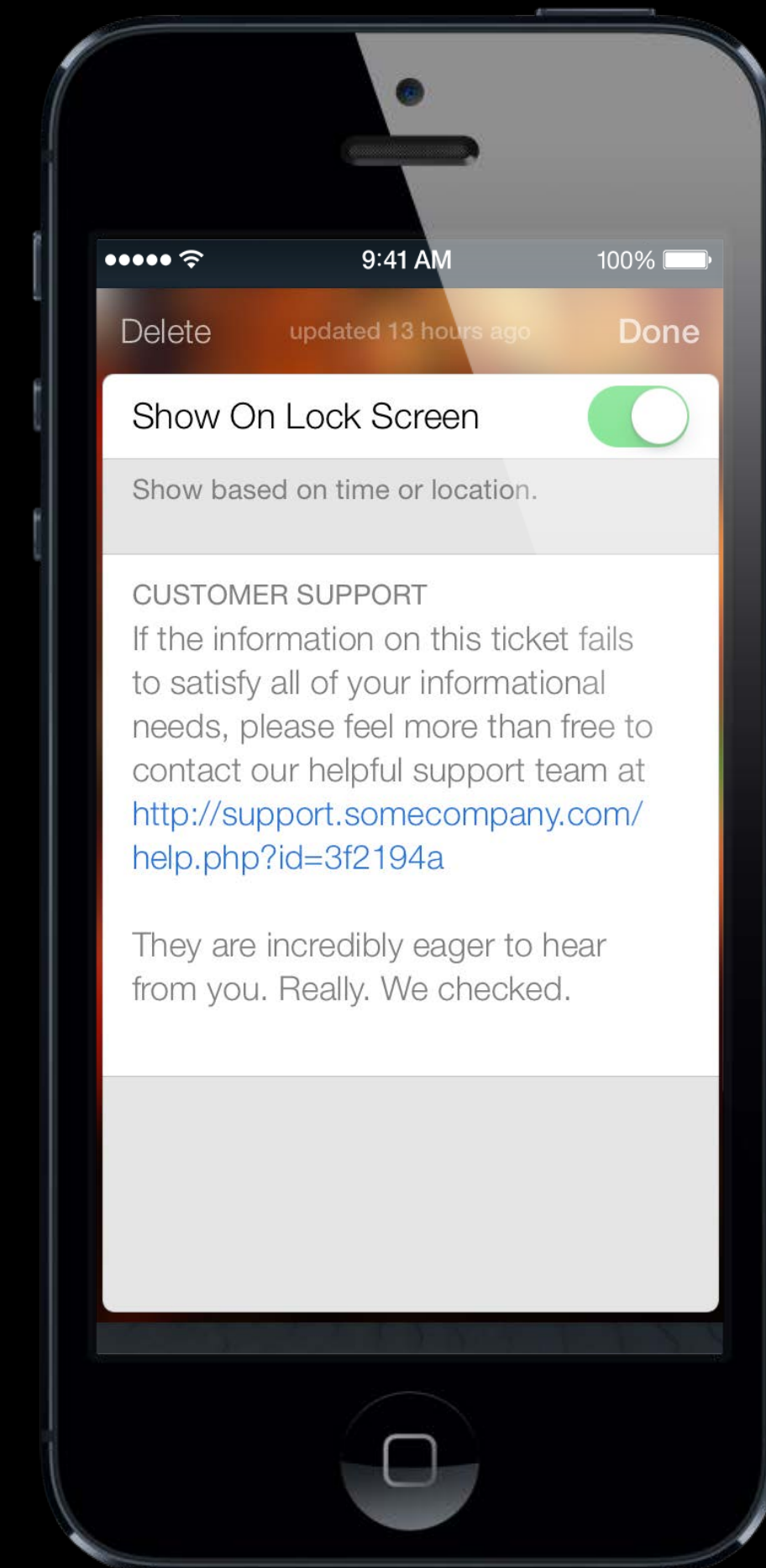


# Text Links

- URLs are often long or ugly

[http://support.yourcompany.com/  
help.php?id=3f2194a](http://support.yourcompany.com/help.php?id=3f2194a)

<http://bit.ly/EpvC>



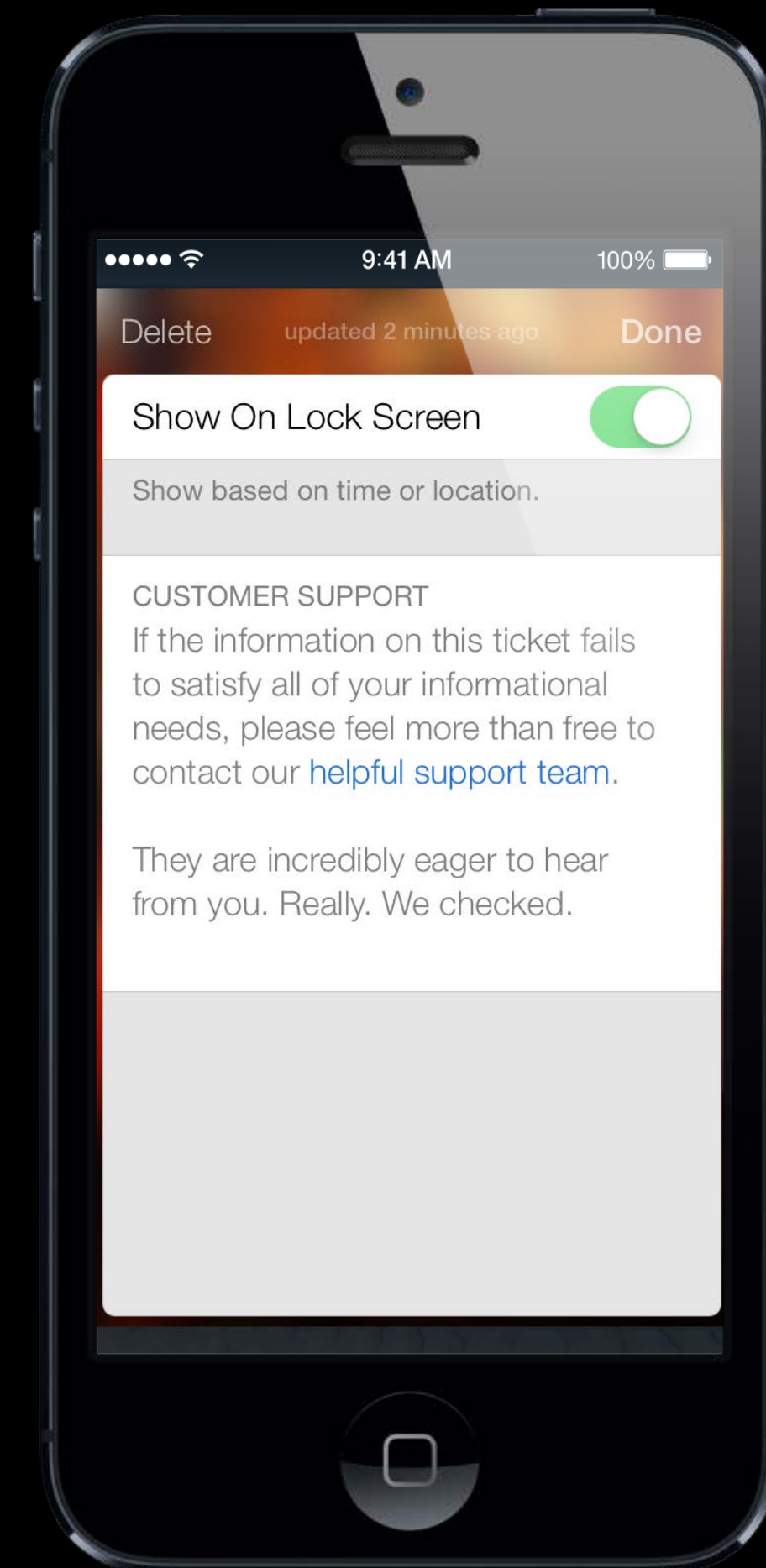
# Text Links

- URLs are often long or ugly

[http://support.yourcompany.com/  
help.php?id=3f2194a](http://support.yourcompany.com/help.php?id=3f2194a)

<http://bit.ly/EpvC>

- Embedded URLs



# Text Links

Embedded URLs

# Text Links

## Embedded URLs

```
{  
  "key": "about",  
  "value": "More information at http://apple.com/ios/",  
  "attributedValue": "<a href='http://apple.com/ios/'>More Information</a>"  
}
```

# Text Links

## Embedded URLs

```
{  
  "key": "about",  
  "value": "More information at http://apple.com/ios/",  
  "attributedValue": "<a href='http://apple.com/ios/'>More Information</a>"  
}
```

- Not full HTML

# Text Links

## Embedded URLs

```
{
  "key": "about",
  "value": "More information at http://apple.com/ios/",
  "attributedValue": "<a href='http://apple.com/ios/'>More Information</a>"
}
```

- Not full HTML
- Only on back fields



# Text Links

## Embedded URLs

```
{
  "key": "about",
  "value": "More information at http://apple.com/ios/",
  "attributedValue": "<a href='http://apple.com/ios/'>More Information</a>"
}
```

- Not full HTML
- Only on back fields
- Provide “value” key for backward compatibility

# Pass Content

## Review

# Pass Content

## Review

- New style in 7.0: less gradient, no shine, wider strip images

# Pass Content

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- New style in 7.0: less gradient, no shine, wider strip images
- Date fields without time zone adjustment

`"ignoresTimeZone": true`

# Pass Content

## Review

- New style in 7.0: less gradient, no shine, wider strip images
- Date fields without time zone adjustment

`"ignoresTimeZone": true`

- App links can now provide context when launching

`"appLaunchURL": "myapp://pass/1A629"`

# Pass Content

## Review

- New style in 7.0: less gradient, no shine, wider strip images

- Date fields without time zone adjustment

```
"ignoresTimeZone": true
```

- App links can now provide context when launching

```
"appLaunchURL": "myapp://pass/1A629"
```

- Metadata

```
"userInfo": {"aKey": "aValue", "aNumber": 6}
```

# Pass Content

## Review

- New style in 7.0: less gradient, no shine, wider strip images

- Date fields without time zone adjustment

```
"ignoresTimeZone": true
```

- App links can now provide context when launching

```
"appLaunchURL": "myapp://pass/1A629"
```

- Metadata

```
"userInfo": {"aKey": "aValue", "aNumber": 6}
```

- More control over data detectors on back fields

```
"dataDetectorTypes": ["UIDataDetectorTypePhoneNumber", ... ]
```

# Pass Content

## Review

- New style in 7.0: less gradient, no shine, wider strip images

- Date fields without time zone adjustment

```
"ignoresTimeZone": true
```

- App links can now provide context when launching

```
"appLaunchURL": "myapp://pass/1A629"
```

- Metadata

```
"userInfo": {"aKey": "aValue", "aNumber": 6}
```

- More control over data detectors on back fields

```
"dataDetectorTypes": ["UIDataDetectorTypePhoneNumber", ... ]
```

- Embedded URLs on back fields

```
<a href='http://apple.com/ios/'>More Information</a>
```



# Getting Passes

What's in a pass?

# Overview

# Overview

- Passes come from your server

# Overview

- Passes come from your server
- Mail/Safari

# Overview

- Passes come from your server
- Mail/Safari
- Your apps

# Overview

- Passes come from your server
- Mail/Safari
- Your apps
  - PKAddPassesViewController

# Overview

- Passes come from your server
- Mail/Safari
- Your apps
  - PKAddPassesViewController
  - PKPassLibrary

# Overview

- Passes come from your server
- Mail/Safari
- Your apps
  - PKAddPassesViewController
  - PKPassLibrary
  - Sequential adding



*Demo*

Adding multiple passes

**Nicholas Circosta**

iOS Engineer

# Adding Multiple Passes



# Adding Multiple Passes



- PKPassLibrary

# Adding Multiple Passes



- PKPassLibrary
  - (void)**addPasses**:(NSArray \*)passes

# Adding Multiple Passes



- PKPassLibrary

- (void)**addPasses**:(NSArray \*)passes

- withCompletionHandler**:(void(^)(PKPassLibraryAddPassesStatus status))completion

# Adding Multiple Passes



- PKPassLibrary
  - (void)**addPasses**:(NSArray \*)passes  
**withCompletionHandler**:(void (^)(PKPassLibraryAddPassesStatus status))completion
- PKAddPassesViewController

# Adding Multiple Passes



- PKPassLibrary

- (void)**addPasses**:(NSArray \*)passes

- withCompletionHandler**:(void(^)(PKPassLibraryAddPassesStatus status))completion

- PKAddPassesViewController

- (id)**initWithPasses**:(NSArray \*)passes

# Adding Multiple Passes



- PKPassLibrary
  - (void)**addPasses**:(NSArray \*)passes  
**withCompletionHandler**:(void(^)(PKPassLibraryAddPassesStatus status))completion
- PKAddPassesViewController
  - (id)**initWithPasses**:(NSArray \*)passes
- All or nothing

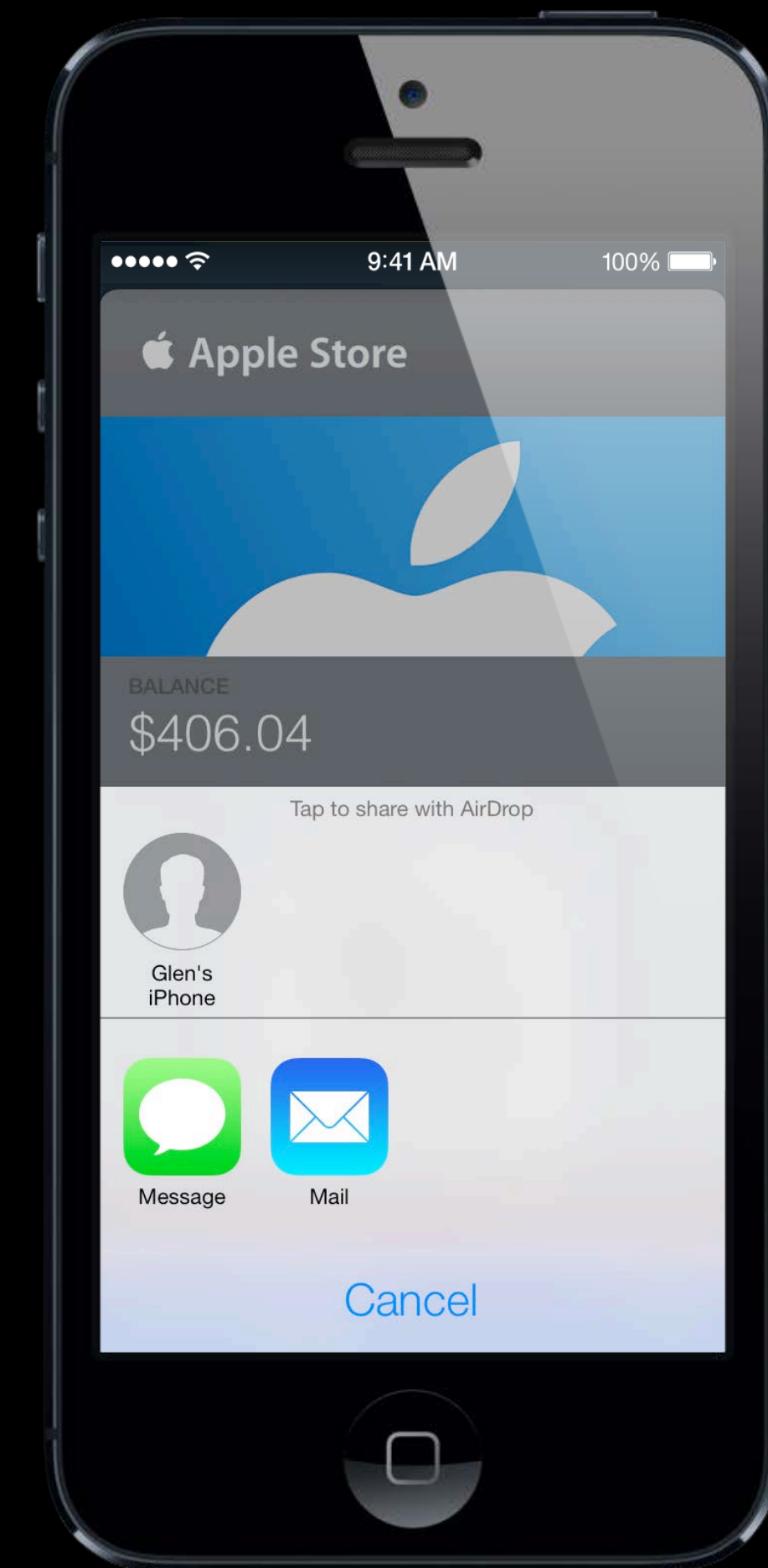


# Adding Multiple Passes



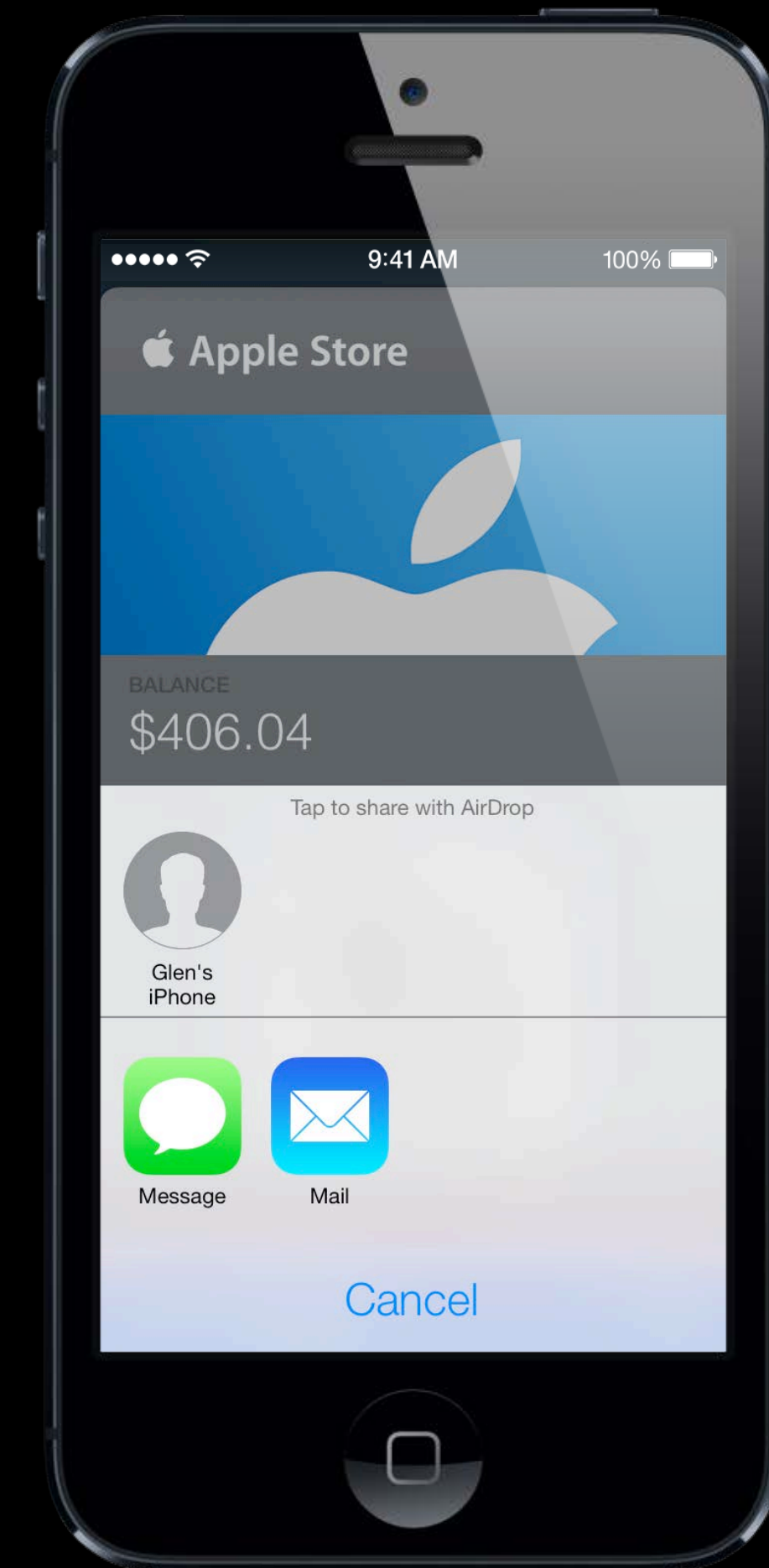
- PKPassLibrary
  - (void)**addPasses**:(NSArray \*)passes  
**withCompletionHandler**:(void(^)(PKPassLibraryAddPassesStatus status))completion
- PKAddPassesViewController
  - (id)**initWithPasses**:(NSArray \*)passes
- All or nothing
  - Provide UI for choosing passes if needed

# Sharing



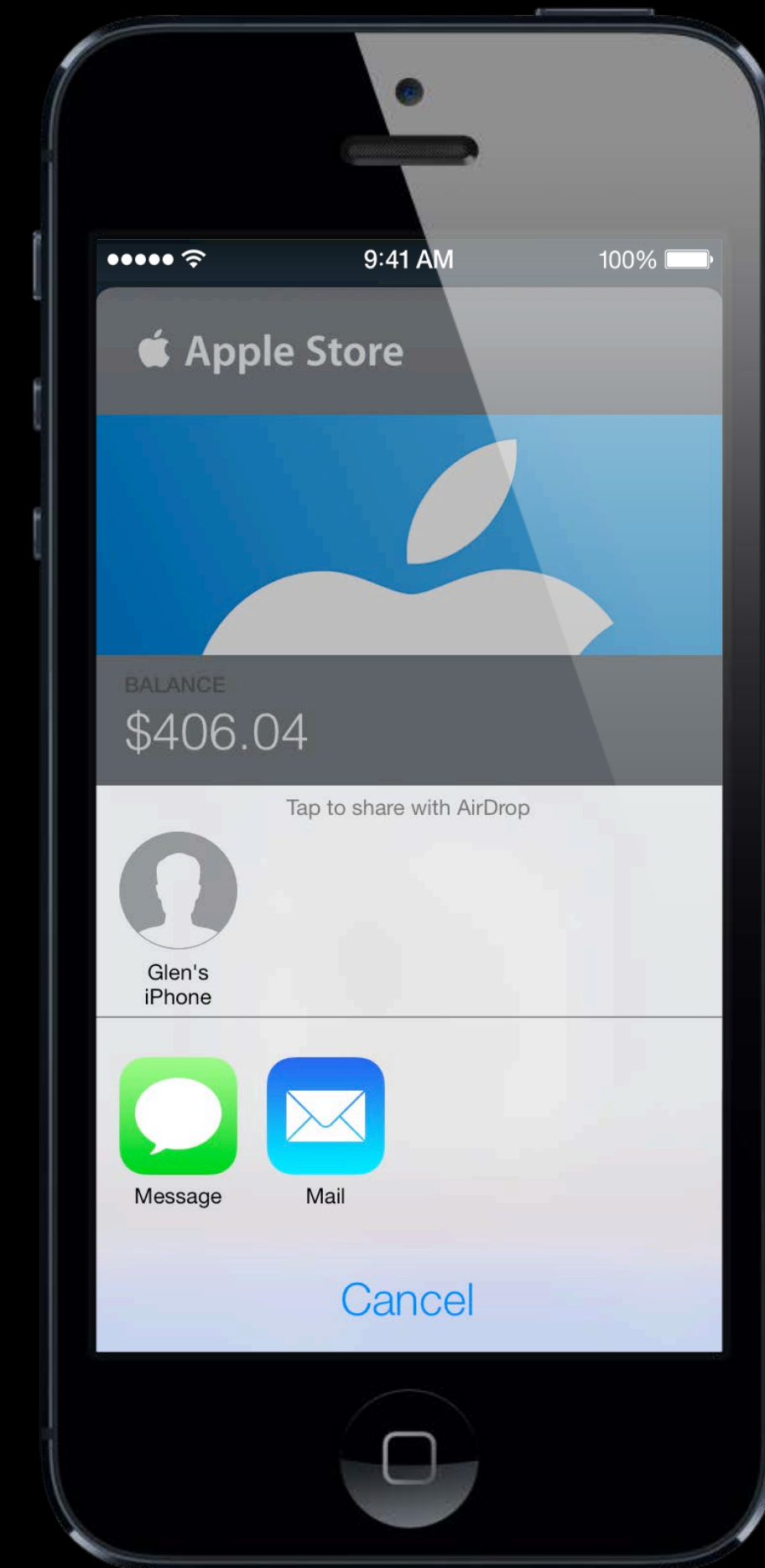
# Sharing

- Users can now send passes to each other



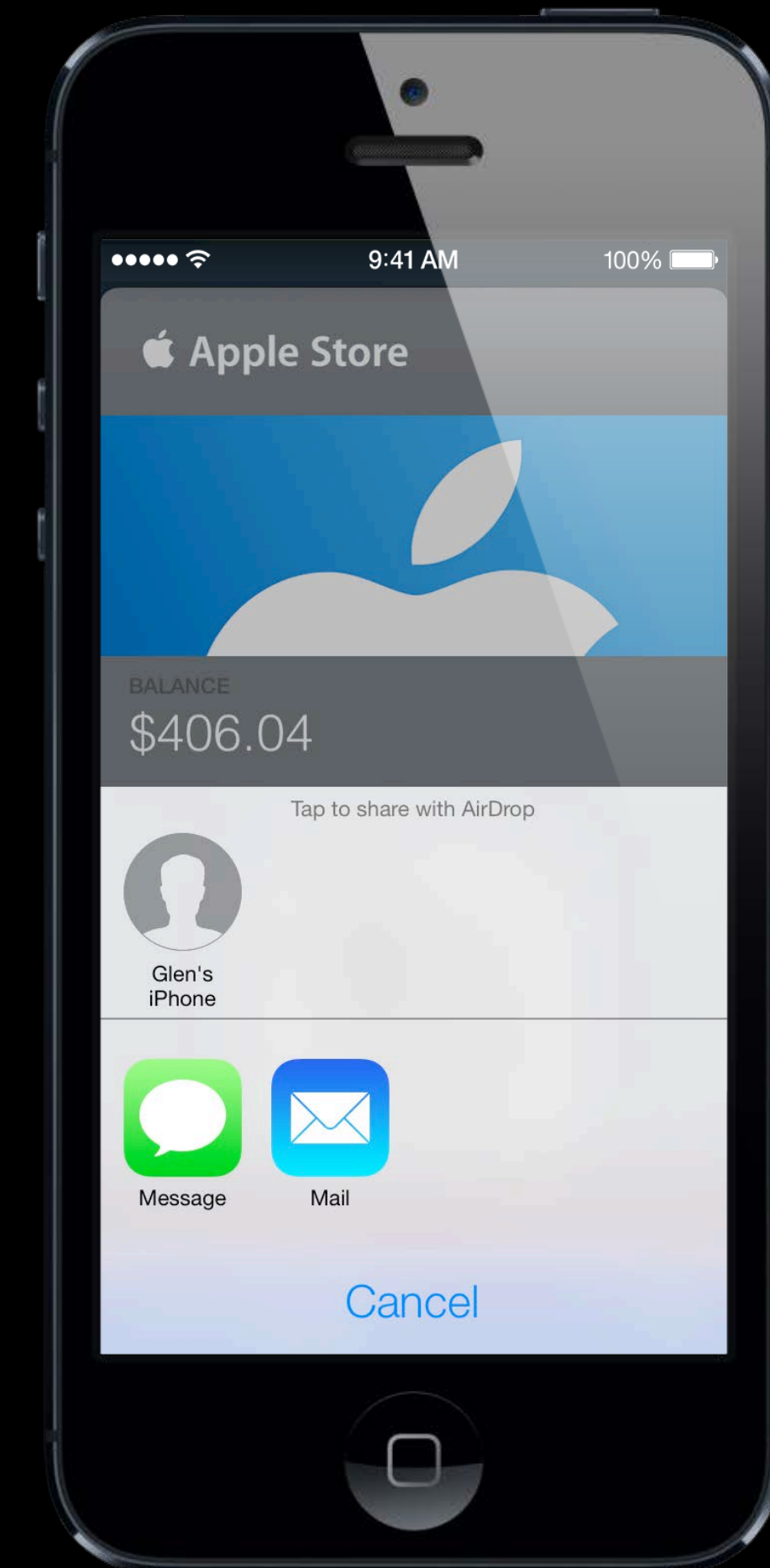
# Sharing

- Users can now send passes to each other
- Easy to spread



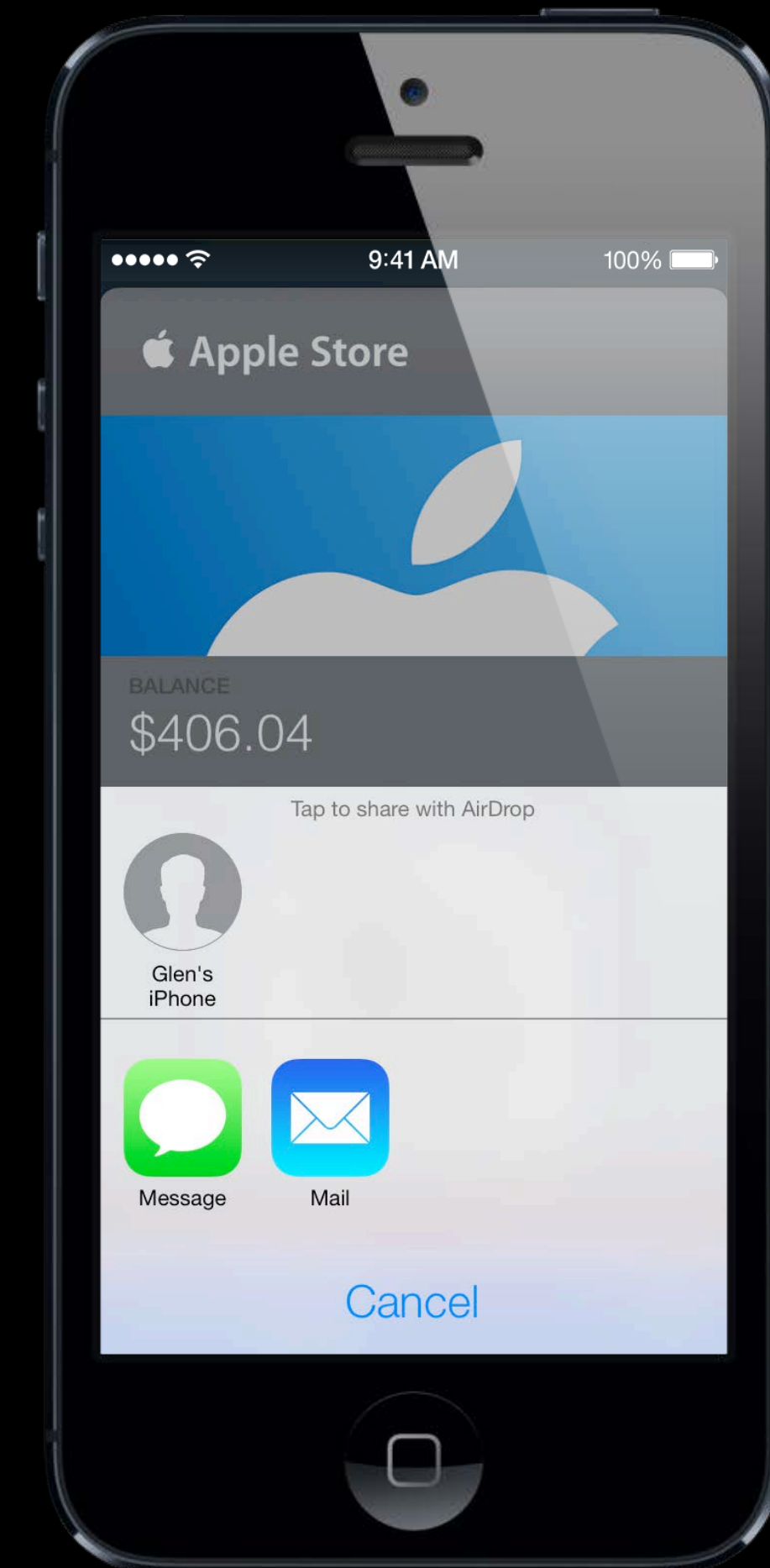
# Sharing

- Users can now send passes to each other
- Easy to spread
- Simplifies group pass usage



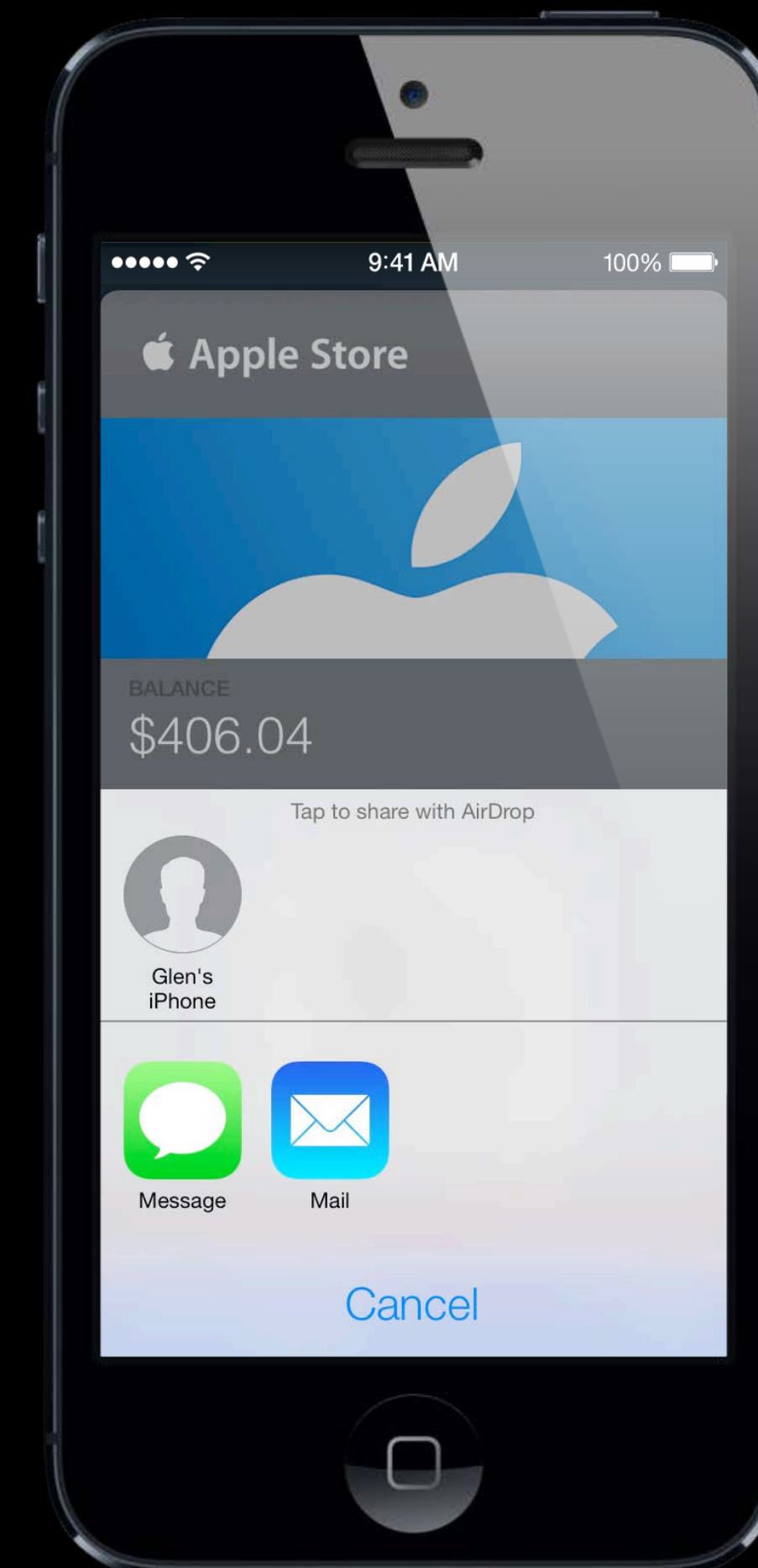
# Sharing

- Users can now send passes to each other
- Easy to spread
- Simplifies group pass usage
- Passes could already be in multiple places



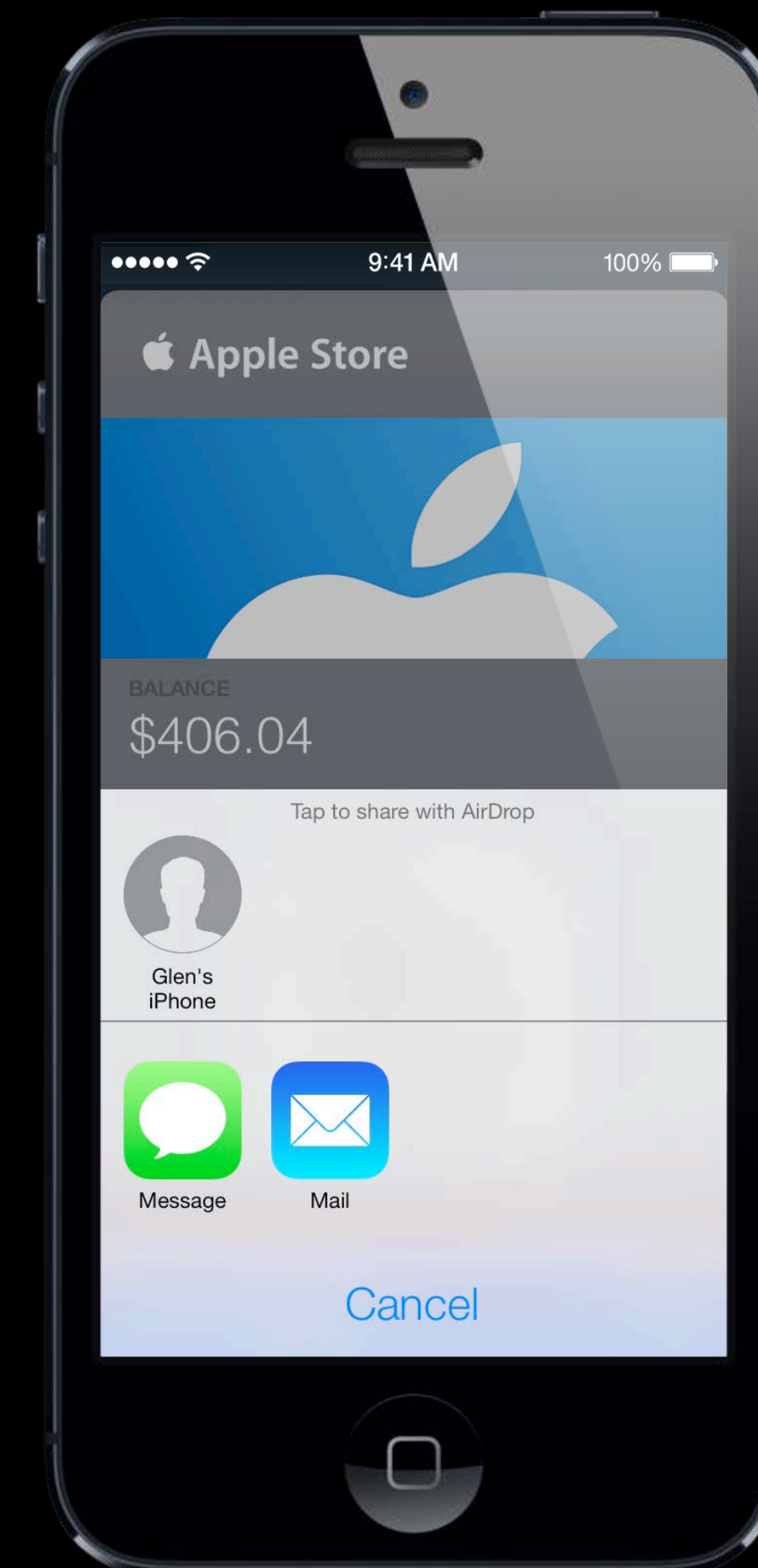
# Sharing

- Users can now send passes to each other
- Easy to spread
- Simplifies group pass usage
- Passes could already be in multiple places
  - Now even more so



# Sharing

- Users can now send passes to each other
- Easy to spread
- Simplifies group pass usage
- Passes could already be in multiple places
  - Now even more so
- Validate your passes



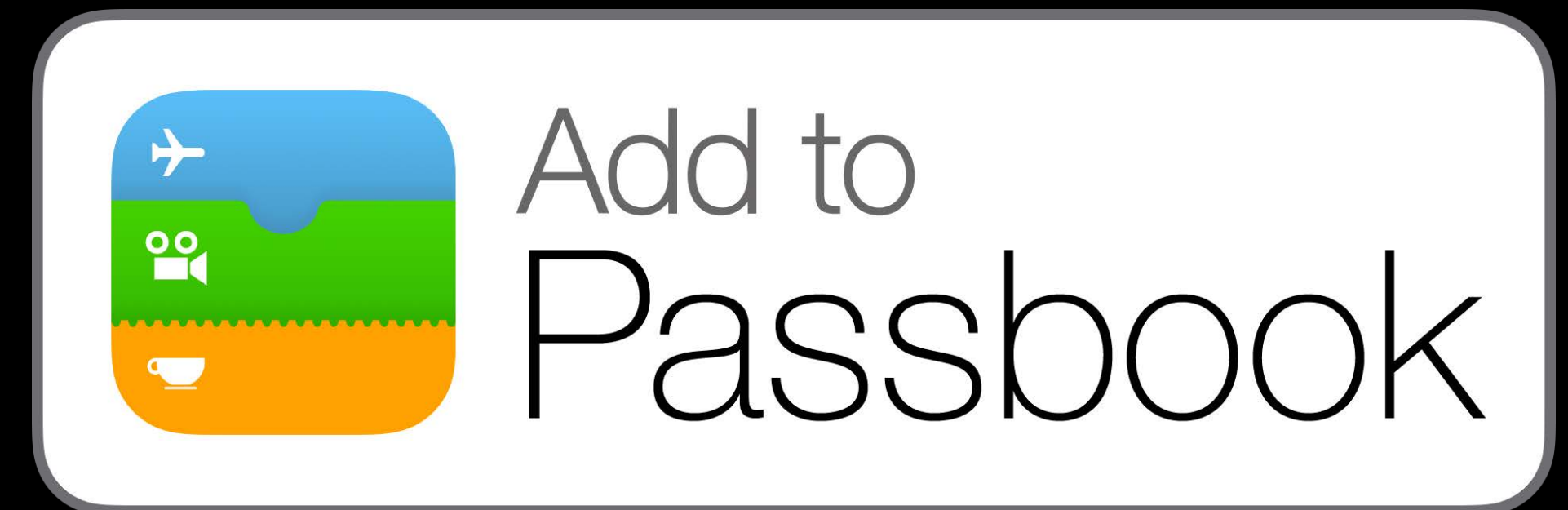


# “Add to Passbook” Badge



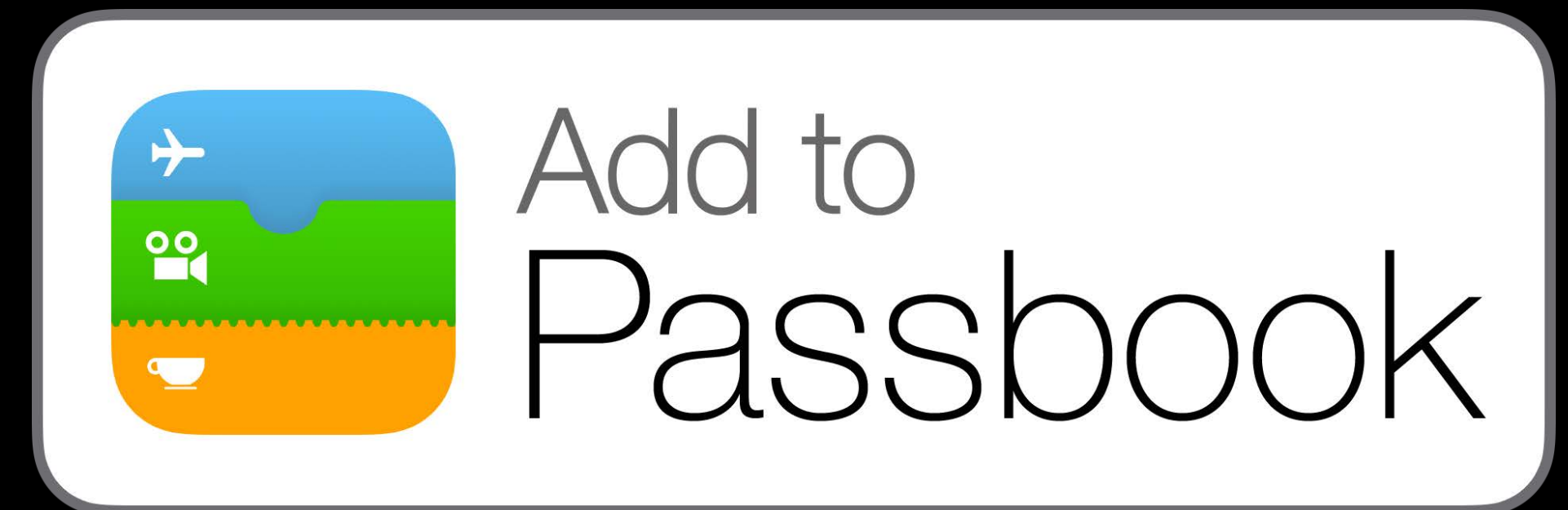
# “Add to Passbook” Badge

- Users look for the badge



# “Add to Passbook” Badge

- Users look for the badge
- Include it where appropriate



# “Add to Passbook” Badge

- Users look for the badge
- Include it where appropriate
  - Websites/email



# “Add to Passbook” Badge

- Users look for the badge
- Include it where appropriate
  - Websites/email
- Design for your app



# Code Scanning



# Code Scanning



- Low-friction way to get a pass



# Code Scanning



- Low-friction way to get a pass
- Put a URL in a 2D code





# Code Scanning



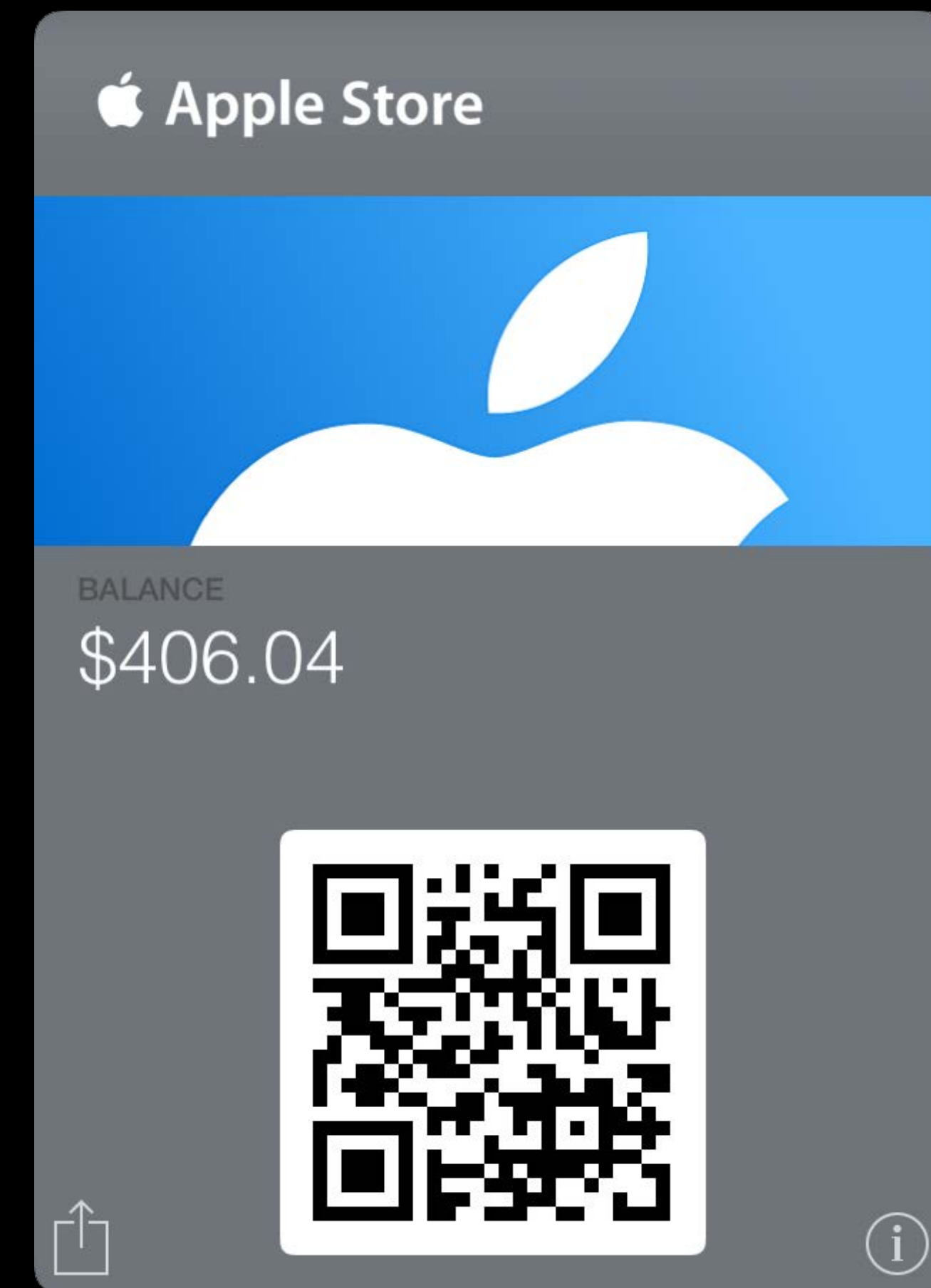
- Low-friction way to get a pass
- Put a URL in a 2D code
- Scan the code with Passbook



# Code Scanning



- Low-friction way to get a pass
- Put a URL in a 2D code
- Scan the code with Passbook



# Code Scanning



# Code Scanning



- Codes can be anywhere

# Code Scanning



- Codes can be anywhere
- Unique codes on individually printed items

# Code Scanning



- Codes can be anywhere
- Unique codes on individually printed items
- Non-unique codes don't have to point to one pass

*Demo*

Code scanning

**Nicholas Circosta**

iOS Engineer

# Code Scanning





# Code Scanning



- Must return a pass

# Code Scanning



- Must return a pass
- Must be HTTPS

# Code Scanning



- Must return a pass
- Must be HTTPS
- Standard Passbook barcode formats

# Getting Passes

Review

# Getting Passes

## Review

- Adding multiple passes

# Getting Passes

## Review

- Adding multiple passes
  - PKPassLibrary and PKAddPassesViewController

# Getting Passes

## Review

- Adding multiple passes
  - PKPassLibrary and PKAddPassesViewController
- Sharing

# Getting Passes

## Review

- Adding multiple passes
  - PKPassLibrary and PKAddPassesViewController
- Sharing
  - Much easier than it was before



# Getting Passes

## Review

- Adding multiple passes
  - PKPassLibrary and PKAddPassesViewController
- Sharing
  - Much easier than it was before
  - Be prepared for passes being in more than one place

# Getting Passes

## Review

- Adding multiple passes
  - PKPassLibrary and PKAddPassesViewController
- Sharing
  - Much easier than it was before
  - Be prepared for passes being in more than one place
- “Add to Passbook” badge

# Getting Passes

## Review

- Adding multiple passes
  - PKPassLibrary and PKAddPassesViewController
- Sharing
  - Much easier than it was before
  - Be prepared for passes being in more than one place
- “Add to Passbook” badge
  - Use it where appropriate

# Getting Passes

## Review

- Adding multiple passes
  - PKPassLibrary and PKAddPassesViewController
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  - Much easier than it was before
  - Be prepared for passes being in more than one place
- “Add to Passbook” badge
  - Use it where appropriate
- Code scanning

# Getting Passes

## Review

- Adding multiple passes
  - PKPassLibrary and PKAddPassesViewController
- Sharing
  - Much easier than it was before
  - Be prepared for passes being in more than one place
- “Add to Passbook” badge
  - Use it where appropriate
- Code scanning
  - Pass URLs in 2D codes

# Getting Passes

## Review

- Adding multiple passes
  - PKPassLibrary and PKAddPassesViewController
- Sharing
  - Much easier than it was before
  - Be prepared for passes being in more than one place
- “Add to Passbook” badge
  - Use it where appropriate
- Code scanning
  - Pass URLs in 2D codes
  - Low-friction way to get a pass into users’ hands

# Relevance

Here and now

# Overview

## Relevance





# Overview

## Relevance

- One swipe away



# Overview

## Relevance

- One swipe away
- Most important method to get people to use your passes



# Overview

## Relevance

- One swipe away
- Most important method to get people to use your passes
- Relevance is not a notification



# Overview

## Relevance

- One swipe away
- Most important method to get people to use your passes
- Relevance is not a notification
- iOS 6 API: coordinate-based



# Overview

## Relevance

- One swipe away
- Most important method to get people to use your passes
- Relevance is not a notification
- iOS 6 API: coordinate-based
  - 10 places



# Overview

## Relevance

- One swipe away
- Most important method to get people to use your passes
- Relevance is not a notification
- iOS 6 API: coordinate-based
  - 10 places
  - Fixed distance



# Overview

## Relevance

- One swipe away
- Most important method to get people to use your passes
- Relevance is not a notification
- iOS 6 API: coordinate-based
  - 10 places
  - Fixed distance
  - Changes require a pass update



# Proximity





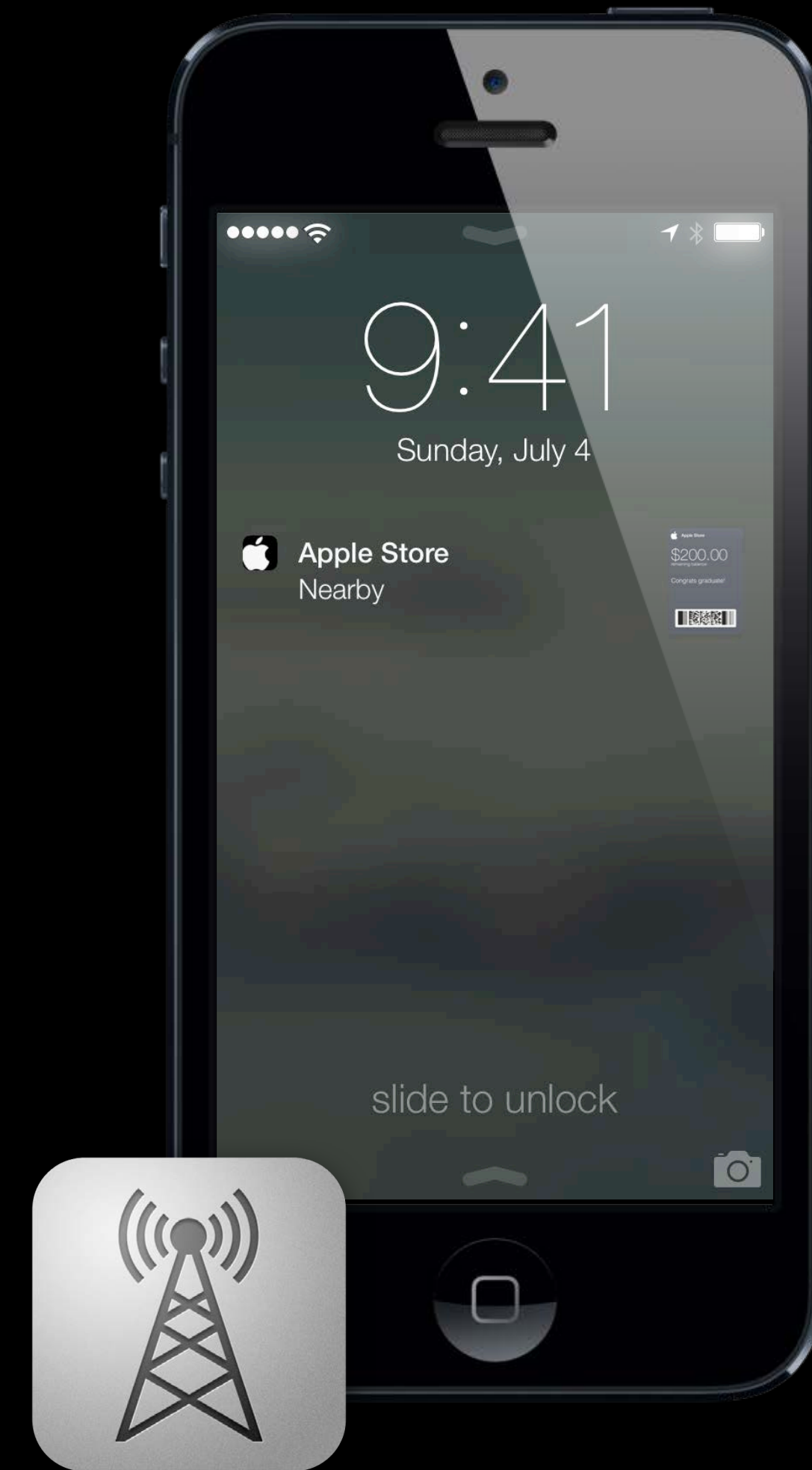
# Proximity



# Proximity



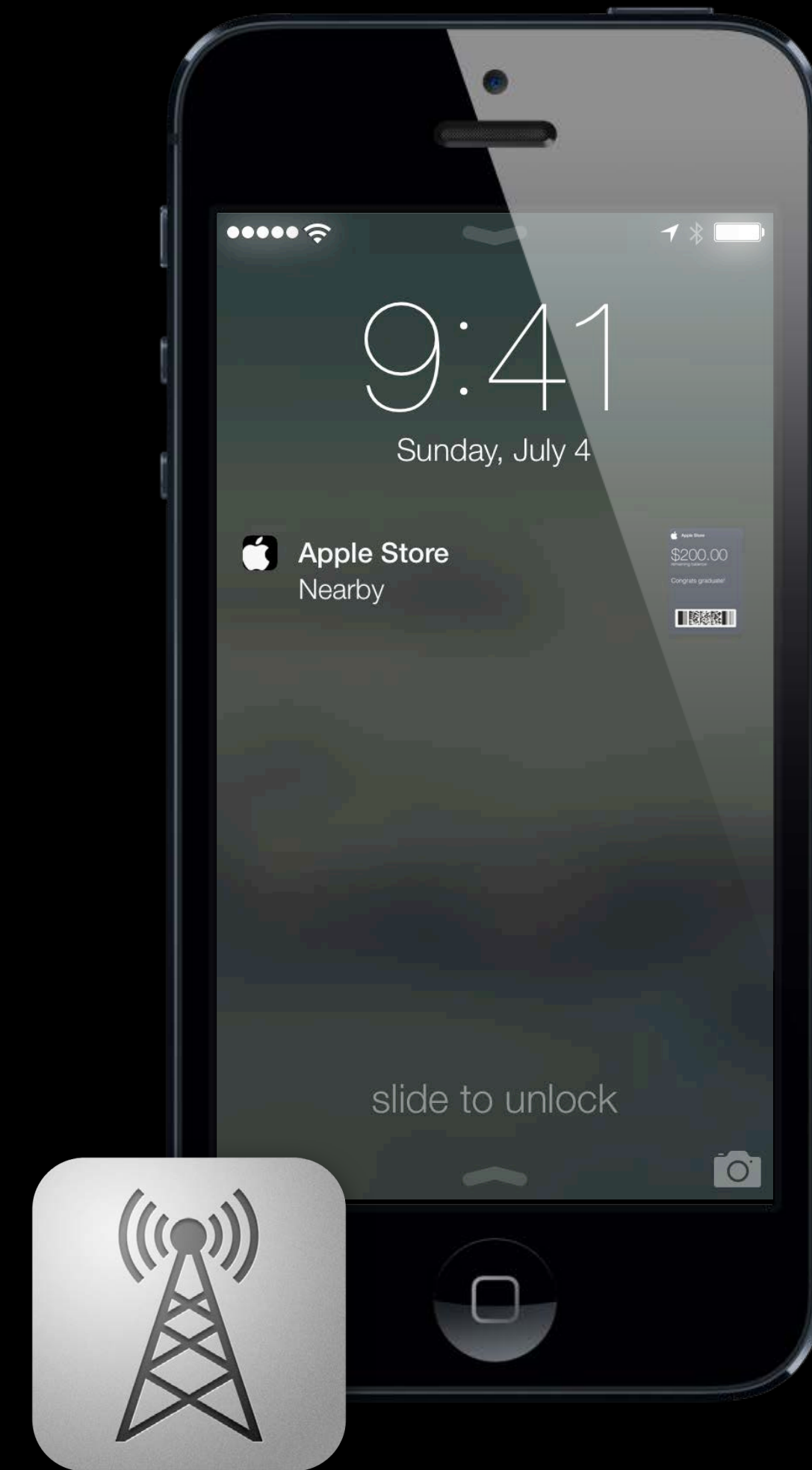
- iBeacons



# Proximity



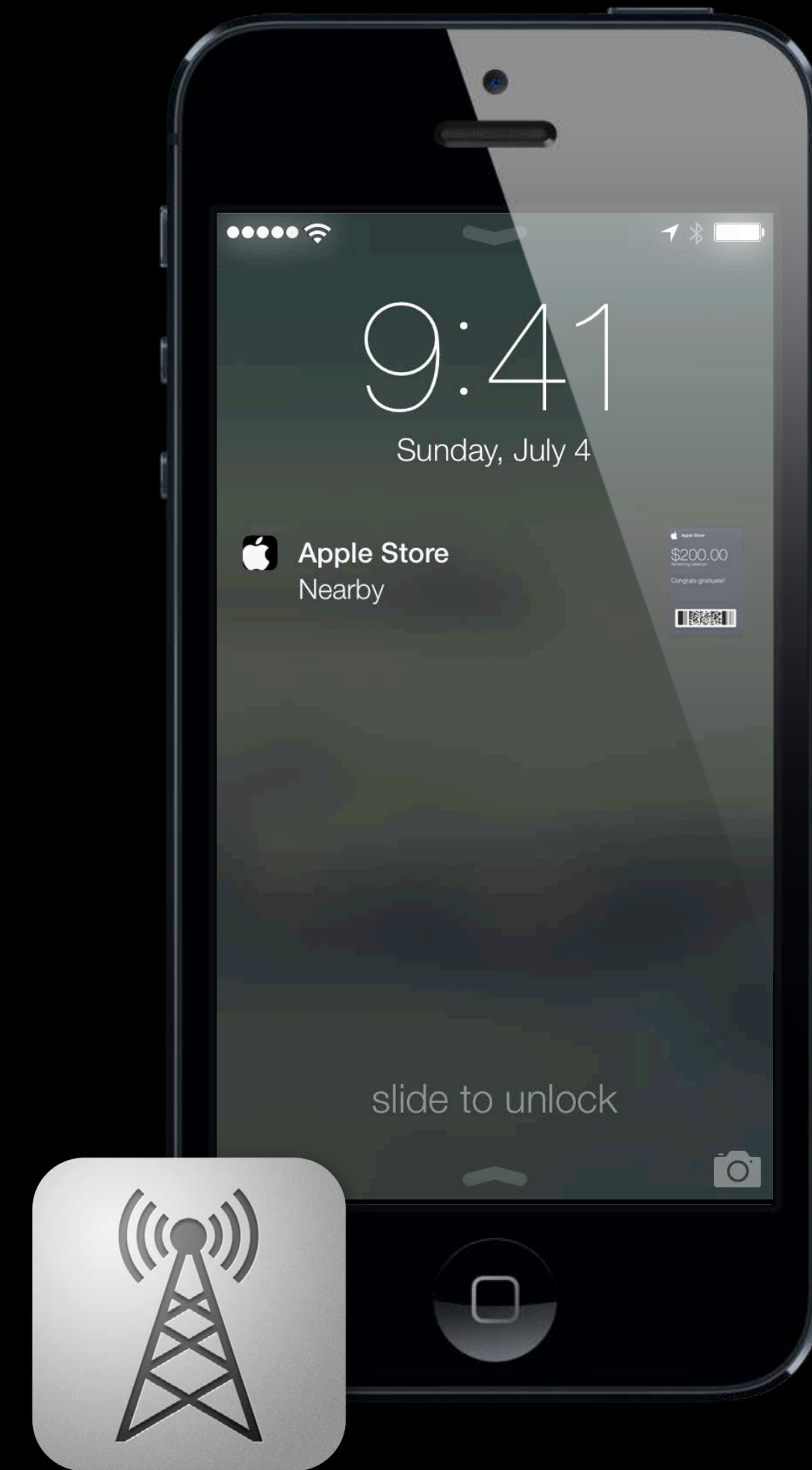
- iBeacons
  - Core Location API



# Proximity



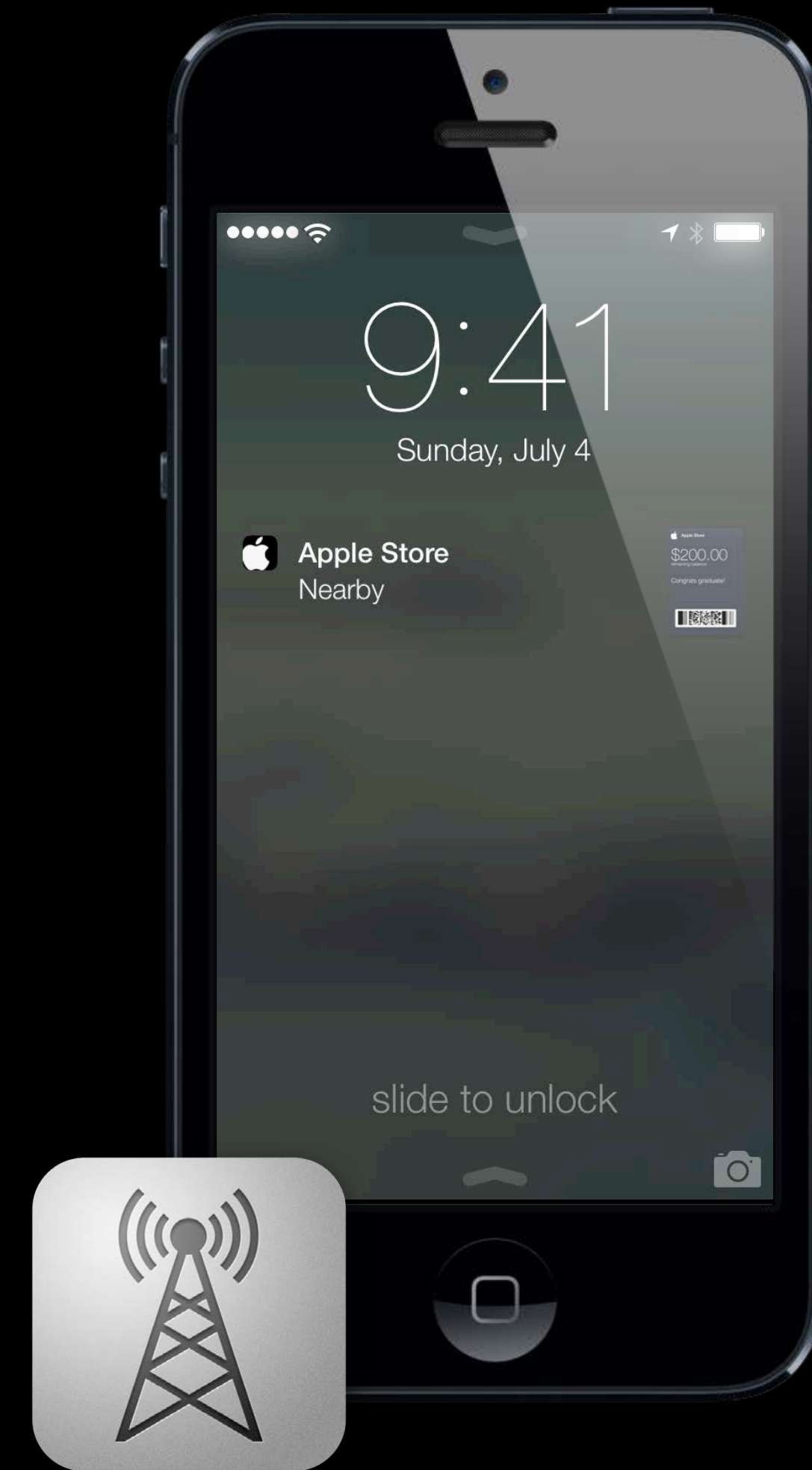
- iBeacons
  - Core Location API
- Within range, pass is relevant



# Proximity



- iBeacons
  - Core Location API
- Within range, pass is relevant
- More flexible than fixed locations



# Proximity



# Proximity



- Top-level pass key

```
"beacons": [{  
  "proximityUUID": "99C759FE-C660-4B95-981A-0C53E0EE6124",  
  "relevantText": "Delicious food nearby"  
}]
```

# Proximity



- Top-level pass key

```
"beacons": [{  
  "proximityUUID": "99C759FE-C660-4B95-981A-0C53E0EE6124",  
  "relevantText": "Delicious food nearby"  
}]
```

- Up to 10 different beacon IDs



# Proximity

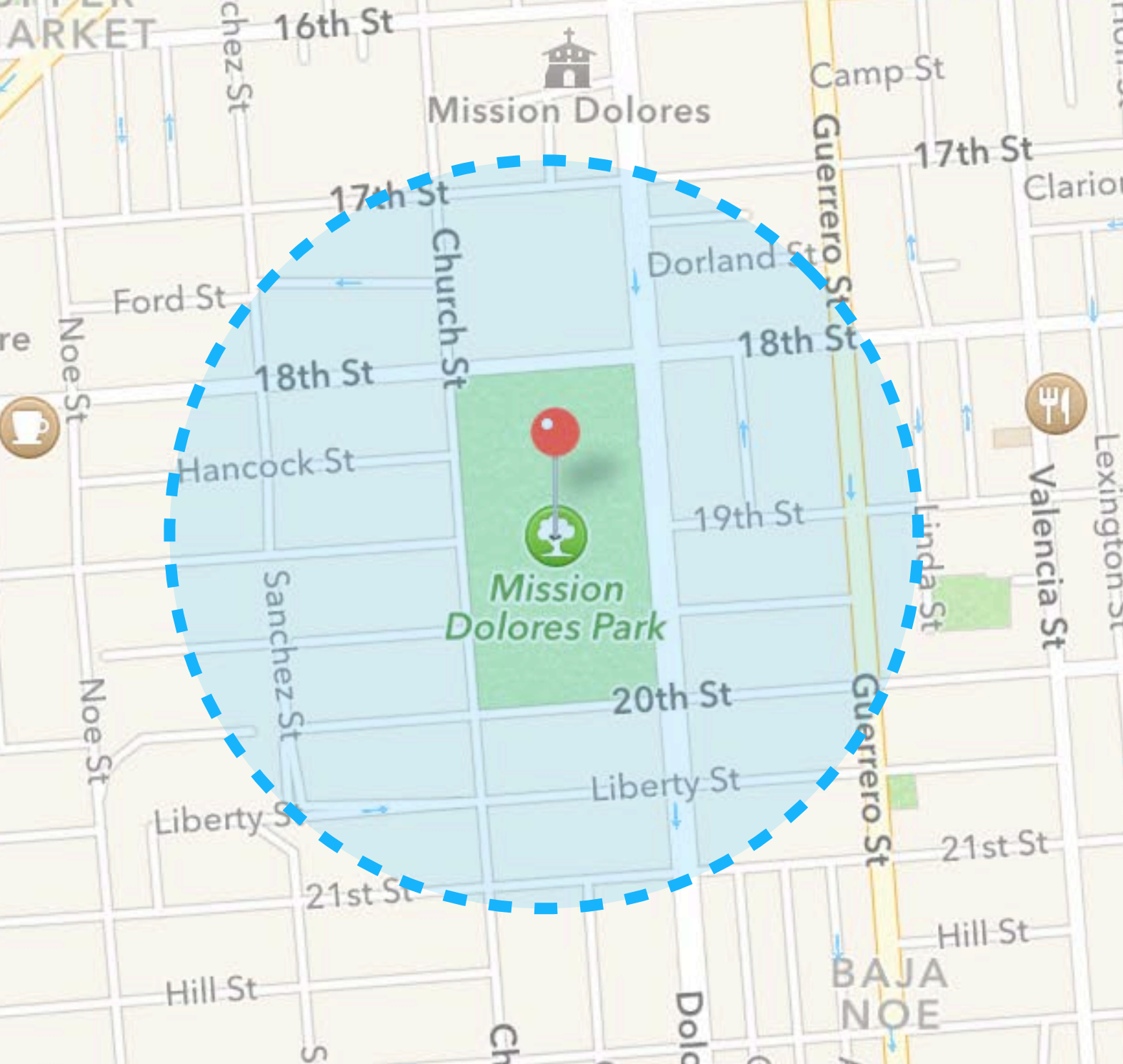


- Top-level pass key

```
"beacons": [{  
  "proximityUUID": "99C759FE-C660-4B95-981A-0C53E0EE6124",  
  "relevantText": "Delicious food nearby"  
}]
```

- Up to 10 different beacon IDs
- iOS devices can act as beacons too!

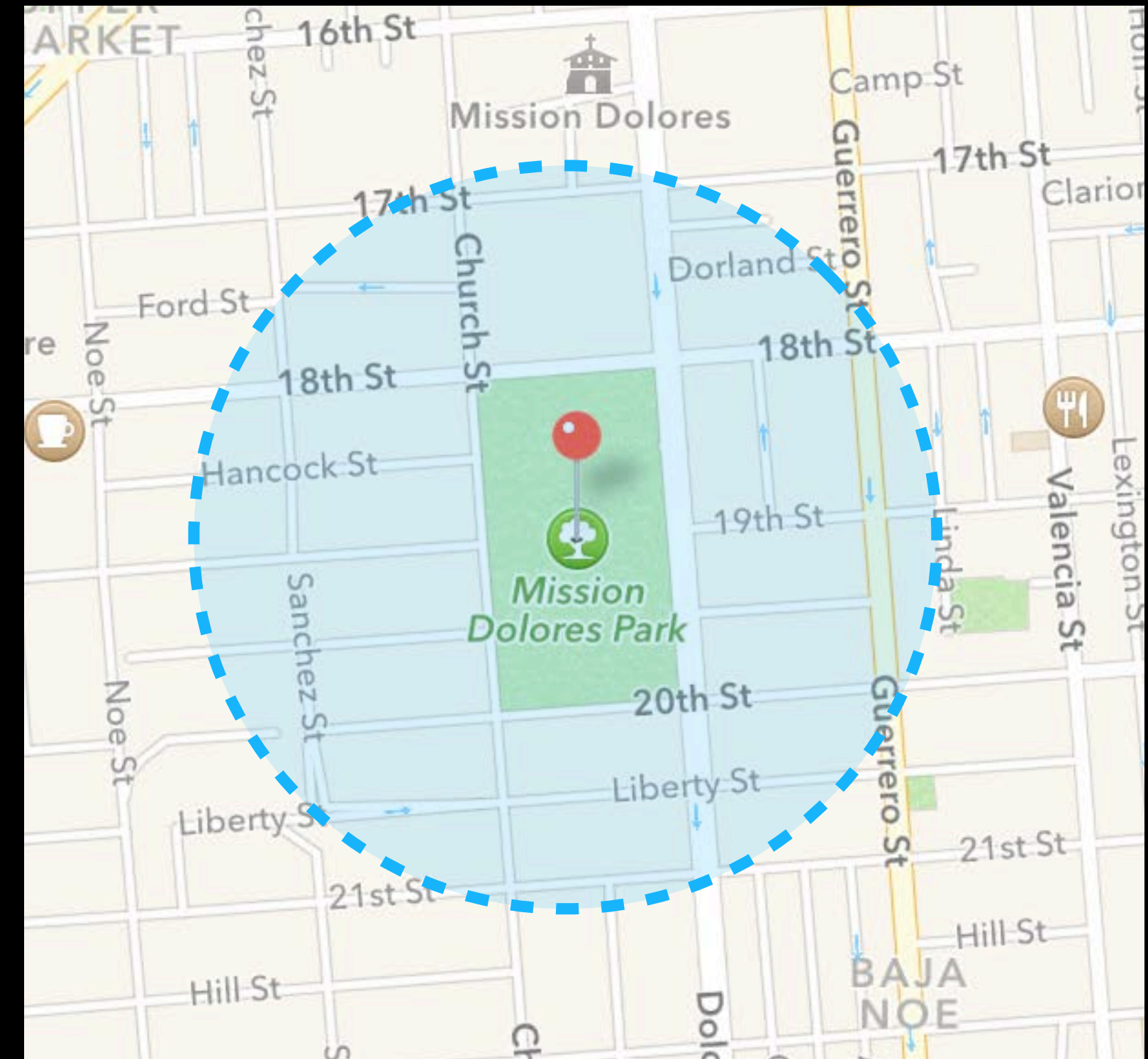
# Distance Restriction



# Distance Restriction



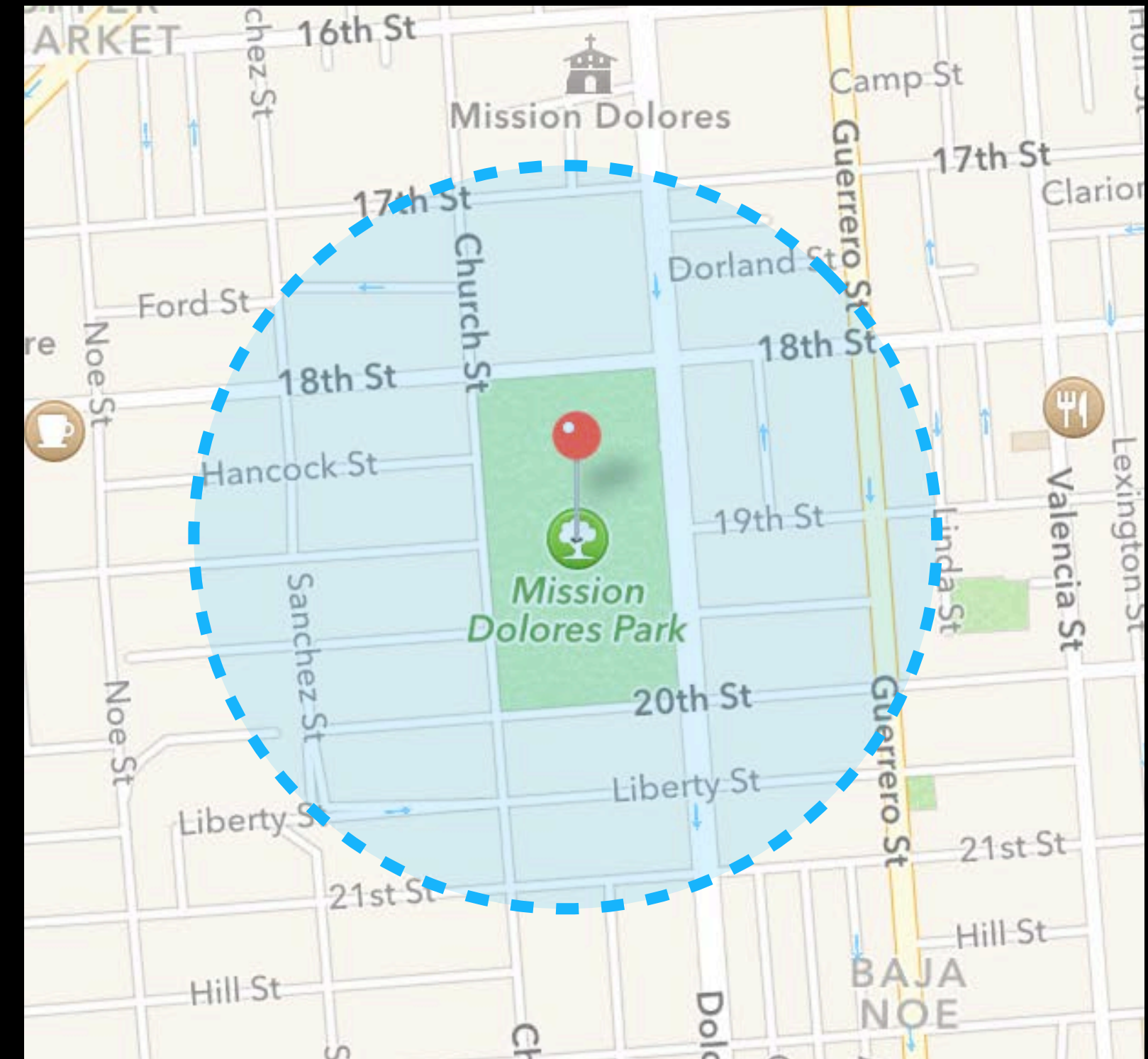
- Default distance can be too much



# Distance Restriction



- Default distance can be too much
- Constrain to a particular area

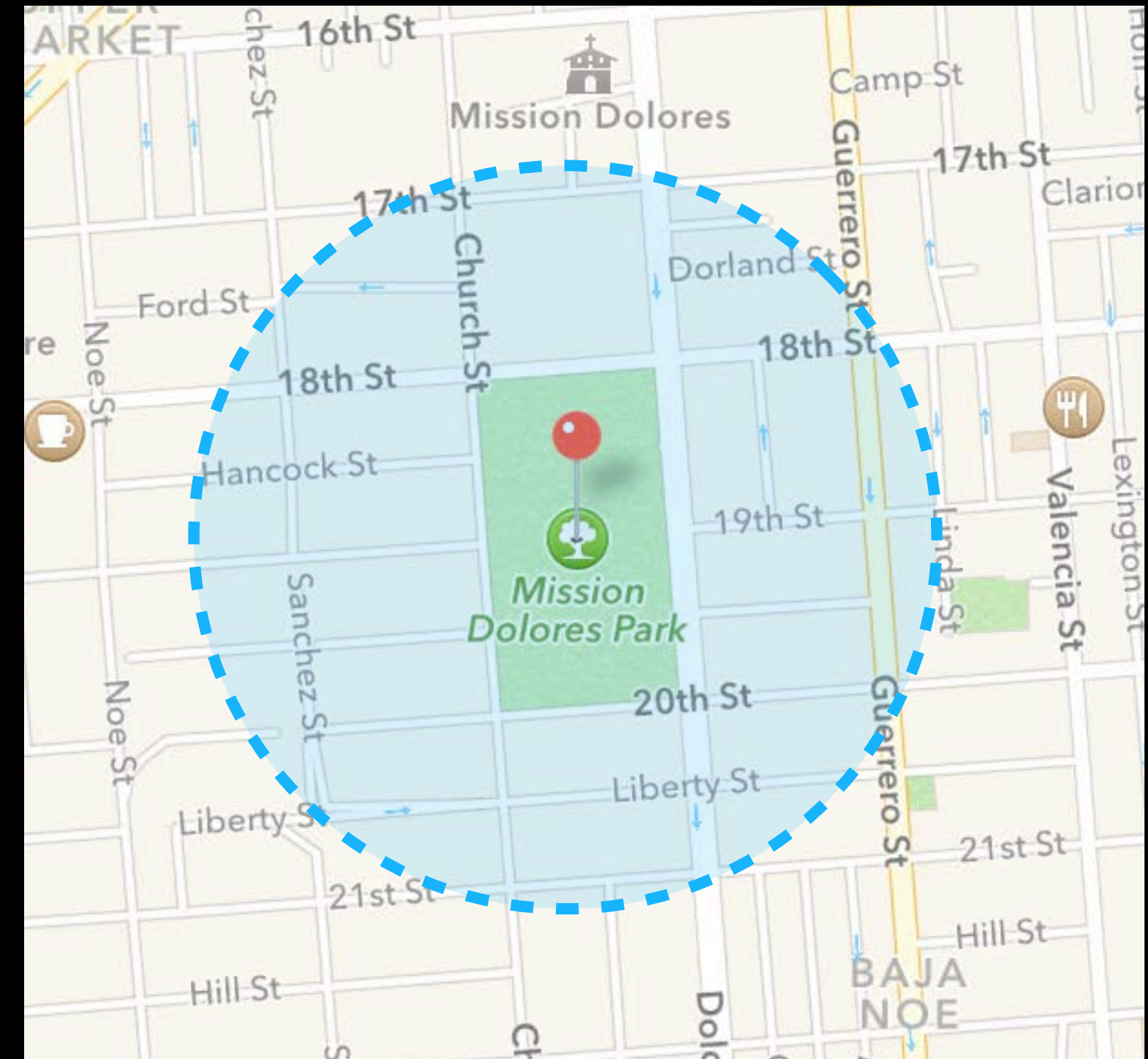


# Distance Restriction



- Default distance can be too much
- Constrain to a particular area
- Location dictionary key

```
"locations":  
[  
  {"latitude":37.783062,  
   "longitude":-122.404084,  
   "maxDistance":500  
}]
```



# Relevance

## Review

# Relevance

## Review

- Convenient access to passes

# Relevance

## Review

- Convenient access to passes
- A relevant pass is not a notification



# Relevance

## Review

- Convenient access to passes
- A relevant pass is not a notification
- iBeacons: any number of locations, non-static

```
"beacons": [{"proximityUUID": "..."}]
```

# Relevance

## Review

- Convenient access to passes
- A relevant pass is not a notification
- iBeacons: any number of locations, non-static

```
"beacons": [{"proximityUUID": "..."}]
```

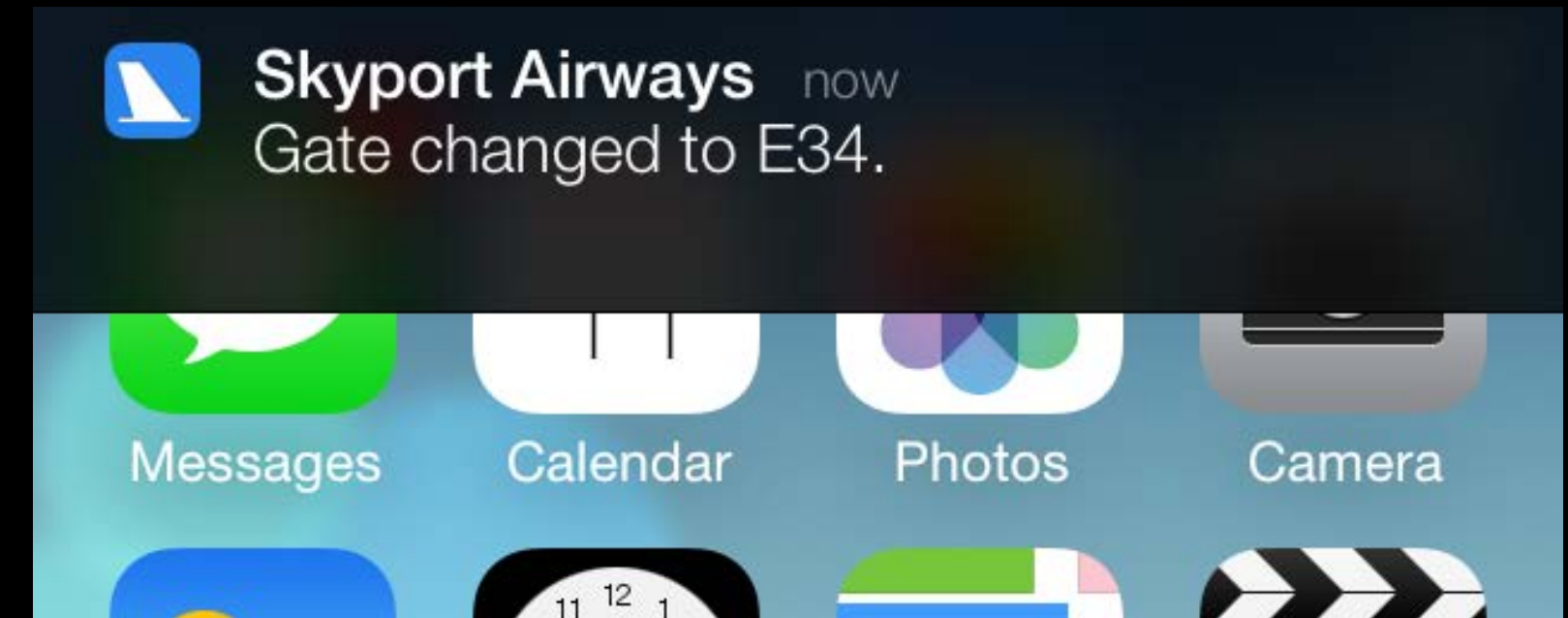
- Distance restriction: more precise relevance

```
"maxDistance": 500
```

# Updating Passes

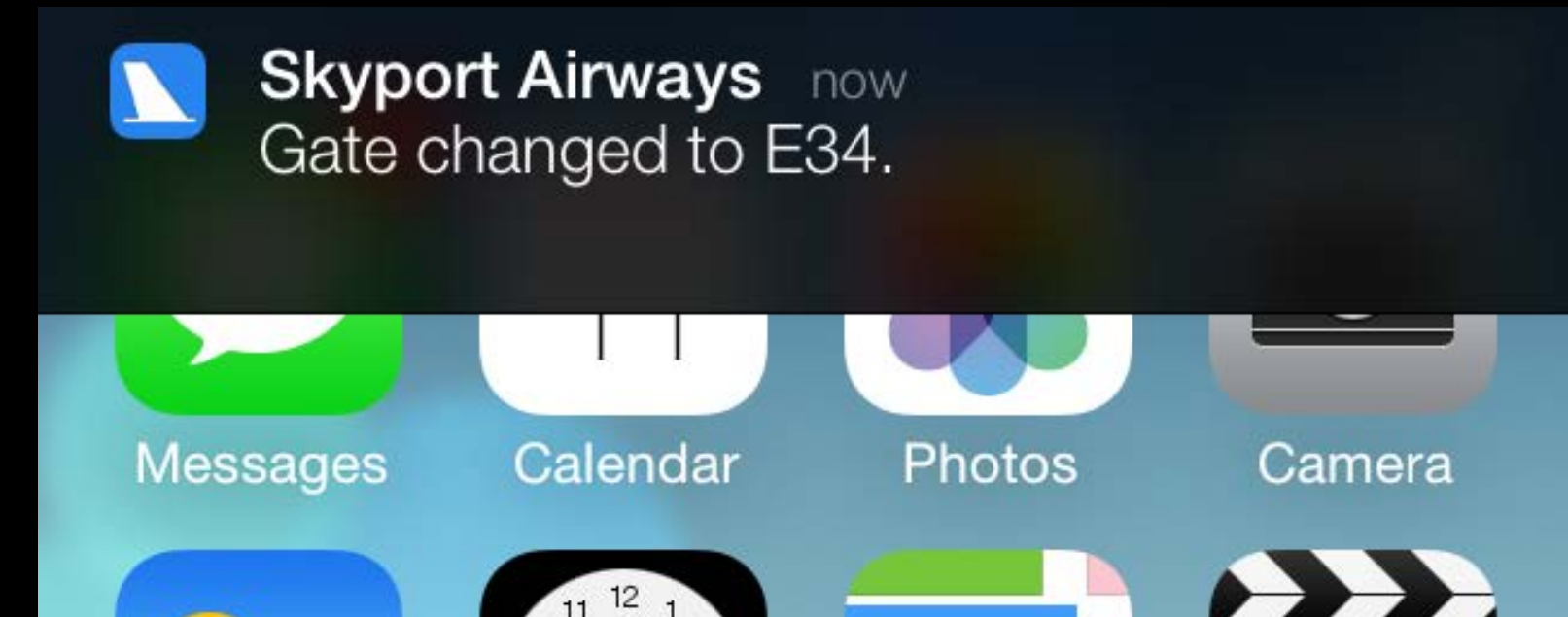
Just now

# Push!



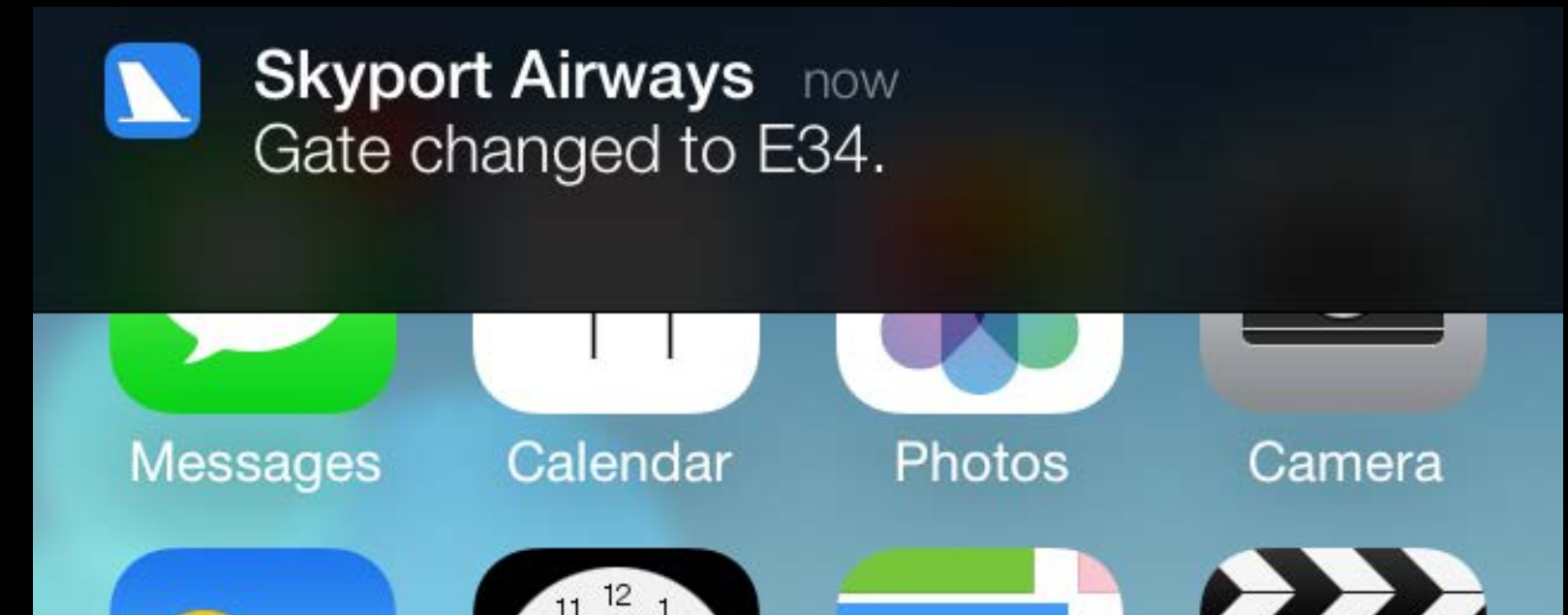
# Push!

- Passes are more useful and engaging when they update



# Push!

- Passes are more useful and engaging when they update
- Make sure change messages are important

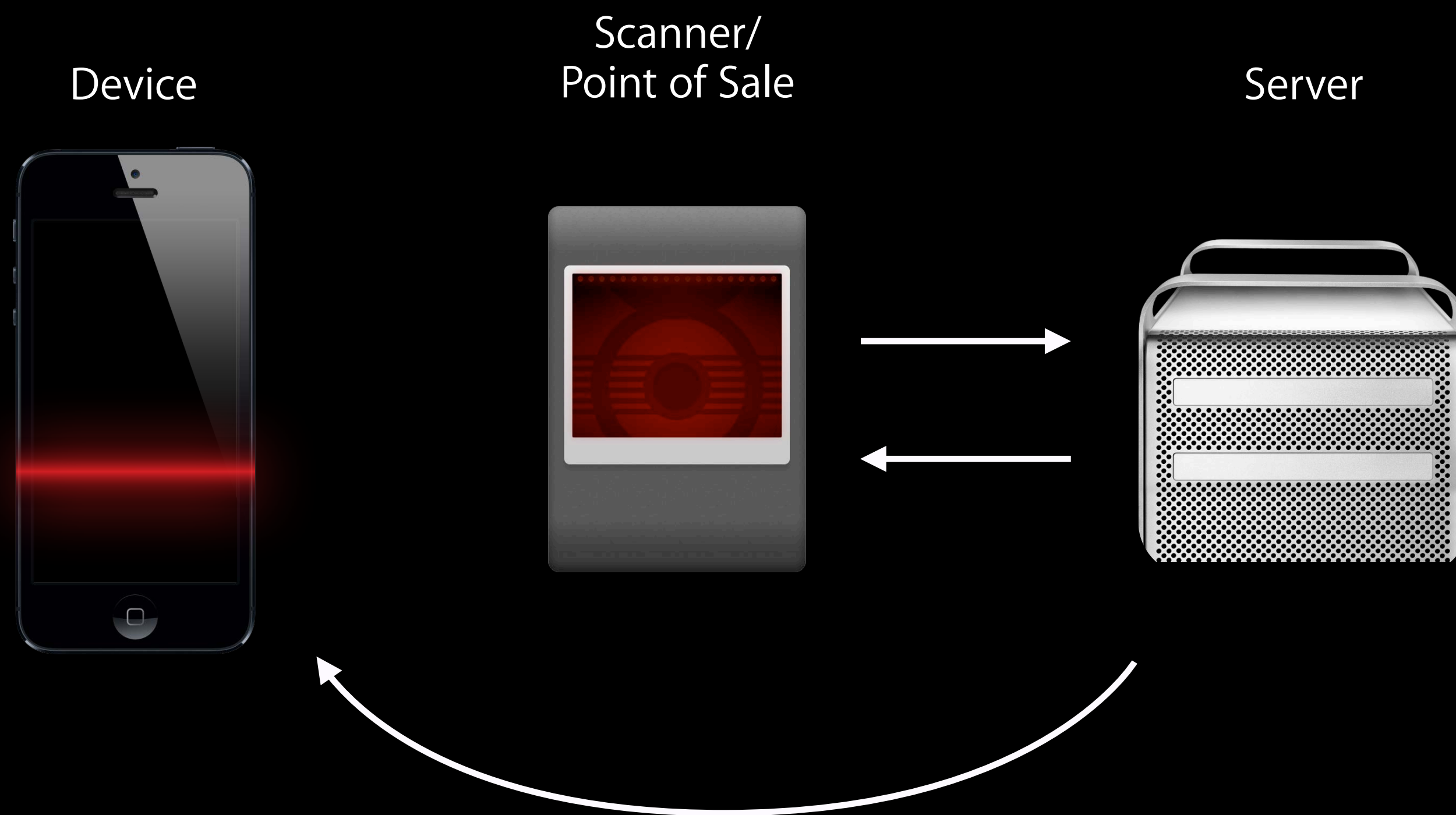


# Using Passes

What it's all about

# Overview

## Using passes

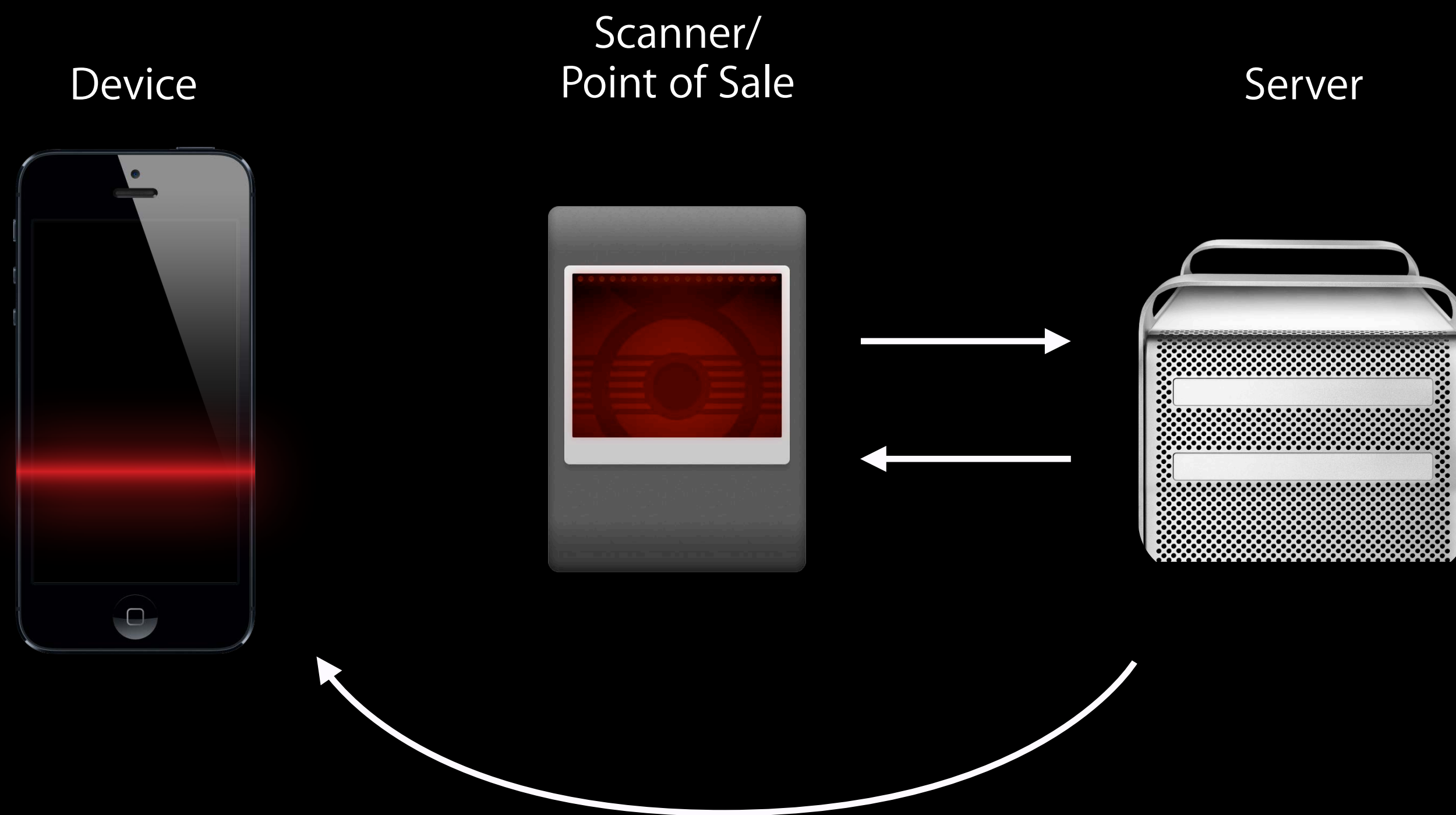




# Overview

## Using passes

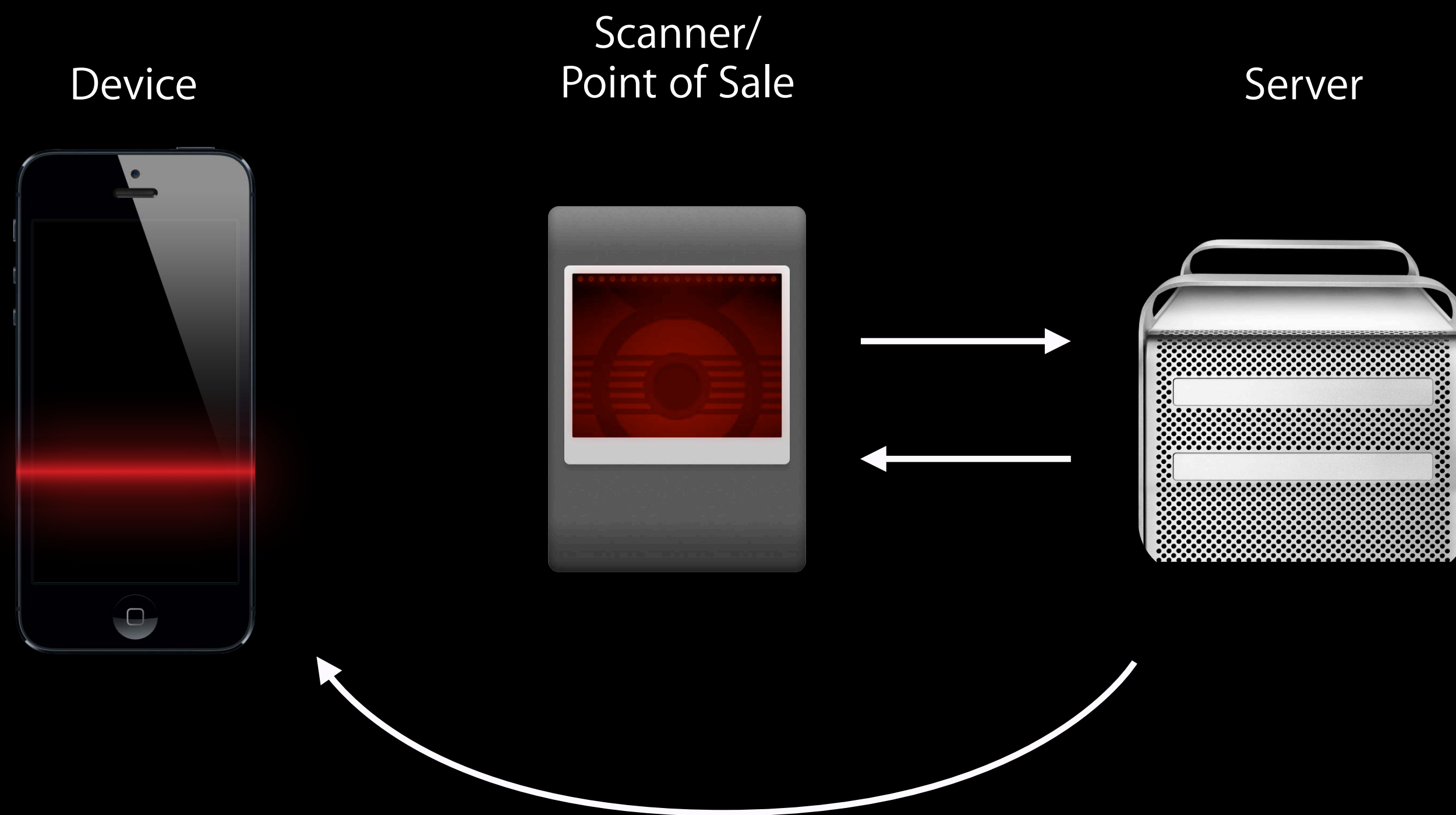
- Scan barcode on user's pass



# Overview

## Using passes

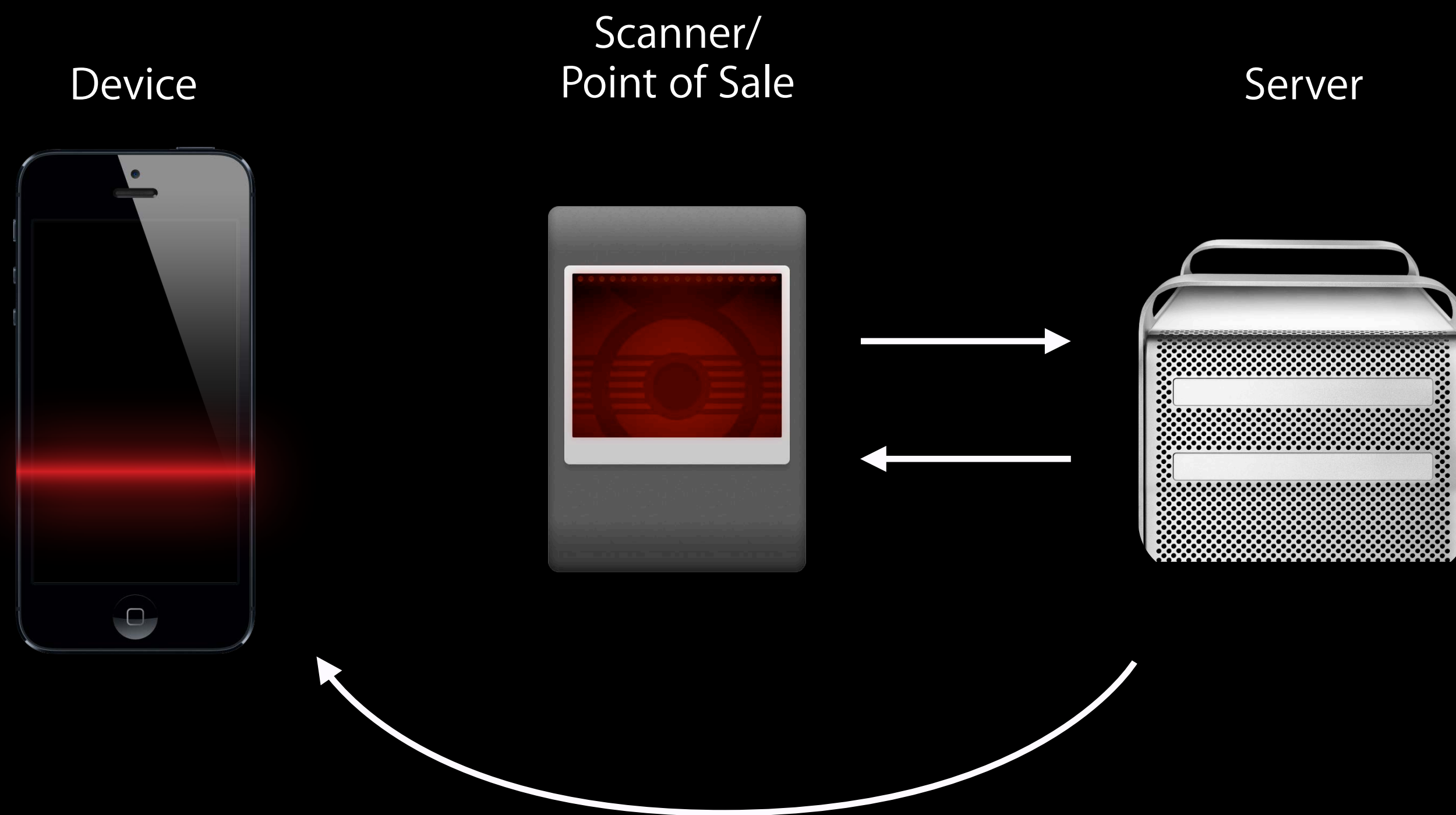
- Scan barcode on user's pass
- Check the pass with your server



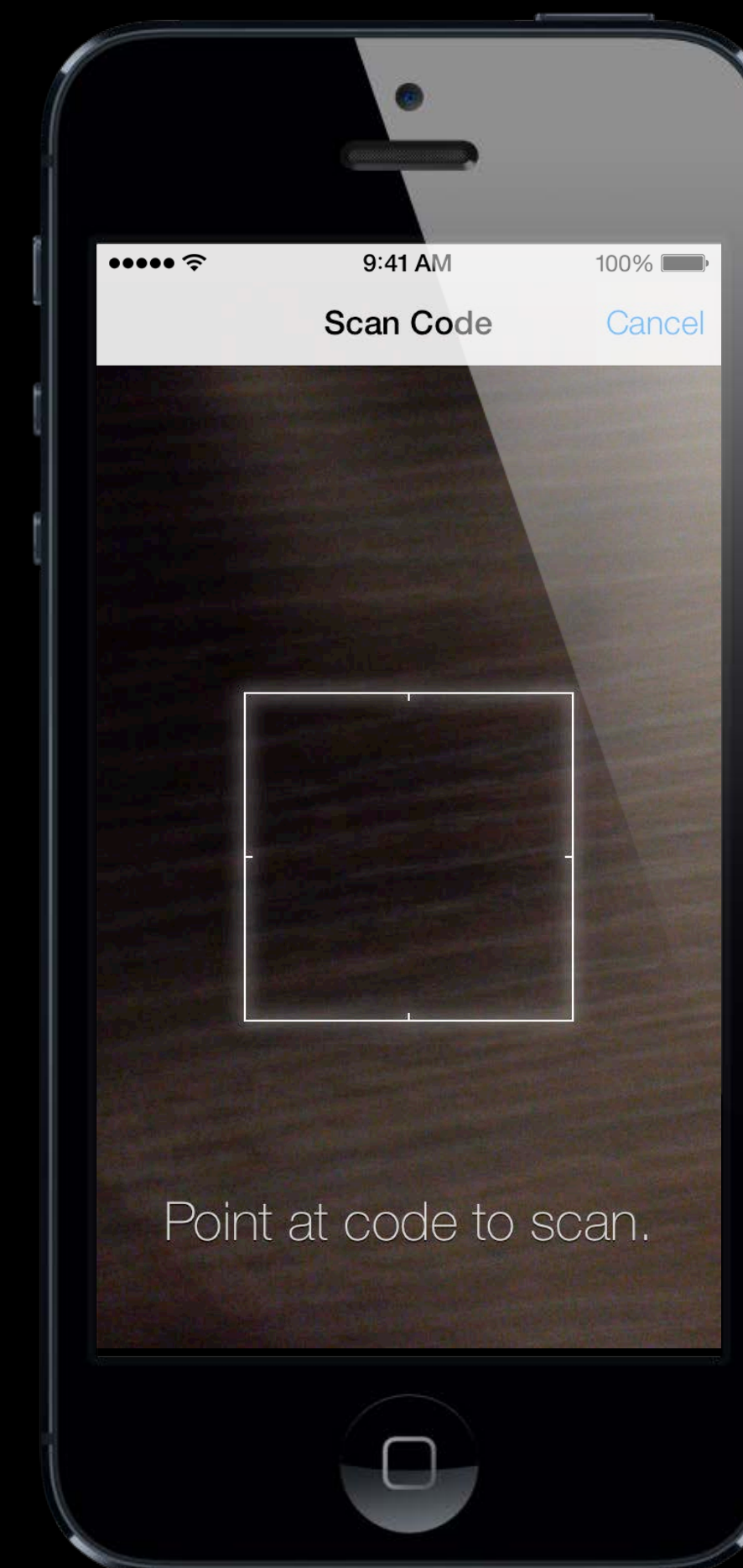
# Overview

## Using passes

- Scan barcode on user's pass
- Check the pass with your server
- Update balances, etc.



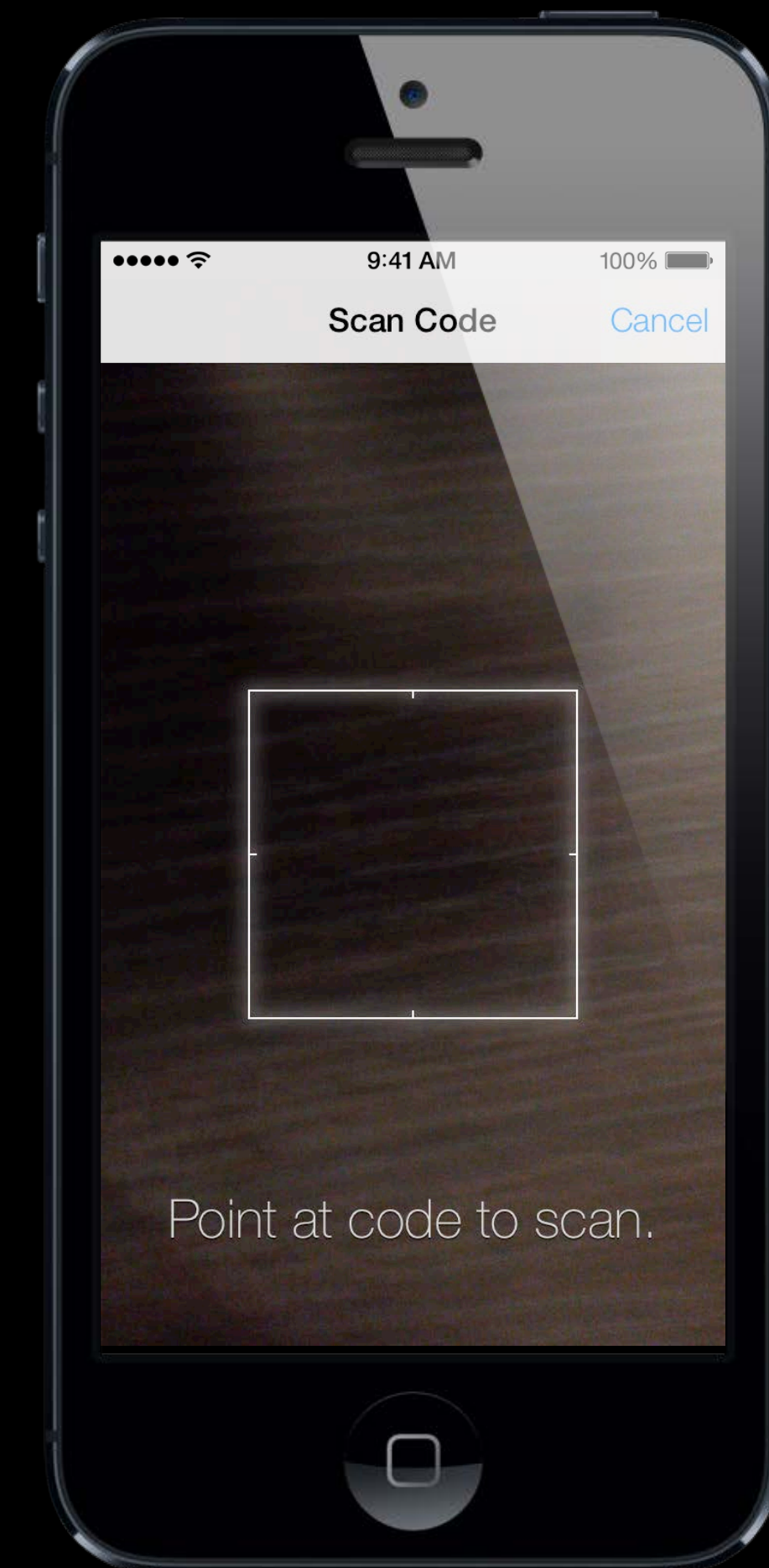
# Code Scanning



# Code Scanning



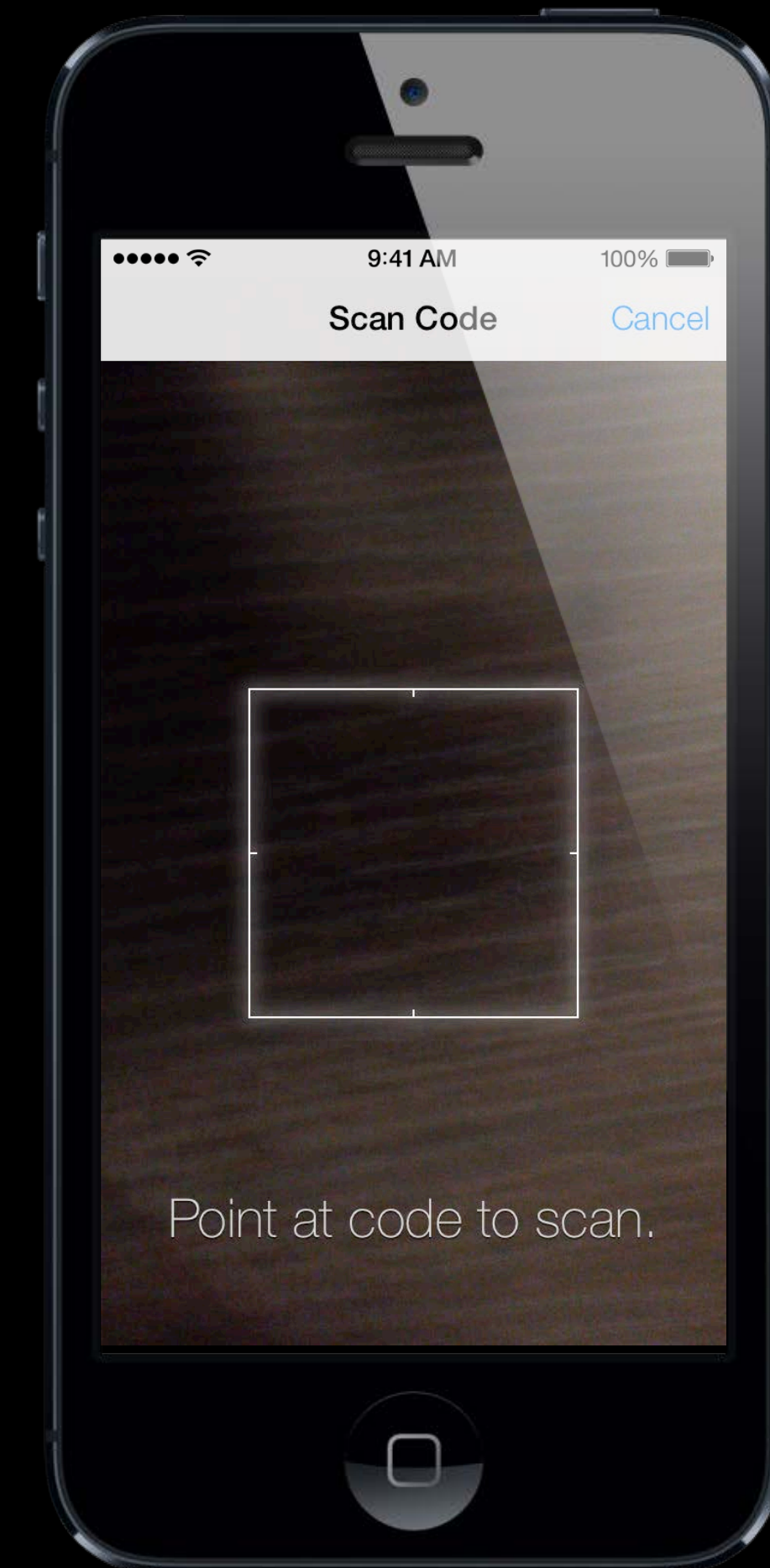
- Same API is available to you



# Code Scanning



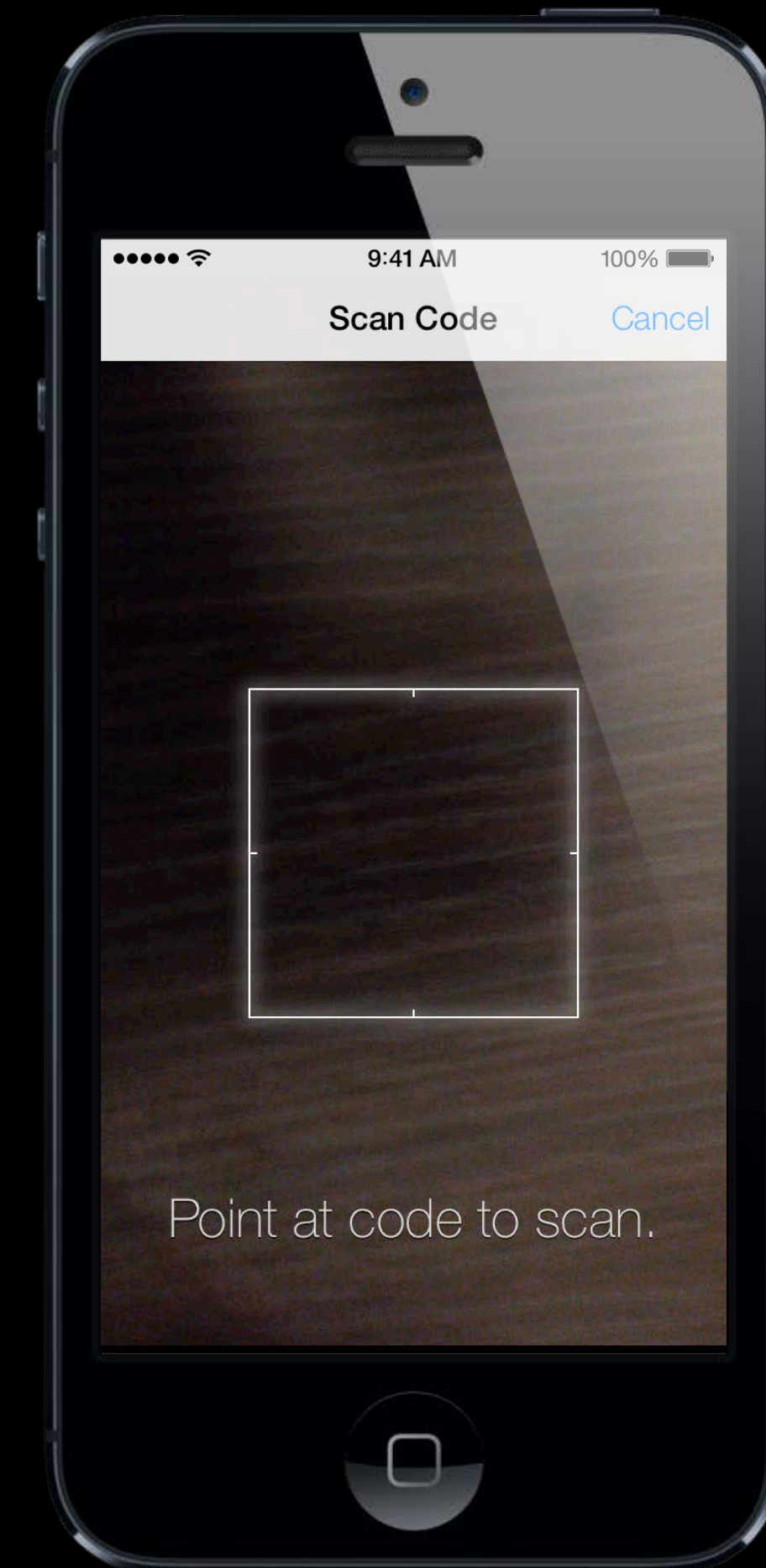
- Same API is available to you
  - AVFoundation



# Code Scanning



- Same API is available to you
  - AVFoundation
- Supports all pass barcode types



# Expiration





# Expiration



- Mark a pass as expired in UI



# Expiration

- Mark a pass as expired in UI
- Two keys



# Expiration



- Mark a pass as expired in UI
- Two keys

`"expirationDate": "2013-08-19T9:41-08:00"`



# Expiration



- Mark a pass as expired in UI
- Two keys

```
"expirationDate": "2013-08-19T9:41-08:00"  
"voided": true
```



# Expiration



- Mark a pass as expired in UI
- Two keys
  - "expirationDate": "2013-08-19T9:41-08:00"
  - "voided": true
- Validate your passes



# Using Passes

Review

# Using Passes

## Review

- Code scanning is available API
  - AVFoundation

# Using Passes

## Review

- Code scanning is available API
  - AVFoundation
- Mark passes as expired in UI

```
"expirationDate": "2013-08-19T9:41-08:00"
```

```
"voided": true
```



# Using Passes

## Review

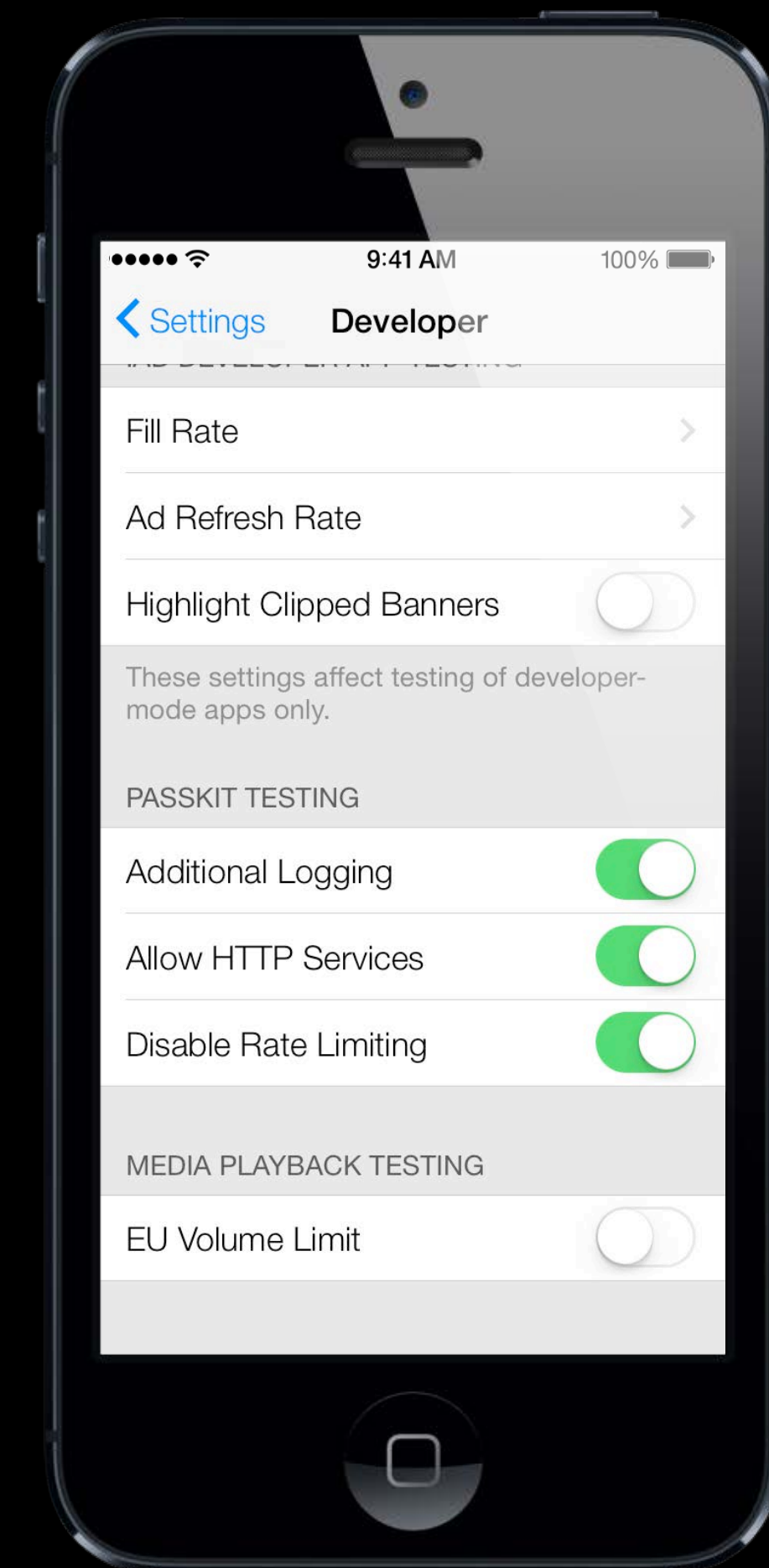
- Code scanning is available API
  - AVFoundation
- Mark passes as expired in UI

```
"expirationDate":"2013-08-19T9:41-08:00"  
"voided":true
```
- Check passes with your backend

# Tips and Tricks

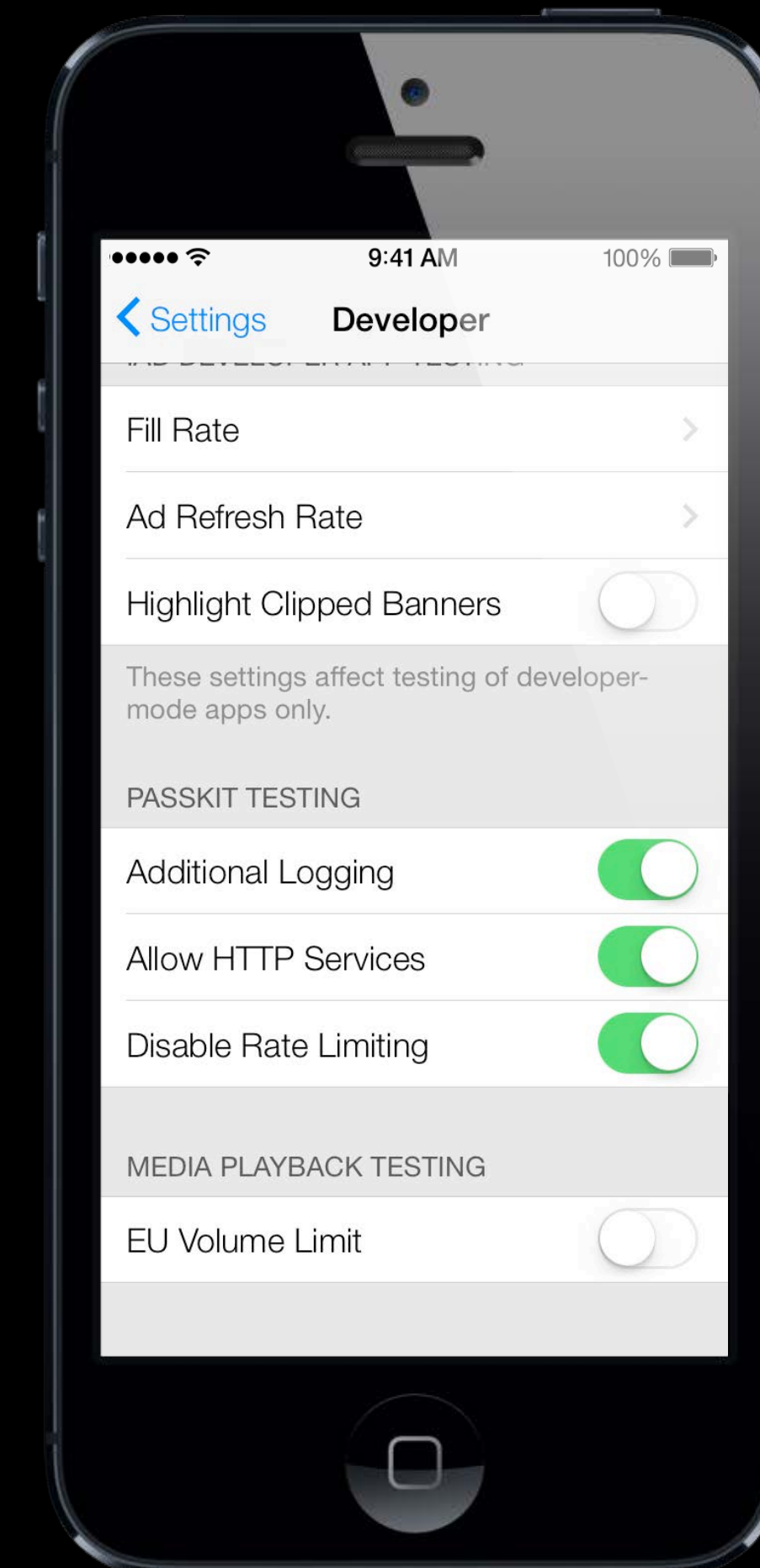
Make things better

# Developer Settings



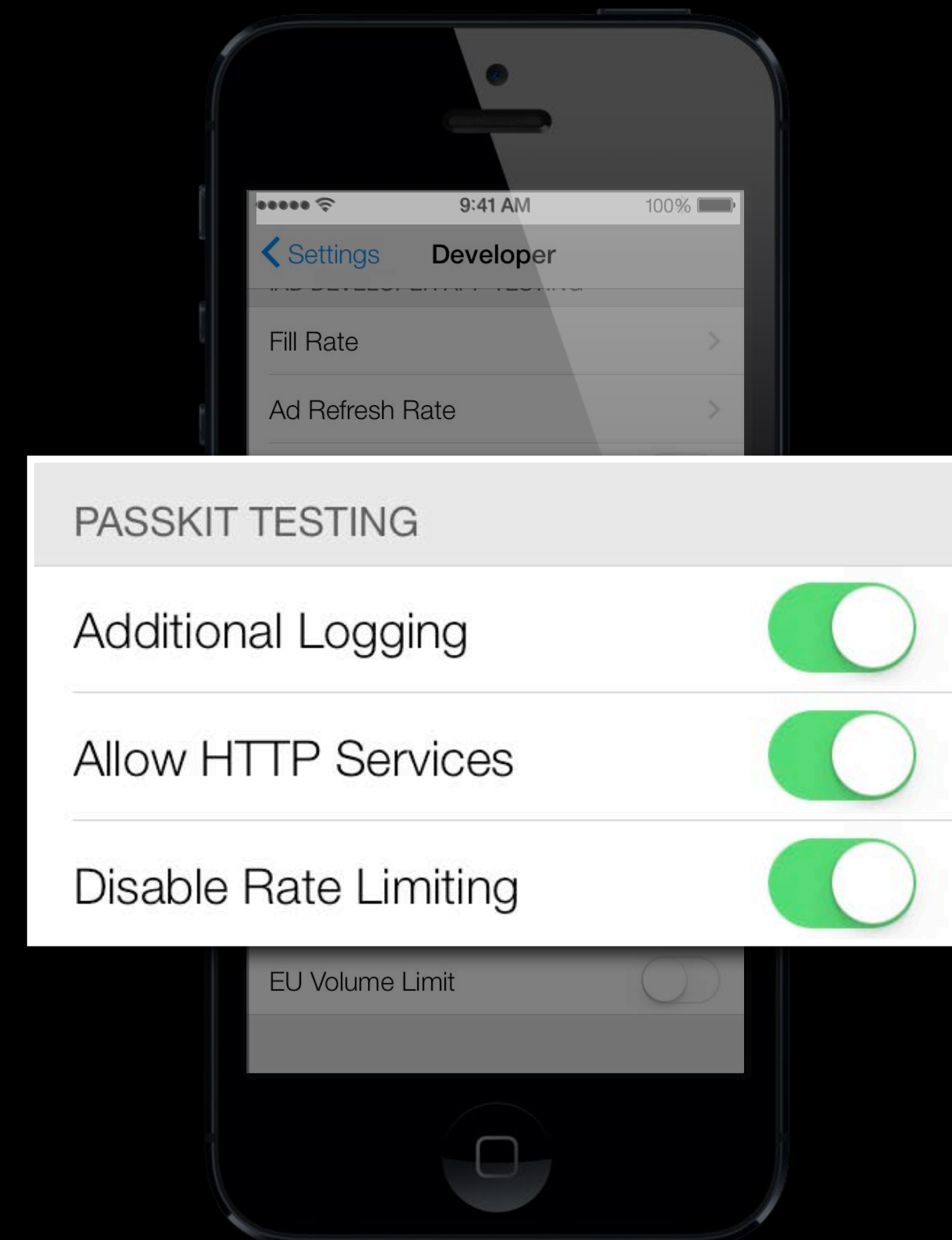
# Developer Settings

- Useful for debugging



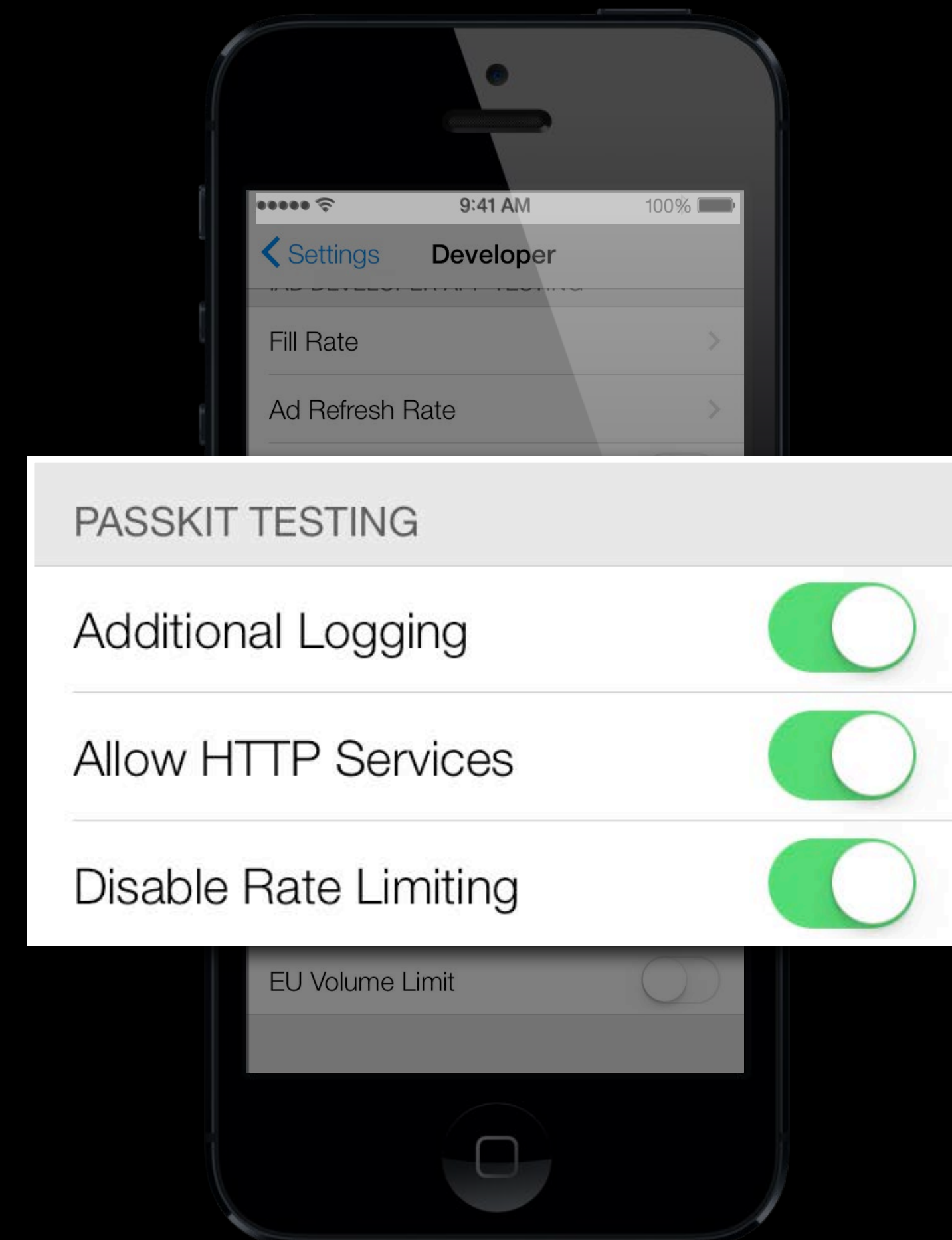
# Developer Settings

- Useful for debugging



# Developer Settings

- Useful for debugging
- Only on development devices



# Logging Endpoint



# Logging Endpoint

- Catch implementation errors





# Logging Endpoint

- Catch implementation errors
- Web service URL + “/logs”



# Logging Endpoint

- Catch implementation errors
- Web service URL + “/logs”
- Most common issue: not using “Last-Modified”/“If-Modified-Since”



Review

# Review

## Ecosystem

# Review

## Ecosystem

- Passes are information with real-world use

# Review

## Ecosystem

- Passes are information with real-world use
- Produced by your server

# Review

## Ecosystem

- Passes are information with real-world use
- Produced by your server
- Added to pass library

# Review

## Ecosystem

- Passes are information with real-world use
- Produced by your server
- Added to pass library
- Redeemed/used



# Review

## Ecosystem

- Passes are information with real-world use
- Produced by your server
- Added to pass library
- Redeemed/used
- Updated

# Review

What's new

# Review

## What's new

- Richer pass content

# Review

## What's new

- Richer pass content
- Easier ways to get passes

# Review

## What's new

- Richer pass content
- Easier ways to get passes
- More control over pass relevance

# Review

## What's new

- Richer pass content
- Easier ways to get passes
- More control over pass relevance
- Better support for using passes

# Review

Tips and tricks

# Review

## Tips and tricks

- Developer settings



# Review

## Tips and tricks

- Developer settings
- Logging endpoint

# Summary

- Lots of new APIs
- User features can impact your integration
- Validate your passes
- Give us feedback!

# More Information

## Paul Marcos

Connected Technologies Evangelist  
[pmarcos@apple.com](mailto:pmarcos@apple.com)

## Documentation

<http://developer.apple.com/passbook>

## Apple Developer Forums

<http://devforums.apple.com>

# Related Sessions

What's New in Camera Capture

Nob Hill  
Wednesday 11:30AM

Integrating Passbook into Your Ecosystem

Pacific Heights  
Wednesday 3:15PM

What's New in Core Location

Presidio  
Thursday 11:30AM

# Labs

Passbook Lab	Services Lab A Wednesday 12:45PM	
Passbook Lab	Services Lab A Wednesday 4:30PM	

 WWDC2013