

Introducing Passbook

Part 1

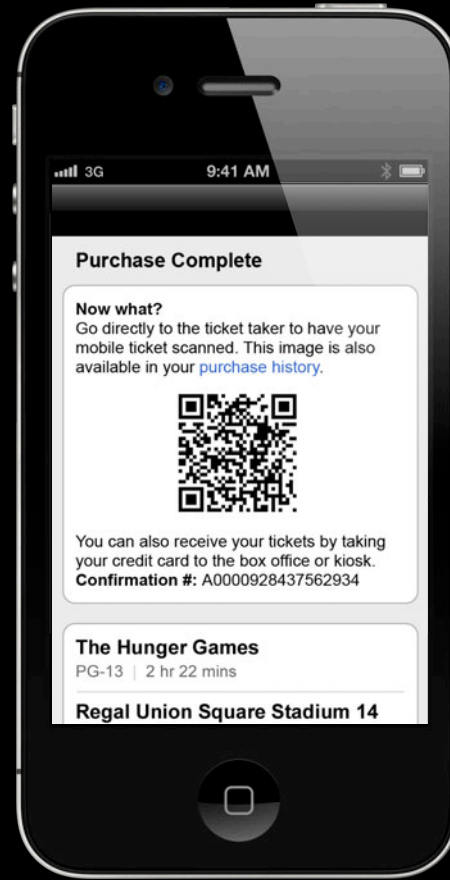
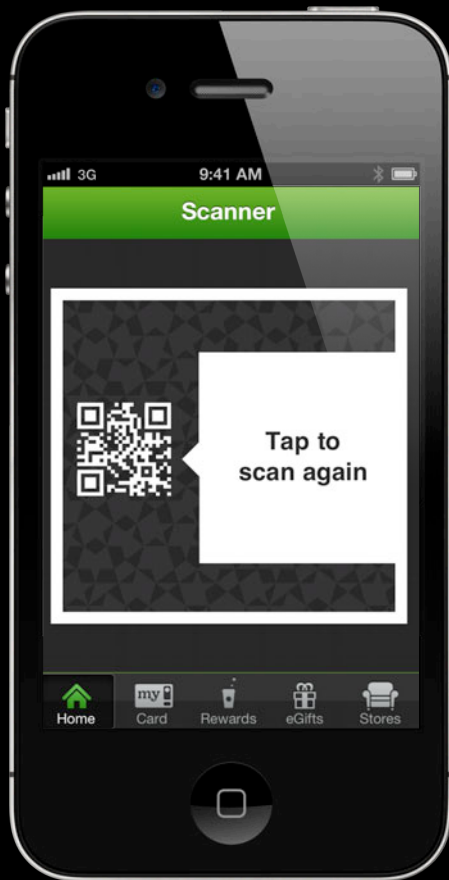
Session 301

Glen Steele and Ken Ferry

iOS Software Engineers

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









Show the back too. Talk about settings and things







What You Will Learn

- How to create passes
- How to get a pass into Passbook
- Design tips for making great passes

Part 2

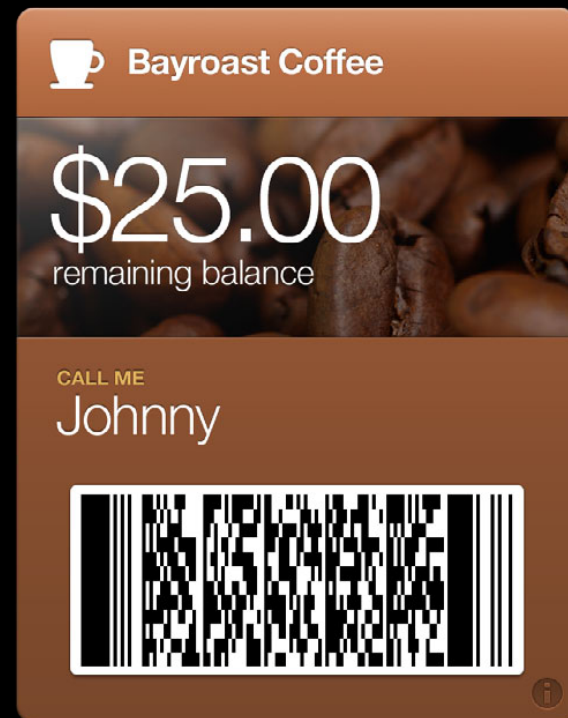
Session 309

- How to update passes using push
- PassKit

Making a Pass

What Is in a Pass

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



What Is in a Pass

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

Pass

```
├── pass.json
├── fr.lproj
│   └── pass.strings
├── de.lproj
│   └── pass.strings
├── icon.png
├── icon@2x.png
├── logo.png
├── logo@2x.png
├── manifest.json
└── signature
```

Building Passes

Overview

Building Passes

Overview

- Enter pass identifiers

Building Passes

Overview

- Enter pass identifiers
- Choose a pass style

Building Passes

Overview

- Enter pass identifiers
- Choose a pass style
- Fill out user-visible fields

Building Passes

Overview

- Enter pass identifiers
- Choose a pass style
- Fill out user-visible fields
- Add colors, logos, and images

Building Passes

Overview

- Enter pass identifiers
- Choose a pass style
- Fill out user-visible fields
- Add colors, logos, and images
- Establish relevant time and locations

Pass Identifiers

Pass Identifiers

- Team Identifier
 - 10 character string found on the developer portal
 - Used in entitlementing apps to access passes through PassKit

```
"teamIdentifier" : "DK9N2M2GK6"
```

Pass Identifiers

Pass Identifiers

- Pass Type Identifier
 - Defines a class or category of passes
 - Registered on the developer portal
 - Used for grouping

`"passTypeIdentifier" : "pass.com.mycompany.storecard"`

Pass Identifiers

Pass Identifiers

- Serial Number
 - Unique for every pass
 - Chosen by you and opaque to Passbook
 - Combined with Pass Type Identifier to determine global uniqueness

`"serialNumber" : "B5BD0271-B90B-400D-8344-36A789714CC8"`

Pass Identifiers

Example

Pass Identifiers

Example

 Skyport Airways GATE
23

SAN FRANCISCO NEW YORK CITY

SFO  **JFK**


FLIGHT	LENGTH	SEAT	DEPARTS
JB520	3:05	12A	4:32P

John Appleseed




 Skyport Airways GATE
23

SAN FRANCISCO NEW YORK CITY

SFO  **JFK**

FLIGHT	LENGTH	SEAT	DEPARTS
JB520	3:05	12A	4:32P

Jane Appleseed



 Skyport Airways GATE
23

SAN FRANCISCO NEW YORK CITY

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FLIGHT	LENGTH	SEAT	DEPARTS
JB520	3:05	12A	4:32P

John Appleseed Jr.

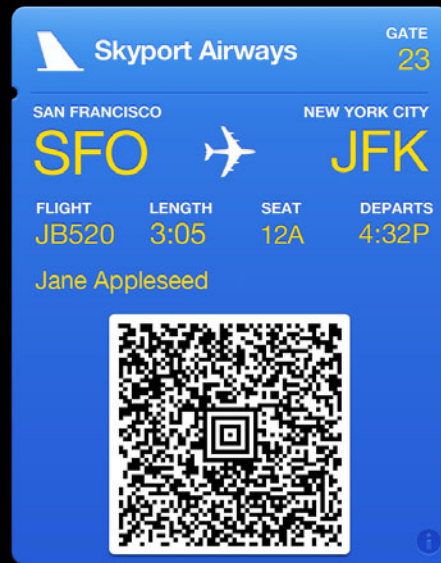


Pass Identifiers

Example



pass.com.skyport.bp



pass.com.skyport.bp



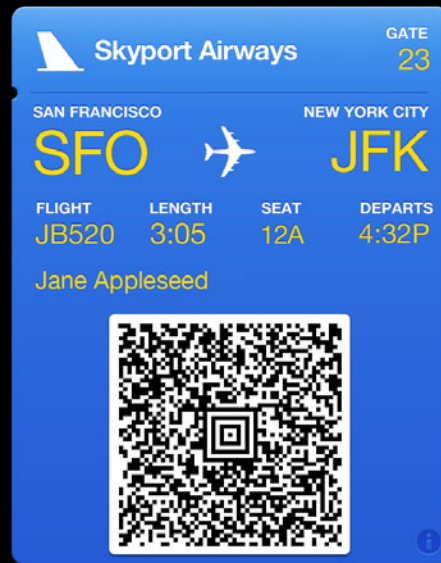
pass.com.skyport.bp

Pass Identifiers

Example



pass.com.skyport.bp
0001



pass.com.skyport.bp
0002



pass.com.skyport.bp
0003

Pass Identifiers

Example



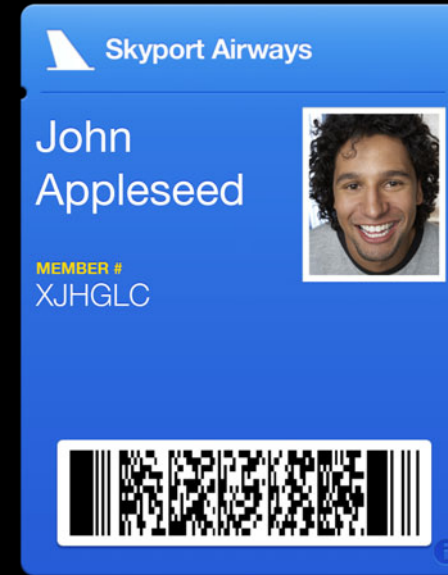
pass.com.skyport.bp

Pass Identifiers

Example



pass.com.skyport.bp

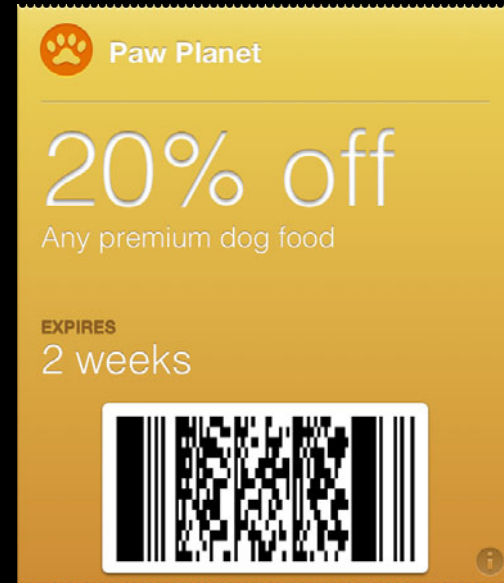


pass.com.skyport.member

Pass Styles

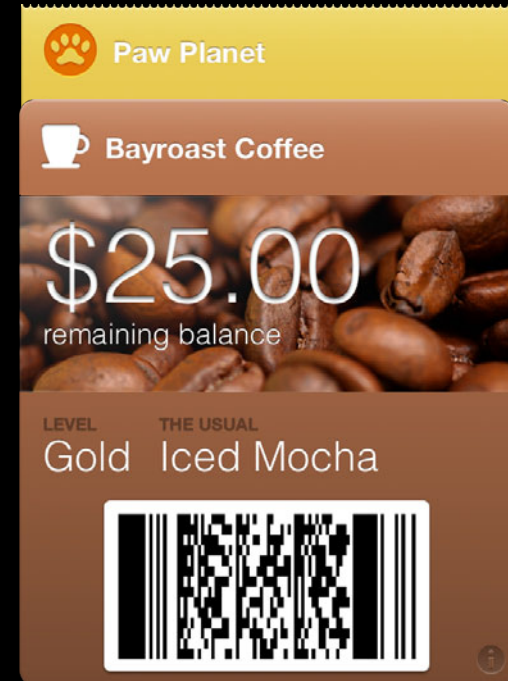
Pass Styles

- Coupons



Pass Styles

- Coupons
- Store cards



Pass Styles

- Coupons
- Store cards
- Boarding passes



Pass Styles

- Coupons
- Store cards
- Boarding passes
- Event tickets



Pass Styles

- Coupons
- Store cards
- Boarding passes
- Event tickets
- Generic



Pass Styles

- Coupons
- Store cards
- Boarding passes
- Event tickets
- Generic

```
"coupon" : {  
  headerFields : ...  
  primaryFields : ...  
  secondaryFields : ...  
  auxilliaryFields : ...  
  backFields : ...  
}
```



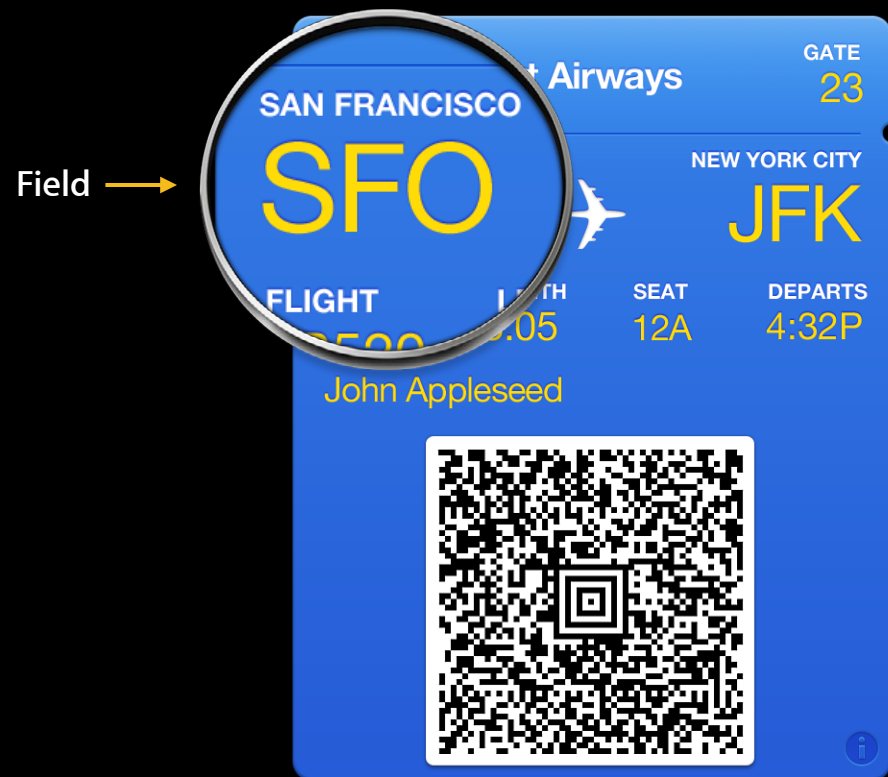
Fields

- Key
- Label
- Value
- Text alignment
- Change message
- Date and time style



Fields

- Key
- Label
- Value
- Text alignment
- Change message
- Date and time style



Fields

Skyport Airways GATE **23**

SAN FRANCISCO NEW YORK CITY

SFO  **JFK**

FLIGHT	LENGTH	SEAT	DEPARTS
JB520	3:05	12A	4:32P

John Appleseed



Fields

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SFO  **JFK**

FLIGHT	LENGTH	SEAT	DEPARTS
JB520	3:05	12A	4:32P

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← Header Fields

Fields

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JB520	3:05	12A	4:32P

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← Header Fields

← Primary Fields

Fields

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SFO  **JFK**

FLIGHT	LENGTH	SEAT	DEPARTS
JB520	3:05	12A	4:32P

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← Header Fields

← Primary Fields

← Secondary Fields

Fields

Skyport Airways GATE 23

SAN FRANCISCO NEW YORK CITY

SFO  **JFK**

FLIGHT	LENGTH	SEAT	DEPARTS
JB520	3:05	12A	4:32P

John Appleseed



← Header Fields

← Primary Fields

← Auxiliary Fields

← Secondary Fields

Fields

Example

```
"boardingPass": {  
}
```

Fields

Example

```
"boardingPass": {  
  "headerFields" : [  
    {  
      "key": "gate",  
      "label": "GATE",  
      "value": "82",  
      "changeMessage": "Gate changed to %@"  
    }  
  ]  
}
```

Fields

Example

```
"boardingPass": {
  "headerFields" : [
    {
      "key": "gate",
      "label": "GATE",
      "value": "82",
      "changeMessage": "Gate changed to %@"
    }
  ],
  "auxiliaryFields" : [
    {
      "key" : "departs",
      "label" : "DEPARTS",
      "value" : "2012-05-21T12:20:00-07:00",
      "dateStyle" : "PKDateStyleNone",
      "timeStyle" : "PKDateStyleShort"
    }
  ]
}
```

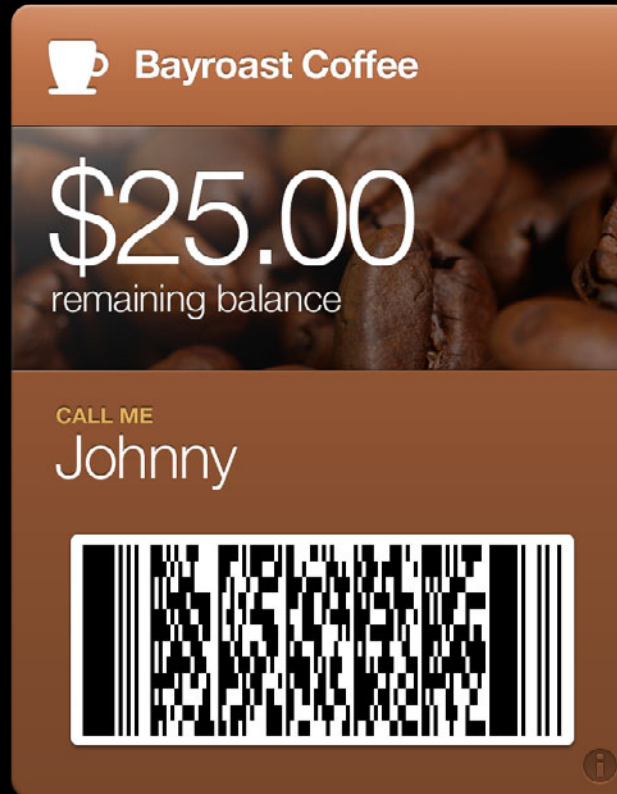

Fields

Example

```
"boardingPass": {
  "headerFields" : [
    {
      "key": "gate",
      "label": "GATE",
      "value": "82",
      "changeMessage": "Gate changed to %@"
    }
  ],
  "auxiliaryFields" : [
    {
      "key" : "departs",
      "label" : "DEPARTS",
      "value" : "2012-05-21T12:20:00-07:00",
      "dateStyle" : "PKDateStyleNone",
      "timeStyle" : "PKDateStyleShort"
    }
  ],
  "transitType" : "PKTransitTypeAir"
}
```

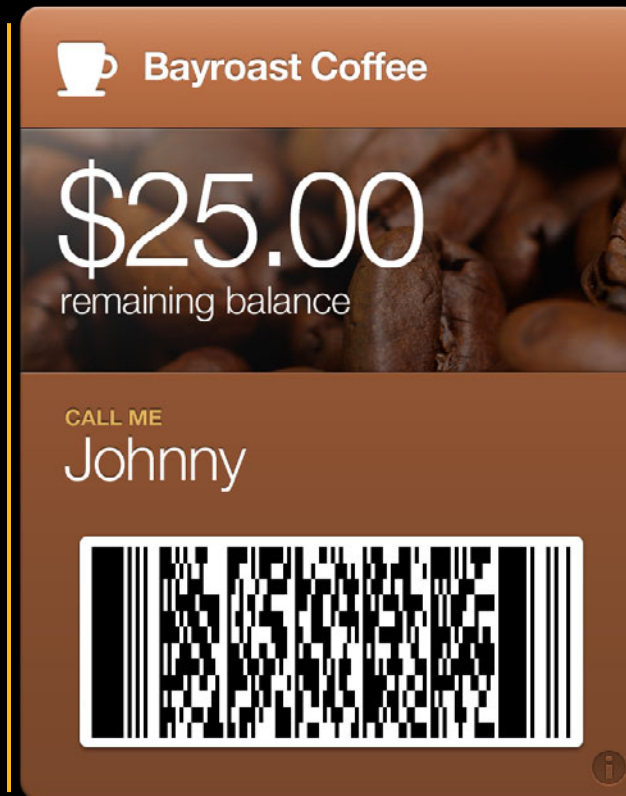


Color

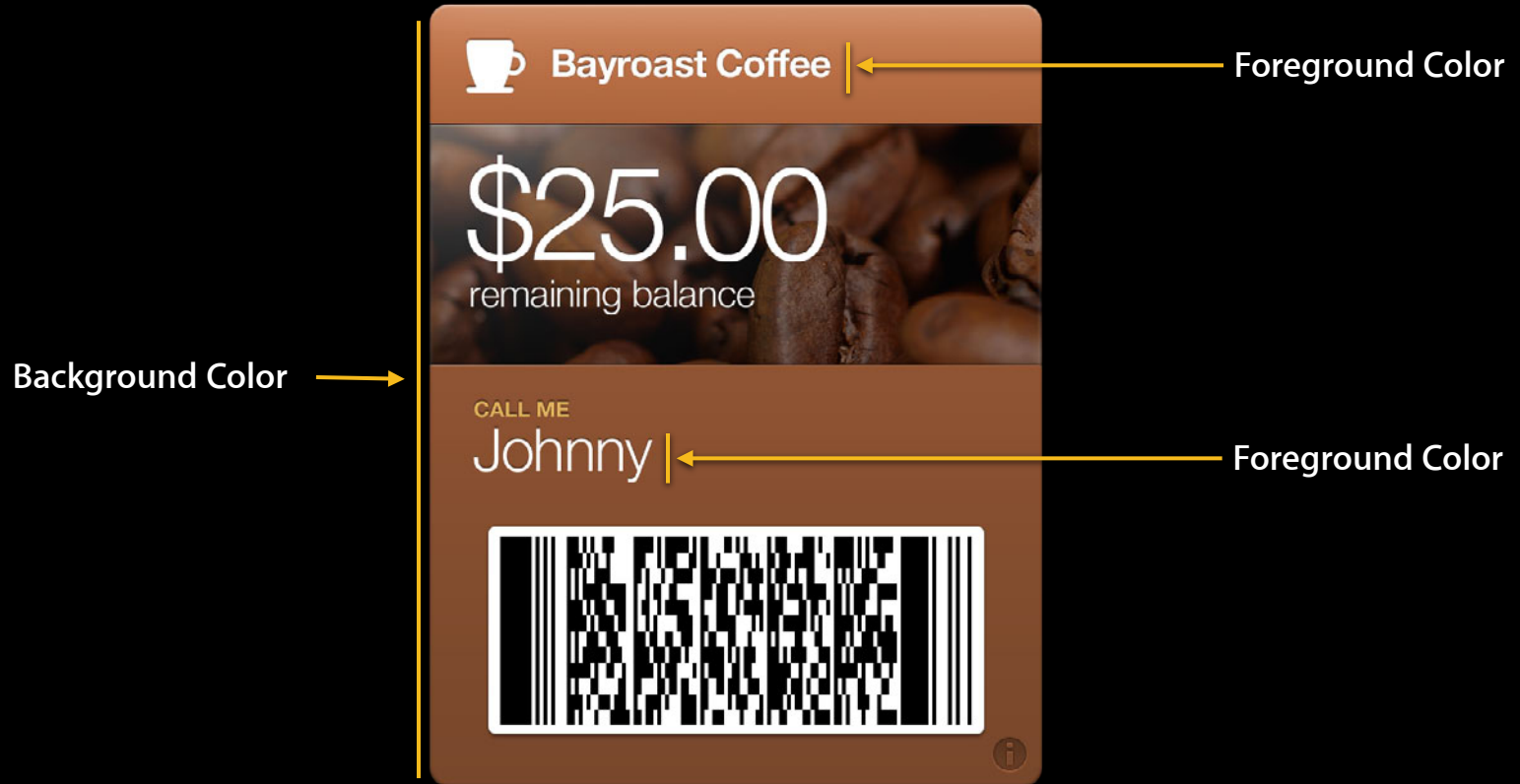


Color

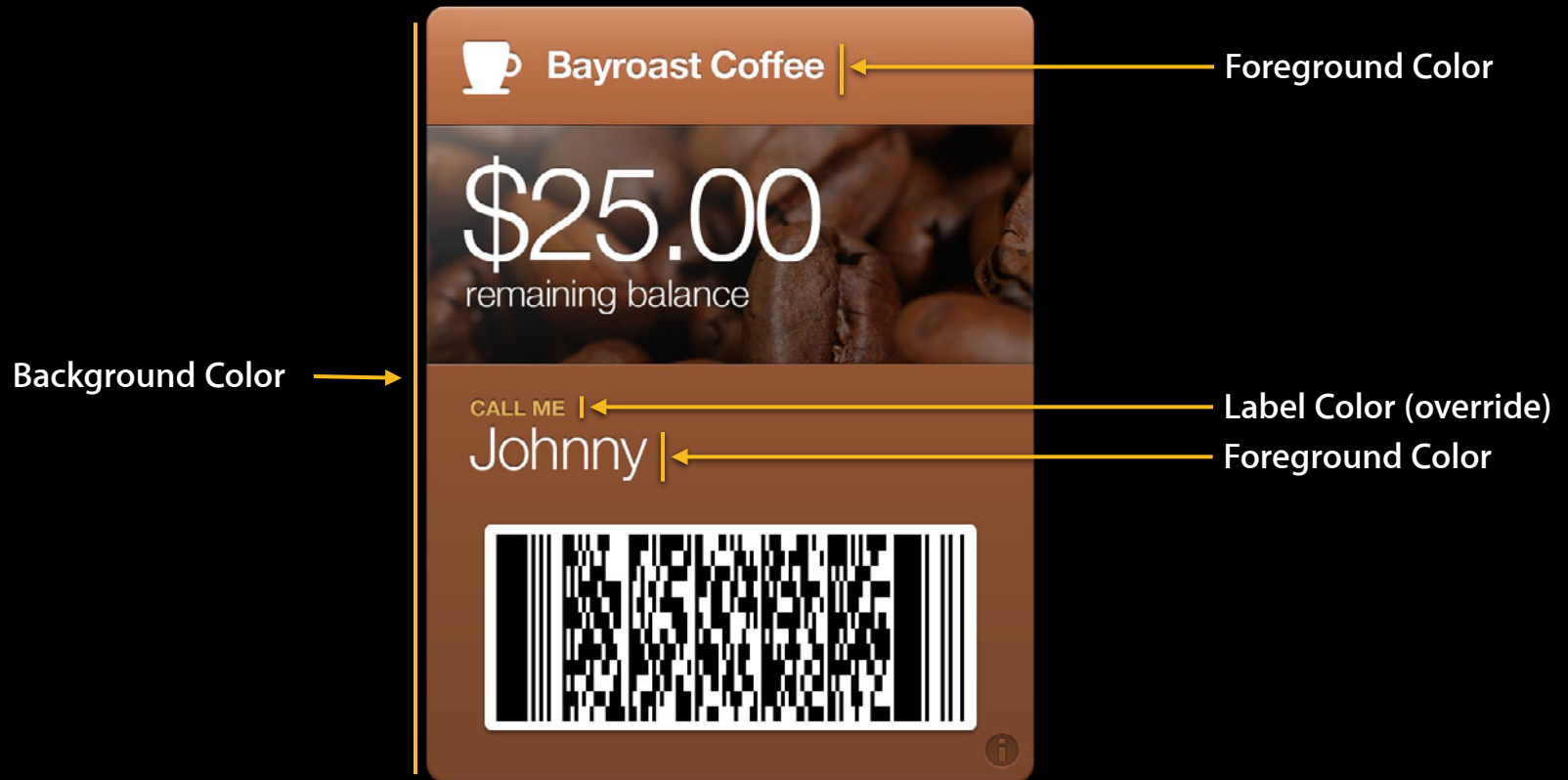
Background Color →



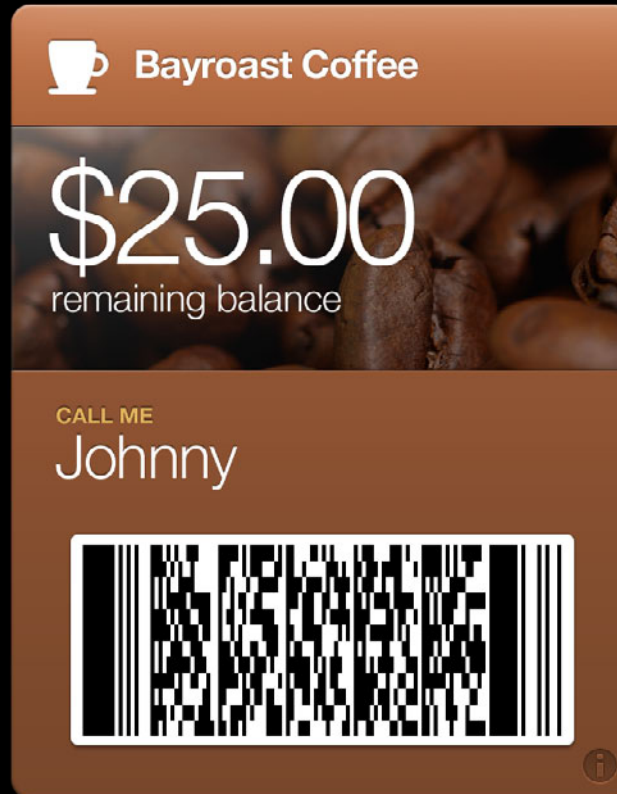
Color



Color

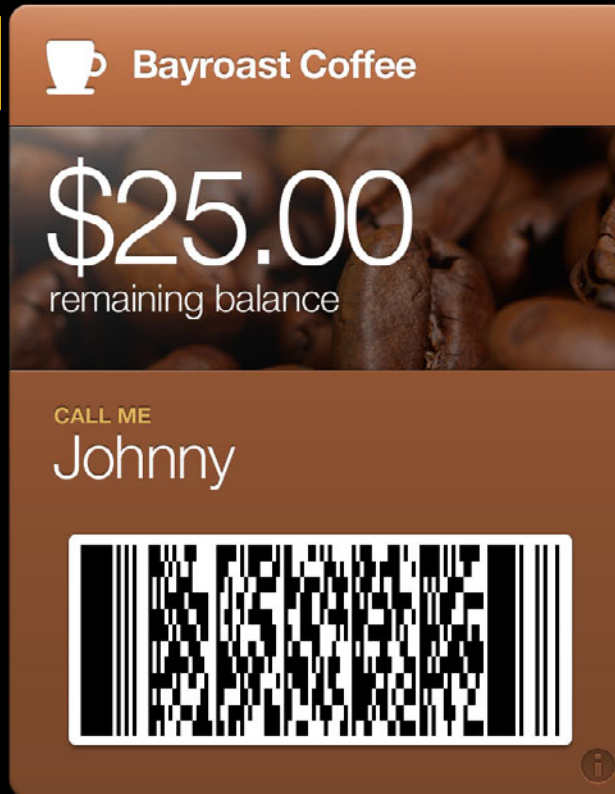


Logos and Images



Logos and Images

Logo & Logo Text →



Logos and Images

Logo & Logo Text



Bayroast Coffee

\$25.00
remaining balance

Background Image

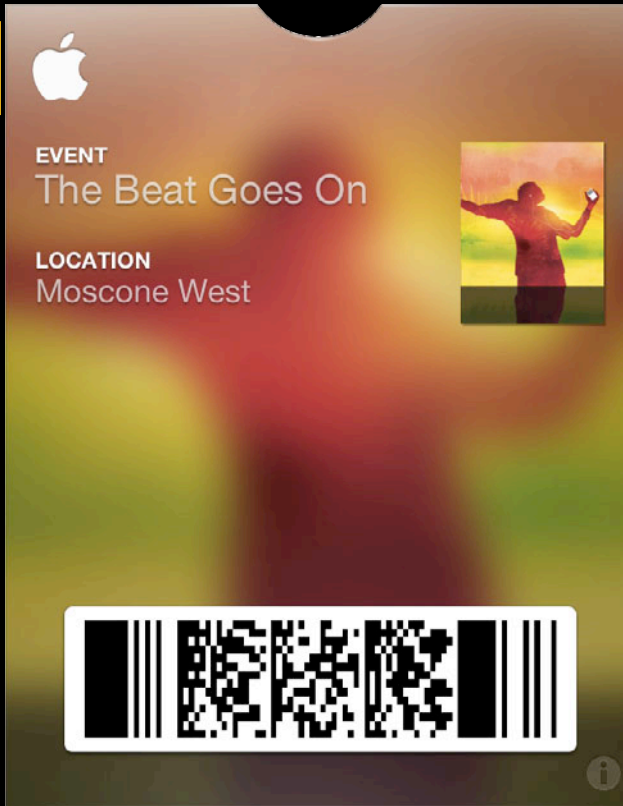
CALL ME

Johnny



Logos and Images

Logo & Logo Text →



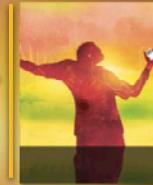
← Background Image

Logos and Images

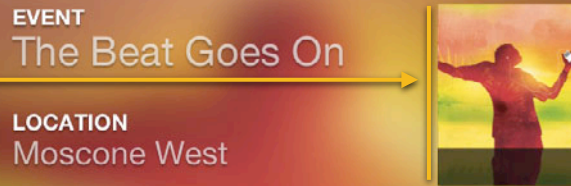
Logo & Logo Text



Thumbnail Image



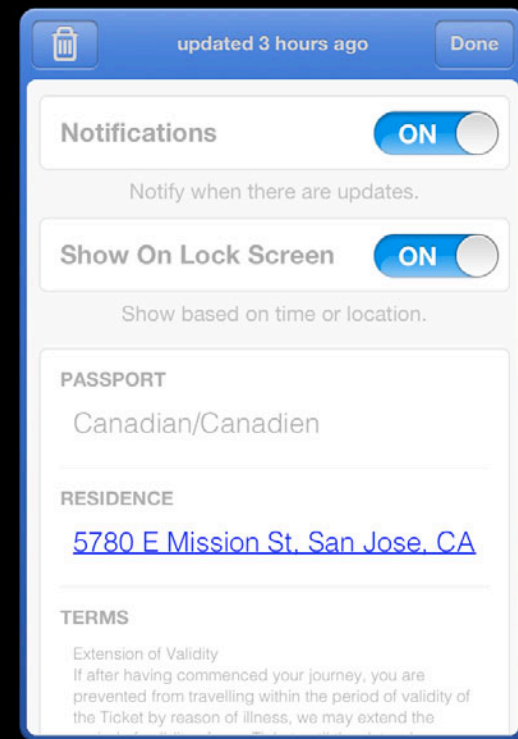
Background Image



EVENT
The Beat Goes On
LOCATION
Moscone West

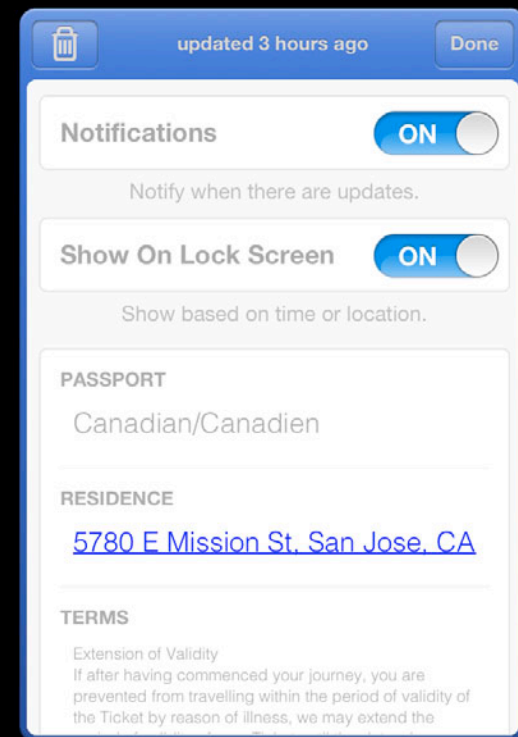


Pass Backs



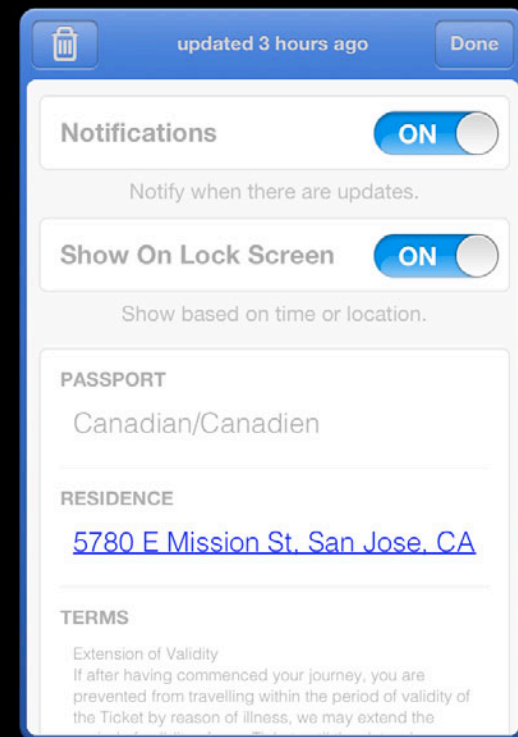
Pass Backs

- Top reserved for pass settings



Pass Backs

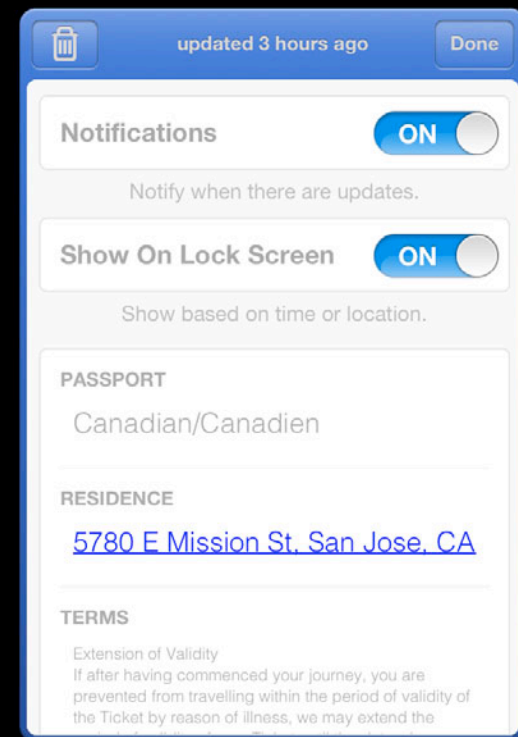
- Top reserved for pass settings
- Use the **backFields** to show extra information



Pass Backs

- Top reserved for pass settings
- Use the `backFields` to show extra information
- Optionally show an App Store item

```
"associatedStoreIdentifiers" : [  
    375380948  
]
```



Barcodes

- Formats
 - PDF417
 - Aztec
 - QR
- You provide the message, we draw the barcode
- Optional alt text



Barcodes

Example

```
"barcode" : {  
  "messageEncoding" : "iso-8859-1",  
  "message" : "123456789012345",  
  "altText" : "306672334462487",  
  "format" : "PKBarcodeFormatPDF417"  
}
```


Relevancy



Relevancy

Location

- Location queried on lock screen wake
- Provide up to 10 coordinates of interest in your pass.json
- Radius is tied to pass style
- Exit fence for location-relevant passes



Relevancy

Date

- Provide a single date of relevancy in your pass.json
- Relevancy window tied to pass style



Relevancy

Example

```
"locations" : [  
  {  
    "longitude" : -122.3748889,  
    "latitude" : 37.6189722  
  },  
  {  
    "longitude" : -122.03118,  
    "latitude" : 37.33182  
  }  
],  
"relevantDate" : "2011-12-08T13:00-08:00"
```

Relevancy

Summary

- Puts your pass in front of the user when they need it
- Locations and dates are limited, but you can update them
- Come back to Part 2 to find out how

Localization

- pass.strings in .lproj folders
- Provide translated values for pass.json values

```
//pass.json:  
{  
  "key" : "loc",  
  "label" : "localized to french",  
  "value" : "Oh my stars."  
}
```

```
//fr.lproj/pass.strings:  
"Oh my stars." = "Sacré bleu!";
```

Demo

Authoring a pass

Ken Ferry

iOS Software Engineer

Getting Passes into Passbook

About that magic stuff...



Bayroast Coffee

\$25.00

remaining balance

CALL ME

Johnny



Pass

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

Deploying Passes

- Visit the Developer Portal
 - Set up a new Pass Type Identifier
 - Get a signing certificate
- Sign and zip your pass package to create a pass

Set Up a Pass Type Identifier

iOS Provisioning Portal

- New Pass IDs section
- Provide a description and identifier
 - Must begin with “pass.”
 - Reverse DNS recommended



Set Up a Pass Type Identifier

iOS Provisioning Portal

- New Pass IDs section
- Provide a description and identifier
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 - Reverse DNS recommended



Signing Passes

- Use the signpass tool included in the session resources
- On your server, you will need to write your own
 - Reference implementation provided

Deploying to Passbook

3 methods

Deploying to Passbook

3 methods

- Mail attachment
 - Recognized by Mail on iOS 6.0

Deploying to Passbook

3 methods

- Mail attachment
 - Recognized by Mail on iOS 6.0
- Safari URL
 - MIME type: `application/vnd-com.apple.pkpass`

Deploying to Passbook

3 methods

- Mail attachment
 - Recognized by Mail on iOS 6.0
- Safari URL
 - MIME type: `application/vnd-com.apple.pkpass`
- PassKit
 - Come back for Part 2

Demo

Signing passes

Ken Ferry

iOS Software Engineer

Designing Great Passes

Design Tips

Colors and styles

- Vibrant, solid colors work best
- Use the right pass style



Design Tips

Logos

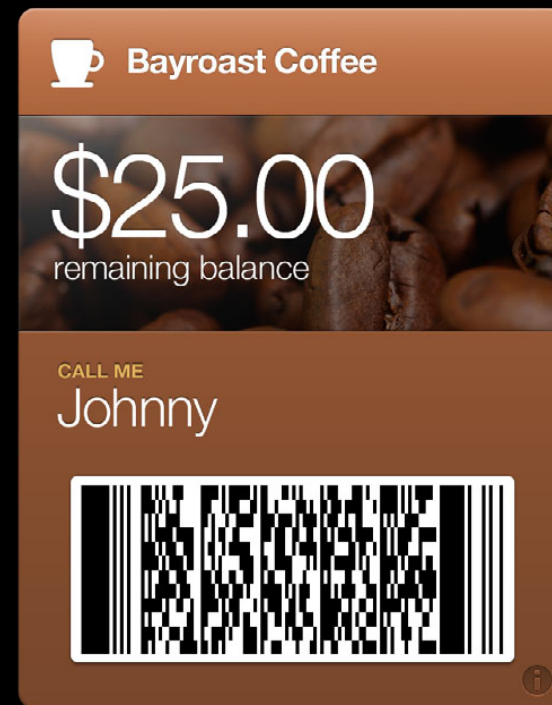
- Solid white logos look good
- Logos are not automatically engraved
 - Black drop shadow
 - 1 pixel y-offset
 - 1 pixel blur
 - 35% opacity
- Use logo text

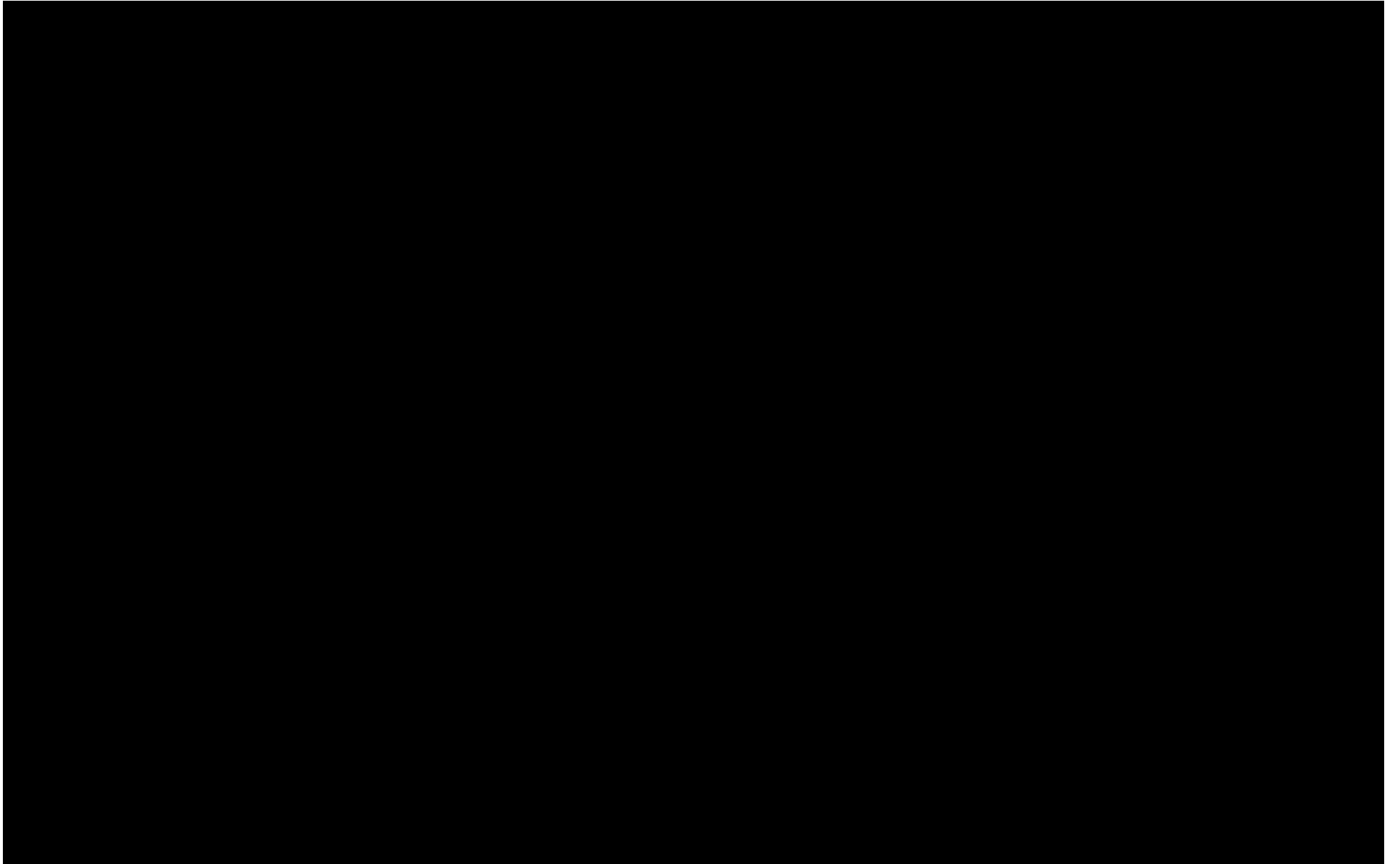


Design Tips

Layout

- Avoid information overload
- Keep passes accessible
- Use header fields sparingly
- PDF417 is friendly to layout





Keep It Simple



Mission Organic

\$520

remaining balance

DEAL OF THE DAY

Odwalla Superfood





Juice Hound

Free

Berry Blaster Extreme

SIZE

Large



 Toy Town

20% off
any children's toy

EXPIRES
2 weeks





WWDC 2012
Apple Design Awards

LOCATION
Moscone West



More Information

Paul Marcos

Application Services Evangelist

pmarcos@apple.com

Documentation

Passbook Programming Guide

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

Apple Developer Forums

<http://devforums.apple.com>

Related Sessions

Introducing Passbook, Part 2

Marina
Thursday 4:30PM

Labs

Passbook Lab 1

App Services Lab B
Thursday 9:00AM

Passbook Lab 2

App Services Lab B
Friday 9:00AM

 WWDC2012

The last 3 slides
after the logo are
intentionally left
blank for all
presentations.

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presentations.

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