Case Study:
Creating a Cross Platform Mobile Experience

movitas

Doug Bellenger
Philly ETE Presentation

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Overview

- Intro To Movitas
- Requirements
- Our Approach
- Testing
- Gotchas
- Development Environment
- What's Next
- Questions! Questions! Questions!

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Who the hell is Movitas?!

movitas
DRIVING MOBILE REVENUE
FOR DESTINATIONS
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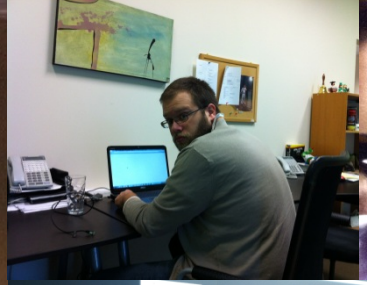
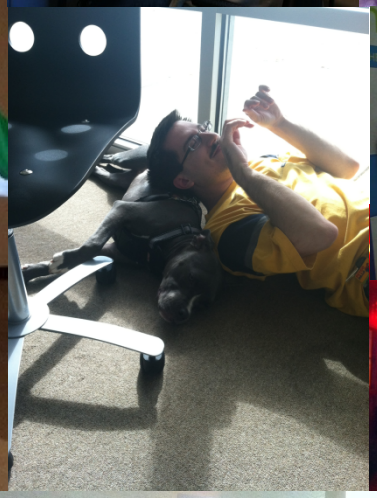
DRIVING MOBILE REVENUE
FOR HOTELS & RESORTS
Jersey
Shore
7





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mobile platform

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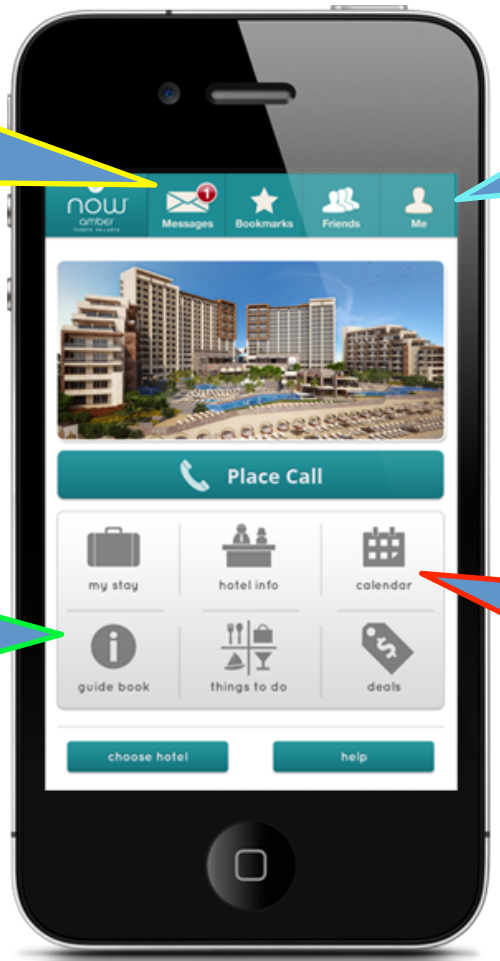
Comprehensive set of applications for enhancing guest's experience while traveling

Communications

- Hotel PBX integration for room forwarding, voicemail, wake up calls, and caller id
- VoIP calls on- and off-property
- VoIP to local, long-distance and international land lines (integrated with telco provider if needed)

Social

- Find, add and interact with friends
- Update status locally and to global social networks
- Check-in, review and rate local activities and businesses
- Share your activity, and view others' activity in the destination



Destination

- Information about the destination (maps, emergency, culture, currency, language, etc.)
- Listings of, and interaction with, local activities and businesses (check-in, voip calls, ratings, reviews, reservations, etc.)
- Special offers and redemptions

Hotel

- Hotel content (rooms, amenities, services, calendars, maps etc.)
- Hotel media (pictures, video, curated feeds, etc.)
- Food, amenity and service booking (integrated with PMS)
- Check-in and folio look up

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Business impact driving systems and services investment

- **Extends** hotel PBX to guests' smartphones and increases value of telephony infrastructure investments
- **Provides** mobile concierge information for hotels and destinations
- **Creates** frictionless commerce opportunities that are proven to raise amenity spend, generate new revenues for hotel
- **Flexibility** to enhance any hotel's business processes and integration requirements

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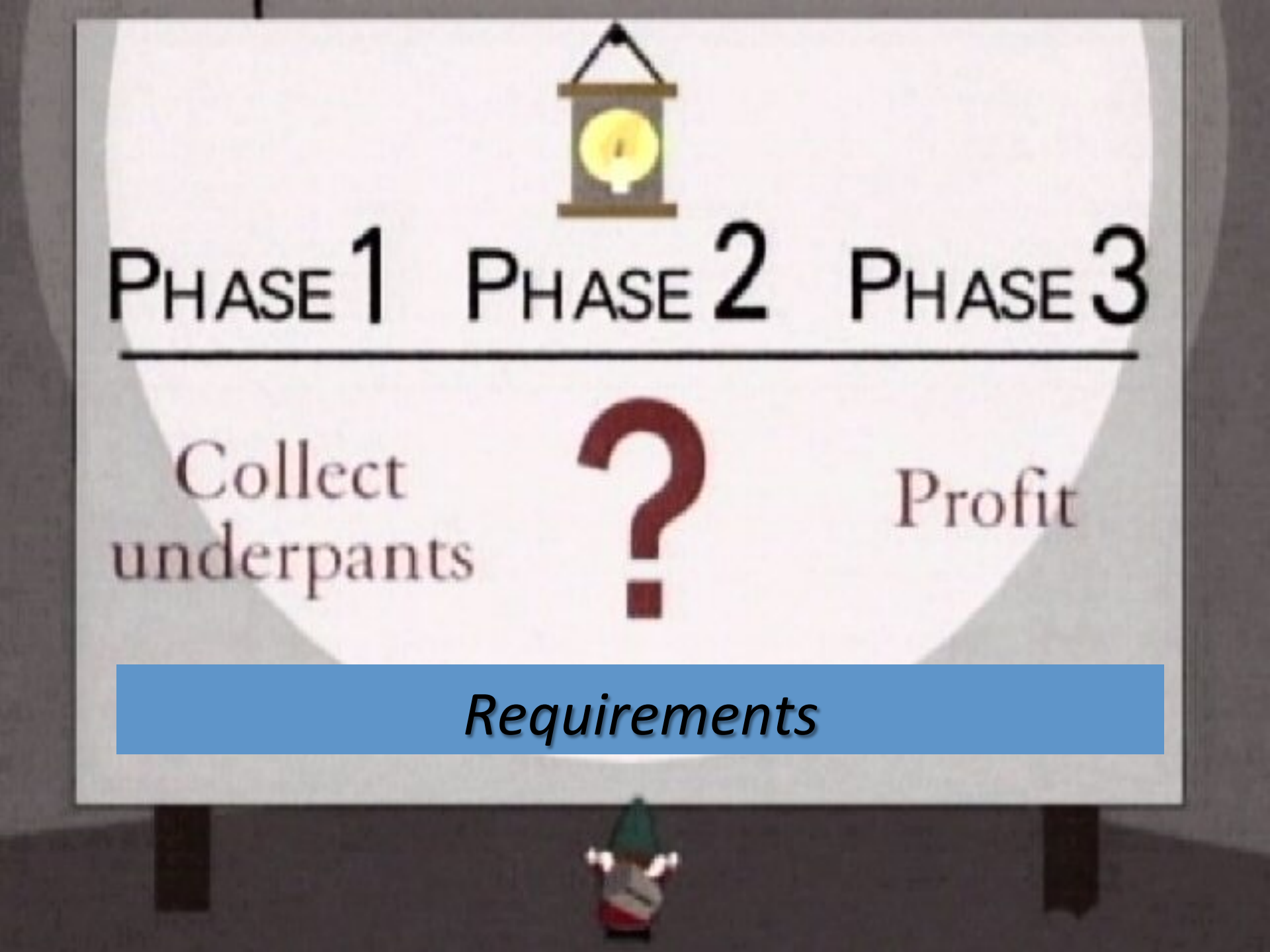
PHASE 1
PHASE 2
PHASE 3
Collect underpants
?
Profit
Requirements

Our Requirements

- Integrated Solution
  - Needs to extend our current CMS and marketing systems, not replace them
  - Needs to provide a consistent interface for native functionality on different devices
- Flexible Application
  - One app that can be used as the base for all client apps
- Scalable For All Parties
  - Ability to deploy changes via web for client sites
  - Easy to migrate app updates into all clients and all devices
- Rapid Deployment
  - Need to be able to quickly implement application across all platforms

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Potential Options

- Build a native application for each device and client
- Build a hybrid application using a tool like Phonegap or Appcelerator
- Build a hybrid internally

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How We Made It Work

Our Approach

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PhoneGap

+

PhoneGap Device Specific API's

Custom and 3rd Party API's and Libraries

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Quinta Avenida
Playa del Carmen
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Bookmarks
Friends
Me
Logout
Local Deals
Local Activities
Calls & Messages
Local Info
Playa Buzz
Profile Settings
Access full Internet
Help
verizon
Quinta Avenida
Playa del Carmen
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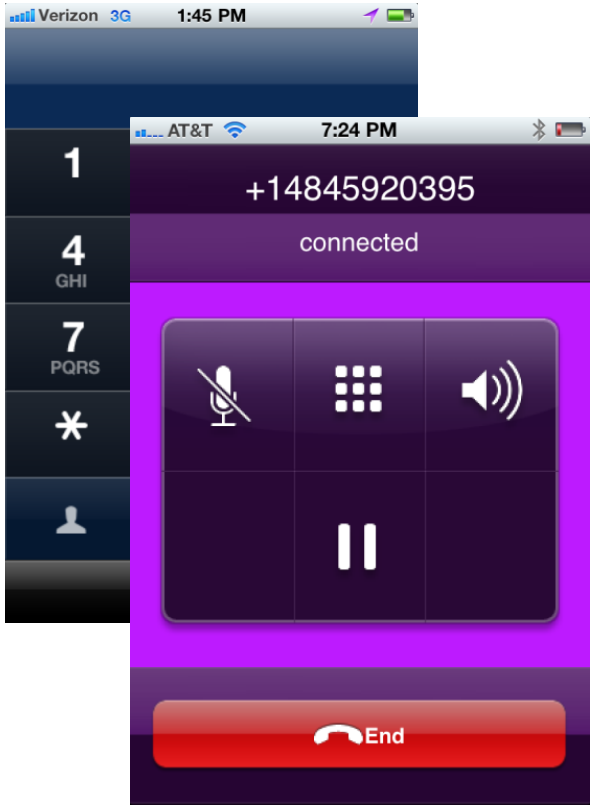
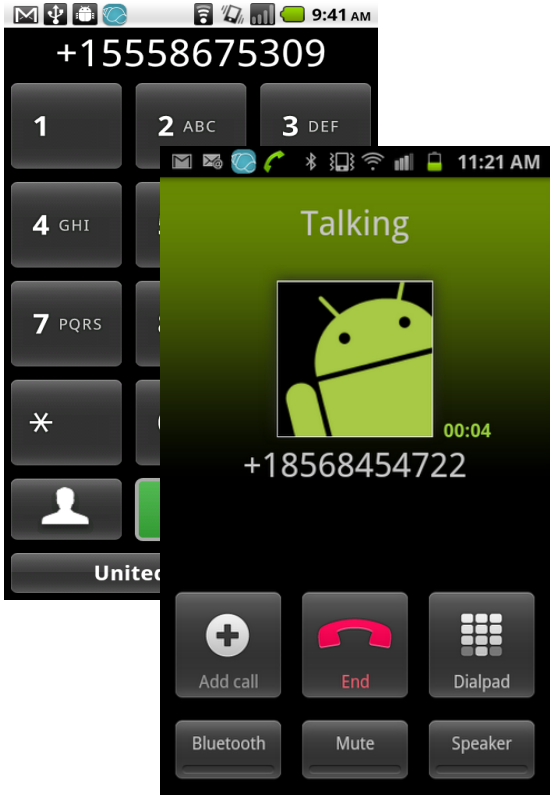
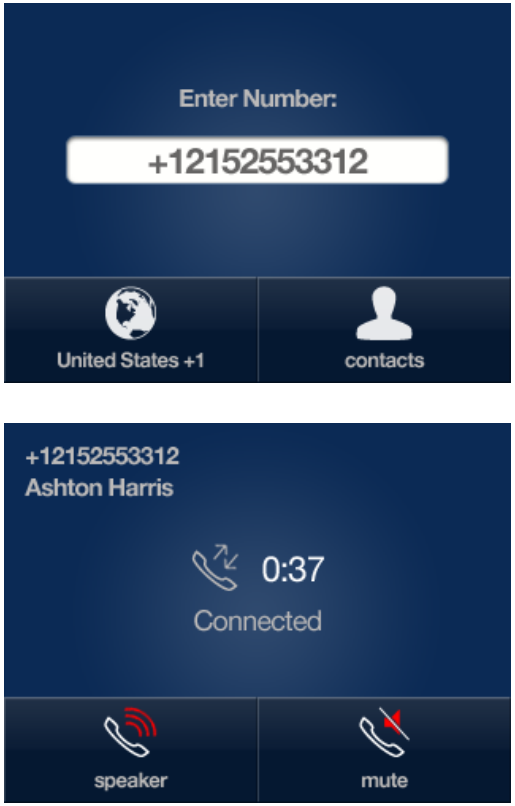
Local Info
Playa Buzz
Profile Settings
Access full Internet
Help

Device Specific Interfaces







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Unique Device Features

Things to Consider

- Menu Buttons
- Back Buttons
- Implement Call Buttons
- End Call Buttons

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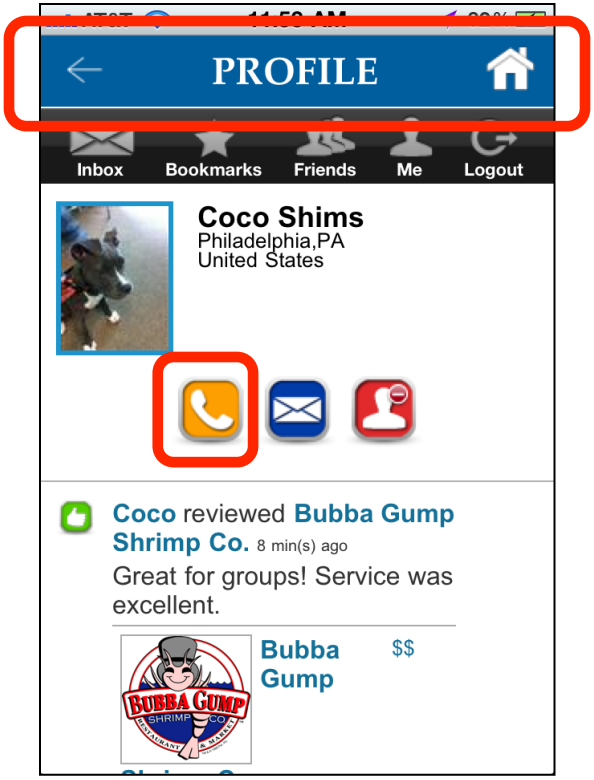
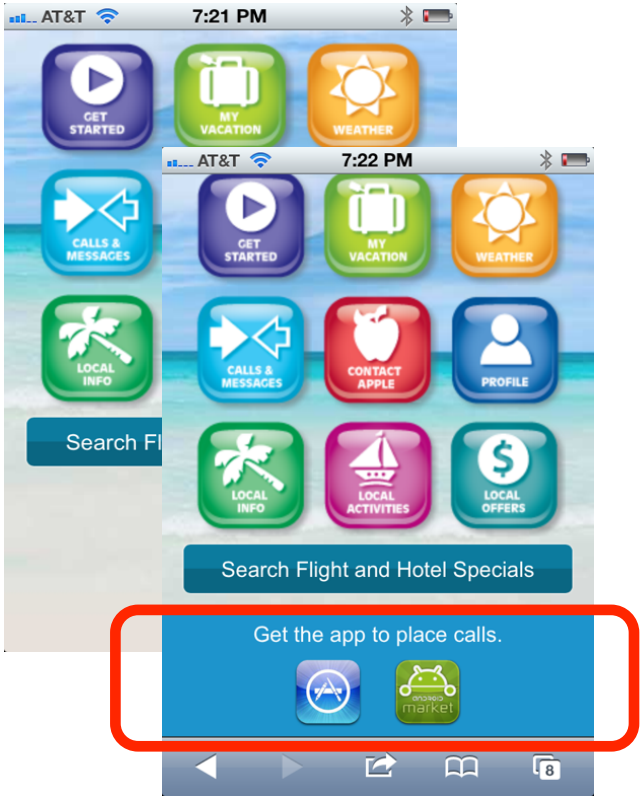
App Versus Mobile Web Considerations



Navigation to Support Browsing Without Standard Browser Functions



Icons to Get Applications on Mobile Web

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Catching Differences With Responsive Web Design

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Push Notifications

- Developing a Common Engine to Post to Different Endpoints
  - Modified our marketing system to handle the different methods for sending push notifications
  - Other options include services like Xtify or tools from message aggregators
- Handling Certs
  - Needed to develop structure to handle certs for different applications and devices
- Notification Bar versus Badges
  - Need to account for APIs to clear badges when messages are received
  - Need to design messaging that is received to be common to each device

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TESTING

I FIND YOUR LACK OF TESTS DISTURBING.

DIYDESPAIR.COM

Testing

- Build Validation
  - Ensure that each build is validated and signed for production use
- Lab Testing
  - Tools like Blackberry Simulators, iPhone Simulators and Android Simulators can save you a lot of money on testing
  - Having a few devices for each format are critical to feeling the user flow versus clicking through it. For Android, small, medium and large devices are recommended.
- User Testing
  - Use tools like UserTesting.com or focus groups to get hands on testing

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Gotchas!!
Gotchas!!
Gotchas!!
Gotchas!!

Gotchas

Push Notification

- Needed to generate a common interface to handle device differentiation
- Managing certs

Release Process

- Building for testing is different than building for distribution

Images Everywhere!

- Need to account for design of icons and promotional images to submit for each different app store

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Gotchas

- Integrating Other Platforms
  - Account for common platforms that also design various experiences for various devices. Example: FACEBOOK!!
- Drawing a Line for OS Support
  - Sometimes not supporting older OS system is a necessity (ex. Blackberry and Android)
- Prepare for Deprecation
  - Make sure that you test on new OS versions for any functions that get deprecated and build to account for the older OS versions if necessary (ex. iOS and Android Tablet identification)

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Gotchas

- Memory
  - Even Phonegap apps are not websites! You need to account for memory management to make sure crashes and leaks don't occur.
- Networking
  - Account for the inevitable lost network connection
- Keep an eye on all code changes
  - When upgrading make sure to stay on top of updates and review all code changes before forking the new code into your site.

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But Wait! There's More!
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What to Expect From App Store

- Android
  - Advantage: Almost instantly available and easy to become a publisher
  - Disadvantage: Only one account can manage the apps

- iPhone
  - For first submission prep for 3-4 weeks total
  - Follow up submissions typically are a few days to a week
  - Make sure to test and validate before submitting because when you're rejected time seems to start over

- Blackberry
  - Signing up for an account is a little more tedious that Android, but far quicker than iPhone
  - Site says 24 hours for approval, but so far our experience is a week for initial review

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The Development Environment

- Setting up environments to support multiple users
  - Document settings to ensure proper certs and SDK's are on all environments
  - Setting up pair stations that can be remotely accessed to ease the pain of varying settings

- Getting Git right
  - Deployment strategies for one app across multiple clients
  - Handling feature branches as well as one client

- Find the tools to debug
  - Before you even start track down how to get logs, how to use simulators, tools for testing performance, etc. Each device is different and comes with it's own advantages and disadvantages

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What's Next?

We want to help you achieve...here's what's next!

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Prepare to Iterate

- Be prepared for OS updates
- Watch your logs and error reports for clues to bugs that weren't previously found
- Collect user feedback through surveys and focus groups
- Watch analytics to determine what the highest and lowest used features are across each device

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Where Do We Go Next?

- Tablet Support
  - Starting work on iPad and Android tablets now using same framework
- Building for Offline Support
  - Need to develop our own interface for caching and offline access to support travelers
- Building an Application Team
  - Now that we have multiple operating systems, multiple sizes and new clients coming out all of the time, it's time to build the team

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