The OneBusAway iPhone App

An iPhone Development Perspective
The OneBusAway iPhone App

The OneBusAway iPhone App is an application developed to provide real-time information about bus routes, including estimated arrival times at stops. It helps users plan their daily commutes more efficiently by showing the next available bus, its estimated time of arrival, and other relevant details. The app is designed to be user-friendly, allowing users to add stops as bookmarks and filter or sort routes based on their preferences. It is particularly useful for students and commuters who rely on public transportation to get around the University of Washington and other urban areas.

The screenshot shows a typical interface of the OneBusAway app, displaying information for stops such as Stevens Way & Benton LN. Users can view the route number, destination, estimated time of arrival, and any delays or early departures. The app also includes a map feature that provides a visual representation of the bus routes and stops, enhancing the user experience by making it easier to plan and navigate through the city.
iPhone, iPad, iOS, iWhatever...

- A quick note:
  - I’ll use iPhone, iPad, iOS pretty much interchangeably, but...

- Devices:
  - iPhone
  - iPod Touch
  - iPad

- Operating system that powers them all:
  - iOS
Why iPhone app development?

- Love it or hate it, it’s the biggest game in town
  - Verizon iPhone announcement tomorrow will only fuel the fire

- Users could care less about our opinions of various platforms. They just want the app.
  - Either you provide it
  - Or someone else will
Pay To Play

- To really develop an iPhone app, you’ll need:
  - A Mac to run Xcode on
  - An iOS device to test your app on
    - simulator only goes so far
  - A developer license ($100/yr) so you can:
    - Run your app on your phone
    - Submit your app to the app store

- Adds up to real cash
Writing an iOS App

- You develop using:
  - Objective C – The native iOS Programming Language
  - Xcode – Apple’s Integrated Developer Environment
Objective C

- “Let’s strap some object oriented features onto C, as inspired by Smalltalk”
- C-like, but object oriented features don’t look anything like C++

- Not my favorite language, but it works…
  - Experience with C and object oriented language concepts will help, but only so much
What does it look like?

- (NSString*) getHello:(NSString*)name {
  NSLog(@"Length=%d", [name length]);
  return [@NSString stringWithFormat:@"Hey, %@!", name];
}

- Simple function declaration
  - (return type) fnName:(arg_type)arg_name

- Message passing: [name length]
  - Objective-C: Send message “length” to object “name”
  - Java: Call method “length” on object “name”
The Good and the Bad

- The Good
  - Message system allows flexible object and type composition
  - But don’t shoot yourself in the foot ;)

- The Bad
  - No garbage collection for Objective-C on iOS
Xcode

- Works well enough

- I’m a raging Eclipse addict, so that colors any reasonable advice I could give here ; )
The App Store Review Process

- It’s gotten better, but...
- Still largely a nerve-wracking process
  - My first app was rejected once
- You play by Apple’s rules or you don’t play at all
- Review process can take up to two weeks
  - Critical that you find bugs BEFORE submitting
My Advice* To You

* I’ve never had a full-time job for longer than 3 months in my life, so take it with a grain of salt ; )
Learn by Doing

- The best way to learn a language, a framework, a tool:
  - Build something with it!

- Find a quick project and try to make it happen:
  - First version will probably be junk, but don’t sweat it

- Look for the things that annoy you on a day-to-day basis for ideas and inspiration
Thanks!

Questions?