Hong Kong JS v5.0
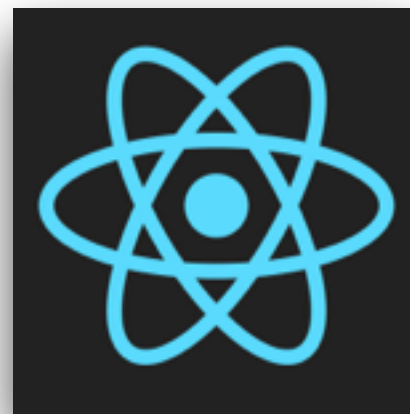
var greeter = new Greeter("Hello, world!");

Agenda

◉ Welcome, Housekeeping

◉ TypeScript & Angular by **Bart Verkoeijen**

◉ **Beer Break :)**

◉ Announcements

◉ React Native & Tools by **Kevin Bluer**

◉ Q&A & Wrap Up

JS

Housekeeping

Housekeeping

◉ Questions…anytime :)

◉ Restrooms :))

◉ Drinks courtesy of Spacious & Industrie IT :)))

JS

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- We use Ruby On Rails and Javascript

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we mean business
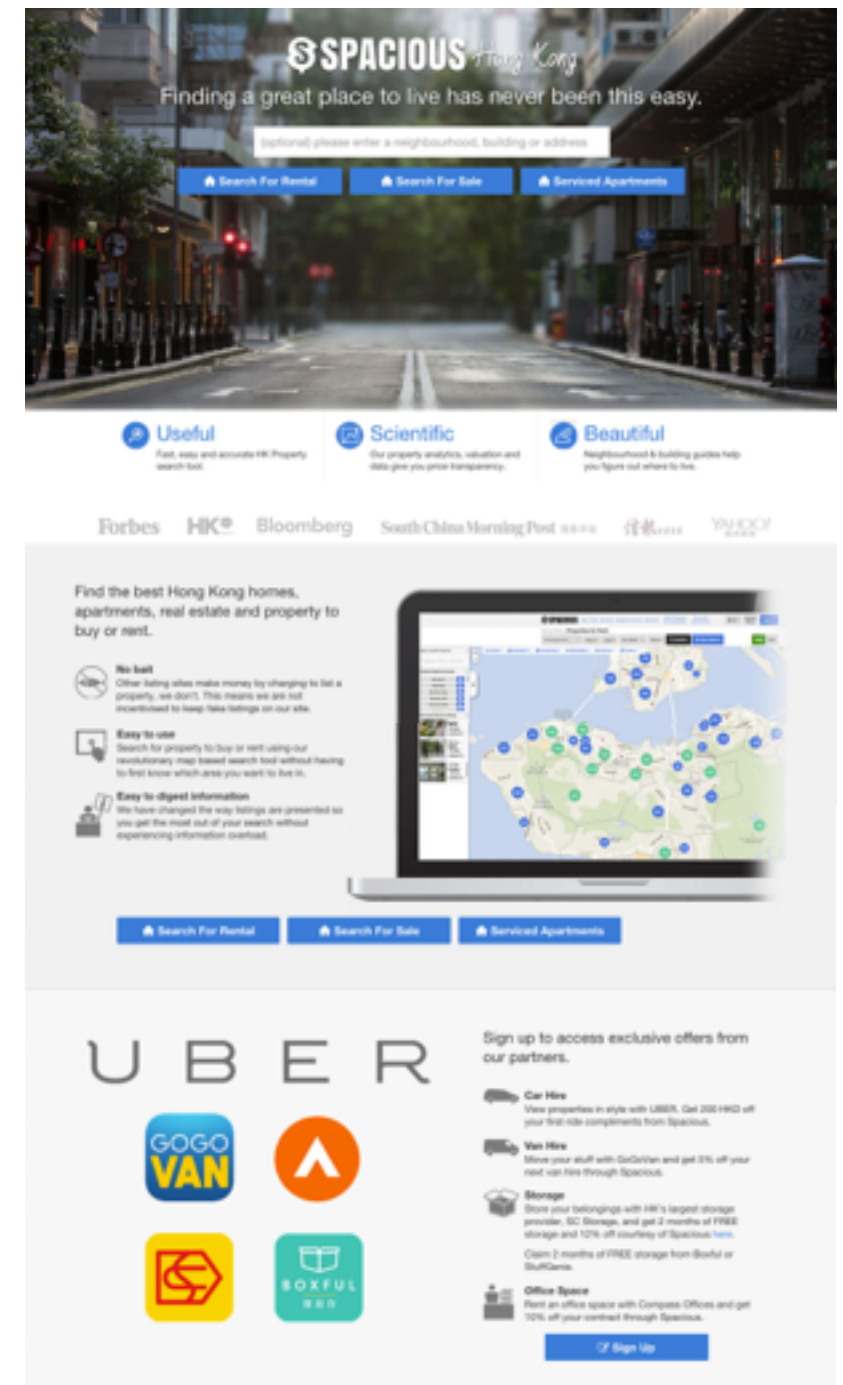
We help all types of companies from enterprise to start-ups bring to life digital platforms that change the way we live.

- +160 employees across Australia and Hong Kong

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- Email andrew.debruijin@industrie.com

TypeScript & Angular
Bart Verkoeijen

Beer Break :)

Announcements

Announcements

◉ **hongkongjs.com is still in progress :)**

    ◉ Email me at kevin@bluer.com if you want to help

    ◉ Next check-in next Friday 17th

React Native + Tools
Kevin Bluer

Agenda

◉ Goals

◉ Overview & Reactive Native

◉ Getting Started & Development Experience

◉ Demos

◉ Backend Integration

◉ React Native Versus…

◉ Summary + Next Steps

JS

Show of hands...
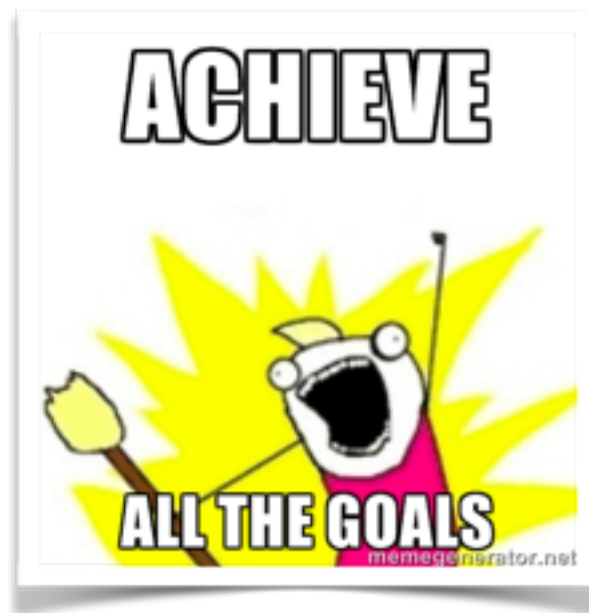

Mobile Web?

Hybrid?

Native?

- ◉ Experiences good / bad / ugly?
- ◉ Heard of React Native?
- ◉ Any goals with getting to know?

Session Goals

◉ Some insight into how it works

◉ Compare and contrast to other approaches

◉ Impart some of my personal experiences

◉ **To inspire you to give it a try :)**

JS

React Native Overview

Overview

◉ New way to create native iOS apps (with Android coming soon) using JavaScript

◉ Open Source project created by Facebook (http://facebook.github.io/react-native)

◉ Differs from traditional hybrid approaches in that it leverages real native components, as opposed to an embedded browser

◉ Builds on ReactJS development model (which I'm still learning)

JS

In the wild?

◉ Who's using it? Facebook (with Groups App)

◉ Industry Commentary…

Andy Matuschak
@andy_matuschak
Follow

I say with confidence as a former UIKit author: React's model for the UI layer is vastly better than UIKit's. React Native is a *huge* deal.

2:54 AM - 29 Jan 2015

561 RETWEETS 513 FAVORITES

Shane O'Sullivan
@chofter
Follow

The best thing about React Native is non obvious. Four words: No compilation, instant refresh.
What to do with all that free time?

3:32 AM - 29 Jan 2015 ♀ Queens, NY, United States

37 RETWEETS 43 FAVORITES

Jordan
@jordwalke
Follow

If you're a ReactJS developer, today you are now a native app developer! #reactjsconf

2:23 AM - 29 Jan 2015

89 RETWEETS 65 FAVORITES

JS

Similarities to React JS

◉ Specify views as functions of data

◉ Creating "Shadow" Views / Elements and only updates what's changed based on a diff algorithm

```javascript
1   var React = require('react-native');
2   var { AppRegistry, Image, Text } = React;
3
4   var App = React.createClass({
5     render: function() {
6       return (
7         <View>
8           <Image src={require('image!hello')}/>
9           <Text>Hello World!</Text>
10        </View>
11      );
12    }
13  });
14
15  AppRegistry.registerComponent('helloworld', () => App);
```

```javascript
21      render: function() {
22        return (
23          <div className='appContent'>
24            <h1>Welcome to Horizon Mobile Admin</h1>
25            <p>Select a section from the top-navigation to begin
26          </div>
27        );
28      }
29  });
```

JS

Characteristics #1
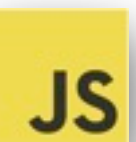
◉ **Many Native iOS Components supported**

  ◉ E.g. UITabBar, UINavigationController

  ◉ Each of them have their React Native counterpart (e.g. TabBarIOS, NavigatorIOS, etc)

◉ **Asynchronous Execution**

  ◉ "All operations between the JavaScript application code and the native platform are performed asynchronously"

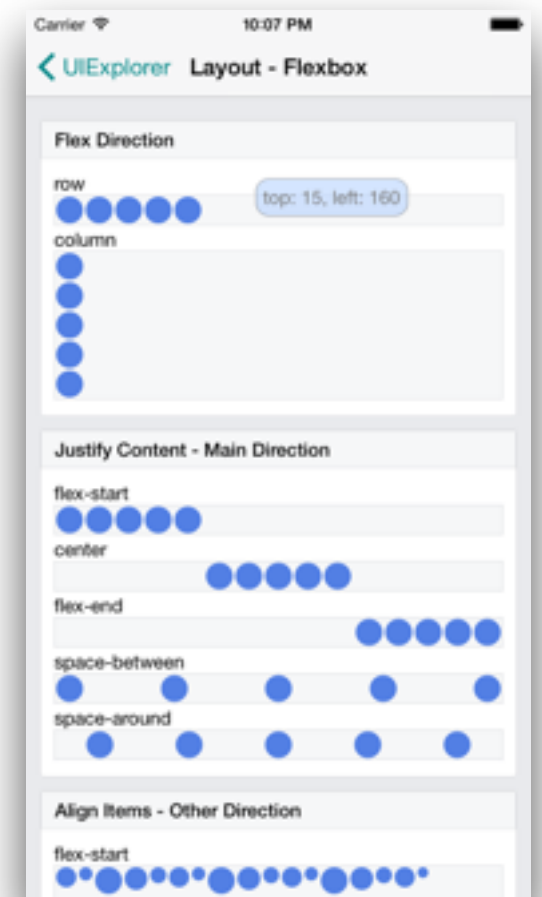 ◉ Which means things are fast and responsive

TabBar

Characteristics

◉ **Flexbox and Styling**

   ◉ Makes it simple to build common UI elements

   ◉ Also supports common web styles via the StyleSheet abstraction (which can be applied inline)

◉ **Polyfills**

   ◉ React Native is just the "view"

   ◉ For the rest we can use additional libraries that work with the API's exposed via React
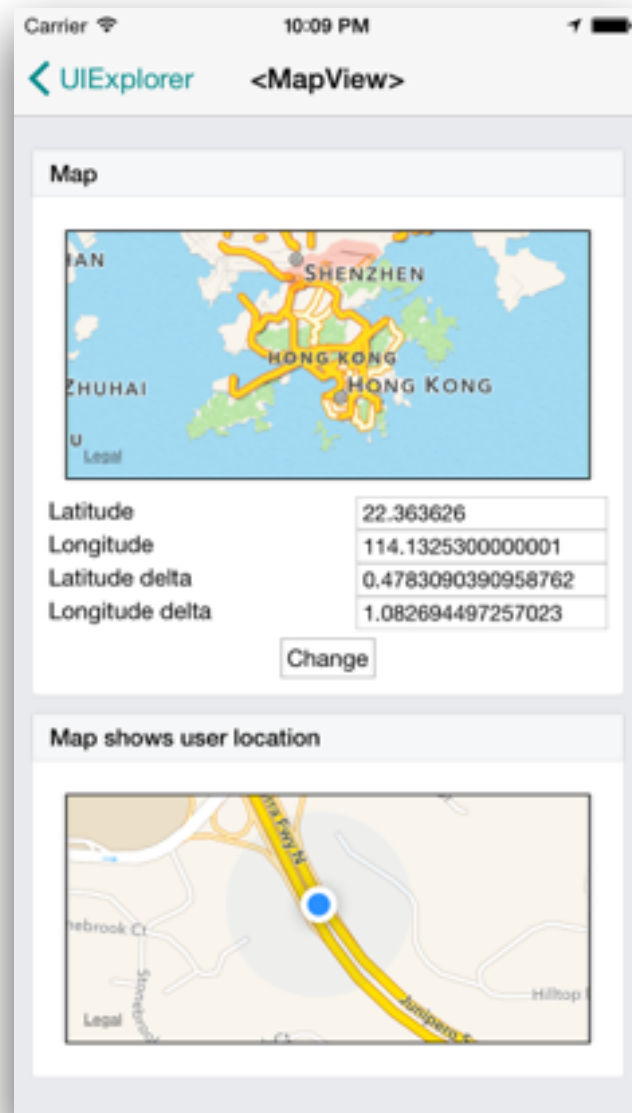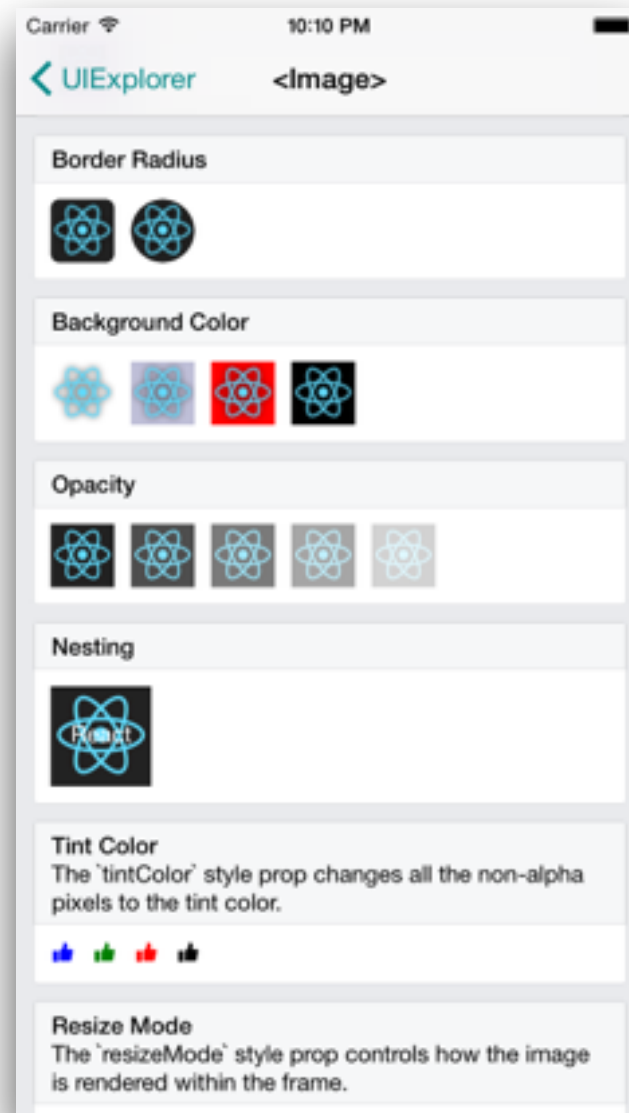
Flexbox

Additional Characteristics

◉ **Extensibility**

 ◉ You can bridge between native views and modules

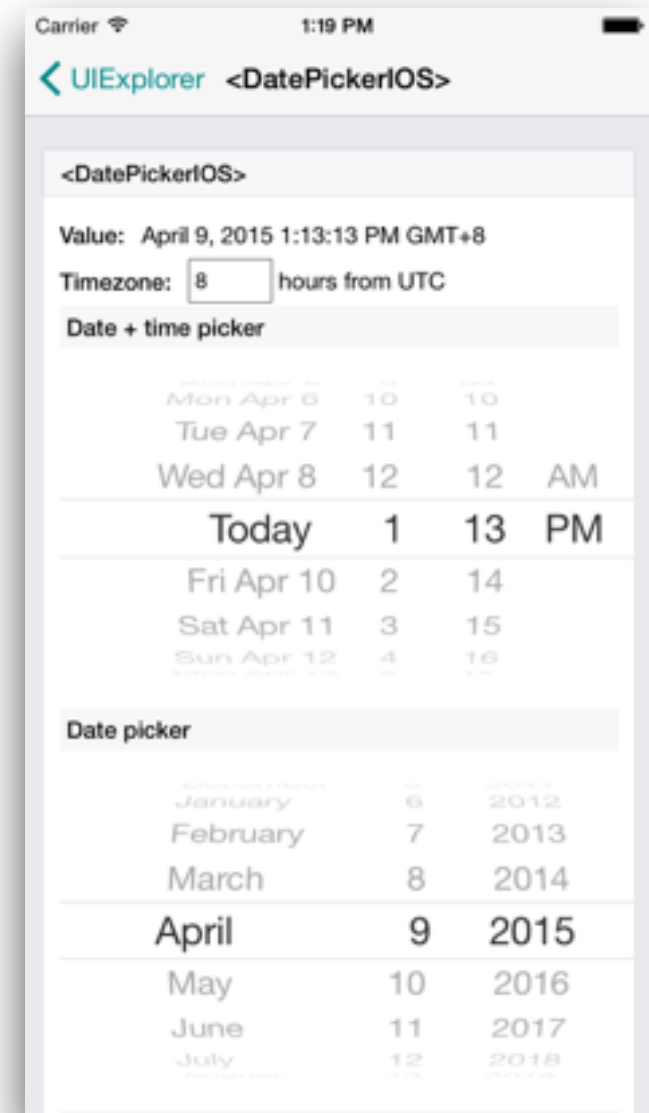 ◉ Also a library of components is emerging (similarity to Cocoa Pods): http://react.parts/native-ios
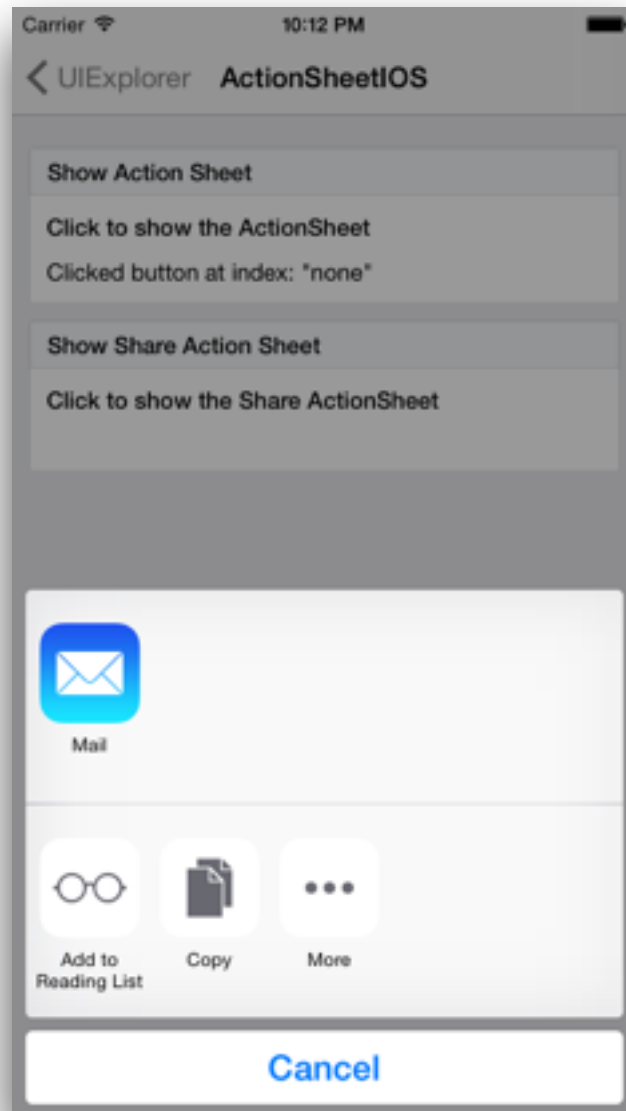
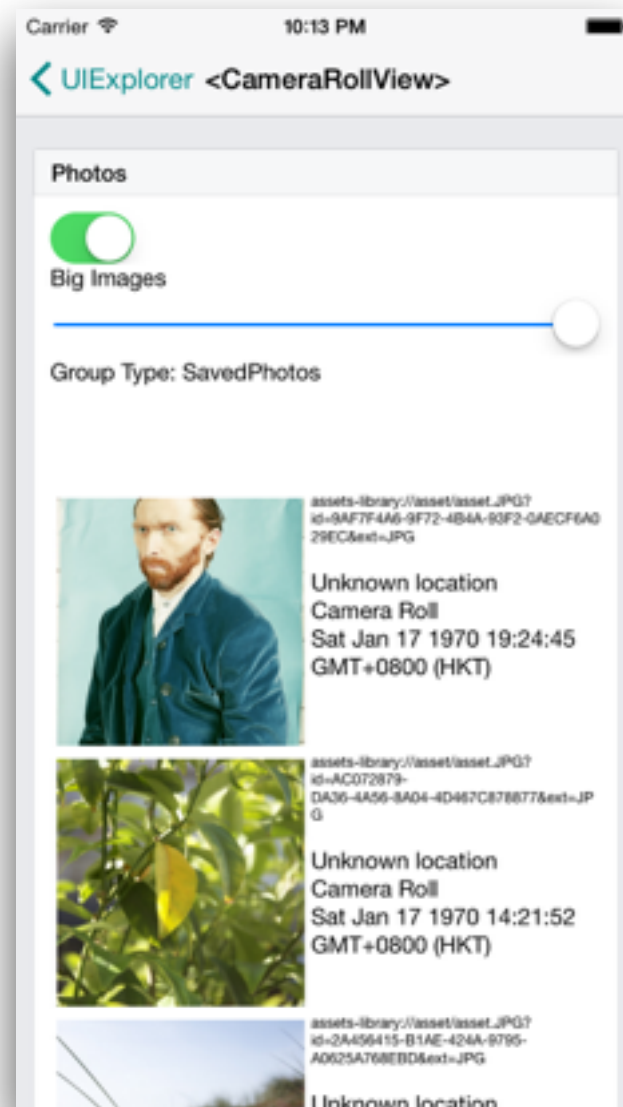# Component Examples
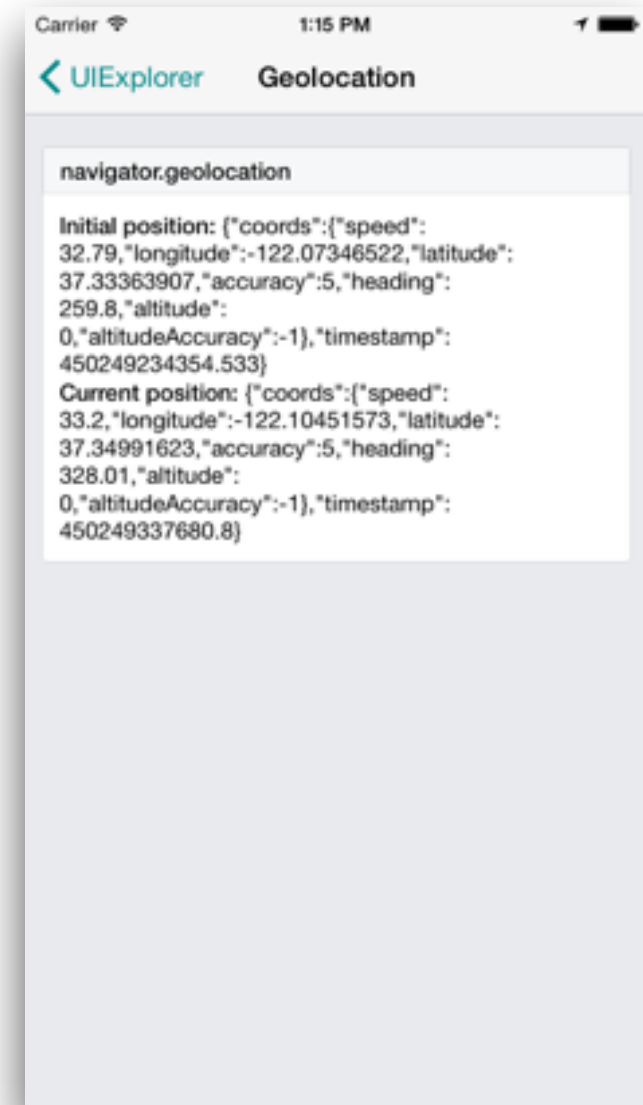

MapView

Images

DatePicker

API Examples

Action Sheet

Camera Roll

GeoLocation

# Getting Started & Development Experience

Getting Started

◉ Mac only for now (given it's dependency on Xcode)

◉ Requires Node (and optional Watchman and Flow)

◉ Your first project…

```
$ npm install -g react-native-cli

$ react-native init AwesomeProject
```

```
drwxr-xr-x@ 6 bluer  staff   204 Apr  2 09:49 AwesomeProject.xcodeproj
drwxr-xr-x  9 bluer  staff   306 Apr  2 10:22 iOS
-rw-r--r--  1 bluer  staff  2423 Apr  2 10:20 index.ios.js
drwxr-xr-x  4 bluer  staff   136 Apr  2 09:48 node_modules
-rw-r--r--  1 bluer  staff   208 Apr  2 09:48 package.json
```

JS

Running

◉ Once created open in Xcode and Run

◉ Cmd + Ctrl + Z for additional options such as Debugging and Live Reload
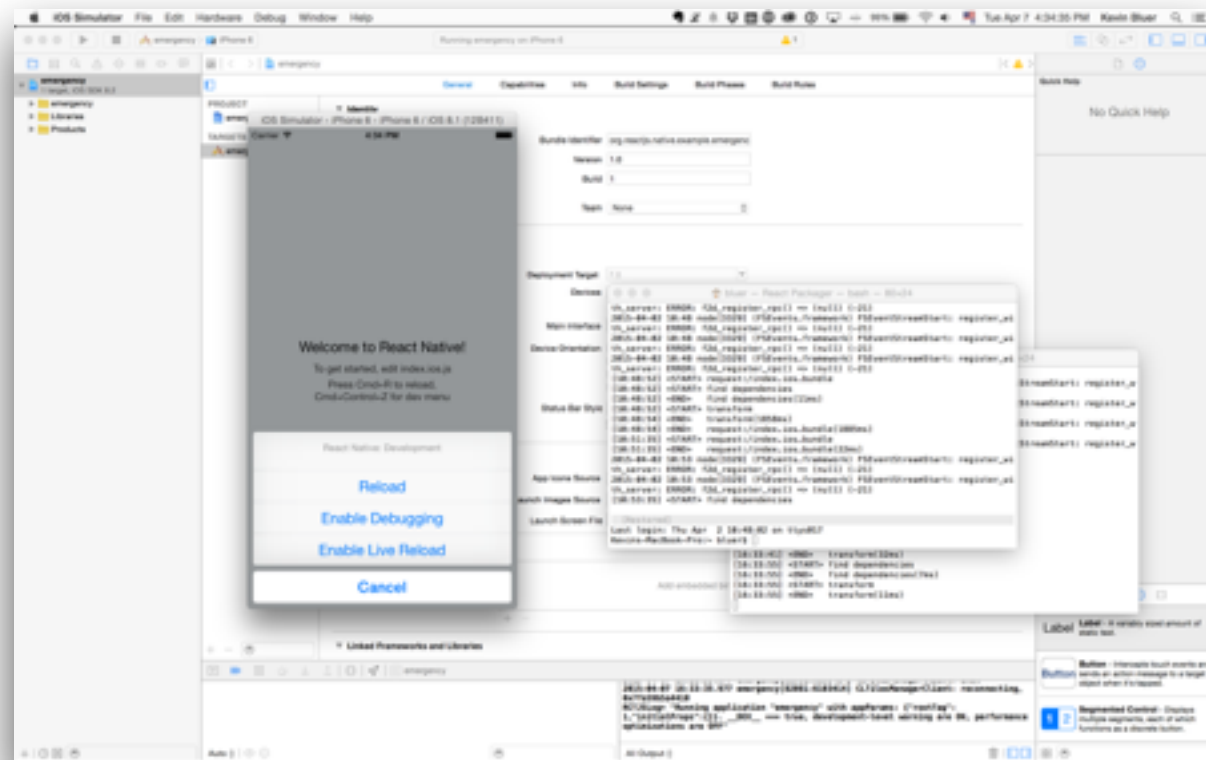
Adding Components

◉ Used referencing the required component as follows…

```
 7  var React = require('react-native');
 8  var {
 9     AppRegistry,
10     Image,
11     ListView,
12     StyleSheet,
13     Text,
14     View,
15  } = React;
```

◉ 3rd Party Ones Installable via NPM :)

◉ npm install react-native-video --save

JS

Demos & Hello World!

Demos

◉ **UIExplorer**

◉ You decide :)

  ◉ Todo

  ◉ 2048

  ◉ Hacker News

JS

Hello World!

Hello World :)

◉ Create an empty project

```
react-native init hongkongjs
```

◉ Add a component via npm (https://github.com/ide/react-native-button)

```
npm install react-native-button --save
```

JS

Debugging

◉ Can be done in Chrome

◉ Started within the app itself (via Cmd + Ctrl + Z)

JS
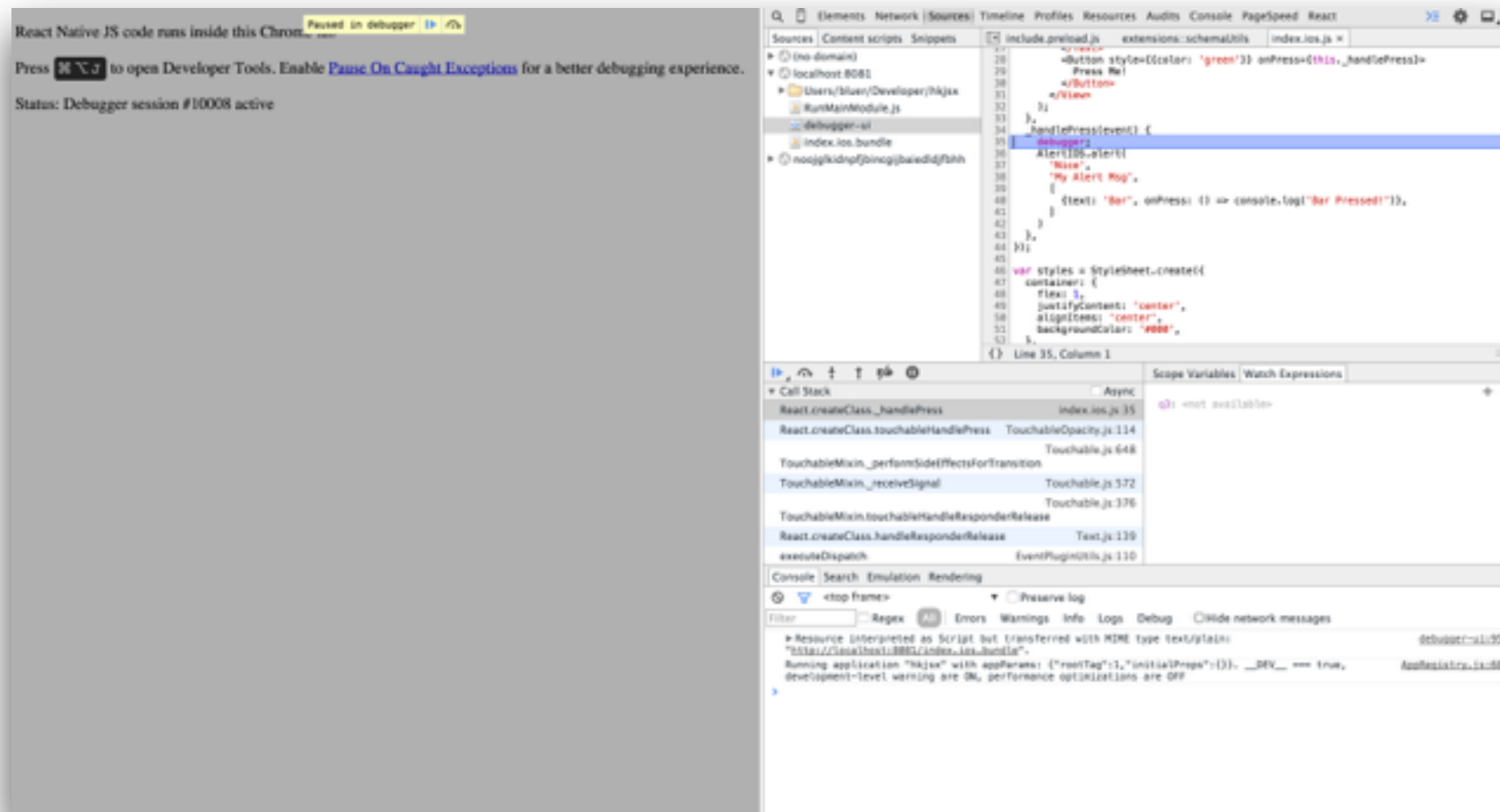
Packaging for Deployment

◉ Simply re-reference the bundle (versus the internal "webserver")

◉ Switch the appropriate line AppDelegate.m

```
$ curl 'http://localhost:8081/index.ios.bundle?
dev=false&minify=true' -o iOS/main.jsbundle
```

JS

Backend Integration

Backend Integration

◉ By definition it plays nicely with any RESTful API

◉ However, Parse React just out :)

◉ <u>Parse</u> (similarly to <u>Firebase</u>) is a seriously good compliment in that it provides

  ◉ Core Data

  ◉ Cloud Code

  ◉ Push

  ◉ Analytics

◉ It's also owned by Facebook so I wouldn't be surprised to see tighter ever integration

JS

React Native
Versus…

Versus Ionic (and Hybrid)

◉ I'm torn as Ionic has been evolving incredibly fast recently (with some great innovations such as Push, Creator, View, Deploy)

◉ Performance has also been reasonable

◉ Also I know native components is on the roadmap

JS

Versus "Pure" Native

- Theoretically minimal performance loss, although time / experience will tell

- Arguably significantly less complexity than writing pure native iOS and Android (and other)

- As always for graphically intensive / cutting edge work (e.g. latest API's) pure native is optimal

JS

The Future

The Future

◉ Already a lot of activity

    ◉ TouchID support

    ◉ SQLite3 bindings

    ◉ Camera and Video

    ◉ Pull Down to Refresh :)

◉ We're already seeing a lot of components

    ◉ http://react.parts/native-ios

◉ Exciting to follow :)

JS

Takeaways

JS

Takeaways

◉ It works!

◉ It doesn't cover every application type, but a good number (social, news, e-commerce, etc)

◉ Still weighing up how it stacks up against pure hybrid frameworks such as Ionic or TouchstoneJS

◉ **Powerful skill to start adding to your repertoire (and adds an ever stronger case for ReactJS)**

JS

Next Steps

Next Steps

- ◉ Get it installed

- ◉ React Dev Tools (http://fb.me/react-devtools)

- ◉ Check out some sample projects

  - ◉ https://github.com/iSimar/HackerNews-React-Native

Q&A

Next Month - MEAN + JS Tools