



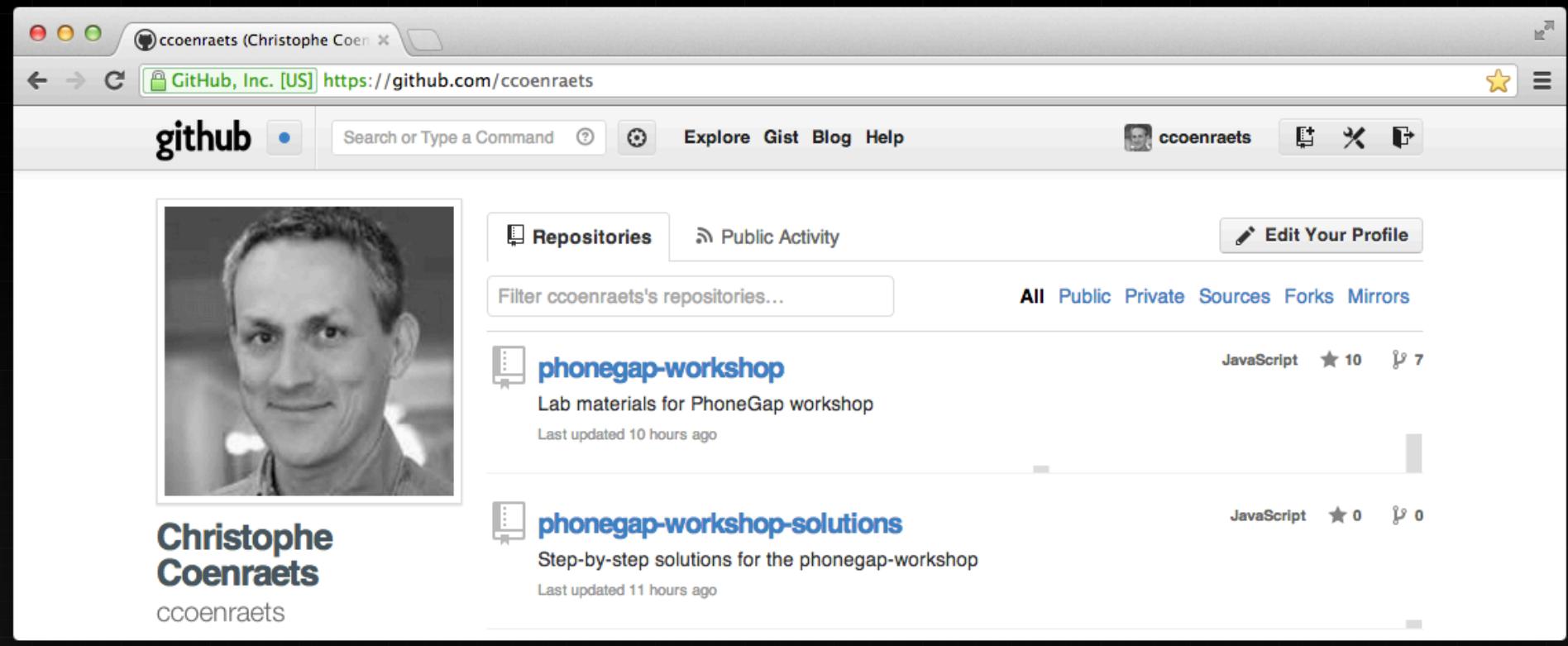
PhoneGap

BUILDING CROSS-PLATFORM MOBILE APPS WITH PHONEGAP

CHRISTOPHE COENRAETS
[HTTP://COENRAETS.ORG](http://COENRAETS.ORG)
@CCOENRAETS



<https://github.com/ccoenraets>

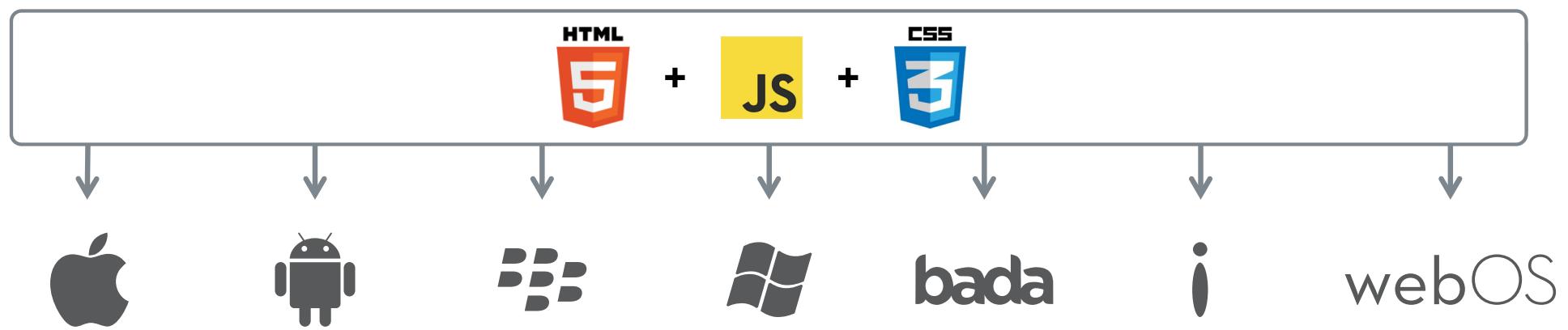


A screenshot of a web browser displaying the GitHub profile of user `ccoenraets`. The browser window has a light gray header bar with standard OS X-style buttons (red, yellow, green) and a title bar showing the URL `https://github.com/ccoenraets`. Below the title bar is a navigation bar with links for `Explore`, `Gist`, `Blog`, and `Help`. On the right side of the navigation bar is a user icon and the name `ccoenraets`. The main content area shows a large profile picture of a man with short hair, identified as `Christophe Coenraets` and `ccoenraets`. Below the profile picture, there are three repository cards:

- Repositories**: A button to view all repositories.
- Public Activity**: A link to view activity on public repositories.
- Edit Your Profile**: A button to edit the user's profile.

Below these buttons is a search bar labeled "Filter ccoenraets's repositories...". To the right of the search bar are filters for repository visibility: `All`, `Public`, `Private`, `Sources`, `Forks`, and `Mirrors`. The first repository listed is **phonegap-workshop**, described as "Lab materials for PhoneGap workshop", last updated 10 hours ago, and written in JavaScript with 10 stars and 7 forks. The second repository listed is **phonegap-workshop-solutions**, described as "Step-by-step solutions for the phonegap-workshop", last updated 11 hours ago, and written in JavaScript with 0 stars and 0 forks.

N Platforms, 1 App





HTML



CSS



JS



Mobile Sites

Package as Native App

Access device features
PhoneGap

Mobile Apps

PhoneGap and Cordova

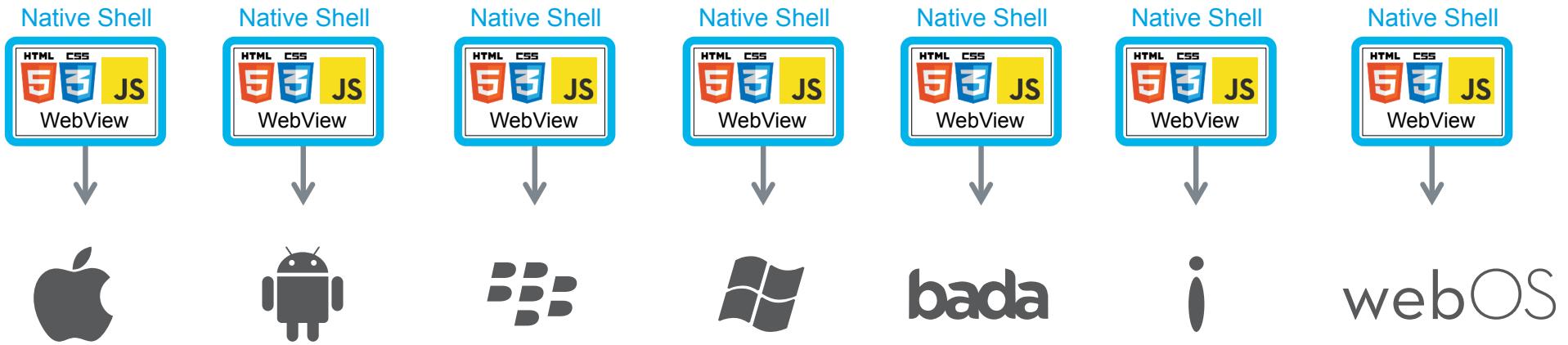


APACHE
CORDOVA™

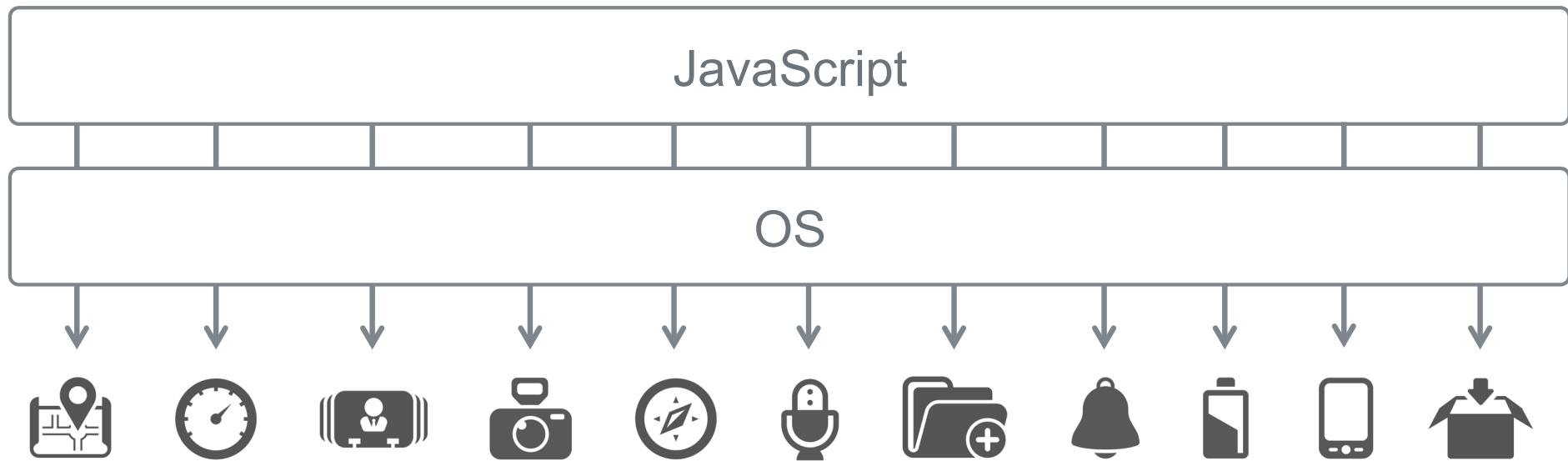


PhoneGap

Hybrid Apps



PhoneGap is a Bridge

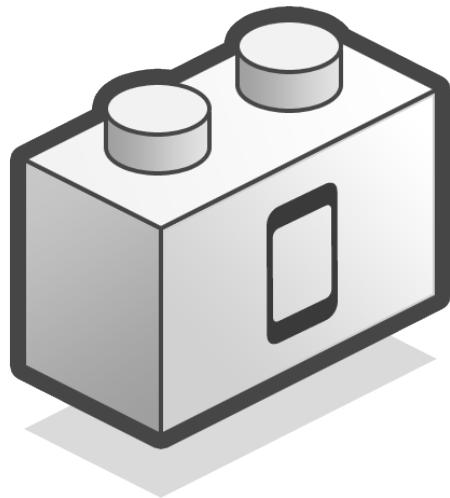


<http://docs.phonegap.com/en/2.2.0/index.html>

The screenshot shows the Apache Cordova Documentation homepage for version 2.2.0. The main content area is titled "API Reference". It is organized into four columns of API categories:

Category	Description	Category	Description
Accelerometer	Tap into the device's motion sensor.	Camera	Capture a photo using the device's camera.
Connection	Obtain the direction that the device is pointing.	Device	Quickly check the network state, and cellular network information.
Events	Gather device specific information.	Geolocation	Hook into native events through JavaScript.
File	Make your application location aware.	Media	Record and play back audio files.
Geolocation	Hook into the devices native storage options.	Notification	Visual, audible, and tactile device notifications.
Media		Storage	
Notification			
Storage			
Guides			
Getting Started Guides			
Command-Line Usage			
Upgrading Guides			

Plugins



- Barcode Reader
- Child Browser
- iAd
- ApplicationPreferences
- Screen Shot
- ExternalScreen
- inAppPurchaseManager
- LocalNotifications
- PushNotification
- Calendar

<https://github.com/phonegap/phonegap-plugins>

The screenshot shows the GitHub repository page for `phonegap / phonegap-plugins`. The repository has been forked from `purplecabbage/phonegap-plugins`. It has 2,354 stars and 1,253 forks. The `Code` tab is selected. Below the tabs, it says "Plugins for use with PhoneGap. — [Read more](#)". There are download options: [Clone in Mac](#), [ZIP](#), [HTTP](#), and [Git Read-Only](#) (<https://github.com/phonegap/phonegap-plugins.git>). A "Read-Only access" badge is present. The file list shows the following commits:

File	Author	Date	Message
Android	shazron	6 days ago	Moved plugin to author's repo. [dimitrismistriotis]
BlackBerry		3 months ago	Merge pull request #719 from mow415/master [becka11y]
Palm		a year ago	Strip debug info from plugin binary [bni]
Qt		a year ago	- Added PowerManagement plugin for Qt port of PhoneGap [Viras-]
WindowsPhone		2 months ago	Merge pull request #670 from rmituniewicz/barcodeWindows [shazron]
iOS		18 hours ago	Moved plugin to author's repo. [shazron]
iPhone		17 hours ago	Moved plugin to author's repo. [shazron]
.gitignore		2 years ago	Added exclusions to .gitignore [shazron]
README.md		19 days ago	Update README.md [shazron]

At the top right, there is a link to [1000+ commits](#).

When to go Hybrid?

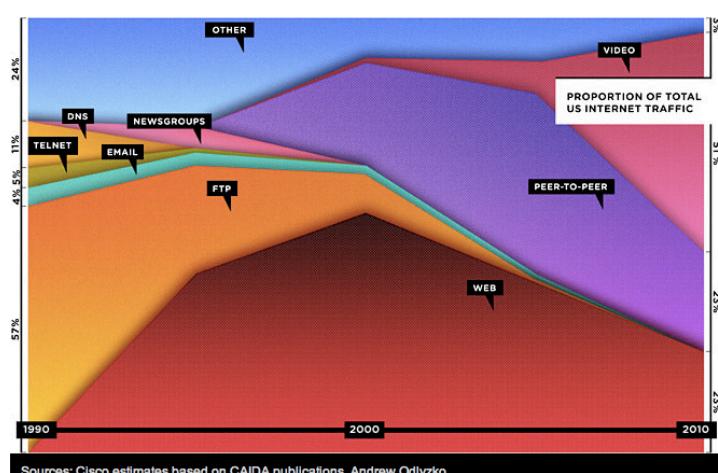


WIRED GEAR SCIENCE ENTERTAINMENT BUSINESS SECURITY DESIGN VIDEO INSIDER

The Web Is Dead. Long Live the Internet

By Chris Anderson and Michael Wolff | August 17, 2010 | 9:00 am | Categories: Wired

September 2010



Sources: Cisco estimates based on CAIDA publications, Andrew Odlyzko

The Web is dead. PLUS

The Web Is Dead? A Debate
How the Web Wins
How Do Native Apps and Web Apps Compare?

ReadWriteWeb

Featured Sections: Mobile

The App is Dead (OK Not Really, But The Browser Is Back)

RICHARD MACMANUS · MAY 10TH, 2012

17 Comments | 98 Likes | 5,863 Tweets | 668 Shares | 72 +1 | 208 LinkedIn Shares

Like 98 | 98 people like this. Be the first of your friends.



"If it can be done on the Web, build it for the Web; if it can't, build an app." — Alex Schleifer, GM of the Media Lab at SAY Media

Thanks to Apple's iOS and Google's open source Android OS, smartphone and tablet apps have enjoyed a period of astounding success over the past few years. Towards the end of 2010, Wired magazine even declared that "the Web is dead." Who needs browsers when we have apps galore on our smartphones and tablets? Well, fast forward 18 months and things have changed. Browsers are starting to trend up again and some online businesses are turning away from apps.

Mobile Sites vs Hybrid Apps vs Native Apps

	Mobile Site	Hybrid App	Native App
Access	Universal	App Store	App Store
Updates	Instant	App Store	App Store
Graphic	HTML, Canvas, SVG	HTML, Canvas, SVG	Native
Performance	Slower	Slower	Faster
Device APIs	Limited	Yes	No
Developer Skills	Web	Web	Objective C / Java / C
Connectivity	Mostly Online	Online / Offline	Online / Offline
Push Notification	No	Yes	Yes

BBC Olympics



O2UK 3G

BBC OLYMPICS

Usain Bolt storms back to form in Rome

Bryant praise for Team USA

Nadal's knee still causing concern

Home Schedule Live All sports More

O2UK 3G

MEDALS

London 2012 Medals Table

Rank	Country	Gold	Silver	Bronze	Total
1	CHN	51	21	28	100
2	USA	36	38	36	110
3	RUS	23	21	28	72
4	AUS	19	13	15	47
5	DEU	16	10	15	41
6	GBR	14	15	17	46
7	KOR	13	10	8	31
8	JPN	9	6	10	25
9	ITA	8	10	10	28

Home Schedule Live All sports More

UNTAPPD

The screen shows the Untappd mobile application interface. At the top, there's a navigation bar with icons for Friends (a person icon), Global (a globe icon), and Nearby (a location pin icon). The title "★ UNTAPPD ★" is centered above the content area. Below the title, there are two main sections: "Kim's Kokomo Bar & Grill" and "Charleston International ...". Each section includes a user profile picture, name, check-in time, and a brief description of the beer being checked in. The "Kim's Kokomo Bar & Grill" section shows a photo of a beer tap labeled "Real Ale Brewing Company" and "DISCOVER Brewtopia". The "Charleston International ..." section shows a photo of a beer tap labeled "Palmetto Brewing Company". At the bottom of the screen, there are five navigation buttons: "THE PUB" (speech bubble), "DISCOVER" (magnifying glass), "DRINK UP" (two glasses icon, highlighted in yellow), "MY TAB" (receipt icon), and "NOTICES" (down arrow icon).

The screen shows the Untappd mobile application interface. The title "★ UNTAPPD ★" is at the top. Below it is a user profile for "Greg Avola" from "New York, NY". The profile includes a small profile picture of a man with glasses, social media links (checkmark, Facebook, Twitter), and a bio: "Co-Founder and CTO of Untappd, Web Developer, Beer Drinker, Community Guy,". Below the profile are three statistics boxes: "CHECKINS: 1215", "DISTINCT BEERS: 631", and "TOTAL BADGES: 119". Below these are four small thumbnail images of beer bottles and cans. At the bottom, there are three buttons: "ACTIVITY" (blue background), "WISH LIST" (white background), and "FRIENDS" (white background). The "DRINK UP" button at the very bottom is also highlighted in yellow.

The screen shows the Untappd mobile application interface. The title "★ UNTAPPD ★" is at the top. Below it is a map of New York City with a yellow location pin indicating the user's last seen location at "Rivington Music Rehearsal Studios". A callout box next to the pin says "Takeanotherswig was last seen at Rivington Music Rehearsal Studios about 1 hour ago". The map shows various streets and landmarks. At the bottom of the screen, there are five navigation buttons: "THE PUB" (speech bubble), "DISCOVER" (magnifying glass), "DRINK UP" (two glasses icon, highlighted in yellow), "MY TAB" (receipt icon), and "NOTICES" (down arrow icon).

Salesforce.com Logger

A mobile application interface with a dark grey header containing three icons: a clock, a magnifying glass, and a gear. Below the header, there are two tabs: "Contacts" and "Accounts". The "Contacts" tab is selected, indicated by a blue background. The list of contacts is displayed in a scrollable table:

Contact Name
Craig Villamor
Sönke Rohde
Grant Anderson
Akhilesh Gupta
Ronald Fischer
Edward Stamos
Artur Kesel

A detailed view of a contact profile for **Edward Stamos**, President and CEO of Acme. The profile includes a purple header with the contact's name and title, followed by the company name "Acme". Below the header are six action buttons arranged in a 2x3 grid:

Action	Action	Action
Check-In	Follow-Up	Take Note
Call	Email	Map

At the bottom of the screen, there is a navigation bar with the word "Acme" and a right-pointing arrow.

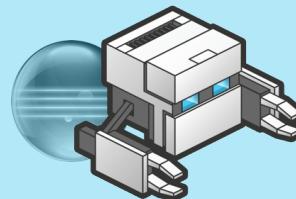
A task creation dialog for **Edward Stamos**. The dialog has a purple header with the contact's name and title, followed by the company name "Acme". The main area of the dialog contains fields for "Follow-Up" (with a placeholder "Reminder Date"), a text input for "What do you need to do?", and two buttons at the bottom: "Cancel" and "Save Task". A "Share on Chatter" button with a "C" icon is located at the bottom right. The entire dialog is set against a light grey background.

Part 1:

Exploring the App
Choosing a Local Storage Option

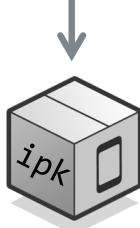
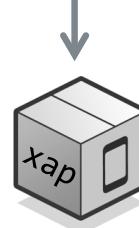
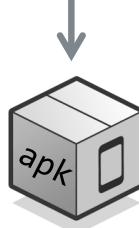
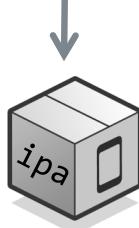
N IDEs, N SDKs

HTML
5 + JS + CSS



PhoneGap Build

C++



webOS

Part 2:

Building with PhoneGap Build

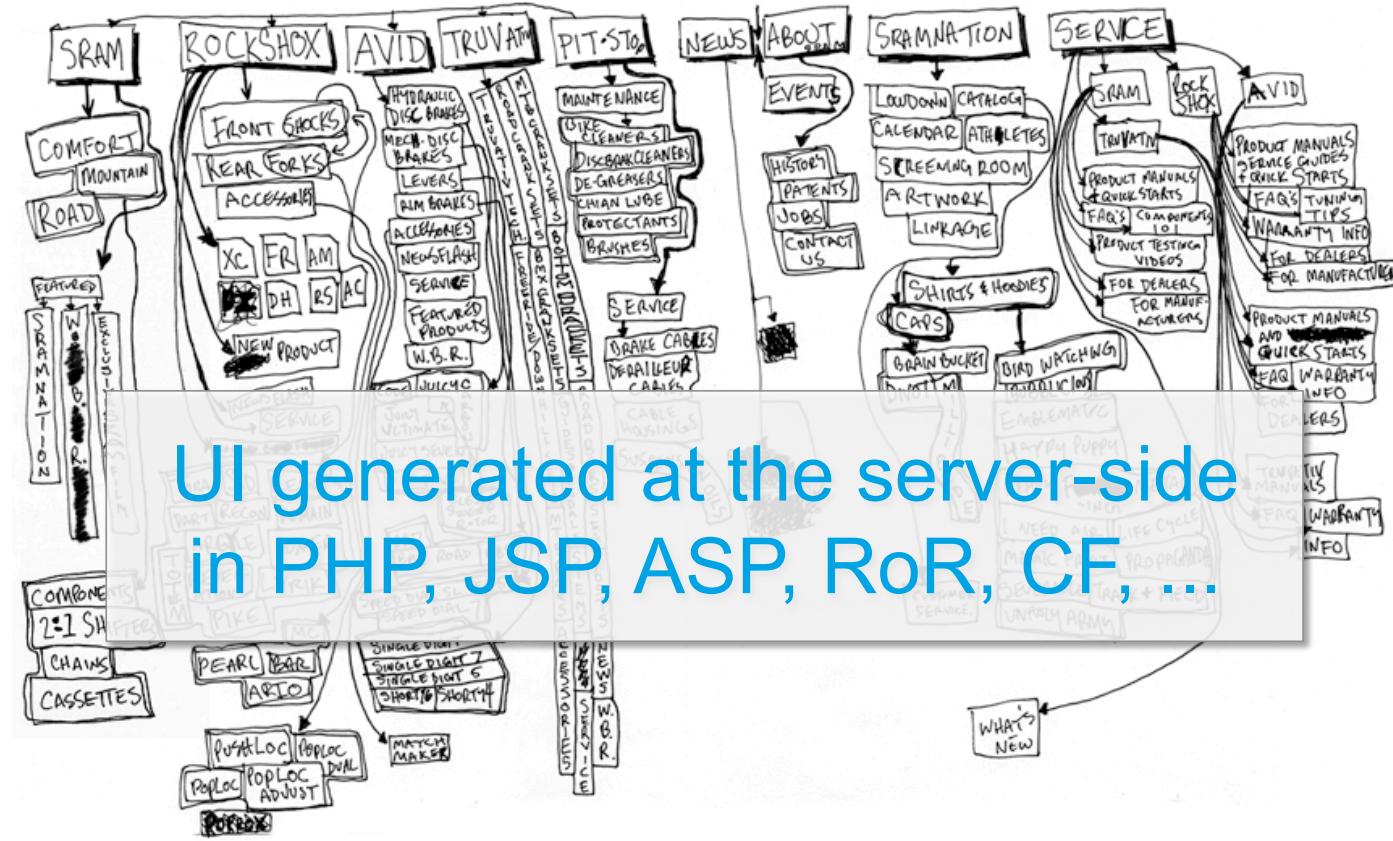


Part 3:

Using Native Notification

How do I architect a mobile HTML application?

Old School



New School

```
<html>
<head>
    <title>My Big App</title>
    <script src="my-big-app.js"></script>
</head>
<body></body>
```

Single Page Application
UI built dynamically at the client-side in
JavaScript



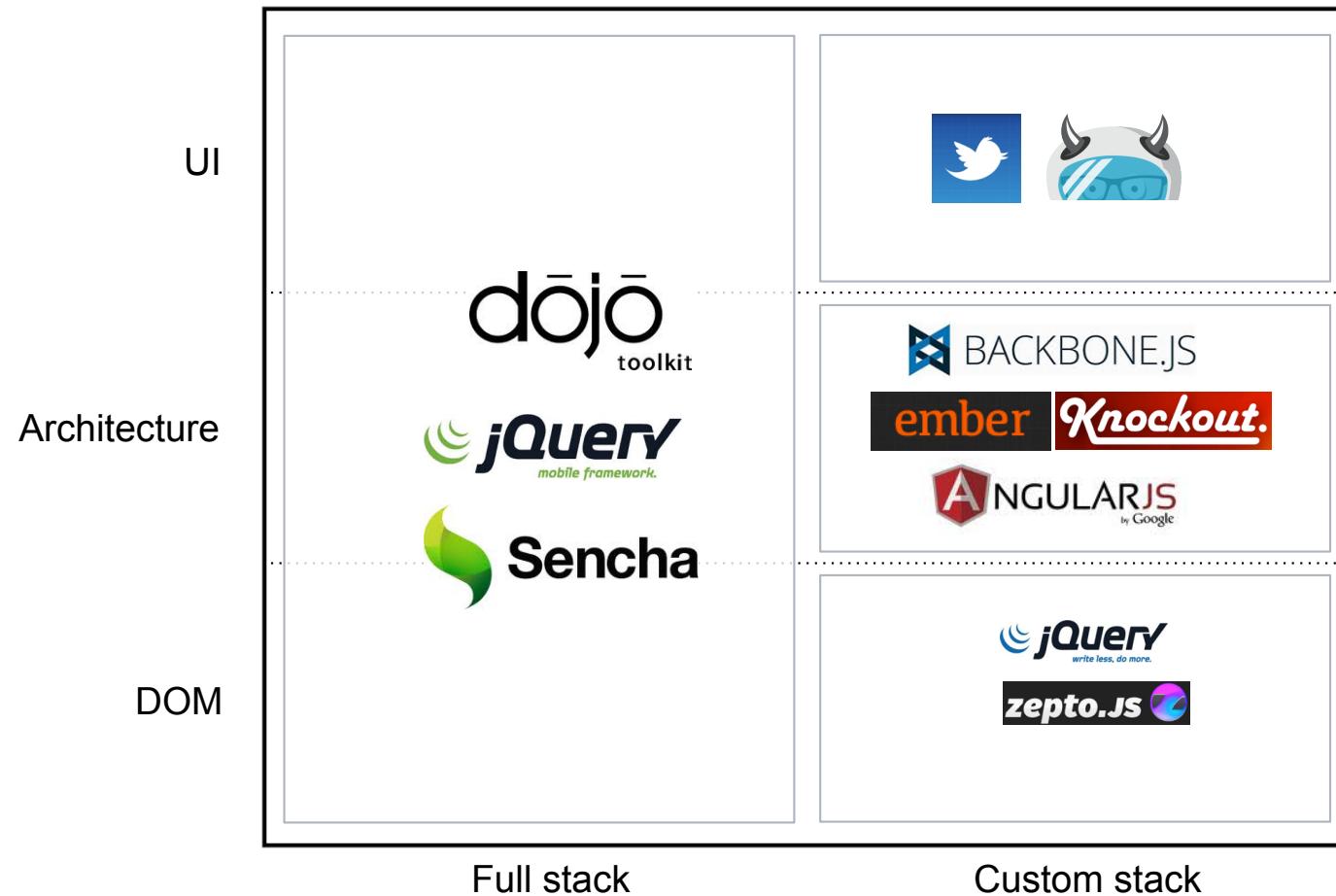
←
JSON
JSONP



RESTful API

URL	HTTP Method	Result
api/employees	GET	Get all employees
api/employees/1	GET	Get employee #1
api/employees/1/reports	GET	Get reports of employee #1
api/employees	POST	Add employee
api/employees/1	PUT	Modify employee
api/employees/1	DELETE	Delete employee

Framework Options



Part 4:

Setting Up a Single Page Application

Template: Before

```
$('#employeePic').attr('src', 'pics/' + employee.firstName + '_' + employee.lastName + '.jpg');
$('#fullName').text(employee.firstName + ' ' + employee.lastName);
$('#employeeTitle').text(employee.title);
$('#city').text(employee.city);
if (employee.managerId>0) {
    $('#actionList').append('<li><a href="employeedetails.html?id=' + employee.managerId + '"><p class="line1">View Manager</p>' +
        '<p class="line2">' + employee.managerFirstName + ' ' + employee.managerLastName + '</p></a></li>');
}
if (employee.reportCount>0) {
    $('#actionList').append('<li><a href="reportlist.html?id=' + employee.id + '"><p class="line1">View Direct Reports</p>' +
        '<p class="line2">' + employee.reportCount + '</p></a></li>');
}
if (employee.email) {
    $('#actionList').append('<li><a href="mailto:' + employee.email + '"><p class="line1">Email</p>' +
        '<p class="line2">' + employee.email + '</p></a></li>');
}
if (employee.officePhone) {
    $('#actionList').append('<li><a href="tel:' + employee.officePhone + '"><p class="line1">Call Office</p>' +
        '<p class="line2">' + employee.officePhone + '</p></a></li>');
}
if (employee.cellPhone) {
    $('#actionList').append('<li><a href="tel:' + employee.cellPhone + '"><p class="line1">Call Cell</p>' +
        '<p class="line2">' + employee.cellPhone + '</p></a></li>');
    $('#actionList').append('<li><a href="sms:' + employee.cellPhone + '"><p class="line1">SMS</p>' +
        '<p class="line2">' + employee.cellPhone + '</p></a></li>');
}
```

Template: After

```
<div>
  
  <div class="employee-details">
    <h3><%= firstName %> <%= lastName %></h3>
    <p><%= title %></p>
  </div>

  <ul class="action-list">
    <% if (managerLastName) { %>
      <li><a href="#employees/<%= managerId %>"><h3>View Manager</h3><p><%= managerName %></p></a></li>
    <% } %>
    <li><a href="#employees/<%= id %>/reports"><h3>View Direct Reports</h3><p><%= reportCount %></p></a></li>
    <li><a href="tel:<%= officePhone %>"><h3>Call Office</h3><p><%= officePhone %></p></a></li>
    <li><a href="tel:<%= cellPhone %>"><h3>Call Cell</h3><p><%= cellPhone %></p></a></li>
    <li><a href="sms:<%= cellPhone %>"><h3>SMS</h3><p><%= cellPhone %></p></a></li>
    <li><a href="mailto:<%= email %>"><h3>Email</h3><p><%= email %></p></a></li>
  </ul>
</div>
```

Check out Mustache, underscore.js,
handlebar.js, HAML, ...

Part 5:

Using Handlebar Templates

Part 6:

Creating a View

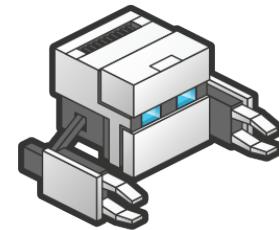
Summary



PhoneGap



APACHE
CORDOVA™



Write cross platform mobile apps
with web standards

Build for 6 platforms
and debug “on-device”

<http://incubator.apache.org/cordova/>
<http://phonegap.com>

<https://build.phonegap.com>