chrome

slides at goo.gl/kIfUe

The Mobile Web Developer's Tool Belt

Pete LePage
Developer Advocate, Google

Tooling In The Web Dev Lifecycle

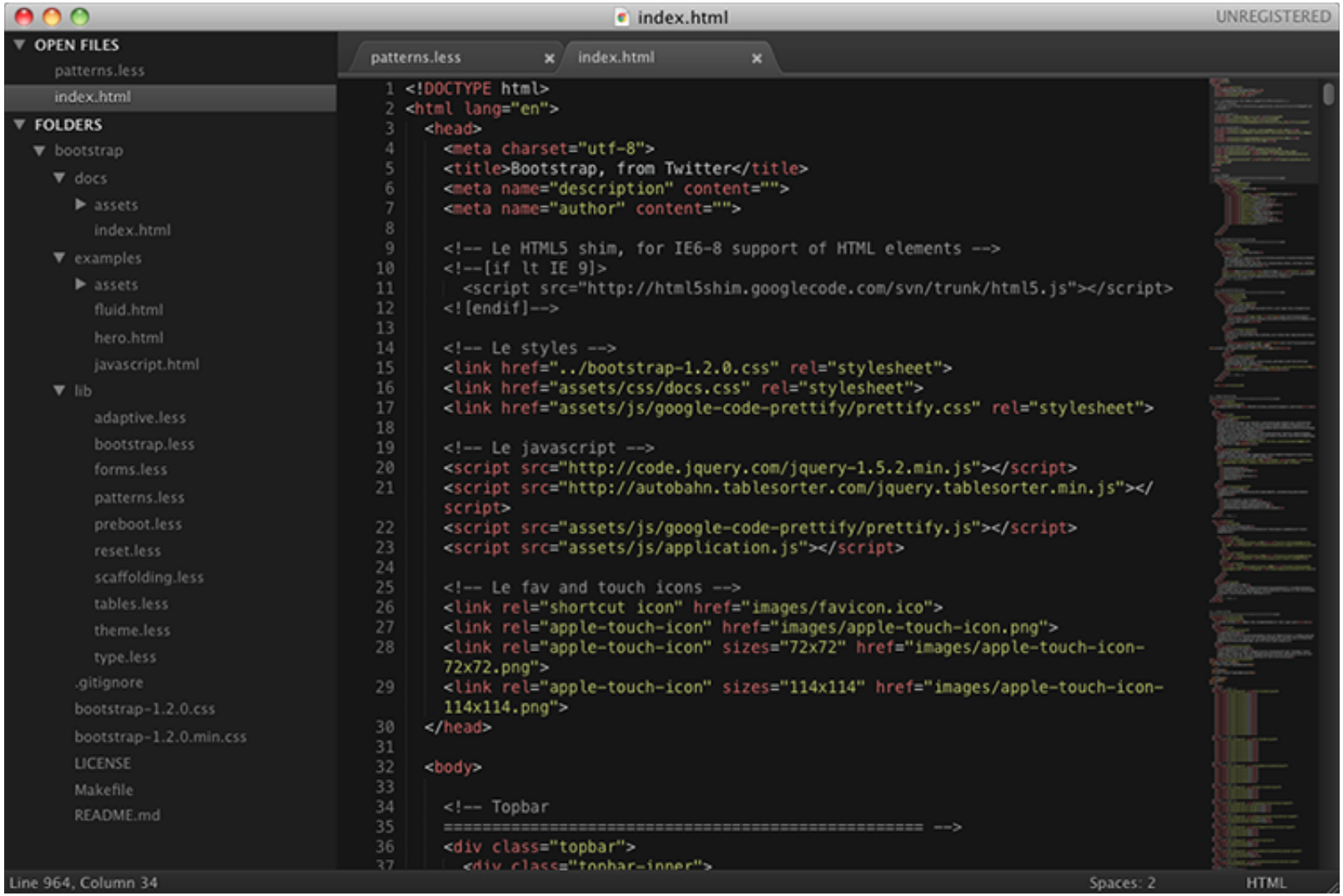
- Development Environments
- Authoring Abstractions
- Frameworks & Libraries
- Testing & Iteration Flow
- Performance Tuning
- Build Optimization
- Deployment

Check out Paul Irish's presentation on Tooling and the Web App Development Stack

Development Environment

Code, Compile, Build, & Reload

Sublime Text 2



CodeKit

It's like steriods for web developers

- Compiles nearly everything
- Live browser reloads
- Combines and minifies
- Optimizes images
- JSHint and JSLint
- Team collaboration
- Easy frameworks

For more information, see incident57.com/codekit/

Development Tools

A More Lickable Web

Don't let mobile, enterprise or web be an excuse for ugly, beauty sells!

Inspiration

- www.mobile-patterns.com
- pttrns.com

Human Interface Guidelines*

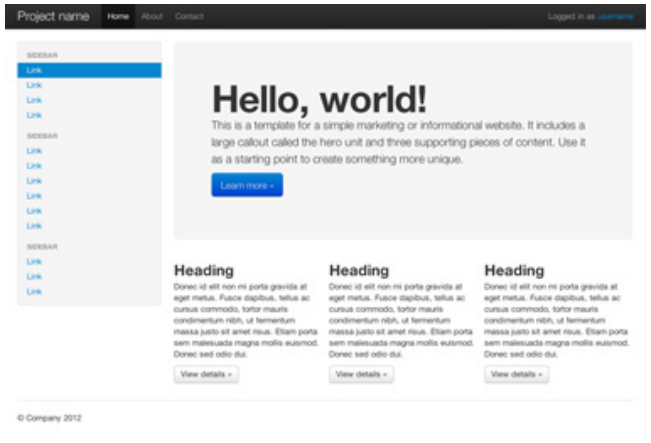
- Android's Human Interface Guidelines
- iOS Human Interface Guidelines
- Developing Web Content for Safari
- User Experience Guidelines for Windows Phone

* Use caution: following only one will look weird on another.

Boiler Plates

jQuery Mobile

Bootstrap



Helpful Libraries: FT Fast Click

Problem: 300ms delay between a tap and the click event firing on mobile browsers.

Solution: Track `TouchStart` events and fire a click event as soon as it receives a `TouchEnd` event.

JAVASCRIPT

```
window.addEventListener('load', function() {
  new FastClick(document.body);
}, false);
```

github.com/ftlabs/fastclick

Helpful Libraries: JSConsole

Problem: No debug console on mobile devices without using a remote debugger.

Solution: Send `console.log` events to a separate server that you connect to from your desktop.

1. Open http://jsconsole.com/ on the desktop computer and type `:listen`
2. Paste output into the source for your mobile app
3. ????
4. Profit. Okay, not quite yet.

jsconsole.com/

Helpful Libraries: HammerJS

Problem: Makes handling multi-touch gestures hella easy!

Solution: A 2k library that handles tap, double tap, swipe, hold, transform and drag.

JAVASCRIPT

```
var hammer = new Hammer(document.getElementById("contain
hammer.ondragstart = function(ev) { };
hammer.ondrag = function(ev) { };
hammer.ondragend = function(ev) { };
hammer.onswipe = function(ev) { };
```

eightmedia.github.com/hammer.js/

Helpful Libraries: Lawn Chair

Problem: IndexedDB, WebSQL or LocalStorage, which works best?

Solution: Provides a simple API that abstracts away the implementation of each service.

JAVASCRIPT

```
var people = lawnchair();
people.save({name:"Pete", email:"petele@google.com"});

people.all(function(peeps) {
  peeps.forEach(function(person) {
    console.log(person);
  });
});
```

brian.io/lawnchair/

High DPI Displays

There isn't an easy answer yet, but there are options...

MEDIA QUERIES

```
#my-image { background: (low.png); }
@media only screen and (min-device-pixel-ratio: 1.5) {
  #my-image { background: (high.png); }
}
```

IMAGE SET

```
// Only works in Safari & Chrome today.
background-image: url(icon1x.jpg);
background-image: -webkit-image-set(
  url(icon1x.jpg) 1x,
  url(icon2x.jpg) 2x
);
```

SOURCE SET

```
// Not yet implmented by any browser :(
<img alt="my awesome image" src="banner.jpeg"
  srcset="banner-HD.jpeg 2x, banner-phone.jpeg 640w, banner-phone-HD.jpeg 640w
```

High DPI Displays

Best Practices

- Using image replacement is generally frowned upon
- Use vector images or CSS styles wherever possible
- Heavily compressed 2x images often look better than enlarged 1x images
- Use icon fonts like Font Awesome

For more information, see goo.gl/wjaLT

Other Helpful Tips & Stuff To Know

- Fingers != mouse pointer
- Avoid: tables, relative positioning, absolute positioning, floats
- Headers and Footers? Use `position: fixed;`
- Scroll inside elements? Use `overflow: scroll;`
- Inertial scrolling? Use `-webkit-overflow-scrolling: touch;` (iOS 5+)

Testing

Faking It: Network Link Conditioner

Testing locally doesn't simulate real world mobile networks, but there are tools you can use to simulate them.

- Charles Proxy [Mac, PC, Linux]
- Network Link Conditioner [Mac]

Faking It: Chrome's Dev Tools

Chrome's Dev Tools allows you to over-ride some settings or force certain behaviours like:

- User Agent
- Device Metrics
- Simulate Touch Events
- Coming Soon: Geo Location
- Coming Soon: Device Orientation
- Coming Eventually: Device Pixel Ratio

Faking it: Emulators

Emulators are a great place to start, but don't give you a complete picture.

- Android
- iOS and without running XCode
- Browser Stack

Real Thing: Chrome Remote Debugger

One Time Setup

1. Install the Android SDK
2. On the mobile device, enable USB debugging at the OS level
3. On the mobile device, launch Chrome. Open `Settings > Advanced > Developer tools` and check the `Enable USB Web debugging` checkbox.

Debugging

1. Connect the mobile device to computer via USB
2. On the desktop, run `adb forward tcp:9222 localabstract:chrome_devtools_remote`
3. Open the desktop, open Chrome and navigate to localhost:9222

See goo.gl/K2Qhj for more information.

Real Thing: Safari Remote Debugger

One Time Setup

1. On the mobile device, enable the Web Inspector under `Settings > Safari > Advanced`
2. On the desktop, open Safari and open the preference pane, under `Advanced`, check the `Show Develop menu` in the menu bar checkbox

Debugging

1. Connect the mobile device to your computer
2. On the desktop, click the `Develop` menu bar item, and choose the device you want to debug

See goo.gl/TLmWW for more information.

Real Thing: Firefox Remote Debugger

One Time Setup

1. On the desktop, navigate to `about:config`, search for `remote-en` enable it, then restart Firefox.
2. On the mobile device, navigate to `about:config`, search for `debugger`, toggle `devtools.debugger.force-local` to false and `devtools.debugger.remote-enabled` to true, then restart Firefox.

Debugging

1. On the mobile device, find the IP address
2. On the desktop, click the `Tools` menu bar item, and choose `Web Developer > Remote Debugger` and enter the remote IP address plus port 6000.

See goo.gl/pQe4z for more information.

Real Thing: Open Device Labs

source: Viljami Salminen goo.gl/1yu7c

A Few Favors to Ask!

Chrome Mobile Office Hours

Responsive vs Separate Sites with Brad Frost

What: Should we create a separate mobile site or create a responsive experience instead?

Join Brad Frost as he takes apart the Obama and Romney campaign webites.

When: November 14th, 10:30am ET

Where: goo.gl/r01L6

We ~~Want~~ Need Your Help!

Don't accept the status quo

- File any Chrome bugs you find at new.mcrbug.com
- Build a mobile web experiment and submit it at m.chromeexperiments.com to show off your skills!
- Start an open device lab in your area
- The mobile web is what **you** make of it.

<Thank You!>

Questions?

Pete LePage
g+ petelepage.com/plus/
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slides goo.gl/kIfUe

chrome