APPS FOR FIREFOX OS

What are they, and how can I build one?

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The Web is the Platform

* Apps on FirefoxOS are built exclusively using web technologies

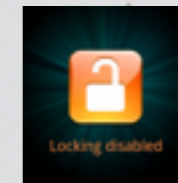* The very same stack used to build (modern) web pages:

  * HTML(5)

  * CSS3

  * JavaScript

* An app is simply a collection of web pages designed to look and feel like one

Why the Web?

* A single code-base for all platforms

* Based on Open Standards

* Participatory in nature, can get started very quickly & easily

* No lock-in

Apps are not websites

✳ A common mistake is to repurpose an existing website into an app without any modification

✳ Mobile devices operate in a unique environment that must be take into account while designing an app

✳ What are some common pitfalls?

✳ 3 big **gotchas**: Layout, Offline, Transitions

Layout

✻ Mobile screens are not only smaller than desktops, but are also subject to orientation changes by users

✻ Readability is **very** important

✻ Luckily, CSS3 has everything you need to serve different layouts based on screen size!

✻ Advanced templates like **bootstrap** will even gracefully switch between different layouts (*responsive design*)
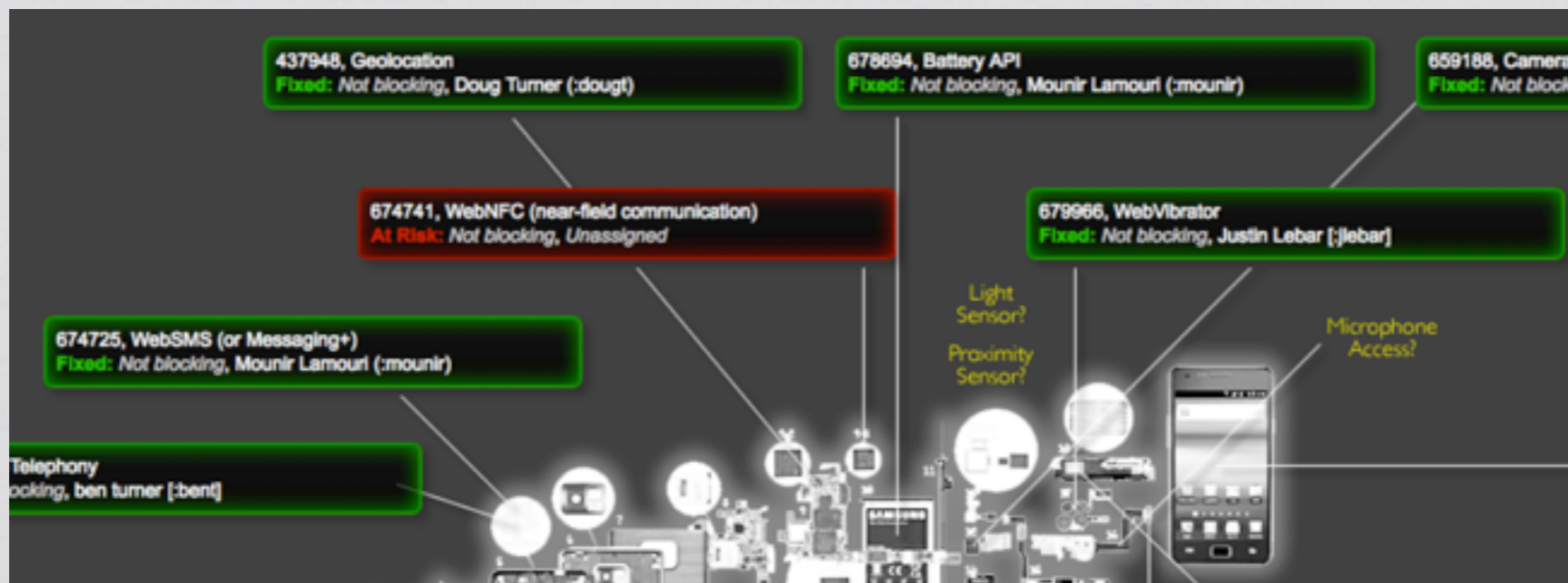
Offline

✳ Unfortunately, you don't get this for free

✳ Special considerations must be made while developing the app

✳ An arsenal of tools at your disposal to help you ranging from **localStorage** to **AppCache**

✳ Always check for errors!
XHRs are most susceptible

Launch & Transitions

* The white page interstitial is acceptable when browsing the web, but not when using an App

* Special care should be taken to have a very smooth launch experience by using a very small, quick to load page

* Subsequent page loads should be handled with CSS3 transforms to move in preloaded content to avoid the white screen effect

* Fortunately, this is not hard to do in many JS frameworks

WebAPIs

* Every piece of hardware in a phone running FirefoxOS is accessible to JavaScript!

* Geolocation, Camera, Accelerometer, Compass, TCP Sockets, SMS, Phone, Vibration… what do **you** need as a developer?

Enough Talk, Show me the Code!

✳ You can get started very quickly in just two steps:

   ✳ Create an app template in Mortar

   ✳ Deploy the app to a B2G Desktop build

✳ Iterating on your app is easy with Firefox Nightly
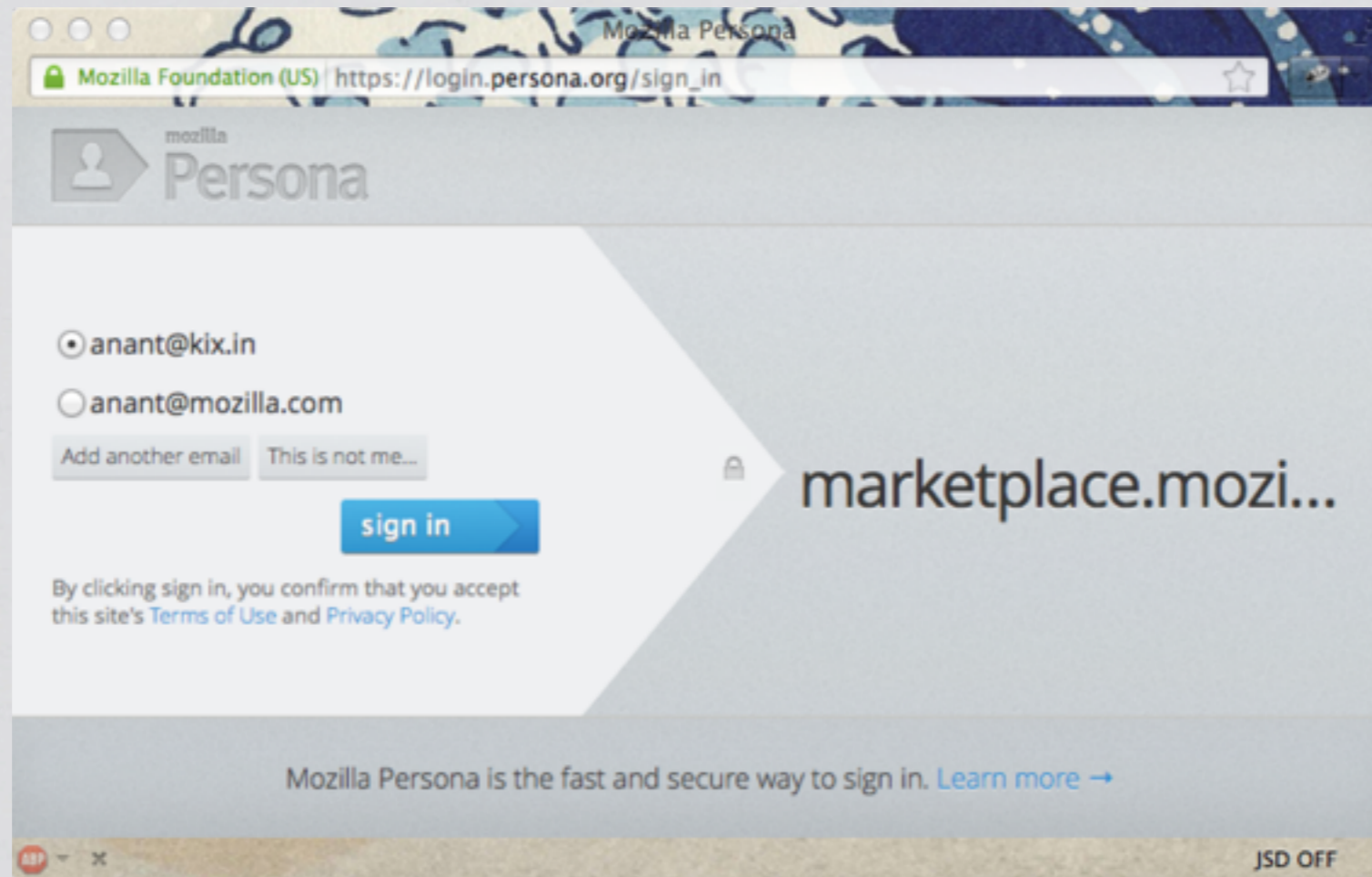
Mortar

```
$ git clone https://github.com/mozilla/mortar.git
$ cd mortar && npm install
$ ./bin/build app-stub demo-app
```

B2G Desktop Build

```
$ wget http://ftp.mozilla.org/pub/mozilla.org/b2g/nightly/...
$ git clone https://github.com/mozilla-b2g/gaia
$ make -C gaia profile
$ /path/to/b2g -p gaia/profile
```

Identity with Persona

```
navigator.id.watch(callback);
navigator.id.request();
```


Integrating a login system is super easy!

Easy Payments

Support for paid apps…
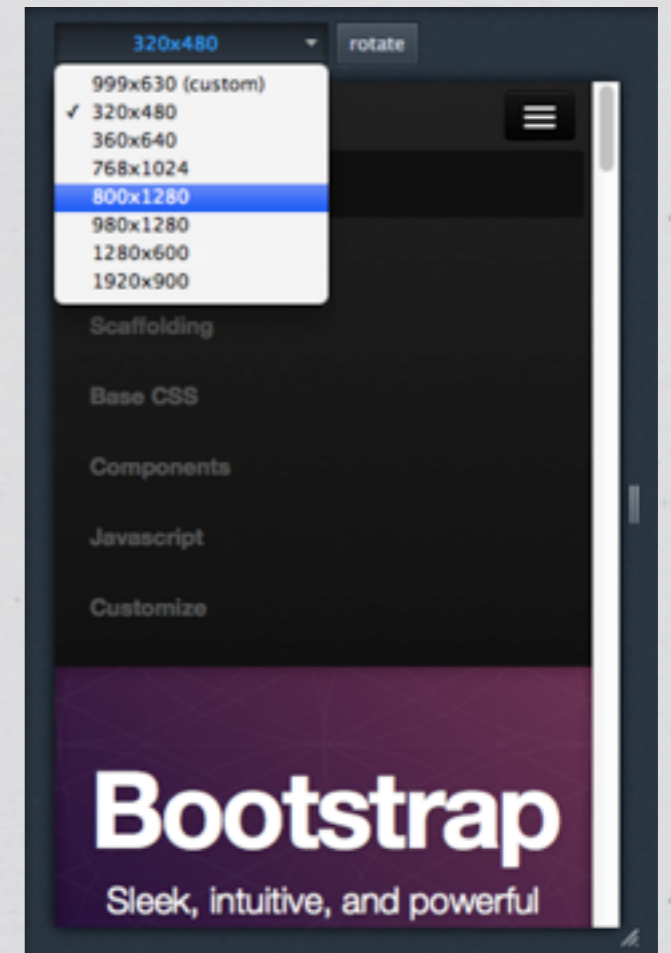
```
mozmarket.receipts.verify(...);
```

… and in-app payments …
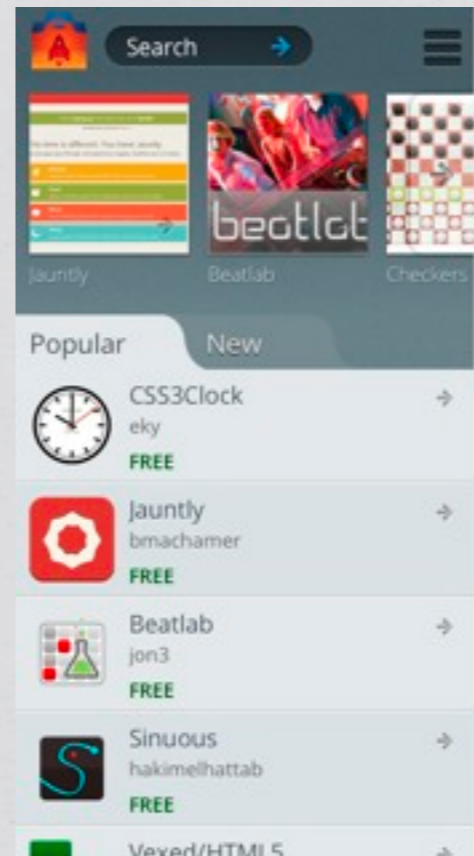
```
let req = mozmarket.buy(...);
req.sign(jwt);
```

Firefox Nightly

✳ All your standard developer tools, now in-built!

✳ Responsive layout preview

✳ DOM Tree Inspector (also available in 3D!)

Finishing Touches

* Packaging
  Only needed for certain types of apps

* Submit to the Marketplace!

Happy Hacking!

HTML / CSS / JS
+
Mortar / Bootstrap
+
Firefox Nightly / B2G Desktop Build
=
An amazing app!

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