

The Joshfire Framework

Technical overview of the 0.9 release

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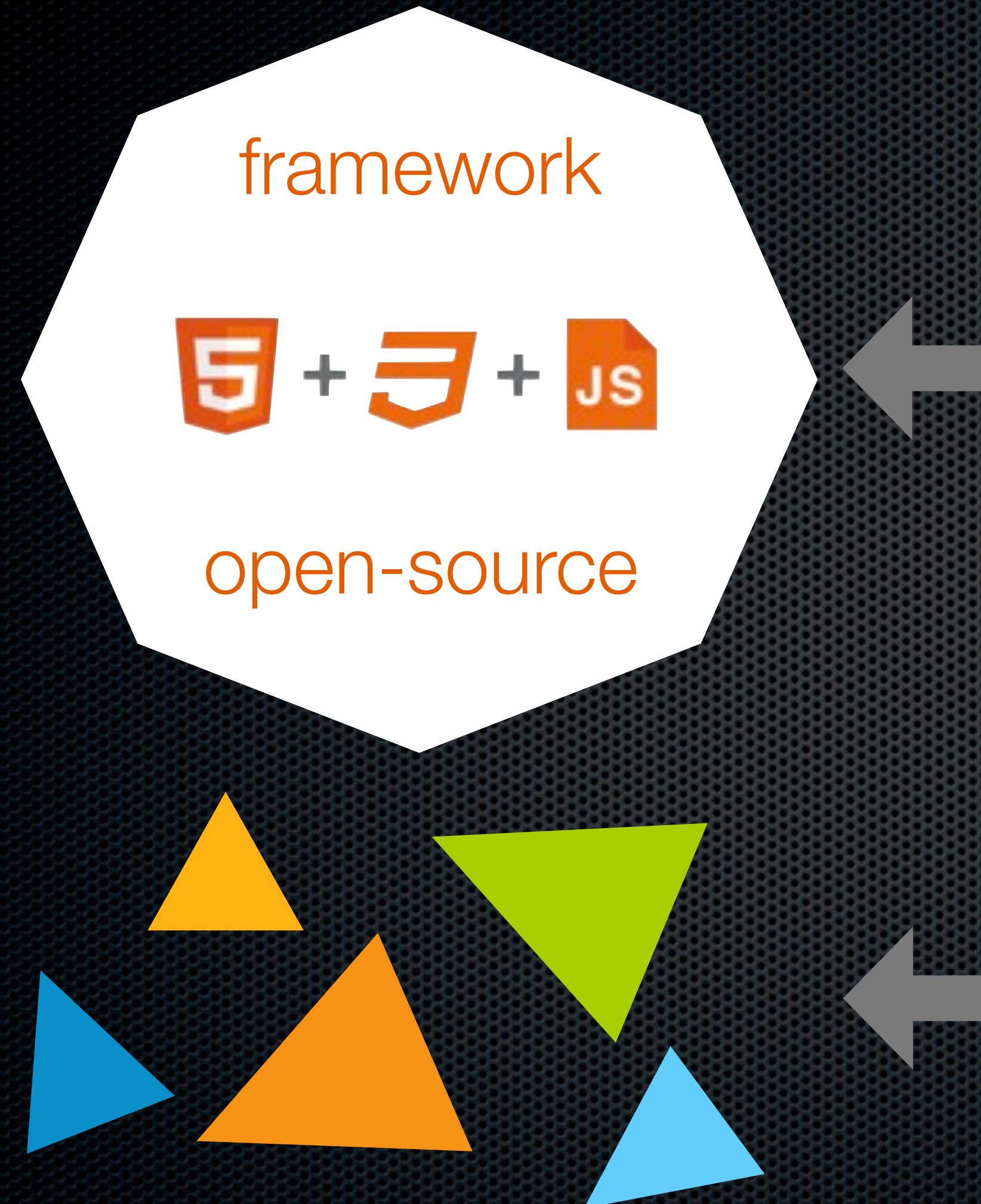
What problem Joshfire solves

- A new device every day...
- Technological fragmentation
- Some boxes/SDKs are very hard to develop for
- Agencies selling N apps for N devices



Increasing fragmentation => Developer pain

The solution



A powerful framework based only on standard web technologies

A library of device-specific adapters

One app, many devices



- For developers:
 - Simple, fast
 - Documented, standard
 - Easy to maintain
 - Evolutive
- For users:
 - A continuous experience through all their devices

Let's do a cross-device video app

Specs

- There's a list of videos
- I choose a video
- Video plays
- (Repeat on new device)

HTML5 ?

```
<html>
<body>
  <video id="myplayer" controls autoplay />
  <ul>
    <li><a href="video1.mp4">Video 1</a></li>
    <li><a href="video2.mp4">Video 2</a></li>
  </ul>
  <script>
    $('li a').click(function(ev) {
      $('#myplayer')[0].src = ev.target.href;
    });
  </script>
</body>
</html>
```

Not actually cross-device

- <video> nightmare
- jQuery on poor browsers :/
- Keyboard/Remote support?
- How to load Video 3?
- Server-side?

Describe what you want!

```
var Data = [
  {
    "id": "1",
    "url": "video1.mp4"
  },
  {
    "id": "2",
    "url": "video2.mp4"
  },
];
```

```
var UI = [
  {
    "id": "myPlayer",
    "type": "video"
  },
  {
    "id": "myVideos",
    "type": "list",
    "dataPath": "/",
    "onSelect": function(elt) {
      app.ui.myPlayer.play(elt.url);
    }
  }
];
```

Every Joshfire app has a Data Tree and a UI Tree

Describe what you want!

```
var Data = [
  {
    "id": "videos",
    "children": [
      {
        "id": "1",
        "url": "video1.mp4"
      },
      {
        "id": "2",
        "url": "video2.mp4"
      }
    ]
  }
];
```

```
var UI = [
  {
    "id": "myPlayer",
    "type": "video"
  },
  {
    "id": "myVideos",
    "type": "list",
    "dataPath": "/videos/",
    "onSelect": function(elt) {
      app.ui.myPlayer.play(elt.url);
    }
  }
];
```

Every Joshfire app has a Data Tree and a UI Tree

Describe what you want!

```
var Data = [
  {
    "id": "videos",
    "children": function(callback) {
      myVideoApi(callback);
    }
  }
];
```

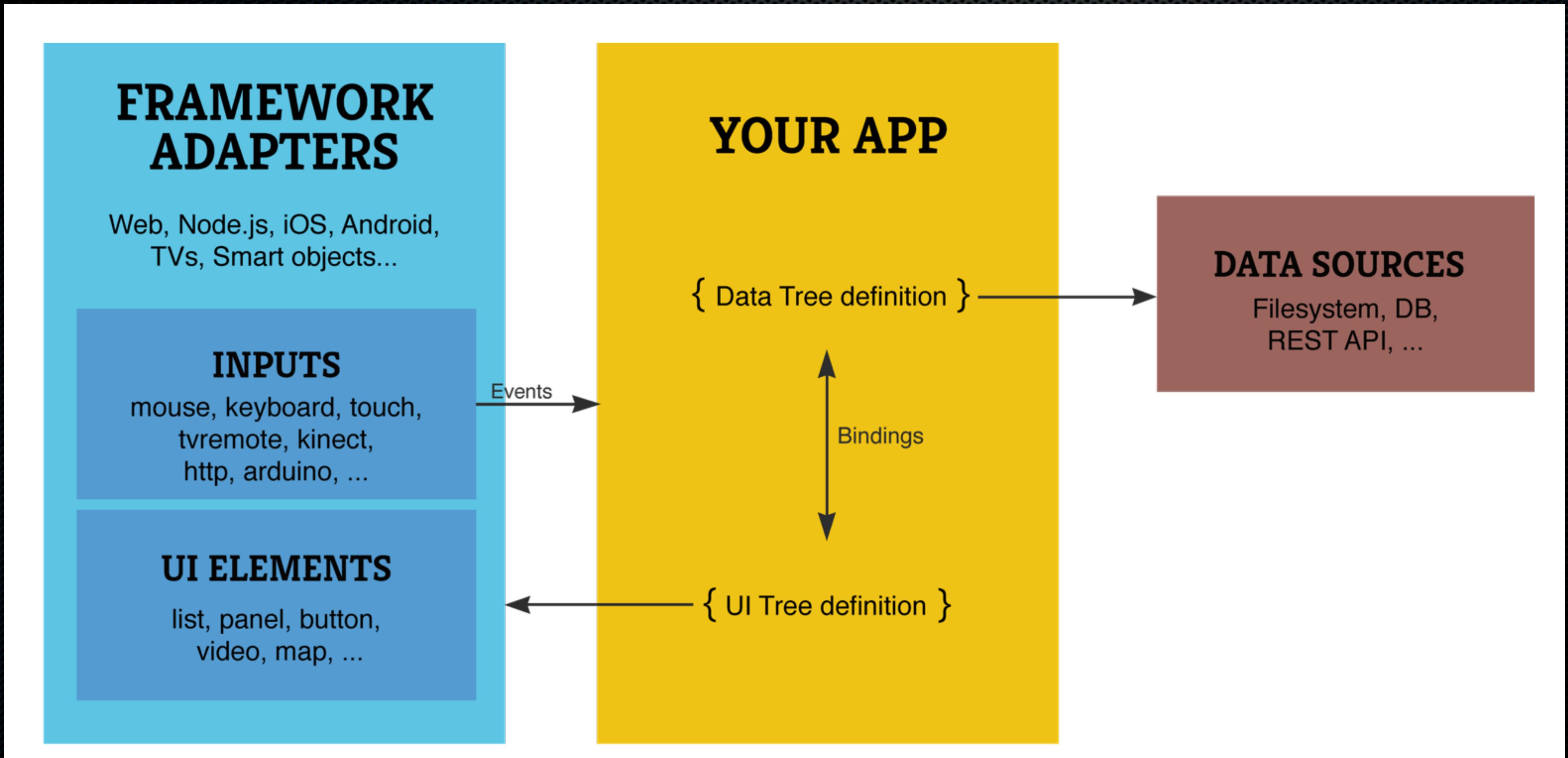
```
var UI = [
  {
    "id": "myPlayer",
    "type": "video"
  },
  {
    "id": "myVideos",
    "type": "list",
    "dataPath": "/videos/",
    "onSelect": function(elt) {
      app.ui.myPlayer.play(elt.url);
    }
  }
];
```

Every Joshfire app has a Data Tree and a UI Tree

What does this allow?

- Forget PHP, Ruby and [insert deprecated language]. **Full JavaScript stack.**
- Translate to HTML(5), either on client or server
- Adapt UI depending on device (iOS lists, Native video players, ...)
- Accept any input method (mouse, keyboard, touch, HTTP, ...)
- Switch to any data source
- Expose as RSS/XML feed
- ...

General design



Framework opinions

- Impose what really matters
 - Data & UI Trees
 - Adapters
- Let developer stay in his comfort zone for the rest
 - Template engine / CSS frameworks / CoffeeScript / ...
 - Backbone.js / Models / Data sources / ...
 - Expressjs / ...

Tech overview

- Code 100% JavaScript (FTW!)
- Beautiful documentation, Simple examples, GitHub
- Ridiculously modular (RequireJS, Events)
- Don't reinvent the wheel (Underscore.js, MediaElement.js, ...)
- Utils library (Splashscreen, Stresstest, Worker pool, Geoloc, ...)
- Optional build tools in Python (synchronous, Fabric)

Adapter solutions

- Mobile: Zepto, iScroll/Scrollability, PhoneGap, Titanium?
- TVs: jQuery (modern), Server-side rendering (CEHTML & friends)
- Desktop: Chromeless, AIR, ...
- Arduino/Objects: HTTP packets to Node then socket.io
- Embedded: ARM + Chromium framebuffer?
- Boxee: XML export
- ...

Joshfire 0.9 (Developer preview)

- Released today! Check <http://joshfire.com>
- First JS library ever to ship with web+mobile+TV+node+arduino
- Under heavy development (new adapters, more doc, ...)
- Developer feedback welcome before 1.0 API freeze
- 0.9.x & 1.x releases will focus on media/content apps
- We're still hiring ;-)
- We'll be happy to help you refactor your apps with the framework
- Questions?

Joshfire
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