Windows Azure

Modern Web Applications

with ember.js, node.js, and Windows Azure

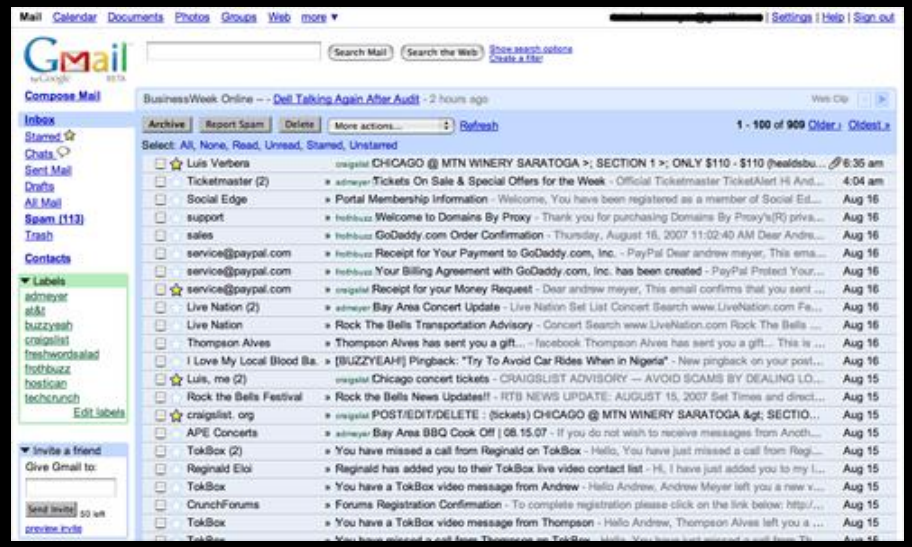
Tim Park
Platform Strategy, Microsoft
@timpark

In the beginning…

- Monolithic applications (aka “Web 1.0”)
  - Click -> … time passes … -> page render
  - No to little client side interactivity.

… and then there was …

- AJAX architecture (aka “Web 2.0”)
  - Incremental requests for updates with data updates.
  - Foundational JavaScript libraries like jQuery appear.
  - High on complexity.
  - Questionable frontend app architecture and maintainability.



… a disruption in the force …

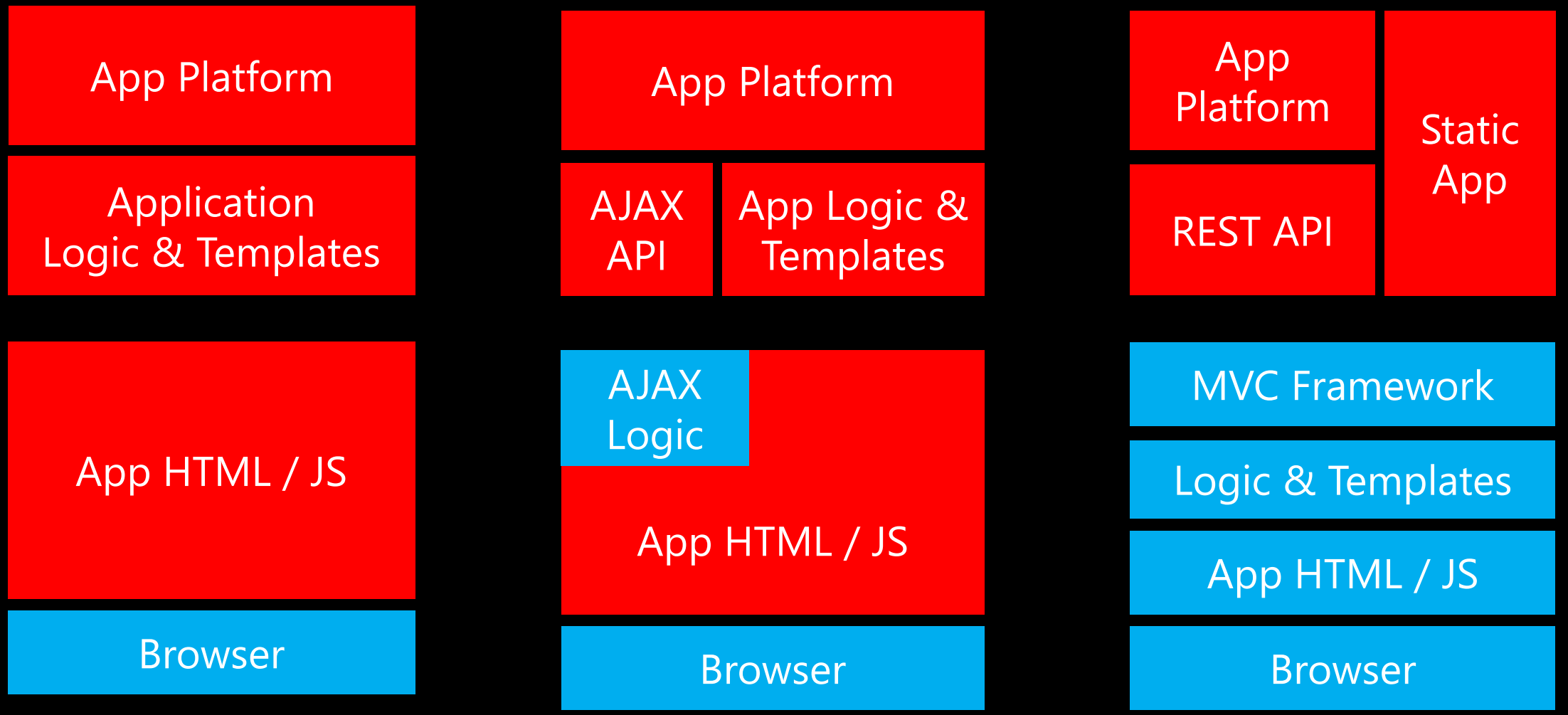
- Highly capable mobile devices arrived.
- Native frameworks dominate apps, not web frameworks.
- Connected apps drive API endpoint development.

… driving changes to web applications …

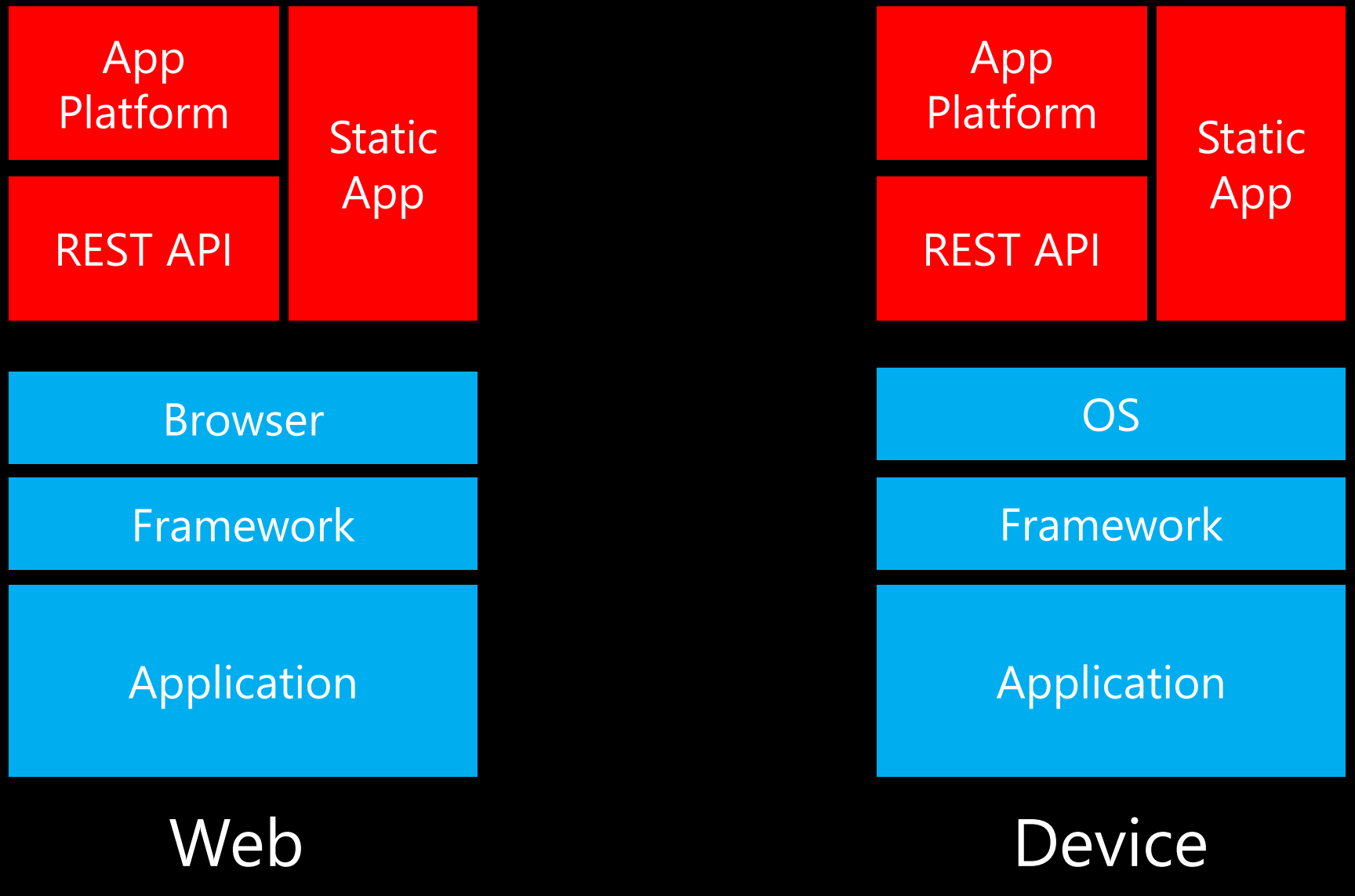
- Web AJAX and mobile APIs slowly rationalized into REST endpoints designed to serve both.
- Server side MVC frameworks prove themselves.
- Homegrown AJAX “frameworks” causing a ton of pain.
- Users expect fast and fluid applications.
- JavaScript engines make large strides
  - More ambitious client applications possible.

Enter client based frameworks

Application Architecture Comparison



Convergence between Device & Web



Client based app walkthrough

- Let’s build a sample app using ember.js demonstrating this
  - (Available at https://github.com/timfpark/messages)

Node.js

- Leverages large JavaScript developer base
- Built on the V8 JavaScript runtime
- Very small, lightweight, and fast
- Asynchronous development model
  - Evented vs. Threaded
- Great for real time or IO-bound applications
- Not great for CPU-bound applications.
- Rich package ecosystem (20,000+ packages)

Node.js backend walkthrough

- For simplicity, included as part of previous application:
  - https://github.com/timfpark/messages

Windows Azure

- Deploy and scale this application using Windows Azure

Resources

- Ember.js: http://emberjs.com
  - Handlebars templating: http://handlebarsjs.com
- Client based apps shootout: http://addyosmani.github.com/todomvc/
- Handlebars: http://handlebarsjs.com/
- Node.js: http://nodejs.org
- Windows Azure: http://www.windowsazure.com/
  - Node.js SDK: http://www.windowsazure.com/en-us/develop/nodejs/
  - Continuous Deployment: http://www.windowsazure.com/en-us/develop/net/common-tasks/publishing-with-git/

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Thanks!


tpark@microsoft.com


@timpark

http://timpark.io