

ApacheCon North America

Introducing Apache™ FlexJS™
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Apache Flex™

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Short Bio

- Software dev since 1998, mostly UI
- Freelance Flex and JS dev & consultant since 2010
- Apache Flex Committer and PMC Member since 2016
- Working with Harbs on migrating an app to FlexJS

Classic Flex SDK

- MXML (declarative programming)
- AS3 (strongly typed, packages, but ECMAScript)
- Good IDEs
- Flash dependent
- Lots of features
- Big application download size
- Difficult to optimize

FlexJS

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- AS3 (strongly typed, packages, but ECMAScript)
- Good IDEs
- ~~Flash dependent~~
- ~~Lots of features~~
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- ~~Difficult~~ Easy to optimize

Let's Build An App

- MXML
- IDE
- Non CSS layout
- Data binding
- States
- Custom component

Build for Flash

- Put a breakpoint in IDE
- Runtime verifier (handy for distributed development)
- Incremental Build
- Pixel perfect across browsers
- Developers like it
- Right click – Flash (clients not so much)

Build for JS

- Right click - no flash
- Show sources (can be minified)
- Break and inspect in browser

How did That Work?

- In Flash
 - IDE compiles
 - FlexJS is just a set of libraries
- In JS
 - Run Ant or Maven build
 - App code is transpiled from AS3 to JS (using Falcon JX)
 - Framework code was already transpiled

Let's Modify Using a Bead

- Add a behavior
- Put in MXML
- New behavior shows both in flash and in JS
- Bead source appears only when added

What Are These Beads?

- Think of UI components as strands
 - -----
- A bead is an encapsulation of a functionality
- Can be added to strand
 - -----<view>-----<data-binding>-----<tooltip>-----<layout>---
- Or removed
 - ----- <view>-----<layout>---
- Can listen on strand or on other beads
- Model, view, controller, layout are examples of beads

What's So Good About Them?

- Avoid overthinking hierarchy trees
 - Composition over inheritance
- Easily override behavior
- Configuration via CSS can be powerful
- Don't download code you don't use
 - Faster download, faster code
- Create your own components set by choosing your beads

Demo

- Remember ClickTracker?
- Build, show code
 - ClickTracker is in source, so it was downloaded with app
- Remove Bead
- Build, show code
 - ClickTracker is no longer there, so we just optimized

Component Sets

- Choose your component set
- What are your needs?
 - Rapid development (Express)
 - Fast app startup (Basic)
 - 3rd party library (MDL, CreateJS)
- You can mix
 - Choose namespace prefix

Contributing to Framework

- Set up IDE to use framework libs
- Create an example app
- Add bead/component
- Run test example in IDE
- Run in JS
- Good? Tests Run? Make pull request.

Questions?

<https://cwiki.apache.org/confluence/display/FLEX/FlexJS>

Also, Google *FlexJSWorldTour*