











More than Flex 4 (beta)

Flex 4, Flash Player 10 & the Text Layout Framework.

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More than Flex 4 (beta)

- **Flash Builder IDE** - New features that will save you time. 
- **Spark & Halo** - New component & container model. 
- **View States** - New MXML syntax. 
- **Effects** - Animate. 
- **FXG** - Flash XML Graphics. 
- **FP10 3D** - Support for Z axis positioning and rotation.  
- **FP10 Text Engine** - Flowing Text in Flash & Flex.   

Excluded (big) topics ...

- **Adobe Flash Catalyst** - Interaction Design Tool

<http://labs.adobe.com/technologies/flashcatalyst/>

- **Pixel Bender** and .PBJ files

<http://labs.adobe.com/technologies/pixelbender/>



Resources

- **Differences between Flex 3 and Flex 4**
http://www.adobe.com/devnet/flex/articles/flex3and4_differences.html
- **Adobe Flex 4 Help**
<http://livedocs.adobe.com/flex/gumbo/html/>
- **Flex 4 (gumbo) Language Reference**
<http://livedocs.adobe.com/flex/gumbo/langref/>
- **Text Layout Framework**
<http://labs.adobe.com/technologies/textlayout/>
- **Flash Player 10**
<http://labs.adobe.com/technologies/flashplayer10/>

Language & Component Namespaces

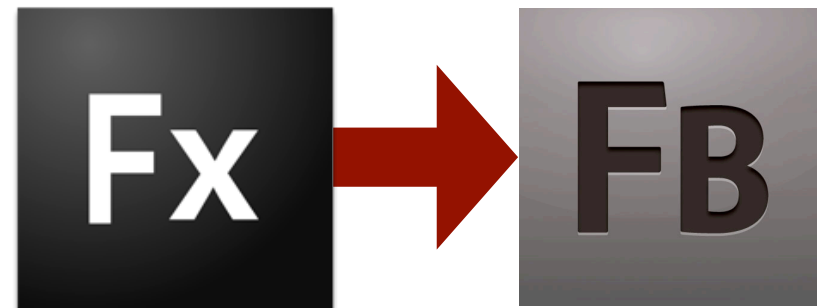
- **MXML 2009 Specification**

<http://opensource.adobe.com/wiki/display/flexsdk/MXML+2009>

- The Flex language namespace contains non-visual tags such as:
 - <fx:Binding/>**
 - <fx:Component/>**
 - <fx:Declarations/>**
 - ^ Non-visual MXML declarations like `<s:Animate id="tween">`
 - <fx:Library/>**
 - ^ Reusable FXG assets `<fx:Definition name="redRect">`
 - <fx:Metadata/>**
 - <fx:Private/>**
 - ^ Compiler will ignore. Used by tools like AI and FC.
 - <fx:Reparent/>**
 - ^ Used with States to change a component's parent on the display list.
 - <fx:Repeater/>**
- The Spark and Halo component namespaces contain visual elements such as:
 - <s:Button/>** and **<mx:Button/>**

Adobe Flash Builder IDE

- In case you're new:
Flex Builder has been re-branded: **Adobe Flash Builder**
- Download
<http://labs.adobe.com/technologies/flashbuilder4/>



Adobe Flash Builder IDE

- ASDoc view & tooltips.
- Filter code hints by category with [ctrl+space].
- Auto generate getter, setter and event handler methods.
- State highlighting in Code View.
- Conditional Breakpoints.
- New Feature Videos:
<http://labs.adobe.com/technologies/flash/videos/>



Spark & Halo

- Spark components are found in the spark.* packages

i.e.: `<s:Button/>`

- Halo (Flex 3) components are found in the mx.* packages

i.e.: `<mx:Button/>`

- Spark Containers can contain primitives, not just UIComponent subclasses:

```
<s:Group width="100" height="200">  
  <s:Rect percentHeight="100" percentWidth="100">  
    <s:stroke>  
      <s:SolidColorStroke color="0x000000" />  
    </s:stroke>  
  </s:Rect>  
</s:Group>
```

- Spark components can be skinned with FXG (*Flash XML Graphics*).



View States in MXML

- Enhanced States Specification

<http://opensource.adobe.com/wiki/display/flexsdk/Enhanced+States+Syntax>

- State-specific values:

```
<s:Group alpha="0.8" alpha.someState="0.3">  
  <s:layout.anotherState>  
    <s:VerticalLayout/>  
  </s:layout>  
</s:Group>
```

- Include in / Exclude from states:

```
<s:SimpleText text="Here's looking at you, kid" includeIn="casablanca"/>  
<s:SimpleText text="PBJ" excludeFrom="thisPresentation"/>
```



View States in MXML

- Important notes:

- Flex 3 States syntax still works.

- Once Flex 4 States are defined, there is no longer a “null” or “” state.

“Once a "stateful" component has been defined (one where the **states** language tag has one or more valid State children), the component must at any given time be in one of the defined states (it is no longer valid for a component to be in a 'base' or 'null' state). By default, the first declared state is the initial state (the initial value of **currentState**), unless **currentState** is explicitly set.”

```
<s:states>  
  <s:State name="default" />  
  <s:State name="someOtherState" enterState="doSomething()" />  
</s:states>
```



Effects Rewritten

- **Video introduction to Flex 4 Effects**

<http://labs.adobe.com/technologies/flash/videos/flashcamp/haase/>



FXG - **F**lash **X**ML **G**raphics

- **FXG 1.0 Specification**

<http://opensource.adobe.com/wiki/display/flexsdk/FXG+1.0+Specification>

- **Why FXG and not SVG?**

http://www.andersblog.com/archives/2008/09/flash_on_the_be.html

- **Short answer:**

SVG markup strays too far from MXML coding standards.

FXG plays nicely with Flex.



FXG - **F**lash **X**ML **G**raphics

- Using Adobe Illustrator to create FXG.
- FXG classes as objects in Flex Applications.
- Reusable Graphic symbols:
`<fx:Library />`, `<fx:Definition />` and `<fx:Graphic />`



Text Layout Framework

- **Framework home page**

<http://labs.adobe.com/technologies/textlayout/>

- Get and use system fonts without embedding.

```
Font.enumerateFonts(true);  
<s:TextInput fontFamily="Trebuchet MS" />
```

- Spark text components implement the TLF.

```
<s:TextArea columnCount="2" textRotation="rotate90" />
```

- Linked containers.

```
// Flow text through n containers  
textflow.flowComposer.addController(ctrlContainer1);  
textflow.flowComposer.addController(ctrlContainer2);
```

- Inline graphics & rotation of non-embedded fonts.

