

A Shallow Dive into the Flex 4

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Agenda

- Spark Component Architecture
- Enhanced States Syntax
- CSS Advanced Selectors
- Integration with Adobe Catalyst

Spark Component Architecture

- spark.components (1/2)
 - Application
 - Button
 - ButtonBar
 - ButtonBarButton
 - CheckBox
 - DataGroup
 - DropDownList
 - Group
 - HGroup
 - HScrollBar
 - HSlider
 - List
 - MXMLComponent
 - NumericStepper
 - Panel
 - PopUpAnchor
 - RadioButton
 - RadioButtonGroup
 - ResizeMode
 - Scroller
 - SkinnableContainer
 - SkinnableDataContainer
 - Spinner
 - TextArea

Spark Component Architecture

- spark.components (2/2)
 - TextInput
 - TextSelectionVisibility
 - ToggleButton
 - VGroup
 - VideoPlayer
 - VScrollBar
 - VSlider

Spark Component Architecture

- spark.components.supportClasses
 - AnimationTarget
 - ButtonBarHorizontalLayout
 - ButtonBase
 - DropDownController
 - GroupBase
 - InvalidatingSprite
 - ItemRenderer
 - ListBase
 - Range
 - ScrollBar
 - ScrollerLayout
 - Skin
 - SkinnableComponent
 - SkinnableContainerBase
 - Slider
 - TextBase
 - ToggleButtonBase
 - TrackBase

Spark Component Architecture

- spark.effects
 - AddAction
 - Animate
 - AnimateColor
 - AnimateFilter
 - AnimateShaderTransition
 - AnimateTransform
 - CallAction
 - CrossFade
 - Fade
 - KeyFrame
 - MotionPath
 - Move
 - Move3D
 - RemoveAction
 - Resize
 - Rotate
 - Rotate3D
 - Scale
 - Scale3D
 - SetAction
 - SimpleMotionPath
 - Wipe
 - WipeDirection

Spark Component Architecture

- spark.effects.animation
- Animation
- RepeatBehavior
- Timeline

Spark Component Architecture

- spark.effects.easing
- EaseInOutBase
- EasingFraction
- Linear
- Power
- Sine

Spark Component Architecture

- spark.effects.interpolation
- ArrayInterpolator
- HSBInterpolator
- NumberInterpolator
- RGBInterpolator

Spark Component Architecture

- spark.effects.supportClasses
 - AddActionInstance
 - AnimateColorInstance
 - AnimateFilterInstance
 - AnimateInstance
 - AnimateShaderTransitionInstance
 - AnimateTransformInstance
 - CallActionInstance
 - FadeInstance
 - MoveInstance
 - RemoveActionInstance
 - ResizeInstance
 - RotateInstance
 - SetActionInstance
 - WipeInstance

Spark Component Architecture

- spark.effects Demos
- http://labs.taiga.jp/flex4/EffectSample_01/
- http://labs.taiga.jp/flex4/EffectSample_02/
- http://labs.taiga.jp/flex4/EffectSample_03/

Spark Component Architecture

- spark.events
- DropDownEvent
- ElementExistenceEvent
- RendererExistenceEvent
- TextOperationEvent
- TrackBaseEvent
- VideoEvent

Spark Component Architecture

- spark.filters
 - BevelFilter
 - BlurFilter
 - ColorMatrixFilter
 - ConvolutionFilter
 - DisplacementMapFilter
 - DropShadowFilter
 - GlowFilter
 - GradientBevelFilter
 - GradientFilter
 - GradientGlowFilter
 - ShaderFilter

Spark Component Architecture

- spark.filters Demos
- http://labs.taiga.jp/flex4/FilterSample_01/

Spark Component Architecture

- spark.layouts
 - BasicLayout
 - ColumnAlign
 - HorizontalAlign
 - HorizontalLayout
 - RowAlign
 - TileLayout
 - TileOrientation
 - VerticalAlign
 - VerticalLayout

Spark Component Architecture

- `spark.layouts.supportClasses`
- `Block`
- `LayoutBase`
- `LayoutElementHelper`
- `LinearLayoutVector`

Spark Component Architecture

- spark.primitives
- BitmapImage
- BitmapImageResizeMode
- Ellipse
- Graphic
- Line
- Path
- Rect
- RectangularDropShadow
- RichEditableText
- RichText
- SimpleText
- VideoElement

Spark Component Architecture

- `spark.primitives.pathSegments`
 - `CloseSegment`
 - `CubicBezierSegment`
 - `LineSegment`
 - `MoveSegment`
 - `PathSegment`
 - `QuadraticBezierSegment`

Spark Component Architecture

- `spark.primitives.supportClasses`
- `FilledElement`
- `GraphicElement`
- `RichEditableTextContainerManager`
- `StrokedElement`
- `TextGraphicElement`

Spark Component Architecture

- spark.primitives Demos
- <http://labs.taiga.jp/flex4/PathSampleFB4B1/>

Spark Component Architecture

- spark.skins
- SparkSkin

Enhanced States Syntax

- State-Specific Component Instances

```
<s:states>
```

```
  <mx:State name="default" />
```

```
  <mx:State name="aState" />
```

```
  <mx:State name="bState" />
```

```
</s:states>
```

```
<s:Button label="Button A" />
```

```
<s:Button label="Button B" includeIn="aState, bState" />
```

```
<s:Button label="Button C" excludeFrom="bState" />
```

Enhanced States Syntax

- State-Specific Property Values

```
<s:states>  
  <mx:State name="aState" />  
  <mx:State name="bState" />  
</s:states>
```

```
<s:Button  
  color.aState = "#990000"  
  color.bState = "#000099"  
  label.aState = "Button B_A"  
  label.bState = "Button B_B"  
  includeIn    = "aState, bState"  
>
```

Enhanced States Syntax

- State Groups

```
<s:states>
```

```
  <mx:State name="aState" stateGroups="Group1" />
```

```
  <mx:State name="bState" stateGroups="Group1" />
```

```
  <mx:State name="cState" stateGroups="Group2" />
```

```
  <mx:State name="dState" stateGroups="Group1" />
```

```
</s:states>
```

```
<s:Button
```

```
  color.Group1 = "#990000" label.Group1 = "Button B_A"
```

```
  color.Group2 = "#000099" label.Group2 = "Button B_B"
```

```
  includeIn    = "Group1"
```

```
/>
```

Enhanced States Syntax

- Custom Creation and Destruction Policies

```
<s:states>  
  <mx:State name="aState" />  
</s:states>
```

```
<s:Button label="Button A"  
  includeIn="aState"  
  itemCreationPolicy="immediate" />
```

```
<s:Button label="Button B"  
  includeIn="aState"  
  itemCreationPolicy="deferred" />
```

Enhanced States Syntax

- Demos
- http://labs.taiga.jp/flex4/StateSample_01/
- http://labs.taiga.jp/flex4/StateSample_02/
- http://labs.taiga.jp/flex4/StateSample_03/
- http://labs.taiga.jp/flex4/StateSample_04/

CSS Advanced Selectors

- id Selector

```
<fx:Style>
```

```
    #hoge { color : #ff0000; }
```

```
</fx:Style>
```

```
<s:Button id="hoge" label="AAAAAA" />
```

CSS Advanced Selectors

- Descendant Selector

```
<fx:Style>
  @namespace s "library://ns.adobe.com/flex/spark";
  s|Panel s|Button {
    color : #ff0000;
  }
</fx:Style>
```

```
<s:Panel title="AAA" width="400" height="300">
  <s:Button id="piyo" label="AAA" />
</s:Panel>
```

CSS Advanced Selectors

- Pseudo Selectors

```
<fx:Style>
```

```
  @namespace s "library://ns.adobe.com/flex/spark";
```

```
  s|Button:up          { color : #000000; }
```

```
  s|Button:over       { color : #ff0000; }
```

```
  s|Button:down       { color : #00ff00; }
```

```
  s|Button:disabled   { color : #0000ff; }
```

```
</fx:Style>
```

```
<s:Button label="AAA" />
```

CSS Advanced Selectors

- Demos
- http://labs.taiga.jp/flex4/StyleSample_01/
- http://labs.taiga.jp/flex4/StyleSample_02/
- http://labs.taiga.jp/flex4/StyleSample_03/