#### HTML in a Flash World A look at AIR development with HTML, CSS and JavaScript

### What is Adobe AIR?

 A platform for desktop applications built using web technologies such as Flash, Flex and Ajax that can be run on various operating systems

## Technologies

- Flash
- Flex
- Ajax: HTML, CSS and JavaScript using Webkit

## Flash

- Can use the entire Flash AS3 API along with AIR runtime API including pixel bending, rotation, etc
- Built on Flash Player
- Can instantiate HTML control like any other movie clip

## Flex

- Access to all the Flex technologies such as Flex charts, data grids, etc
- Ability to build desktop applications quickly and easily

#### HTML

- Code base can easily be shared between web and desktop applications
- Ajax libraries such as jQuery, Mootools, ExtJS, and YUI can be used within AIR applications
- Ability to sandbox code for additional application security
- Full access to AS3 API and Flash runtime from JavaScript.

## Webkit

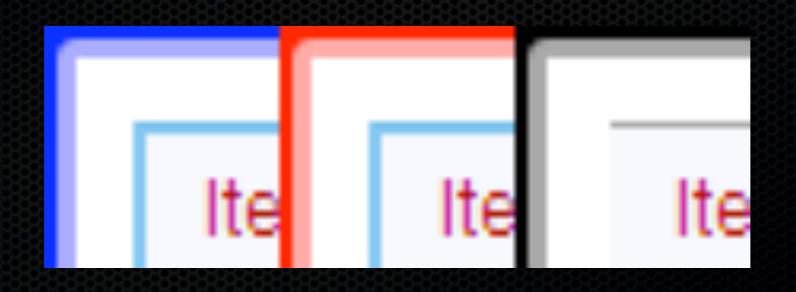
- Single rendering environment (no cross-browser issues)
- CSS3 Features
- New DOM methods
- With HTML Control in Flash environment, text rendering isn't consistent with browser
- Consistent HTML controls across platforms but not with OS

## CSS3 Features

- opacity and rgba support
- multiple background images
- border-radius
- border-image
- columns
- CSS Transformations
- CSS3 Media Queries
   http://www.w3.org/TR/css3-mediaqueries/

## Opacity

border: 5px solid rgba(255,0,0,.6); -webkit-background-clip: padding;

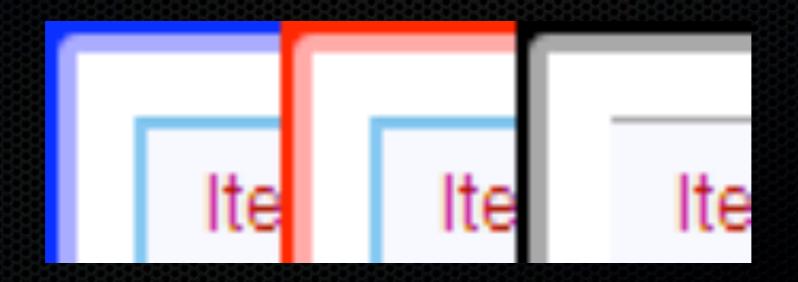


## Background Images

Item 1		
Item 2	4 - 4 - 4	
Item 3		
	60)	
	VACCAV	

## Border Radius

-webkit-border-radius: 5px;



## Background Images

-webkit-border-image: url(example.gif) 5px 5px 5px 5px repeat
stretch;



#### Background Images

-webkit-column-count: 3;

-webkit-column-gap: 20px;

-webkit-column-rule: 1px solid #333;

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### CSS3 Media Queries

```
<style type="text/css">
@media screen and (max-width: 800px) {
    #b { display:none; }
    }
    </style>
</head>
<body>
<div id="a">This is A</div>
<div id="b">This is B</div>
</body>
```

## DOM Features

- XPath and CSS Selector engines
- XML serialization and de-serialization

## Selector Engines

//XPATH

ToDo.items

.evaluate("//item[@id='"+ id +"']", ToDo.items)

.iterateNext();

// W3C Selectors
ToDo.items = document.querySelectorAll(".items");

## XML Serialization

var s = byteData.readUTFBytes(byteData.length);

```
var parser=new DOMParser();
```

```
var doc=parser.parseFromString(s,"text/xml");
```

```
var serializer = new XMLSerializer();
```

```
var packet = serializer.serializeToString(ToDo.items);
```

# Debugging

- For HTML Applications, AIRIntrospector allows HTML and JavaScript inspection in running application
- Introspector comes with SDK
- Recommend removing tool for site launch

## Deployment

- Applications contained in an AIR file (a ZIP file format)
- Flash badges (available with SDK) can be created to allow installation from a web page
- Web sites can communicate with AIR applications

#### Resources

#### Adobe AIR

 Developer Center <u>http://www.adobe.com/devnet/air/ajax/</u>

#### JavaScript Libraries

- Ext JS has AIR interface <u>http://extjs.com</u>/
- MooTools, jQuery, Prototype and others can speed up development
- BlackBookSafe