

# 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/>



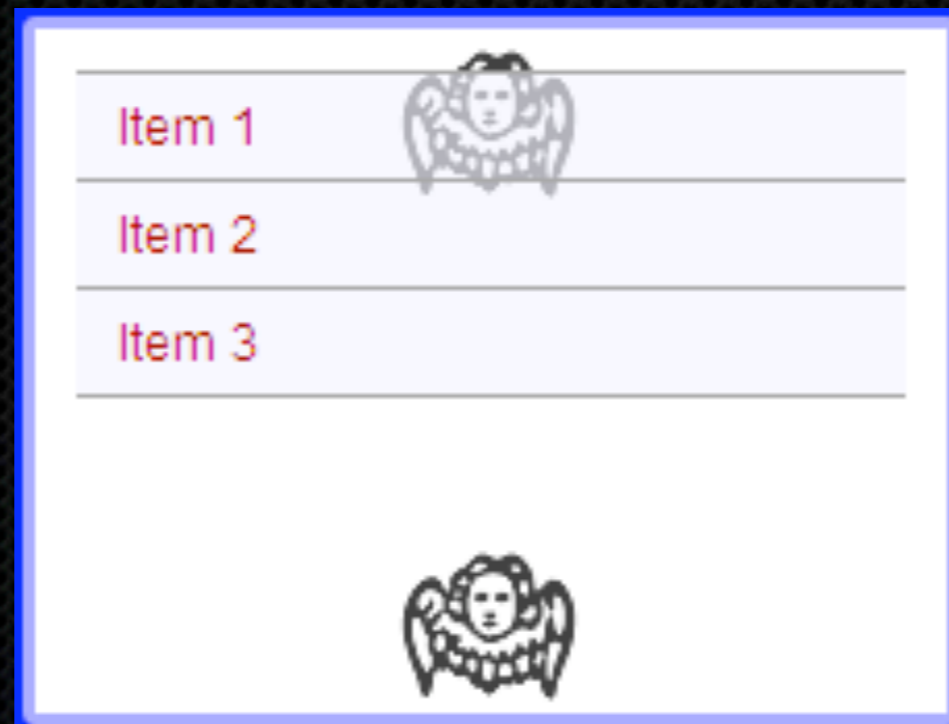
# Opacity

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



# Background Images

```
background: url(assets/top-left.png) no-repeat 0 0,  
            url(assets/bottom-left.png) no-repeat 100% 100%;
```



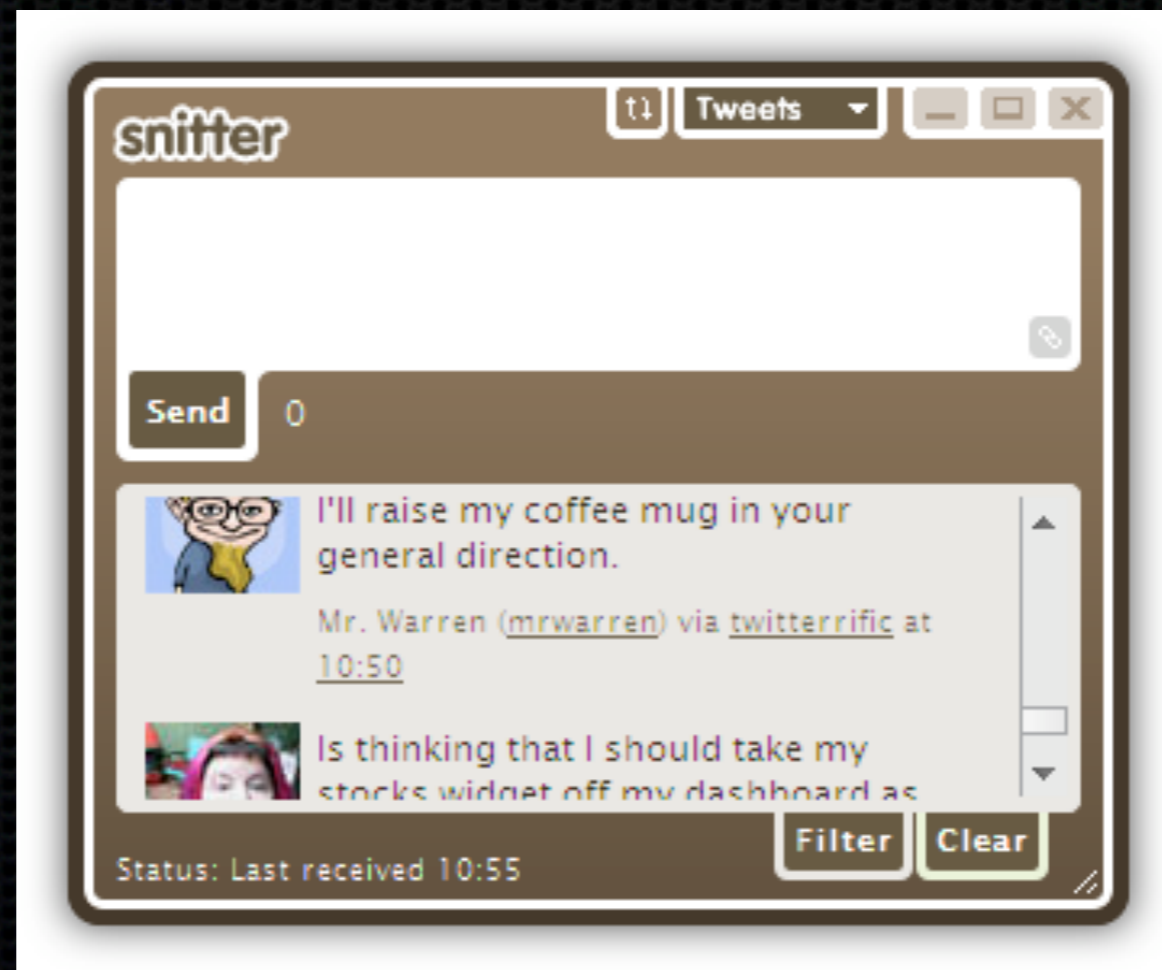
# Border Radius

```
-webkit-border-radius: 5px;
```



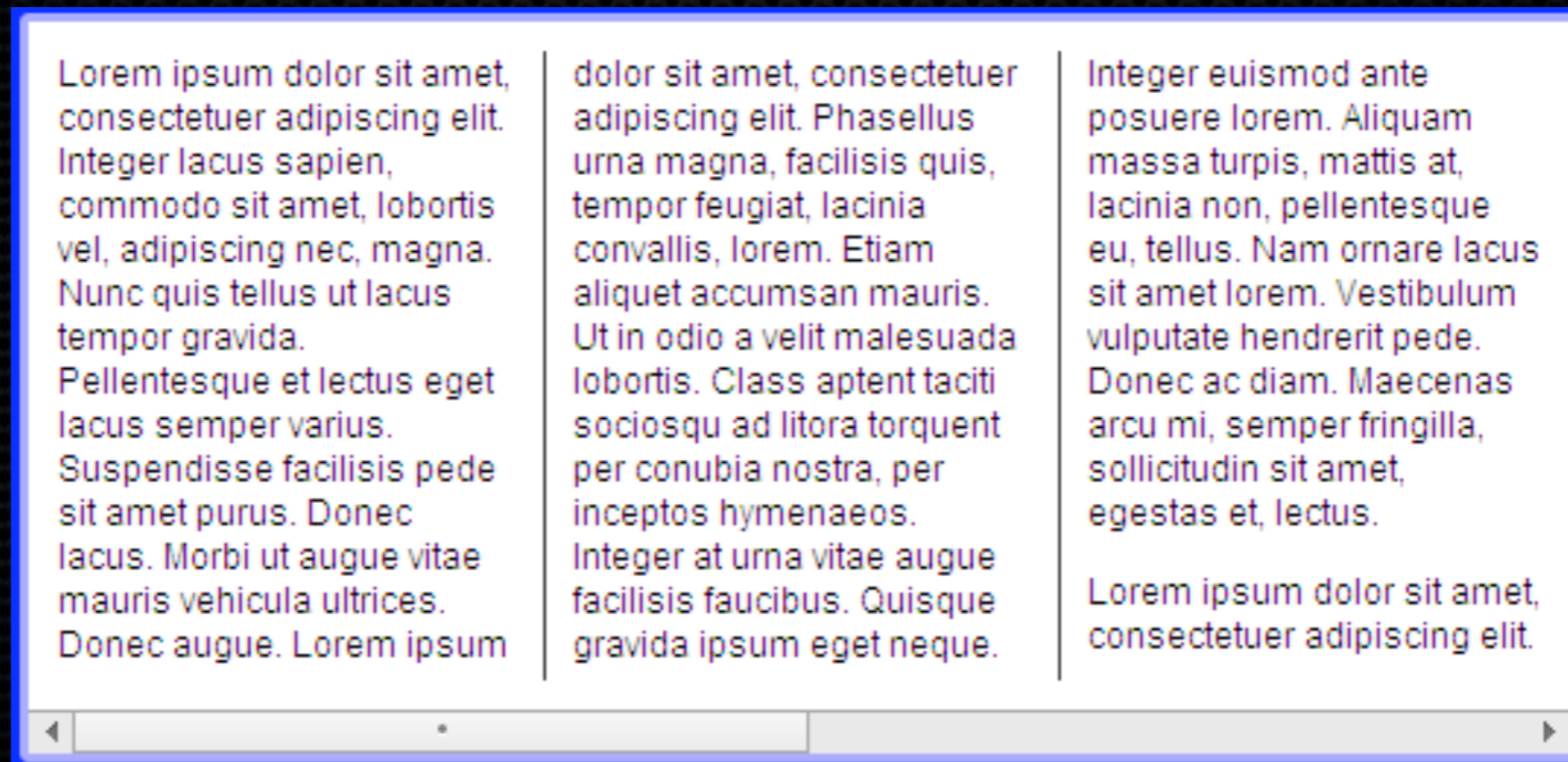
# Background Images

```
-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;
```



# 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  
<http://www.adobe.com/devnet/air/ajax/>

## ✦ JavaScript Libraries

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

## ✦ BlackBookSafe