

Best Practices for Building Tools That Output to the Web

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% whoami

- HyperEdit
- Cupertino Fruit Co.
- Tumult Hype



Demo

General Differences

When Building a Site	When Building a Tool
You choose browsers you support	<u>We</u> choose which browsers you support
Small enough to load fast	Must be as small as possible
You control the HTTP server	The server is horribly misconfigured

Don't assume anything!

Some Considerations

- Style Isolation
- Minification
- CSS3 Animations
- Video
- Browser Bugs
- Server Caching

Style Isolation

- iframes?
- CSS Resets

Minification

- Glue files together
- Google Closure Compiler
 - `--compilation_level ADVANCED_OPTIMIZATIONS`
 - `--output_wrapper "(function(){%output%})();"`
- String replacements
- JSON optimization

CSS3 Animations?

- Difficult to manipulate
- Poor control over animations
 - `animation-play-state`
- Unable to synchronize
- More significant performance wins elsewhere

Video

- To encode or not to encode?
- IE6-8

Browser Bugs

- IE6 is easy!
- New browsers introduce regressions

Server Configurations

- Video MIME types
- Caching Behavior
 - Cache-Control: max-age=0

Flicker Avoidance

```
var buffer = document.createElement('canvas');  
buffer.width = img.width;  
buffer.height = img.height;  
buffer.getContext("2d").drawImage(img, 0, 0);  
_hype.imageToDataURLMapping[img.name] = buffer.toDataURL();
```

```
// use data url cached version instead  
var imageDataURL = hypeDoc.imageToDataURLMapping[value];  
if(imageDataURL != null) {  
    element.style.backgroundImage = "url('" + imageDataURL + "')";  
}
```

Thank You!

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<http://tumult.com/hype/>