Ajax
Asynchronous JavaScript and XML

By Rolland Brunec
Introduction

- Netscape’s JavaScript and their problems
- Why Asynchronous JavaScript ...?
- What is XMLHttpRequest?
- Use cases for Ajax
  - DOM manipulation/CSS/JavaScript
  - {XML/JSON/HTML} as exchange format
Advantages

• Bandwidth usage
• Interactive Web Applications
• Rich User Interfaces
Disadvantages

- Browser integration
- “back button” problem
- Network latency
- Search engine optimisation + web analytics
- JS and DOM implementation is not always correct
- Accessibility
Frameworks

• Why use frameworks?
  • Faster development time
  • Readable source code
  • Disadvantages of JS resolved
Frameworks

- Prototype / script.aculo.us
- GWT (Google Web Toolkit)
- Dojo Toolkit
- YUI (Yahoo! UI Library)
- Sajax
- .Net Ajax
Script.aculo.us

• Extends Prototype by adding
  • Visual effects (Appear/Fade/Shake/etc)
  • Controls (drag&drop, autocompletion, in-place editor)
  • Utilities (Builder, Unit testing)
Appear/Fade

```html
<div id="clickme" onclick="
Effect.Appear('hidden_element', { duration: 3.0 });
Effect.Shake('hidden_element');
Effect.Fade('hidden_element', { duration: 3.0 });">
  click me pleeeeeease!
</div>

<div id="hidden_element" style="display:none">magic!</div>
```
Drag & Drop

<div id="dragable_element">I'm draggable</div>
<script type="text/javascript">
    new Draggable('dragable_element');
</script>
In-place Editor

<div id="clickme">Click me, click me!</div>
<script type="text/javascript">
new Ajax.InPlaceEditor('clickme', '/xxx.html');
</script>
DOM manipulation

The code:
var element = Builder.node('p', { className:'error' }, 'An error has occurred');

Creates:
<p class="error">An error has occurred</p>
Links

- http://www.prototypejs.org/
- http://github.com/madrobby/scriptaculous/wikis
- http://script.aculo.us/
- http://www.cs.montana.edu/paxton/classes/germany/index.html