

Struts on Ajax: Retrofitting Struts with Ajax Taglibs




Struts University Series

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visit www.StrutsUniversity.org






Abstract

- Struts is Java's most popular web framework. Ajax is the web's hottest user interface. What happens when we put Struts on Ajax?
 - During the session, we will cover
 - Integrating Ajax with Struts 1 or Struts 2
 - Using the AjaxParts taglib with Struts 1 or 2
 - Using the Ajax YUI plugin with Struts 2
- 




What is Ajax?

- Originally, acronym for "Asynchronous JavaScript And XML."
 - Technique, rather than a framework (such as Struts).
 - Allows web pages to work like GUI apps
 - Already used by Microsoft and Google, among many, many others.
- 




What was life like before Ajax?

- "web page as a flat document"
 - To mimic GUI desktop apps
 - 1 send all data with (a lot of) JavaScript
 - 2 constant form submits back to the server
 - Ajax gives you the best of both worlds:
 - dynamic web pages on the client
 - server-side Java application
- 




How does Ajax work?

- Ajax adds a "background" call to the server
 - 1 XMLHttpRequest requests content asynchronously.
 - 2 Content can be anything; JavaScript updates page.
 - 3 Triggered by JavaScript events: onclick, onchange, onblur, ...
- 



Can we use Ajax in a Struts app?

- XHR is just another request/response
 - Struts can stream data as a response
 - Use pure Ajax libraries (with scriplets)
 - Use plain-vanilla Ajax libraries
 - Use Ajax JSP tag libraries
- 



What are some pure Ajax Libraries?

- SACK (<http://twilightuniverse.com/projects/sack/>),
 - Prototype (<http://www.prototypejs.org/>),
 - JQuery (<http://jquery.com/>)
- 

Simple AJAX Code-Kit (SACK)

Posted in **blog** by Gregory on the November 16th, 2005

SACK is exactly what it says it is: A simple set of code to allow you to put AJAX into your webpages with none of the fuss or overhead of other packages. Just AJAX, just simple.

Current SACK Version: 1.6

This is the **main page** for SACK and will be, over the next little while, updated with reasources and tutorials about how to use SACK to enhance your webpages. Maybe it will even give you some ideas! If you come up with something special please let me know, I'd love to hear from people that are using my SACK in their projects or products. The same goes for any suggestions, *please* tell me how I can make this better.

SACK 1.2 is included with WordPress 2.0, which makes me happy beyond words, newer versions of SACK should work with no problems in WordPress.

Code Documentation

Full documentation of the classes methods and variables is included in the zip package. It should be more than you need, but if you have any trouble then please let me know. The aim is to make everything *simple*, so if you are confused I need to fix something.

Example Code

A basic demonstration of how you can use SACK to communicate with a PHP page is **included in the full zip distribution**. Remember: it needs to be run on a webserver to work correctly.

The Pages

- ✓ Archives
- ✓ Colophon
 - ↳ Contact Me
- ✓ Portfolio
- ✓ Projects
 - ↳ Ignorance Is Bliss
 - ↳ Simple AJAX Code-Kit (SACK)

The Search

search site archives

The Associates

- ✓ Cherie Priest
- ✓ Owen
- ✓ Pick A Color
- ✓ Podz

The Storage

- ✓ August 2007

<http://twilightuniverse.com/projects/sack/>



JavaScript framework

Prototype is a JavaScript Framework that aims to ease development of dynamic web applications.

```
cells: function(row) {  
  if(row == undefined) return this.tab  
  return $(row).getElementsBySelector(  
  },
```

Prototype is a JavaScript Framework that aims to ease development of dynamic web applications.

Featuring a unique, easy-to-use toolkit for class-driven development and the nicest Ajax library around, Prototype is quickly becoming the codebase of choice for web application developers everywhere.

Download

Get the latest version—1.5.1.1

Learn

Online documentation and resources.

Discuss

Mailing list and IRC

Contribute

Submit patches and report bugs.

<http://www.prototypejs.org/>

jQuery is a new type of JavaScript library.

jQuery is a fast, concise, JavaScript Library that simplifies how you traverse HTML documents, handle events, perform animations, and add Ajax interactions to your web pages. **jQuery is designed to change the way that you write JavaScript.**

"You start with 10 lines of jQuery that would have been 20 lines of tedious DOM JavaScript. By the time you are done it's down to two or three lines and it couldn't get any shorter unless it read your mind." - [Dave Methvin](#)

What does jQuery code look like? **The quick and dirty:**

Run »

```
$("#p.surprise").addClass("ohmy").show("slow");
```

The above code snippet looks for all paragraphs that have a class of 'surprise', adds the class 'ohmy' to them, then slowly reveals them. Click the 'Run' button to see it in action!

Download jQuery

Learn about the jQuery JavaScript library

Designers, Developers, Hobbyists, Businesses...

jQuery is for everyone.

The jQuery library is suited for many different applications.

How can jQuery help you?



Lightweight footprint

· About 14KB in size (Compressed)



CSS3 Compliant

· Supports CSS 1-3 and basic XPath



Cross-browser

· IE 6.0+, FF 1.5+, Safari 2.0+, Opera 9.0+



Getting Started With jQuery

[How jQuery Works](#)

[Tutorials](#)

[Using jQuery with other libraries](#)



Developer Resources

[jQuery Documentation](#)

[Mailing List](#)

Brand New:
[Learning jQuery Book](#)





What are some Ajax UI Libraries?

- Dojo (<http://dojotoolkit.org/>)
 - Google Web Toolkit (<http://code.google.com/webtoolkit/>)
 - YUI (<http://developer.yahoo.com/yui/>)
- 

Navigation

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0.9: Dojo, Dijit and DojoX

[Getting started](#)
[0.4.x to 0.9 Porting Guide](#)

Plaxo Online Upgrades To 0.9

Sat, 10/06/2007 - 05:32 — alex

As a user of [Plaxo](#), I've been delighted with their [Pulse](#) service for a while now. [Bloglines](#) is a really great start at letting me keep up with things, but Pulse fills an important gap where Bloglines leaves off. Why do I trust my personal data to a service like this?



Google Web Toolkit

[Google Code Home](#) > [Google Web Toolkit](#)

Google Web Toolkit - Build AJAX apps in the Java language

[Download Google Web Toolkit \(GWT\)](#)

New! [GWT goes out of Beta with version 1.4](#)

Google Web Toolkit (GWT) is an open source Java software development framework that makes writing AJAX applications like [Google Maps](#) and [Gmail](#) easy for developers who don't speak browser quirks as a second language. Writing dynamic web applications today is a tedious and error-prone process; you spend 90% of your time working around subtle incompatibilities between web browsers and platforms, and JavaScript's lack of modularity makes sharing, testing, and reusing AJAX components difficult and fragile.

GWT lets you avoid many of these headaches while offering your users the same dynamic, standards-compliant experience. You write your front end in the [Java](#) programming language, and the GWT compiler converts your Java classes to browser-compliant JavaScript and HTML.

[Learn more »](#)

Google Web Toolkit

[Download GWT](#)

[Product Overview](#)

[Getting Started Guide](#)

[Example Projects](#)

[Developer Guide](#)

[Class Reference](#)

[Issue Tracking](#)

[Developer Forum](#)

[GWT Blog](#)

[GWT FAQ](#)

[Making GWT Better](#)

[GWT Resources](#)

Search Google Code:

Google Web Toolkit Blog

[More on Pearson's GWT conference](#)

Posted by Dan Peterson, Product Manager

[Subscribe](#) 

Featured Example Projects



[Mail Application](#)

A replica of the UI of a desktop email application.

<http://code.google.com/webtoolkit/>

The Yahoo! User Interface Library (YUI)

Yahoo! UI Library

Home

- YUI Blog
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- YUI on Sourceforge
- API Documentation
- YUI Examples Gallery
- Powered by YUI
- YUI Theater

YUI License

YUI Articles

- YUI FAQ
- Graded Browser Support
- Skinning YUI
- Bug Reports/Feature Requests
- Serving YUI Files from Yahoo!
- Security Best Practices

YUI Components

- Animation
- AutoComplete
- Browser History Manager BETA
- Button BETA
- Calendar
- Color Picker BETA

The Yahoo! User Interface Library (YUI)

The Yahoo! User Interface (YUI) Library is a set of utilities and controls, written in JavaScript, for building richly interactive web applications using techniques such as DOM scripting, DHTML and AJAX. The YUI Library also includes several core CSS resources. All components in the YUI Library have been released as open source under a [BSD license](#) and are free for all uses.

Download YUI

Download YUI version 2.3.1, including [full API documentation](#) and [more than 180 functional examples](#) from Sourceforge.

The library's developers blog [at the YUI Blog](#) and the YUI Library community exchanges ideas at [YDN-JavaScript on Yahoo! Groups](#).

Using YUI:

- [FAQ](#)
- [Getting Started](#)
- [Licensing](#)
- [Articles](#)
- [Cheat Sheets](#)
- [Support & Community](#)

YUI Core:

- [The YAHOO Global Object](#) (base requirement for all YUI components)
- [DOM Collection](#) (convenience

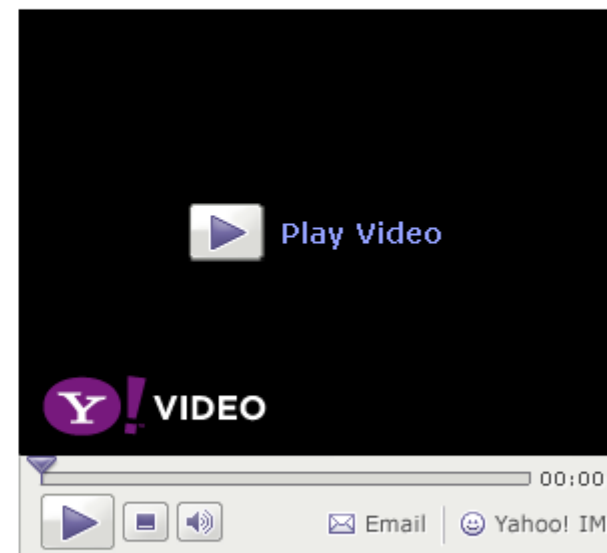
YUI Library Controls/Widgets:

- [AutoComplete](#)
- [Button Control](#) BETA
- [Calendar](#)
- [Color Picker](#) BETA
- [Container](#)

YUI Theater RSS

[\[more videos\]](#)

Steve Souders — "High Performance Web Sites: 14 Rules for Faster Pages"



Steve Souders is Yahoo's chief [performance guru](#) and the author of the popular [YSlow](#) plugin for Firebug; in this talk, he outlines the 14 things you can do to make your web site snappy and responsive. [Available on [Yahoo! Video](#) and as an [MP4 download](#).]



Are there Ajax JSP tag libraries?

- Ajax Tags (<http://ajaxtags.sourceforge.net/>)
 - ColdTags Suite (<http://servletsuite.blogspot.com/2006/06/coldtags-suite-ajax-edition.html>)
 - Prize Tags (<http://www.jenkov.com/prizetags/introduction.tmpl>)
 - JSON-taglib (<http://json-taglib.sourceforge.net/>)
 - AjaxParts Taglib (<http://javawebparts.sourceforge.net/>)
- 

AjaxTags 1.3

Last Published: 08/05/2007

[SourceForge Project Page](#) | [Binaries](#) | [Source](#) | [Maven 2](#)

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Support

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Downloads

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Project Documentation

- ▶ [Project Information](#)



Ajax JSP Tag Library 1.3

Overview

The AJAX Tag Library is a set of JSP tags that simplify the use of Asynchronous JavaScript and XML (AJAX) technology in JavaServer Pages.

AJAX is primarily rooted in JavaScript. However, many server-side developers do not have an extensive knowledge of client-side programming in the browser. It's much easier in some cases for J2EE developers, especially, to simply add a JSP tag to the page to gain the function desired.

This tag library fills that need by not forcing J2EE developers to write the necessary JavaScript to implement an AJAX-capable web form. The tag library provides support for live form updates for the following use cases: autocomplete based on character input to an input field, select box population based on selections made from another field, callout or balloon popups for highlighting content, refreshing form fields, and toggling images and form field states on/off.

<http://ajaxtags.sourceforge.net/>

COLDTAGS SUITE

JAVA WEB COMPONENTS, CONTROLS AND JSP CUSTOM TAGS

MONDAY, JUNE 05, 2006

Coldtags suite: Ajax edition

Coldtags suite ver. 2.70 is ready. At the first hand check out extended set of Ajax tags:

<http://www.servletsuite.com/jsp.htm#ajax>

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[Coldbeans and Web 2.0 \(or 2.1 ?\)](#)

[in memory of JBuilder](#)

[260](#)

[more Ajax](#)

[As per Jan 30](#)

<http://servletsuite.blogspot.com/2006/06/coldtags-suite-ajax-edition.htm>



Features

Mr. Persister

Mr. Persister ORM is guarded by more than 310 unit tests.

OPEN SOURCE

JSP Prize Tags

- [Introduction](#)
- [Demo](#)
- [Documentation](#)
- [Download](#)
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- [Trouble Shooting](#)
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[JSP Tree Tag](#)

[Mr. Persister ORM](#)

Prize Tags - Introduction

The Prize Tags JSP Tag Library is a collection of tag libraries for internet/intranet applications. The table below lists the tags in the Prize Tags collection.

Getting Started

Watch the demo, download the demo web app and look at the code, and download the user guides. You should be up and running in 15 minutes. Many projects won't need more than a few changes from the code in the demo pages.

The Tags

The JSP Tree Tag is now included in the Prize Tags collection. JSP Tree Tag v. 1.5 has had about 3.000 downloads. JSP Prize Tags has had about 6.000 downloads since then, before we reset the statistics recently.

The Prize Tags tag collection contains the following tags:

- ◆ [AJAX Tags](#)
- ◆ [Tree Tag](#)
- ◆ [Tabbed Pane Tag](#)
- ◆ [Alternate Tag](#)
- ◆ [Calendar Tag](#)
- ◆ [Icon Tag](#)
- ◆ [Template Tag](#)
- ◆ ... and several other, smaller tag libs.

Need Help?

Get [training and support](#) for JSP Prize Tags.

Latest News

Prize Tags 3.2.0 out

Version 3.2.0 is the stable release of 3.1.10-beta. For new features, see the [feature history](#).

Prize Tags 3.1.10-beta out

The 3.1.10-beta makes it possible to customize the images of each individual node. Until now that wasn't an easy task.

Prize Tags 3.1.9-beta out

The 3.1.9-beta contains tree DAO's for the Tree Tag, making it easier to build trees dynamically. Read more under [documentation](#).

{JSON-taglib}

SOURCEFORGE.NET®

Last Published: 06/25/2007

json.org

JSON Tag Library

JSON-taglib is a [JSP 2.0](#) tag library used to render [JSON \(JavaScript Object Notation\)](#) data from within JSP code. It can be used as part of the server-side of an [AJAX](#) application, allowing you to use the full power of JSP to format your JSON data.

The tag library is built on the [Java JSON library](#) written by [Douglas Crockford](#).

What is JSON?

JSON is a lightweight data interchange format. It is a text-based, human-readable format for representing data structures. JSON is a subset of the object literal notation of JavaScript and is used extensively in [AJAX](#) web applications. For more information about JSON, check out JSON.org

Quick-Start

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<http://json-taglib.sourceforge.net/>

JAVA WEB PARTS



Supplying the wheel, so you don't have to re-invent it!

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WELCOME TO JAVA WEB PARTS >>>

Java Web Parts is a project that provides small, reusable and largely independant Java components of interest to all web application developers. You can think of this project as being similar to the Jakarta Commons projects.


Java Web Parts is comprised of a number of packages, each supplied in their own individual JAR, with little (ideally no) cross-dependency. The packages currently include:

- **AjaxParts** A collection of components for doing AJAX including the very popular AjaxParts Taglib (APT), formerly known as AjaxTags.
- **Context** A collection of components for dealing with a servlet context
- **Filter** A collection of useful servlet filters
- **Listener** Context and Session listeners for various occasions

<http://javawebparts.sourceforge.net>




Why choose AjaxParts Taglib?

- Designed for Java developers
 - Requires no JavaScript knowledge
 - Declarative, event-driven approach
 - Uses only four tags (in combination)
- 




Why choose AjaxParts Taglib?

- Works with any Java web application
 - Handles sticky cross-browser issues
 - Part of JavaWebParts component library
 - Pure Ajax focus
- 



How about a Simple Hello World Example?

- 1 Press a button
 - 2 Obtain a text message via Ajax
 - 3 Write text message to screen
 - without refresh
 - [Say Hello World via Ajax]**
 - Hello World!
- 

```
<%@ taglib prefix="ajax" uri="javawebparts/ajaxparts/taglib" %>
<html>
  <head>
    <title>Simple Hello World Example</title>
  </head>
  <body>
    <input type="button"
      value="Say Hello World via AJAX" />

    <br /><br />
    <div id="hello-div"></div>

  </body>
</html>
```


index.jsp

```
<%@ taglib prefix="ajax" uri="javawebparts/ajaxparts/taglib" %>
<html>
  <head>
    <title>Simple Hello World Example</title>
  </head>
  <body>
    <input type="button"
      value="Say Hello World via AJAX"
    /><ajax:event ajaxRef="index/hello-button" />
    <br /><br />
    <div id="hello-div"></div>
    <ajax:enable />
  </body>
</html>
```

index.jsp

```
<ajaxConfig>
  <group ajaxRef="index">
    <element ajaxRef="hello-button">
      <event type="onclick">
        <requestHandler
          type="std:SimpleRequest"
          target="index-result.txt">
          <parameter />
        </requestHandler>
        <responseHandler type="std:InnerHTML">
          <parameter>hello-div</parameter>
        </responseHandler>
      </event>
    </element>
  </group>
</ajaxConfig>
```


ajax-config.xml




Hello World! I am an AJAX result from
the (mock) server.



What JARS do we need?

- javawebparts-ajaxparts.jar
 - javawebparts-core.jar
 - commons-logging.jar
- 



```
<web-app>
  <context-param>
    <param-name>
      AjaxPartsTaglibConfig
    </param-name>
    <param-value>
      /WEB-INF/ajax-config.xml
    </param-value>
  </context-param>
```

MyEclipse Web Browser X

* javawebparts-ajaxparts.jarhttp://192.168.42.103:8080/retrofitting/

Say Hello World via AJAX

Say Hello World via AJAX

Hello World! I am an AJAX result from the (mock) server.




Can we use a Struts action instead?

- Replace text file with action that returns text.




```
public class IndexResult extends Action {
    public ActionForward execute(
        ActionMapping mapping, ActionForm form,
        HttpServletRequest request,
        HttpServletResponse response)
        throws Exception {
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
        out.println("Hello World! " +
            "This is an AJAX response " +
            "from a Struts Action.");
        out.flush();
        return null;
    }
}
```

actions.IndexResult.java

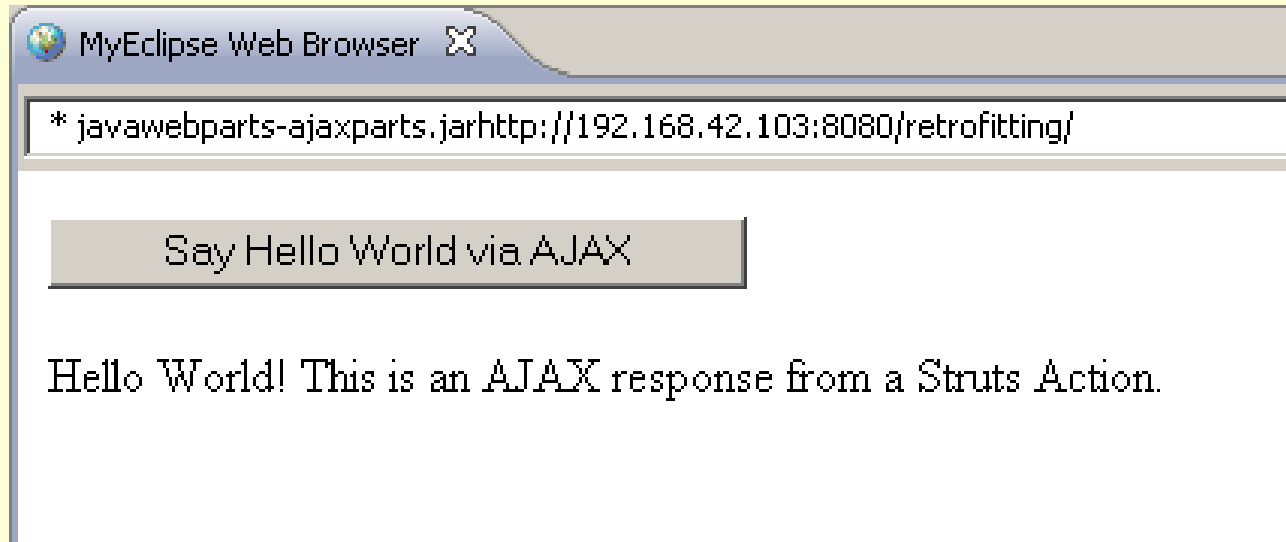


```
<action  
  path="/index-result"  
  type="actions.IndexResult"  
  validate="false" />
```




```
<requestHandler type="std:SimpleRequest"  
  target="index-result.txt">
```

```
<requestHandler type="std:SimpleRequest"  
  target="/index-result.do">
```





How about Struts 2?

- Copy and modify Action
 - Add action mapping
 - Change URI reference
- 

```
public class IndexResult2 extends
    ActionSupport {
    private InputStream inputStream;
    public InputStream getInputStream() {
        return inputStream;
    }
    public String execute() throws Exception {
        inputStream= new StringBufferInputStream(
            "Hello World! This is an AJAX response "
            + "from a Struts 2 Action.");
        return SUCCESS;
    }
}
```

actions.IndexResult2.java


```
<package name="ajaxwebparts"
  extends="struts-default">

  <action name="index-result"
    class="actions.IndexResult2">

    <result type="stream">
      <param name="contentType">text/html</param>
      <param name="inputName">inputStream</param>
    </result>

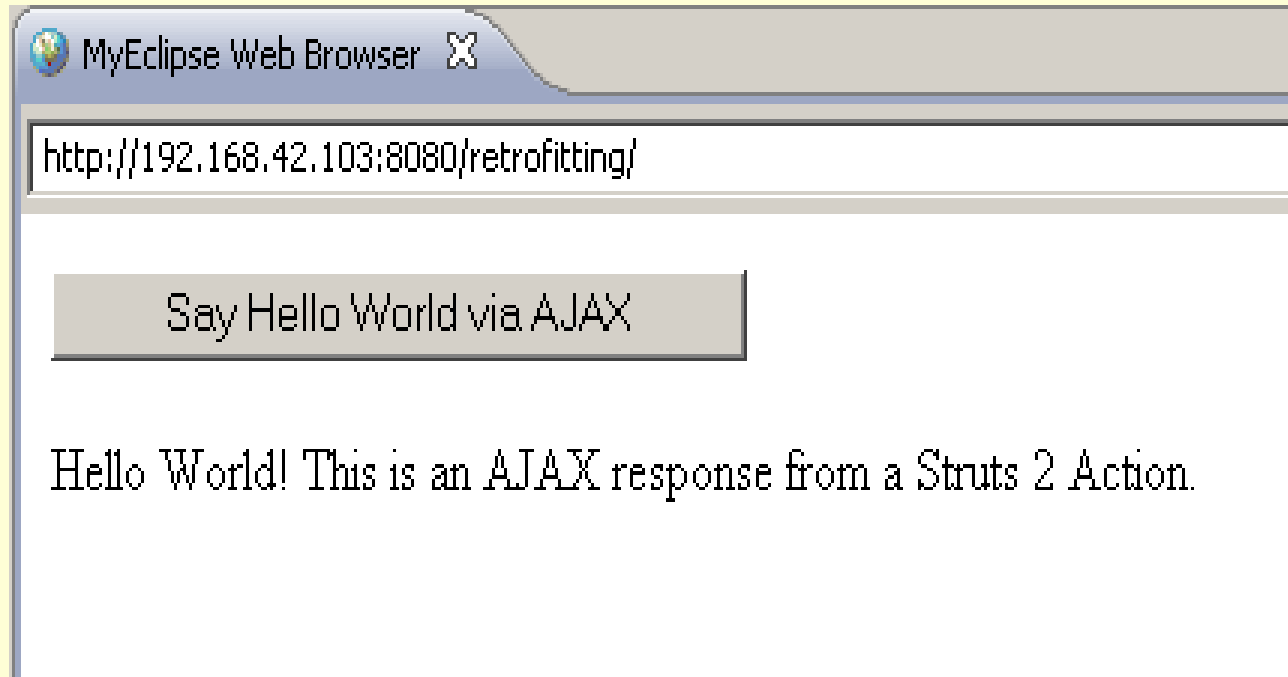
  </action>

</package>
```



```
<requestHandler type="std:SimpleRequest"  
  target="/index-result.do">
```

```
<requestHandler type="std:SimpleRequest"  
  target="/index-result.action">
```






Is it really that easy?

- No Client Side coding required
- Two tags provide most of the functionality
 - `<ajax:enable>`
 - `<ajax:event>`






What does `<ajax:enable>` do?

- Renders JavaScript for other tags on page
 - Must appear after all other APT tags
 - Usually after closing `</body>` tag
- 



What does `<ajax:event>` do?

- Attaches an JavaScript event to a HTML element
 - Tag must **immediately** follow the HTML element
 - Repeat: *immediately!*
- 

What does <ajax:event> do?

wrong:

```
<input type="button"  
  value="Say Hello World via AJAX" />
```

```
<ajax:event ajaxRef="index/hello-button" />
```

right:

```
<input type="button"  
  value="Say Hello World via AJAX"  
/><ajax:event ajaxRef="index/hello-button" />
```

```
<ajaxConfig>
  <group ajaxRef="index">
    <element ajaxRef="hello-button">
      <event type="onclick">
        <requestHandler
          type="std:SimpleRequest"
          target="/index-result.action">
          <parameter />
        </requestHandler>
        <responseHandler type="std:InnerHTML">
          <parameter>hello-div</parameter>
        </responseHandler>
      </event>
    </element>
  </group>
</ajaxConfig>
```

ajax-config.xml



How are Groups and Elements related?



Groups

- Elements
 - Events
 - RequestHandler
 - Parameters
 - ResponseHandler
 - Parameters
 - ResponseHandler 2
 - Parameters






How are Groups used?

- One root ajaxConfig element
- As many *group* stanzas as needed
 - group is a logical container
 - Often corresponds to a page






How are Elements used?

- As many *element* stanzas as needed within a *group*
 - Usually correspond to actual element on a page
 - button, link, div, ...
- 




How are Events and Handlers used?

- As many *event* stanzas as needed within a *element*
 - Attached to a page element or timer
 - Each event may have a *requestHandler* and one or more *responseHandlers*
 - Several standard handlers provided
 - Custom handlers may be added
- 



How are requestHandlers used?

- **SimpleRequest**
 - Sends request to target URI
 - **QueryString**
 - Submits a form as a GET request
 - **Poster**
 - Submits a form as a POST request
 - **SimpleXML**
 - Submits a form as a XML document
- 



How are requestHandlers used?

SendByID

- submits a GET or POST for a list of elements, optionally in XML





How are responseHandlers used?

● InnerHTML

- Sets response content to element's innerHTML

● Alterer

- Raises a JavaScript alert() with the response content

● CodeExecuter

- Evaluates the response content as a script
- 



How are responseHandlers used?


DoNothing

- Allows evaluation of mixed `<script>` content

IFrameDisplay

- Writes response content to a named IFrame

Redirector

- Uses response content as a URI for a redirect; alternatively, URI may be specified in configuration
- 




How are responseHandlers used?

WindowOpener

- Opens a new window and populates it with response content

XLST

- Transforms XSL from response content (requires Sarissa)
- 




How are responseHandlers used?

• TextBoxArea

- Populates text control from response

• SelectBox

- Populates `<select>` control from response
 - `<list>`
 - `<option value="DD">EE</option>`
 - `</list>`
- 




How are responseHandlers used?


- FormManipulator - Populates fields in a form from response content
 - `<form name="AA">`
 - `<formproperty name="BB" value="CC"/>`
 - `<element name="DD" value="EE">`
 - `<property name="FF" value="GG"/>`
 - `</element>`
 - `</form>`






How are Parameters used?

- Any value needed by a handler
 - Varies by handler
- 



What are the benefits of a declarative approach?

- Change URIs or handlers in configuration
 - No JSP coding changes, no recompiling
 - Reload and go!
- 




Is that all there is to AjaxParts?

- Custom handlers, including error handlers
- Configuration options





Is that all there is to AjaxParts?

- Powerful but easy to use
 - Built on a declarative foundation
 - Utilizes event-driven paradigm
 - Works with Struts and other web application frameworks
 - Doesn't require in-depth JavaScript knowledge
- 



Is that all there is to AjaxParts?

- The AjaxParts Taglib from Java Web Parts: Ajax for Java Developers the Easy (yet powerful) Way

- (Frank W Zammetti,
<http://www.omnytex.com/articles/apt/>)

- JavaWebParts web site

- JWP Sample Application and JWP Cookbook
 - (<http://javawebparts.sourceforge.net/>)
- 



Is that all there is to AjaxParts?

- Practical Ajax Projects With Java Technologies
 - (Frank W. Zammetti, ISBN 1-59059-695-1)
- Struts-Ajax-Crud or "Select alters other select list"
 - (Rick Reumann,
http://www.learntechnology.net/content/ajax/ajax_select_alter.jsp)





Other Struts 1 Ajax Resources


- Sprinkle Some Ajax Magic in Your Struts Web Application
 - (Paul Browne, <http://today.java.net/lpt/a/236>)
 - Ajax using XMLHttpRequest and Struts
 - (Frank W. Zammetti, <http://www.omnytex.com/articles/xhrstruts/>)
- 



Struts University Series




Are there new alternatives for Struts 2?

- Struts 2.0 Ajax Tag Themes
 - Struts 2.1 Ajax Tag Plugins
 - Dojo and (some) YUI
 - GWT Plugin
 - Uses Action as backend data source
 - JSON Plugin
 - Renders Action properties as JSON object
- 



How do the S2 Ajax Tags work?

- The Dojo plugin provides several tags
 - a / link - make a remote call to the server using Ajax
 - form - Ajax-based validation via DWR
 - submit - Used with form tag
 - div - Obtain content for a div via remote call
 - tabbedpanel - content for each panel is object via remote call
- 




How do the S2 Ajax Tags work?

- The YUI plugin provides three tags
 - autocomplete
 - datepicker
 - languages





How do the S2 Ajax Tags work?

- The YUI plugin provides three tags
 - autocomplete
 - **datepicker**
 - languages
- 

The selected date is



Submit

The selected date is



October 2007

Su	Mo	Tu	We	Th	Fr	Sa
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10



MyEclipse Web Browser 

http://192.168.42.103:8080/retrofitting/datepicker.action

The selected date is



```
<%@ taglib prefix="yui" uri="/struts-yui-tags" %>
```

```
<%@ taglib prefix="s" uri="/struts-tags" %>
```

```
<html>
```

```
<head>
```

```
<yui:head datepicker="true" />
```

```
</head>
```

```
<body>
```

```
<p>The selected date is
```

```
<s:property value="datepicker" /></p>
```

```
<s:form action="datepicker">
```

```
<yui:datepicker id="datepicker"  
  name="datepicker" />
```


```
<s:submit />
```

```
</s:form>
```


```
</body>
```

```
</html>
```

datepicker.jsp



```
<action name="datepicker"  
class="actions.Datepicker">  
  <result>datepicker.jsp</result>  
</action>
```



```
public class Datepicker extends ActionSupport {
    private Date datepicker;
    public Date getDatepicker() {
        return datepicker;
    }
    public void setDatepicker(Date value) {
        datepicker = value;
    }
}
```

actions.DatePicker.java




The selected date is

10/26/2007



October 2007

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Are there other Struts 2 Ajax resources?

- Turbocharge Your Pages with Ajax, Dojo, and Struts
 - (Doug Tillman, <http://www.devx.com/webdev/Article/31806>)
 - For help with the Dojo tags, see the new Ajax Recipes page
 - <http://struts.apache.org/2.x/docs/ajax-and-javascript-recipes.html>
 - Ian Roughley's new S2 book (November 2007) includes an Ajax chapter
 - (Practical Apache Struts 2 Web 2.0 Projects, ISBN 1590599039)
-



Is that all there is?

- In this session, we covered
 - Integrating Ajax with Struts 1 or Struts 2
 - Using the AjaxParts taglib with Struts 1 or 2
 - Using the Ajax YUI plugin with Struts 2





Struts University Series