



# AJAX Integration with ColdFusion 8

*Sean A Corfield  
CTO, Scazu Inc.*

June 27th - 30th 2007

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# What is this about? (I)

- ✓ ColdFusion 8 – currently in Public Beta
- ✓ Amongst the many new features, ColdFusion 8 adds extensive support for building rich applications and UI using JavaScript & Dynamic HTML
- ✓ We'll look at a **dozen** new tags, several new attributes and other new features that provide easy-to-use controls and interactivity with (almost) no JavaScript

# What is this about? (II)

- ✓ This is an **overview** of the new AJAX features
- ✓ I'm going to show code examples for each tag and function
- ✓ I'm not going to go into detail about any specific tag or function
- ✓ Go to Rakshith N's "ColdFusion 8: Advanced AJAX Development" for more details

# Who am I?

- ✓ Freelance Consultant / CTO, Scazu Inc
- ✓ Previously
  - Manager, Hosted Services, Adobe
  - Senior Architect, Macromedia
- ✓ Blogger – An Architect's View – since 2002
- ✓ ColdFusion developer since 2001
- ✓ Web Developer since 1997

# A bit of “AJAX” history

- ✓ XMLHttpRequest introduced in IE5 – used in Outlook Web Access
- ✓ Microsoft Remote Scripting switched to XMLHttpRequest in 2002
- ✓ Other browsers added support
- ✓ Jesse James Garrett coined the name in 2005 and the web development world went insane...

# AJAX Pros...

- ✓ **Pros**
  - Improves user experience – fewer page refreshes
  - Lowers bandwidth usage – only data is loaded
  - Separates data, format, style and function

## ...and Cons

- ✓ **Cons**
  - Browser history and bookmarking is hard
  - Network latency can cause unresponsiveness
  - Search engines don't read JavaScript
  - JavaScript behavior differs across browsers

# AJAX is complicated

- ✓ AJAX is much more than XMLHttpRequest
  - Also User Interface widgets and controls
- ✓ Well over a hundred libraries out there
  - Dojo, Prototype, Scriptaculous, Spry...
- ✓ Popular libraries are complex pieces of code
- ✓ You often need to know a **lot** of JavaScript

# AJAX and ColdFusion 8 (I)

- ✓ Developer Productivity theme
- ✓ Make it easy to use AJAX
  - Provide a rich set of User Interface controls
  - Enable rich input and output
  - Provide a natural way to handle data management

# AJAX and ColdFusion 8 (II)

- ✓ New tags for layout and controls
- ✓ JSON serialization for CFC results
- ✓ Ability to “bind” data and methods to controls
- ✓ Automatically proxy CFCs in JavaScript
- ✓ ColdFusion 8 AJAX UI controls are based on Yahoo! UI toolkit and Ext JS library

# What will we cover?

- ✓ Enhanced input and data binding
- ✓ Data management and calling CFCs
- ✓ New interactive layout tags and controls

# Input & Output

- ✓ Data binding across controls
- ✓ Rich textarea
- ✓ Built-in auto-suggest
- ✓ `<cfgrid>` and `<cftree>` get a facelift

# Data Binding

- ✓ bind= attribute for cfgrid, cfinput, cfselect etc
- ✓ Can bind to:
  - bind="{city}, {stateCode}"
  - bind="cfc:path.to.cfc.func(args)"
  - bind="javascript:func(args)"
  - bind="url:http://domain.com/file.cfm?args"
- ✓ Can bind in values of HTML controls
  - source="displayCity.cfm?citycode={city}"

# Related Selects

- ✓ Data binding to create related selects
- ✓ Populate option lists from CFC calls
- ✓ Pass selected option value to a remote call

# Rich Text Editor

- ✓ cftextarea has a new richtext="true" attribute
- ✓ Uses FCKeditor to provide WYSIWYG editor
- ✓ Toolbars are configurable
- ✓ Compatible with IE, FireFox, Mozilla, Netscape
  - Full support for Safari is a work in progress

# Auto-suggest for input fields

- ✓ autosuggest= attribute on cfinput
- ✓ Takes a list of possible values
- ✓ Can be bound to a dynamic list (array)

## cfgrid

- ✓ New format: HTML – full AJAX grid
  - Built-in column sorting, paging
  - Cells can be edited, rows can be deleted
- ✓ Grid data retrieved from bound CFC call

## cftree

- ✓ Now supports format="html"
- ✓ Now supports data binding
  - CFCs, JavaScript and JSON URLs
- ✓ Dynamic trees can be cached

# Data Management

- ✓ Data binding provides simple data management
- ✓ Controls can be bound to CFC results
- ✓ Control values can be passed to CFC calls
  
- ✓ What if you need more specific calls / logic?

# cfajaxproxy

- ✓ Auto-magic CFC facade
- ✓ Creates a JavaScript class to match your CFC
- ✓ You call methods on the JavaScript proxy
  - It automatically calls your CFC methods
  - Calls can be synchronous or asynchronous
- ✓ Can also bind a single method call

# AJAX UI

- ✓ Layouts
- ✓ Menus
- ✓ Windows
- ✓ etc

# cflayout

- ✓ Simple dynamic layouts:
  - Tab navigator
  - Horizontal & Vertical Box layouts
  - Border layout
- ✓ Child tag
  - cflayoutarea
  - Content can be populated via a URL
  - URL can contain dynamic bind expressions

# cflayout type="tab"

- ✓ “Stacked” panels selectable by clickable tabs
- ✓ Tabs can be at the top or bottom of the layout
- ✓ Tabs can have a close box [x]
- ✓ Can control overflow
  - auto, hidden, scroll, visible

# cflayout type="hbox|vbox"

- ✓ Simple horizontal or vertical layout
- ✓ Can control overflow
  - auto
  - hidden
  - scroll
  - visible

# cflayout type="border"

- ✓ Up to five panels, automatic layout:
  - Top, Bottom, Left, Right, Center
- ✓ Optional title bar on each panel
- ✓ Collapsible, closable panels
  - Can be hidden initially
- ✓ Top, Bottom, Left, Right can all be resized
  - Optional draggable edge

# cfmenu

- ✓ Creates a horizontal or vertical menu
- ✓ Child tag
  - cfmenuitem
  - Can be nested to create sub-menu
  - Can link to JavaScript or a URL

## cftooltip

- ✓ Creates mouseover “tooltips” for any element
- ✓ Control show / hide delays
- ✓ Tooltip can be specified as:
  - Simple inline text
  - URL to page that includes formatting & graphics

## cfwindow

- ✓ Creates a floating “window” in the browser
- ✓ The window can be modal
- ✓ The window can be closable
- ✓ The window can be draggable
- ✓ Window content can come from a URL
- ✓ URL can contain dynamic bind expressions

## cfdiv

- ✓ Creates an HTML tag whose contents are populated from a dynamic URL
- ✓ HTML tag can be anything with an HTML body
  - By default it's `<div>`

## cfpod

- ✓ Creates a “pod” such as you see on blogs
- ✓ Can have an optional title
- ✓ Content can be inline or from a URL
- ✓ URL can contain dynamic bind expressions
- ✓ Can also dynamically populate a pod
  - `ColdFusion.navigate(url,podID)`

# Miscellaneous Stuff (I)

- ✓ ?cfdebug – built in AJAX debugger
  - Can turn on/off in ColdFusion Administrator
- ✓ ColdFusion DOM includes:
  - Methods to show/hide, expand/collapse
  - Grid, Layout, Tree, Window methods
  - ColdFusion.navigate() - populate item from URL
  - ColdFusion.setGlobalErrorHandler()

# Miscellaneous Stuff (II)

- ✓ SerializeJSON(), DeserializeJSON(), IsJSON()
- ✓ AJAX Date Picker

# Resources

- ✓ ColdFusion 8: Advanced AJAX Development – Rakshith N @ CFUNITED
- ✓ <http://labs.adobe.com/technologies/cold> - ColdFusion 8 on <labs>
- ✓ <http://forta.com/blog/> - Ben Forta on ColdFusion
- ✓ <http://ray.camdenfamily.com/> - Ray Camden on AJAX

# Questions?

*Sean A Corfield*  
*sean@corfield.org*  
*<http://corfield.org>*