



Emerging Technologies

From Basic HTML to Accessible Web 2.0 Using Dojo – Part 2

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Agenda

- Brief Introduction to Dojo
- Dojo Accessibility
- Review a Basic HTML Page
- Enhancing with Dojo
 - Prepare New Design
 - Use Tree Control for Navigation
 - Use BorderContainer for Layout
 - Separate Information using TabContainer
 - Use Rich Text Editor for Comments
- Test with Screen Reader
- Review
- Summary

Dojo - What is it?

- Open Source JavaScript Toolkit
- “Easy” Ajax
- Data Binding
- Full event system
- Browser abstraction layer
- User Interface Widgets
- Dual Licensed
 - Academic Free License v2.1
 - BSD License
- Dojo 1.0 available in November, 2007
 - 1.1 in March, 2008
- Dojo 1.2 released October, 2008
 - 1.2.3 in December, 2008
- Dojo 1.3 planned for Q1 2009



Core Widget Set - dijit

- Accessible
- Internationalized
- Customizable Look and Feel
- Developer Documentation
 - API
 - User Manual
- Supported Browsers
 - Firefox 2, Firefox 3
 - IE 6, IE 7, IE 8 support in progress
 - Safari 3
- Data Binding
 - Tree, Grid*, Select

*Grid is in dojox (dojo extensions)

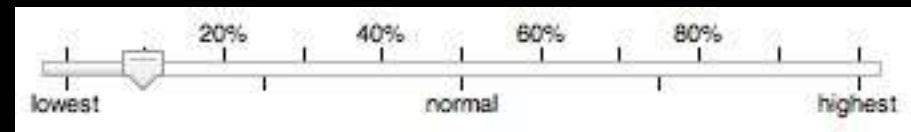
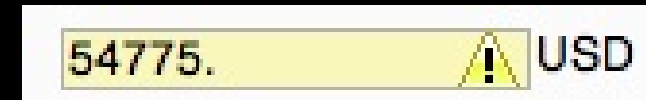
Dojo Core Widgets - Dijit

- Form Widgets
- Layout Widgets
- Advanced Widgets

Form Widgets



- Button, Dropdown Button, Combo Button
- Checkbox, Radio
- ComboBox, Filtering Select, Multi Select
- Textbox
- Currency & Integer Validation Textboxes
- Resizable Textarea
- Slider
- Integer Spinner
- Inline Editbox
- Dropdown Calendar



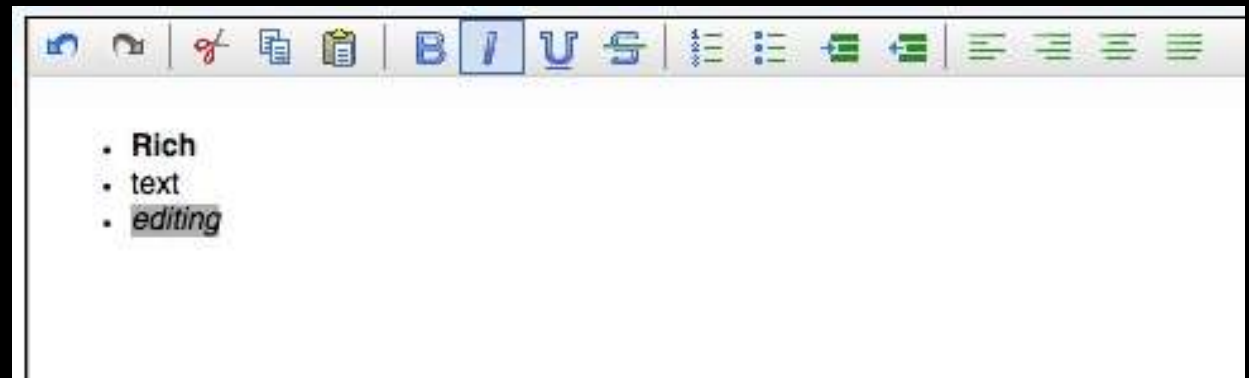
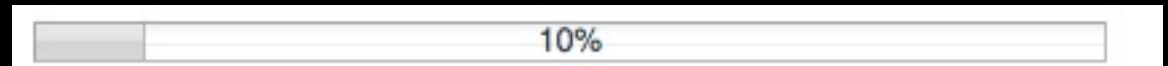
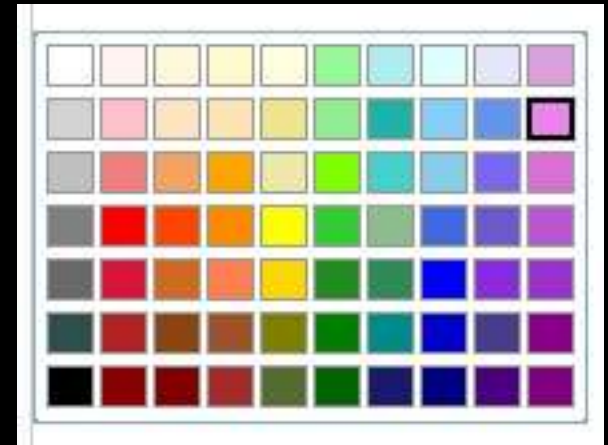
Layout Widgets

- Accordion Container
- Content Pane
- Dialog
- Border Container
- Tab Container
- Title Pane



Advanced Widgets

- Color Palette
- Context Menu
- Rich Text Editor
- Progress Bar
- Toolbar
- Tooltip, Tooltip Dialog
- Tree



Accessibility Support in Dojo Core Widgets - 1.0.x+

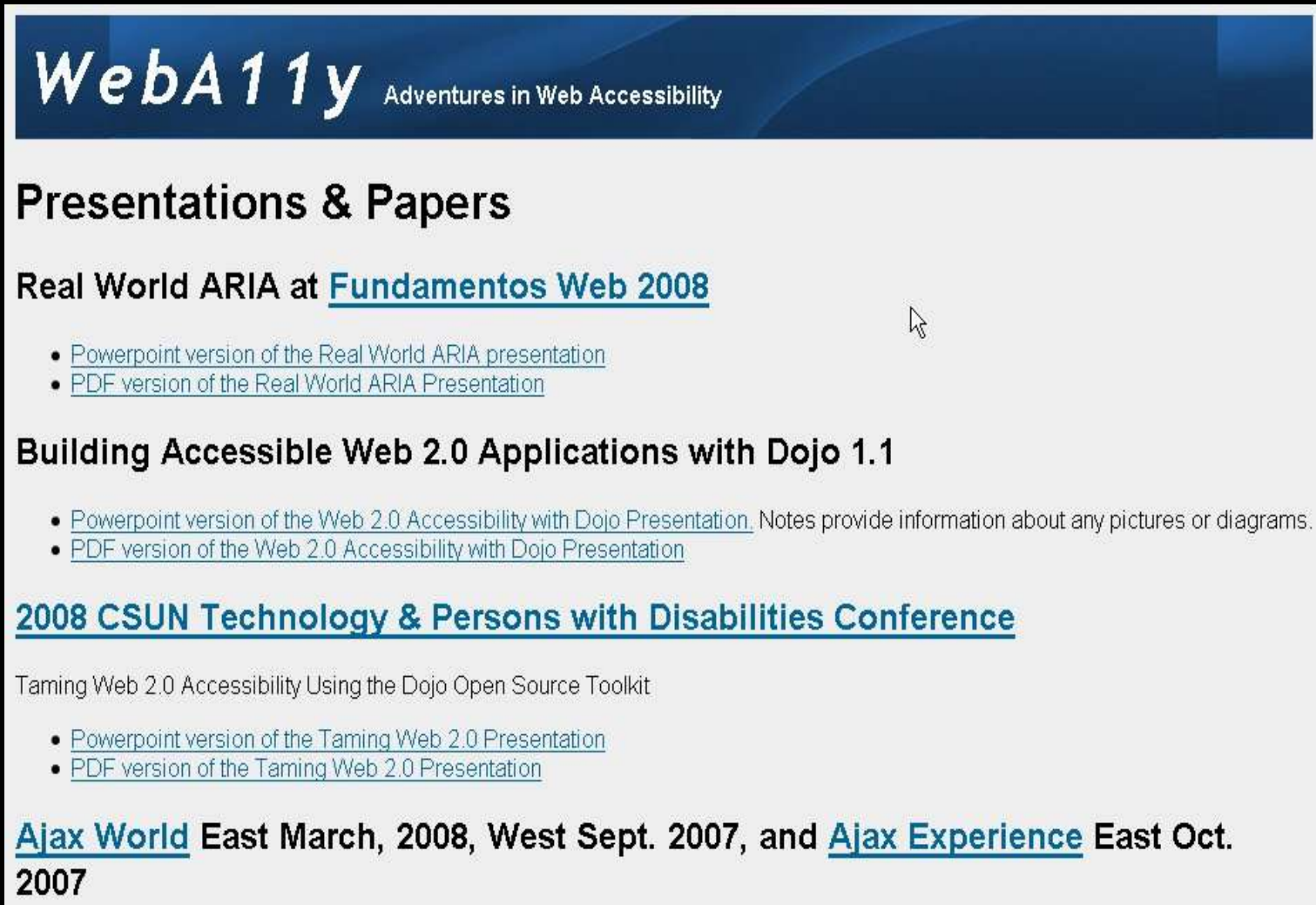
- Keyboard support in IE 6, IE 7, Firefox 2, Firefox 3
- Screen reader support in FF 2 & FF 3 with JAWS 9 or later
 - Implemented using Accessible Rich Internet Applications (ARIA)
- Low Vision Support
 - Windows high contrast support in IE 6, IE 7, FF2, FF3
 - No fixed font sizes
 - Support Images off in FF
- Low Vision support allows claim of “equivalent facilitation” for US Section 508 requirement to run with CSS turned off.

Using Dojo

Becky's Setup

- MacBook Pro
- Eclipse with Aptana and Dojo 1.2 plugin
- XAMPP Apache Server with PHP
 - Configured to serve up CalWac directory
- Parallels Desktop to run Windows
- Firefox 3 in Windows
- JAWS 10 in Windows

Original (boring) HTML Page



WebA11y Adventures in Web Accessibility

Presentations & Papers

Real World ARIA at [Fundamentos Web 2008](#)

- [Powerpoint version of the Real World ARIA presentation](#)
- [PDF version of the Real World ARIA Presentation](#)

Building Accessible Web 2.0 Applications with Dojo 1.1

- [Powerpoint version of the Web 2.0 Accessibility with Dojo Presentation](#). Notes provide information about any pictures or diagrams.
- [PDF version of the Web 2.0 Accessibility with Dojo Presentation](#)

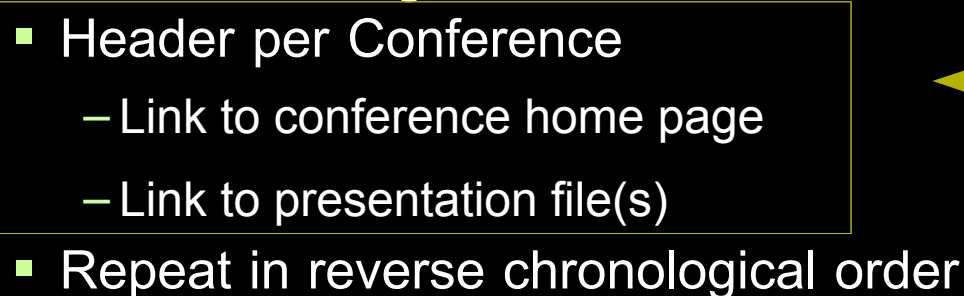
[2008 CSUN Technology & Persons with Disabilities Conference](#)

Taming Web 2.0 Accessibility Using the Dojo Open Source Toolkit

- [Powerpoint version of the Taming Web 2.0 Presentation](#)
- [PDF version of the Taming Web 2.0 Presentation](#)

[Ajax World](#) East March, 2008, West Sept. 2007, and [Ajax Experience](#) East Oct. 2007

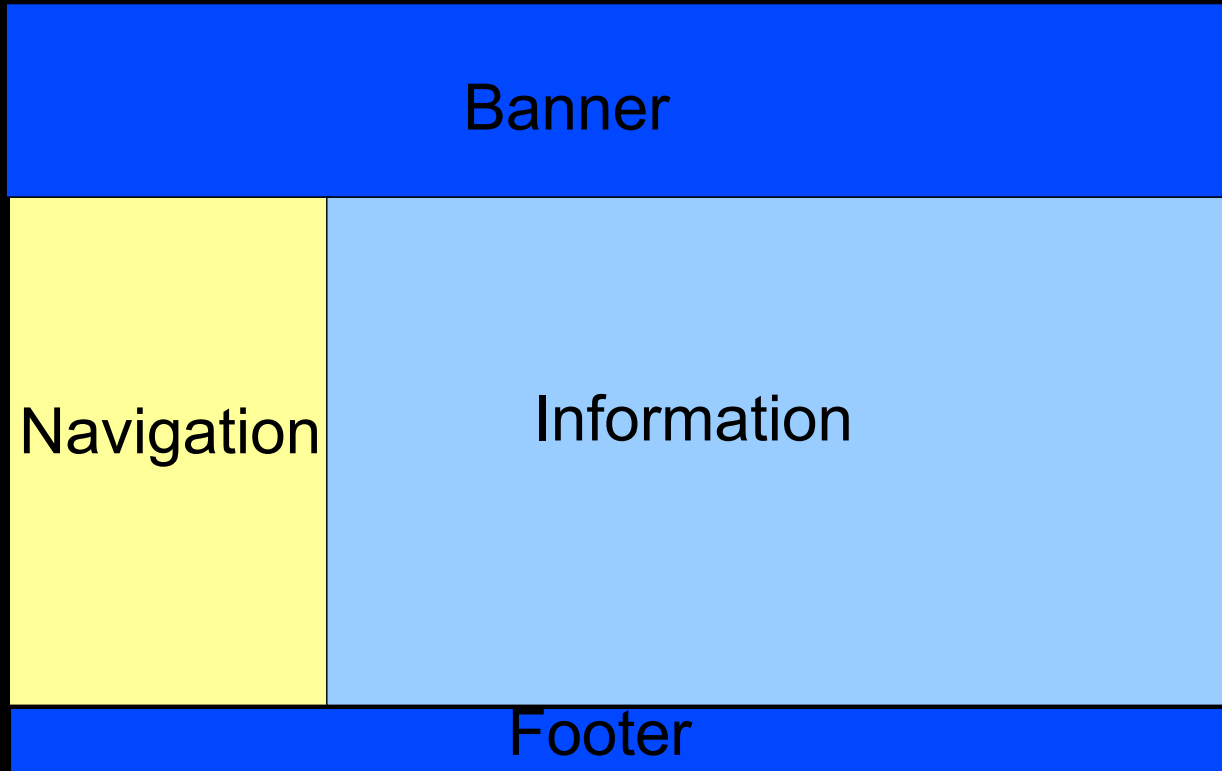
Original Design

- Banner at top of page
 - Header for Page Title
 - Header per Conference
 - Link to conference home page
 - Link to presentation file(s)
 - Repeat in reverse chronological order
 - List Papers
- 

Updated Design

- Banner at top
- Improve Layout
 - Navigation on Left hand side
 - Data displayed on right hand side
- Organize the Information
 - Conferences by Year
 - Publications
 - Recorded Demos (previously on another page)
- Better Navigation
- Add footer

Improve Layout



Use Dijit BorderContainer!

Organize the Information

- Conferences
 - 2009
 - 2008
 - 2007
 - 2006
- Publications
 - Printed
 - Online
- Recorded Demos
 - Screen Reader
 - Keyboard
 - Low Vision



Use dijit Tree

Organize the Data

- Provide Links to presentations
- Load Conference link within site
- Allow Comments

Use dijit TabContainer

The screenshot illustrates a web application interface using a dijit TabContainer. The container has three tabs: 'Content', 'Info', and 'Comments'. The 'Info' tab is currently selected and active. The content of the 'Info' tab includes a header for 'California State University Northridge' and a section titled 'Please Add Comments: CSUN'. Below this, there is a comment box with a toolbar containing icons for undo, redo, bold, italic, underline, strikethrough, bulleted list, numbered list, link, unlink, and a text area containing the comment 'This presentation was GREAT!'. The 'Content' and 'Comments' tabs are visible but not active. The overall layout is clean and organized, demonstrating the use of the dijit TabContainer for managing different views of the data.

Improve Navigation

- Use Tree to navigate
- Select Node in tree to display data

The screenshot displays the 'WebA11y' website interface. On the left, a navigation tree is visible with the following structure:

- Presentations
 - 2009
 - 2008
 - Fundamentos Web
 - IBM
 - CSUN
 - Ajax World East
 - 2007
 - 2006
- Publications
 - Print
 - Web Accessibility (highlighted)
 - Online
- Recorded Demos
 - Dojo with Screen Reader
 - Dojo with Keyboard
 - Dojo and Low Vision

The main content area on the right shows the details for the selected 'Web Accessibility' publication. It includes a book cover image, the title 'Web 2.0 Chapter in Web Accessibility A Foundation for Research', and the following text:

Web Accessibility
A Foundation for Research

Harper, Simon; Yesilada, Yeliz (Eds.)
2008, VIII, 380 p. 31 illus., Hardcover
ISBN: 978-1-84800-049-0

- [Web Accessibility available from Amazon](#)
- [Web Accessibility available from Publisher](#)

Implementation

- **Get Dojo**
- Implement Tree
- Create Layout
- Integrate Tree
- Add TabContainer
- Customize Tree Icons
- Add Content Tab & Rich Text Editor

Get Dojo

- Install Dojo on your server
 - Download from <http://dojotoolkit.org/downloads>
 - Once development is complete consider creating your own optimized build <http://dojocampus.org/content/tag/build/>
- Use Dojo from your IDE
 - Example: Eclipse with Aptana plugin
from Apanta page select create new project link
adds projectName/lib/dojo/dojo
 projectName/lib/dojo/dijit
 projectName/lib/dojo/dojox
- Use Dojo from CDN
 - AOL: `<SCRIPT TYPE="text/javascript" SRC="http://o.aolcdn.com/dojo/1.2/dojo/dojo.xd.js"></SCRIPT>`
 - Google: `<SCRIPT TYPE="text/javascript" SRC="http://ajax.googleapis.com/ajax/libs/dojo/1.2/dojo/dojo.xd.js"></SCRIPT>`

Implementation

- Get Dojo
- **Implement Tree**
- Create Layout
- Integrate Tree
- Add TabContainer
- Customize Tree Icons
- Add Content Tab & Rich Text Editor

dijit.Tree

- Display hierarchical data
- Data provided via TreeModel
 - dijit.tree.TreeStoreModel – single root node
 - dijit.tree.ForestStoreModel – multiple root nodes
- Attach code to events
- Customize Icons
- Drag and Drop (not accessible)

Organize our data

- Presentations
- Publications
- Recorded Demos

Organize the Presentation Data

- Presentations – id, description, type
 - Year – id, description, type
 - Conference
 - id
 - description
 - type
 - Info link – url to the conference site ([infoUrl](#))
 - Data link – url to local page containing presentation links ([dataUrl](#))
 - Conference
 - Id
 - description
 - type
 - Info link
 - Data link
 - Year – id, description, type
 - conference

Organize the Publication Data

- Publications – id, description, type
 - Type – id description, type
 - Publication
 - Id
 - Description
 - Type
 - Info link – url to the publication site ([infoUrl](#))
 - data link – local page with publication links ([dataUrl](#))
 - Type – id, description, type
 - Publication
 - Id
 - Description
 - Type
 - Info link
 - data link

Organize the Demos

- Recorded Demos – id, description, type
 - Demo
 - Id
 - Description
 - Type
 - Data link – link to page containing demo files ([dataUrl](#))
 - Demo
 - Id
 - Description
 - Type
 - Data link

Creating the Tree Model

- `dijit.tree.Model`
 - an Object matching a certain API of methods the tree needs
- Provides following functions
 - Respond to queries from the tree about data items and hierarchy
 - Notify tree when items in data store change
 - Handle writes back to the data store from changes in the tree
(not implemented in this demo)
- *Interacts with a dojo data store*
- *`dijit.tree.TreeStoreModel` – single root*
- *`dijit.tree.ForestStoreModel` – multiple roots*

A `dijit.Tree` presents a view onto hierarchical data. The "TreeModel" represents the actual data.

Dojo Data Stores

- Uniform data access layer
- All data is represented as an item or as an attribute of an item
- Search for items with particular properties
- dojo.data is an API so others can write custom data stores
- Dojo provides JSON format data store
 - dojo.data.ItemFileReadStore ←
 - dojo.data.ItemFileWriteStore
- Additional stores available in dojox
 - dojox.data.FlickrStore
 - dojox.data.WikipediaStore
 - dojox.data.XmlStore
 - more.....

Working with ItemFileReadStore

- Using dojo data stores
 - - <http://docs.dojocampus.org/quickstart/data/usingdatastores>
- Terminology
 - Item
 - Attribute
 - Value
 - Identity (primary key)
- Expects JavaScript Object or JSON (JavaScript Object Notation) file

Building the data store

```
{ identifier: 'id',  
  label: 'description',  
  items: [  
    { id: 'Presentations', description: 'Presentations',  
      type: 'Category' },  
    { id: 'Papers', description: 'Publications',  
      type: 'Category' },  
    { id: 'Demos', description: 'Recorded Demos',  
      type: 'Category' }  
  ]  
}
```

We will query items by id and display the description

Building the Data Store

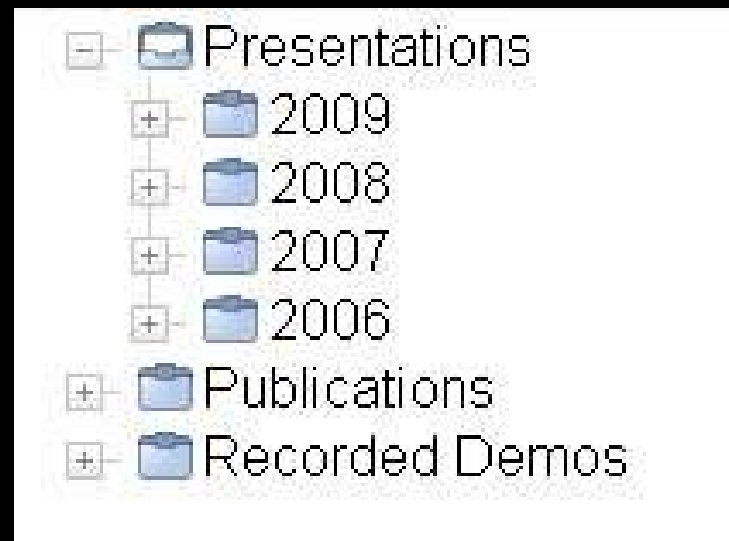


Building the Data Store – Adding Children

```
{ identifier: 'id',
  label: 'description',
  items: [
    { id: 'Presentations', description: 'Presentations', type: 'Category',
      children: [
        { id: '2009', description: '2009', type: 'group' },
        { id: '2008', description: '2008', type: 'group' },
        { id: '2007', description: '2007', type: 'group' },
        { id: '2006', description: '2006', type: 'group' }
      ]
    },
    { id: 'Papers', description: 'Publications', type: 'Category' },
    { id: 'Demos', description: 'Recorded Demos', type: 'Category' }
  ]
}
```

“children” is the default attribute name in the `dijit.tree.ForestTreeModel` to identify child items. Use `childrenAttrs` parameter to specify a different name.

Building the Data Store – Adding Children



Building the Data Store – Adding More Children

```
{ id:'Presentations', description: 'Presentations', type:'Category',
  children: [
    { id: '2009', description: '2009', type:'group',
      children: [
        { id: 'CalWAC', description: 'California Web A11y Conf', type:'conf',
          dataUrl:'data/.html', infoUrl:'http://www.knowbility.org/calwac/'}
      ]
    },
    { id: '2008', description: '2008', type:'group',
      children: [
        {id:'FWeb', description: 'Fundamentos Web', type:'conf',
          dataUrl:'data/fweb.html', infoUrl:'http://www.fundamentosweb.org/'},
        {id:'IBM', description: 'IBM', type:'conf',
          dataUrl:'data/buildwDojo.html', infoUrl:'http://www.ibm.com/able'},
        {id:'CSUN08', description: 'CSUN', type:'conf',
          dataUrl:'data/csun08.html', infoUrl:'http://www.csun.edu/cod/conf'},
        {id: 'AWorld08', description: 'Ajax World East', type:'conf',
          dataUrl:'data/ajaxWorld08.html', infoUrl:'http://ajaxworld.com/'}
      ]
    },
    { id: '2007', description: '2007', type:'group'},
    { id: '2006', description: '2006', type:'group'}
  ]
},
```

Building the Data Store – Adding More Children



Attributes of the Data Model

- id
 - Primary key
- description
 - Label to display in tree
- type
 - Used to identify item types for queries
- dataUrl
 - Url to local page containing HTML fragment with links to data
- infoUrl
 - Url to conference page

Example dataUrl page

dataUrl:'data/fweb.html'

```
<h2>Real World ARIA at
  <a href="http://www.fundamentosweb.org">Fundamentos Web 2008</a>
</h2>
<div>
  <ul>
    <li><a href="data/RealWorldARIA.ppt">Powerpoint version of
the Real World ARIA presentation</a>
    </li>
    <li><a href="data/RealWorldARIA.pdf">PDF version of the
Real World ARIA Presentation</a>
    </li>
  </ul>
</div>
```


Create the Tree – Add dojo and dijit requires

```
<style type="text/css">
    @import "lib/dojo/dojo/resources/dojo.css";
    @import "lib/dojo/dijit/themes/soria/soria.css";
    @import "resources/calwac.css";

</style>
<!-- required: dojo.js -->
<script type="text/javascript" src="./lib/dojo/dojo/dojo.js"
    djConfig="isDebug: true, parseOnLoad: true">
</script>

<script type="text/javascript">
    dojo.require("dojo.data.ItemFileReadStore");
    dojo.require("dijit.Tree");
    dojo.require("dojo.parser"); // scan page for widgets and
instantiate them
</script>
```

Create the Tree – add dijit code

```
<body class="soria">

<!-- Reference the data store -->
<div dojoType="dojo.data.ItemFileReadStore"
jsId="resourceStore" url="resourceData.json">
</div>

<!-- Add the tree model -->
<div dojoType="dijit.tree.ForestStoreModel" jsId="resModel"
store="resourceStore" ></div>

<!-- Add the tree -->
<div dojoType="dijit.Tree" id="resTree" model="resModel"
showRoot="false">
</div>

</body>
```

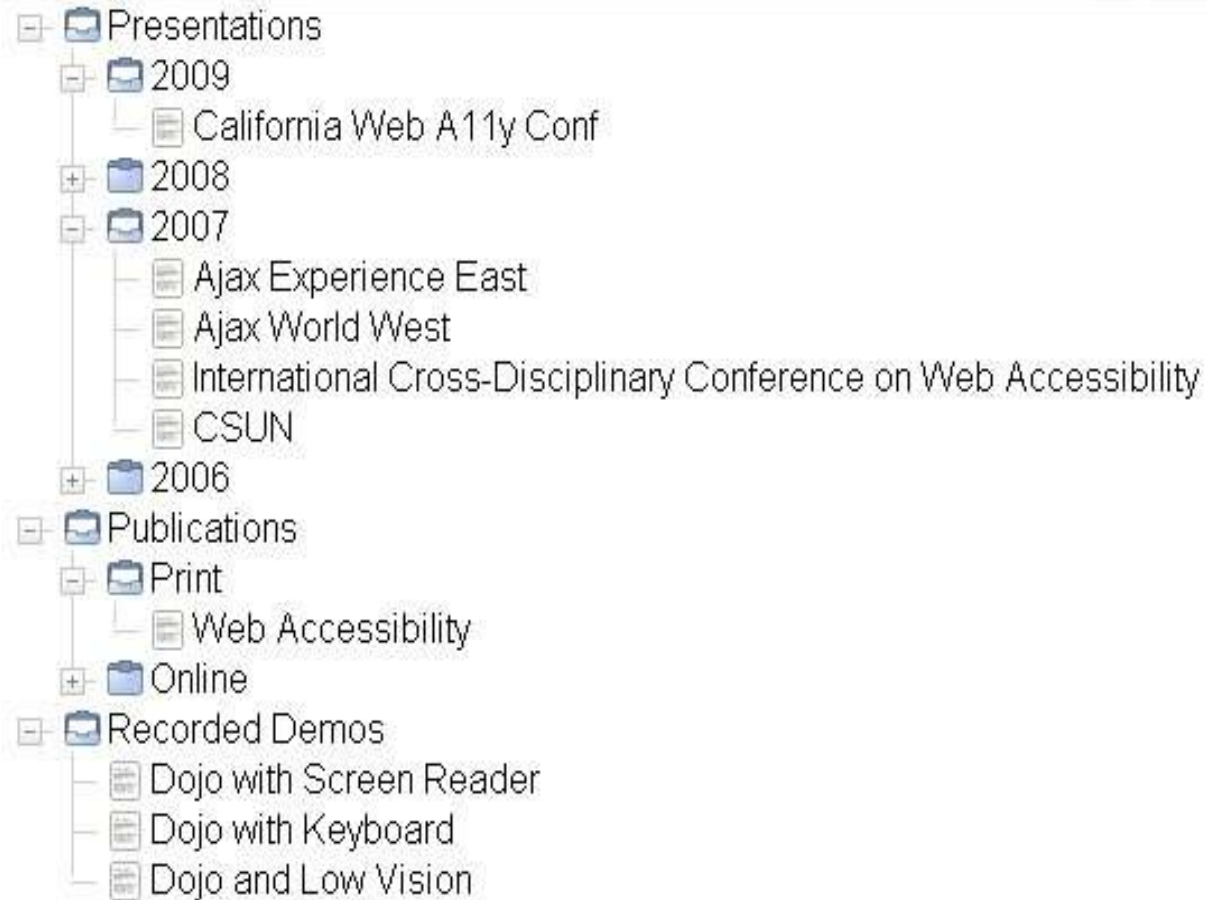
Add an Event when Click a Node

```
<body class="soria">
<!-- Reference the data store -->
<div dojoType="dojo.data.ItemFileReadStore" jsId="resourceStore"
url="resourceData.json">
</div>

<!-- Add the tree model -->
<div dojoType="dijit.tree.ForestStoreModel" jsId="resModel"
store="resourceStore" ></div>

<!-- Add the tree -->
<div dojoType="dijit.Tree" id="resTree" model="resModel" showRoot="false">
  <script type="dojo/method" event="onClick" args="item">
    alert("Execute of node " + resourceStore.getLabel(item)
      + ", dataUrl=" + resourceStore.getValue(item, "dataUrl"));
  </script>
</div>
</body>
```

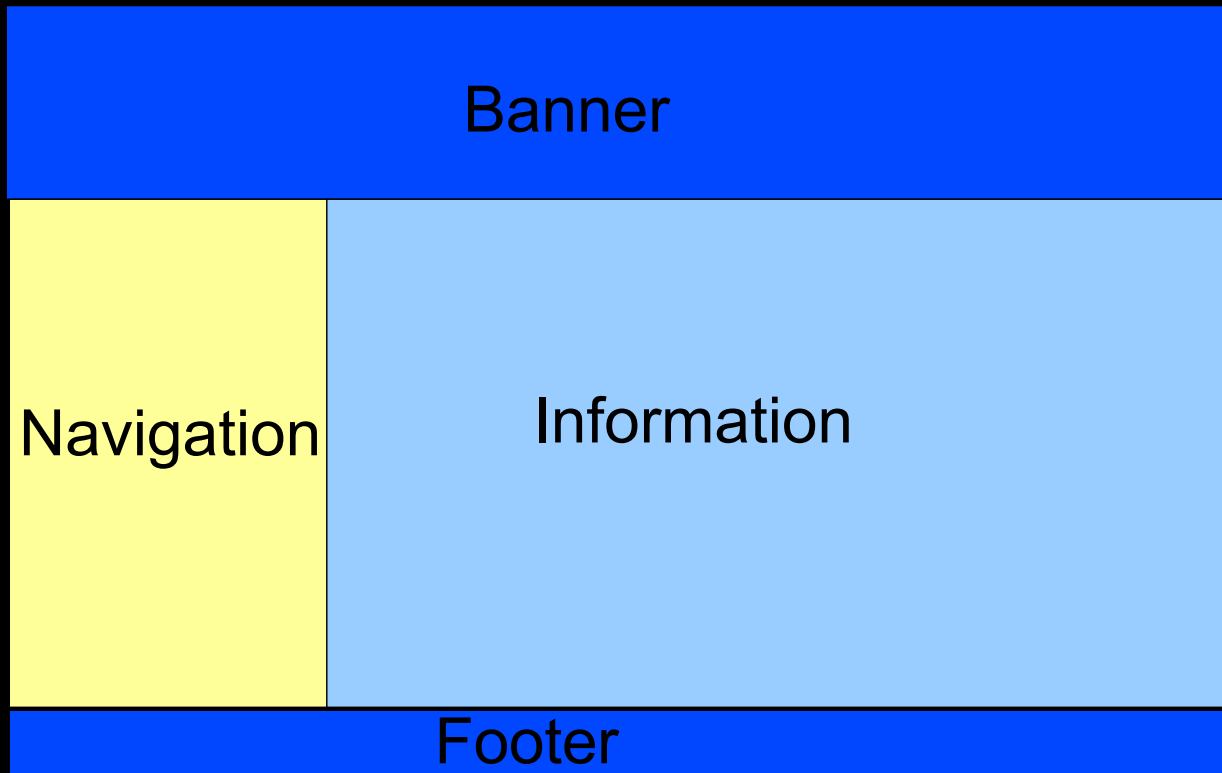
View of the Tree



Implementation

- Get Dojo
- Implement Tree
- **Create Layout**
- Integrate Tree
- Add TabContainer
- Customize Tree Icons
- Add Content Tab & Rich Text Editor

Create Layout



Use Dijit BorderContainer!

dijit.layout.BorderContainer

- Specify up to five regions
 - left, right, top, bottom, mandatory center
- Size regions using px or % via CSS
 - Height for top and bottom regions
 - Width for side regions
 - Center region is automatically calculated
- Optional splitter for resizing region
- Border and Margin around each region
 - Set gutters="false" to turn off (except for splitters)
 - Best to include gutters for a11y
- Two layout modes
 - headline – top and bottom extend entire width (default)
 - sidebar – left and right regions extend entire height

Add dijit.layout.BorderContainer prerequisites

For BorderContainer to take up size of entire viewport must set size of <body> and BorderContainer

```
body, html { width:100%; height:100%; margin:0; padding:0 }  
#borderContainer { width:100%; height:100% }
```

Add requires

```
dojo.require("dijit.layout.ContentPane");  
dojo.require("dijit.layout.BorderContainer");
```


Add dijit.layout.BorderContainer

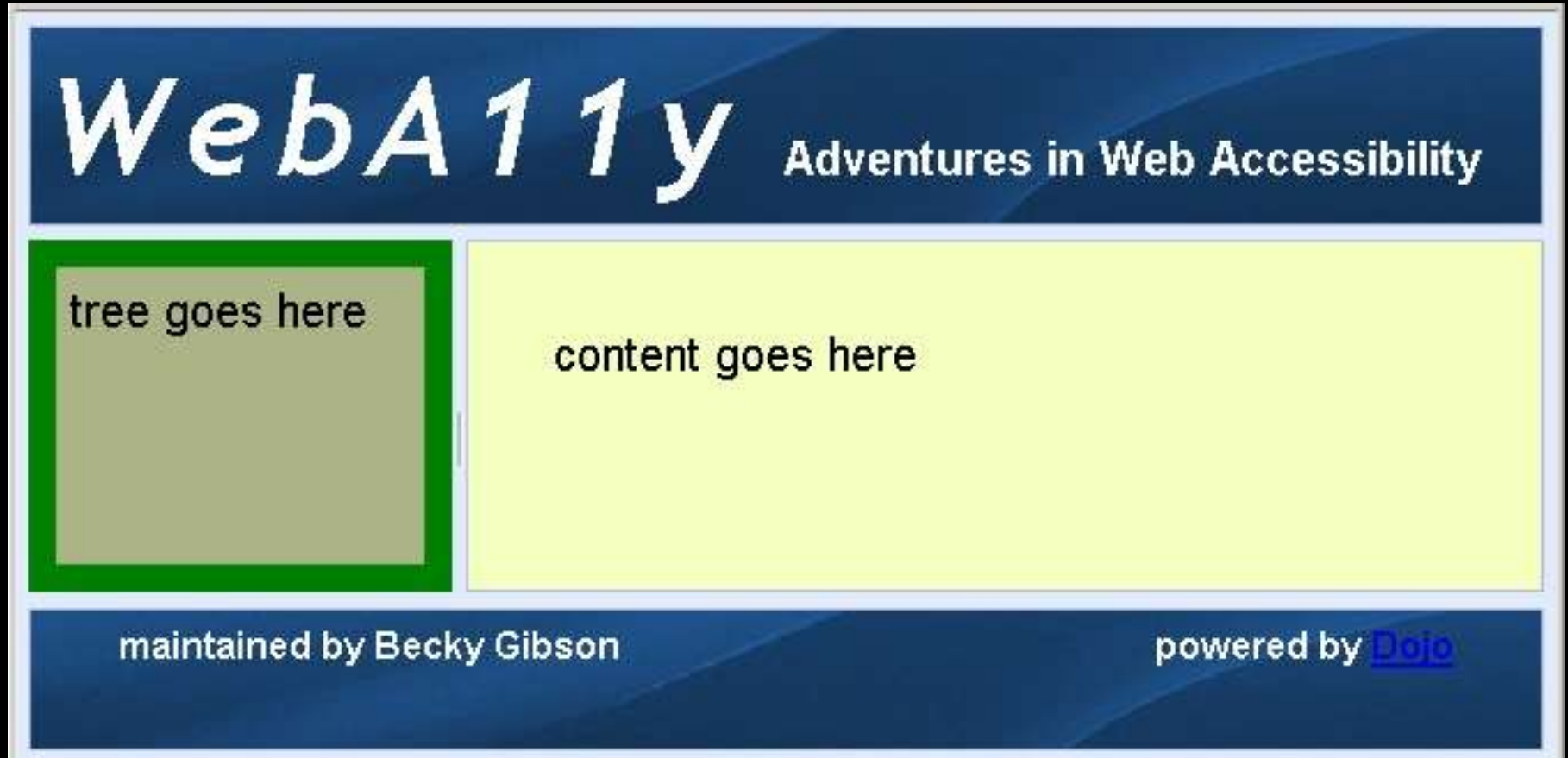
```
<div id="borderContainer" dojoType="dijit.layout.BorderContainer" >
  <div dojoType="dijit.layout.ContentPane" region="top" class="banner">
    banner content goes here
  </div><!-- end of top -->

  <div id="border1-left" dojoType="dijit.layout.ContentPane"
    region="left" style="background-color: #acb386; border: 10px green
solid; width: 100px;" splitter="true" minSize="150" maxSize="250" >
    tree goes here
  </div><!-- end of left -->

  <div dojoType="dijit.layout.ContentPane" region="center"
    style="background-color: #f5ffbf; padding: 30px;">
    <div id="content">content goes here</div>
  </div><!-- end of center -->

  <div dojoType="dijit.layout.ContentPane" region="bottom" class="banner"
    style="height: 3em;font-size:small;" >
    <span>footer content goes here</span>
  </div><!-- end of bottom -->
</div><!-- end of BorderContainer -->
```

Initial Layout



Implementation

- Get Dojo
- Implement Tree
- Create Layout
- **Integrate Tree**
- Add TabContainer
- Customize Tree Icons
- Add Content Tab & Rich Text Editor

Integrate the Tree

```
<div id="border1-left" dojoType="dijit.layout.ContentPane"
  region="left" style="width: 20%;" splitter="true"
  minSize="175" maxSize="300" >
  <div dojoType="dojo.data.ItemFileReadStore"
    jsId="resourceStore" url="resourceData.json"></div>

  <div dojoType="dijit.tree.ForestStoreModel"
    jsId="resModel" store="resourceStore" ></div>

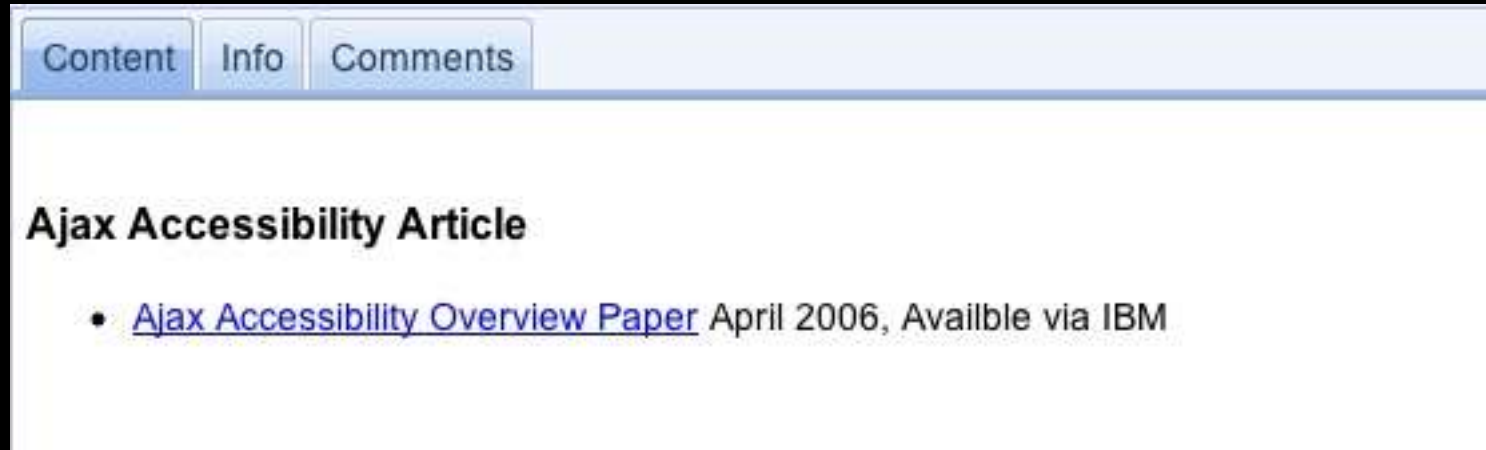
  <div dojoType="dijit.Tree" id="resTree"
    model="resModel" showRoot="false">
  </div>
</div><!-- end of left -->
```

Set Content into Center Pane on Tree Node Click

- Set up onclick event handler for current tree item
 - `<script type="dojo/method" event="onClick" args="item">`
- Query data store for dataUrl parameter for current item
 - `resourceStore.getValue(item, "dataUrl");`
- Use `dijit.byId()` to obtain the center ContentPane
 - `dijit.byId("content")`
- Use `dojo.attr()` to set the href attribute of the center ContentPane
 - `dojo.attr(dijit.byId("content"), "href", dataContent);`
- Set up ARIA properties on ContentPane
 - `<div id="content" dojoType="dijit.layout.ContentPane"`
 - `region="center" style="padding: 30px;" role="region"`
 - `aria-live="assertive" aria-atomic="true">`

Dijit Live ContentPane Example

When the information in a ContentPane is updated via Ajax and should be spoken by the screen reader – add aria information to the source code.



```
<div id="content" dojoType="dijit.layout.ContentPane" title="Content"
    role="region" aria-live="assertive" aria-atomic="true">
    initial text displayed in the pane
</div>
```

Set the Content when Click on Tree Node

```
<div dojoType="dijit.Tree" id="resTree" model="resModel"
showRoot="false">
  <script type="dojo/method" event="onClick" args="item">
    var dataContent = resourceStore.getValue(item, "dataUrl");
    if (dataContent) {
      dojo.attr(dijit.byId("content"), "href", dataContent);
    }
  </script>
</div>
</div><!-- end of left -->

<div id="content" dojoType="dijit.layout.ContentPane"
  region="center" style="padding: 30px;" role="region"
  aria-live="assertive" aria-atomic="true">
  <div >content goes here</div>
</div><!-- end of center -->
```


Tree Integrated and Content Retrieved

WebA11y Adventures in Web Accessibility

- [-] Presentations
 - + 2009
 - [-] 2008
 - [-] Fundamentos Web
 - [-] IBM
 - [-] CSUN
 - [-] Ajax World East
 - + 2007
 - + 2006
- + Publications
- + Recorded Demos

Real World ARIA at [Fundamentos Web 2008](#)

- [Powerpoint version of the Real World ARIA presentation](#)
- [PDF version of the Real World ARIA Presentation](#)

maintained by Becky Gibson

powered by [Dojo](#)

Implementation

- Get Dojo
- Implement Tree
- Create Layout
- Integrate Tree
- **Add TabContainer**
- Customize Tree Icons
- Add Content Tab & Rich Text Editor

dijit.layout.TabContainer

- Container with multiple panes
- Only one pane displayed at a time
- Each Pane has a tab
 - Title
 - Optional close icon
 - Arranged across top, bottom, left or right

Original Content Region

```
<div id="content" dojoType="dijit.layout.ContentPane" region="center"
    style="padding: 30px;" role="region" aria-live="assertive"
    aria-atomic="true">
        Select an item from the tree for more information
</div><!-- end of center -->
```

Convert to TabContainer

```
<div dojoType="dijit.layout.TabContainer" region="center"
    tabStrip="true">
<div id="content" dojoType="dijit.layout.ContentPane" region="center"
    style="padding: 30px;" title="Content" selected="true" role="region"
    aria-live="assertive" aria-atomic="true" >
    Select an item from the tree for more information
</div>
<div dojoType="dijit.layout.ContentPane" title="Info"
    role="region" aria-live="assertive">
    <iframe id="infoPane" src="infoDefault.html"
        frameborder="no" style="width:100%;height:100%;"></iframe>
</div>
</div><!-- end of center -->
```

TabContainer Integrated

The screenshot displays the 'WebA11y' application interface. The title bar reads 'WebA11y Adventures in Web Accessibility'. On the left, a tree view shows a folder structure under 'Presentations', including sub-folders for the years 2009, 2008, 2007, and 2006, and files named 'Ajax Experience' and 'CSUN'. Below this are 'Publications' and 'Recorded Demos' folders. On the right, a tabbed interface has 'Content' and 'Info' tabs. The 'Info' tab is active, displaying the text: 'Select an item from the tree for more information'. At the bottom, the footer indicates 'maintained by Becky Gibson' and 'powered by Dojo'.

Populate the TabContainer Panes

```
<div dojoType="dijit.Tree" id="resTree" model="resModel"
showRoot="false">

  <script type="dojo/method" event="onClick" args="item">
    var dataContent = resourceStore.getValue(item, "dataUrl");
    var infoContent = resourceStore.getValue(item, "infoUrl");
    if (dataContent) {
      dojo.attr(dijit.byId("content"), "href", dataContent);
    }
    dojo.byId("infoPane").contentWindow.location.replace
((infoContent ? infoContent : "infoDefault.html"));      </
script>

</div>
```


Completed TabContainer

The screenshot shows a web browser window with the following elements:

- Page Title:** WebA11y Adventures in Web Accessibility
- Navigation:** A horizontal menu with tabs for 'Content' and 'Info'. Below it is a navigation bar with links: home, programs/services, air, what's new, about, donate/volunteer, contact us, and John Slatin.
- Search:** A search box with the text 'Site Search' and a search button.
- Left Sidebar:** A tree view under 'Presentations' containing folders for years 2009, 2008, 2007, 2006, and categories 'Publications' and 'Recorded Demos'. The 'California Web' folder under 2009 is selected.
- Main Content:** A large group photo of people. Below the photo is a headline: 'CalWAC 4 - California Web Accessibility Conference coming to'. To the right of the headline is a blue box with the text '* CalWAC 4 Sponsorship Information'.

Implementation

- Get Dojo
- Implement Tree
- Create Layout
- Integrate Tree
- Add TabContainer
- **Customize Tree Icons**
- Add Content Tab & Rich Text Editor

Customize Tree Icons

- Create new Styles
- Add event handler for `getTreeIconClass`

Tree Icon Styles

```
body .customFolderOpenedIcon {  
    background: url('closeIcon.jpg') no-repeat top;  
}  
body .customFolderClosedIcon {  
    background: url('openIcon.jpg') no-repeat top;  
}  
  
body .confIcon {  
    background: url('confIcon.jpg') no-repeat top;  
}  
  
body .audioIcon {background: url('audioIcon.jpg') no-repeat top;  
}  
body .pubIcon {background: url('pubIcon.jpg') no-repeat top;  
}
```



GetIconClass Event Handler

```
<div dojoType="dijit.Tree" id="resTree" model="resModel"
    showRoot="false">
<script type="dojo/method" event="getIconClass" args="item, opened">
    if(item == this.model.root ||
        resourceStore.getValue(item, "type") == "Category" ||
        resourceStore.getValue(item, "type") == "group") {
        return (opened ?
            "customFolderOpenedIcon" : "customFolderClosedIcon");
    } else {
        return resourceStore.getValue(item, "type") + "Icon";
    }
</script>
<script type="dojo/method" event="onClick" args="item">
    .....
</script>
</div>
```

Custom Tree Icons

The screenshot shows the 'WebA11y' website with the subtitle 'Adventures in Web Accessibility'. On the left is a tree navigation menu with the following structure:

- Presentations
 - 2009
 - 2008
 - 2007
 - 2006
 - Ajax Experience** (highlighted with a dotted border)
 - CSUN
- Publications
 - Print
 - Online
- Recorded Demos
 - Dojo with Screen Reader
 - Dojo with Keyboard
 - Dojo and Low Vision

The main content area has two tabs: 'Content' (selected) and 'Info'. The content displays the following:

[Ajax Experience October 2006](#)

Presentation on Accessibility and the Dojo OpenSource Toolkit for JavaScript. Note that most of the information contained here is still relavent but the api's and some of the strategy has changed for Dojo 1.0

- [PowerPoint version of Dojo Accessibility Presentation](#)
- [PDF version of Dojo Accessibility Presentation](#)

At the bottom of the page, it says 'maintained by Becky Gibson' on the left and 'powered by Dojo' on the right.

Implementation

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- Customize Tree Icons
- **Add Content Tab & Rich Text Editor**

dijit.Editor

- Designed to work like a word processor
- Built in Toolbar
- Outputs HTML
- Plugin architecture supports
 - Additional commands and features
 - New toolbar buttons

Adding the Editor

```
<div dojoType="dijit.layout.ContentPane" title="Comments">
  <p><strong>Please Add Comments:
    <span id="currentItemText"></span></strong>
  </p>

  <div style="border: 1px solid black;margin-left:5em;width:
80%;height: 60%;">
    <div dojoType="dijit.Editor" id="commentEditor">
      </div>
    </div>
  </div>

</div>
```

Basic Editor

Please Add Comments: California Web A11y Conf



The screenshot shows a rich text editor window. At the top is a toolbar with icons for undo, redo, cut, copy, paste, bold, italic, underline, strikethrough, bulleted list, numbered list, indent, outdent, left align, center align, right align, and justify. Below the toolbar, the text reads "Rich Text Editing - easy as". Underneath this text is a numbered list with three items: "1. one", "2. two", and "3. three!".

Extra Credit – Submit & Dialog

dijit.Dialog

```
<div dojoType="dijit.Dialog" id="commentDlg" title="Comments"
    execute="dijit.byId('commentForm').submit();" >
    <p id="commentView" role="region" aria-live="assertive">
    </p>
    <button dojoType="dijit.form.Button" type="submit">
    OK
    </button>
    <button dojoType="dijit.form.Button" onclick="dijit.byId
    ('commentDlg').hide();" >
    Cancel
    </button>
</div>
```

Invoke the Dialog on Submit

Add below editor <div> in Info Content Pane

```
<form dojoType="dijit.form.Form" id="commentForm"
  action="commentSubmit.php" method="post"
  encType="multipart/form-data">
  <input type="hidden" id="commentText" name="commentText" value="">
  <button dojoType="dijit.form.Button" name="submitButton" >Fake Submit
    <script type="dojo/method" event="onClick">
      var editorContents = dijit.byId("commentEditor").getValue();
      if (editorContents.length >0){
        dojo.byId('commentView').innerHTML = editorContents;
        dojo.byId('commentText').value = editorContents;
        dijit.byId('commentDlg').show();
      }
    </script>
  </button>
  <button dojoType="dijit.form.Button" type="reset">Reset
    <script type="dojo/method" event="onClick">
      dijit.byId("commentEditor").setValue("");
    </script>
  </button>
</form>
```

Submission Example

The screenshot displays the WebA11y website interface. The header features the logo "WebA11y" and the tagline "Adventures in Web Accessibility". A navigation menu includes "Content", "Info", and "Comments". A sidebar on the left lists "Presentations" (2009, 2008, 2007, 2006), "Publications", and "Recorded Demos". The main content area shows a heading "Please Add Comments: Ajax Experience" and a rich text editor with a toolbar. The editor contains the text: "Great Presentation by Adam and Becky! I learned all about Dojo I18N and A11y. Dojo Rocks!". A "Comments" dialog box is open, showing the same text and "OK" and "Cancel" buttons. Below the dialog, "Fake Submit" and "Reset" buttons are visible.

Customize the Editor Toolbar via plugin

Add plugin requires

```
// 'fontName', 'fontSize', 'formatBlock'  
dojo.require("dijit._editor.plugins.FontChoice");  
dojo.require("dijit._editor.plugins.TextColor");
```

Update editor code

```
<div dojoType="dijit.Editor" id="commentEditor"  
    extraPlugins="['foreColor','hiliteColor']">  
</div>
```


Implementation

- Get Dojo
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- Add Content Tab & Rich Text Editor
- **Use from CDN**

Modify to use AOL CDN - Style

From:

```
<style type="text/css">
  @import "lib/dojo/dojo/resources/dojo.css";
  @import "lib/dojo/dijit/themes/soria/soria.css";
  @import "resources/calwac.css";
  body, html { width:100%; height:100%; margin:0; padding:0 }
  #borderContainer { width:100%; height:95% }
</style>
```

To:

```
<style type="text/css">
  @import "http://o.aolcdn.com/dojo/1.2.0/dojo/resources/dojo.css";
  @import "http://o.aolcdn.com/dojo/1.2.0/dijit/themes/soria/soria.css";
  @import "resources/calwac.css";
  body, html { width:100%; height:100%; margin:0; padding:0 }
  #borderContainer { width:100%; height:95% }
</style>
```


Modify to use AOL CDN - dojo.js

From:

```
<script type="text/javascript" src="./lib/dojo/dojo/dojo.js"
      djConfig="parseOnLoad: true">
</script>
```

To:

```
<script type="text/javascript"
      src="http://o.aolcdn.com/dojo/1.2/dojo/dojo.xd.js"
      djConfig="isDebug: false, parseOnLoad: true">
</script>
```

Accessible using Firefox 3 and JAWS 10

Summary

- Dojo makes Web 2.0 easy!
 - BorderLayout
 - Tree Control
 - Tab Container
 - Rich Text Editor
 - More!
- Use as much or as little of Dojo as you need
- Progressively include more Dojo features
- Move to Web 2.0 today with Dojo!
- Be Accessible!



Resources

- Becky's Accessibility Presentations and Papers
 - <http://www.weba11y.com/Presentations/presentations.html>
- ARIA Roadmap, Best Practices, Primer, Specifications
 - <http://www.w3.org/wai/pf>
- Mozilla Developer Center - Firefox ARIA Information
 - http://developer.mozilla.org/en/docs/Accessible_DHTML
- Mailing list for ARIA issues
 - <http://lists.w3.org/Archives/Public/wai-xtech/>
- Dojo
 - Home - <http://www.dojotoolkit.org/>
 - Dojo Campus - <http://dojocampus.org>
 - Book - <http://www.dojotoolkit.org/book/dojo-book-1-0>
 - API Reference - <http://api.dojotoolkit.org>
 - 1.3 Book (in progress) - <http://docs.dojocampus.org>
- DHTML Style Guide Draft
 - http://dev.aol.com/dhtml_style_guide

Dojo Books in Print

- Dojo The Definitive Guide by Matthew Russel, O'Reilly Press
- Dojo Using the Dojo JavaScript Library to Build Ajax Applications by James E. Harmon, Addison-Wesley Developer's Library
- Mastering Dojo by Rawld Gill, Craig Riecke, Alex Russel, Pragmatic Press

