Module: Look & Feel Customization

Module overview:

This module gives an overview of the type of customization that can be performed on a DSpace repository user interface. The module will look at the two interfaces that DSpace 1.5 supports, the xmlui and the JSPUI detailing what they are, how they differ and the benefits of each. The module will conclude with a look at some example repository interfaces.

Module objectives:

By the end of this module you will:

- Understand the different user interfaces to the DSpace software

- Understand the different levels of customisation that can be done to the DSpace interface

- Have customised the JSPUI interface of DSpace

Note

For the practical exercise, please refer to your sheet 'Local instructions' for details of the following:

- What the URL of your DSpace installation is

- How to open a terminal window

- The location of [dspace] and [dspace-src] directories

- How to rebuild DSpace using mvn and ant

The DSpace Interface

The DSpace Interface

- There are two interfaces to DSpace 1.5

    - The JSPUI   (Java Server Pages)

    - The XMLUI   (Manakin Framework)

The JSPUI

JSPUI - [dspace.url/jspui]

D SPACE

- The JSPUI is the standard interface for DSpace allowing fast creation of dynamic web content

- The JSPUI interface is implemented using:
  - Java Servlets which handle the business logic
  - JavaServer Pages (JSPs) which produce the HTML

- The source code for the JSP webapp is located either:

```
[dspace-src]\dspace-jspui\dspace-jspui-webapp\src\main\webapp
```
If the full source was downloaded

```
[dspace-src]\dspace\target\dspace-[version].dir\webapps\dspace-jspui-webapp\
```
If the default release was downloaded after the first build

The JSPUI

The JSPUI interface is implemented using Java Servlets which handle the business logic, and JavaServer Pages (JSPs) which produce the HTML pages sent to an end-user. Since the JSPs are much closer to HTML than Java code, altering the look and feel of DSpace is relatively easy.

[DSpace url]/jspui

D SPACE

The JSPUI

The JSPUI

To make it even easier, DSpace allows you to 'override' the JSPs included in the source distribution with modified versions, that are stored in a separate place, so when it comes to updating your site with a new DSpace release, your modified versions will not be overwritten. It should be possible to dramatically change the look of DSpace to suit your organization by just changing the CSS style file and the site 'skin' or 'layout' JSPs in jsp/layout; if possible, it is recommended you limit local customizations to these files to make future upgrades easier.
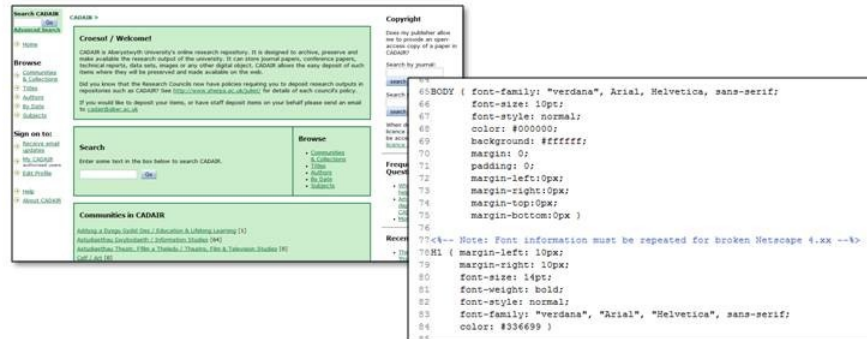
Customising the Stylesheet

Customising the Stylesheet

Heavy use is made of a style sheet, styles.css.jsp. If you make edits, copy the local version to [dspace-source]/dspace/modules/jspui/src/main/webapp/styles.css.jsp, and it will be used automatically in preference to the default, as described above.

Fonts and colours can be easily changed using the stylesheet. The stylesheet is a JSP so that the user's browser version can be detected and the stylesheet tweaked accordingly.
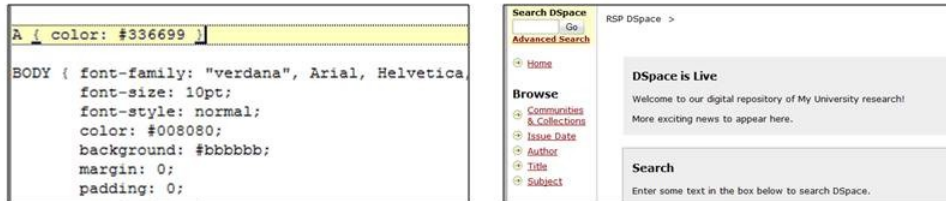
Editing the Stylesheet

Editing the Stylesheet

Page Structure
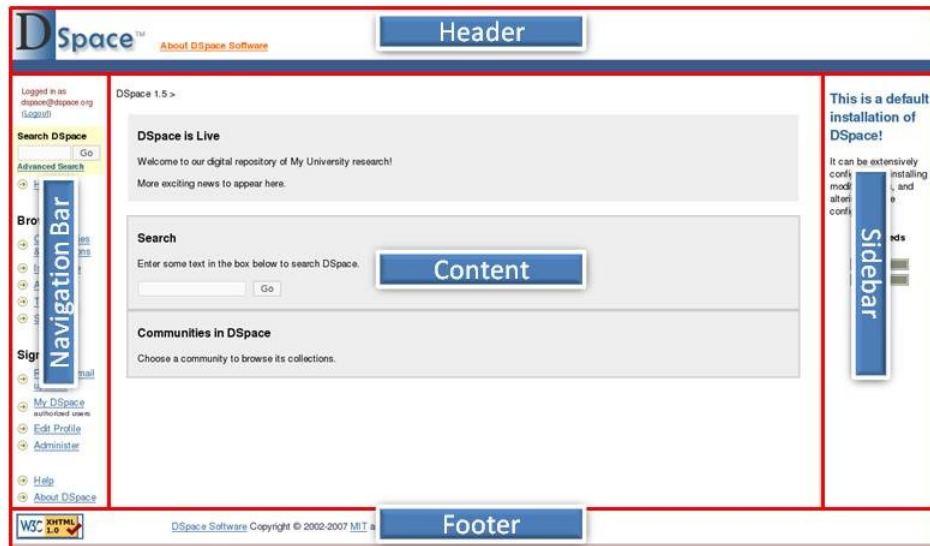
Page Structure

The 'layout' of each page, that is, the top and bottom banners and the navigation bar, are determined by the JSPs /layout/header-*.jsp and /layout/footer-*.jsp. You can provide modified versions of these (in [dspace-source]/dspace/modules/jspui/src/main/webapp/layout), or define more styles and apply them to pages by using the "style" attribute of the dspace:layout tag.

Customising a JSP

Customising the JSP

After you've customized your JSPs, you must rebuild the DSpace Web application. If you haven't already built and installed it, follow the install directions. Otherwise, follow the steps below:

- Rebuild the DSpace installation package by running the following command from your [dspace-source]/dspace/ directory:

   mvn package

- Re-install the DSpace WAR(s) to [dspace]/webapps by running the following command from your [dspace-source]/dspace/target/dspace-[version].dir directory:

   ant -Dconfig=[dspace]/config/dspace.cfg update

- Depending on your setup with Tomcat, you may also need to do the following:
   o Shut down Tomcat, and delete any existing [tomcat]/webapps/dspace files
   o Copy the new .war file(s) to the Tomcat webapps directory:
   o Restart Tomcat.

When you restart the web server you should see your customized JSPs.

Types of Customisation - Simple

Types of Customisation – Simple

- Simple Customisation to the JSPUI involves:
    - Basic changes to the page elements
    - Changes to the stylesheet
    - Advantages:
    - Quick to implement
    - Simple to complete (only a basic understanding of CSS/HTML is required)
- Disadvantages:
    - Only very basic changes to the look and feel can be completed
    - DSpace look & feel does not very greatly from the 'out of the box' installation

Types of Customisation - Advanced

Types of Customisation - Advanced

- Advanced Customisation to the JSPUI involves
    - JSPUI Interface - Editing Java Server Pages (JSPs) etc...
    - Changes to the stylesheet

    Advantages:
    - Advanced changes to the look and feel can be achieved
    - DSpace can be branded to match the organisational corporate scheme
- Disadvantages:
    - Changes can be time consuming
    - Changes require knowledge of additional programming languages (Java/Java Server Pages)
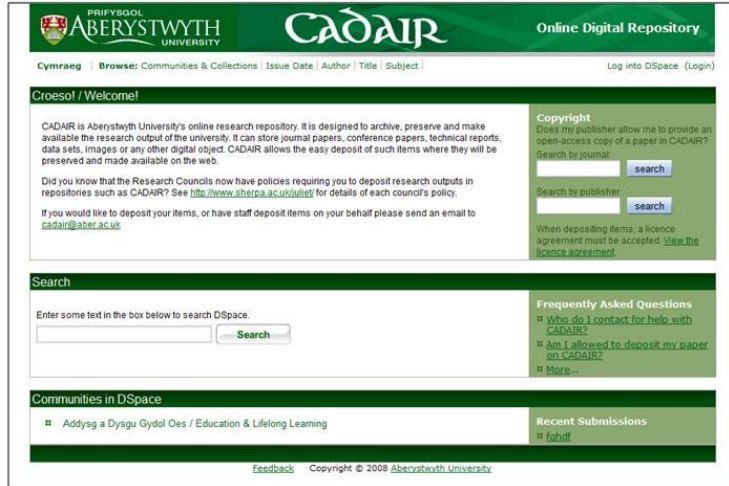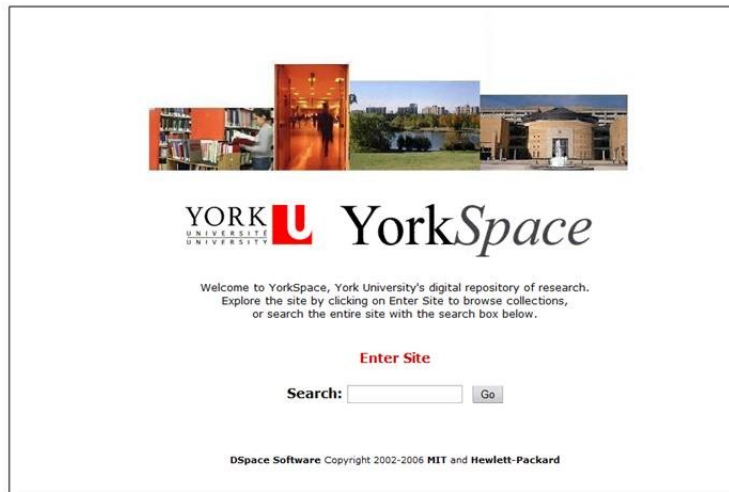
Advanced Customisation - JSPUI

Aberystwyth University Repository

Advanced Customisation - JSPUI

York University Repository

The XMLUI

- XMLUI is a new front end for DSpace
- Based on Apache Cocoon Framework
- Why? Four Design Goals
  - allowing each community and collection represented in DSpace to maintain a distinct look and feel.
  - to increase support for internationalization in Dspace
  - to separate the business logic from stylistic controls, increasing ease of adaptability.
  - to provide an alternative interface to the current JSP based implementation, requiring no changes to the core of Dspace (including the database), while specifically enabling both user interfaces to operate simultaneously.
- Additional Information on Manakin can be found at:
  - http://di.tamu.edu/projects/xmlui

The XMLUI

The Manakin user interface is composed of two distinct components: aspects and themes. Manakin aspects are like extensions or plugins for Manakin; they are interactive components that modify existing features or provide new features for the digital repository. Manakin themes stylize the look-and-feel of the repository, community, or collection.
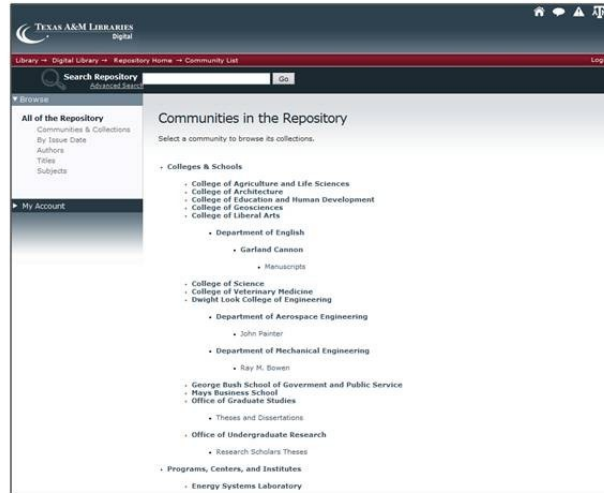
The repository administrator is able to define which aspects and themes are installed for the particular repository by editing the [dspace]/config/xmlui.xconf configuration file. The xmlui.xconf file consists of two major sections: Aspects and Themes.
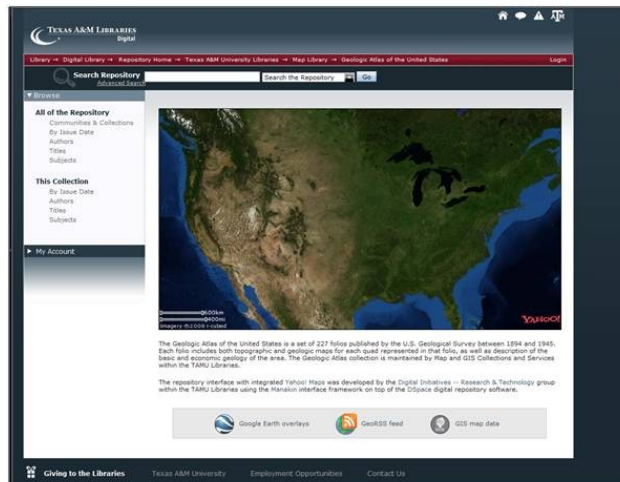
Advanced Customisation - XMLUI

Texas A&M Repository

Advanced Customisation - XMLUI

Texas A&M Repository

Practical: Modifying the DSpace Stylesheet

1) The first step is to move the stylesheet to the local changes directory

```
cp
[dspace-src]/dspace-jspui/dspace-jspui-
webapp/src/main/webapp/styles.css.jsp [dspace-
src]/dspace/modules/dspace-jspui/src/main/webapp/
```

2) Open the stylesheet using gedit or vim

```
cd
[dspace-src]/dspace/modules/dspace-jspui/src/main/webapp/
gedit styles.css.jsp
```

We'll edit the DSpace homepage to change the colour of the grey tables.
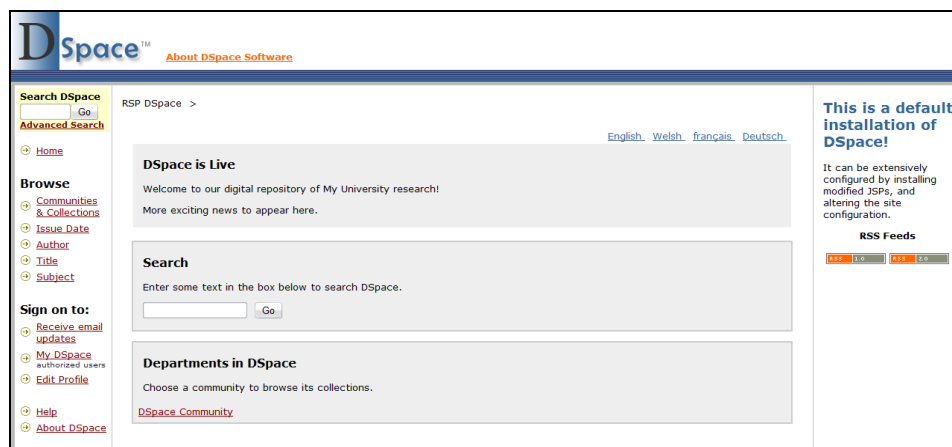
These are part of the css class oddRowEvenCol

```
<td class="oddRowEvenCol">
    <h3><fmt:message key="jsp.home.search1"/></h3>
        <p><label for="tquery"><fmt:message key="jsp.home.search2"/></label></p>
        <p><input type="text" name="query" size="20" id="tquery" /> 
            <input type="submit" name="submit" value="<fmt:message key="jsp.general.search.button"/>" /></p>
</td>
```

3) Locate the class `.oddRowEvenCol` in the `styles.css.jsp` stylesheet

```
469  .oddRowEvenCol{ font-family: "verdana", "Arial", "Helvetica", sans-serif;
470          font-size: 12pt;
471          font-style: normal;
472          font-weight: normal;
473          color: #000000;
474          vertical-align: middle;
475          text-decoration: none;
476          background: #eeeeee;
477          <%= padding %>  }
478
```

4) Edit the line which defines the colour of the css element: `background: #eeeeee;`

5) Change the hex code to `#8FD8D8;` and save and exit gedit

```
468
469  .oddRowEvenCol{ font-family: "verdana", "Arial", "Helvetica", sans-serif;
470          font-size: 12pt;
471          font-style: normal;
472          font-weight: normal;
473          color: #000000;
474          vertical-align: middle;
475          text-decoration: none;
476          background: #8FD8D8;
477          <%= padding %>  }
```

6) DSpace will need to be repackaged:

```
cd [dspace-src]\dspace
mvn package
```

7) Then DSpace will need to be redeployed:

```
cd [dspace-src]\dspace\target\[version]\dspace-
[version].build.dir
Ant –Dconfig=[dspace]\config\dspace.cfg update
```
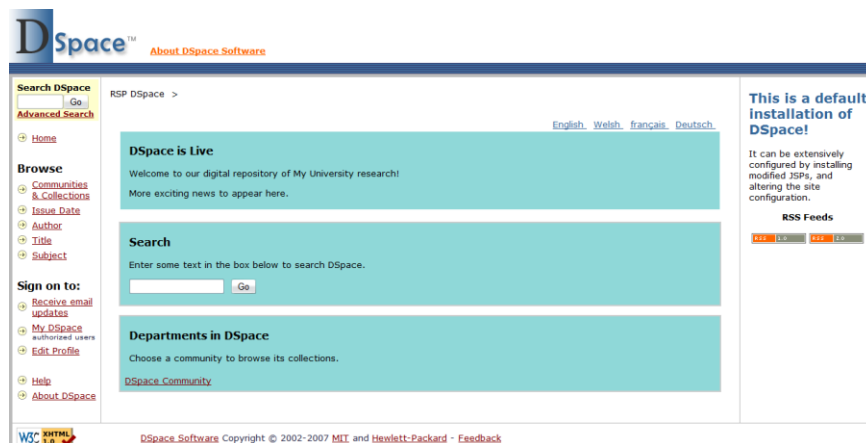
8) Finally, tomcat will need to be restarted

```
sudo /etc/init.d/tomcat5.5 restart
```

9) Browsing to your DSpace URL should see the colors modified on the home page.
`http://localhost:8080/jspui`

Practical: Customising the DSpace Stylesheet

1) The first step is to move the layout directory to the local changes directory

```
cp -r
[dspace-src]/dspace-jspui/dspace-jspui-webapp/src/main/webapp/layout
[dspace-src]/dspace/modules/dspace-jspui/src/main/webapp/
```

2) Open the header-default.jsp using gedit or vim

```
cd
[dspace-src]/dspace/modules/dspace-jspui/src/main/webapp/layout
gedit header-default.jsp
```

We'll edit the DSpace logo and change it to the HP-MIT logo

3) Locate the image path dspace-blue.gif in the `header-default.jsp` file

4) Edit the line which defines this image name from `dspace-blue.gif` to `hp-mit.gif`. Also change the width and height to the new image dimensions.

```
Width="150"
Height="82"
```

5) `request.getContextPath() %>/image/hp-mit.gif" alt="`
   `<fmt:message key="jsp.layout.header-default.alt"/>" width="150" height="82"`

6) DSpace will need to be repackaged:

```
cd [dspace-src]\dspace
mvn package
```

7) Then DSpace will need to be redeployed:

```
cd [dspace-src]\dspace\target\[version]\dspace-
[version].build.dir
Ant –Dconfig=[dspace]\config\dspace.cfg update
```
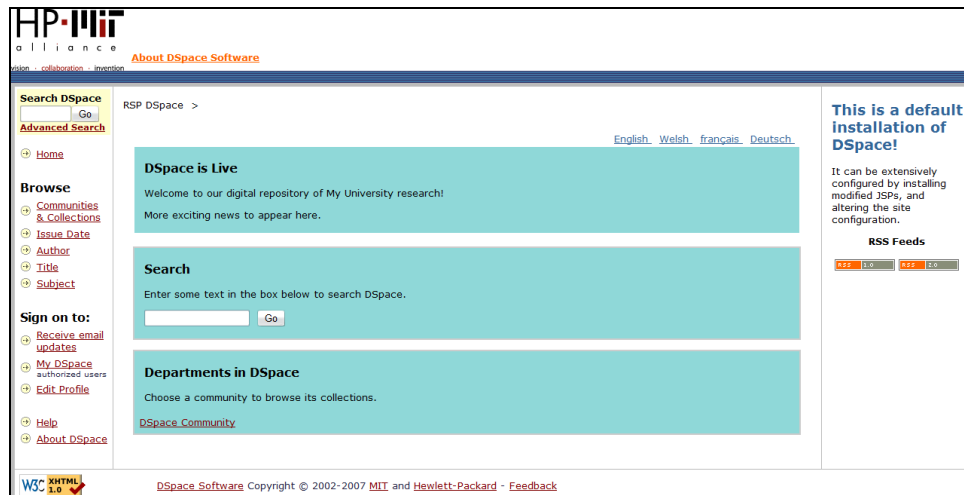
8) Finally, tomcat will need to be restarted

```
sudo /etc/init.d/tomcat5.5 restart
```

9) Browsing to your DSpace URL should see the colours modified on the home page.

```
http://localhost:8080/jspui
```

Credits

- These notes have been produced by:

    - Stuart Lewis & Chris Yates

    - Repository Support Project

        - http://www.rsp.ac.uk/

    - Part of the RepositoryNet

    - Funded by JISC

        - http://www.jisc.ac.uk/