CUSTOMIZING DSPACE 1.5 WITH BASIC OVERLAYS

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DSpace 1.5 Overview

- **Maven Build Architecture**
  - DSpace “modules”
  - Application “Overlays”
- **XMLUI (aka. Manakin)**
- **Configurable Submission**
- **Streamlined Browse System**
- **SWORD Interface**
- **LNI (Lightweight Network Interface)**
Introducing Maven…

- Apache Software Foundation
- Java Project Build / Management Tool

Advantages:
- Manages dependencies
- Easier to manage/build many “modules”
- Allows for basic application customizations via “overlays”

Disadvantages:
- Yet Another XML config (many actually…)
- Somewhat complex, if doing more than basic overlays
Maven v. Ant

- DSpace 1.x-1.4 used Ant to build & install DSpace
- DSpace 1.5 uses both Maven & Ant
  - **Maven** – Builds / Assembles DSpace “package”
    - Includes applying “overlays” and pulling down all the necessary 3rd party dependencies
  - **Ant** – Installs or Updates your DSpace Installation
Ok, so what really is Maven?
Maven Concepts: An Overview

- pom.xml (Project Object Model)
- Standard directory layout

```
src
|-- main
|  |-- java (Java Source Code)
|  |-- resources (Application Resources)
|  `-- webapp (Web Application Source)

`target`
  (Build / Package Output)
```
DSpace 1.5 Release

```
dspace
  bin
  config
  docs
  etc
  modules (Module Overlays)
  src (Maven Build Settings – no Java here…)
  pom.xml (Maven Project Object Model settings)
```
DSpace 1.5 Source (SVN)

(Same as 1.5 release – see previous slides)

Source code for DSpace “modules”

In Release Version:
Maven pulls down pre-compiled versions of these modules
Building DSpace 1.5 (Maven)

```
Build DSpace

mvn package
```

```
dsapce
  target
    dspace-1.5-build.dir
      webapps
  ...
```

```
dsapce
  bin
  config
  etc
  modules
  src
  pom.xml
```
Installing DSpace 1.5 (Ant)
What are Overlays?

- Simple way to “overlay” your own basic customizations and code
- Allow you to more easily manage your customizations separately
- What can you “overlay”?
  - User interface look-and-feel (JSPUI, XMLUI Themes)
  - Language / terminology
  - Java code to add functionality (basic XMLUI Aspect)
    - Although, this may be better built into a custom “module”
Modules + Maven = Overlays

Build DSpace

dspace

modules

jspui

messages
.properties

jsp

Overlay

pom.xml
<dependencies/>
<build/>

Can you give me the JSPUI Web application?

Maven Repository

Here you go…

My JSPUI

JSPUI WAR
Creating a Basic Overlay - JSPUI

Notice our Maven “standard directory layout”

(Replacement for “/jsp/local”)
Creating a Basic Overlay - XMLUI
Building/Installing an Overlay

- Add your files to appropriate “/dspace/modules/” directory (see previous slides)
- Rebuild DSpace: `mvn package`
  - Builds to `[dspace-src]/dspace/target/`
- Update DSpace installation: `ant update`
  - Installs to `[dspace.dir]` (as specified in dspace.cfg)
Sample Overlays

- Custom XMLUI Aspect – Breadcrumb Trail
- Configurable Submission – Custom Step
- Modify Breadcrumb Trail to link to our Library’s Homepage
- Do this at the “aspect” level so that it will apply across all of our XMLUI Themes

**Credit:** Conal Tuohy, New Zealand Electronic Text Centre
XMLUI Theme Overlay, in Review
Aspect Overlay – Breadcrumb Trail

```xml
<xsl:template match="*">
    <xsl:copy>
        <xsl:copy-of select="@*"/>
        <xsl:apply-templates/>
    </xsl:copy>
</xsl:template>

<xsl:template match="dri:pageMeta">
    <xsl:copy>
        <xsl:copy-of select="@*"/>
        <dri:trail target="www.library.my.edu/">
            My Library
        </dri:trail>
        <xsl:apply-templates/>
    </xsl:copy>
</xsl:template>
```
Not Shown: Re-Building & Updating DSpace 1.5 Installation
Aspect Overlay – Breadcrumb Trail

Search DSpace

Enter some text in the box below to search DSpace.

Communities in DSpace

Select a community to browse its collections.

- Test Community

My Library → DSpace Home
Configurable Submission

- Reorder, remove or add “steps” to Submission
- Different submission processes for different collections
Configurable Submission

Step Definition
- JSPUI: JSPs
- XMLUI: Transformer

Step UI Class

Step Processing Class

Step Definition
- JSPUI: JSPs
- XMLUI: Transformer

Step UI Class

Step Processing Class

Submission “Controller”

Start Submission

JSPUI: Servlet
XMLUI: Flowscript

item-submission.xml

<submission-process>

<step/>

<step/>

....

Next Step, etc..
Configurable Submission Overlay

- Something I prepared earlier...
Contact Info

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DSpace Mailing Lists

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