Selection and Implementation of SilverStripe

An open source web content management system

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Why a web content management system (CMS)?

Selection of a web content management system (CMS)
- Requirements
- Selection Process

Implementation of SilverStripe

Migration Process
Need for a CMS

photo from wiccked, http://www.flickr.com/photos/wiccked/
False Start – Failure saved us
Gathering CMS requirements

- Focus groups with content providers
- Research
  - Issue of Library Hi Tech (vol. 24, issue 2, 2006)
  - CMS Matrix

photo by Scott Beale / Laughing Squid, http://laughingsquid.com/
Key CMS requirements

- Existing open source system
- Support distributed content model
- Easy for users of differing technical skills
- Central control of page templates/style sheets
CMS Requirements: Content Creation and Ownership

- Metadata creation and editing at page level
- Contact info at page level by author
- Multi-author pages
- Integration of RSS/other dynamic content
CMS Requirements: Content Management

- Link maintenance
- Repurpose content
- Access controls
- Robust reporting
CMS Requirements: Publishing

- Preview
- Content owner controls publishing
- RSS: produces own feeds
- Handles non-Roman languages
- Extensible

CMS Requirements: Presentation

- Page templates/style sheets control layout centrally
- Meets ADA and W3C Accessibility requirements
- Meets current HTML standards
- Search engine optimized
- Page load time acceptable

CMS Requirements: Administration/Technical

- LAMP (Linux, Apache, MySQL, PHP)
- Scalable
- Good documentation: both tech and non-tech
- Skills required to maintain on OSUL team

Photo by cobalt123, http://www.flickr.com/photos/cobalt/
CMS Trial: May 21 – Aug 29, 2008

- 5 to 3 Systems
  - Drupal
  - MODx
  - Silverstripe
  - Plone
  - TYPO3
- Content providers evaluation
  - 14 testers: diverse content needs and technical skill levels
- Technical evaluation
  - Systems Developers

# CMS Trial: Content Providers

## Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web GUI intuitiveness</td>
<td>Difficult</td>
</tr>
<tr>
<td>Media integration</td>
<td>Moderate</td>
</tr>
<tr>
<td>Editor ease of use</td>
<td></td>
</tr>
<tr>
<td>Ability to add content</td>
<td></td>
</tr>
<tr>
<td>Ability to preview content</td>
<td></td>
</tr>
<tr>
<td>Ability to publish content</td>
<td></td>
</tr>
<tr>
<td>Metadata storage</td>
<td></td>
</tr>
<tr>
<td>Ability to “feature items”</td>
<td></td>
</tr>
<tr>
<td>Ability to add RSS feeds</td>
<td></td>
</tr>
<tr>
<td>Ability to enter tabular data</td>
<td></td>
</tr>
<tr>
<td>Ability to create forms</td>
<td></td>
</tr>
<tr>
<td>Testing area for new features</td>
<td>Easy</td>
</tr>
</tbody>
</table>
## CMS Trial: Technical Evaluation

### Categories
- Installation
- Maintainability
- Technical documentation
- Active developer community
- Structure management (subsites/trees)
- Access control/permissions
- Link management
- Ease of extensibility
- Interoperability (data portability + web services)

### Levels of Difficulty
- **1** Difficult
- **2** Moderate
- **3** Easy

![Difficulty Levels](image-url)
# CMS Trial: Findings

<table>
<thead>
<tr>
<th>Content Providers</th>
<th>Drupal</th>
<th>MODx</th>
<th>SilverStripe</th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>1.48</td>
<td>2.08</td>
<td>2.14</td>
<td>60%</td>
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<tr>
<td>Tech Eval</td>
<td>2.00</td>
<td>2.33</td>
<td>2.78</td>
<td>40%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overall Rating</th>
<th>Drupal</th>
<th>MODx</th>
<th>SilverStripe</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.69</td>
<td>2.18</td>
<td>2.39</td>
</tr>
</tbody>
</table>
SilverStripe CMS Overview

- Open source
  - www.silverstripe.org
    - Released Nov 2006
    - BSD license
- Modular structure
- Web standards compliant
- Template language fully separates content and style
- Strong development community
2008 DEMOCRATIC NATIONAL CONVENTION
SilverStripe: The Company

- Founded in 2000
- Headquartered in Wellington, New Zealand
- Use CMS to build websites for clients
- Offer paid support of SilverStripe CMS
Server Requirements

- PHP 5.2.0+ (will run on PHP 5.0+) and MySQL
  - see http://www.gophp5.org/
- Apache+mod_rewrite / lighttpd / IIS
- Windows / OSX / Linux / BSD
SilverStripe: Modules

- 3rd Party Modules/Modifications
  - userforms
    - Drag and Drop GUI for building forms for the public site
  - Other Modules:
    - imagegallery, dataobjectmanager, googlesitemaps, log4php
  - Nested URLs (AKA Hierarchical URLs)
    - Nested URLs will be a part of the SilverStripe core in the next major release (2.4.0, est. release ~2010)
What are nested URLs?
Also known as hierarchical URLs

**Without Nested URLs**

- About → /about
  - Departments → /departments
    - Web Implementation Team → /WIT

**With Nested URLs**

- About → /about
  - Departments → /about/departments
    - Web Implementation Team → /about/departments/WIT
Silverstripe: OSUL Modules

- **osulibraries** (renamed from mysite)
  - Provides most of our functionality, customizations, configuration, etc.
- **auth_shibboleth**
  - Allows users to login with OSU Shibboleth Single Sign-On
- **restacl**
  - Allows the use of a centralized access control list built with a REST API
- **userprofiles**
  - Allows users to build profiles (phone, address, photo, email, etc.)
Migration: Technical Details

- 2 sites on separate servers, 1 public hostname
  - New CMS - http://library.osu.edu
  - Old static web site – http://nextweb.lib.ohio-state.edu
- Custom field in osulibraries module:
  “This cms page replaces the following page on the old site:”
  - 1–to-many map of page on old site to 1 new CMS page
  - old pages will automatically redirect to new CMS page
Rewrite/Replacement Page Logic Flowchart

1. Incoming request
2. apache mod_rewrite
3. CMS URL?
   - yes: Skip ahead to SilverStripe
   - no: send incoming URL to RewriteMap external .php cli script
4. SilverStripe DB (MySQL)
5. add links to memcached task
6. memcached
7. Does replacement Link exist in memcached?
   - no: Rewrite url: replace library.osu.edu with nextweb.lib.ohio-state.edu
   - yes: Parse replacement link from result
8. Return URL to apache
9. url contain nextweb.lib.ohio-state.edu?
   - yes: deliver content through proxy
   - no: 301 Redirect to CMS page
Old page that does not have a replacement (yet):
http://library.osu.edu/sites/fye

memcached cannot find anything matching this url, returns NULL

RewriteMap returns
http://nextweb.lib.ohio-state.edu/sites/fye

When you visit
http://library.osu.edu/sites/fye,
your browser will remain on this url, but the content from
http://nextweb.lib.ohio-state.edu/sites/fye
will show because it is being proxied through the library.osu.edu hostname
New CMS page:
http://library.osu.edu/about/locations/thompson-library

Replaces this old page:
http://library.osu.edu/sites/renovation

memcached stores something similar to this:

```javascript
{
  url: 'http://library.osu.edu/sites/renovation',
  replacement: 'http://library.osu.edu/about/locations/thompson-library'
}
```

RewriteMap returns
http://library.osu.edu/about/locations/thompson-library

When you visit
http://library.osu.edu/sites/renovation, your browser will be redirected (via 301 redirect) to
http://library.osu.edu/about/locations/thompson-library
Other Parts of Project

- Information Architecture (IA) Overhaul
- New Navigation
- New Graphical Design
- Training for content providers on CMS and IA/Navigation
Putting It All Together
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Questions?