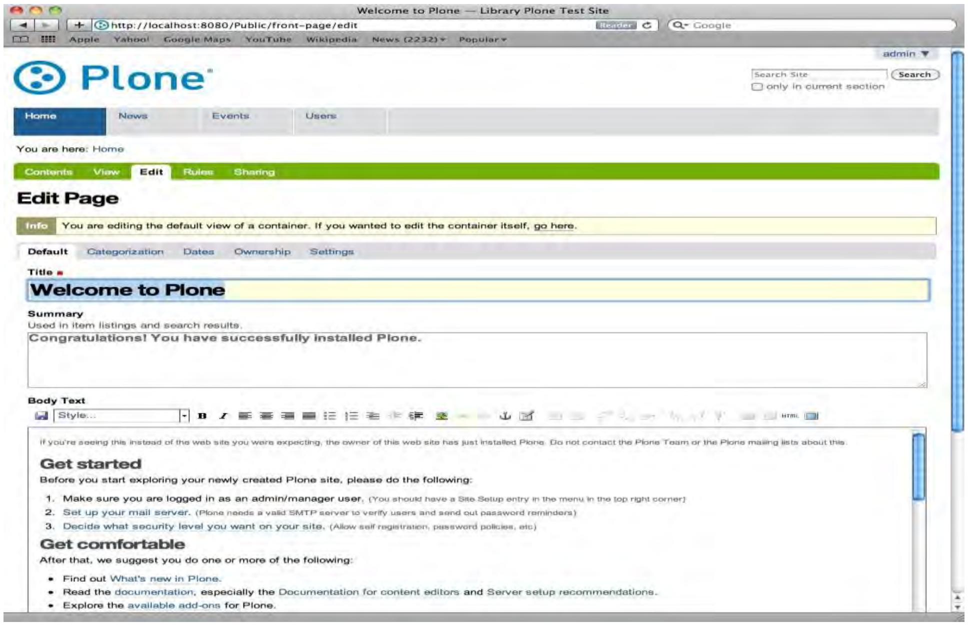
A Review of the Plone Content Management System

By Stephen P. Bollinger

Web content management systems (CMSs) are tools to help efficiently manage modern websites. Broadly defined, CMSs are database-driven software packages that allow people who are not HTML experts to create and edit website content, manage revisions and approvals for content, and help reduce the workload of maintaining a website. Within the past five years open source content management systems, created and maintained by a community of software developers and available without charge, have matured to become viable options for libraries that are not information technology juggernauts. Plone[1], now in its fourth major release, is one such content management system that is now in wide use by libraries.

From the perspective of a content creator or owner, Plone offers compelling features compared to managing a traditional, file-based website. Adding to and editing pages within a Plone site is simple, specifically because a visual editor with a word-processing-like interface is provided that works via your web browser (Figure 1).

Figure 1: A Plone website page in the edit mode. The page editor includes a visual editor with word processor-style toolbar. The editor can be switched to an HTML code view as well.



Edit Page

Info You are editing the default view of a container. If you wanted to edit the container itself, go here.

Title

Welcome to Plone

Summary

Used in item listings and search results.

Congratulations! You have successfully installed Plone.

Body Text

If you're seeing this instead of the web site you were expecting, the owner of this web site has just installed Plone. Do not contact the Plone Team or the Plone mailing lists about this.

Get started

Before you start exploring your newly created Plone site, please do the following:

1. Make sure you are logged in as an admin/manager user. (You should have a Site Setup entry in the menu in the top right corner)
2. Set up your mail server. (Plone needs a valid SMTP server to verify users and send out password reminders)
3. Decide what security level you want on your site. (Allow self registration, password policies, etc)

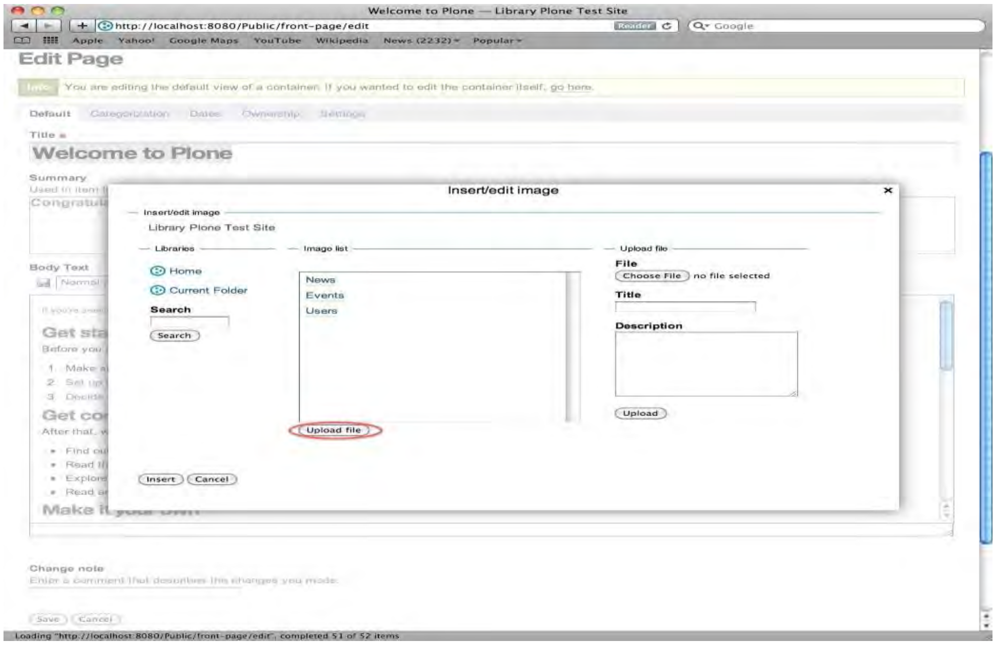
Get comfortable

After that, we suggest you do one or more of the following:

- Find out What's new in Plone.
- Read the documentation, especially the Documentation for content editors and Server setup recommendations.
- Explore the available add-ons for Plone.

The visual editor also readily allows images and multimedia to be added to a page. Images can be uploaded to your Plone site from within the visual editor, saving time and making it easy for novice content editors (Figure 2).

Figure 2: The ―Add Image” dialog with the ―Upload Image” option selected.



Welcome to Plone — Library Plone Test Site

http://localhost:8080/Public/front-page/edit

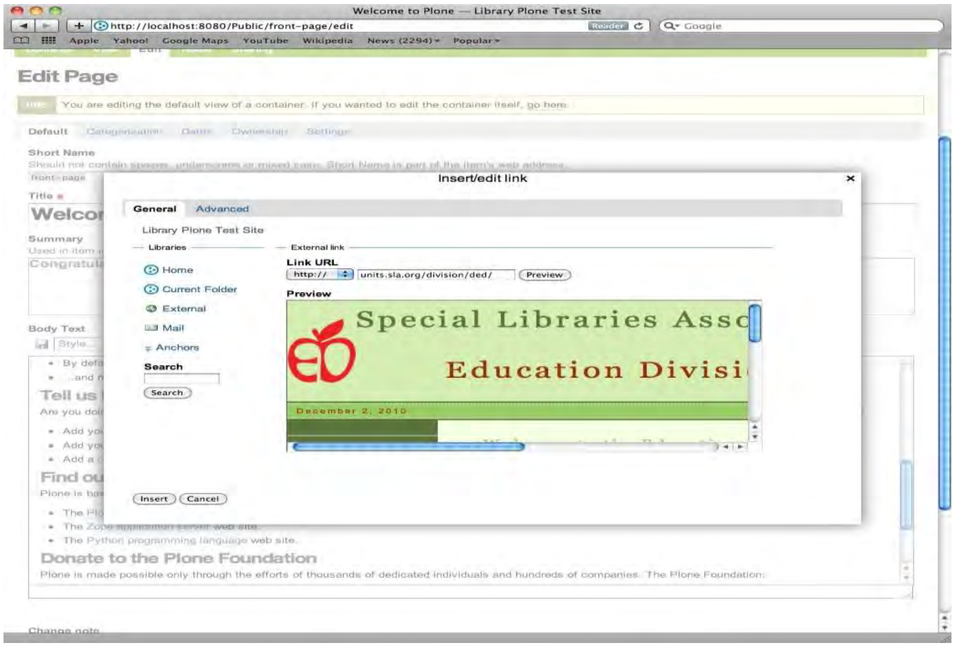
You are editing the default view of a container. If you wanted to edit the container itself, go here.

Title: Welcome to Plone

Loading "http://localhost:8080/Public/front-page/edit", completed 51 of 52 items

One of Plone‘s strongest features is providing a clear and easy to use dialog box to create links to other web pages within and outside of your website (Figure 3). Plone also provides ―working copy” support, where a separate version of a page can be created and edited without affecting the original version of the page that your website visitors see. Once you are satisfied with your working copy, you can then replace the original version with it. These features allow people who are not HTML experts to effectively manage content on a Plone website.

Figure 3: The ―Insert/edit link” dialog showing the preview of an external link.



Welcome to Plone — Library Plone Test Site

http://localhost:8080/Public/front-page/edit

You are editing the default view of a container. If you wanted to edit the container itself, go here.

Short Name: Should not contain spaces, underscores or mixed case. Short Name is part of the item's web address. front-page

Link URL: http:// units.sla.org/division/ded/

Donate to the Plone Foundation

Plone is made possible only through the efforts of thousands of dedicated individuals and hundreds of companies. The Plone Foundation:

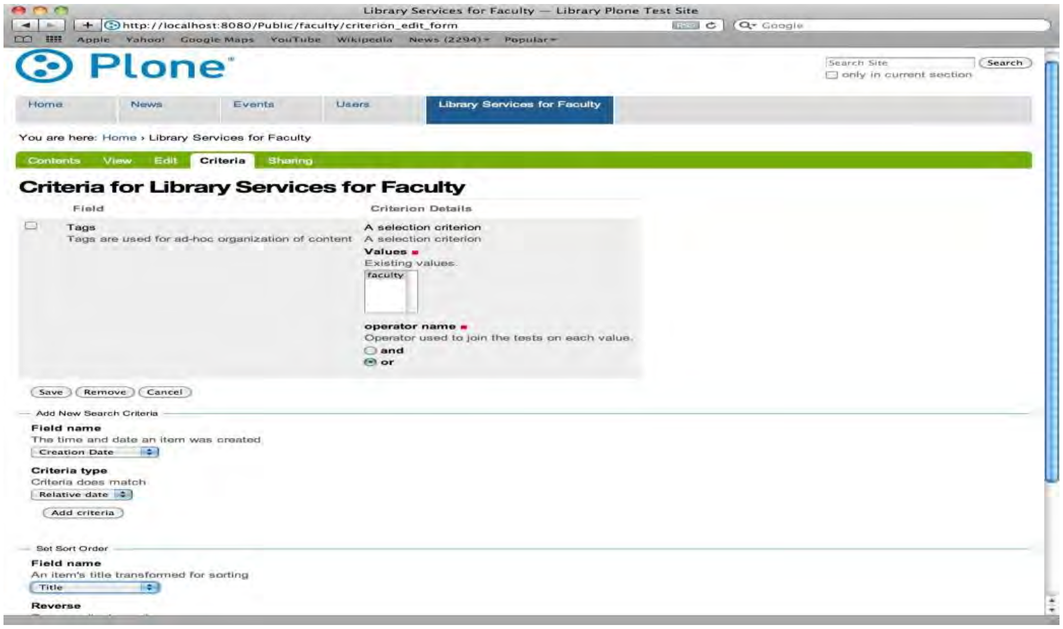
Plone is not called a ―webpage management system” however, because content management systems are transcending that metaphor. ―Content types,” in Plone‘s vernacular, can include news items (often used for rudimentary blogging), events (a calendaring content type), files (for PDFs or MS Word documents) and more. A ―page” is just another content type. Like all CMSs, Plone is really storing everything you create in your website in a database.

Harnessing the power of the internal database is Plone‘s greatest strength, as realized in the ―collection” content type. Collections are saved queries, a set of search criteria that you define based on content and metadata within your Plone website. The best way to understand this is by example:

You can ―tag” pages, news items, events, etc. on the ―Categorization” tab in Plone. By tagging relevant content with the term ―faculty,” one can then create a collection that will display any and all ―faculty”-tagged content. Since the collection is a saved query, it will dynamically update its listing of content tagged with ―faculty” any time that tag is applied or removed from an item on your website[2].

Collections can pull a wide variety of metadata from the content of your Plone site; they are a powerful and flexible tool to automate things that would be difficult on a traditional, HTML-file website (Figure 4). However, they are not well explained or understood in the Plone community and their user interface is convoluted. Each release of Plone has seen them improved but further work remains to make them readily accessible to the uninitiated.

Figure 4: Editing the criteria for a collection to display all content on the website tagged with ―faculty”. More criteria can be added and the sort order of the results can be set in this interface.



You are here: Home › Library Services for Faculty

Criteria for Library Services for Faculty

	Field	Criterion Details
□	Tags Tags are used for ad-hoc organization of content	A selection criterion A selection criterion **Values** ■ Existing values. faculty **operator name** ■ Operator used to join the tests on each value. ○ and ● or

(Save) (Remove) (Cancel)

Add New Search Criteria

Field name
The time and date an item was created
Creation Date

Criteria type
Criteria does match
Relative date

(Add criteria)

Set Sort Order

Field name
An item's title transformed for sorting
Title

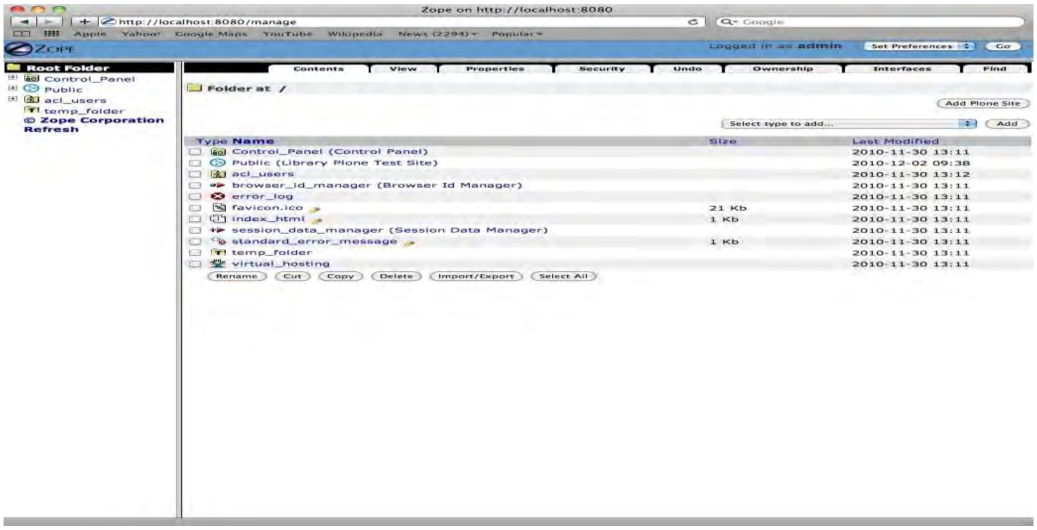
Reverse

Adding and editing content types such as these are tasks that any registered user of the Plone site can do; the header, footer and optional left- and right-hand columns are the domain of managers known in Plone as ―administrator.” Plone administrators are allowed to customize a wide variety of the features and functionality of the CMS, including the options offered within the visual editor, user and group permissions, workflow, installing add-on products, and the visual look of the website (often known as ―theming”). This management and customization is a daunting task in any CMS and Plone does not differ in this regard.

Plone website administrators have access to powerful widgets called ―portlets” that can populate the optional left- and right-hand columns on a Plone website. Portlets can be assigned site-wide, by folder, or even by individual page. Built-in portlets included in a default Plone installation include a calendar (tied to your event content type), news (tied to your news content type), site navigation (a customizable navigation menu), collection (displaying the results of a collection you have created), and static text (allowing you to create and edit text using the visual editor). For primarily security reasons, regular Plone content editors and creators are not allowed to create, edit, or assign portlets. Portlets are a powerful feature to dynamically display content across a Plone website but their design requires the website administrator to manage them directly and limits their usefulness for your content editors.

For the website administrator, Plone offers some distinct advantages and disadvantages from its peers. One major strength is Plone‘s security[3] and multiple platform support. The Plone developer community has worked to deliver a unified, integrated, and polished installation process on a wide variety of operating systems, including Microsoft‘s and Apple‘s. Macintosh and Windows installers sometimes briefly lag behind Linux versions. Plone is built upon the Zope web application development framework and the Python scripting language which are installed seamlessly with Plone. Upgrades and security patches are integrated, so a typical Plone website administrator does not need to worry about separately maintaining, upgrading, or patching Zope. Zope does have its own through-the-web interface where some Plone tasks must be accomplished (Figure 5). However, as Plone has matured fewer and fewer routine tasks are required through the Zope interface. Theming and CSS (cascading style sheet) customization are notable exceptions, though there are third-party add-ons, known as ―products” in the Plone community that move some theming abilities into the Plone through-the-web interface.

Figure 5: The Zope Management Interface (ZMI) where some administrative Plone tasks must be accomplished occasionally.



Type	Name	Size	Last Modified
□	Control_Panel (Control Panel)		2010-11-30 13:11
□	Public (Library Plone Test Site)		2010-12-02 09:38
□	acl_users		2010-11-30 13:12
□	browser_id_manager (Browser Id Manager)		2010-11-30 13:11
□	error_log		2010-11-30 13:11
□	favicon.ico	21 Kb	2010-11-30 13:11
□	index_html	1 Kb	2010-11-30 13:11
□	session_data_manager (Session Data Manager)		2010-11-30 13:11
□	standard_error_message	1 Kb	2010-11-30 13:11
□	temp_folder		2010-11-30 13:11
□	virtual_hosting		2010-11-30 13:11

Plone‘s third-party products help extend the core functionality of the CMS but must be evaluated carefully. There are several universities that actively develop and support Plone products, most notably Pennsylvania State University, which hosts an annual Plone conference. Installing these products is a multiple step process, however, that unavoidably will require using a command line interface (a DOS-style prompt on Windows, OS X‘s terminal, etc.). When browsing the otherwise-helpful products listing on the Plone website, it is often unclear which products are ready to use versus those that are still a proof-of-concept or early testing version. Products that have not been properly tested can crash your Plone website. For this reason, it is crucial that you set up a separate Plone installation for testing purposes if you are going to seriously explore using third-party products. Products can also lag behind major Plone releases, especially since some products are voluntarily created and may be abandoned by their developer. It is therefore necessary to evaluate products' history, support, and developer commitment prior to committing to using them.

It will take anywhere from several months of intensive use to over a year of casual use to master a CMS. Each, Plone included, has its own foibles and tricks. This is where the community of support for a CMS matters most. Fortunately, Plone has a wide variety of no-cost support resources available including documentation, email lists, forums, and an IRC channel where many senior Plone developers regularly respond[4]. This sort of access to the developers and their plans for Plone's future development is unprecedented compared to most commercial CMSs. The trade-off is that there really is no vendor to complain to or resolve issues that may arise with your CMS. This requires you participate in the Plone community yourself. While that may be intimidating to novices, it certainly allows you a voice in the development of Plone that is not available or more difficult with many commercial CMSs.

The final important measure of any CMS is whether there are more formal, commercial sources of support. For instance, do vendors exist that can offer hosting services, consulting, or software development services for Plone? These sorts of companies can ease the logistical problems of managing your Plone site while you concentrate on managing its content. The answer is that yes, there are many companies and independent software developers worldwide that support Plone. There are also several excellent books published covering Plone and how to get the most out of it. In this regard, Plone does not differ significantly from a commercial software package.

For many libraries, Plone is a viable and powerful option for creating and maintaining websites. Since it is based on Zope and Python, Plone is significantly different from CMSs that are built upon the MySQL database and PHP scripting language (notably Drupal and Joomla, which are also widely used in libraries). The differences to the content creators are less significant; they will be highly significant to website administrators and library information technologists however. Careful consideration will yield whether those differences will work for your library's website needs.

[1] http://www.plone.org/ serves as the cornerstone of the online Plone community. Also see the Plinkit Collaborative, http://www.plinkit.org/, for a hosted, Plone-based project focused on public libraries.
[2] For a live example of this, see http://www.library.ncat.edu/faculty. You can also filter on content type, for example http://www.library.ncat.edu/events filters on the event content type and on the date metadata contained therein, only showing you events that are in the future.
[3] http://www.plone.org/ (accessed 11-30-2010) claims that Plone has the best security record among major content management systems.
[4] Access to all of these resources is available at http://www.plone.org/.

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