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Instant Websites: Using WordPress as a Content Management System

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Instant Websites: Using WordPress as a Content Management System

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Executive Summary

Abstract

In this teaching module, you will create a website to promote a business, product, or service using a simple Content Management System (CMS). With the nextbusnews.com site as a model, you will launch a promotional website using the open source blogging platform WordPress as a simple CMS.

Creating web pages, and making them available on the internet, is easier than ever. But today's websites are expected to do much more than provide a few static pages, even if the website is for a small business or a niche product. When a website is expected to organize multiple content items, be easily updated by non-technical users, and engage users as a community, technology professionals often turn to Content Management Systems.

Once you have completed this module, you will have the starting point for a simple yet powerful CMS-driven website. You may continue to develop the site by adding content, customizing the look and feel of the site, adding functionality through freely available plug-ins, and obtaining feedback from real users.

This module is part of a larger effort to introduce non-technical business students to real IT topics using open source platforms. Instead of assuming that students build technology from a blank page, open source platforms allow students to start delivering functional web sites 'out of the box'. Freed from the assumption that an entire web site or database has to be built from scratch, students can grapple with higher-level technology and business issues such as content organization, administration, analytics, advertising, search placement, revenue, and, most importantly, feedback from real users.

Pre-requisite knowledge and technical skills

Business knowledge: Basic exposure to the concepts of Content Management and Blogging.

Technical skills: Ability to download files/folders from websites, decompress if necessary, and use FTP to upload files/folders to a specific directory on a web host. Access to a web host control panel that provides install scripts for PHP-based open source applications such as WordPress (available through free services such as freehostia.com and inexpensive web hosts).

Learning objectives

Create a new website using WordPress.

Design a simple category structure that is appropriate for the business, product, or service you are promoting.

Customize your site using freely-available themes.

Introduce students to the extensive variety of open source applications for business available through free or inexpensive web hosting services.

Instant Websites: Using WordPress as a Content Management System

J.P. Allen, University of San Francisco, jpallen@usfca.edu

1. Introduction

In this module, you will create a website to promote a business, product, or service using a simple Content Management System.

Creating web pages, and making them available on the internet, is easier than ever. But today's websites are expected to do much more than provide a few static pages, even if the website is for a small business or a niche product. When a website is expected to organize multiple content items, be easily updated by non-technical users, and engage users as a community, technology professionals often turn to Content Management Systems (CMS).

Using the nextbusnews.com site as a model, you will launch a web site that promotes a business, product, or service, using the open source blogging platform WordPress as a simple Content Management System.

Your specific learning objectives for this module are to:

- Create a new website using WordPress.
- Design a simple category structure that is appropriate for the business, product, or service you are promoting.
- Customize your site using freely-available themes.
- Introduce yourself to the extensive variety of open source applications for business, available through free or inexpensive web hosting services.

2. The Business Problem: Promoting a Complex Product at NextBusNews.com

According to the *Wall Street Journal* (8/13/08), only 36% of small businesses in the US with regular internet access have web sites. Cost and uncertainty are still significant barriers to starting new website projects. Other projects within companies that would benefit from a web presence, such as sites for specific product lines or promotions, might also be too resource- or time-constrained to justify a lengthy website development project.

A new generation of open source software platforms has emerged that can provide the starting point for business-quality websites, yet can be launched and managed by non-technical specialists. These open source platforms include WordPress for blogging, Drupal and Joomla! for content management, phpBB for online forums, and Moodle for online training and education.

The NextBus company faced the problem of explaining a complex product to both industry customers and end users. NextBus provides real-time passenger information systems for public transportation. Using the NextBus vehicle tracking system, GPS receivers provide updated positions on each vehicle every 90 seconds, or 200 meters. NextBus generates projected arrival and departure times, and makes those times available through the internet, on mobile devices, and on electronic signs at bus stops. As of August 2008, NextBus technology is used by 45 transit agencies in North America.

NextBus decided to create a separate site called nextbusnews.com that explains how the NextBus product works, and its benefits. NextBus uses complex technology, and provides benefits to a variety of different users, including fleet managers looking for greater efficiency, and riders who need reliable transit.

NextBus needed a site where news and success stories could be updated easily, but also where different audiences could find specific information tailored to their needs.

The site nextbusnews.com uses the WordPress platform as its foundation. Because WordPress is blogging software used by millions of writers, it is easy for non-technical users to add new content. Content for different users and purposes can be grouped easily into categories.

Visit nextbusnews.com and make note of the following features:

1. *Static vs. dynamic content.*

Look at the top navigation menu items, particularly ‘How NextBus Works’ and ‘News’. The content on the ‘How NextBus Works’ page is mostly *static*, meaning that the content of this page will not change, or be added to, frequently. The content on the ‘News’ page, in contrast, will be updated regularly, and is organized by date. Content such as news stories, or a growing collection of customer success stories, is considered *dynamic* content.

On the WordPress platform, static content is organized as *pages*, and dynamic content is organized as *posts*.

2. *Categories for content.*

On the home page of nextbusnews.com, try one of the ‘Categories’ links near the bottom of the left column. In a content management system, it is easy to assign categories to any content items (either static pages or dynamic posts). The content management system automatically updates the category links, making website management a much easier task.

3. *Automatic information updating.*

Still on the nextbusnews.com home page, look at the ‘NextBus News’ links in the upper left column. These links point to the full news stories (or posts) found on the ‘News’ page. The content management system automatically updates the news links on the home page as additional news story posts are added.

4. *Graphic design.*

It was important to NextBus that the nextbusnews.com site look professional. NextBus wanted to avoid a website that looked like a casual, personal blog. Take a look at the overall graphic design of the site. Does it look professional and business-like? Does it look like a personal blog?

In this module, your business problem is to make static and dynamic content about a product, service, or business widely available and well organized. You will choose a product, service, or business to promote. Then, using nextbusnews.com as an example, you will create a website and a simple category structure using WordPress.

3. Preparation for Class

Before you attend the class session for this instruction module, be sure that you and your team members have completed these tasks:

1. You have read the material in this instruction module, and visited the nextbusnews.com site as described above.

2. You have read the first three sections of the “First Steps With WordPress” page at http://codex.wordpress.org/First_Steps_With_WordPress.
3. You have chosen a product, service, or business that you would like to promote through a CMS-based website.
4. You are able to log in to your web hosting provider, and find the administrator control panel.

4. During Class

Our objective during this 90-minute session is to complete the four specific learning objectives for this module.

Objective #1: Create a new website using WordPress.

Logon to the web hosting account provided by your instructor. From your web host control panel, click on the icon for installation scripts (the icon varies by web host provider, but ‘fantastico’ and ‘simple scripts’ are two popular examples).

Click on the icon for a WordPress installation. Fill in the information for the administrator username and password of your choice. Choose your own subdirectory for the WordPress installation, unless your instructor has chosen one for you.

The installation instructions will give you the URL of your site. Visit your site and create your first test post, following the steps at http://codex.wordpress.org/First_Steps_With_WordPress#Writing_and_Managing_Posts.

In the right column, click on the link for your administrator panel (the Dashboard). Go to the “Settings” menu, and change the name and the tag line of your site to fit the product, service, or business you will be promoting.

Congratulations! You’re up and running.

One more quick task: you need to create a sample page for your site. From the administrator panel, click on “Write”, then “Page” to create your first test page. By default, WordPress makes blog posts the front page for your site, but many of you will want to follow the example of nextbusnews.com and have a static page as the front page. To change this, click on “Settings”, then “Reading”, and select your preferred option under “Front page displays”.

Objective #2: Design a simple category structure that is appropriate for the business, product, or service you are promoting.

Create a list of at least five categories of content that your users will seek out on your site. Enter those categories into your site, following the steps at http://codex.wordpress.org/First_Steps_With_WordPress#Put_Posts_in_Categories.

You have the option of creating hierarchies of categories as well, if that makes the most sense for your audiences.

Be sure you assign at least one category to one of your test posts or pages.

Objective #3: Customize your site using freely-available themes.

Out of the box, your site looks a little boring and generic. The look and feel of your site can be customized by choosing a different theme. Clicking on “Design” at the administrator panel lists your

current theme choices. Click on another theme, and see how the appearance, but not the content, of your site changes.

At first, you don't have many theme choices. But fear not, many other theme choices are freely available on the web. Search for a theme that fits your needs at the official WordPress theme repository (<http://wordpress.org/extend/themes/>) or on many other sites. You can install a new theme on your site by following the steps at http://codex.wordpress.org/Using_Themes#Adding_New_Themes. Basically, you need to download a folder with the theme files to your PC, then use FTP or some other file transfer method to copy the folder to a specific directory on your web host.

Test your new theme by selecting the theme from the "Design" tab on the administrator panel. Be sure the theme is compatible with the version of WordPress running on your site.

Nice work! Now you're ready to start adding content to promote your business, product, or service.

Objective #4: Introduce yourself to the extensive variety of open source applications for business available through free or inexpensive web hosting services.

Before you finish this class session, go back one more time to your web host control panel (where you first started this module, not the WordPress administrator panel). Take a look at some of your other open source software options. Depending on the web host, you are likely to have dozens of other software packages at your disposal. Typical choices include other content management systems, forum software, galleries, mailing list management, customer relationship management, project management, collaboration, wikis, and many others. Though these software packages do different things, conceptually they often share a similar structure to WordPress.

Choose one of the other software packages. Find its website using a search engine. Can you identify any potential business uses for the software?

5. After Class

At the end of this module, you have the starting point for a simple yet powerful content management system. Some directions for you to pursue after the class session is over include:

Adding content. You now have the ability to add the pages, posts, links, images, and video you need to turn this into a finished website.

Customizing the theme. Because WordPress, and its themes, are open source, you have the ability to change the look and feel of your site by editing the HTML, CSS (style sheets), or PHP (server-side code) of your site. Even non-technical people who aren't completely familiar with HTML or CSS can make simple changes, such as changing colors, fonts, and positions by using tutorial resources available on the web. For a starting point, see http://codex.wordpress.org/Stepping_Into_Templates.

Adding functionality. In the same way that you added a new theme to your site, you can also add new functionality. In WordPress, these additional functions are called plugins. Popular types of plugins include new features for better search engine optimization (all-in-one-seo-pack, and google sitemap generator), better user statistics (stats), multimedia (nextgen-gallery), administration tools (wp-db-backup and wp-automatic upgrade), user polls (wp-polls), and interfaces to outside services. See <http://codex.wordpress.org/Plugins> for more tips, and for links to directories of plugins.

Recruiting users. Once you have assembled a critical mass of content and functionality, invite a few carefully chosen users to your site and ask for their comments. The content management system handles the details of user registration for you.

Exploring other open source CMS systems. WordPress can be used as a simple content management system, but other open source options are available for larger and more complex websites. Drupal and Joomla! are two leading examples. Explore their websites, and find out what additional features they offer. You can even give them a quick test drive at <http://opensourcecms.com>.

6. Additional Resources

The nextbusnews.com website: <http://nextbusnews.com>

The WordPress website: <http://wordpress.org>

The Open Source CMS website for test-driving open source CMS systems: <http://opensourcecms.com>

Article on using WordPress as a CMS, including nextbusnews.com as an example: <http://www.webhelpmagazine.com/2008/06/wordpress-cms-nextbus-news>

7. Author Biography

Jonathan P. (J.P.) Allen is an Associate Professor of Information Technology at the School of Business and Management, University of San Francisco. More information and news about J.P. is available at blog.jpedia.org.

TEACHING NOTE

Instant Websites: Using WordPress as a Content Management System

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1. Introduction

To teach this module as a *hands-on exercise* requires some preparation and organization. If the module appears too complex at first, it can be delivered as a demonstration where the steps are performed by the instructor. We find the hands-on approach, however, to be more motivational for students. The hands-on approach leaves students in control of their own sites, giving the work done in this module the potential to grow into a larger project over a few weeks, or even an entire semester.

2. Business Prerequisites

- Basic exposure to the concepts of Content Management, and Blogging

Nothing complicated is required here - knowledge equivalent to reading the Wikipedia entries on 'blogging' and 'web content management systems' would be sufficient. However, class time is tight for this module, so it's valuable not to have to answer questions about basic terms.

3. Technical Prerequisites

- Access to a web host control panel that provides install scripts for PHP-based open source applications such as WordPress.

The biggest technical challenge to this module is setting up student teams with a web host and a domain name. There are two main approaches:

1. Each student/team has their own domain name and web host. This is the approach we prefer. Now that domain names cost so little, purchasing domain names is well within student budgets, and increases the engagement level significantly. Domain names can be bought from sites such as godaddy.com.

Students will also need to sign up for their own web hosting under this option. If students will be continuing with the project after this module, we recommend students choose an inexpensive paid hosting service such as bluehost.com or dreamhost.com. If the project ends with this module, the students can sign up with one of the numerous free web hosting services such as freehostia.com that offer software installs and MySQL databases.

The critical issue is that the web host must provide install scripts for PHP-based open source applications such as WordPress. Most do, but you need to check. Students will not have enough time to install WordPress manually in this module.

2. All students/teams share a single domain name and web host. This approach saves students from buying domain names and enrolling for web hosting, but requires the instructor to distribute usernames and passwords ahead of time. The instructor also needs to give each student/team the name of a unique subdirectory for their WordPress installation.

- Ability to download files/folders from web sites (decompressing files if necessary), and use FTP to upload file/folders to a specific directory on a web host.

Students need to be able to download a folder from a website, then upload that folder to a directory on their web host that contains the themes for WordPress. This is usually fairly easy to set up, requiring the student to take the FTP username, password, and server address provided by their web host, and enter that information into a FTP client.

It is important to have a checkpoint that ensures both of these prerequisites are in place. The class session cannot succeed if these prerequisites are not completed by all students/teams.

4. Class Session Structure

One suggested time breakdown is as follows:

10 minutes of common briefing - fielding questions from the audience, or responding to questions that have arisen from online discussion before class.

60 minutes of each person or team proceeding with the module at their own pace - this may seem like a long time for students to be left alone, but each student or team will have issues at different steps in the process. This structure leaves the instructor free to distribute attention where it is needed the most. This structure also allows more advanced students/teams the freedom to go beyond the minimum steps in the module and begin to build out a real site.

15 minutes of common debriefing (with perhaps a few students/teams still putting finishing touches on their sites) - our experience is that the module generates lots of student questions and discussion.

5 minutes for random problems and transition times, or a break.

5. The Philosophy of Using Open Source Platforms for Teaching Business School IT

This instruction module is one small part of a larger effort to introduce non-technical students to non-trivial IT topics using open source software platforms such as WordPress, Drupal, Joomla! and phpBB. These open source platforms for content management, blogging, and forums allow students with almost zero technology experience to set up fairly sophisticated web sites and services quickly. The open source software provides all the basic functions of a web site, a starting point from which even non-technical students can add content, customize the look and feel, and add functionality via modules and widgets.

We call the learning philosophy behind our approach *technology immersion*. Using an analogy from foreign language teaching, we try to push non-technical students to speak in a foreign language (i.e., offer real functionality for users) early on, rather than teach them years of grammar and vocabulary (i.e., teach programming languages or technical skills as stand-alone activities). (See <http://spring08.jpedia.org> for more explanation, and examples of student projects).

Instead of assuming that students build technology from a blank page, open source platforms allow students to start delivering functional web sites 'out of the box'. Soon, they're hearing from their users, and their requests naturally motivate students to learn and do more with the technology. As students improve their web sites, and respond to comments from real users, our belief is that students will be better able to learn specific technical skills, and be more motivated to do so. Freed from the assumption that an entire web site or database has to be built from scratch, students can grapple with higher-level technology and business issues such as content organization, administration, analytics, advertising, search placement, revenue, and, most importantly, feedback from real users.

Using open source platforms is critical. The community-based nature of open source means that, initially, students can choose from a wide range of freely-available customizations and add-ons. But when the

students are ready and able to make more serious changes, the full details of code and style sheets are completely open to them.

We are concerned about the future of IT education in business schools. Recent surveys suggest that business school students are not studying technology-related topics because they find the teaching methods and topics uninteresting [1]. The traditional MIS career track is under strain. The technology immersion approach allows us to explore new technical roles for the general business student, while providing valuable skills for the technologists.

6. Reference

- [1] Walstrom, K. A., Schambach, T. P., Jones, K. T., & Crampton, W. J. Why Are Students Not Majoring in Information Systems? *Journal of Information Systems Education*, vol. 19, no. 1, pp. 43-54, 2008.