by Linda Christie
<lindac(at)doctorvar.com>

About the author:
Linda Christie is the owner of publishing and international consulting firm Write Solutions and the founder of DoctorVAR.com. Linda has spent over two decades in the print and electronic computer publishing world. As the contributing editor for TechTarget.com, she wrote "Storage Management" a bimonthly newsletter, as well as scores of technical tips. In addition, she held the position of features editor and senior writer for the publisher of "The Computer Journal," "Enterprise Technologies," "IT Solutions and Strategies," and "CAD Technologies." Linda is also the award-winning author of 11 "how-to" information technology, medical, and business books released by top New York publishers.

Case Study: Open Source Content Management Systems Make E-commerce Websites Affordable

Abstract:

It's one thing to formulate a great idea for a Website that's informative, entertaining, and commercially viable. It's quite another turning a passion into a robust e-commerce Website for under $5,000. .
_____ _____ _____

Mid-November last year, systems integrator, Scott Kroeger, owner of Hudson Avenue Technologies

based in Omaha, NE, received an inquiry about programming a robust e-commerce website for under $5,000. Publishing and consulting firm Write Solutions wanted to launch DoctorVAR.com (http://www.doctorvar.com/): an e-commerce Website to help computer value added resellers (VARs) improve their technical know-how, consulting, marketing and management skills. Here's how Scott addressed this seemingly impossible challenge.
Text written by Linda Christie.

Custom development gone wrong

No, the web publisher wasn't being unreasonable. It seems that hackers had demolished their first effort which had consumed nine months of work, databases brimming with valuable IT information the staff had gathered and uploaded, and most of their cash reserves-because the custom developer they had contracted with failed to backup the site.

The way to a proper solution

My first concern was how computer savvy and organized this client was. If she was going to require a lot of training and hand-holding, even implementing an open-source solution would cost more than her budget would allow. So I sent her a number of questions to learn more about the project, as well as "test" her abilities, such as:

- What kind of site do you need developed?
- What is your budget?
- What are your timelines?
- How did you choose php?
- Is an admin interface required?
- Do you need to manage banner ads?
- What other sources of income do you anticipate?
- What are your support requirements after implementation?
- Will you be managing the site's content or do you have technical staff?
- Is the content you are providing free or subscription based?
- Is there an existing site with similar functionality I could check out?

This client wasn't a technical guru, but her answers told me that she was very computer savvy, well organized, and knew exactly the capabilities and features she wanted for the site. After she "passed my test," I told her that I thought she'd have difficulty programming the site from scratch for $4-5,000, even in India.

Then I told her that from her requirements, I thought she was "re-inventing the wheel." I emailed the following: "Fortunately, you are not the first person with the need for a Content Management System. There are numerous free open source CMSs with all of the functionality that you need and then some. Additionally, most CMSs come with wonderful administration functions that someone with a minimal amount of technical expertise can do the majority of the site configuration.With this option, I can deliver a fully functional site by the end of the year within the budget you specified."

Within hours, I received a request for an in-person meeting which turned into the first of three meetings

needed to plan and implement the project. One of the reasons it took so few meetings was that before writing a single line of code, the site owner and I had a clear idea of the scope of the project. Only then did I recommend a comprehensive solution that would address all of the issues her specifications raised. This saved a lot of time and expense, as well as made my job much less frustrating.

Integrating/customizing open source solutions

After our first meeting, I was pretty certain the open source content management system (CMS) PostNuke would provide the capabilities she needed. A fork from PHPNuke (http://www.phpnuke.org/), PostNuke provides many enhancements and improvements over the PHPNuke System. It offers full CSS support, HTML 4.01 transitional compliance, advanced blocks system, and is fully multi-lingual enabled.

So I sent the PostNuke (http://www.postnuke.com/) manual to the client for review. However, she astutely pointed out that, according to the documentation, unique block/page configuration for multiple pages isn't possible-a stringent requirement for the DoctorVAR.com implementation.

I was pretty sure I could find a workaround for this problem by examining other PostNuke site installations and reading forum discussions. It didn't take me long to figured out that multiple PostNuke installs would solve the page layout problem and provide complete control over the subsite blocks. A PostNuke subsite is an additional installation of PostNuke within the 'main' PostNuke installation. For example, if the main PostNuke installation is installed under '/htdocs/postnuke', a subsite would be installed under '/htdocs/postnuke/subsite1'.

Each subsite has the ability to be configured completely separately from the main PostNuke installation. This allows the administrator to manage separate topics as their own distinct 'subsites.' My challenge was to figure out how to make all 28 installs talk to each other by modifying what database tables each subsite looked at.

After examining the code, I configured the subsites to share information such as user session information, articles, menus, etc. This way the DoctorVAR.com site can share all information between the subsites - theme, menus, login, etc. However, I configured each subsite to maintain its own block layout-thus the content for each main topic page (subsite) can be laid out uniquely.

The next problem I had to tackle was the site search function, another prime requirement. The client wanted to use html blocks to handle the bulk of the content since the PostNuke articles feature would be tedious to maintain. However, PostNuke only searches major modules, not html pages.

To resolve the html layout and search issues, I integrated a PostNuke module called Content Express (http://pn.arising.net/ce/). This module provides the site with a very friendly admin interface for adding html pages and controlling the site navigation, as well as a search engine for html pages. Content Express wasn't built for multi-site configuration, so I had to go into the code and figure out what it was doing to know how to integrate it for the multi-site solution.

To complete the site, I integrated free PostNuke modules to provide an ezine, forum, job bank, and banner/ad management. Within two weeks, my client was laying out pages and uploading data. And by

the end of two months the DoctorVAR.com site she'd dreamed about was up-within her budget and without sacrificing one feature or requirement. The only software she had to purchase was a classified ads module and shopping cart for $59, plus a $30 theme. The rest of the modules were free.

Since my background is in integration, I get more excited about finding open source software, figuring out how the code works and then using my technical skills and coding to make the modules work together. This way I don't have to spend a lot of time programming from scratch and debugging code. The flexibility, performance, and ease of administration of the DoctorVAR.com (http://www.doctorvar.com/) implementation is a testament to how robust and cost effective open source CMSs are.

Additional Resources

- PostNuke.com (open source Weblog/content management system) (http://www.postnuke.com/)
- Content Express (open source Web content management system) (http://pn.arising.net/ce/)
- WhatsNews (open source ezine module) (http://nuke-modules.gading.de/)
- phpAdsNew (open source ad server) (http://www.phpadsnew.com/one/)
- phpBB (open-source bulletin board package) (http://www.phpbb.com/)
- phProfession (open source job bank) (http://www.phpsolutions.co.uk/index.php/)
- DoctorVAR.com Website Content/Stickiness Articles (http://www.doctorvar.com/subsite8/?mid=12#stickiness/)
- DoctorVAR.com Web Presence Articles (http://www.doctorvar.com/subsite27/?mid=22#WebPresence/)
- Web Marketing & E-Commerce (http://www.wilsonWeb.com/)
- Apromotionguide.com - Free Website promotion tutorial (http://apromotionguide.com/)