THE TECH SET

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ELLYSSA KROSKI

14

Drupal in Libraries

KENNETH J. VARNUM

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Ellyssa Kroski is Emerging Technologies and Web Services Librarian at Barnard College; writer, educator, and international conference speaker; as well as adjunct faculty member at Long Island University, Pratt Institute, and San José State University

Drupal in Libraries

Kenneth J. Varnum, Web Systems Manager, University of Michigan Library

...a remarkable job pulling together the basics of Drupal CMS into a readable, short, yet thorough, book. NINA MCHALE, ARAPAHOE LIBRARY DISTRICT, COLORADO, USA

Drupal is a free and open-source content management system (CMS) that many libraries use to create well designed, easy-to-use and manage websites. Kenneth J. Varnum guides you step by step through the decisions and tasks needed to develop and launch a Drupal-powered site and learn the advantages of the open source approach.

The book offers hints and suggestions to work with your IT department, colleagues, and management as you develop your technical specifications. The implementation chapter guides you through installing Drupal, adding modules, developing your own themes (page layouts), and describes librarian-created modules that have been shared with the community and can be downloaded and installed on anyone's site. You also get advice on marketing your site, best practices for project management and development, and measuring the success and impact of the site once it launches.

ISBN 978-1-85604-840-8

9 781856 048408

Facet Publishing
www.facetpublishing.co.uk

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常州大学图书馆
藏书章

KENNETH J. VARNUM

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© 2012 Kenneth J. Varnum
Published by Facet Publishing,
7 Ridgmount Street, London WC1E 7AE
www.facetpublishing.co.uk

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First published in the USA by ALA TechSource, an imprint of the American Library Association, 2012.
This simultaneous UK edition 2012.

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library.

ISBN 978-1-85604-840-8

Printed and bound in the United Kingdom.

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FOREWORD

Drupal is a powerful, free, open source content management system that enables organizations to create extensive, flexible websites incorporating social and 2.0 functionality. *Drupal in Libraries* is a comprehensive guide to harnessing the power of this increasingly popular technology to create community-oriented websites. Drupal guru Ken Varnum deftly conveys the entire process of setting up a library website as well as provides tips and best practices for creating and customizing themes, incorporating library resources into Drupal, and enhancing websites with social media features. Everything from creating and configuring Views and Panels, creating new content types, and designing your own modules can be found in this all-in-one manual.

The ten new TECH SET volumes are designed to be even more cutting-edge than the original ten. After the first ten were published and we received such positive feedback from librarians who were using the books to implement technology in their libraries as well as train their staff, it seemed that there would be a need for another TECH SET. And I wanted this next set of books to be even more forward-looking and tackle today's hottest technologies, trends, and practices to help libraries stay on the forefront of technology innovation. Librarians have ceased sitting on the sidelines and have become technology leaders in their own right. This series was created to offer guidance and inspiration to all those aspiring to be library technology leaders themselves.

I originally envisioned a series of books that would offer accessible, practical information that would teach librarians not only how to use new technologies as individuals but also how to plan and implement particular types of library services using them. And when THE TECH SET won the ALA's Greenwood Publishing Group Award for the Best Book in Library Literature, it seemed that we had achieved our goal of becoming the go-to resource for libraries wanting hands-on technology primers. For these new ten books, I thought it was important to incorporate reader feedback by adding two new chapters to each volume that would better facilitate learning how to put these new technologies into practice

in libraries. The new chapter called "Social Mechanics" discusses strategies for gaining buy-in and support from organizational stakeholders, and the additional "Developing Trends" chapter looks ahead to future directions of these technologies. These new chapters round out the books that discuss the entire life cycle of these tech initiatives, including everything from what it takes to plan, strategize, implement, market, and measure the success of these projects.

While each book covers the A–Zs of the technology being discussed, the hands-on "Implementation" chapters, chock-full of detailed project instructions, account for the largest portions of the books. These chapters start off with a basic "recipe" for how to effectively use the technology in a library and then build on that foundation to offer more and more advanced project ideas. Because these books are designed to appeal to readers of all levels of expertise, both the novice and advanced technologist will find something useful in these chapters, as the proposed projects and initiatives run the gamut from the basic how to create a Foursquare campaign for your library to how to build an iPhone application. Similarly, the new Drupal webmaster will benefit from the instructions for how to configure a basic library website, while the advanced web services librarian may be interested in the instructions for powering a dynamic library website in the cloud using Amazon's EC2 service.

Ken Varnum has been writing and speaking about web technologies for many years and has been keeping the University of Michigan Library on the cutting-edge as the Web Systems Manager. When I realized that the series needed a book on Drupal, I knew that Ken was the person to write it. He brings his extensive knowledge and expertise to this outstanding book on *Drupal in Libraries*, in which he guides readers through all aspects of creating a robust website using this powerful open source application. And he does so in a clear and articulate manner that is exceedingly accessible for the reader.

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Ellyssa Kroski is the Manager of Information Systems at the New York Law Institute as well as a writer, educator, and international conference speaker. In 2011, she won the ALA's Greenwood Publishing Group Award for the Best Book in Library Literature for THE TECH SET, the ten-book technology series that she created and edited. She's also the author of *Web 2.0 for Librarians and Information Professionals*, a well-reviewed book on web technologies and libraries. She speaks at several conferences a year, mainly about new tech trends, digital strategy, and libraries. She is an adjunct faculty member at Pratt Institute and blogs at *iLibrarian*.

PREFACE

You've likely picked up *Drupal in Libraries* because you've heard something about Drupal and want to know if it is a good fit for your organization. Or perhaps you've been told to "fix the website" and you're exploring various technologies to make that request a reality.

I wrote *Drupal in Libraries* because there was no similar book available when I was managing a major website redesign in Drupal. Much of what I include in this book is derived from the processes and lessons I learned as I investigated content management software, managed the development team that customized our Drupal installation, and worked closely with the project management team to redesign our library's website. The lessons I learned—some the hard way—will save you time and effort. The days when an organization could essentially put up some HTML pages and call it a done deal are long past (if they ever truly existed). A multitude of tools and technologies exist to help libraries organize, publish, and maintain their content. One of the rising stars in this arena is the Drupal open source content management framework.

So what is an "open source content management framework"? Healthy open source software tools create a community from their user base. This community helps augment and develop the tool itself, creating new functionality that is relevant to its users. Drupal and libraries have forged a particularly symbiotic relationship, with libraries large and small creating—and, most importantly, sharing—chunks of code to accomplish specific tasks.

ORGANIZATION AND AUDIENCE

Drupal in Libraries will guide readers step by step through the decisions and tasks needed to develop and launch a Drupal-powered website. Chapter 1 discusses open source and proprietary software and helps you understand the pros and cons of an open source approach. It ends with a discussion of

Drupal concepts to help you understand the rest of the book. Chapter 2, "Types of Solutions Available," describes the range of solutions available—from doing it yourself to outsourcing the entire development process, with various gradations in between. In Chapter 3, "Planning," you will go through a planning process that will guide you to your initial functional specifications for your site. "Social Mechanics," Chapter 4, gives you hints and suggestions to work with your IT department, colleagues, and management as you develop your technical specifications.

The bulk of the how-to in *Drupal in Libraries* is in Chapter 5, "Implementation." This chapter guides you through installing Drupal, adding modules, and developing your own themes (page layouts) and describes the modules created by other librarians for use on their sites. Chapters 6–8 discuss marketing your site, best practices for project management and development, and measuring the success and impact of the site once it launches. The book wraps up with a chapter on emerging trends and tools in Drupal and a look at the changes that might be expected when the next versions of Drupal (versions 8 and 9) are released in the years to come.

Drupal in Libraries is for you, the information professional. It assumes that you have some knowledge of website design and architecture, but it does not require you to be a specialist. You may have some programming skills, but they are not required for you to make use of this book. Being a framework, not a "solution," means that Drupal is powerful enough to accomplish almost any web content management task yet is focused on one thing—organizing web content—effectively. It is a tool set to manage web content and allow you, the web project manager, to rapidly customize the functionality you need.

ACKNOWLEDGMENTS

I am indebted to the many people who have taught me much about Drupal and project management. Scott Ash, Albert Bertram, and Tyler Frankenstein are excellent developers who have taught me much of what I know, and I'm grateful to them for their many lessons and pointers. I learned a great deal from the other members of our Drupal project team at the University of Michigan Library: Karen Reiman-Sendi, Mike Creech, and Liene Karels. They have openly shared their advice, opinions, and knowledge over the past four years and this book is richer for it.

I am particularly grateful to Karen, who graciously read and commented on the complete manuscript, showing me places where my assumptions and the reader's diverged. Lucinda Varnum, my perennial proofreader, deserves a great deal of gratitude and credit for improving my writing, both of this book and in general. Ellyssa Kroski, my editor, has suggested innumerable ways to improve the narrative. Any mistakes in the finished book are mine alone, despite the best efforts of my colleagues and family to eliminate them.

Finally, I dedicate this book to my wife, Nieka Apell, who has so generously put up with the great time sink that is a book. Thank you for your love and support, in this and everything.

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Don't miss this book's companion website!

Turn the page for details.

1

INTRODUCTION

- Content Management Systems versus Flat Files
- Open Source versus Closed
- Selecting a Content Management System
- Drupal
- A Note about Drupal Versions

Drupal is a powerful tool for managing web content, one that has become very popular in recent years. It is used in many organizations, including libraries, because of its flexibility and extensibility. But what makes it so useful in the library setting? This book will answer this question and walk you through creating a basic library website using freely available modules.

Before you decide on Drupal, however, you should begin with a more fundamental question: "Do I need a content management system (CMS)?" Because you're reading this book, your answer to this question is likely "yes." To help you get to an unqualified "yes," we will begin by looking at a series of decision points—whether you need a content management system in the first place and, if you do, whether it should be an open source or proprietary system. We will then provide some guidelines for making a well-reasoned decision and, finally, spend some time describing Drupal and the way it is structured.

In the coming chapters, we will examine the ways you can get Drupal for your site, plan a CMS installation, work with your library staff and technical support groups, and then delve into building a Drupal site of your own.

CONTENT MANAGEMENT SYSTEMS VERSUS FLAT FILES

If your website is more than a few years old, you may still be living in the world of plain HTML files stored on a web server. If you are, and you have more than a few dozen pages to manage, you are probably looking for the

efficiency a content management system (CMS) can bring you. These efficiencies include:

- the creation of a small number of templates so that all of your webpages look the same and can be changed quickly as the need arises.
- the separation of layout from content so that anyone in your organization may be given authority to write or maintain content for your website without the need to provide training on HTML, CSS, or any programming tools.
- the ability to reuse text multiple times within your site. For example, blog posts about circulation could appear in your news section as well as on your circulation page. Hours for libraries or service desks can appear both centrally and within the site they refer to. Staff names and contact information can be displayed everywhere they are needed, in the correct context.
- consistency across the organization for how web data is managed and stored.
- work flows that allow for content review and approval, where appropriate, before publication.
- the ability to borrow from other people using the same CMS by downloading and installing modules—small applications—to enhance your site.

When we began our redesign at the University of Michigan Library, we were faced with a monster of a website. It had more than 50,000 pages. About 10,000 were static files, coded in HTML and organized into several dozen subsites. The remaining 40,000 pages were generated dynamically, using Perl or PHP and a database back end, through a number of different legacy applications. There was no standardization between the HTML parts of the site and the dynamically generated portions—not even within the static pages or dynamic pages. This was the result of having different developers and authors building their own pieces of the site, independently, over the course of almost two decades. The maintenance effort in keeping the static part of the site updated was a large one, even though it was distributed across many individuals around the library. The not insignificant effort needed to keep the dozen or so different applications up-to-date and functioning was concentrated in the Web Systems group.

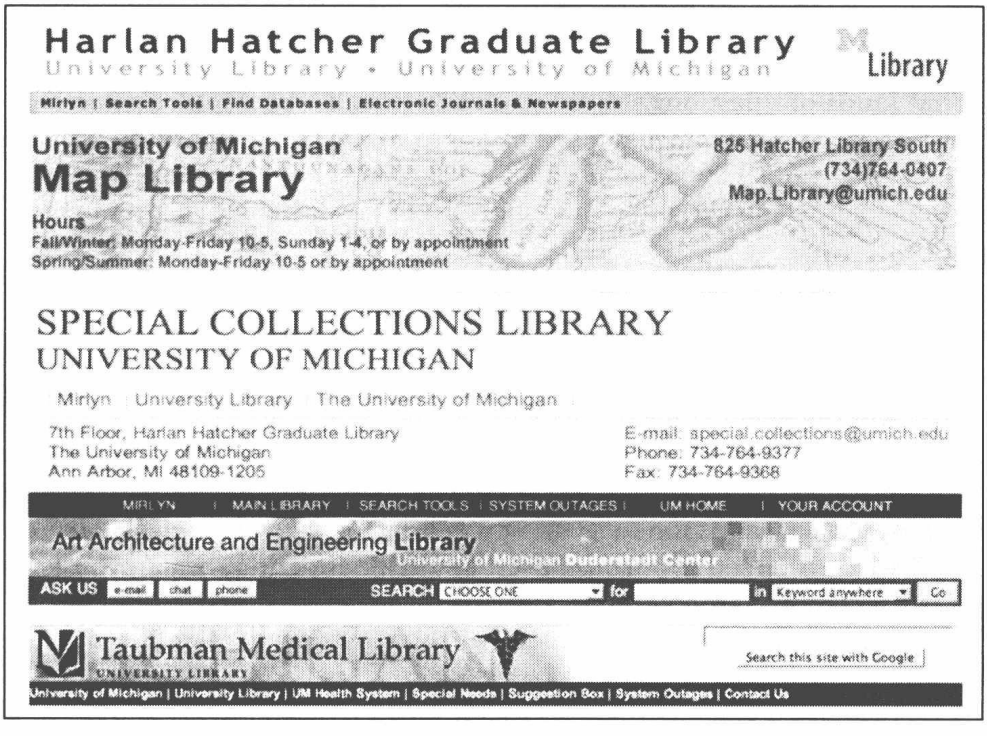
From the user perspective, the library's site had dozens of graphic identities for different parts of the library, many of which bore little resemblance to the homepage (see Figure 1.1). Constituent libraries, service points, departments, and information pages had radically different designs. There was almost no consistent navigation across the site; many pages did not link to the main

library page. Those that did used different logos or graphics, and the links were placed on different parts of the webpage. This complicated user interface made it very difficult for a site visitor to move from one library to another or from a library to a particular resource. The site was an exercise in frustration for our users and our staff.

Furthermore, there was no consistent application of site search—some search boxes covered the whole library website, while others included only that particular subsite's content. We arrived at this state of affairs much as you may have: by allowing the web to grow organically over years without finding the time or energy to bring it together.

When we were done with our redesign, we had pruned a tremendous amount of stale content, reducing the number of pages considerably, to about 10,000. This total represents a large number of brief pages describing particular resources in detail, along with information about the library and its services. We put in place a navigation across the entire site and had given more than 100 library staff members (out of a total staff of nearly 500) the authority to write, edit, and delete pages. Changes we now make to standard elements are instantly rolled out to the entire site through templates and common CSS files.

▶ Figure 1.1: Sample Screenshots of Our Heterogeneous Site



▶ OPEN SOURCE VERSUS CLOSED

Assuming that you have decided to go the CMS route, there is another fork in the road to navigate. Like most software systems, content management systems come in two flavors: closed (proprietary) and open source. In a proprietary or closed system, the vendor maintains control over the application and the interface, providing a defined, sometimes limited, suite of functions. These applications can range from "black box" to well-documented systems. In a "black box" system, the computer code is not accessible to anyone but the system's developer. Customers cannot look inside to see how the software works. In contrast, well-documented systems have detailed explanations of what is going on within the system, even if customers do not have the ability to change the way the application works. These changes are generally made through requests to the vendor for feature enhancements. At the same time, you usually have control over the display templates and styling.

Open systems differ in that you, the library, have access to the source code so you can make changes to meet your particular needs as well as add new functionality that is not offered by the software company. Plus, you can benefit from the many developers working in the same programming environment to help quash bugs and add features.

▶ SELECTING A CONTENT MANAGEMENT SYSTEM

What kinds of questions should you ask yourself when you're selecting a CMS? When we established a task force to evaluate the open source CMS landscape in April 2008, we used a fairly broad set of criteria to review the product landscape and settle on a short list of products that might work well for us:

- Is support available? If so:
  - How is it delivered?
  - What is the cost?
- Will the product be around for a while? As Yogi Berra said, "It's tough to make predictions, especially about the future." But you can make an educated guess.
- How modular is the tool?
  - Do you need to turn on every available function, or can you leave those that aren't of immediate use to your users inactive?
  - Can you add other modules available now or that might be available in the future?
- How active is the developer community?

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