

Companion Web Site

- Provides code files for all examples in the book

Aaron Brazell

Technical editing by Mark Jaquith,
leading WordPress core developer

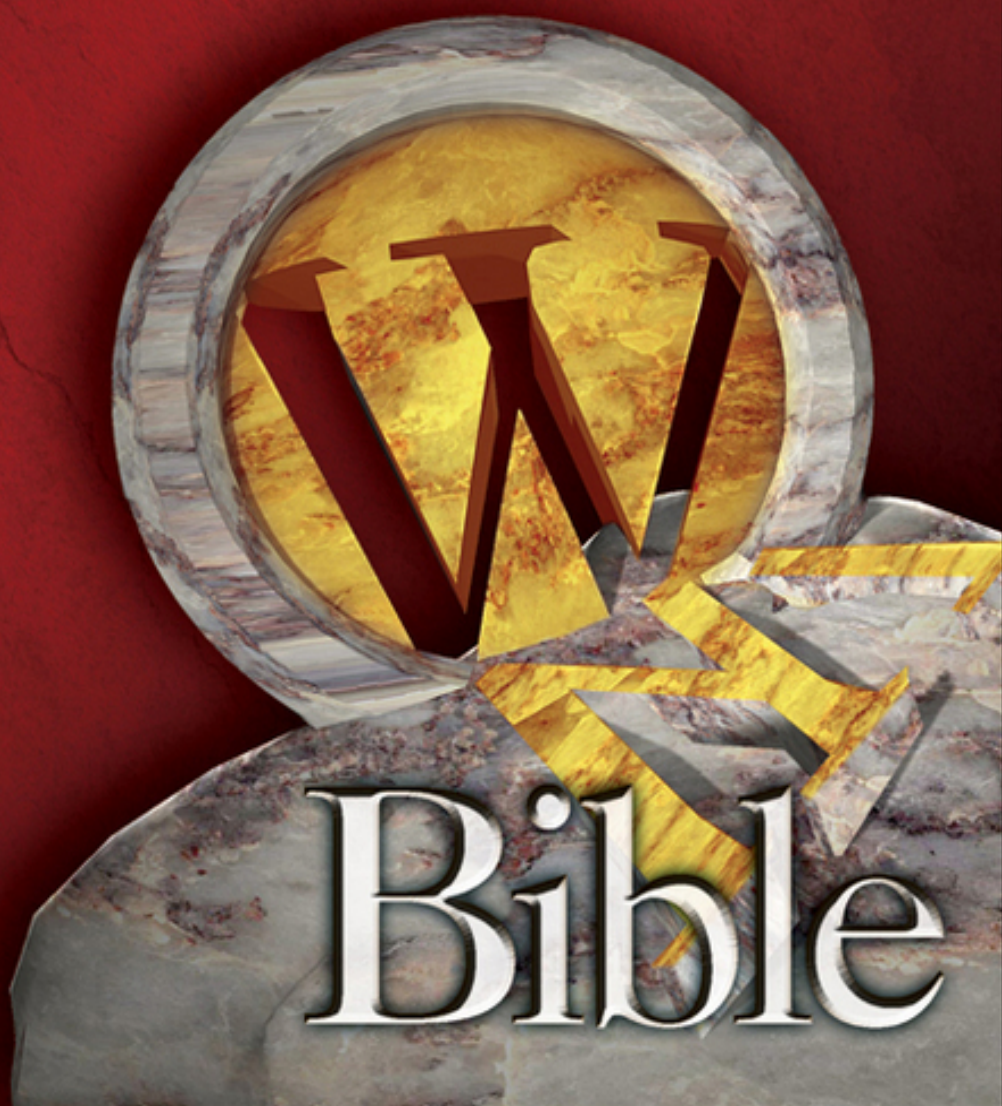
WordPress®

2nd Edition

Install, configure,
and manage WordPress

Turn a blog into a
social network

Create a dynamic,
full-fledged CMS



The book you need to succeed!

Companion Web Site

- Provides code files for all examples in the book

Aaron Brazell

Technical editing by Mark Jaquith,
leading WordPress core developer

WordPress®

2nd Edition

**Install, configure,
and manage WordPress**

**Turn a blog into a
social network**

**Create a dynamic,
full-fledged CMS**



The book you need to succeed!

WordPress[®] Bible, 2nd Edition

Table of Contents

[Part I: Getting Started with WordPress](#)

[Chapter 1: Learning About WordPress](#)

[A Brief History of WordPress](#)

[The creation of WordPress](#)

[The WordPress ecosystem emerges](#)

[The future of WordPress](#)

[Leveraging the WordPress Community](#)

[Support](#)

[Development](#)

[WordPress by the Numbers](#)

[Ten Things You Need to Know About WordPress](#)

[Generate content with an offline editor](#)

[Benefit from built-in SEO features](#)

[Widgetize your blog for a unique experience](#)

[Install themes, plugins, and core upgrades automatically](#)

[Turn your blog into a social network](#)

[Extend WordPress with plugins](#)

[Provide context with the WordPress taxonomies](#)

[Import your blog from any platform](#)

[Take advantage of multiple feeds](#)

[Make WordPress a full-fledged CMS with custom post types](#)

[Generate navigation menus on the fly with no coding required](#)

[Understanding Open Source and the General Public License](#)

[Summary](#)

[Chapter 2: Installing and Configuring WordPress](#)

[System Requirements](#)

[Choosing a Web Server](#)

[Apache](#)

[Lighttpd](#)

[Nginx](#)

[Internet Information Services](#)

[Optional modules](#)

[Installing WordPress](#)

[Configuring the database](#)

[Uploading your files](#)

[Summary](#)

[Chapter 3: WordPress, SEO, and Social Media Marketing](#)

[Understanding the Basics of Search Engine Optimization](#)

[Canonical URLs](#)

[The Meta tag boost](#)

[The All in One SEO plugin](#)

[Leveraging Social Networks to Extend Your Blog](#)

[Facebook](#)

[Twitter](#)

[Summary](#)

[Chapter 4: Finding Help in the WordPress Support System](#)

[Using the WordPress Codex](#)

[Staying in the Loop with Mailing Lists](#)

[wp-hackers](#)

[wp-testers](#)

[wp-docs](#)

[wp-xmlrpc](#)

[wp-polyglots](#)

[wp-svn](#)

[wp-trac](#)

[Finding Help in the WordPress Support Forums](#)

[Understanding the support forum layout](#)

[Posting in the support forums](#)

[Using IRC to Find Help](#)

[Quick Start for IRC](#)

[The WordPress IRC Rooms](#)

[Summary](#)

[Part II: Working with Plugins](#)

[Chapter 5: Extending WordPress with Plugins](#)

[Understanding WordPress Hooks](#)

[The anatomy of a hook](#)

[Theme hooks](#)

[Writing Your Own Plugin](#)

[Extending the WordPress Admin](#)

[Creating an admin interface](#)

[Adding an admin panel to the WordPress Admin navigation menu](#)

[Creating unique nonces for plugin form security](#)

[Processing data and interacting with the database](#)

[Loading JavaScript libraries](#)

[Creating new Dashboard widgets](#)

[Creating Events with Actions](#)

[Modifying Content with Filters](#)

[Using Multi-Argument Hooks](#)

[Working with Custom Post Types](#)

[Making WordPress a full-fledge CMS](#)

[Applying Custom Taxonomies](#)

[Localizing Plugins](#)

[Enabling plugin code for translation](#)

[Providing a textdomain for the plugin](#)

[Generating a POT file for translators](#)

[Summary](#)

[Chapter 6: Building Widgets and Navigation Menus](#)

[Using Widgets in WordPress](#)

[Building Widgets with the Widget API](#)

[Building a new widget plugin](#)

[Creating a control interface for the plugin](#)

[Saving configuration data](#)

[Putting it all together](#)

[Replacing existing widgets](#)

[Widgetizing Your Theme](#)

[Declaring sidebars](#)

[Integrating widgetized sidebars in themes](#)

[Building WordPress Navigation Menus](#)

[Exploring the navigation menu interface](#)

[Enabling a theme to use navigation menus](#)

[Registering navigation menu locations in a theme](#)

[Summary](#)

[Chapter 7: Understanding the WordPress Database Class](#)

[Examining the Schema and Properties of the Database Class](#)

[The database properties](#)

[Adding Data to MySQL with WordPress](#)

[Inserting new data into MySQL](#)

[Updating data in MySQL safely](#)

[Retrieving Data from MySQL with WordPress](#)

[Retrieving a single value from a table](#)

[Retrieving a column of data](#)

[Retrieving a row of data](#)

[Retrieving a full data set](#)

[Performing other queries](#)

[Preventing SQL Injection](#)

[Summary](#)

[Chapter 8: Dissecting the Loop and WP_Query](#)

[Defining the Loop](#)

[Wrangling the Loop with Plugins](#)

[Discovering query hooks](#)

[Altering the query with hooks](#)

[Developing Custom and Multiple Loops](#)

[Using query_posts\(\) and rewind_posts\(\)](#)

[Instantiating a new Loop with WP_Query](#)

[Using variables to alter the query](#)

[Examples of WP_Query in action](#)

[Analyzing the Twenty-Ten Loop](#)

[Child theming Twenty-Ten](#)

[Leveraging get_template_part\(\)](#)

[Using Loops Strategically](#)

[Summary](#)

[Part III: Working with Themes and Template Tags](#)

[Chapter 9: Using Free or Premium Themes](#)

[Understanding the User Experience](#)

[Typography](#)

[White space](#)

[Fixed or fluid width](#)

[Sidebars](#)

[Finding and Implementing Free Themes](#)

[Finding and Implementing Premium Themes](#)

[Exploring Free Theme Frameworks](#)

[Twenty-ten theme](#)

[Thematic framework](#)

[Comparing Premium Theme Frameworks](#)

[Builder Theme](#)

[Genesis Theme Framework](#)

[Summary](#)

[Chapter 10: Understanding the Template File Hierarchy](#)

[Looking at the Minimum Necessary Template Files](#)

[style.css](#)

[index.php](#)

[Understanding the Common Template Files](#)

[header.php](#)

[footer.php](#)

[sidebar.php](#)

[comments.php](#)

[single.php](#)

[archive.php](#)

[page.php](#)

[search.php](#)

[loop.php](#)

[functions.php](#)

[screenshot.png](#)

[Enhancing the User Experience with Template Files](#)

[attachment.php](#)

[image.php, video.php, audio.php, and application.php](#)

[author.php](#)

[loop-{type}.php](#)

[tag.php](#)

[tag-{slug}.php](#)

[category.php](#)

[category-{x}.php](#)

[date.php](#)

[year.php, month.php, day.php](#)

[home.php](#)

[404.php](#)

[Developing Custom Template Files](#)

[Taking Advantage of WordPress Theme Features](#)

[Post Thumbnails](#)

[Navigation Menus](#)

[Automatic Feed URLs](#)

[Custom Backgrounds](#)

[Custom Headers](#)

[Summary](#)

[Chapter 11: Adding JavaScript and CSS to Themes](#)

[Examining the jQuery and Prototype Frameworks](#)

[jQuery](#)

[Prototype](#)

[Comparing the frameworks](#)

[Leveraging WordPress' JavaScript Libraries](#)

[Prototype: script.aculo.us](#)

[Prototype: TinyMCE](#)

[jQuery: Autosave](#)

[jQuery: hoverIntent](#)

[jQuery: Farbtastic](#)

[jQuery: jQueryUI](#)

[Examining WordPress Plugins that Use JavaScript Effects](#)

[jQuery Reply to Comment](#)

[Social Bookmarks](#)

[WP Conditional Digg This Badge](#)

[WPTouch iPhone Theme](#)

[Looking at Theme Styles](#)

[Queuing styles](#)

[Using JavaScript to style elements](#)

[Summary](#)

[Chapter 12: Dissecting the Comment Loop, Template Tags, and Theme Best Practices](#)

[Using Hooks in Themes](#)

[Common hooks](#)

[Additional hook suggestions](#)

[Implementing Scripts in Themes](#)

[Using Template Tags to Make Themes Dynamic](#)

[Using bloginfo\(\) to access blog metadata](#)

[Modularizing themes with get_template_part\(\)](#)

[Using template tags in the Loop](#)

[Using Loop template tags outside the Loop](#)

[Creating Conversations with Threaded Comments and Paged Comments](#)

[Personalizing the Reader Experience with Avatars](#)

[Summary](#)

[Part IV: Creating Content](#)

Chapter 13: Navigating the Content Production Experience

[Customizing Your Workspace](#)

[Leveraging the Elements of Content Creation](#)

[Using the title strategically](#)

[Designating an excerpt](#)

[Enhancing searchability of content](#)

[Looking at categories and tags: What's the difference?](#)

[Publishing and scheduling posts](#)

[Using custom fields](#)

[Hacking Your Experience: Getting the Most Out of Writing](#)

[Using the visual text editor](#)

[Using Full Screen mode](#)

[Using the Press This bookmarklet](#)

[Summary](#)

Chapter 14: Using Offline Editors

[What Is XML-RPC?](#)

[WordPress-supported remote protocols](#)

[The bundled XML-RPC library](#)

[AtomPub and the upcoming standard of remote management](#)

[Understanding XML-RPC Security Risks](#)

[Looking at Offline Blog Editors](#)

[Windows Live Writer \(Windows\)](#)

[BlogDesk \(Windows\)](#)

[MarsEdit \(Mac\)](#)

[Ecto \(Mac\)](#)

[Drivel \(Linux\)](#)

[ScribeFire \(All\)](#)

[Summary](#)

[Part V: Keeping Up with the Joneses: Maintenance and Upgrades](#)

[Chapter 15: Performing Automatic Upgrades](#)

[Meeting the Minimum Automatic Upgrade Requirements](#)

[Disabling the “Upgrade Nag”](#)

[Performing Automatic Upgrades](#)

[Using SSH for Automatic Upgrades](#)

[Using SSH with keys](#)

[Using constants to bypass credentials](#)

[Summary](#)

[Chapter 16: Moving to WordPress and Backing It Up](#)

[Moving a Blog to WordPress](#)

[Blogger](#)

[Blogware](#)

[DotClear](#)

[LiveJournal](#)

[Movable Type and TypePad](#)

[WordPress](#)

[Importing Tags into WordPress](#)

[Converting categories to tags](#)

[Looking at Backup Routines](#)

[File backups](#)

[MySQL backups](#)

[Backup scripting](#)

[Summary](#)

[Chapter 17: WordPress Maintenance and Security](#)

[Upgrading WordPress](#)

[Upgrading manually with FTP](#)

[Debugging problems with FTP upgrades](#)

[Choosing an FTP Client](#)

[Windows FTP clients](#)

[Mac OS X FTP clients](#)

[Practicing Sound WordPress Security](#)

[Data sanitization](#)

[File permissions](#)

[Summary](#)

[Chapter 18: Caching Strategy to Ensure WordPress Scales](#)

[Understanding Caching](#)

[Using WordPress Caching Mechanisms](#)

[WordPress object cache](#)

[The WP Super Cache plugin](#)

[Memcached and the Batcache plugin](#)

[Optimizing PHP with Opcode Caching](#)

[eAccelerator](#)

[APC](#)

[Caching MySQL with HyperDB and the Query Cache](#)

[MySQL query cache](#)

[HyperDB](#)

[Harnessing the “Cloud”](#)

[Summary](#)

[Chapter 19: Understanding WordPress Roles and Capabilities](#)

[Looking at WordPress Roles and Capabilities](#)

[User levels](#)

[Adding and removing custom capabilities](#)

[Checking capabilities in plugins](#)

[Using the Role Manager Plugin](#)

[Summary](#)

[Part VI: Alternate Uses for WordPress](#)

[Chapter 20: Using WordPress for Alternative Blogging](#)

[Photoblogging with WordPress](#)

[What is a Photoblog?](#)

[Examples of notable photoblogs](#)

[Great WordPress photoblog themes](#)

[Using EXIF data in a photoblog](#)

[Implementing a Twitter-style Blog](#)

[Using Press This for a Tumble Blog](#)

[Summary](#)

[Chapter 21: WordPress as a Content Management System](#)

[Using WordPress as a Content Management System](#)

[Custom Post Types](#)
[Custom Taxonomies](#)
[Custom Post Formats](#)
[Understanding Enterprise WordPress Needs](#)
[Single sign-on authentication](#)
[Lead generation and CRM integration](#)
[WordPress support](#)
[Conveying a Consistent Message and Brand](#)
[Understanding When a Blog is Not a Blog](#)
[Summary](#)

[Part VII: Looking at the WordPress Ecosystem](#)

[Chapter 22: Leveraging WordPress Multisite Functionality](#)

[Installing and Configuring WordPress Multisite](#)

[Setting Up WordPress Multisite](#)

[WordPress Multisite System Configurations](#)

[Managing WordPress Multisite](#)

[Sites panel](#)

[Users panel](#)

[Themes panel](#)

[Plugins panel](#)

[Settings panel](#)

[Updates panel](#)

[Understanding WordPress Multisite Plugin Nuances](#)

[Blog ID](#)

[WordPress Multisite database schema](#)

[Adapting to WordPress Multisite](#)

[Activating plugins network wide](#)

[Constructing image permalinks](#)

[Using WordPress Multisite with different domains](#)

[Summary](#)

[Chapter 23: Adding User Forums with bbPress](#)

[Installing bbPress](#)

[Finding bbPress Plugins](#)

[Understanding the bbPress Theme System](#)

[Summary](#)

[Chapter 24: Creating Your Own Social Network with BuddyPress](#)

[What Is BuddyPress?](#)

[Activity Stream](#)

[Blog tracking](#)

[bbPress integration](#)

[Friends](#)

[Groups](#)

[Private Messaging](#)

[Extended Profile](#)

[Configuring BuddyPress](#)

[General Settings](#)

[Component Setup](#)

[Forums Setup](#)

[Profile Field Setup](#)

[Comparing BuddyPress and WordPress Development](#)

[Looking at BuddyPress Theme Concepts](#)

[Extending BuddyPress](#)

[Summary](#)

[Chapter 25: Using BackPress as a Development Framework](#)

[Defining BackPress](#)

[Developing with BackPress](#)

[Including BackPress in your PHP project](#)

[Understanding the BackPress facilities](#)

[Solving BackPress Dependencies](#)

[Summary](#)

[Chapter 26: WordPress.com and the Automattic Products](#)

[About Automattic](#)

[After the Deadline](#)

[Akismet](#)

[Gravatar](#)

[IntenseDebate](#)

[P2 Theme](#)

[Plinky](#)

[PollDaddy](#)

[VaultPress](#)

[VideoPress](#)

[VIP Hosting](#)

[Taking a Look at Automattic's Open Source Footprint](#)

[WordPress](#)

[BuddyPress](#)

[bbPress](#)

[BackPress](#)

[WordPress app for iOS](#)

[WordPress app for Android](#)

[WordPress app for BlackBerry](#)

[Using WordPress.com Themes](#)

[Getting Your Plugin Included in WordPress.com](#)

[Buying Premium WordPress.com Features](#)

[Custom CSS](#)

[Disk space upgrades](#)

[Domain mapping](#)

[No-ads](#)

[Unlimited Private Users](#)

[VideoPress](#)

[Summary](#)

[Chapter 27: Leveraging Automattic Products](#)

[Obtaining a WordPress.com API Key](#)

[Using Akismet to Kill Spam](#)

[Verify Key](#)

[Comment Checking](#)

[Submit Spam](#)

[Submit Ham](#)

[Making Use of WordPress.com Stats](#)

[Engaging Readers with IntenseDebate](#)

[Crowdsourcing with PollDaddy](#)

[Summary](#)

[Part VIII: Appendixes](#)

[Appendix 1: WordPress Hook Reference](#)

[Appendix 2: Template Tags](#)

[Include tags](#)

[Blog Info tags](#)

[Lists and dropdowns](#)

[Login/Logout tags](#)

[Post tags](#)

[Comments tags](#)

[Category tags](#)

[Tag/Taxonomy tags](#)

[Author tags](#)

[Date and Time tags](#)

[Edit links](#)

[Permalink tags](#)

[Links tags](#)

[Trackback tags](#)

[Title tags](#)

[Post Thumbnails](#)

[Appendix 3: WordPress Hosting](#)

[Disk space](#)

[Bandwidth provision](#)

[Backups](#)

[Secure Shell](#)

[Dedicated servers](#)

[WordPress-optimized Hosting](#)

[Shared hosting](#)

[Green Web hosting](#)

[Appendix 4: WordPress Vendors and Professional Services](#)

[Covered Web Services](#)

[Crowd Favorite](#)

[E.Webscapes](#)

[Yoast](#)

[WebDevStudios](#)

[Appendix 5: WordPress in Government](#)

[Government case studies](#)

[United Kingdom: 10 Downing Street](#)

[South Africa: Province of the Eastern Cape](#)

[Appendix 6: WordPress in Major Media](#)

[WordPress MU Sitewide Tags](#)

[BuddyPress](#)

[RSSCloud](#)

[Appendix 7: The General Public License](#)

[TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION](#)

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

NO WARRANTY

WordPress® Bible, 2nd Edition

Aaron Brazell



Wiley Publishing, Inc.

WordPress® Bible, 2nd Edition

Published by
Wiley Publishing, Inc.
10475 Crosspoint Boulevard
Indianapolis, IN 46256
www.wiley.com

Copyright © 2011 by Wiley Publishing, Inc.,
Indianapolis, Indiana

Published by Wiley Publishing, Inc., Indianapolis,
Indiana

Published simultaneously in Canada

ISBN: 978-0-470-93781-5

Manufactured in the United States of America

10 9 8 7 6 5 4 3 2 1

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as permitted under Sections 107 or 108 of the 1976 United States Copyright Act, without either the prior written permission of the Publisher, or authorization through payment of the appropriate per-copy fee to the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, (978) 750-8400, fax (978) 646-8600. Requests to the Publisher for permission should be addressed to the Permissions Department, John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030, 201-748-6011, fax 201-748-6008, or online at <http://www.wiley.com/go/permissions>.

Limit of Liability/Disclaimer of Warranty: The publisher and the author make no representations or warranties with respect to the accuracy or completeness of the contents of this work and specifically disclaim all warranties, including without limitation warranties of fitness for a particular purpose. No warranty may be created or extended by sales or promotional materials. The advice and strategies contained herein may not be suitable for every situation. This work is sold with the understanding that the publisher is not engaged in rendering legal, accounting, or other professional services. If professional assistance is required, the services of a competent professional person should be sought.

Neither the publisher nor the author shall be liable for damages arising herefrom. The fact that an organization or Website is referred to in this work as a citation and/or a potential source of further information does not mean that the author or the publisher endorses the information the organization or Website may provide or recommendations it may make. Further, readers should be aware that Internet Websites listed in this work may have changed or disappeared between when this work was written and when it is read.

For general information on our other products and services or to obtain technical support, please contact our Customer Care Department within the U.S. at (877) 762-2974, outside the U.S. at (317) 572-3993 or fax (317) 572-4002.

Library of Congress Control Number: 2011924123

Trademarks: Wiley, the Wiley logo, and related trade dress are trademarks or registered trademarks of John Wiley & Sons, Inc. and/or its affiliates, in the United States and other countries, and may not be used without written permission. WordPress is a registered trademark of Automattic, Inc. All other trademarks are the property of their respective owners. Wiley Publishing, Inc. is not associated with any product or vendor mentioned in this book.

Wiley also publishes its books in a variety of electronic formats. Some content that appears in print may not be available in electronic books.

About the Author

Aaron Brazell is a Co-Founder at WP Engine, an Austin, Texas-based startup built to meet the technical needs of WordPress bloggers. He is a WordPress core contributor and has been an active member of the WordPress community since 2004 as a developer, user, and consultant.

He is a frequent public speaker, engaging with the WordPress community at WordCamps around the United States, as well as at marketing, social media, and other industry events. He has organized WordCamp Mid-Atlantic, a WordPress community conference catering to the Greater Capital region, which includes Maryland, D.C., Delaware, and Northern Virginia. He believes in challenging conventional thinking and assumptions, and as a result, often takes actions that are provocative, strategic, and unconventional in an effort to move dialogue and popular opinion forward.

In addition to his work with WordPress and social media, Aaron is an avid photographer and sports fan (his favorite teams are the Boston Red Sox and Baltimore Ravens), and has one son, Devin Michael. He currently lives in Austin, Texas.

Dedication

To Devin, my only son, for giving me something to think about even when I don't realize I need to be thinking

about it.

Credits

Senior Acquisitions Editor

Stephanie McComb

Executive Editor

Jody Lefevere

Project Editor

Beth Taylor

Technical Editor

Mark Jaquith

Copy Editor

Beth Taylor

Editorial Director

Robyn Siesky

Editorial Manager

Rosemarie Graham

Business Manager

Amy Knies

Senior Marketing Manager

Sandy Smith

Vice President and Executive Group Publisher

Richard Swadley

Vice President and Executive Publisher

Barry Pruett

Project Coordinator

Sheree Montgomery

Graphics and Production Specialists

Melanee Habig Ronald G. Terry

Quality Control Technician

Melissa Cossell

Proofreading

Evelyn Wellborn

Indexing

BIM Indexing & Proofreading Services

Media Development Project Manager

Laura Moss

Media Development Assistant Project Manager

Jenny Swisher

Media Development Associate Producers

Josh Frank

Shawn Patrick

Doug Kuhn

Marilyn Hummel

Foreword

When Aaron first mentioned he was writing the WordPress Bible, I immediately offered him a hand in editing. I figured it was a safe bet. After all, I'm a PHP guy with five years of Drupal experience and zero years of WordPress. In fact, my only involvement with WordPress was attending WordCamp Mid-Atlantic; I'd never even installed it before. I had to open my mouth. . .

.

Fast-forward a couple months and suddenly chapter after chapter fill my inbox. So I started digging into this alien environment from two different perspectives: first, from the community perspective and second, from a developer's perspective.

For open source projects, the community is important to understand. Not only do you need to know how to get involved, but also you also need to know how healthy it is. Is this project going to be active a month or year from now? Therefore, I started reading with the intent to learn about the WordPress community. I wanted to know its motivations, how it interacted, how decisions were made, and how information flows within, into, and out of the team. Delving into the community and help chapters, I learned quite a bit. I found myself dropping into IRC, exploring a mailing list or two, and hitting WordPress forums to see how new voices were welcomed. To be honest, I appreciated the perspective and guidance from someone who “gets it.”

Secondly, one of the joys of open source is looking at things from a developer's perspective. Unfortunately, many open source projects are a pile of messy code with horrible documentation, and you'll find yourself huddled under a desk crying pitifully in under 15 minutes. With WordPress, I didn't have that experience. Sure, there were times when something didn't make sense at first pass, but I kept digging. I asked some harsh questions related to PHP 5 and object-oriented principles and coding standards and APIs and a variety of other things. Each response — even those which I disagreed with — was well-reasoned and internally consistent. More important, the documentation and explanations supporting the system were amazing and provided numerous great examples. In fact, the underlying concepts were useful enough that I've duplicated a few in one of my projects.

All that said, I enjoyed the book, I enjoyed exploring a new community and system, and I appreciated having Aaron as a guide.