

CSS Mastery

Advanced Web Standards Solutions

Andy Budd
with Cameron Moll
and Simon Collison



CSS Mastery: Advanced Web Standards Solutions

Copyright © 2006 by Andy Budd, Cameron Moll, and Simon Collison

All rights reserved. No part of this work may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage or retrieval system, without the prior written permission of the copyright owner and the publisher.

ISBN-13 (pbk): 978-1-59059-614-2

ISBN-10 (pbk): 1-59059-614-5

Printed and bound in the United States of America 9 8 7 6 5 4 3 2 1

Trademarked names may appear in this book. Rather than use a trademark symbol with every occurrence of a trademarked name, we use the names only in an editorial fashion and to the benefit of the trademark owner, with no intention of infringement of the trademark.

Distributed to the book trade worldwide by Springer-Verlag New York, Inc.,
233 Spring Street, 6th Floor, New York, NY 10013. Phone 1-800-SPRINGER, fax 201-348-4505,
e-mail orders-ny@springer-sbm.com, or visit www.springeronline.com.

For information on translations, please contact Apress directly at 2560 Ninth Street, Suite 219, Berkeley, CA 94710.
Phone 510-549-5930, fax 510-549-5939, e-mail info@apress.com, or visit www.apress.com.

The information in this book is distributed on an “as is” basis, without warranty. Although every precaution has been taken in the preparation of this work, neither the author(s) nor Apress shall have any liability to any person or entity with respect to any loss or damage caused or alleged to be caused directly or indirectly by the information contained in this work.

The source code for this book is freely available to readers at www.friendsofed.com in the Downloads section.

Product numbers for the images used in Tuscany Luxury Resorts are as follows:
FAN1003579, FAN1003613, FAN1006983, and DVP0703035.

Credits

Lead Editor Chris Mills	Copy Editor Liz Welch
Technical Reviewer Molly Holzschlag	Assistant Production Director Kari Brooks-Copony
Editorial Board Steve Anglin Dan Appleman Ewan Buckingham Gary Cornell Jason Gilmore Jonathan Hassell Chris Mills Dominic Shakeshaft Jim Sumser	Production Editor Kelly Winquist Compositor and Artist Diana Van Winkle, Van Winkle Design Proofreader April Eddy Indexer John Collin
Project Manager Denise Santoro Lincoln	Interior and Cover Designer Kurt Krames
Copy Edit Manager Nicole LeClerc	Manufacturing Director Tom Debolski

CONTENTS

Foreword	xiii
About the Authors	xv
About the Technical Reviewer	xvii
Acknowledgments	xix
Introduction	xxi
Chapter 1: Setting the Foundations	1
Structuring your code	2
Use meaningful markup	3
IDs and class names	5
Divs and spans	7
Document types, DOCTYPE switching, and browser modes	8
Validation	9
Browser modes	10
DOCTYPE switching	10
Getting your styles to hit the target	11
Common selectors	11
Pseudo-classes	12
The universal selector	13
Advanced selectors	13
Child and adjacent sibling selectors	14
Attribute selectors	14
The cascade and specificity	16
Specificity	16
Using specificity in your stylesheets	17
Adding a class or an ID to the body tag	18
Inheritance	18
Planning, organizing, and maintaining your stylesheets	19
Applying styles to your document	19
Commenting your code	21
Adding structural comments	21
Note to self	22
Removing comments and optimizing your stylesheets	23
Style guides	23
Organizing your stylesheets for easy maintenance	24
Summary	25

CONTENTS

Chapter 2: Visual Formatting Model Recap	27
Box model recap	28
IE/Win and the box model	30
Margin collapsing	31
Positioning recap	33
The visual formatting model	33
Relative positioning	34
Absolute positioning	35
Fixed positioning	36
Floating	37
Line boxes and clearing	38
Summary	42
Chapter 3: Background Images and Image Replacement	43
Background image basics	44
Rounded-corner boxes	46
Fixed-width rounded-corner boxes	47
Flexible rounded-corner box	49
Mountaintop corners	52
Drop shadows	53
Easy CSS drop shadows	54
Drop shadows a la Clagnut	57
Fuzzy shadows	57
Onion skinned drop shadows	61
Image replacement	63
Fahrner Image Replacement (FIR)	64
Phark	64
Gilder/Levin method	65
Inman Flash Replacement (IFR) and Scalable Inman Flash Replacement (sIFR)	66
Summary	67
Chapter 4: Styling Links	69
Simple link styling	70
Fun with underlines	71
Fancy link underlines	72
Highlighting different types of link	73
Highlighting downloadable documents and feeds	75
Creating buttons and rollovers	76
Simple rollovers	77
Rollovers with images	78
Pixy-style rollovers	78
Visited-link styles	80
Pure CSS tooltips	81
Summary	83

Chapter 5: Styling Lists and Creating Nav Bars	85
Basic list styling	86
Creating a vertical nav bar	87
Highlighting the current page in a nav bar	90
Creating a horizontal nav bar	91
Simplified “sliding doors” tabbed navigation	93
CSS image maps	96
flickr-style image maps	99
Remote rollovers	104
A short note about definition lists	108
Summary	109
Chapter 6: Styling Forms and Data Tables	111
Styling data tables	112
Table-specific elements	114
summary and caption	114
thead, tbody, and tfoot	114
col and colgroups	115
Data table markup	115
Styling the table	116
Adding the visual style	117
Added extras	118
Simple form layout	119
Useful form elements	119
Form labels	120
The basic layout	120
Other elements	122
Embellishments	124
Required fields	125
Complicated form layout	125
Accessible date input	126
Multicolumn check boxes	128
Form feedback	130
Summary	132
Chapter 7: Layout	133
Centering a design	134
Centering a design using auto margins	134
Centering a design using positioning and negative margins	136
Float-based layouts	137
Two-column floated layout	137
Three-column floated layout	140
Fixed-width, liquid, and elastic layout	141
Liquid layouts	142
Elastic layouts	144
Elastic-liquid hybrid	146
Liquid and elastic images	147

CONTENTS

Faux columns	149
Summary	152
Chapter 8: Hacks and Filters	153
An introduction to hacks and filters	154
A warning about hacks and filters	154
Using hacks sensibly	155
Filtering separate stylesheets	156
Internet Explorer conditional comments	157
Band pass filters	158
Filtering individual rules and declarations	160
The child selector hack	160
Attribute selector hack	160
The star HTML hack	162
IE/Mac commented backslash hack	162
The escaped property hack	163
Tantek's box model hack	163
The modified simplified box model hack	164
The !important and underscore hacks	164
The Owen hack	165
Summary	166
Chapter 9: Bugs and Bug Fixing	167
Bug hunting	168
Common CSS problems	168
Problems with specificity and sort order	169
Problems with margin collapsing	170
Bug hunting basics	171
Isolate the problem	173
Creating a minimal test case	174
Fix the problem, not the symptoms	174
Ask for help	174
Having "layout"	175
What is "layout"?	175
What effect does layout have?	176
Common bugs and their fixes	177
Double-margin float bug	178
Three-pixel text jog bug	178
IE 6 duplicate character bug	181
IE 6 peek-a-boo bug	182
Absolute positioning in a relative container	182
Stop picking on Internet Explorer	183
Summary	184

Case Study 1: More Than Doodles	185
About this case study	186
Controlling content area with descendant selectors	188
The XHTML	188
A note about naming conventions	189
Three-column layout	189
Two-column layout	190
One-column layout	191
Removing unwanted columns	192
Floating the columns	193
The calculations	194
Floating the columns in the right place	195
Highlighting the current page based on the body class	196
Drop-in boxes for columns	198
Right-angled or rounded corners—you decide	199
Flat, right-angled corners	199
So, let's prepare for something special	200
Transparent custom corners and borders	201
The images	202
The CSS	202
Combining classes for targeted actions	204
Image classes and exceptions	206
Default images	206
Owned images	207
Larger images	207
Dealing with links	210
Understanding the sidebar links	210
Checked-off visited links	210
LAHV, not LVHA	212
Highlighting external links	213
Floated drop shadows (gallery)	214
Casting the shadows	214
Floating the images	215
Summary	216
Case Study 2: Tuscany Luxury Resorts	217
About this case study	218
The fluid layout	219
Body and container	221
Masthead	221
Content and sidebar	222
Fluid properties	224
Footer	225
Resolving fluid layout issues	225

CONTENTS

Aligning elements using absolute positioning	226
Location properties (top, bottom, left, right)	227
Stacking order (z-index)	229
Background image techniques	230
Dividing the top in three	231
“Bulletproofing” a background	232
Image replacement	234
Logo image replacement	235
Initial cap image replacement	236
Fluid imagery	237
Coding a fluid image	238
Using a single list item for multiple elements	240
Coding the menu	240
Summary	244
Index.	245

FOREWORD

In our wonderful world of web design, there are 3,647 ways to accomplish the same goal. Approximately. And that absurdly fictitious number is increasing every day. Instead of one, correct way of solving a particular problem, we're both blessed and cursed by the abundant choices we have as web designers. It's these choices that make designing for the Web fun and interesting, while at the same time overwhelming. *CSS Mastery* will help cure that *overwhelmingitis* (a word that I've just invented).

Andy Budd has been writing, designing, and speaking about standards-based web design for years, and we're now lucky to see his clear, easy-to-follow way of teaching essential CSS techniques compiled in this very book. The result is a card catalog of indispensable solutions, tricks, and tips that a web professional such as yourself should not be without.

I've always frowned on publications that suggest a *single*, correct way of accomplishing a goal, and Andy does the complete opposite, offering multiple methods for tasks such as styling links, creating tabbed navigation, or creating columned layouts (to name but a few). Armed with these popular and stylish approaches to common design elements, you'll be better prepared to make your own *informed* decisions.

And as if that wasn't enough, Andy's gone ahead and enlisted the help of two imitable designers to help pull all the pieces together, showing how these essential techniques can work *together*. I've long been a fan of Cameron's and Simon's work, and to see two great case studies covering fluid, bulletproof designs as well as flexible style solutions, respectively... well, that's just a gigantic bonus.

So dig in and start chipping away at those 3,647 ways to master your CSS.

Dan Cederholm
Salem, Massachusetts
Author, Web Standards Solutions

ABOUT THE AUTHORS



Andy Budd is a user experience designer and web standards developer living and working in Brighton, England. As the creative director of web design consultancy Clearleft (www.clearleft.com), Andy enjoys building attractive, accessible, and standards-compliant websites. His online home can be found at www.andybudd.com, where he writes about modern web design practices.

Andy is a regular speaker at international design conferences, workshops, and training events, and organized the UK's first web 2.0 conference (www.dconstruct.org). Passionate about the quality of education in the industry, Andy runs SkillSwap (www.skillswap.org), a free community training and networking project. Andy also helped set up the Web Standards Awards (www.webstandardsawards.com), a project that aims to recognize websites for their use of web standards.

When he's not building websites, Andy is a keen travel photographer. Never happier than when he's diving some remote tropical atoll, Andy is also a qualified PADI dive instructor and retired shark wrangler.

ABOUT THE AUTHORS



Cameron Moll, recognized as one of the industry's most balanced new media designers, is proficient in functional web design, elegant interfaces, and clean markup. Cameron has been involved in the design and redesign of scores of websites, and his influential techniques have found favor in circles across the Web. A marketing background and a keen eye for design lead him to merge form and function in the form of compelling visual experiences.

Cameron's work has been recognized by respected organizations and notable individuals such as National Public Radio (NPR), Communication Arts, and Veer. His personal site, CameronMoll.com, delivers design how-tos in the form of engaging conversation, on-topic banter, and downloadable artwork source files.



Simon Collison is Lead Web Developer at Agenzia (www.agenzia.co.uk), and has worked on numerous web projects for record labels, high-profile recording artists, and leading visual artists and illustrators, including The Libertines, Black Convoy, and Project Facade. Simon also oversees a production line of business, community, and voluntary sector websites, and passionately ensures everything he builds is accessible and usable, and complies with current web standards. Simon regularly reviews CSS-based websites for Stylegala, and does his best to keep his highly popular blog (www.collylogic.com) updated with noise about web standards, music, film, travels, and more web standards.

On those rare occasions away from the computer, Simon can be found in the pub, or trying to con free gig tickets out of his clients. A little too obsessed with music, he is very likely to bore you with his latest musical Top 100, or give you a potted history of the UK indie scene from 1979 to the present day. Simon has lived in many cities, including London and Reykjavik, but now lives happily in Nottingham with Emma and a cat called Ziggy.

ABOUT THE TECHNICAL REVIEWER

Molly E. Holzschlag is a well-known Web standards advocate, instructor, and author. A popular and colorful individual, she is Group Lead for the Web Standards Project (WaSP) and an invited expert to the GEO working group at the World Wide Web Consortium (W3C). Among her 30-plus books is the recent *The Zen of CSS Design*, coauthored with Dave Shea. The book artfully showcases the most progressive csszengarden.com designs. You can catch up with Molly's blog at—where else?—<http://molly.com/>.

ACKNOWLEDGMENTS

Andy Budd

Thanks to everybody who helped make this book possible, both directly and indirectly.

To Chris for guiding me through the writing process and helping turn my ideas into reality. And to everybody at Apress who worked tirelessly to get this book published on time. Your dedication and professionalism is much appreciated.

To my friends and colleagues at Clearleft (www.clearleft.com), Jeremy Keith (www.adactio.com) and Richard Rutter (www.clagnut.com), for providing encouragement and feedback throughout the book-writing process.

To Molly E. Holzschlag for lending your experience and breadth of knowledge to this book. Your support and guidance was invaluable, and I still don't know where you manage to find the time.

To Jamie Freeman and Jo Acres for providing the perfect environment in which to develop my skills. I'll pop around for tea and doughnuts soon. Thanks also to the Brighton web development community at large, and especially everybody on the BNM and SkillSwap mailing lists.

To all my colleagues who continue to share their wealth of knowledge in order to make the Web a better place. This book would not have been possible without the previous work of the following people, to name but a few: Cameron Adams, John Allsopp, Nathan Barley, Holly Bergevin, Douglas Bowman, The BritPack, Dan Cederholm, Tantek Çelik, Joe Clark, Andy Clarke, Simon Collison, Mike Davidson, Garrett Dimon, Derek Featherstone, Nick Fink, Patrick Griffiths, Jon Hicks, Shaun Inman, Roger Johansson, Ian Lloyd, Ethan Marcotte, Drew McLellan, Eric Meyer, Cameron Moll, Dunstan Orchard, Veerle Pieters, D. Keith Robinson, Jason Andrew Andrew Santa Maria,, Dave Shea, Ryan Sims, Virtual Stan, Jeffrey Veen, Russ Weakley, Simon Willison, and Jeffrey Zeldman.

To all the readers of my blog and everybody I've met at conferences, workshops, and training events over the last year. Your discussions and ideas helped fuel the content of this book.

Big thanks to Mel, for proofreading each chapter and putting up with me over the last 9 months.

And lastly, thanks to you for reading. I hope this book helps you take your CSS skills to the next level.

ACKNOWLEDGMENTS

Cameron Moll

I'd like to give gratitude to all the contributors to my case study. A big nod goes to Ryan Parman, whose TIMEDATE script was used to generate the day/month stamp in the upper-right corner of the Tuscany layout. Download a copy of his script here: www.skyzyx.com/scripts/.

And endless thanks to Veer for providing the gorgeous images used in this layout. Without their help, Tuscany Luxury Resorts may have otherwise been visually drab. Somehow, without fail, Veer always delivers unique, phenomenal visual elements—photography, type, merchandise, and more—that are far from commonplace. Access their collections here: www.veer.com/.

Simon Collison

I must thank the incredible Jon Burgerman (www.jonburgerman.com), Richard May (www.richard-may.com), and all my other Black Convoy (www.blackconvoy.com) friends for allowing me to use their images and names, and generally skim the cream off their talent for this case study. Huge thanks also to the cool Swede Roger Johansson (www.456bereastreet.com) for allowing me to use his rounded corners and for buying me a drink last summer. The More Than Doodles design was built quickly and efficiently thanks to the inspired templating system within the ExpressionEngine (www.expressionengine.com) publishing platform—a tool I could not live without. Finally, thanks to the Agenzia (www.agenzia.co.uk) boys for turning a blind eye to my fevered book writing of late. Much appreciated all around.

INTRODUCTION

There are an increasing number of CSS resources around, yet you only have to look at a CSS mailing list to see the same questions popping up time and again. “How do I center a design?” “What is the best rounded-corner box technique?” “How do I create a three-column layout?” If you follow the CSS design community, it is usually a case of remembering which website a particular article or technique is featured on. However, if you are relatively new to CSS, or don’t have the time to read all the blogs, this information can be hard to track down.

Even people who are skilled at CSS run into problems with some of the more obscure aspects of CSS such as the positioning model or specificity. This is because most CSS developers are self-taught, picking up tricks from articles and other people’s code without fully understanding the spec. And is it any wonder, as the CSS specification is complex and often contradictory, written for browser manufacturers rather than web developers?

Then there are the browsers to contend with. Browser bugs and inconsistencies are one of the biggest problems for the modern CSS developer. Unfortunately, many of these bugs are poorly documented and their fixes verge on the side of folk law. You know that you have to do something a certain way or it will break in one browser or another. You just can’t remember which browser or how it breaks.

So the idea for a book formed. A book that brings together the most useful CSS techniques in one place, that focuses on real-world browser issues and that helps plug common gaps in people’s CSS knowledge. A book that will help you jump the learning curve and have you coding like a CSS expert in no time flat.

Who is this book for?

CSS Mastery is aimed at anybody with a basic knowledge of (X)HTML and CSS. If you have just recently dipped your toes into the world of CSS design, or if you’ve been developing pure CSS sites for years, there will be something in this book for you. However, you will get the most out of this book if you have been using CSS for a while but don’t consider yourself a master just yet. This book is packed full of practical, real-world advice and examples, to help you master modern CSS design.

How is this book structured?

This book eases you in gently, with two chapters on basic CSS concepts and best practices. You will learn how to structure and comment your code, the ins-and-outs of the CSS positioning model, and how floating and clearing really works. You may know a lot of this already, but you will probably find bits you've missed or not understood fully. As such, the first two chapters act as a great CSS primer as well as a recap on what you already know.

With the basics out of the way, the next five chapters cover core CSS techniques such as image, link, and list manipulation; form and data-table design; and pure CSS layout. Each chapter starts simply and then works up to progressively more complicated examples. In these chapters you will learn how to create rounded-corner boxes, images with transparent drop shadows, tabbed navigation bars, and flickr-style rollovers. If you want to follow along with the examples in this book, all the code examples can be downloaded from www.friendsofed.com.

Browser bugs are the bane of many a CSS developer, so all the examples in this book focus on creating techniques that work across browsers. What's more, this book has two whole chapters devoted to hacks, filters, bugs, and bug fixing. In these chapters you will learn about some of the most common filters, when to use them, and when not to use them. You will also learn about bug-hunting techniques and how to spot and fix common bugs before they start causing problems. You will even learn what really causes many of Microsoft Internet Explorer's seemingly random CSS bugs.

The last two chapters are the *piece de resistance*. Simon Collison and Cameron Moll, two of the best CSS designers around, have combined all of these techniques into two fantastic case studies. So you learn not only how these techniques work, but also how to put them into practice on a real-life web project.

This book can be read from cover to cover, or kept by your computer as a reference of modern tips, tricks, and techniques. The choice is up to you.

Conventions used in this book

This book uses a couple of conventions that are worth noting. The following terms are used throughout this book:

- (X)HTML refers to both the HTML and XHTML languages.
- Unless otherwise stated, CSS relates to the CSS 2.1 specification.
- IE 5.x/Win means Internet Explorer versions 5.0 and 5.5 for Windows.
- IE 6 and below on Windows refers to Internet Explorer 5.0 to 6.0 on Windows.

It is assumed that all the (X)HTML examples in this book are nested in the `<body>` of a valid document, while the CSS is contained in the `<head>` of the document for convenience. Occasionally, (X)HTML and CSS have been placed in the same code example for brevity. However, in a real document, these items need to go in their respective places to function correctly.

```
p {color: red;}
```

```
<p>I'm red</p>
```

Lastly, for (X)HTML examples that contain repeating data, rather than writing out every line, the ellipse character (...) is used to denote code continuation:

```
<ul>  
<li>Red</li>  
<li>Yellow</li>  
<li>Pink</li>  
<li>Green</li>  
...  
</ul>
```

So, with the formalities out of the way, let's get started.