Second Edition

The Art of
SEO

Mastering Search Engine Optimization

Eric Enge
Stephan Spencer
Jessie Stricchiola
Rand Fishkin
Foreword by John Battelle

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The Art of SEO

"Hype-free, data-rich and loaded with insight that's essential reading for anyone who needs a deep understanding of SEO."
—Seth Godin, author, *We Are All Weird*

"SEO expertise is a core need for today's online businesses. Written by some of the top SEO practitioners out there, this book can teach you what you need to know for your online business."

—Tony Hsieh, CEO of Zappos.com, Inc., author of *New York Times* bestseller *Delivering Happiness*

Four acknowledged experts in search engine optimization share guidelines and innovative techniques that will help you plan and execute a comprehensive SEO strategy. This second edition brings you up-to-date on recent changes in search engine behavior—such as new ranking methods involving user engagement and social media—with an array of effective tactics, from basic to advanced.

- Comprehend SEO's many intricacies and complexities
- Explore the underlying theory and inner workings of search engines
- Understand the role of social media, user data, and links
- Discover tools to track results and measure success
- Recognize how changes to your site can confuse search engines
- Learn to build a competent SEO team with defined roles
- Glimpse the future of search and the SEO industry

Eric Enge is the CEO of SEO consulting firm Stone Temple Consulting (www.stonetemple.com).

Stephan Spencer founded the SEO firm Netconcepts and the training/coaching program ScienceofSEO.com. He's the author of *Google Power Search* (O'Reilly).

Jessie Stricchiola, co-founder of SEMPO.org, is the CEO of San Francisco SEO and web marketing firm Alchemist Media.

Rand Fishkin is CEO and co-founder of Moz (http://moz.com), a Seattle-based startup focused on building software for marketers.

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Praise for The Art of SEO

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> —TONY HSIEH, CEO, ZAPPOS.COM, INC., AND *NEW YORK TIMES* BEST-SELLING AUTHOR OF *DELIVERING HAPPINESS*

"Written by some of the top minds in SEO!"

> —DANNY SULLIVAN, EDITOR-IN-CHIEF, SEARCHENGINELAND.COM, AND PRODUCER, SMX: SEARCH MARKETING EXPO

"In *The Art of SEO*, industry luminaries Eric Enge, Stephan Spencer, Jessie Stricchiola, Rand Fishkin successfully translate their deep collective knowledge into a straightforward and engaging guide covering it all fundamentals, advanced techniques, management strategies, and an array of useful tools and tips. It is required reading for anyone looking to maximize search engine traffic to their site."

> —MARK KAUFMAN, ASSOCIATE VICE PRESIDENT, CNET AUDIENCE DEVELOPMENT, CBS INTERACTIVE

"This is a valuable and comprehensive treatment of fundamental and complex SEO topics. The authors intelligently cover an impressive array of diverse tactics and essential skills that range from practical to strategic. A section on testing provides process examples for research and analysis, an often-ignored requirement in an industry where the target is always moving. *The Art of SEO* is the kind of book that ends up highlighted, dog-eared, and coffee-stained."

> —ALEX BENNERT, DIRECTOR OF SEARCH STRATEGY, *WALL STREET JOURNAL*

"With over 80% of Internet sessions starting with a search, you should be looking for ways to develop traffic from search engines. *The Art of SEO* is a book I continually recommend to beginners and more experiences marketers. This book can shave years off the learning curve for anyone thinking of delving into the world of search marketing. *The Art of SEO* walks you through the most important steps in planning and executing a top-flight program. The authors of

this book are trusted individuals whose repeated, proven success working with SEO & Social Media marks them as leaders in the field. Easy to understand and well written, this book walks you through everything you need to understand to be successful with your own SEO campaigns. Read now, prosper now and later.

—DUANE FORRESTER, AUTHOR OF *HOW TO MAKE MONEY WITH YOUR BLOG AND TURN CLICKS INTO CUSTOMERS*, AND SENIOR PRODUCT MANAGER, BING, FORMER SEMPO BOARD MEMBER

"Save years of learning with *The Art of SEO*! The book's content and strategies are sure to help your bottom line. Even if you're a seasoned online marketer, this book has tips and tricks for you!"

—MONA ELESSEILY, VICE PRESIDENT OF ONLINE MARKETING, PAGE ZERO MEDIA

"An essential guide to best practices and cutting-edge tactics that belongs on the desk of all search marketing professionals."

—CHRIS SHERMAN, EXECUTIVE EDITOR, SEARCH ENGINE LAND

"Roll up your sleeves, buckle your seat belt, and take your foot off the brake. You are about to go on a journey from the very basics to the very high-end, enterprise level, and then into the future of the art of SEO. These four authors have been involved in Internet marketing from the very start and have hands-on experience. These are not pundits in search of an audience but practitioners who have actually done the work, know how it's done, and have the scars to prove it. This is a dynamite primer for the beginner and a valued resource for the expert. Clear, concise, and to the point, it may not make you laugh or make you cry, but it will make you smart and make you successful."

—JIM STERNE, PRODUCER OF THE EMETRICS MARKETING OPTIMIZATION SUMMIT (WWW.EMETRICS.ORG) AND CHAIRMAN OF THE WEB ANALYTICS ASSOCIATION (WWW.WEBANALYTICSASSOCIATION.ORG

"DO NOT BUY THIS BOOK. Please. I beg of you. If you compete with us or any of our clients, do not buy this book. Itís become our go-to source for anything and everything we need to know about successful search engine optimization. 4 out of 5 marketers recommend this book in place of Ambien. The other one? He's laughing his way to the bank."

—AMY AFRICA, CEO, EIGHT BY EIGHT

"*The Art of War* isn't about Chinese pottery, and *The Art of SEO* isn't a paint-by-numbers kit. This 600-page book is a comprehensive guide to search engine optimization strategies and tactics written by four SEO experts: Eric Enge, Stephan Spencer, Rand Fishkin, and Jessie Stricchiola. The chapters in the second edition on creating link-worthy content and link marketing as well as how social media and user data play a role in search results and ranking are must-reads for anyone interested in mastering search engine optimization."

— GREG JARBOE, PRESIDENT, SEO-PR, AND AUTHOR OF *YOUTUBE AND VIDEO MARKETING: AN HOUR A DAY*

"*The Art of SEO, Second Edition* reads like an Ian Fleming novel; intriguing the reader with surprising insights and exciting new ideas...all while making SEO seem oh-so-sexy."

— SEAN SINGLETON, SEARCH MARKETING MANAGER, AMERICAN APPAREL

"*The Art of SEO* is really about the science of SEO. This detailed and practical guide to SEO mastery comes from a panel of all-star practitioners and will give you the edge. Get it before your competitors do!"

— TIM ASH, CEO, SITETUNERS, CHAIR OF CONVERSION CONFERENCE, AND AUTHOR OF *LANDING PAGE OPTIMIZATION*

"There are no better names in the search marketing industry to write a book on the art of SEO than these four authors. Each author has gems of knowl- edge to share individually, and all of them teaming up to create a single book is like discovering a treasure."

— BARRY SCHWARTZ, NEWS EDITOR, SEARCH ENGINE LAND, AND EDITOR, SEARCH ENGINE ROUNDTABLE

"The second edition of *The Art of SEO* expands and enhances a book that was already the industry standard for SEO education and strategy. Anyone looking to optimize their website and get better rankings on the search engines should keep this book on their desk and refer to it daily. All of the advanced technical SEO strategies are covered in a straight-forward method which is easy to understand and action-oriented. When you are finished reading this book, you will have a better grasp on how search engines work and how you can optimize your website with expert proficiency. If you want to drive more traffic to your website, engage your audience on a deeper level, generate more sales, and grow your business—this books lays the plan out for you."

— JOSEPH KERSCHBAUM, VICE PRESIDENT, CLIX MARKETING, AND AUTHOR OF *PAY-PER-CLICK SEARCH ENGINE MARKETING: AN HOUR A DAY*

"Rarely does a work so thoroughly deconstruct the art and science of SEO: what it is, how it works, who makes it happen, and why it is important to the modern firm."

—SARA HOLOUBEK, CEO, LUMINARY LABS, AND PRESIDENT, SEMPO (2009-2010)

"*The Art of SEO* offers true ingredients for enduring results. This book provides vital tips, practical recommendations, and guardrails for anyone looking to achieve sustainable SEO success."

—MICHAEL GENELES, PRESIDENT, 87INTERACTIVE

"Businesses online face unprecedented competition for the time and dollars of consumers. The authors have captured their deep knowledge of patterns and best practices in search, and made it accessible to anyone with a stake in driving traffic and bottom-line results. This book is packed with information, yet still an easy read. It will take the mystery out of search engine marketing and empower you to build a successful business online. It is a must read for my team and I recommend it to anyone who is looking to grow their knowledge in this critical business competency."

—JEREMIAH ANDRICK, SENIOR MANAGER, ONLINE CUSTOMER ACQUISITION, LOGITECH, AND FORMER PROGRAM MANAGER FOR MICROSOFT BING

"In your hands is a definitive collection of SEO knowledge from four leading practitioners of the art. This book is required reading for my company, and we're also recommending it to our clients."

—ADAM AUDETTE, PRESIDENT, RKG

"If you do a search in Google for "search engine optimization," "SEO," or any similar term, you will find countless outdated articles that promote practices that are not very useful these days—website submissions, link exchanges, altering meta keyword tags, etc. These seemingly useful tactics do very little for the ultimate goal of an effective SEO campaign: to drive meaningful traffic. Because search engines have changed significantly in the last 10 years, many of these practices are no longer necessary, while some, like massive link exchanges, are actually considered search engine "spam." If these are what you are expecting from *The Art of SEO*, you will be positively disappointed. Sure, this book is about everything you will ever need to know about SEO now and in the near future, but after my personal technical review of all its merits, I can guarantee you that I couldn't find a single piece of nonsensical advice. If you only want one book, get this one. You can start from zero and become a SEO master in record time."

—HAMLET BATISTA, OWNER, HAMLET BATISTA GROUP, LLC

"Search engine optimization continues to evolve in exciting ways. This book provides one of the most comprehensive guides to planning and executing a full SEO strategy for any website. It will be an important reference for SEO professionals, business owners, and anyone who wants to succeed in the SEO field."

—KHALID SALEH, CEO, INVESP

"There are no better guides through the world of SEO; the combined experience of these authors is unparalleled. I can't recommend highly enough that you buy this book."

—WILL CRITCHLOW, CO-FOUNDER, DISTILLED

"As a co-author of a book people refer to as the "Bible of Search Marketing," you might think that I wouldn't recommend other search books. Not so. But I recommend only excellent search books written by outstanding search experts. *The Art of SEO* easily clears that high standard and is a must-read for anyone serious about organic search success."

—MIKE MORAN, CO-AUTHOR OF *SEARCH ENGINE MARKETING, INC.*, AND AUTHOR OF *DO IT WRONG QUICKLY*

"An amazingly well-researched, comprehensive, and authoritative guide to SEO from some of the most well-respected experts in the industry; highly recommended for anyone involved in online marketing."

—BEN JESSON, CEO AND CO-FOUNDER, CONVERSION RATE EXPERTS

"Finally, a guide to the perplexing world of SEO by some of its most accomplished practitioners. *The Art of SEO* has become my bible of search. Full of clear examples, cutting-edge research, and smart marketing strategies, this is a fun read that can help get your site the search ranking it deserves."

—HOWIE JACOBSON, AUTHOR OF *GOOGLE ADWORDS FOR DUMMIES*

"In *The Art of SEO*, these four industry leaders have left no stone unturned in their quest to deliver one of the ultimate resources on search engine optimization that has ever been published."

—CHRIS WINFIELD, CO-FOUNDER AND CMO, BLUEGLASS INTERACTIVE, INC.

"You may know enough about search engine optimization to be dangerous, but *The Art of SEO* will make you formidable."

—CHRIS PIRILLO, INTERNET ENTREPRENEUR, CHRIS.PIRILLO.COM

"This must-have book by industry heavyweights is a milestone. The material is convincing and compelling. Most important of all, the ideas make powerful strategies for successfully marketing sites online."

—DISA JOHNSON, CEO, SEARCH RETURN

"The disciplined and scientific practice of natural search engine optimization is critical to brand awareness and new customer acquisition. *The Art of SEO* has transformed what has historically been a misunderstood and mystical marketing strategy into an easy-to-comprehend, actionable guide to understanding and navigating the inner and outer workings of SEO."

—SETH BESMERTNIK, CEO AND CO-FOUNDER, CONDUCTOR

"Regardless of whether you're a beginner or an expert search marketer, *The Art of SEO* delivers! From keyword research and search analytics to SEO tools and more!"

—KEN JURINA, PRESIDENT AND CEO, TOP DRAW, INC.

"There is an art (and science) to search engine optimization. It's not always easy, it's not always obvious, and the results depend a lot on what the major search engines are tinkering with under their own hoods. Thankfully, there is a book like *The Art of SEO* to shine a light, give you some clues, and help you get ahead of your competitors."

—MITCH JOEL, PRESIDENT, TWIST IMAGE, AND AUTHOR OF *SIX PIXELS OF SEPARATION*

"*The Art of SEO* is a masterpiece in search engine optimization techniques. Whether you're technical or creative, whether a coder, a designer, a copywriter, or a PR professional, you need this book."

—ANDY BEAL, CO-AUTHOR OF *RADICALLY TRANSPARENT*, FOUNDER OF TRACKUR, AND FOUNDER OF MARKETING PILGRIM

"Fantastic read! This is a must-read for anyone in our industry. This book is a veritable textbook, and almost certainly will become part of any curriculum on the subject."

—JEFF QUIPP, CEO, SEARCH ENGINE PEOPLE

"The utmost compliments go to the team that pulled together *The Art of SEO*. As a professional educator, I can attest to the extreme difficulty of making SEO understandable and interesting. This is a must-read for every entrepreneur, marketer, and Internet professional to understand the fundamentals and importance of SEO to their business."

> —AARON KAHLOW, FOUNDER, ONLINE MARKETING SUMMIT

"Collectively, Rand, Eric, Jessie, and Stephan know more about SEO than anyone else on the planet. You want to master SEO? Listen to this dream team!"

> —AVINASH KAUSHIK, AUTHOR OF *WEB ANALYTICS 2.0* AND *WEB ANALYTICS: AN HOUR A DAY*

"Written by in-the-trenches practitioners, *The Art of SEO* is a well-written step-by-step guide providing sensible and practical advice on how to implement a successful SEO program. The authors have created a readable and straightforward book filled with actionable strategies and tactics any online business can use. I now have a great resource to recommend when people ask, 'Know of any good books on SEO?'"

> —DEBRA MASTALER, PRESIDENT, ALLIANCE-LINK AND THE LINK SPIEL BLOG

"Presenting the inner mechanics of search engine optimization is a daunting task, and this book has accomplished it with flair. The book reveals the closely guarded secrets of optimizing websites in a straightforward, easy-to-understand format. If you ever wanted to unravel the mysteries of the most enigmatic discipline on the Internet, this is the book you want as your guide. This book is so comprehensive and well written, it just might put me out of a job."

> —CHRISTINE CHURCHILL, PRESIDENT, KEYRELEVANCE

"*The Art of SEO* is the perfect complement to the science of conversion optimization. This book is a must-read volume by four highly regarded industry veterans."

> —BRYAN EISENBERG, *NEW YORK TIMES* BEST-SELLING AUTHOR OF *CALL TO ACTION* AND *ALWAYS BE TESTING*

"Simply put...*The Art of SEO* is a smart book on Search Engine Optimization. Neatly laid out, comprehensive and clear..this edition explains the nuances of cutting edge tactics for improving your SEO efforts. I refer to it constantly."

> —ALLEN WEISS, CEO AND FOUNDER, MARKETINGPROFS, LLC

"Enge, Spencer, Fishkin and Stricchiola do it again! Thousands of people in the Shop.org community of digital retail executives reference The Art of SEO as the number one resource to wrap their arms around the ever-changing, critical online marketing science (and art-form) that is search. It's 30+ years of experience jam-packed to help marketing, eCommerce and SEO practioners at all levels master search engine marketing. Bravo!"

> —ARTEMIX EBNEYOUSEF BERRY, SENIOR DIRECTOR, SHOP.ORG

"I have personally known and respected each author for many years, and this book is a superb collection of their collective wisdom for implementing SEO for your website. I trust the information presented in this book will help readers accomplish their traffic goals. You can never know too much about SEO in this ever-changing and competitive space. Read this book."

> —BRUCE CLAY, PRESIDENT, BRUCE CLAY, INC.

"The Art of SEO provides the nuts and bolts of SEO and beyond. This book gives you the tools you need to grok and apply a wide range of strategies immediately, giving you the plans to build, and to remodel when necessary, and it assists with hammering and painting, too. SEO is more than just keywords, copy, and layout. The authors deftly guide you through the constantly evolving search engine landscape, in all its aspects. Does SEO permeate throughout everything you publish online? It should. Make each page, each word, each link count. It doesn't matter whether your site is for lead generation, sales, or reputation building. Every web master or marketeer needs a copy of this book on the shelf, or a stack of them to distribute to their team."

> —KELLY GOTO, PRINCIPAL, GOTOMEDIA

"Anyone who wants to know how SEO really works must read The Art of SEO. This is a true reference work."

> —JOHN CHOW, SUPER BLOGGER, JOHNCHOW.COM

"In The Art of SEO, industry luminaries Eric Enge, Stephan Spencer, Jessie Stricchiola, and Rand Fishkin successfully translate their deep collective knowledge into a straightforward and engaging guide covering it all fundamentals and advanced techniques for a post-Panda world, management strategies, social media opportunities, and an array of useful tools and tips. It's required reading for anyone looking to maximize search engine traffic to their site."

> —MARK KAUFMAN, ASSOCIATE VICE PRESIDENT, CNET AUDIENCE DEVELOPMENT, CBS
> INTERACTIVE

The Art of SEO

Eric Enge, Stephan Spencer, Jessie Stricchiola, and Rand Fishkin

The Art of SEO, Second Edition

by Eric Enge, Stephan Spencer, Jessie Stricchiola, and Rand Fishkin

I'd like to dedicate this book to Beth, Rob, Valerie, and Kristian, who are, without question, the principal joys of my life. I'd also like to thank the countless people in the SEO community who have helped me along the way.

—Eric Enge

I dedicate this book to my beautiful daughters, Chloë, Ilsa, and Cassandra, for their love and support, and for tolerating my workaholic tendencies. They are wise beyond their years. They keep me grounded.

—Stephan Spencer

I'd like to dedicate this book to the SEO community and note that, like Einstein, if I have had any success, it's because I've stood on the shoulders of giants—to all those who practice, evangelize, and support SEO, thank you and keep up the great work. I'm also immensely grateful to Geraldine DeRuiter, love of my life, and the most talented writer this side of Hemingway.

—Rand Fishkin

To everyone in search. Thank you.

—Jessie Stricchiola

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FOREWORD

Almost two decades have passed since the World Wide Web has risen to prominence in nearly all aspects of our lives, but as with nearly all significant technology-driven shifts in our society, most businesses have been slow to react. If you've already put your business online and begun the journey that is your ongoing, online conversation with customers, congratulations!

But if you count yourself as one of those still in the slow lane, fret not. There's never a bad time to get started, and with this book in hand, you're already well on your way. In fact, starting now might even be to your benefit—over the past decade or so, much has been learned and many mistakes have been made. New technologies have risen to prominence (Facebook, Twitter, and more recently Google+ come to mind), and old ones have fallen to the wayside. The Web is far more mature, and the rules of the road are a bit clearer. In addition, an entire industry of professionals in search optimization and marketing has also matured and stands ready to help.

Over seven years ago, a hotshot start-up with a funny name went public, armed with a customer base in the hundreds of thousands and a user base in the tens of millions, and proceeded to grow faster than any company in history. In less than a generation, Google has become a cultural phenomenon, a lightning rod for controversy, and a fundamental part of any intelligent business person's customer strategy.

But Google is really a proxy for something larger—a new, technologically mediated economy of conversation between those who are looking for products, services, and information, and those who might provide them. The vast majority of our customers, partners, and colleagues

are increasingly fluent in this conversation, and use it to navigate their personal and professional lives.

The shorthand for this interaction is "search," and like most things worth understanding, learning to leverage search takes practice. In fact, it's more accurate to put it this way: learning to leverage search *is* a practice—an ongoing, iterative practice, and a process that, once begun, never really finishes. Your customers are out there, asking Google and other search engines questions that by all rights should lead them to your digital doorstep. The question is: are you ready to welcome them?

Think of search as another way to have a conversation with a good customer or prospective customer. The skills you naturally have—describing your business and its merits relative to competitors, your approach to service, the ecosystem in which your business lives—are skills you should translate to the practice of SEO. It can be daunting and frustrating, but then again, so is starting and running a business. Those who are willing to do the extra work will prosper. Those who stay on the sidelines risk failure.

The days of putting an ad in the Yellow Pages and waiting by the phone are over. With search, everyone's number is listed—if they have a website, that is. But not everyone will show up as an answer to a customer query. Learning how to make sure your business shines is no longer an option; it is table stakes in a game you've already decided to play, simply by hanging out a shingle.

So why not play to win? Even if you decide you don't want to go it alone—and who could blame you?—and you hire an expert to guide you through, understanding the art of SEO will make you a better client for whomever you hire. Speaking from experience, there's nothing better than working with someone who understands the basics of your practice. Make no mistake, at the end of the day, SEO is an art, one informed by science, experience, and a healthy dose of trial and error. The sooner you get started, the better you and your business will become. The book in your hands is a meticulous volume written by some of the brightest minds and most experienced hands in the SEO industry. Read on, and enjoy the journey!

—John Batelle, January 2012

The book before you is designed to be a complete and thorough education on search engine optimization for SEO practitioners at all levels. This second edition has been completely revamped and updated from the first edition, taking into account the changes in the search engine industry and the rising influence of social media. Nonetheless, as with the first edition, you can think of it as SEO 101, SEO 102, and SEO 103. Our goal has been to help simplify a very complex, layered topic and to make it easier for people to grasp, as well as to make it easier to focus on the most important aspects of SEO for individual businesses. As a group we have over 30 years' experience working on SEO projects. This means that we have seen how SEO works over a relatively long period of time, across thousands of different websites. Any one of us could have written this book individually (in fact, one of us tried to), but we discovered that by working together we were able to create something of much greater value for you, the SEO artist.

Who Should Read This Book

People who are involved in SEO at any level should consider this book invaluable. This includes web developers, development managers, marketing people, and key business personnel. If SEO is not your profession, then this book may serve primarily as a reference. However, if you are or want to become an SEO practitioner, you will likely want to read it from cover to cover.

After reading the entire text, a new SEO practitioner will have been exposed to all aspects of the art of SEO and will have laid the necessary groundwork for beginning to develop his SEO expertise.

An experienced SEO veteran will find this volume useful as an extensive reference to support ongoing SEO engagements, both internally, within an in-house SEO group or SEO consultancy, and externally, with SEO clients. Finally, the book will serve as a refresher course for working SEO practitioners, from the novice to the professional.

Conventions Used in This Book

The following typographical conventions are used in this book:

Italic

> Indicates new terms, URLs, email addresses, search terms, filenames, and file extensions.

`Constant width`

> Used for program listings, as well as within paragraphs to refer to program elements such as variable or function names, tags, attributes, and operators.

`Constant width italic`

> Shows text that should be replaced with user-supplied values or by values determined by context.

> **N O T E**
> **This icon signifies a tip, suggestion, or general note.**

> **W A R N I N G**
> **This icon indicates a warning or caution.**

Using Code Examples

This book is here to help you get your job done. In general, you may use the code in this book in your programs and documentation. You do not need to contact us for permission unless you're reproducing a significant portion of the code. For example, writing a program that uses several chunks of code from this book does not require permission. Selling or distributing a CD-ROM of examples from O'Reilly books does require permission. Answering a question by citing this book and quoting example code does not require permission. Incorporating a significant amount of example code from this book into your product's documentation does require permission.

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Geraldine DeRuiter—outline development and editing
Mona Elesseily—review
Michael Geneles—metrics, tools, and review
Chase Granberry—tools access
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Brian Klais—metrics
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Mark Nunney—tools access
Jeremy Schoemaker—tools access
Julia Schoenegger—tools access
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Arina Sinzhanskaya—tools access
Chris Smith—local/mobile search
Danny Sullivan—for his role in launching this industry
Dana Todd—witty wisdom
Vryniotis Vasilis—tools access
Aaron Wall—tools/training access
David Warmuz—tools access
Rob Wheeler—tools access
Ben Wills—tools access

Search: Reflecting Consciousness and Connecting Commerce

Search has become integrated into the fabric of our society. With more than 158 billion searches performed worldwide each month as of August 2011 (according to comScore, *http://www.comscore.com*), approximately 5.2 billion web searches are performed every day. This means that on average about 61,000 searches are performed every single second of every day. In addition, users have grown to expect that the responses to their search queries will be returned in less than one second.

Search is a global phenomenon. As of March 2011, the worldwide population of Internet users numbered over 2 billion (*http://www.internetworldstats.com/stats.htm*), and the penetration rate was still only 23.8% in Asia and 11.4% in Africa.

The high demand for search exists, and is growing, because people can now obtain in mere seconds information that 20 years ago would have required a trip to the library, the use of a card catalog and the Dewey Decimal System, and a foot search through halls of printed volumes—a process that could easily have consumed two hours or more. Through the new channel of search, people can also conduct many of their shopping, banking, and social transactions online—something that has changed the way our global population lives and interacts.

This dramatic shift in behavior represents what investors like to label a *disruptive event*—an event that has changed something in a fundamental way. Search engines are at the center of this disruptive event, and having a business's website rank well in the search engines when

people are looking for the service, product, or resource it provides is critical to the survival of that business. As is the case with most paths to success, obtaining such prime search result real estate is not a simple matter, but it is one that this book aims to deconstruct and demystify as we examine, explain, and explore the ever-changing art of search engine optimization (SEO).

The Mission of Search Engines

Since web searchers are free to use any of the many available search engines on the Web to find what they are seeking, the burden is on the search engines to develop a relevant, fast, and fresh search experience. For the most part, search engines accomplish this by being *perceived* as having the most relevant results and delivering them the fastest, as users will go to the search engine they think will get them the answers they want in the least amount of time.

As a result, search engines invest a tremendous amount of time, energy, and capital in improving their relevance. This includes performing extensive studies of user responses to their search results, comparing their results against those of other search engines, conducting eye-tracking studies (discussed later in this chapter), and constructing PR and marketing campaigns.

Search engines generate revenue primarily through paid advertising. The great majority of this revenue comes from a *pay-per-click* (or *cost-per-click*) model, in which the advertisers pay only for users who click on their ads. Because the search engines' success depends so greatly on the relevance of their search results, manipulations of search engine rankings that result in nonrelevant results (generally referred to as *spam*) are dealt with very seriously. Each major search engine employs a team of people who focus solely on finding and eliminating spam from their search results. This matters to SEO practitioners because they need to be careful that the tactics they employ will not be seen as spamming efforts by the search engines, as this would carry the risk of resulting in penalties for the websites they work on.

The Market Share of Search Engines

Figure 1-1 shows the US market share for search engines in July 2011, according to comScore. As you can see, Google is the dominant search engine on the Web in the United States.

In many European countries, the disparity is even greater. However, in some markets Google is not dominant. In China, for instance, Baidu is the leading search engine. The result is that in most world markets, a heavy focus on SEO is a smart strategy for Google.

The Human Goals of Searching

The basic goal of a human searcher is to obtain information relevant to an inquiry. However, searcher inquiries can take many different forms. One of the most important elements to building an online marketing strategy for a website around SEO and search rankings is
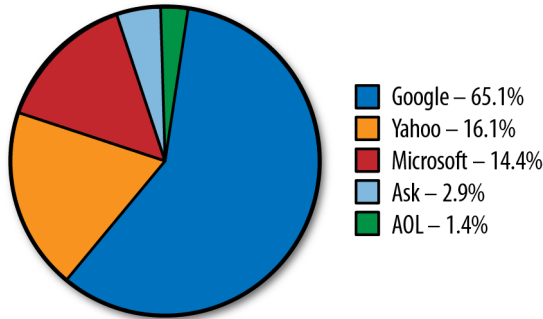
FIGURE 1-1. Search engine market share (July 2011)

developing a thorough understanding of the psychology of your target audience. Once you understand how the average searcher—and, more specifically, your target market—uses search engines, you can more effectively reach and keep those users.

Search engine usage has evolved over the years, but the primary principles of conducting a search remain largely unchanged. Most search processes comprise the following steps:

1. Experience the need for an answer, solution, or piece of information. For example, the user may be looking for a website (navigational query) to buy something (transactional query) or to learn something (informational query). We will discuss this in more detail in the following section.

2. Formulate that need in a string of words and phrases (the query). Most people formulate their queries in one to three words. Table 1-1 gives a more detailed look at the percentages of searches per query length.

3. Execute the query, check the results, see whether you got what you wanted, and if not, try a refined query.

TABLE 1-1. Searches by query length (comScore, August 2011 data)

Words	Percent of searches
1	25.8%
2	22.8%
3	18.7%
4	13.2%
5+	19.5%

When this process results in the satisfactory completion of a task, a positive experience is created for the user, the search engine, and the site providing the information or result.

Who Searches and What Do They Search For?

comScore reported that the number of search queries performed worldwide on the Web was approximately 158 billion across all engines in August 2011.

comScore data also shows over 1.3 billion people were using a search engine on a given day in that month. Search engine users in the US were slightly more likely to be women than men (50.1% versus 49.9%). According to comScore, as of August 2011, there were 216 million Internet users in the US, and two-thirds of those users had an income of $40,000 or more (as shown in Table 1-2).

TABLE 1-2. Internet users by household income (August 2011)

US household income	Internet users
Less than $15,000	22,581(10.5%)
$15,000–$24,999	11,999 (5.6%)
$25,000–$39,999	31,558 (14.6%)
$40,000–$59,999	49,651 (23%)
$60,000–$74,999	24,521 (11.4%)
$75,000–$99,999	29,698 (13.7%)
$100,000 or more	45,998 (21.3%)

You can find additional data from studies, surveys, and white papers on Search Engine Land's Stats & Behaviors page (*http://searchengineland.com/library/stats-search-behavior*).

All of this research data leads us to some important conclusions about web search and marketing through search engines. For example:

- Search is very, very popular. It reaches more than 88% of people in the US and billions of people around the world.
- Google is the dominant player in most world markets.
- Users tend to use short search phrases, but these are gradually getting longer.
- Search covers all types of markets.

Search is undoubtedly one of the best and most important ways to reach consumers and build a business, regardless of that business's size, reach, or focus.

Determining Searcher Intent: A Challenge for Both Marketers and Search Engines

Good marketers are empathetic. Smart SEO practitioners and the search engines have a common goal of providing searchers with results that are relevant to their queries. Therefore, a crucial element to building an online marketing strategy around SEO and search rankings is understanding your audience. Once you grasp how your target market searches for your service, product, or resource, you can more effectively reach and keep those users.

Search engine marketers need to be aware that search engines are *tools*—resources driven by intent. Using the search box is fundamentally different from entering a URL into the browser's address bar, clicking on a bookmark, or picking a link on your start page to go to a website; it is not the same as a click on the "stumble" button in your StumbleUpon toolbar or a visit to your favorite blog. Searches are performed with *intent*; the user wants to find something in particular, rather than just land on it by happenstance.

What follows is an examination of the different types of queries, their categories, characteristics, and processes.

Navigational Queries

Navigational searches are performed with the intent of surfing directly to a specific website. In some cases, the user may not know the exact URL, and the search engine serves as the "White Pages." Figure 1-2 shows an example of a navigational query.

FIGURE 1-2. Navigational query

Opportunities: Pull searcher away from destination; get ancillary or investigatory traffic.

Average traffic value: Very high when searches are for the publisher's own brand. These types of searches tend to lead to very high conversion rates. However, these searchers are already

aware of the company brand, so they may not represent new customers. For brands other than the one being searched on, the click-through rates will tend to be low, but this may represent an opportunity to take a customer away from a competitor.

Informational Queries

Informational searches involve a huge range of queries—for example, local weather, maps and directions, details on the latest Hollywood awards ceremony, or just checking how long that trip to Mars really takes. Informational searches are primarily non-transaction-oriented (although they can include researching information about a product or service); the information itself is the goal and no interaction beyond clicking and reading is required. Figure 1-3 shows an example of an informational query.
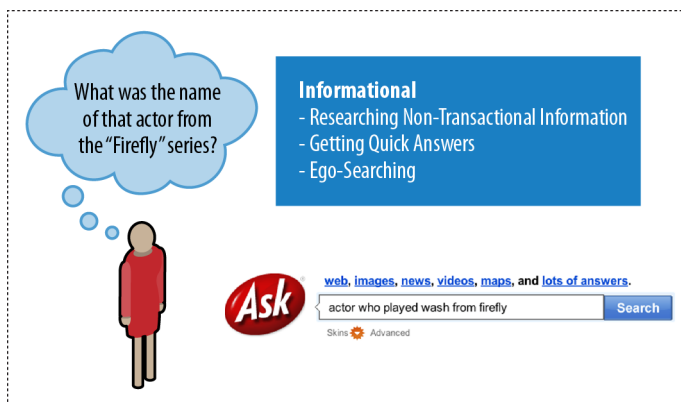
FIGURE 1-3. Informational query

Opportunities: Brand searchers with positive impressions of your site, information, company, and so on; attract inbound links; receive attention from journalists/researchers; potentially convert to sign up or purchase.

Average traffic value: The searcher may not be ready to buy anything as yet, or may not even have a long-term intent to buy anything, so the value tends to be "medium" at best. However, many of these searchers will later enter in a more targeted search, and this represents an opportunity to capture mindshare with those potential customers. For example, informational queries that are focused on researching commercial products or services can have high value.

Transactional Queries

Transactional searches don't necessarily involve a credit card or wire transfer. Signing up for a free trial account at CooksIllustrated.com , creating a Gmail account, paying a parking ticket,

or finding the best local Mexican restaurant for dinner tonight are all transactional queries. Figure 1-4 shows an example of a transactional query.
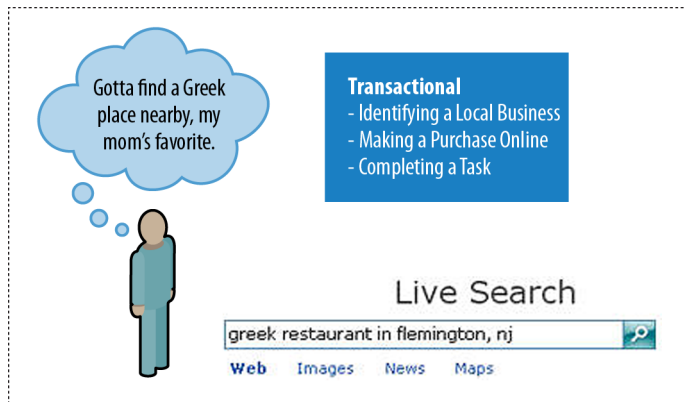
FIGURE 1-4. Transactional query

Opportunities: Achieve transaction (financial or other).

Average traffic value: Very high.

Research from Pennsylvania State University and the Queensland University of Technology (*http://ist.psu.edu/faculty_pages/jjansen/academic/pubs/jansen_user_intent.pdf*) shows that more than 80% of searches are informational in nature, and only about 10% of searches are navigational or transactional.

The researchers went further and developed an algorithm to automatically classify searches by query type. When they tested the algorithm, they found that it was able to correctly classify queries 74% of the time. The difficulty in classifying the remaining queries was vague user intent—that is, the queries could have multiple meanings. Here are some URLs that point to additional academic research on this topic:

- *http://www.sigir.org/forum/F2002/broder.pdf*
- *http://www.strategynode.com/how-to-determine-if-a-search-query-is-navigational-informational -or-transactional*

Adaptive Search

The search engines also look at sequences of search queries to determine intent. This was confirmed in Eric Enge's interview with Jack Menzel, Product Management Director for Google Search (*http://www.stonetemple.com/how-google-does-personalization-with-jack-menzel/*). You can verify this by trying search sequences such as a search on *Rome* followed by a search on *hotels*.

Normally, a search on *hotels* would not include results for hotels in Rome, but when the preceding query was for *Rome*, some results for hotels in Rome will be included. Keeping track of users' previous search queries and taking them into account when determining which results to return for a new query—known as *adaptive search*—is intended to help the search engines get a better sense of a user's intent. The search engines need to do this with care: excessive changes to the results they return based on recent query history are likely to lead to problems, so usually these types of changes are fairly limited in scope. Nonetheless, it is useful to be aware of the types of sequences of searches that users go through in their quest for information.

How Publishers Can Leverage Intent

When you are building keyword research charts for clients or on your own sites, it can be incredibly valuable to determine the intent of each of your primary keywords. Table 1-3 shows some examples.

TABLE 1-3. Sample search queries and intent

Term	Queries	Intent	$$ value
Beijing Airport	980	Nav	Low
Hotels in Xi'an	2,644	Info	Mid
7-Day China tour package	127	Trans	High
Sichuan jellyfish recipe	53	Info	Low

This type of analysis can help to determine where to place ads and where to concentrate content and links.

Hopefully, this data can help you to think carefully about how to serve different kinds of searchers based on their individual intents, and how to concentrate your efforts in the best possible areas.

Although informational queries are less likely to immediately convert into sales, this does not necessarily mean you should forego pursuing rankings on such queries. If you are able to build a relationship with users who find your site after an informational query, they may be more likely to come to you to make a related purchase at a later date.

One problem is that when most searchers frame their search queries they provide very limited data to the search engine—usually just one to three words. Since most people don't have a keen understanding of how search engines work, users often provide queries that are too general or that are presented in a way that does not provide the search engine (or the marketer) with what it needs to determine their intent.

General queries are important to most businesses because they often get the brand and site on the searcher's radar, and this initiates the process of building trust with the user. Over time,

the user will move on to more specific searches that are more transactional or navigational in nature.

If, for instance, companies buying pay-per-click (PPC) search ads bought only the high-converting navigational and transactional terms and left the informational ones to competitors, they would lose market share to those competitors. Over the course of several days, a searcher may start with *digital cameras*, home in on *canon g10*, and then ultimately buy from the store that showed up in her search for *digital cameras* and pointed her in the direction of the Canon G10 model.

Given the general nature of how query sessions start, though, determining intent is quite difficult, and it can result in searches being performed where the user does not find what he wants, even after multiple tries. A July 2011 report (*http://www.eweek.com/c/a/Search-Engines/ Google-Could-Boost-Customer-Satisfaction-Vs-Facebook-ACSI-Report-644343/*) found that 83% of Google users and 82% of Bing users were satisfied with their experiences.

While 83% satisfaction is an amazing accomplishment given the complexity of building a search engine, this study still showed that more than 17% of users did not find what they were looking for. As an SEO practitioner, you should be aware that some of the visitors that you succeed in attracting to your site may have arrived for the wrong reasons (i.e., they were really looking for something else), and these visitors are not likely to help your business goals. Part of your task as an SEO is to maintain a high level of relevance in the content placed on the pages you manage, to help minimize this level of waste.

How People Search

Search engines invest significant resources into understanding how people use search, enabling them to produce better (i.e., faster, fresher, and more relevant) search engine results. For website publishers, the information regarding how people use search can be used to help improve the usability of a site as well as search engine compatibility.

Data from comScore provides some great insight into the types of things that people tend to search for. Table 1-4 shows a breakdown of many of the major categories that people's Internet searches fall into, based on comScore data for August 2011.

TABLE 1-4. Searches by market segment

Parent category name	Total searches
Directories/Resources	2,789,625,911
Entertainment	1,750,928,801
Retail	1,686,123,715
Services	1,288,400,837
Conversational Media	837,067,182

Parent category name	Total searches
Community	653,405,269
Travel	462,129,796
Health	435,860,663
News/Information	421,756,642
Sports	297,503,391

This shows that people search across a very wide range of categories. Search engines are used to find information in nearly every area of our lives. In addition, user interactions with search engines can be multistep processes. Witness the user search session documented by Microsoft and shown in Figure 1-5.

Inside a real query "session"

Example decision: Which shoes to buy?
Total task time: 55 minutes and 44 seconds

■ Dwell time

■ 21 sec Merrell shoes Search
■ 2 min www.onlinestores.com
■ 1 min www.merrell.com
■ 6 sec Discount Merrell Shoes Search
■ 4 min www.nextag.com
■ 12 sec Merrell women's sandals Search
■ 8 min www.coachlikeapro.com
■ 3 min Clarks shoes Search
■ 9 min www.clarks.com
■ 5 sec Easy spirit Search
■ 1 min www.zappos.com
www.easyspirit.com 27 min $

FIGURE 1-5. Merrell shoes user search session

In this sequence, the user performs five searches over a 55+ minute period before making a final selection. The user is clearly trying to solve a problem and works at it in a persistent fashion until the task is done.

However, it is increasingly common for search sessions of this type to take place over the course of more than one day. A 2007 study of ecommerce sites by ScanAlert showed that 30% of online transactions occurred more than 24 hours after the initial search (*http://searchenginewatch.com/3626363*).

The purchase cycle can sometimes involve a large number of clicks. Marin Software (*http://www.marinsoftware.com*) provided us with data on one consumer durable retailer (whose products represent high-cost, considered purchases) for whom 50% of the orders involved more than 10 clicks leading up to the conversion event.

For this particular retailer, when you look at the number of different ad groups that were clicked on in those 10 clicks, the clicks were mostly on the same keyword. In fact, for more than 75% of all conversions that came from multiple paid clicks, all the clicks were from the same ad group. Only 7% of conversions came from three different ad groups (and none from more than that).

Table 1-5 shows the average delay between the first click received by the site and the resulting purchase for this example retailer.

TABLE 1-5. Delay between first click and purchases

Delay between first click and purchases	Percentage of users
Same day	50%
2 to 7 days	9%
8 to 30 days	12%
31 to 90 days	26%
More than 90 days	3%

This behavior pattern indicates that people are thinking about their tasks in stages. As in our Merrell shoes example in Figure 1-5, people frequently begin with a general term and gradually get more specific as they get closer to their goal. They may also try different flavors of general terms. In Figure 1-5, it looks like the user did not find what she wanted when she searched on *Merrell shoes*, so she then tried *discount Merrell shoes*. You can then see her refine her search, until she finally settles on Easy Spirit as the type of shoe she wants.

This is just one example of a search sequence, and the variety is endless. Figure 1-6 shows another search session, once again provided courtesy of Microsoft.

In this search session, the user has a health concern. This particular user starts with a five-word search, which suggests that she may have some experience using search engines. At 3:01 her search on *headache pregnant 3rd trimester* leads her to Answers.yahoo.com. After visiting this site, her search suddenly gets more specific.

She begins to focus on gestational diabetes, perhaps because something she saw on Answers.yahoo.com led her to believe she may have it. The session culminates in a search for *first signs of gestational diabetes*, which suggests that she has concluded that this is quite possibly the issue she is facing.

Typical session: health

10 unique queries
7 partial re-queries and refinements
57 minutes

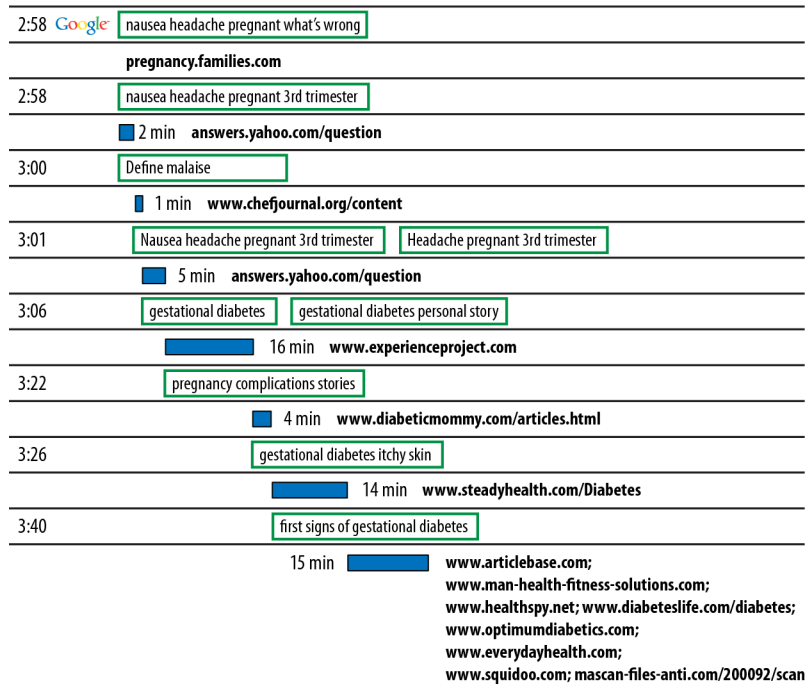| Time	Query / Site
2:58 Google	nausea headache pregnant what's wrong
	pregnancy.families.com
2:58	nausea headache pregnant 3rd trimester
	2 min **answers.yahoo.com/question**
3:00	Define malaise
	1 min **www.chefjournal.org/content**
3:01	Nausea headache pregnant 3rd trimester Headache pregnant 3rd trimester
	5 min **answers.yahoo.com/question**
3:06	gestational diabetes gestational diabetes personal story
	16 min **www.experienceproject.com**
3:22	pregnancy complications stories
	4 min **www.diabeticmommy.com/articles.html**
3:26	gestational diabetes itchy skin
	14 min **www.steadyhealth.com/Diabetes**
3:40	first signs of gestational diabetes
	15 min **www.articlebase.com;**
	www.man-health-fitness-solutions.com;
	www.healthspy.net; www.diabeteslife.com/diabetes;
	www.optimumdiabetics.com;
	www.everydayhealth.com;
	www.squidoo.com; mascan-files-anti.com/200092/scan

FIGURE 1-6. Health user search session

The session stops there. It may be that at this point the user feels she has learned what she can. Perhaps her next step is to go to her doctor with her concerns, prepared to ask a number of questions based on what she has learned.

Our next search session example begins with a navigational search, where the user simply wants to locate the travel website Orbitz.com (see Figure 1-7). The user's stay there is quite short, and she progresses to a search on *Cancun all inclusive vacation packages*. Following that she searches on a few specific resorts and finally settles on *cancun riviera maya hotels,* after which it appears she may have booked her hotel—the final site visited on that search is Bookings.occidentalhotels.com, and the direction of her searches changes after that.

At that point, the user begins to look for things to do while she is in Cancun. She conducts a search for *cancun theme park* and then begins to look for information on *xcaret,* a well-known eco park in the area.

Users traverse countless different scenarios when they are searching for something. These example search sessions represent traditional PC interactions. Recent data from mobile search shows different behavior for mobile searchers, who are more likely to be close to completing

Typical session: travel

11 unique queries
5 partial re-queries and refinements
33 minutes

Time	Engine	Query	Duration	Sites
19:14	Google	Orbitz travel	1 min	www.orbitz.com
19:15	Google	Cancun all inclusive vacation packages	14 min	cancun.bookit.com; www.travelocity.com; from bookit.com
19:29	Google	Allegro Playacar - All inclusive	2 min	from bookit.com; www.occidentalhotels.com
19:31	Google	Occidental Grand Xcaret - All inclusive resort	3 min	from bookit.com; search.bookit.com; www.occidentalhotels.com; from bookit.com
19:34	Google	NH Riviera Cancun - All inclusive	1 min	www.cancun.com/Hotels/NH-Riviera-Cancun; www.tripadvisor.com; www.travel-center.com
19:35	Google	cancun riviera maya hotels	7 min	www.nh-hotels.com; www.cancunandrivieramaya.com; www.nh-hotels.com; www.occidentalhotels.com; bookings.occidentalhotels.com
19:42	YAHOO!	Cancun theme park Cancun theme park	1 min	www.cancun.com/Ecological_Parks/Xcaret
19:43	Live	xcaret	1 min	search.live.com/results; search.live.com/video
19:44	Live	xcaret	2 min	www.xcaret.com; www.xcaret.com/Gallery.aspx; bookings.occidentalhotels.com/travel/itinerary.cfm; www.xcaret.com/Tickets/Xcaret_Basic_Entrance.html
19:46	Live	xcaret video	1 min	search.live.com/video; www.orbitz.com/App/View; www.orbitz.com/App/ViewPackageDetails

FIGURE 1-7. Travel user search session

a transaction. Data from a May 2011 eMarketer study showed that 55% of people visited a business they found in the search results after searching for information on their smartphone devices. Search engines do a lot of modeling of these different types of scenarios to enable them to provide better results to users. The SEO practitioner can benefit from a basic understanding of searcher behavior as well. We will discuss this in more detail in Chapter 2.

How Search Engines Drive Commerce on the Web

People make use of search engines for a wide variety of purposes, with some of the most popular being to research, locate, and buy products. Ecommerce sales reported by the US Census Bureau were a healthy $47.5 billion (*http://www.census.gov/retail/mrts/www/data/pdf/ec_current.pdf*) in the second quarter of 2011.

It is important to note that search and offline behavior have a heavy degree of interaction, with search playing a growing role in driving offline sales. A Google study from 2011 showed that each $1 of online ad spend drives anywhere from $4 to $15 in offline sales (*http://www.youtube.com/watch?v=Xpay_ckRpIU*).

According to a March 2010 report from Forrester Research, over $155 billion worth of consumer goods were purchased online in the US in 2009. While that seems like a big number, the influence on offline sales was far greater. Forrester estimated that $917 billion worth of retail sales in 2009 were "web-influenced." Further, online and web-influenced offline sales combined accounted for 42% of total retail sales. Local search is an increasingly important component of SEO, and one that we will explore in detail in Chapter 2.

Eye Tracking: How Users Scan Results Pages

Research firms Enquiro, Eyetools, and Didit conducted heat-map testing with search engine users (*http://www.enquiro.com/research/eyetrackingreport.asp*) that produced fascinating results related to what users see and focus on when engaged in search activity. Figure 1-8 depicts a heat map showing a test performed on Google. The graphic indicates that users spent the most amount of time focusing their eyes in the top-left area, where shading is the darkest.

Published in November 2006, this particular study perfectly illustrates how little attention is paid to results lower on the page versus those higher up, and how users' eyes are drawn to bold keywords, titles, and descriptions in the natural ("organic") results versus the paid search listings, which receive comparatively little attention.

This research study also showed that different physical positioning of on-screen search results resulted in different user eye-tracking patterns. When viewing a standard Google results page, users tended to create an "F-shaped" pattern with their eye movements, focusing first and longest on the upper-left corner of the screen, then moving down vertically through the first two or three results, across the page to the first paid page result, down another few vertical results, and then across again to the second paid result. (This study was done only on left-to-right language search results—results for Chinese, Hebrew, and other non-left-to-right-reading languages would be different.)

In May 2008, Google introduced the notion of Universal Search. This was a move from simply showing the 10 most relevant web pages (now referred to as "10 blue links") to showing other types of media, such as videos, images, news results, and so on, as part of the results in the
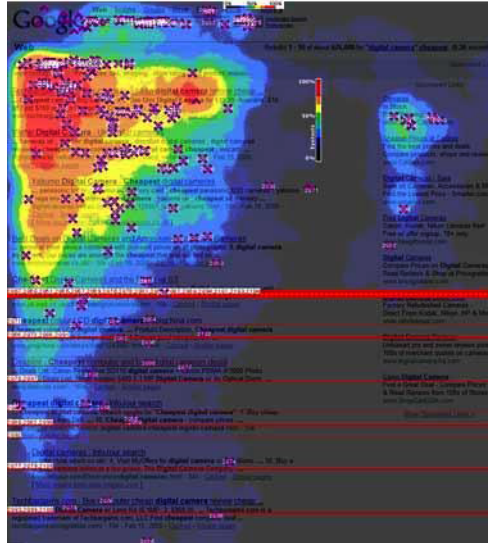
FIGURE 1-8. Enquiro eye-tracking results

base search engine. The other search engines followed suit within a few months, and the industry now refers to this general concept as *Blended Search*.

Blended Search, however, creates more of a chunking effect, where the chunks are around the various rich media objects, such as images or video. Understandably, users focus on the image first. Then they look at the text beside it to see whether it corresponds to the image or video thumbnail (which is shown initially as an image). Based on an updated study published by Enquiro in September 2007, Figure 1-9 shows what the eye-tracking pattern on a Blended Search page looks like.


FIGURE 1-9. Enquiro eye-tracking results, Blended Search

Users' eyes then tend to move in shorter paths to the side, with the image rather than the upper-left-corner text as their anchor. Note, however, that this is the case only when the image

is placed "above the fold," so that the user can see it without having to scroll down on the page. Images below the fold do not influence initial search behavior until the searcher scrolls down.

A more recent study performed by User Centric in January 2011 (*http://www.usercentric.com/ news/2011/01/26/eye-tracking-bing-vs-google-second-look*) shows similar results, as shown in Figure 1-10.
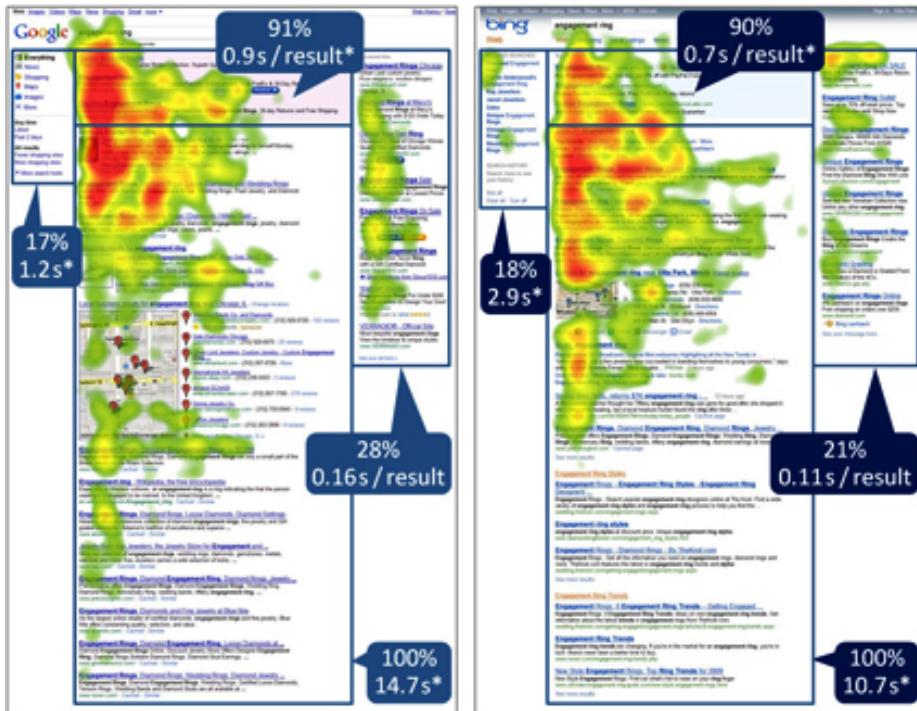
Heatmaps showing the aggregate gaze time of all 24 participants on Google (left) and Bing (right) for one of the transactional tasks. The red color indicates areas that received the most total gaze time (4.5 seconds and above). Each callout includes the percentage of participants who looked at the area and the time (in seconds) they spent looking there. The numerical data are an average across all four tasks. Asterisks indicate values that were significantly different between Google and Bing at alpha = .1.

FIGURE 1-10. User Centric eye-tracking results

In 2010, Enquiro investigated the impact of Google Instant on search usage and attention (*http://ask.enquiro.com/2010/eye-tracking-google-instant/*), noting that for queries typed in their study:

- Percent of query typed decreased in 25% of the tasks, with no change in the others
- Query length increased in 17% of the tasks, with no change in the others
- Time to click decreased in 33% of the tasks and increased in 8% of the tasks

These studies are a vivid reminder of how important search engine results pages (SERPs) really are. And as the eye-tracking research demonstrates, "rich" or "personalized" search, as it evolves, will alter users' search patterns even more: there will be more items on the page for them to focus on, and more ways for them to remember and access the search listings. Search marketers need to be prepared for this as well. The Search, plus Your World announcement in January of 2012 will also have a profound impact on the results, but no studies on that impact have been done as of February 2012.

Click Tracking: How Users Click on Results, Natural Versus Paid

By now, you should be convinced that you want to be on the top of the SERPs. It never hurts to be #1 in the natural search results.

In contrast, data shows that you may *not* want to be #1 in the paid search results, because the resulting cost to gain the #1 position in a PPC campaign can reduce the total net margin on your campaign. A study released by AdGooroo in June 2008 (*http://www.adgooroo.com/ how_keyword_length_and_ad_posi.php*) found that:

> Bidding for top positions usually makes financial sense only for high-budget, brand-name advertisers. Most other advertisers will find the optimal position for the majority of their keywords to lie between positions 5–7.

Of course, many advertisers may seek the #1 position in paid search results, for a number of reasons. For example, if they have a really solid backend on their website and are able to make money when they are in the #1 position, they may well choose to pursue it. Nonetheless, the data from the survey suggests that there are many organizations for which being #1 in paid search does not make sense.

Even if your natural ranking is #1, you can still increase the ranking page's click rate by having a sponsored ad above it or in the righthand column. The AdGooroo survey showed that having a prominent paid ad on the same search results page makes your #1 natural ranking receive 20% more clicks.

Distribution of Search Results and Traffic

To start breaking this down a bit, Figure 1-11 shows the screen real estate occupied by the two types of search results. This screenshot was taken prior to Google's January 2012 Search, plus Your World announcement, but is the type of screen layout related to studies that will help us understand which portions of the search results receive the most clicks.

This example from Google shows how the paid results appear above and to the right of the natural search results. Note that Google often does not show paid results above the natural results, in which case the paid results show up only on the right.
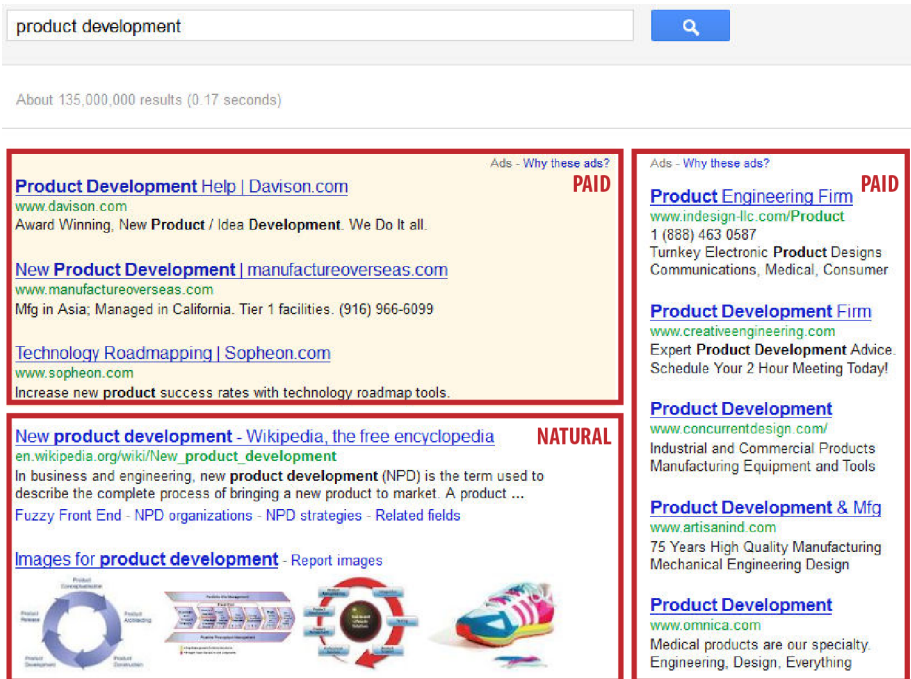
FIGURE 1-11. Paid and natural search results

Your position in the results has a huge impact on the traffic you will receive. Studies on the impact of SERP position have shown widely varying results, but do agree that the advantage of higher positions is significant. Figure 1-12 shows the results from AOL data released in 2006 (*http://www.webuildpages.com/jim/click-rate-for-top-10-search-results/*).

In addition, the first 10 results received 89.71% of all click-through traffic; the next 10 results (normally listed on the second page of results) received 4.37%, the third page 2.42%, and the fifth page 1.07%. All other pages of results received less than 1% of total search traffic clicks.

A study on click-through rate by search position done by Cornell University (*http://www.cs .cornell.edu/People/tj/publications/granka_etal_04a.pdf*) showed similar results, but with an even higher skew toward the first position, with the first result getting 56.36% of the clicks.

Why are searchers blind to relevant results farther down the page? Is this due to the "implied endorsement" effect, whereby searchers tend to simply trust the search engine to point them to the right thing?

According to the Cornell study, 72% of searchers click on the first link of interest, whereas 25.5% read all listings on the first page and then decide which one to click. Both effects (implied endorsement and rapid cognition) most likely play a role in searcher behavior.
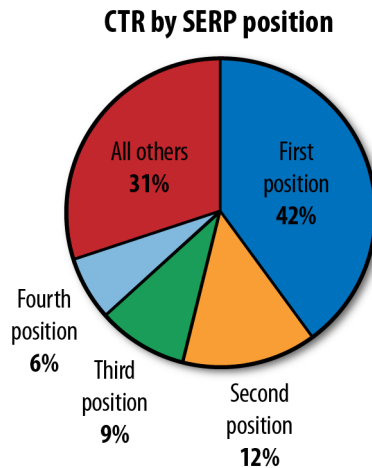
CTR by SERP position

FIGURE 1-12. Click-through rate (CTR) by SERP position

Different Intents and Effects of Listings in Paid Versus Natural Results

The AOL data in Figure 1-12 demonstrated that natural results get the lion's share of clicks. Further data from the Enquiro, Didit, and Eyetools eye-tracking study shows which organic results users notice when looking at a search results page (see Table 1-6).

TABLE 1-6. Visibility of natural search results

Rank	Visibility
1	100%
2	100%
3	100%
4	85%
5	60%
6	50%
7	50%
8	30%
9	30%
10	20%

Similarly, Table 1-7 shows the percentage of users that look at each of the top paid results when viewing a search results page.

TABLE 1-7. Visibility of paid search results

Rank	Visibility
1	50%
2	40%
3	30%
4	20%
5	10%
6	10%
7	10%
8	10%

Notice this data shows that the visibility of a listing in the natural results is double or more (up to six times) of the visibility of the same position in the paid results. For example, only 60% of users ever even notice the natural search result in position five, but the paid search results fare even worse, with only 10% of users noticing the result in the fifth position. With the advent of Search, plus Your World, the visibility of the paid search results is even further reduced. Paid search advertisers will have increasing incentive to appear in the paid results that appear above the organic results, and advertisers that do not appear there are likely to receive even less traffic.

Here are some additional things to take away from the Enquiro et al. study:

- 85% of searchers click on natural results.
- The top four sponsored slots are equivalent in views to being ranked at 7–10 in natural search in terms of visibility and click-through.
- This means if you need to make a business case for natural search, assuming you can attain at least the #3 rank in natural search for the same keywords you bid on, natural search could be worth two to three times your PPC results.

Clearly, the PPC model is easier for companies to understand because it is more similar to traditional direct marketing methods than SEO is. The return on investment (ROI) of PPC campaigns can be tracked and demonstrated more reliably than that of SEO campaigns; thus, to date it has been considered more accountable as a marketing channel. However, as budgets are tightening and the focus is shifting to the highest ROI search investments, the focus is increasingly on SEO.

Interaction Between Natural and Paid Search

iCrossing published a report in 2007 (*http://www.icrossing.com/icrossing-search-synergy-report-natural-paid*) that showed a strong synergy between natural and paid search. The study shows what happens when you incorporate natural search into an existing paid search campaign and compare its performance to the performance of the paid search campaign on its own. Figure 1-13 summarizes the improvement in the results.
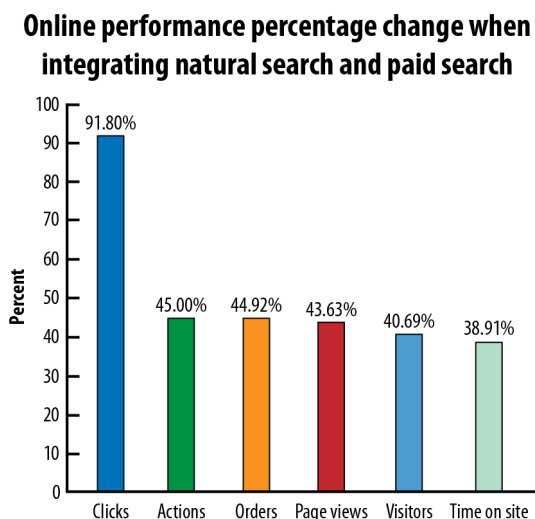
Online performance percentage change when integrating natural search and paid search

- Clicks: 91.80%
- Actions: 45.00%
- Orders: 44.92%
- Page views: 43.63%
- Visitors: 40.69%
- Time on site: 38.91%

FIGURE 1-13. Interaction between natural and paid search

The marked improvement in click-through rate intuitively makes sense. For years marketers have known that the number of impressions a consumer is exposed to will have a dramatic effect on metrics such as retention and likelihood to buy. Google's January 2012 announcement and release of Search, plus Your World will, of course, impact this significantly. It will provide marketers with three different opportunities to create an impression on the user, in the organic results, the paid results, and the Google+ Brand Pages results on the top right of the SERPs.

A search page provides you with more than one opportunity to put your name in front of the user. You should take advantage of this if you can. It is also useful to understand the difference between natural and paid search. Although some users do not understand the distinction between natural search results and paid search results, it is a common belief in the industry that the majority of users recognize paid search results as advertisements.

However, this viewpoint is not universally accepted. Stephan Spencer wrote an article for Search Engine Land that showed the results of an SEO campaign that had a PPC campaign
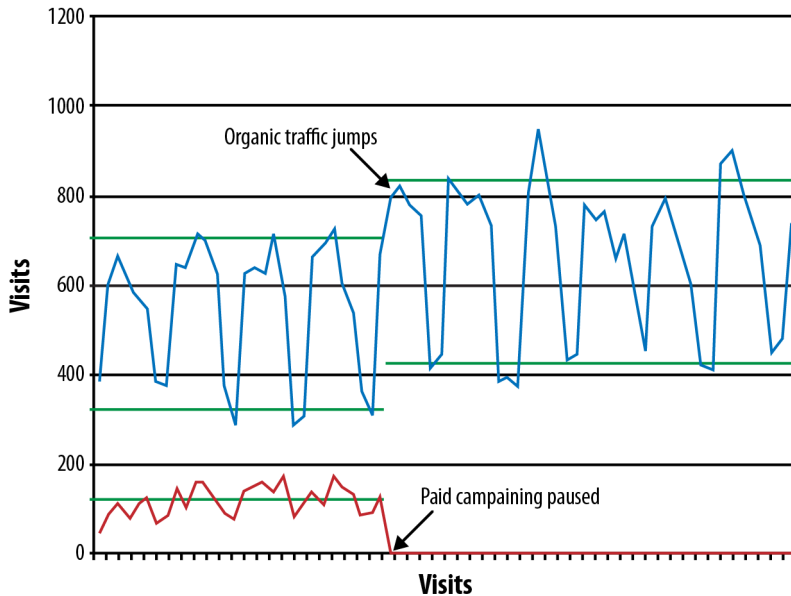
FIGURE 1-14. Interaction between organic search traffic and PPC campaigns

running. As shown in Figure 1-14, organic search traffic went up when the PPC campaign was turned off.

Google also did a study on this, published in July 2011, that showed that organic search traffic did go down when a PPC campaign was also in effect, but that the combination of the organic plus paid search traffic was higher (*http://searchengineland.com/google-study-ppc-ads-do-not-cannibalize-your-organic-traffic-86972*). One can also expect that it will take time for searchers to fully understand what the Google+ Brand Page results are, and how they differ from the organic and paid results. Figure 1-15 shows an example of a Google result including Brand Pages.

Conclusion

Search has penetrated the very fabric of global society. The way people work, play, shop, research, and interact has changed forever. Organizations of all kinds (businesses and charities), as well as individuals, need to have a presence on the Web—and they need the search engines to bring them traffic. As our society moves ever closer to a professional consumer ("prosumer") economy, the ways in which people create, publish, distribute, and ultimately find information and resources on the Internet will continue to be of great importance. This book will investigate further just how search, and therefore search engine

FIGURE 1-15. Google+ Brand Page for the NFL

optimization, is at the center of the Web and is still your key to success in the new web economy.

Search Engine Basics

In this chapter, we will begin to explore how search engines work. Building a strong foundation on this topic is essential to understanding the SEO practitioner's craft.

As we discussed in Chapter 1, people have become accustomed to receiving nearly instantaneous answers from search engines after they have submitted a search query. In Chapter 1 we also discussed the volume of queries (more than 6,000 per second), and Google reported as early as 2008 that it knew of about 1 trillion pages on the Web (*http://googleblog .blogspot.com/2008/07/we-knew-web-was-big.html*). It is likely that this number is now low by one or more orders of magnitude, as the Web continues to grow quite rapidly.

Underlying this enormous data processing task is the complex nature of the task itself. One of the most important things to understand about search engines is that the crawlers (or "spiders") used to visit all the web pages across the Web are software programs. Software programs are only as smart as the algorithms used in implementing them, and although artificial intelligence is being increasingly used in those algorithms, web crawling programs still don't have the adaptive intelligence of human beings.

Software programs cannot adequately interpret each of the various types of data that humans can—videos and images, for example, are to a certain extent less readable by a search engine crawler than they are through the eyes of humans. These are not their only limitations, either; this chapter will explore some of their shortcomings in more detail.

Of course, this is an ever-changing landscape. The search engines continuously invest in improving their ability to better process the content of web pages. For example, advances in

image and video search have enabled search engines to inch closer to human-like understanding, a topic that will be explored more in .

Understanding Search Engine Results

In the search marketing field, the pages the engines return to fulfill a query are referred to as *search engine results pages* (SERPs). Each engine returns results in a slightly different format and will include *vertical search results* (specific content targeted to a query based on certain triggers in the query, which we'll illustrate shortly).

Understanding the Layout of Search Results Pages

Each unique section represents a snippet of information provided by the engines. Here are the definitions of what each piece is meant to provide:

Vertical navigation
> Each engine offers the option to search different verticals, such as images, news, video, or maps. Following these links will result in a query with a more limited index. In Figure 2-3, for example, you might be able to see news items about stuffed animals or videos featuring stuffed animals.

Horizontal navigation
> The search engines also offer other types of navigation elements. For example, in Figure 2-1 you can see that Google offers the option to limit the date range of the content returned in the search results.

Search query box
> All of the engines show the query you've performed and allow you to edit that query or enter a new query from the search results page. Next to the search query box, the engines also offer links to the advanced search page, the features of which we'll discuss later in the book.

Results information
> This section provides a small amount of meta information about the results that you're viewing, including an estimate of the number of pages relevant to that particular query (these numbers can be, and frequently are, wildly inaccurate and should be used only as a rough comparative measure).

PPC (a.k.a. paid search) advertising
> Companies purchase text ads from either Google AdWords or Microsoft adCenter. The results are ordered by a variety of factors, including relevance (for which click-through rate, use of searched keywords in the ad, and relevance of the landing page are factors in Google) and bid amount (the ads require a maximum bid, which is then compared against other advertisers' bids).

Natural/organic/algorithmic results

These results are pulled from the search engines' primary indexes of the Web and ranked in order of relevance and popularity according to their complex algorithms. This area of the results is the primary focus of this section of the book.

Query refinement suggestions

Query refinements are offered by Google, Bing, and Yahoo!. The goal of these links is to let users search with a more specific and possibly more relevant query that will satisfy their intent.

In March 2009, Google enhanced the refinements by implementing Orion Technology, based on technology Google acquired in 2006. The goal of this enhancement is to provide a wider array of refinement choices. For example, a search on *principles of physics* may display refinements for the Big Bang, angular momentum, quantum physics, and special relativity.

Shopping search results

All three search engines do this as well. Shopping results incorporate offers from merchants into the results so that searchers that are looking to buy something can do so quite easily.

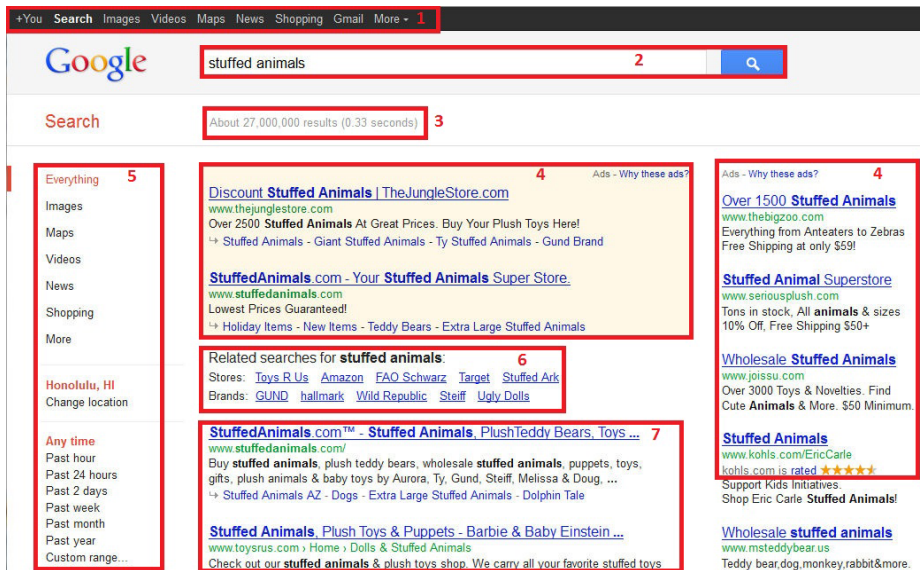Figure 2-1 shows the SERPs in Google for the query *stuffed animals*.

FIGURE 2-1. Layout of Google search results

The various sections outlined in the Google search results are as follows:

1. Horizontal navigation (see top left)
2. Search query box
3. Results information
4. PPC advertising
5. Vertical navigation
6. Query refinement suggestions
7. Natural/organic/algorithmic results

Even though Yahoo! no longer does its own crawl of the Web or provides its own search results information (it sources them from Bing), it does format the output uniquely. Figure 2-2 shows Yahoo!'s results for the same query.
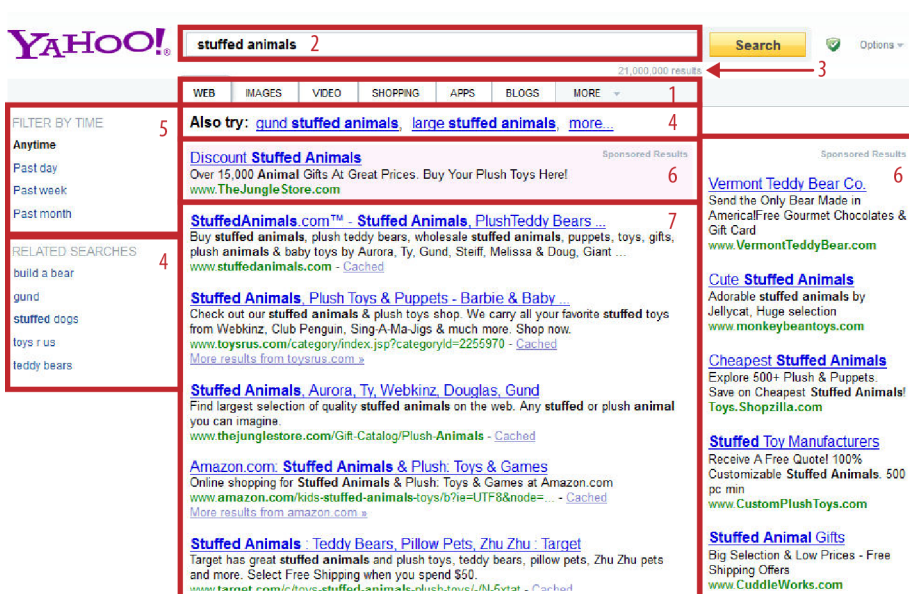

FIGURE 2-2. Layout of Yahoo! search results

The sections in the Yahoo! results are as follows:

1. Horizontal navigation
2. Search query box
3. Results information
4. Query refinement suggestions

5. Vertical navigation

6. PPC advertising

7. Natural/organic/algorithmic results

Figure 2-3 shows the layout of the results from Microsoft's Bing for the query *stuffed animals*.
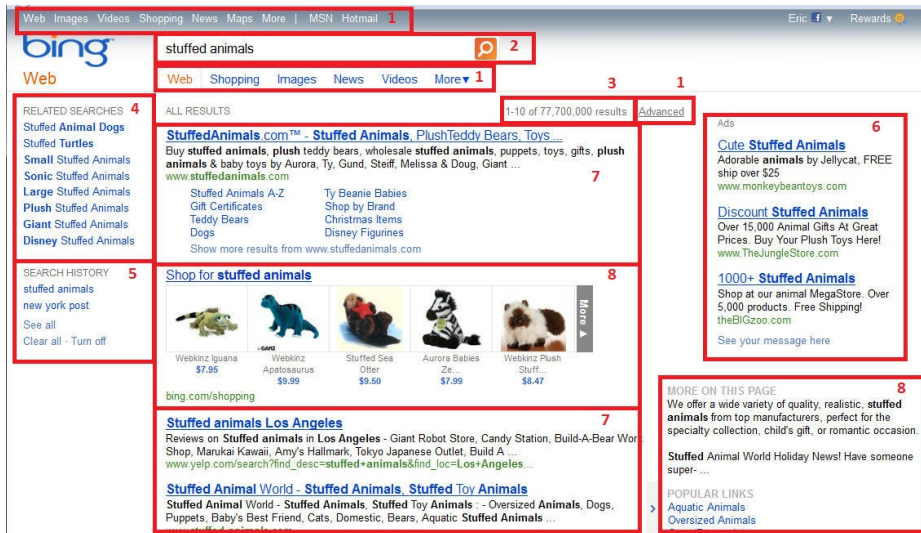

FIGURE 2-3. *Layout of Bing search results*

The sections in Bing's search results are as follows:

1. Horizontal navigation

2. Search query box

3. Results information

4. Query refinement suggestions

5. Vertical navigation

6. PPC advertising

7. Natural/organic/algorithmic results

8. Shopping search results

Be aware that the SERPs are always changing as the engines test new formats and layouts. Thus, the images in Figure 2-1 through Figure 2-3 may be accurate for only a few weeks or months, until Google, Yahoo!, and Microsoft shift to new formats.

How Vertical Results Fit into the SERPs

These "standard" results, however, are certainly not all that the engines have to offer. For many types of queries, search engines show *vertical* results, or *instant answers*, and include more than just links to other sites to help answer a user's questions. These types of results present many additional challenges and opportunities for the SEO practitioner.

Figure 2-4 shows an example of these types of results. The query in Figure 2-4 brings back a business listing showing an address and the option to get directions to that address. This result attempts to provide the user with the answer he is seeking directly in the search results.

FIGURE 2-4. Local search result for a business

Figure 2-5 shows another example. The Google search in Figure 2-5 for *weather* plus a city name returns a direct answer. Once again, the user may not even need to click on a website if all she wanted to know was the temperature.

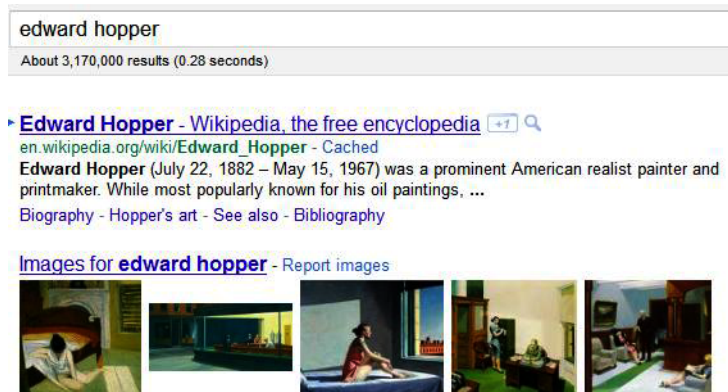*FIGURE 2-5. Weather search on Google*

FIGURE 2-6. Google search on an artist's name

Figure 2-6 is an example of a search for a well-known painter. A Google search for *Edward Hopper* returns image results of some of his most memorable works. This example is a little different from the "instant answers" type of result shown in Figures 2-4 and 2-5. If the user is interested in the first painting shown, he may well click on it to see the painting in a larger size or to get more information about it. For the SEO practitioner, getting placed in this vertical result could be a significant win.

Figure 2-7 shows an example from Yahoo!. A query on Yahoo! for *chicago restaurants* brings back a list of popular dining establishments from Yahoo!'s local portal. High placement in these results has likely been a good thing for Lou Malnati's Pizzeria.

Figure 2-8 is an example of a celebrity search on Bing.

The results in Figure 2-8 include a series of images of the famous actor Charlie Chaplin. As a last example, Figure 2-9 is a look at the Bing search results for videos with Megan Fox.

At the top of the search results in Figure 2-9, a series of popular videos are provided. Click on a video in the results, and the video begins playing right there in the search results.

As you can see, the vast variety of vertical integration into search results means that for many popular queries, returning the standard set of 10 links to external pages is no longer the rule. Engines are competing by attempting to provide more relevant results and more targeted responses to queries that they feel are best answered by vertical results, rather than web results.

As a direct consequence, site owners and web marketers must take into account how this incorporation of vertical search results may impact their rankings and traffic. For many of the searches shown in the previous figures, a high ranking—even in position #1 or #2 in the algorithmic/organic results—may not produce much traffic because of the presentation of the vertical results above them.
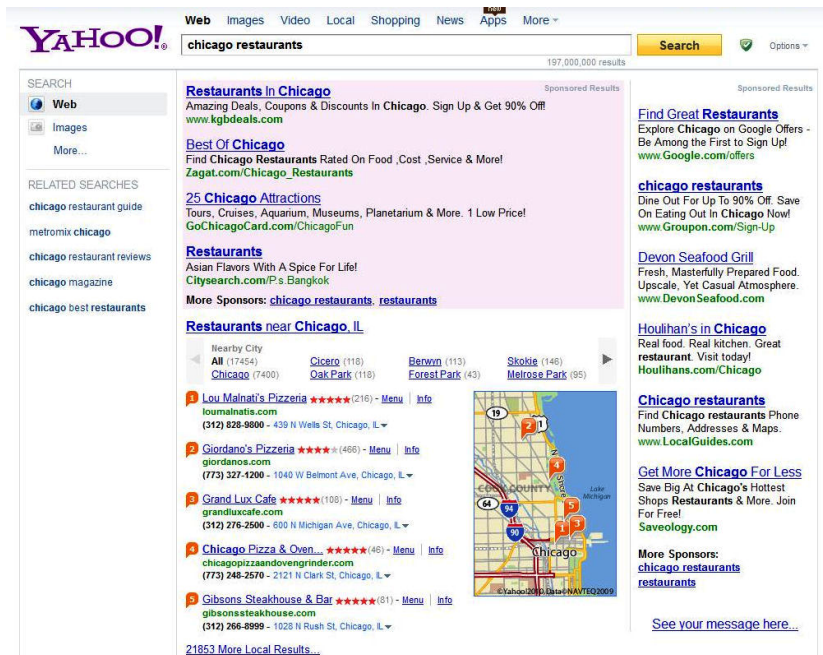
FIGURE 2-7. Yahoo! search for Chicago restaurants

The vertical results also signify an opportunity, as listings are available in services from images to local search to news and products. We will cover how to get included in these results in Chapter 10.

Algorithm-Based Ranking Systems: Crawling, Indexing, and Ranking

Understanding how crawling, indexing, and ranking works is helpful to SEO practitioners, as it helps them determine what actions to take to meet their goals. This section primarily covers the way Google and Bing operate, and does not necessarily apply to other search engines that are popular, such as Yandex (Russia), Baidu (China), Seznam (Czechoslovakia), and Naver (Korea).

The search engines must execute multiple tasks very well to provide relevant search results. Put simplistically, you can think of these as:

- Crawling and indexing billions of documents (pages and files) on the Web (note that they ignore pages that they consider to be "insignificant," perhaps because they are perceived as adding no new value or are not referenced at all on the Web)
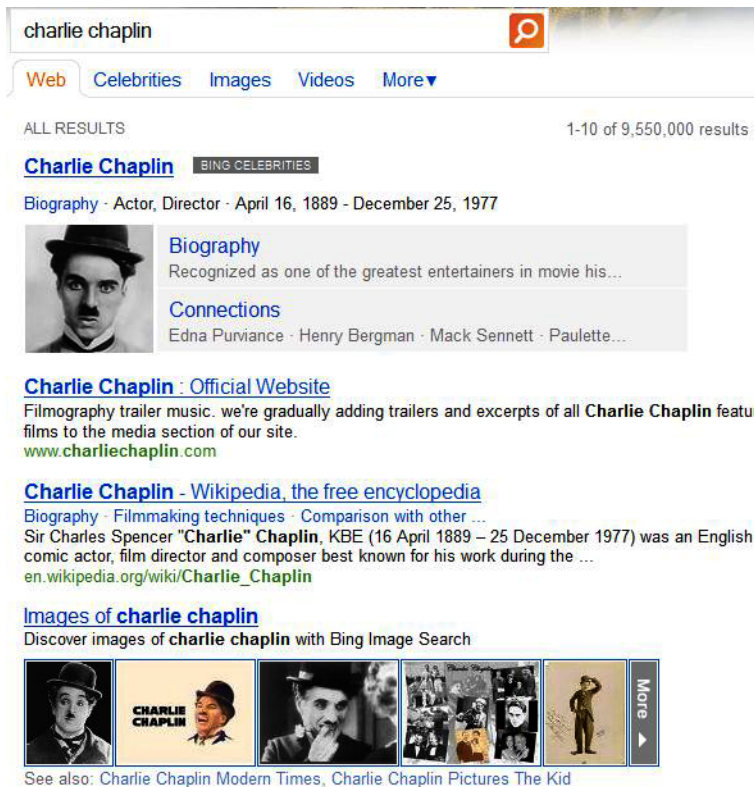
FIGURE 2-8. Bing result for Charlie Chaplin

- Responding to user queries by providing lists of relevant pages

In this section, we'll walk through the basics of these functions from a nontechnical perspective. This section will start by discussing how search engines find and discover content.

Crawling and Indexing

To offer the best possible results, search engines must attempt to discover all the public pages on the World Wide Web and then present the ones that best match up with the user's search query. The first step in this process is *crawling* the Web. The search engines start with a seed set of sites that are known to be very high quality sites, and then visit the links on each page of those sites to discover other web pages.

The link structure of the Web serves to bind together all of the pages that have been made public as a result of someone linking to them. Through links, search engines' automated robots, called *crawlers* or *spiders*, can reach the many billions of interconnected documents.