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REVIEW OF: Peter Morville, Louis Rosenfeld, and Joseph James. *The Internet Searcher's Handbook: Locating Information, People, and Software*, 2nd ed. revised by GraceAnne A. DeCandido. New York: Neal-Schuman, 1999.

by Brad Eden

Are the days rapidly approaching when, as in the TV sci-fi series *Star Trek*, we will be able simply to say "computer" followed by any question we wish and have the answer supplied directly in a helpful and friendly manner by a machine? Perhaps we will, but in the meantime the authors of this book have tried to provide a comprehensive introduction to Internet information retrieval, as well as a guide to the various information sources currently available on the World Wide Web. The authors are well-known pioneers and librarians in the area of Internet information and resources. This second edition attempts to update the 1996 edition that in the rapid progress of Internet technology is now woefully out-of-date.

The book is divided into ten chapters that are written as stand-alone sections of the book, but together describe the current landscape of the Internet. Chapter 1, *Fundamentals of Searching Digital Resources*, provides a working vocabulary for the fundamentals of searching the Internet and some example searching tips and defines types of search features. Chapter 2, *Using the Web to Answer Reference Questions*, offers an overview of different types of informational sites on the Web. Chapter 3, *Metadata: What's it to You?*,

includes a brief description of metadata, current standards, and how metadata can help the Internet searcher. Chapter 4, Bots and Intelligent Agents, introduces bots, spiders, chatterbots, linkbots, and newsbots to the reader. Chapter 5, Using the Internet for Research: Building Web Guides, covers the fundamentals of Internet resource guides and how to incorporate them for conducting in-depth research. Chapter 6, Online Communities as Tools for Research and Reference, examines online communities like usenets, listservs, and newsgroups to obtain information.

Chapters 7, 8, and 9 provide information on virtual libraries, Internet directories, and Internet search tools, respectively. Each of these three tools is defined and extensively examined through examples. This edition covers five virtual libraries, three Internet directories, and eight major search tools. Chapter 10 discusses web rings and geospatial information systems and offers closing thoughts on the changing nature of the Internet. An appendix includes a quick list of all of the URL's mentioned in the text by chapter number for quick reference.

All the authors are pioneers in their approach to information on the Internet. In fact, many of the authors' Web sites are featured in this book. While the inclusion of these Web sites may seem like self-promotion, the quality of these virtual libraries and Internet directories is well-known. Sideboxes appear occasionally throughout the chapters to highlight important statements and tips in the text. Descriptions of resources in Chapters 7-9 provide meta-information such as URL, resource type, use, navigation, scope, searching tips, updates, and contact information. I found the descriptions of Internet search engines particularly helpful. The authors have developed two Web sites to accompany this book: The Internet Searching Center (<http://www.clearinghouse.net/searching/index.html> ([../..../index.html](http://www.clearinghouse.net/searching/index.html))), providing quick access to all three types of searching resources in Chapters 7-9, and the Internet Searcher's Handbook Web Page (<http://www.neal-schuman.com/ish.html> (<http://www.neal-schuman.com/ish.html>)), featuring links organized in the order they are discussed in the book.

I found the writing style to be both scholarly and understandable, so that the book is accessible to the experienced Internet librarian, librarians in general, and even the general Internet public looking for a simple, yet effective, guide to the Internet. Full-page visual representations of Web sites referenced in the text make the book a much easier read than the 172 pages would indicate and assist the reader in focusing on the concise descriptions of each Web site. The chapter on metadata does not correctly name the 15 elements of the Dublin Core, but it does provide a fairly accurate description of the major metadata standards. Overall, I highly recommend this book to librarians as a guidebook to Internet resources and to the general public interested in understanding the Internet in its current manifestation.

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REVIEW OF: James D. Murray. Windows NT SNMP: Simple Network Management Protocol. Cambridge, MA: O'Reilly and Associates, 1998.

by Lisha Li

Composed with three parts and ten chapters, this book thoroughly discusses the Microsoft Simple Network Management Protocol (SNMP). "SNMP is one of the many protocols found in the Internet Protocols suite." (p. 8) Based on his practical knowledge, the author explores the details of how to implement SNMP with Microsoft Windows NT or Windows 95.

Part one is SNMP basics; it includes four chapters. Chapter 1 is an introduction to SNMP. It answers such questions as "Why choose SNMP?", "What is network management?", "What is SNMP?", "What does SNMP offer?", and "What is the relationship between SNMP and Microsoft?" The brief SNMP history gives readers an overview of how SNMP was developed. It also compares different versions of SNMP (i.e., SNMPv1 and SNMPv2). At the time this book was written, SNMPv3 was in development.

Chapter 2 covers network basics; it summarizes the basic components of computer networks (e.g., routers, bridges, hubs, end-hosts, and proxies). It also explains TCP/IP protocols that are used to convey data from one part of a network to another. The seven layers in the OSI reference model are explained in clarity. A figure shows how SNMP protocols are linked to the OSI network layers. A protocol data unit (PDU) is a logical definition for a data packet. A SNMP message can be referred to as an Application PDU (APDU). An example provides an idea of how an ADPU is transported across an Ethernet network.

Chapter 3 deals with network management and SNMP. If you ask ten different people what network management is, you may get ten different answers. That is because network involves different levels of management. This chapter discusses what the differences are among the levels of network management. System management and network management also differ and overlap with each other. A basic model of network management is used to explain how, why, where, and when network management is performed.

Chapter 4 looks at the inside of SNMP: the operational characteristics of SNMP and how management information is logically organized. SNMP has four simple operations named Get, GetNext, Set, and Trap. These operations can perform all network management functions. The internal data structure of SNMP, the data transmission encoding of the data structures, and rules for defining objects within SNMP are expressed in separate "languages": Abstract Syntax Notation One (ANS.1), Basic Encoding Rules (BER), and Structure of Management Information (SMI) respectively. This chapter also discusses managed objects, scalar and columnar Managed Information Base (MIB) variables, the SNMP message, SNMPv1 traps, and the use of a protocol analyzer.

Part two of this book, six chapters, explores SNMP details that help developers to write NT SNMP agent and management code. Chapter 5 describes how to install, uninstall, configure, and test the SNMP service and its components under Windows 95 and Windows NT. Comparisons are made between Windows NT and Windows 95 that help readers decide if the Microsoft SNMP service and Application Program Interface (API) is a right choice for them. Specific procedures are listed to provide a guideline for installing, starting, stopping, removing, and testing SNMP under different operating systems. Examples are shown to explain how to modify the registry file, for instance, OEMNSVSN.INF for Windows NT and SNMP.INF for Windows 95.

Chapter 6 investigates the SNMP APIs, including Extension API, Management API, Utility API, and Service API. The SNMP.H header file and SNMP API data types are discussed in detail along with various examples. Chapter 7 focuses on writing Extension Agents. Many working code examples are included to explain how to implement each SNMP Extension API call and use it in an extension agent. After the creation of an Extension agent dynamic link library (DLL), the author discusses how to install, start, and test the Extension agent. The MIB database is also explored in this chapter along with practical examples.

Chapter 8 examines how to design and implement Trap support in an Extension Agent, as well as how and when to trigger a Trap. Three different methods used to monitor one or more managed nodes for the occurrence of specific events are presented: polling-only, trap-only, and trap-directed polling. These methods can be used for collecting management information and detecting trappable events. Chapter 9 takes an in-depth look at the Microsoft SNMP Management API. The Microsoft MIB compiler (MIBCC.EXE) is introduced, and a figure clearly shows the functional relationships of the Management API. The MGMTAPI.H header file is explained further.

Chapter 10 demonstrates how to write network management applications. The most common types of SNMP management applications include simple management tools, network management applications, network management platform, system management application, and intermediate management systems. Some parameters are noted for double-checking when unexpected problems arise while communicating with an agent or remote destination port. Etiquette issues in relation to SNMP are also addressed, for instance, limit the size of the request messages, spare the agent, go easy on the polling, don't send that trap if no one wants it.

Part three includes four appendixes. Appendix A lists related references, such as books, periodicals, and Internet resources, and commercial and non-commercial SNMP software packages. Appendix B includes all the Microsoft Knowledge Base articles on Win32 SNMP through late 1997. All the requests for comments (RFCs) referenced in this book and listed in Appendix C. Appendix D describes the accompanying CD-ROM and provides a glossary of the terms used in the book.

The book is well organized. From the basic concepts to the technical details, the author uses an easily understandable language and appropriate illustrations to deliver what he wants to tell the reader. Sufficient code examples are chosen to support the ideas or methods mentioned in the book. The appendixes are very useful tools for readers who wish to pursue these topics further. The glossary and the index provide readers with a quick guide to find the definition of a term or to refer to a specific section. This book is very helpful for Win32 programmers who want to implement SNMP management on a Windows NT or Windows 95 system. It may also be useful to system administrators and network administrators.

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REVIEW OF: Michael J. Hammel. The Artist's Guide to the GIMP. Seattle, WA: Specialized System Consultants, 1999.

by Ray Olszewski

The GIMP (Gnu Image Manipulation Program) is a free-software program for the editing of photos and scanned images. It also includes some capabilities for actual image creation, but compared to true drawing programs, these are limited. In programming circles, the GIMP is thought of as a Photoshop work-alike, but

in reality it provides only a limited subset of Photoshop's capabilities. Though the GIMP is, in principle, platform independent, in practice it sees use mainly on Linux and Unix workstations running Xfree86 or some other variant of the X Window graphical user interface (GUI).

In *The Artist's Guide to the GIMP* Michael J. Hammel provides a first-rate introduction to the capabilities of the GIMP and a useful reference for anyone who plans to use it for everyday image manipulation. Hammel is himself an accomplished visual artist whose cover art for the *Linux Journal* is familiar to the community of Linux users. Here, he succeeds in blending his artistic understanding of how to edit images on a computer with just enough programming detail to permit effective use of a tool that, at this point, remains sufficiently rough around the edges to require a bit of skill to set up.

The Guide is organized primarily as a reference tool for GIMP users with sections that follow the organization of tools and options as presented by the program in normal operation. It is, to my knowledge, the only printed reference available for the GIMP, and it serves this role well providing detailed documentation of each option, examples of how to use it, and visual illustrations of what it looks like when it works correctly.

After a brief introduction, Hammel takes the reader through a discussion of each of the "toolbox" selections, ways to use the several methods of selecting an area of a image and the various features available for fine manipulation and correction of colors in the images. He covers as well the complexities of combining multiple "layers" (essentially several independent images) into a composite image, cropping and resizing, and use of the drawing tools included in the program. A brief "Part 2" describes specific filters (the equivalent to Photoshop's Plug-ins) and a scripting technique for combining multiple filters into a composite effect.

While Hammel tries to convey an enthusiasm for the GIMP throughout the book, he does not overlook its shortcomings. Although its support for creation of images for use on computers is excellent, the GIMP is weak when it comes to creating and editing images for use in print media. CMYK color encoding is not supported at the editing stage, and there seems to be no provision for producing color separations. Pantone colors are not supported because of license requirements that are incompatible with the Gnu GPL licensing of the GIMP.

The book itself is not without its flaws, though they are relatively minor. Attempts to incorporate "tutorial" sections are weak giving the feel of an applique reluctantly added at the insistence of an editor. Occasional omissions will puzzle some readers; for example, Hammel describes the GIMP as a "raster" tool, without contrasting that with vector-based graphics software. Occasionally the writing seems a bit dated, as when Hammel refers readers to the "sunsite" archive (this archive was moved to "metalab" (<http://metalab.unc.edu/> (<http://metalab.unc.edu/>)) well before the book's 1999 publication date).

On balance, however, these flaws are minor. The book's strengths are more important. The writing is clear and direct. The publisher did not skimp on its physical quality; sharp and clear full-color plates appear throughout illustrating all the important ideas. The accompanying CD provides both software (the GIMP itself, albeit a slightly dated version, and supplemental tools for operating scanners and converting between image-file formats) and copies of all the book's images giving the reader ample material with which to experiment and practice.

For anyone who wants to learn to use the GIMP software to create useful images, this is an indispensable reference. Experienced Photoshop users will find it a useful learning tool as well, a convenient guide for moving to the GIMP from Photoshop.

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