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REVIEW OF: Ralph Abraham, Frank Jas, and Willard Russell. *The Web Empowerment Book: An Introduction and Connection Guide to the Internet and the World-Wide Web.* New York: Springer-Verlag, 1995.

by Bradford Eden

For those who are just beginning their exploration of the Internet and the World Wide Web, it is easy to get lost in their technical jargon, language, and culture. This book attempts to provide an introduction to the World Wide Web, and to provide new and beginning users with the technical understanding needed to connect to, access, and surf the Internet. The book is divided into three main sections: Part 1, "An Introduction to the World-Wide Web," comprises Chapters 1-5 and introduces the basic concepts of the WWW; Part 2, "Empowerment for the World-Wide Web," comprises Chapters 6-10 and assists new and beginning users in connecting to the Internet; and Part 3, "Beginning UNIX," comprises Chapters 11-16 and is a very concise beginner's guide to UNIX and its commands. Three appendices include a glossary, a "Webography" (sites of interest chosen by the authors), and a bibliography.

By design, the reader may begin at any of the three main sections of the book; in fact, the authors state that one may need to read the section about connecting to the Internet first (part 2) before reading the introduction (part 1). I found this book to be very understandable and user-friendly, a good beginning book for the first-time Internet user and surfer. Everything and anything is explained in detail from acronyms, such as HTML, FTP, and SLIP, to one of the most detailed and best explanations of UNIX commands for the non-UNIX user that I have ever found. I was impressed with the step-by-step instructions for downloading, accessing, and running important software for connectivity in both the Mac and Windows environments.

Numerous illustrations and computer screen examples assist the reader in visualizing the instructions. Chapter 2, in fact, provides a brief tour of the World Wide Web, including glossy color pictures of the computer screen examples taken from the Internet. One of the main problems is that many of the Web sites used as examples in the book may have changed addresses or otherwise not be accessible, due to the changing nature of the Net. Addresses of Internet access providers given in Chapter 6 are also subject to change at any time.

Despite the time value aspect of some of the material, I still highly recommend this book. Part 3, "Beginning UNIX," by itself is a wonderfully concise and instructional section, suitable for the beginning computer user. Part 2 also provides a self-contained guide to Internet connectivity and all its myriad variations, from software to hardware considerations. Finally, Part 1 is a simple yet informative introduction to the Web for the beginning Internet user. All three sections are well thought out, and the book as a whole is an excellent beginner's guide to the Internet and the World Wide Web.

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REVIEW OF: Ray Grenier and George Metes. Enterprise Networking: Working Together Apart. Burlington, MA: Digital Press, 1992.

by Charles A. Schwartz

Although this book appeared four years ago, it is still fairly current covering its long-range subject: social, cultural, and psychological adaptations to computer telecommunications networks in the workplace. The other literature in this area, by contrast, tends to gloss over the need for significant personal and group changes in the use of new technical systems.

Some of the book's value for academic organizations must be inferred because its main subject is reengineering business organizations (particularly operations spread over different time zones and globally distributed resources). Yet the book gathers some interesting research on networking as a social, rather than technical, activity. For example, communication logarithmically declines as distance increases:

[A study found that] 25 percent of technical workers whose offices were next door to one another (less than 5 meters) were likely to talk to each other at least once a week. At 10 meters' separation, fewer than 10 percent were likely to communicate weekly. At 30 meters or more, they needed to reintroduce themselves prior to communications....It appears that only very small groups that can effectively collocate within a few feet of each other will communicate as a natural function of their proximity. Beyond 30 meters, they remain essentially strangers and will find it difficult, if not impossible, to overcome their physical separation. Unless given a long-distance communications medium at their disposal, they simply will not communicate. (pp. 22-23)

However, the potential for both cognitive and cultural barriers against effective communication through computer networks rise nearly exponentially in relation to the number of people involved:

When large projects fail it is usually due to a failure to communicate rather than a lack of competence or technology. Communication--sharing information--can account for up to 90 percent of project activity. Add ten people to a ten-person project and you have only increased the number of people--the nodes--by ten. However, the significant metric is that you have increased the information-sharing potential from 45 ($10 \times 9/2$ links) to 190 ($20 \times 19/2$ links). The 149 new links must be designed, managed, and maintained for project information sharing to be successful. Thus, complexity-as-change as well as complexity-as-size can inhibit networking communications. (p. 51)

The book's general theme--as drawn from the following clip of a company's typical response to a vendor--is one that academic organizations have come to appreciate:

Just one thing: Tell us how the new technology and new work processes will affect our people. How do we know they'll use the new technology? How will it do to make their work lives better? Unless your company is prepared to help us understand the impact of this new technology on our people and operations, we can't take the risk. Come back when you can address the whole situation, not just the technology. (p. 23)

Overall, academic librarians and computing center staff will probably skim the several chapters on networking architecture. However, chapter 9, on the psychology of networking, may be of particular interest; chapter 12 includes a short section on university programs; and chapter 14 has a useful outline on benchmarking an organization's networking capability and commitment.

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REVIEW OF: Steven E. Miller. *Civilizing Cyberspace: Policy, Power, and the Information Superhighway*. Addison-Wesley, 1996.

by Robert Wittorf

The topic is timely, the title is enticing, but the definitions are vague. "Civilizing" in the author's context is the means for regulating "cyberspace" for the "public good." The latter is negatively defined by loss of universal access, domination of "cyberspace" by private political interests, publication and gathering of private information into data banks accessible to and used by commercial interests, censorship, and increasing computer crime.

"Cyberspace" is "...an electronic environment in which data and programs can be seen and manipulated as if they had physical attributes--shape, color, motion." (p.1) As the discussion unfolds, there are many cyberspaces--the Internet, the World Wide Web, future movie and television program delivery, Electronic Data Interchange, and unspecified data transmissions of the future. Indeed, the author identifies cyberspace as a "dream" of the future. His intent is to show the shape the future will take as it develops influenced by current commercial, political, and policy- making entities.

The author depicts this future in considerable, and often dull, detail, given largely without much attribution and with no footnotes or bibliography. From a past where the government participated in, financed, and regulated common carriers, the author now sees government intervention declining and government financing diminishing. The government is releasing its grip on regulating the "cyberspace" industries in order to let private investment develop and control the delivery and content of what the public receives.

The author's vision, the eventual result of current tendencies left to unfold unchecked, is a networked world divided between users who can afford to participate and those left out because of finances or education. It will be a world dominated by vested interests. He wonders whether educational institutions at all levels and their libraries will be able to afford meaningful access, whether free speech will be impaired, and whether computer crime will become rampant and unchecked.

The author sums up his biases:

We--The American people--are not building a national information infrastructure so that a handful of firms can make money from the NII itself. We are building it because of the benefits we hope the entire nation will derive from that the NII makes possible. Achieving those benefits requires policies that lead, slowly but definitely, toward universal service. (p. 207)

Universal service means having use of the tools required to receive, utilize, create, and send basic types of transmitted material. It means getting adequate training to know how to use equipment for the desired results. It means being able to participate in meaningful commercial and noncommercial online activities that make it worthwhile to use the system and allow users to speak in their own voice. (pp. 207-208)

His antidote is simple in its statement, yet difficult in its implementation: namely, that citizen groups should become involved in monitoring commercial activity by a systematic program of data gathering and political involvement with the policy making agencies of government.

I found the larger dialogue often became muddled among discussions of diverse data transmissions: text, financial data, and video and film programming. They are not the same, and government interest in discouraging computer crime is historically greater than its interest in regulating film/video viewing. Besides, public attempts at regulation of the latter have met arguably with limited success. Statements such as the quotation above illustrate the author's tendency to make broad statements of national purpose, for which his book is the only source of which I am aware.

The book's details, as noted, sometimes have attributions, but there are no footnotes or bibliography. The lack of footnoting lessens its credibility, particularly in a work like this which presents a large amount of detail. The book's major value is in provoking public debate and making sure that the future Mr. Miller fears does not happen. Certainly, at the very least, it provides a liberal view and a criticism of current government policy. Readers who agree that government deregulation is bad will probably applaud this book.

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Adding Real Value: The Application of Technology

by Thomas C. Wilson

Occasionally I am struck by personal experiences that present very useful applications of technology--sometimes these experiences even inspire me to recommit my energies to make useful tools available.

Case Study 1: Recently I used a gas card at one of the many truly self-service card-swiping pumps now available in Houston. This is a technology I can get behind, since it allows me to decide whether or not I wish to go inside to purchase my gas. This time for some reason my card wasn't working. Previously I have encountered readers out of order, receipt printers out of paper, or communication problems, all of which irritate me because they defeat the purpose of the technology. In this case, however, I was particularly miffed because my card seemed to be okay. I groused about how there obviously must be something wrong with the reader and how I was going to go into the store and give them a piece of my mind, etc., etc., etc. Fortunately, for my own public image, I was able to get the card to work after several additional attempts. I filled up my tank, went on my way, and chalked it up as another example of less-than-helpful technology about which I would probably write an editorial (editors do that, you know!).

Imagine my surprise a couple of weeks later when I received in the mail a replacement gas card from the company with the following note attached:

You recently used your card and the information could not be read by the electronic scan unit. Please destroy the card number referenced on the front side of the enclosed document. We are pleased to provide a replacement card for your convenience.

I was pleased. Here was a recognizable service that the technology did for me, saving me the trouble of getting a replacement card offline.

Case Study 2: With an increase in the amount of information that companies want to provide directly to customers and a concomitant reduction in personnel, phone call processing systems have grown substantially in use. They offer the opportunity, when appropriately configured, to connect a caller to the correct person or piece of information in a timely fashion.

The airline industry has widely implemented these systems to offer flight arrival information, reservation processing, and marketing highlights. I had the opportunity recently while planning a trip to use one such system. The main interface seemed straightforward and gave clear instructions on which numbers to press for navigating the system. And the company had added vocal warnings about delays due to the high response level for recent discounts. Since I wasn't particularly in a hurry, I followed the directions supposedly to connect to an agent. After pressing the number 4 to await an agent for domestic travel, however, I was informed that I had incorrectly followed the directions, and I was promptly disconnected without any chance to address my alleged offense. I retried it three times just to make sure I was hearing and following directions correctly; each time I got disconnected. Tired of pressing all those buttons, I decided the next time to wait on the line for the default agent--I was afraid this option would put me into on-hold purgatory. Surprise, surprise, in a matter of seconds I was talking to a human (although I didn't perform a Turing test). The agent was not particularly interested in my suggestion that they take a look at their call processing system.

Case Study 3: This month I had the pleasure of visiting Quebec City. One must-see site there is the Musee de la civilisation (<http://www.mcq.org/> (<http://www.mcq.org/>)); I would rate it as one of the best museums I've ever experienced. One exhibit at the time of my visit, Je vous entends chanter, was a tribute to music and musicians from Quebec. The exhibit itself was thoughtfully presented, experientially designed, and technologically appropriate. The museum used radio frequency wireless headphones to present music and commentary to each visitor as s/he perused the exhibit. Each entry had associated with it a zone into which the visitor would walk in order to hear the audio portion of the exhibit. Each visitor could proceed at his/her

own pace, and return to sections that were of particular interest. The floor layout also encompassed the notion of relationships among various styles of music. It was informative, impressive, and intimate--quite an accomplishment using a technology that isn't particularly cutting edge. [1]

I share these case studies from my recent personal experience to remind us that the computing and networking technologies we employ in service to others are not self-fulfilling. Their real benefit is determined not solely by what we select, but also in how we implement and maintain them. "Not a problem for libraries!" you say? Well, how often have we entered techno-religious wars over which solution was best, wasting precious energy needed for real implementation? How often have we purchased technologies only to have them remain in storage awaiting installation? How often have services or tools been unavailable because something wasn't tested completely, someone didn't notice, or inadequate products or staffing were employed? How often have we been seduced by impressive technologies only later to discover their lack of depth to address our challenges?

I'm not devaluing the difficult work that we all perform day-to-day or indiscriminately pointing the finger of blame. Rather, I offer the cautious suggestion that real value is found less in specific technologies than in how strenuously we apply them. Perhaps we could all benefit from spending a little more time creatively implementing useful technologies than we do worrying about how close to the edge we are. And once we have cleared the hurdle of installation, we would do well to invest in listening to those who use them.

Notes:

[1] Behind the scenes, the elaborate computer-controlled audio technology is state-of-the-art. My comments here are focused on the use of rf transmission, an older technology, in such a creative application.

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