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REVIEW OF: Mark Beaulieu. (2002). *Wireless Internet Applications and Architecture: Building Professional Wireless Applications Worldwide*. Boston: Addison-Wesley.

by Ray Olszewski

In *Wireless Internet Applications and Architecture*, Mark Beaulieu has given us an impressive overview of the state of wireless development toward the end of 2001, including the then current views of how the wireless market would develop. Beaulieu examines market and user-base characteristics, application development tools and techniques, deployment of actual networks, and hardware options for wireless devices. In all cases, he combines a breadth of knowledge and a depth of understanding to instruct the reader well in what is possible and what is likely.

For Beaulieu, the "wireless Internet" is fundamentally the provision of services to mobile users who use devices with substantially less power than desktop and laptop PCs. So some wireless technologies, like 802.11 Ethernet, get at most passing mentions, and services like Internet cafes or public Wireless Access

Points for laptop users are not discussed at all. Instead, Beaulieu focuses on the wireless Internet as a fundamentally new way to deliver information, with distinct challenges in content development, presentation form, and pricing.

The book is divided into three broad parts. First, Beaulieu offers an overview of wireless development that is market- and user-oriented. For a nontechnical reader, this is the most useful part of the book. He discusses six basic types of devices for accessing his version of the wireless Internet: Web Phones, PDA-like handhelds, two-way pagers (like the RIM Blackberry), Voice Portals (server-based systems that interact with a voice telephone connection), and Appliances (specialized, single-purpose devices like "Internet radios").

In discussing the range of ways to access the wireless Internet, Beaulieu's focus is on the user and how to create services that typical users will find valuable enough to pay for. He points to successful service introductions, mainly in Japan and Europe, as models for what might someday succeed in the USA. His examples include both the familiar, such as Japan's DoCoMo messaging and "microbilled" service framework, and less familiar offerings, such as a prototype restaurant guide developed by his own company, Digital Lantern.

Unlike most discussions I've read of wireless services in the USA, this one is refreshingly realistic about the reasons why they are less successful here than in Europe and Japan. After the usual bow to the superior technical standards of non-US services, he addresses the relatively high prices of US wireless offerings. He writes, for example:

In most countries, you pay to originate a call. In the United States, the called party also pays for the call, and then pays for data. The U.S. cell phone data rates are among the highest in the civilized world. I am always amazed at my wireless bills and wonder what it will take to convince telcos to lower rates to start the market. (p. 39)

The second and third sections, while also providing both depth and breadth, are considerably less friendly to the nontechnical reader. The second section focuses on application development, discussing both software options and development strategies. For someone with a background in programming and user-interface design (such as me), these sections are superb technical introductions to the selections of tools available, to the specialized design challenges of coping with the limits (low data rates, small displays, slow CPUs, minimal memory and storage) of portable devices, and to the various candidate standards for data organization and server-client communication.

But to a nontechnical reader, this section can be daunting. Take this description of an implementation of Java for Palm PDAs: "If you install the developer's release of the KVM, you will see some optional features are included in this implementation. ... The following features are optional language elements: long, float, double, multidimensional arrays, recoverable handling of error classes, threads, event handling, JNI, class loaders, and finalization" (p. 294). Now don't get me wrong; this is a very good technical description of what that package includes, one that is crystal clear to anyone with the necessary technical background. But it is also representative of much of the writing in this section and, as such, illustrates to those of you with less training in programming how difficult this section will be to read.

The third section focuses on hardware deployment, ranging from the siting of antennas to the expected service lives of new consumer-level devices. To an engineer, I suspect that it is as clear and cogent as the prior section is to a trained programmer. To me, it is ... well, daunting. Even so, it gives me a good overview

of the issues involved in deploying actual networks and devices, even though much of the technical detail is over my head.

In the end, Beaulieu himself best sums up the difficulty of writing the sort of book he has written. In the preface, he writes of his oral presentations in this way: "It seems that the less the audience knows, the more eager we become to teach. I am always tempted to fill them in on the advantages of CDMA, SMS, XML, i-mode, GPS, HDR, 802.11a ... until at some point, I can see that my audience is lost. As Miles Davis once said, 'If you understood what I said, you would be me.'" The book, too, delivers more technical depth than almost any likely reader can handle.

But even with that caution, it is a valuable resource for anyone interested in learning about the ways in which the wireless Internet may develop in the next 5 to 10 years. Beaulieu is enthusiastic about the prospects of these technologies, but he is no Pollyanna about them; he recognizes and, throughout the book, discusses with care, the need to offer truly valuable services at sensible prices. Anyone considering developing services for wireless customers should buy and read this book, as should anyone else with an interest in wireless technologies.

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Review of: Richard F. Bellaver and John M. Lusa (Eds.). (2002). Knowledge Management Strategy and Technology. Boston: Artech House.

by Shirl Kennedy

"Knowledge in a database is like food in a freezer. Nothing ever came out in better shape than it went in."

- Frances Cairncross, The Company of the Future

This book, according to the publisher, "gives professionals a thorough, up-to-date understanding of knowledge management (KM) and details the techniques needed to identify, manage, control the flow of, store, and share access to information." Well, yes and no. I'd have to say it depends on the professional. I'm not sure it's something your average CEO would wade through, but it might be a decent overview for CIOs who need to get up to speed on KM.

The editors, both associated with the Center for Information and Communications Sciences at Ball State University, have put together a series of chapters written by a group of consultants, systems professionals, academics, and other professionals who have expertise in various aspects of this thing called "knowledge management." The book's preface is extremely useful; each of the 12 chapters is summarized in terms of

subject matter and focus, and it immediately becomes apparent that they need not be read in any particular order. If you want to jump directly to the chapter on data warehousing or the chapter on groupware, go right ahead.

Besides presenting "a practical framework for KM" in terms of the relationships among different types of data, the book specifically covers document imaging and management, quantitative and qualitative research, systems architecture, the role of directories and the Internet, and the role of KM in marketing/competitive intelligence. Many of the chapters are liberally sprinkled with case studies; the reader will find that these enhance understanding of what can sometimes be some pretty dense, technical material. Since so many authors are involved here, the quality of the writing does vary in terms of clarity and readability.

I found chapter 6 -- Data Warehousing: The Storage and Access of Distributed Information -- to be particularly well done, from the perspective of a reader who is only vaguely familiar with this topic. It presents an introduction, which explains how we got to where we are today, and then goes on to cover storing, distributing, and accessing data, with several lucid diagrams. The authors, a Deloitte Consulting manager and a Ball State professor, also cover RAID (Redundant Array of Independent or Inexpensive Disks) technology, and discuss how the World Wide Web fits into the data warehousing picture.

This particular chapter has an extensive bibliography. Not all of them do, although the book itself has a good one. It also offers a KM glossary, but some of the definitions are too brief and vague, e.g., "Metatag - Means of identifying data about data." At the back, just before the extensive index, are professional profiles of all the contributing authors; for many of these folks, an contact e-mail address is provided.

The format and content of this book suggests that it might be an effective text for a college-level course in KM. It's definitely not late-night, bedside-table reading material for someone seeking a basic overview of the topic; some of the chapters are far more technical than others. If you go to Amazon.com and search for books on KM, Amazon's "Listmania" feature will present you with several rosters of titles by folks with varying degrees of familiarity with the subject. What's highly recommended by many of these people? *The Complete Idiot's Guide to Knowledge Management*, by Melissie Clemmons Rumizen, Alpha Books, 2001.

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REVIEW OF: John Callender. (2002). Perl for Web Site Management. Sebastopol, CA: O'Reilly & Associates.

by Lydia levins

Devotees of O'Reilly's extensive line of Perl books may find this book surprising, expecting it to be aimed at O'Reilly's usual audience of experienced Perl programmers looking for new clever tricks, in this case tricks that facilitate the tasks of Web management. What Callender provides instead is a beginner-friendly, hands-on introduction to Perl, framed as an extended tutorial. His target audience is readers who, like himself, are "accidental programmers," without the training or inclination to become full-time professional programmers but with a willingness to learn whatever they need to know to solve their immediate problems. Managing a Web site turns out to be a splendid example of a domain where accidental programmers abound, and where--with Callender's able assistance--they can accomplish worthwhile feats in Perl. Yet readers with intermediate skills will find this collection interesting, as well: the text moves fairly quickly and its lucid plain-English explanations cover a surprising breadth of territory for an introductory work.

After presenting an overview of needed tools, including advice on selecting a Web-hosting provider and a quick introduction to Unix, the book works its way through a series of basic tasks for which Perl can be used to automate the creation or maintenance of a Web site. Among these are:

- Processing CGI forms (e-mail gateway, guestbook)
- Analyzing Web access logs
- Checking a site for invalid links
- Generating a large site using templates
- Setting up simple keyword search with SWISH-E
- Registering users for authenticated access
- Building basic databases with DBM

Each chapter builds on the skills introduced to date. Especially for the more complex problems, Callender presents each new script using an iterative approach, demonstrating first a simplest-case solution and then augmenting this initial code gradually with more or smarter functionality, explaining each new bit of syntax when it first appears. Sometimes he presents the simple, long way to do something and then teaches an alternative, more sophisticated short way. In addition to breaking the material down into bite-size chunks, this strategy also gives the beginning reader some experience with the thought processes behind much real-life programming.

A curious side-effect of Callender's tutorial approach is that he often ends up presenting a simplistic programming solution while admitting that it is not the best approach to the problem. This effect is of course more pronounced in the earlier chapters, when his readers have learned only a few Perl constructs. ("The ideal approach would be...? Unfortunately, we don't know how to do that yet.") In most cases he does provide brief pointers, or longer sidebar explanations, suggesting a more advanced approach or identifying an existing module that would be more robust than his own code. However, there is sometimes still a niggling impression that he is teaching the reader to reinvent the wheel, as when he spends three chapters pulling apart the Apache Web log format without ever mentioning by name the existing Perl module `Apache::ParseLog`, or when he spends four chapters demonstrating one approach to templated sites without mentioning the `HTML::Template` module (though he does mention other modules relevant to templates).

Nevertheless, there are other areas where Callender's teaching excels. One of these is his encouragement of good habits: all of his examples feature rigorous code (with `-w` and `'use strict'`), and his discussions of security concerns (including SSH (Secure Shell), taint mode, and file locking) are unusually detailed for an introductory book. He details scrupulously any assumptions inherent in his script logic; his advice on debugging, especially early in the book, manages to be both highly informative and encouraging. He does

make liberal use of existing Perl modules, offering a thorough explanation of how to get them from CPAN, and demystifies the potentially intimidating process of creating your own new module. Overall, his teaching style is informal but quite thorough, with understandable real-world examples that neatly anticipate his students' errors and offer valuable troubleshooting skills.

This book fills an important niche between the basic introductions to Perl, like O'Reilly's Learning Perl ("the llama book"), and the more advanced reference books, like O'Reilly's Perl Cookbook. Task-focused beginners may find it an ideal first book, if they are more interested in accomplishing the kinds of tasks that Callender addresses than in learning Perl from the more standard language-centric approach. Intermediate Perl programmers, especially those who fit the "accidental programmer" profile, are likely to find this book tremendously useful as well.

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