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REVIEW OF: Mark Grand. Java Language Reference, 2nd ed. Sebastapol, CA: O'Reilly & Associates, 1997.

by Craig S. Booher

Six months after publishing Java Language Reference by Mark Grand, O'Reilly released the second edition of this valuable reference tool. An earlier TER review (<http://www.lita.org/ter/ter-4-7.html> (<http://www.lita.org/ter/ter-4-7.html>)) of the first edition applauded its many commendable features. These

included superb organization, thorough cross references in the form of chapter references and an extensive index, and an hierarchical arrangement to the content which assists the reader in picturing the place of each Java element in the overall context of the language. See the previous review for a discussion of these and other noteworthy features found in both editions.

While retaining all of the features commended in the first edition, this second edition updates the coverage to reflect the release of version 1.1 of the Java language. The new material concentrates on the following features:

- the syntax of inner classes
- anonymous arrays
- definition of instance initializers
- syntax for class literals
- definition of final local variables, method parameters, and catch parameters

Despite expansion to cover these new features, the overall structure of the book is essentially unchanged. The only major additions are sections on two new classes in Chapter 10 - 10.2 Byte and 10.26 Void. Byte provides an object wrapper for a byte value (useful for treating a byte value as an object) while Void is an uninstantiable wrapper for the primitive type void. Both new classes are necessary for the support of class literals.

Although these are the only new sections, several other parts of the book have been expanded to accommodate new Java features.

A new subsection on inner classes was added to Chapter 5.3. The introduction of inner classes with Java 1.1 enables the programmer to define classes as members of other classes, just like one can do for variables and methods. The new section describes the various types of inner classes - nested top-level classes, member classes, local classes, and anonymous classes.

Another new feature, anonymous arrays, is discussed in a new subsection of Chapter 4.2 Allocation Expressions. Anonymous arrays are created and initialized without using a variable initializer. Instead, they use instance initializers for any complex initialization.

Instance initializers are sections of code that execute when an instance of a class is created. A new subsection in Chapter 5 describes the syntax for instance initializers.

Chapter 4 was also expanded with a new subsection on the syntax of class literals. A class literal is a new type of primary expression that produces a class object for a specific data type. Class literals were added to Java 1.1 to support the new Reflection API.

Java 1.1 has also added final local variables, method parameters, and catch clause parameters. With their introduction, local classes can access these entities from within the scope of their blocks. Appropriate sections in Chapters 5 and 6 have been expanded to cover the syntax of these new entities.

Finally, two sections of Chapter 10 - Character and Class - were significantly enlarged. The 4 Character class variables described in the first edition have increased to 33 constants. Similarly, the 7 instance methods in the Class class now number 31. Both of these classes are greatly expanded in Java 1.1 to provide support for the Reflection API.

As was true of the first edition, this book is not intended to be read sequentially. Designed to provide quick, succinct answers to specific questions about the syntax and structure of the Java programming language, it will be very useful to those with intermediate or advanced experience with Java.

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REVIEW OF: Garry A. Garrard. Cellular Communications: Worldwide Market Development. Boston: Artech House, 1997.

by Pamela Czapla

Garrard states in the preface that the development of cellular communications spans a little over a decade. To keep up with its growth, recruiters drew largely upon employees in other telecommunications sectors. These recruits and others expressed the need for a single source of information on the development of this cellular communications and the issues it faces. Luckily Garrard rose to the task. Another objective accomplished by this book, common to Artech House publications, is to bridge marketing and engineering concerns.

This title joins the Artech House Mobile Communications series edited by John Walker. Compared to some other publishers, Artech House has a facility for expediting time sensitive books, and this book is no exception. Although Garrard reveals that he started this book in the era of WordPerfect 5.1, he discusses developments as late as March 1997. Granted, several statistics date back a year or two, but considering the size of the undertaking and the amount of statistical material (not to mention tables and figures) Garrard was grappling with, these few shortfalls can be understood.

Garrard's treatise is fairly exhaustive. Although acknowledging that most attribute the beginning of cellular communications to circa 1980, Garrard insists "Cellular is the latest manifestation of radio technology" (p. 1). Thus his treatment begins with the birth of radio a century earlier. Following separate chapters on the history of radio (BC--before cellular) and European monopolies from 1985-1991, Garrard breaks out the details of cellular in Europe, United States and the rest of the world. He then devotes a chapter to mobile services such as personal communications systems (PCN in the UK; PCS in the USA), PMR (Private Mobile Radio), PAMR (Public Access Mobile Radio) and other mobile services acronyms too numerous to mention. The final chapter ponders "Where Next?"

The "Note on the Author" suggests that Garrard embodies mammoth experience in cellular communications. This book confirms it. Garrard's access to historical developments and statistics seems limitless. His intimate knowledge of developments is revealed in his descriptions of meetings and corporate undertakings. He was there.

Fortuitously Garrard not only fathoms cellular communication but also facilely explains complicated developments. Thus endless meetings and conflicting exigencies are lucidly summarized. Although his knowledge of European and American developments appears greatest, he handily discusses developments in other areas such as South America and the Orient. To those who might wonder at the apparent brevity of the chapter entitled "Cellular in the Rest of the World", he acknowledges "It may seem somewhat presumptuous to cover nearly 90% of the world population in a single chapter, but nearly all the countries discussed below have one factor in common--they have adopted technology from the US and Europe and have made little contribution to the development of the cellular industry" (p. 359).

Garrard displays a facility for statistics. Time and again one set of figures is recast to show linkage to developments in cellular communication. Thus world population statistics are linked to penetration levels. Influences such as government, market factors or geography are linked to the growth of cellular, or lack thereof, in a given country.

As noted above, Garrard describes in the preface requests for one source of information on cellular communications. He answered the call. And he delivered.

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REVIEW OF: Janice Winsor and Brian Freeman. Jumping JavaScript. Mountain View, CA: Sun Microsystems Press, 1997.

by Martin R. Kalfatovic

Web pages aren't as easy as they used to be. It used to be enough to throw off a few lines of HTML to create a reasonable web presence. Now users expect a more lively, visually interesting, and interactive page. What tools would be available to make the web-developer's task easier. Enter JavaScript (originally called LiveScript, circa December 1995), courtesy of Netscape and Sun Microsystems.

JavaScript is, properly speaking, not a programming language (as it's more powerful cousin, Java). As an object-based interpreted scripting language, JavaScript is embedded in web pages and executed by your browser. JavaScript can capture form input, perform mathematical functions, control screen layout and design, navigate frames, and generally liven up your pages.

Jumping JavaScript by Janice Winsor and Brian Freeman is an excellent resource for the novice or wizened JavaScript implementor. The authors start with key elements of JavaScript: creating windows and documents, controlling location, working with links, etc. Each chapter introduces new elements and builds on concepts of earlier chapters. Scattered throughout the chapters are "HTML Brushup" boxes that contain helpful hints for both the experienced and novice HTML writer. Each chapter concludes with a "New Terms and Concepts" box that summarizes what was presented in that chapter.

Jumping JavaScript is not for the true beginner. Readers should have some experience authoring web pages, a basic understanding of the hypertext transfer protocol (HTTP), and hours of web surfing under their belt. For those with a basic foundation in programming concepts (such as data types, variables, functions, operators, etc.)--or novices willing to dive in--this will be clear reading. For those without the time or inclination to become full-fledged JavaScript writers, a little perseverance will allow them to pick up just enough concepts to adapt the samples in the book or found on the web for their own websites. [1] Used in conjunction with the wealth of JavaScripts offered by generous authors on the web, Jumping JavaScript is a handy reference tool.

Sadly, web "inventor" Tim Berners-Lee's recent lament that the web was becoming too hardware/software specific (as in "This site best viewed with Netscape/Internet Explorer") is particularly true in regards to JavaScript. Jumping JavaScript is written specifically from the Netscape point of view. Though most JavaScripts will run on Microsoft's Internet Explorer (and other JavaScript enabled browsers), not all will. Additionally, Microsoft has implemented its own flavor of JavaScript, Jscript. A number of key JavaScript concepts (such as the widely implemented "mouseOver" event handler) are mere rumors to Internet Explorer users.

At 1,100 plus pages, this doorstop of a book is not designed for subway browsing. The clear, jargon-light style of Winsor and Freeman will be a welcome relief from those overdosed on geek- speak. The consistent use of varying typography to highlight concepts and the judicious use of graphics and screen captures make the book easy to read.

Three appendices (a brief frames tutorial, a guide to JavaScript predefined colors, and a quick reference) complete the main body of text. The work includes a short, but helpful, glossary of terms and a thorough index. The accompanying CD-ROM includes all the JavaScripts discussed in the book and is compatible with Mac, Wintel, and UNIX platforms.

A highly recommended addition to the web-developer's bookshelf and for libraries with clientele interested in web-authoring guides.

Notes:

[1] For a list of JavaScript resources, see Kalfatovic, Martin R. (1997, Winter) "Half-Caf Java--Using JavaScript to Power Web Pages." LITA Newsletter, 18(1). Available from <http://www.lita.org/newslett/v18n1/edgeweb.html> (<http://www.lita.org/newslett/v18n1/edgeweb.html>). and the Yahoo! "Computers and Internet: Programming Languages: JavaScript" index.

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