

standardization. After quickly reviewing the chemical and physiological theories of color, Imhof reviews the psychological theory of color. Following a classification of colors, Imhof offers specific advice on effective color combinations, demonstrating the practicality behind understanding the theory.

In Chapter 5, Imhof explores the general problem of relief presentation, which basically stems from attempting to represent a three-dimensional surface on a two-dimensional plane. He further explains the differences between a map and a picture, and discusses the goals of the cartographer challenged to present relief. Spot heights and soundings and their significance are covered in Chapter 6. As in other chapters, but particularly in this one, exacting tables inform the reader of precise measures, such as minimum type sizes (for spot height values) for sheet maps by scale.

Chapter 7 is devoted to a short study of skeletal lines, which can serve either as a constructional aid or as an independent form of terrain representation. The significantly lengthier Chapter 8 offers a detailed study of contour lines in just under forty pages. Again, precise tables and illustrations guide the learner in selecting every detail while the text addresses the resolution of various problems, such as what to do when data is absent.

It should come as no surprise that the longest chapter in Imhof's book is devoted to shading and shadows. Chapter 9 progresses from general aspects and graphic procedure through to oblique hillshading with a computer some fifty pages later. Examples of shading and shadows are prolifically and expertly illustrated using multiple angles and degrees. Chapter 10 covers hachures and other related techniques while Chapter 11 devotes nearly fifty pages to rock drawing, including a critical examination of the different methods and prescriptions for which is best for various scales.

Among the initial decisions any cartographer must make is selecting symbolization. Imhof's Chapter 12 refers strictly to topographic symbolization, in keeping with his overall theme. Chapter 13 explores the purpose and possibilities of area color tinting in maps, applying the lessons learned in the earlier chapter on color theory. Chapter 14 explores the nature and effect of the interplay of elements for varying scales of map. In it, Imhof lays out his now classic techniques for allowing clarity of interpretation among layered elements, such as contour lines and text. Chapters 15 and 16 are devoted to map reproduction techniques and to future developments, respectively. Since this is a classic work, these last chapters, while enjoyable and brief, may be the ones of least practical use to the cartographer.

The ESRI Press edition of *Cartographic Relief Presentation* was edited by H.J. Steward for clarity and con-

sistency and is intended to be an affordable volume for the modern student of cartographic method and theory. The result is a study of cartographic relief presentation that is both approachable and at moments profound. The careful balance of words and images conveys the principles of cartographic expression under consideration as clearly as the relief on an Imhof map of the Alps.

GIS Tutorial for Marketing

by Fred L. Miller

2007 ESRI Press; Redlands, California

432 pages, with graphics on every page

Includes 180-day trial copy of ArcGIS Desktop 9.2

Software on DVD

Includes a data CD

\$79.95 US, Softcover, spiral bound

ISBN 978-1-58948-079-7

Reviewed by Eva Dodsworth, Geospatial Data Services Librarian, University of Waterloo

Written specifically for the undergraduate marketing curriculum, *GIS Tutorial for Marketing* is a nine-chapter, hands-on GIS exercise book that guides the user step by step through course-related business scenarios. With each chapter representing content taught in marketing courses, students gain complementary GIS knowledge through theory and practical exercises using ArcGIS 9.2 software. No previous GIS knowledge is necessary, as the book provides an introduction and guided overview of the software program. Although targeted for marketing students, this tutorial makes an excellent resource for professionals in the marketing and business industries. The sample data included with the book provide professionals with a taste of some of the detailed demographic and consumer-based data collected and made available commercially. The book also acts as a comprehensive GIS reference manual and an overall how-to GIS tutorial for those new to ArcGIS. *GIS Tutorial for Marketing* provides readers a broad-based, hands-on resource for learning how to use GIS tools in making marketing related decisions.

The author, Dr. Fred L. Miller, is Professor of Marketing and Telecommunications Systems Management at Murray State University. He has authored many articles on marketing GIS and is the recipient of the 2001 *Marketing Education Review* Best Article Award. His technical knowledge in GIS and professional experience in teaching marketing courses have produced a resource unavailable until the release of this book. Dr. Miller clearly illustrates the value of GIS technology in

the marketing sector, from site selection to customer profiling to service call routing, and he eliminates a barrier many companies face: technical GIS software training. Coursework assigned to students at Murray State and Bellarmine University forms the book's contents, with student feedback considered when revising and refining the exercises.

The software exercises in the book were designed for ArcGIS 9.2 software. A 180-day trial copy of ArcGIS 9.2 is included at the back of the book. A data disc is also included and is required to complete the exercises. The CD consists of sample data from a variety of sources, but all packaged under ESRI's name. Examples include street data from ArcGIS Business Analyst 8.3 (courtesy of Tele Atlas North America, Inc.), population census data from ESRI Business Information Systems (courtesy of U.S. Census), Community Tapestry data from ESRI Business Information Solutions (courtesy of Mediamark data), and much more.

Seven of the nine chapters cover specific topics that are taught in undergraduate marketing courses, while the first two chapters are dedicated to introducing the readers to ArcMap 9.2 and to geospatial data. Specifically, the data covered in greatest depth is ESRI's Community Tapestry Data lifestyle segmentation system. This product classifies households in the United States into sixty-five distinct lifestyle segments. It combines demographic data with housing, lifestyle, and purchasing behavior information to produce profiles for each segment. Also available is the combination of this data with Market Potential Indexes which provide identification of prospective customers based on their attitudes, lifestyle activities, media habits, and purchasing patterns. This sample data is used in many of the exercises in each chapter.

Every chapter defines a marketing concept, a scenario, an explanation of how GIS software can be used to solve the problem, and step-by-step instructions in doing so using ArcGIS. The scenarios cover a range of organizations, geographic areas, and marketing problems, all consisting of real-world situations. The themes covered include Principles of Marketing, Consumer Behavior, Promotional Management/Advertising/Integrated Communication, Marketing Research/eCommerce/Internet Marketing, International/Global Marketing Management, Retailing/Retail Management, and Personal Selling/Sales Management. Examples of the related scenarios include developing a targeted promotional campaign, matching merchandizing strategy of stores to the lifestyle characteristics of consumers, profiling and locating prospective customers, identifying a location for a store, determining optimal routes for salespeople, and more. Within each chapter, the step-by-step ArcGIS exercises are accompanied by full-color graphics, which average two per page. The reader begins with an introduction to the

software program and learns the basics such as changing symbols, classifying thematic data, measuring, and identifying features. With new scenarios, new skills are learned such as buffering, selecting by location/by attribute, as well as calculating statistics. Users will also spend some time learning how to add graphs, create map layouts, join boundary zip codes files to feature class tables, and perform network analysis. After working through the book, the reader will have a fairly good handle on the most commonly used features and tools in ArcGIS.

The purpose of this tutorial is to provide marketing students with a guide that coaches them through solving real-world marketing problems with the aid of a GIS. The author provides common, easy-to-understand marketing-themed scenarios and demonstrates how GIS tools can be used to calculate, filter, analyze data, and display results. The author's objectives have undoubtedly been met, as he provides a thorough demonstration of how one can find solutions to problems and answers to questions. Students without a GIS background will not only gain an appreciation for GIS technology, but will be able to use the concepts learned in their professional careers. Additionally, the easy-to-read-and-follow style of the manual will also attract individuals with no marketing background but with an interest in marketing and business. Students from all disciplines who read *GIS Tutorial for Marketing* will get a crash course in some of the key concepts of marketing. Additionally, this manual is ideal for anybody interested in learning ArcMap. By working with the common tools and features covered, the user will gain the knowledge and practice necessary to utilize, manipulate, and display geospatial data.

The first chapter provides an orientation to ArcMap, covering all the fundamental features of the software. On its own, it provides an excellent overview of all the tools that are necessary to successfully complete exercises in subsequent chapters. What the chapter doesn't cover, however, is GIS theory. It doesn't explain the concept of a GIS, nor does it explain any cartographic fundamentals which may be crucial to those who haven't worked with maps before. Because the manual includes exercises that use demographic data, some best-practices guidelines would be useful for topics in choropleth mapping, projections, explanations of census boundaries, and even proper map-making techniques. The manual teaches users how to complete specific marketing-related exercises using GIS software, but it doesn't provide them with the information literacy skills required for them to answer real-world questions independently in the future. Readers of this manual will complete all the exercises, but will still not know, for example, which classification method to use for quantitative data, how to properly create a map in layout mode, how to access geospatial data, or how

to work with data from multiple sources and possibly different projections and datums. This book assumes that undergraduate business students have fundamental geography knowledge, but that is certainly not always the case; and, in the real world, datasets are not provided clipped to geographical boundaries of interest with symbols and legends pre-set, as is the case in most of the exercises in the book. I think the manual could at least offer links to online resources that cover the theoretical concepts.

There are seven chapters that introduce different business scenarios, and with each scenario GIS is used to calculate, analyze, visualize, or interpret information. The steps required to perform the functions in the program are clearly explained, and the instructions are very easy to follow, with just the right amount of graphic illustration to keep the reader on track. Many times, though, the technical procedures covered in the first chapter are re-taught in subsequent chapters; for instance, a basic step such as adding new data into the frame is taught step-by-step in every chapter. For users who are completing the exercises in order, this becomes redundant and unnecessary. Although the chapters can be completed in any order, it is advised that the first chapter gets completed before all the others. With this being the case, I feel it isn't necessary to re-teach many of the fundamentals that are covered in Chapter One.

The exercises in the manual use geospatial data provided by ESRI and are samples of a collection that ESRI makes available commercially. The data are described at great length, and a lot of effort has gone into demonstrating the benefits of this data for business professionals. It appears as though the exercises have been created to highlight the apparent effectiveness of detailed demographic data for the business sector. Considering the amount of dataset plugging, especially at the end of the chapters when the data are described even further, I often wondered whether the purpose of the book was to teach users GIS software, or whether it was to promote ESRI's data. It's most likely a combination of the two, but if the tutorial concentrated more on educating and preparing the reader to be an independent GIS user, it would have been that much more effective.

Overall, *GIS Tutorial for Marketing* does an excellent job covering the fundamentals of both the field of Marketing and ArcGIS. Although written for the marketing sector, I would highly recommend this book to any individual interested in learning how to use ArcGIS software. All readers can understand and relate to the scenarios described, and the step-by-step ArcGIS instructions are easy enough to be followed by individuals with a variety of technical backgrounds.

The State of the Middle East: An Atlas of Conflict and Resolution

by Dan Smith

Berkeley, California: University of California Press, 2006.

144 pp., 70 maps, 36 pie charts and bar graphs, bibliography and web sources, index

\$19.95. Paper

ISBN-10: 0-520-24868-6; ISBN-13: 978-0-520-24868-7

Reviewed by: Daniel G. Cole

Smithsonian Institution, Washington, DC

This slim volume gives a succinct and analytical presentation of the history and current state of affairs (up to early 2006) for the Middle East as defined by the author. Dan Smith is known for producing other atlases of this type, such as *The State of War and Peace Atlas* (3rd ed., 1997), *The Penguin Atlas of War and Peace* (4th ed., 2003), and *The Penguin State of the World Atlas* (7th ed., 2003). His cartographer on this atlas is Isabelle Lewis, known for her recent work on the *Inheriting the World: The Atlas of Children's Health and the Environment* (2004), and *The Tobacco Atlas* (2nd ed., 2006).

In the Introduction, the author states that the "intention of this book is to open a door for people who are not experts on the Middle East, but who are interested and concerned by the region's conflicts and its prospects for peace" (7). Smith struggles with the geographic definition of the Middle East, finally settling on those countries stretching from Morocco, in the west, to Iran, in the east. He excludes any African countries south of those bordering the Mediterranean Sea, and defends his decision not to include Cyprus and Turkey, especially noting that the latter country is in essence the "meeting point of Europe and the Middle East, not fully a part of either" (11). Smith outlines the organization of the book into three parts: The Shaping of the Middle East (the region's history), Arenas of Conflict (contemporary issues), and The State of the Nations (with thematic and reference maps). A glossary is, surprisingly, placed at the end of this introductory section, along with a short discussion concerning the problem of transliteration between Arabic and Latin script. Illustrating this, Smith provides the example of the BBC Web site listing of twenty-one different ways to spell the Libyan President's last name!

Part I, The Shaping of the Middle East, covers eight topics: Ottoman Empire, European Colonialism, New Middle East after World War I, Decolonization, Arab Nationalism, Formation of the State of Israel, Oil, and the U.S. Presence. Each topic is two to six pages in length, with twenty-five maps and six graphs overall. Smith frequently uses sidebars, here and in Part II, to summarize chronological sequences. The maps and pie charts are designed with a liberal dose of color, and