

formulae in Appendix 5) followed by two phases of operational procedures are then laid out to efficiently and cost-effectively run an air photo business. One noticeable but minor typo pops up in chapter 13 where two different equations are assigned the same number (13.3) on pp. 311 and 317. The authors next provide two chapters on system-based survey navigation, as specifically related to satellite navigation systems, followed by a brief nine-page review of differential GPS with a noteworthy calculation of the cost savings in regard to its use.

The book finishes with several disparate chapters on oblique aerial photography (with oblique scales defined in Appendix 7), airborne laser terrain mapping, and close with current and future developments. Overall, even with the minor criticisms stated above, this book should be required reading for the employees of any aerial photographic acquisition or aerial survey and photogrammetric companies. That said, this reviewer doubts that the book will be used outside of that narrow audience. More traditional air photo interpretation texts will likely continue to dominate in college classrooms.

Community Geography: GIS in Action

By Kim Zanelli English and Laura S Feaster

Published by ESRI Press in Redland, CA, June 2003.

280 pages, with CD-Rom, photos, screen shots, maps, charts, graphs, tables.

\$24.95 softbound (ISBN 1-58948-023-6)

Community Geography: GIS in Action Teacher's Guide

By Lyn Malone, Anita M. Palmer, and Christine L. Voigt

Published by ESRI Press in Redland, CA, June 2003.

133 pages, with screen shots, maps, charts, graphs, tables.

\$9.95 soft spiral bound (ISBN 1-58948-051-1)

Reviewed by Beth Filar Williams, educational library consultant, Durango, Colorado

The softbound book titled *Community Geography: GIS in Action* contains real world examples exploring the use of Geographic Information Systems to answer geographical questions within local communities. The companion spiral-bound *Teachers Guide* integrates the book's case studies with practical community projects students can perform on their own. A CD-ROM is also included in the book containing GIS data for all exercises. Together these resources offer a comprehensive collection of case studies, lesson plans, exercises, and assessment tools any teacher can use in a 5-12 grade classroom or for any one interested in geographically based community issues and GIS.

The authors of the book *Community Geography*, Kim Zanelli English and Laura S Feaster, are both affiliates of ESRI Educational Products. English is an instructional designer and educa-

tor. Feaster is a geographer and educational specialist. Feaster has also co-authored others books including *Getting to Know ArcGIS Desktop*.

The book consists of two parts. Part One "community mapping projects" contains eight modules and utilizes most of the book's space. The first module "The GIS Basics" is a great beginner or refresher exercise of the basics GIS, especially ArcView 3.x. The remaining seven modules tackle one of seven case studies describing community GIS projects completed by students, teachers and community partners through the US and Canada. The seven modules themes are reducing crime, a war on weeds, tracking water quality, investigating point-source pollution, getting kids to school, managing the community forest, and selecting the right location (for a wildlife area). Following each of the case studies are intermediate level exercises related to the module's theme. These exercises offer hands on experience with GIS, data, and analysis relevant to the case study's theme. The companion CD-Rom, included in the book, contains all necessary data and ArcView 3.x projects to complete these exercises. Lastly following the case studies and exercises is a section entitled "On Your Own." These special sections in each module offer tips, ideas, and guidance for creating similar projects in the local community.

Part two of the book "on your own: project planning," illustrates how to build a community GIS project of your own independent of topic. After defining a project framework with some general questions to first ask, the authors' describe in detail the five-step method of the geographic inquiry process. These steps are:

- ask a geographic questions
- acquire geographic resources
- explore geographic data

- analyze geographic information
- act on geographic knowledge

This five-step process is first introduced in the “how to use this book” section at the start of the book, explaining how all the unique case studies are organized around this geographic inquiry process. With a new table of tasks and suggestions for each of the five steps, the authors’ provide an easy method for applying the knowledge gained in the case studies to creating a local community project with GIS. The book concludes with a list of references and resources, listed by module, and installation guides for the CD-Rom.

The *Teachers Guide to Community Geography: GIS in Action* presents “how-to” exercises for teachers seeking to apply the book with students in the classroom. Written by teachers and tested in classrooms, this guide anticipates questions and issues that may arise within all eight modules of the main book.

The authors Lyn Malone, Anita Palmer, and Christine Voigt are also co-authors of another ESRI book *Mapping Our World: GIS Lesson for Educators*, winner of several geographic educational related awards. Malone specializes as a consultant in educational application of spatial technologies. Palmer is an educational technology consultant. Voigt is a technology coordinator.

The general purpose of this *Teachers Guide* is to provide resources for educators using the book *Community Geography* to complete many of the “on your own” projects. Included in the guide are lesson plans, assessments, rubrics, tips for teachers, and correlations to national geography standards as well as science and technology standards.

The layout of the *Teacher’s Guide* correlates to the eight modules in the book. Each mod-

ule section consists of a lesson plan for teachers to use in their class, corresponding to the theme of the case studies in the book.

The lessons are structured giving an overview, time estimates for each part of the lesson, materials needed, standards addresses (for both middle and high school), objectives, GIS tools and skills needed to complete this lesson, the geographic inquiry steps, lots of teacher notes, and assessments (for both middle and high school) – including black and white copies to print for students if needed for a particular module. Following the lessons, each module has an “on your own” section, similar in theme to the “on your own” section in the book. In the guide, the “on your own” section is much more detailed, with objectives and teacher notes, and stressing a more local focus. While the book provides general information for anyone to read, discuss, or initiate, when asking a geographic question and applying it to their local, the guide is more of a classroom based activity to have individual students, groups or a class complete.

Following the modules in the *Teacher’s Guide*, are a great list of references and resources – some online and other print resources. Both general resources are listed as well as resources by module. A table lists the 18 National Geography Standards and how they correlate to each module. Another table lists both the National Science and Technology Standards and how they correlate to the modules. All of these tables show both the middle and high school standards separately so teachers from 5-12 grades can easily use it. The last section of the *Teacher’s Guide* contains the answer keys to any assessments within the book.

Requirements to efficiently use these resources, includes a computer running Microsoft Windows or Apple Macintosh, ESRI’s

ArcView 3.0 (or higher) software (and license) and an introductory knowledge of GIS and/or ArcView. More information on purchasing this software can be found online at: <http://www.esri.com/shop>.

This book can be used alone as a resource for those seeking to learn more about community GIS projects, as a supplemental text in a college course, or as GIS practice using the data on the CD-Rom and related exercises. The book can also be used as a resource kit along with the *Teachers Guide* for educators and students in any middle or high school environment. Orders can be placed with ESRI for classroom set with multiple book copies and one teacher guide. Further resources are available online at <http://www.esri.com/communitygeography/>. This web site included information on the book(s), an online discussion forum, FAQs, updates, internet resources for each module, access to online software, GIS educational training opportunities, and an online store for purchases.

English and Feaster, the authors of *Community Geography* used actual case studies in schools with over 200 people participating overall. Having applied and examined the activities before publishing the book provides comfort to anxious users. The lessons have been tested in classrooms. English and Feaster thank all those who were so inspired to learn and use GIS to better their own communities, and in turn helped them with the book’s content. The authors’ are to showcase some of these amazing student accomplishments with GIS in the community, as well as, draw on other to be creative, dedicated, and enthusiastic toward community geography and GIS. In the author’s acknowledgment they state “it is not necessary to be a GIS professional to embark upon

a GIS project that provides great benefits to the community.”

Jack Dangermond (president of ESRI) wrote an insightful forward for the book where he tells his “tree story.” Before ESRI was a thought, when he was just a young adult, Dangermond was involved in community geography projects such as those described in the book. He entered a contest on “Redlands Beautification” and won. Today the trees planted in the town center still shade shoppers and make a clear difference in the community. Dangermond implores young people to use their imaginations; ask, explore, analyze; and make a difference in the world. The authors mention this story stating that even a small community project can make a lasting significance in a young person's life and community.

The book's organization allows the user to skim and jump right into the most interesting or relevant module. Studying water quality or air pollution? Jump right to these specific modules. Flexibility, well organization, and ease of use are strengths of the book. The seamless way both the book and guide fit together provides convenience to use as a package for any educator with a basic GIS knowledge to apply in their classroom. Though these two companion books are written by different authors, the book's acknowledgement states that all the authors contributed from planning together to creating the “on your own” and exercise sections, allowing a flow between the two. Uses are not only for a 5-12 classroom setting, but also as supplemental modules or readings for college students, readings or activities for an interested individual or for a local community organization wanting to complete a local project. The case studies might simply be read as example to students or community groups demonstrating how other youth have affected their

communities.

The negatives of this book are its technology requirement. Of course to complete any of the exercises or activities, a computer running ArcView 3.x is a must. In a classroom setting, in order to have a class complete these activities, a lab with licenses for ArcView on each computer must be purchased. Many school districts may not see the benefits of the cost and therefore making the use of these resources ineffective or unreachable. A community organization or an individual desiring to use this book might also be turned off by the cost of the software.

Another negative is the ArcView 3.x software. Most colleges and professional GIS users run newer versions of ESRI's ArcView, called ArcGIS, almost a different GIS package. Though most data would still be compatible, wouldn't it be better to teach students the most used and most recent GIS package on the market? Perhaps the simplicity of ArcView 3.x would actually be beneficial for beginning GIS users, but several GIS professionals have mentioned this aspect as a drawback for purchase.

Another aspect, which could be either positive or negative, depending on one's view, is that both these resources are an all-around ESRI product. The creators of the book – thought not the guide – both work directly for ESRI and the ESRI Press published both these resources. ESRI dominates the GIS market, so it makes sense that the book would use their products and be produced by ESRI. Some GIS users complain of the control ESRI has on the GIS world and would not purchase this resource for that purpose only. Others would be pleased to have the standard, simplicity of using an ESRI product known to be sound and efficient.

The authors of the *Teachers Guide* are well-established educators in the world of Geography. Another

strength of these authors is for publishing a well received book called *Mapping our World*. They are not ESRI staff but actual teachers who have worked with students and/or other educators and possess the real-world educational perspective on what can and cannot be accomplished in a classroom. They have also worked the guide's exercises and tried to anticipate needs, issues and questions that might arise from implementation. The positive result is a teacher's guide from a teacher's perspective.

They have aligned lessons with national standards and included lots of resources and tools for teachers. If the *Community Geography* book is purchased with the intent of classroom use, then the *Teacher's Guide* is a must purchase companion. The structure is exactly like that of the book, allowing the ease and flexibility of use and the guide's organization to apply to both resources. The themes, the lesson, activities etc. all correlate in both resources. These two resources really are a companion set to be used together in a classroom.

Gilbert Grosvenor (chair of National Geographic Society) wrote an insightful forward for the *Teachers Guide*. He suggests that once students learn more about geography it will appeal to their natural curiosity about the world. As toward the purpose of this book, he states sad but true facts about the lack of geographic knowledge in people in general such as after the 9/11 attacks on the US, “83% of ...18-14 year olds could not find Afghanistan on a world map...” Other facts such as these are used to promote and inspire education to the importance of geography knowledge in education. Applying this to community geography, if the youth cannot find a place on a map how can they see relationships between themselves and other, understand current events, and recognize the issues globally that affect their local community?

This rousing forward from Grosvenor intends to positively inspire use of this book.

If the intent is not for classroom use, then the *Teacher's Guide* might be only a supplemental consideration. For local community groups or individuals, the teachers guide is more of a classroom text and perhaps not relevant – with tests and rubrics – to an individual. Other negative aspects of the guide are those similar to the book with the ESRI influence making ArcView a necessity to use the guide adequately and the technology requirements..

A last positive note for both resources, as mentioned earlier, is the website where users can go free of charge to peruse other online resources. The *Community Geography* (both resources) online site gives Web sites list by module, varying for the two resources that can be used as supplements. A positive aspect of online supplements is the ease at which the most recent updates, notes, studies or tips can be quickly disseminated to users. Also online is a discussion forum area, where users can post questions, ideas, or suggestions to share in a threaded discussion with others. Though no questions were posted yet, I imagine more people taking advantage of this as these resources get better known and used.

In the spirit of “think globally, act locally” the authors of both these companion resources have inspired me to take a more active role in promoting the use of GIS as a tool in implementing community projects. Anyone with community interest in mind, and general GIS knowledge, can gain much from using these books. As a practical how-to guide or as a philosophical global expansion of education in a “classroom with no wall,” this guide can be used to address global issues at home and prepare young people of today to be decision makers of tomorrow. I

recommend the book *Community Geography*, to anyone interested in learning more about GIS's practical use in a local community: running a Girl or Boy Scout troop? Working with a nonprofit nature studies organization? Or, simply with your own children in your own house? Many opportunities offer themselves as applications using this resource. I recommend the *Teacher's Guide*, along with the book, to any classroom teacher seeing the necessity of GIS and encouraging students to work on complex issues applying them to their day-to-day lives and local communities