



## Book Reviews



### **Digital Photogrammetry. Volume 1.**

*By TONI SCHENK. Terra Science, Laurelville, Ohio, 2000.*

*ISBN 0 9677653 07 perfect bound,*

*ISBN 0 9677653 15 case bound.*

*152x227mm. ix + 428 pages. Price \$US 49.00 softcover (perfect bound),*

*\$US 69.00 hardcover (case bound).*

*Reviewed by Yi Dong Huang, University of East London*

The death of photogrammetry has been rumoured. A good way to scotch this rumour is to write a book on the subject reminding people of its continuing depth and breadth. Toni Schenk has done so. He has written two volumes on the newest subset of photogrammetry - digital photogrammetry. Volume I is reviewed here. Volume II is scheduled to be published by end of this year. As a first textbook in English devoted to digital photogrammetry, it will be welcomed by all teachers, students and professionals involved in the subject. It will contribute to the much needed shift of emphasis of photogrammetric teaching and training towards digital photogrammetry. Not only will it influence the scope of teaching in photogrammetry but it will also provide material.

The book has a distinct research flavour, reflecting the research volatility and youth of the field. The author's twelve years of teaching experience in digital photogrammetry at graduate level and his active involvement in its research enable him to detail many advanced issues and to include the most up-to-date research outcomes in the book, as well as enable readers to share his visionary views. The inclusion of background subjects down to human vision, radiometry and photometry as chapters provides the reader with a broader knowledge base to support further study and research in this field. The book is, therefore, recommended as a must-buy for graduate students, teachers and researchers involved in photogrammetry. Having said that, many fundamental parts are quite readable by, and suitable for, undergraduates who are less committed but know how to pick and mix. Plenty of numerical examples are helpful to understanding. The summary, the problem section and the reference list at the end of each chapter are favourable to self-teaching.

Volume I of the book contains three parts dealing with 'Background', 'Fundamentals' and 'Automatic orientation procedures' respectively. There are 15 chapters in total.

Volume II is planned to cover automatic aerial triangulation, reconstruction of surfaces from different sensors, generation of orthophotos, and object recognition.

The overall presentation of the book is satisfactory. It makes successful use of extended captions for figures, italic for examples and boxes for important equations. Typographic errors are, unfortunately, a little more numerous than average. Repetitive paragraphs are obvious in quite a few places. The whole volume does not look as compact as one might expect, which may be attributed to the iterative structure of the book combined with strict use of a head and a tail for each chapter, or even section. As to the scope of the book, in your reviewer's opinion, calibration of digital cameras and scanners should not have been omitted and a chapter should have been given to visualisation to cover draping, animation etc, which are now functions of many DPWs.

Despite the errors and preferences mentioned above, there is no doubt that the volume is a very competent compilation of knowledge in the covered topics of digital photogrammetry. It is very comprehensive, timely and inspiring. It can be used as a start-up book by new researchers as well as providing a valuable source of reference for experienced researchers in digital photogrammetry. People from other disciplines may read it to understand the state of the art as well as the basics of photogrammetry. Photogrammetrists may read it to open up their minds to insights from many related disciplines, which is crucial for the sustainable growth of photogrammetry. Some potential buyers of the book may feel it a pity that the operational core they are most interested in, such as, orientation, DEM or orthoimagery, is split between Volume I and Volume II. Nevertheless, for the overall high quality of the book, they are still encouraged to join the majority who will give Volume I a warm welcome and will look forward to the publication of Volume II.

### **Neumaier Award Open for Application**

The Institute of Photogrammetry and Remote Sensing of the Vienna University of Technology will grant two two-year PhD-scholarships. These grants start 1 March 2001. Subject areas are: photogrammetry, RS, GIS, Geodesy, Cartography as well as application oriented mathematics, physics and computer sciences. Applications can be submitted until 1 December 2000.

**Actual information can be found at: <http://www.ipf.tuwien.ac.at/news.html>**

## Monitoring Land Supply with Geographic Information Systems - Theory, Practice and Parcel-Based Approaches

*Edited by ANNE VERNEZ MOUDON and MICHAEL HUBNER. John Wiley and Sons, 2000.*

*ISBN 0-471-37163-7. 161x242 mm. xii + 335 pages. Price £58.50 hard bound.*

*Reviewed by Peter Dale, Department of Geomatic Engineering, University College London*

Given the global pressures on the Earth's surface due to population growth and human ambition, any attempt to find new ways in which to improve the management of that most fundamental of all resources - the land - must be welcome. The need for improved land management is particularly acute in urban areas. Already more than 50% of the world's human population live in towns and cities, a proportion that is due to increase to around 65% over the next two or three decades. Good useable land is now a scarce commodity and its misuse is a crime against humanity. New technologies, and especially geographic information systems (GIS), offer a way forward in that through better information we should be able to reduce some of the risk when making decisions about how best to use the land.

Because they can deal with spatial relationships, GIS are ideal tools to help in the stewardship of the land. Hence a study that focuses on the use of GIS in, for instance, monitoring land supply must be welcome. Unfortunately, in spite of its title, this book is not about GIS; nor is it about the Big Picture since it focuses exclusively on the United States. It says little about the techniques for gathering data needed to monitor land supply, apart from a brief piece of hyperbole on the wonders of remote sensing. There are some useful observations about the problems of data classification (is a golf course a commercial use of land or recreational?) but in general this book is selective in what it covers. It provides a useful review of some of the prac-

tices in parts of the United States and as such makes a small contribution to our understanding of global issues.

The text has been divided essentially into four sections. The first gives a theoretical framework written by the editors very much from a planner's perspective. The second looks at three case histories, each written by lead authors with a critique by two referees. The third gets closer to the title of the book by looking at some specific technical and institutional topics. Finally there are two substantial appendices, one reviewing the findings of a national survey of local and regional planning agencies and the other summarising eleven cases derived from a national review of land supply monitoring programmes.

In the second section, Nancy Tosta offers a critique on 'issues and opportunities presented by urbanism' and writes, "... attempts to model such complex behaviour require that certain variables be selected and analysed, and others ignored. The variables that are ignored are more likely to be those that are difficult to measure, even though they may be more important." How true! GIS allow all sorts of data to be integrated, analysed and displayed but bad data and incorrect data modelling will almost always produce bad answers. This message, though embedded in the text, does not emerge with sufficient force. There is too much theory and too much soft analysis. But that is the fault of the subject more than the editors who have produced a well-written book, albeit with a misleading title.

### Global Environmental Databases (Volume 1)

*Edited by R. Tateishi and D. Hastings  
An ISPRS TC IV/6 Publication*

Volume 1 of 'Global Environmental Databases' was officially released at the XIX ISPRS Congress at Amsterdam. Its first appearance was at the General Assembly on July 16, where a copy was distributed to each ISPRS member delegation. Copies of the book are \$30, from Geocarto International Centre, G.P.O. Box 4122, Hong Kong, E-mail: geocarto@geocarto.com Tel: +852-2546-4262 Fax: +852-2559-3419

We plan to publish Volume 2 in 2001 and welcome any candidates for planned chapters or additional chapters. We welcome your reaction at the latest by 31 October 31. Please contact:

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