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Key Concepts and Techniques in GIS

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Jochen Albrecht

Key Concepts and Techniques in GIS

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PREFACE

GIS has been coming of age. Millions of people use one GIS or another every day, and with the advent of **Web 2.0** we are promised GIS functionality on virtually every desktop and web-enabled cellphone. GIS knowledge, once restricted to a few insiders working with minicomputers that, as a category, don't exist any more, has proliferated and is bestowed on students at just about every university and increasingly in community colleges and secondary schools. GIS textbooks abound and in the course of twenty years have moved from specialized topics (Burrough 1986) to general-purpose textbooks (Maantay and Ziegler 2006). With such a well-informed user audience, who needs yet another book on GIS?

The answer is two-fold. First, while there are probably millions who use GIS, there are far fewer who have had a systematic introduction to the topic. Many are self-trained and good at the very small aspect of GIS they are doing on an everyday basis, but they lack the bigger picture. Others have learned GIS somewhat systematically in school but were trained with a particular piece of software in mind – and in any case were not made aware of modern methods and techniques. Mostly, however, this book addresses all the others: those who have to distinguish between, on the one hand, the claims and promises of software vendors and job applicants alike, and on the other hand the realities and prospects of the marketplace. In other words, this book is aimed at decision-makers of all kinds – those who need to decide whether they should invest in GIS or wait for GIS functionality in Google Earth (Virtual Earth if you belong to the other camp), as well as personnel managers who need to read up on the topic in preparation for interviewing a posse of job applicants.

This book is indebted to two role models. In the 1980s, Sage published a tremendously useful series of little green paperbacks that reviewed quantitative methods, mostly for the social sciences. They were concise, cheap (as in extremely good quality/price ratio), and served students and practitioners alike. If this little volume that you are now holding contributes to the revival of this series, then I consider my task to be fulfilled. The other role model is an unsung hero, mostly because it served such a small readership. The CATMOG (*Concepts and Techniques in Modern Geography*) series fulfills the same set of criteria and I guess it is no coincidence that it too has been published by Sage. CATMOG is now unfortunately out of print but deserves to be promoted to the modern GIS audience at large, which as I pointed out earlier is just about everybody. With these two exemplars of the publishing pantheon in house, is it a wonder that I felt honored to be invited to write this volume? My kudos goes to the unknown editors of these two series.

<author signature>