Digital Land: Integrating Technology into the Land Planning Process

James L. Sipes and Mark S. Lindhult. John Wiley & Sons, New Jersey, 2007.



Review by Shaun Coffey

In recent years the use of new tech-

nologies by decision makers in the land planning arena has increased immensely. Applications such as computer-aided design (CAD) and geographical information systems (GIS) now play a fundamental role in the sustainable management of natural and physical resources worldwide. The emergence of a home-user GIS database on most Council websites throughout New Zealand provides clear evidence of its growing importance. Sipes and Lindhult through consultation with numerous professionals and consultancies have documented in *Digital Land* what tools are being used in practice. Chapter 1 provides a basic introduction to land use planning, concepts of digital data, and the stakeholders commonly involved in land use issues.

To ensure that the use of digital applications produces reliable results, the data must be both appropriate and of high quality. Chapter 2 delves into this idea by exploring the nuts and bolts of what is valid data and how it can be collected. Concepts discussed include metadata, geospatial data, satellite and aerial imagery, adjusting images, searching for data, site surveys and global positioning systems (GPS). A description of common programmes such as Google Earth, NASA's World Wind, and Microsoft Live's Map Search explains the complexities behind these simple applications. One thing that readers will find especially helpful (most relevant to those searching for American data) is the large list of sources provided from which data can be obtained. This includes both governmental and non-governmental organisations.

Chapter 3 covers the important aspects of sharing, storing, and managing data. Anyone who has any experience of working with digital data will testify to the importance of ensuring data is managed in a well organised way. Sipes and Lindhult discuss a variety of concepts, ranging from managing data on a single home based computer to managing data in large shared networks that can be accessed and modified from offices throughout the world.

Brief explanations of a range of different data processing applications are given in chapter 4. These range from your simple word processors and spreadsheets, to project management software, and the complex CAD and GIS applications. Ideas of how these relate to planning, landscape architecture, architecture, urban design, and historic preservation are given which gives some basic information to those in the relevant professions.

Like several chapters in the book, chapter 5 takes on a very wide scope aimed at outlining the integration of digital data in the decision making process. Much of the information is based on the outputs that can be produced through the digital applications with an emphasis placed on map making and image production. Methods of integrating the related but fundamentally different components of CAD and GIS (an extremely difficult process), and outlining their differences is the second key theme of the chapter. Following on from this is an overall summary and conclusion of some of the main things to take out of the book.

Without doubt one of the greatest strengths of this book is the use of literally hundreds of images. These images have been predominantly acquired from the work of American professionals and provide useful examples of technology in action. I found that this helped to clarify the concepts being explained and rectify some of the confusion created by the authors' writing style. As well as this, a large number of case studies (American based also) provided useful examples of where integration of technology and land based decision making had proven successful.

All the information discussed provides a valuable overview of modern technologies. It should be noted however that this text is not suitable for those who are looking to learn in-depth information about specific applications such as GIS, CAD, computer animation, and so on. Those looking for such specifics would be better suited to text books focused solely on the relevant application, or publications released by software developers. I would also warn anyone planning on reading this book that the amount of topics covered and the brevity in which they are explored can at times make the chapters seem shambolic. This has no doubt occurred due to Sipe's and Lindhult's desire to cover as much territory as possible in so few pages. While to many this will prove useful, to others the constant sight of sub-headings will become highly frustrating.

Despite the lack of specific information given in *Digital Land*, Sipes and Lindhult clearly achieve their objective of providing an understanding of the digital data, tools, and processes relevant and beneficial to the land planning process. This text deserves its place on many bookshelves and is best suited to professionals and decision makers at the exploring stage of considering the possible uses and benefits of technological applications, as well as students and members of the public who have a general interest in this field.

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