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THE BOOKWORM
by Peter Salus



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the bookworm

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Every so often, rather than lots of brief comments, I spend time on a book or two. This month I'm devoting the column to three items, which are, quite simply, outstanding.

The Universe of the Net

Mapping Cyberspace is a brilliant attempt at grappling with the representation of what has been called "cyberspace." I say representation because Dodge and Kitchin are not merely geographers or cartographers. They are also concerned with the sociocultural concepts that Baudrillard (or Greimas or Derrida) would endorse.

Maps are attempts at presenting the surface of the world in two-dimensional symbolic form, according to a pre-WWII encyclopedia. Over the past decades, we have used "map" in a far broader sense. In the early 1970s, Gould and White wrote *Mental Maps*, a study of the geography of perception of the images we form of places, and Joan Foley of the University of Toronto was examining the ways students and faculty related campus locations to one another.

The term "cyberspace" was used by Bill Gibson in an article in *Omni* in 1982, and in 1984 it appeared in his *Neuromancer*. The OED *Additions Series* (vol. 3, 1997, s.v.) defines cyberspace as "The notional environment within which electronic communication occurs, esp. when represented as the inside of a computer system . . . the space of virtual reality."

This last definition takes us to Howard Rheingold's 1991 *Virtual Reality* and his 1993 *The Virtual Community: Home-steading on the Electronic Frontier*.

We generally think of maps on flat pieces of paper, or wrapped on a sphere (a globe). But much more is involved in our attempts at mapping information and communications technologies (Chapter 5), mapping asynchronous media (Chapter 7), or mapping synchronous social spaces (Chapter 8), to say nothing of "imaginative mappings" (Chapter 10) or the future (Chapter 11). By preceding these chapters with four introductory chapters (1-4) on cyberspace, geography, and cartography, Dodge and Kitchin have produced a genuine "must read" for sociologists, political scientists, and network engineers.

Think of it, how does one go about mapping a MUD or a MOO? What is entailed in mapping a chat room? Yet I would guess that no one reading this has any doubt as to the conceptual reality of the places we meet online, in the sites we converse in, in the spaces we bargain and market in.

Dodge and Kitchin devote a good deal of time to their discussion of Usenet. And well they might. From the three groups of 1979, to the 300 of 1986, to the 20,000 or so as of last year, the growth of the news groups has reflected the growth in the numbers of users.

I have long found the notion that the vast reticulum that comprises the Internet contains a culture like that of the "coffeehouse," a fascinating one. Smith's views of communities in cyberspace are important here, and Rheingold has used the coffeehouse as a metaphor for Usenet, so we can reflect upon Baudrillard and the notion of the "electronic coffeehouse."

After email and the Web, Usenet is the next most frequent use of the Internet. Dodge and Kitchin limn the "spatial

BOOKS REVIEWED IN THIS COLUMN

MAPPING CYBERSPACE

MARTIN DODGE AND ROB KITCHIN

London & New York: Routledge, 2001. Pp. 260.
ISBN 0-415-19884-4.

DIGITAL COPYRIGHT

JESSICA LITMAN

Amherst, NY: Prometheus Books, 2001. Pp. 208.
ISBN 1-57392-889-5.

WHITE HAT SECURITY ARSENAL

AVIEL D. RUBIN

Boston, MA: Addison-Wesley, 2001. Pp. 510.
ISBN 0-201-71114-1.

INTRUSION DETECTION

REBECCA GURLEY BACE

Indianapolis, IN: Macmillan Technical Publishing, 2000. Pp. 339. ISBN 1-57870-185-6.

structure” as composed of two features: groups and articles. It’s important, they point out (using Smith’s Netscan data), to note the geographical diffusion of postings: of 238 TLDs, there were postings from 205 of them in 1997. Of these, 41% were from hosts in the US. The conceptual cartography of Usenet is thus vastly different from geographical cartography. In fact, the percentages don’t reflect numbers of hosts, either: in 1999, over 50% of hosts were in the US. Some areas are more voluble than their representation reflects.

Cyberspace is non-planar, so we must deal more with conceptual maps than with bi-dimensionality. What Dodge and Kitchin have done is not so much map cyberspace as give us impetus to find hyper-cartographical means to represent connectivity in the 21st century. Their chapters on mapping asynchronous and synchronous spaces, “spatial cognition of cyberspace,” and “future mappings of cyberspace” are of value here.

Napster, etc.

In 1998, lobbyists (largely from the film/TV and recorded music industries) persuaded the US Congress to pass the Digital Millennium Copyright Act (DMCA), which sharply restricts private use of works that are under copyright. The concepts of pay-per-view and pay-per-listen follow, as does the ongoing war on Napster. (It’s not clear to me whether the forces of Mammon know about Gnutella, yet.)

Jessica Litman, a law professor at Wayne State University, has turned out a brilliant book, *Digital Copyright*, on this topic.

Litman skims through the nearly 300 years of copyright law and goes into some detail where the contributions of copyright lawyers, greedy media moguls, and avaricious congressional representatives combined to create a stupid law with nearly no technical input. Nor any

consideration for the user, the scholar, or the ordinary citizen.

Glued to the traditions of distribution, contemporary recording, and production, executives still think in terms of centralized manufacture and distribution. To a certain extent, this militates against companies like Napster, but shared files over the Internet are decentralized, and Gnutella and Freenet provide the recording and distribution companies with no easy target to haul into court.

There is already some recognition that the DMCA hasn’t worked and that some new legislation is required (see Ham & Atkinson, “Napster and Online Piracy,” Progressive Policy Institute report, May 2000). As Litman points out: “Unless the stakeholders do something very different this time around, though, that law won’t work either” (p. 170).

Litman enabled me to understand just how the DMCA protects neither authors nor artists but, rather, the corporate media masters.

Shrink-wrapped software licenses in microscopic print may constitute the greatest support there could be for the FSF, for Linux, for the Open Source movement. *Digital Copyright* will explain just why the DMCA is hopeless.

Countering the Interlopers

Avi Rubin has been doing good work about security matters for a long time. His article on one-time passwords was one of the very best in the final volume of *Computing Systems*. So I approached his book on how to handle Internet threats with great interest. I was well-rewarded.

This is not your standard how-to security book. This is a well-designed, well-written volume on just what the threats

are, how they work, and what you have on hand to resist these threats.

Viruses, worms, denial of service attacks are just the beginning of this. Most interestingly, Rubin dissects the Morris Worm, Melissa, I Love You, and several other malicious invertebrates. His explanations of just how these infiltrative beasts work is just brilliant.

I enjoyed his section on secure transfer and on setting up session keys, too. His chapters on SSL and on encrypted email are also fine.

This is a “different” security book, and it’s one you really need.

(I feel I ought to mention Bace’s *Intrusion Detection* here. While DDoS attacks block, most other attacks are intrusive. In well under 300 pages (plus appendices), Bace fully informed me of problems and methods.)