

We are reminded of aircraft nuclear propulsion (never a good idea), homogeneous reactors (always a good idea) and the often irrational reasons why some technologies survive and others don't. We are also reminded that those who go against the flow are neither always right nor always wrong and that neither rightness nor wrongness (compared to the alternatives) is uniquely correlated to the survival of an idea. Even Eugene Wigner—perish the thought—was occasionally wrong. (It may have been Paul Douglas, the former senator from Illinois, who said that no politician is either as smart or as dumb as he may appear in public. Weinberg has a lot of tolerance for most of his former antagonists, although he pulls no punches on others. I think he has too much tolerance for some of the antinuclear Luddites, who *are* in fact as dumb as they appear.)

The title of Weinberg's book expresses the underlying belief that there will be a second nuclear era, one in which the public will understand the minuscule risk of exposure to low levels of radiation. (Weinberg likes a *de minimis* standard for public exposure equal to the standard deviation of the natural background; I dislike any safety standard not based on safety.) In this new era we will leave our progeny with inexpensive, mortgage-free, long-lived nuclear power plants of such incontrovertibly safe design that no one will be concerned. (I agree that it makes little sense to decommission reactors, once built, so they should be designed with the alternative—durability—in mind. Aircraft are designed to last, with proper maintenance, as was George Washington's famous axe.) And, in Weinberg's view, the utilities will be more concentrated and more professional, divided, as the cereal industry is, into the producers and the distributors. And the waste will be stored so safely that no one will have doubts.

Perhaps and perhaps not. When the fossil fuels inevitably run out and as the world population grows, all these considerations may be seen to be minor compared to the need for electricity. Either way, all the arguments are collected here, from Weinberg's unique perspective, and anyone interested in nuclear power, past or future, or in a firsthand account of a small science that turned into a big technology, should read the book. There will be no other like it.

HAROLD W. LEWIS
University of California
Santa Barbara, California

The Internet for Scientists and Engineers: Online Tools and Resources

Brian J. Thomas
SPIE, Bellingham, Wash., 1995.
450 pp. \$30.00 pb
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Many scientists are feeling somewhat uncomfortable these days: The Internet has exploded in recent years, and they find it difficult to keep up with many of its basic features. E-mail is simple, but when it comes to ftp, telnet, gopher, the World Wide Web and so on, they often need to ask a colleague or, more likely, a student for help. For such scientists, a simple, straightforward introduction to the basics of the Internet is needed.

In *The Internet for Scientists and Engineers* Brian J. Thomas aims to fill this need. His book consists of two parts. The first is a general introduction to the Internet, and the second is a thorough compendium of addresses of discussion groups, Web sites and other resources listed by discipline.

The book's first part is a straightforward, well-written description of the Internet's basic features. It explains the process of getting connected and then discusses e-mail, mail servers, discussion groups, encoding and decoding, telnet, ftp, usenet, on-line databases and the World Wide Web. The writing has a very conversational style and, unlike many similar books, is neither patronizing nor jargon-filled. Thomas covers the basics without overwhelming the reader in detail. (Recently I had to decode a file; I used the book's instructions for decoding and it worked the first time.) A reader should not go through the book chapter by chapter; most scientists will not need many of the sections, and a novice might get bogged down. Fortunately, *The Internet for Scientists and Engineers* has a very complete and thorough table of contents, glossary and index. (Thomas does display a "Mac" bias, but he includes examples in Windows as well.)

This general introduction is not specific to scientists and engineers. The author justifies the book's title through the second half—a massive compendium of Internet sites, primarily on the Web but including many gopher and ftp sites and many discussion groups, organized by scientific discipline.

Although this book may be one of the better introductions to the In-

ternet yet published, it has a problem common to all books on the subject. Books are static, and the Internet is one of the most dynamic entities on the planet. By the time of this review, the book will be almost a year old and already quite outdated. For example, the author mentions that Internet access is not available through America Online or Compuserve (it has been since April). Similarly, search engines such as Lycos and Webcrawler are not mentioned, and there is only a brief reference to Netscape, the primary Web-browsing software. For a novice, however, these drawbacks are relatively unimportant, and I would expect the book's introduction to be useful for at least a few more years. The lists in the second half are also outdated; many sites are university addresses that can be found rapidly with search engines, for example, and many of the sites given are no longer functional. Nonetheless, two-year-old phone books can still be very useful, and a novice would find these lists to be valuable starting points.

For introductions to the Internet that are not outdated, one can turn to the Internet itself. One of the best is the tutorial by Patrick Crispen; it is available on the Web at <http://ua1vm.ua.edu/~crispen/roadmap.html>, or by sending e-mail to listserv@ua1vm.ua.edu with "get map package f=mail" in the body of the message. This set of lectures is very readable, comprehensive and current, and it will be regularly updated. It is also free. Nonetheless, many people would prefer to learn about the Internet through a medium that doesn't involve a power cord. For them, I do not know of a better introduction.

MARC SHER
College of William and Mary
Williamsburg, Virginia

The Beat of a Different Drum: The Life and Science of Richard Feynman

Jagdish Mehra
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Membership in the community of scholars and scientists entails a commitment to ferreting out and acknowledging the efforts of others. It is therefore somewhat difficult to comprehend how one can write about Richard Feynman without mentioning