Vol. 3 Iss. 5 ISSN 1430-4171
The Chemical Educator http://journals.springer-ny.com/chedr
© 1998 Springer-Verlag New York, Inc.
S 1430-4171 (98) 05244-2

Book Review

The Internet for Scientists by Kevin O'Donnell and Larry Winger

Reviewed by
George B. Kauffman and Hiram William Blanken
California State University, Fresno, Fresno CA 93740-0070
george_kauffman@csufresno.edu
hwb11@csufresno.edu

The Internet for Scientists, by Kevin O'Donnell and Larry Winger Harwood Academic Publishers, Amsteldijk 166, 1079 LH Amsterdam, The Netherlands, 1997. Tables, Figs. xi + 309 pp. 16.0 x 23.4 cm. $45.00, £30.00, ECU38.00 HB ISBN 90-5702-221-4; $20.00, £14.50, ECU17.00 PB ISBN 90-5702-222-2.

As a rule most authors, explicitly or implicitly, attempt to establish their credentials and expertise in the subject about which they are writing. This is definitely not the case with Kevin O'Donnell, Head of the Diagnostics and Molecular Biology section at the Scottish Agricultural Sciences Agency, Edinburgh, and Larry Winger of The Medical School, Newcastle-upon-Tyne, UK. Instead, these enthusiastic authors of what they hope is "a straightforward manual and review handbook for accessing and using the resources of the Internet in the day to day labours of the working scientist" go to great lengths to emphasize repeatedly that they are both working scientists just like the reader: "We are two scientists who have learned through trial and error how to find and use the resources available on the Internet. We don't know very much about computers, we see them very much like our cars; our interest lies in using them to get from A to B, not in fiddling around underneath the bonnet ("hood" to Americans; the book abounds in English expressions, and British spelling is used consistently) or avidly reading technical specifications." Maintaining that at least 90% if the information on the Internet is "rubbish," O'Donnell and Winger claim to "have sifted through the rubbish to allow you to go directly to the resources which will help you with your work." The Internet's typical informality is reflected in the colloquial, chatty, light-hearted, and witty style of writing of the authors, who address the reader directly and do not worry about ending sentences with prepositions, correct spelling, or the niceties of punctuation (More critical reviewers than we would probably state here that the book would benefit from more rigorous editing and proofreading).

As the authors are the first to admit, their guide is by no means a definitive source for the Internet ("We're only just beginning to learn how to use the Internet creatively, and seriously, in our daily working lives, so we do apologise for any errors that may have crept into the information herein"), and they ask the reader to e-mail them any corrections or updates (odonnell@sasa.gov.uk or larry.winger@newcastle.ac.uk), which they will post on their errata site: http://www.compulink.co.uk/~embra/ifs.html . However, their book will be useful for an individual new to the Internet or anyone inexperienced in dealing with some aspects of the Internet, such as Usenet. It is divided into two sections, each with five unnumbered chapters. Each of the Internet tools is described in its own chapter. In an attempt to "humanize" the book and to demonstrate how the Internet can be of value to a variety of individuals, the authors preface most of the chapters with scenarios in boldface type featuring composite scientific characters such as Jane Q. Sirius, a neophyte university lecturer and mother of two boys; John St. John Realitas, longtime chairman of a university department of environmental anthropology; Nease S. Androj, a postdoc in plasma physics; and Alistair M. Filbert, a secondary school science teacher.

The book's first section, "Communicating with Other People" (159 pp), begins with a chapter devoted to electronic mail or e-mail (which the authors call email), the oldest and primary means of communication across the Internet. E-mail has evolved from a tool used primarily by individuals intimately involved in the computer world to a medium used in the household by all family members in a variety of ways. The growth in the number of individual e-mail accounts and users of the Internet has been staggering; it has been estimated that the number of e-mail users doubles approximately every 90 days. The authors discuss the basic features of an e-mail editor, software, address designations, directions for subscribing to and setting up a mailing list, and other basics such as listservs (mailing lists maintained by a certain server whereby subscribers can exchange e-mail). When one subscriber sends e-mail to the server, all subscribers to the group receive it. This type of arrangement permits the exchange of a great deal of information quickly and easily, but one must be discriminating in subscribing to listservs because of the avalanche of mail which may fill his or her mailbox very quickly.

The next chapter presents an extensive (49 pp) index of scientific mailing lists and their addresses; the chemistry portion could have been longer and some major chemical listservs were omitted. Sites on the WWW(World Wide Web) also provide addresses of listservs. In the following chapter, "Newsgoups," the authors explain some of the basics of Usenet ("the part of the net where triviality, extremism and abuse are most common and where, yes, you can find pictures of people without their clothes on"), the newsgroups located there, and some of the "netiquette" involved. Some of the vernacular terms used in newsgroups, such as spamming or flaming, are described, and instructions on starting a new newsgroup are given. The authors also explain the hierarchy involved with the newsgroups and such terms as the "alt" or "sci" portion of the "big 8" (the eight main hierarchies in use among newsgroups). In the next and longest chapter in the book (56 pp) they provide an annotated review of some of the more popular newsgroups currently available along with their content and "volume" (the number of posts per day). One advantage that newsgroups possess over a listserv is the fact that viewers need not receive the posts in their own personal mailbox; they can simply view the post in which they are interested.

The final chapter in this section deals with real time chat, such as MUDs (Multiple User Dimensions/Devices), MOOs (Multiple user Object Oriented devices), and IRCs (Internet Relay Chat). This aspect of the Internet is occasionally mentioned in the mainstream press but almost always in a somewhat negative light with references to online stalkers and other notorious behavior by its users. As the name implies, real time chat allows users to communicate with each other in real time. As an example, Winger includes a short online conversation "between me, myself and I, as realised using the seamlessly integrated 'Private Chat' application in the Open University's First Class network." (Here and throughout the book information on the monitor screens is reproduced in easily understood illustrations, which give the reader the feeling of a "hands-on" experience. In fact, many pages of the book resemble a computer screen with important terms in color (red), much like hypertext links).

The delay from the moment a user types a message on his or her screen to the time it takes the other user to see it is only as long as it takes to hit the return key, allowing a more dynamic communication, much like a phone conversation compared to the writing of letters as a means of correspondence. Among scientists the use of RTC for communication is seldom utilized. However, in the future when video conferencing and other similar multi-user conferencing modes become more readily available, this trend will probably change. The ability to send real time video and audio messages over the Internet is a powerful tool for the transmission and exchange of data. A researcher in one part of the world can allow his colleagues on the other side of the globe to witness an experiment and be able to dialogue while the experiment is in progress.

The book's second section, "Communicating with Other Computers" (112 pp), deals with downloading or uploading data or programs rather than communicating with other individual users. The first chapter discusses FTP (file transfer protocol), a means of downloading information and programs. Anonymous FTP is slowly being replaced by retrieval directly from WWW sites or by using FTP from a WWW site. In addition to discussing the concepts of freeware and shareware, the authors deal with a frustrating problem frequently encountered by neophytes - the inability to open "zipped" or "stuffed" files. The next and shortest chapter in the book (4-1/3 pp) deals briefly with another type of communication with other computers via remote

operation or Telnet, a means which is useful when the remote operation of a host computer is needed. A user can log onto a host computer and carry out computational work on the host. This computational ability of the host can far exceed that of the remote terminal. Furthermore, telneting into a host can allow several users to use the same computer simultaneously.

The last three chapters deal with the World Wide Web, the most commonly used means of presenting information to the rest of the world via the Internet. The WWW and the use of web pages is far and away becoming the mainstay of the sharing of information via the Internet. The web is very easy to navigate and somewhat less esoteric than other means such as FTP or Telnet, and it now offers the scientist the ability to transmit sound as well as video. The Internet is changing so rapidly that it would be quite impossible to catalog fully all the aspects of the ever expanding web, and the authors readily acknowledge that "some of our information will be out of date by the time you get to read it."

The authors show how to use the common web browser, Netscape, and they present a relatively short list of sites pertinent to the scientific community. This portion of the book could have been somewhat longer in cataloguing sites and explaining information available via the web. Although in the section, "Academic Journals Online," Springer Journals' home page URL is given, The Chemical Educator is not mentioned. The concluding chapter gives specific directions for readers to contribute to the "virtuous cycle" by creating their own web sites to make information available to others ("One of the most important components of the Internet is the sharing of information [some would say that information sharing is THE point]"). BTW (by the way) the volume contains a glossary of 48 TLAs (three-letter acronyms) and words alphabetically arranged from "access" to "WWW" as well as a 9-page double-column index to facilitate retrieval of information. A short epilogue titled "The Tea Break" lists "fun things you can find on the Internet when you're not working" and concludes with the exhortation, "Happy surfing!"

A comparison of this book with Steven M. Bachrach's The Internet: A Guide for Chemists (American Chemical Society: Washington, DC, 1996; xv + 344 pp), reviewed by G.. B. Kauffman and Robin D. Myers The Chemical Educator 1997, 2(6): S1430-4171(97) 06155-0), is in order. The earlier book, of course, is directed specifically toward chemists, whereas the later volume encompasses the fields of agriculture, anthropology, archæology, astronomy, biology, biotechnology, chemistry, education, engineering, entomology, environmental science, food science, general science, genetics, geoscience, marine science, materials science, mathematics, medicine, meteorology, microbiology, molecular biology, neurology, pharmacology, physics, physiology, plant science, psychology, statistics, and veterinary science. Also, the volumes differ markedly in approach and depth; the Bachrach book is much more scholarly and detailed, e. g., its first chapter, "History of the Internet" contains 22 pages, compared with O'Donnell and Winger's less-than-2-page account titled "All the History of the Internet that You Really Need to Know." The reader's choice between these complimentary books will depend on his or her needs and preferences.
