# Internet resources for engineering

By Thomas P. Dowling

*An overview of basic resources*

**T**he Internet, with its ability to link countless users to each other and to information resources, excels at providing very current information. Engineering, with its need to coordinate current research, excels at using very current information. Not surprisingly, it turns out that there are many sources of engineering information on the Internet.

## Lists and newsgroups

A large number of lists and newsgroups carry engineering information. The most complete directory of mailing lists is the *Directory of Scholarly Electronic Conferences*. Of particular interest are sections 6 (physical sciences) and 8 (computer science). To retrieve the most current version of the directory, either send mail to listserv@kentvm.kent.edu with no subject and with the two lines "get acadlist file6 / get acadlist file8" as the body of the message, or use anonymous ftp to get the files from ksuvxa.kent.edu in the library directory.

One list which does not show up in these sections of the directory is ELDNET-L, the list for the Engineering Libraries Division of the American Society for Engineering Education. To subscribe, send e-mail to listserv@vmd. cso.uiuc.edu with the single line "subscribe eldnet-l <firstname lastname>".

Many engineers rely heavily on Usenet newsgroups. While the specific newsgroups available vary from site to site, most groups related to engineering will be commonly available. Especially helpful will be groups in the hierarchies of sci.engr (sci.engr, sci.engr. biomed, sci.engr.chem, sci.engr.civil, sci.engr. control, sci.engr.manufacturing, sci.engr.mech), sci.space (sci.space, sci.space.news, sci.space. policy, sci.space.science, sci.space.shuttle, sci.space.tech), and ieee (ieee.announce, ieee.general) and the groups comp.org.ieee, comp.org.acm, sci.aeronautics, and misc. books.technical.

## Databases of interest

A number of specialized databases are available on the Internet with implications for engineers. Some of these are either databases of special library collections, or are available through library catalogs, and others are available as separate services.

**Buckyballs.** The University of Arizona's online library catalog provides access to the Buckyball database, a bibliographic database on the literature of buckminsterfullerenes, a family of carbon molecules with implications for research in chemical engineering and superconductivity.

To use the database, telnet to sabio. arizona.edu. Press O (the letter "o," not zero) to use other databases, and then enter 1 for the buckyball database.

## Technical reports

**Stanford Technical Reports Database.** One of the chronically difficult challenges in using engineering literature is finding technical reports. Stanford University's online library catalog offers a connection to the Stanford database of technical reports. The database provides keyword searching by author, organization, title, subject, and report or contract number.

To use the database, telnet to forsythetn.stanford.edu and login with the account "socrates". At the response prompt, en-

*Thomas P. Dowling is engineering computer-based services librarian at the University of Washington, Seattle; e-mail: tdowling@lib.washington.edu*

ter "select technical reports". To exit, enter the command "end" at any prompt.

## Full-text reports via gopher

A growing number of universities and corporations are making the full text of their technical reports available online. Most frequently, they are distributed via gopher servers in PostScript format. While these gopher servers are themselves scattered around the entire Internet, a server at the University of South Carolina provides pointers to them; the server is at gopher.math.scarolina.edu, port 70, under the menu choice labelled "Distributed Multi-Topic Infor Resources."

Another important set of technical reports available via the Net is at NASA's Langley Research Center; it is available for anonymous ftp at techreports.larc.nasa.gov in the /pub/techreports/larc directory. These reports have recently been made available for searching via the World Wide Web (WWW) at http://mosaic.larc.nasa.gov/ltrs/ltrs.html.

## Government information

**EPA.** The Environmental Protection Agency (EPA) offers an Internet connection to several of its databases, including its national library catalog, a database of hazardous waste materials, the Access EPA database of directory information, and several others. To use the service, telnet to epaibm.rtpnc.epa.gov. Enter 4 for public applications, then 1 for the library system, and then optionally enter your name.

**STIS.** The National Science Foundation's (NSF) Science and Technology Information System (STIS) provides information about NSF awards, programs, guidelines for proposals, publications, and other information. STIS provides connections via telnet; telnet to stis.nsf.gov, login as "public", and enter "new" to register as a new user. STIS is also available as a gopher server at stis.nsf.gov, port 70.

**NASA. SCAN.** Selected Current Aerospace Notices (SCAN), NASA's current-awareness bibliographies, are available online in several formats. They are available via a listserv (send the message "lists" to listserv@sti.nasa.gov—be aware that SCAN can generate a lot of e-mail); they are available via gopher at gopher.sti.nasa.gov, port 70; and they are available via WWW at http://www.sti.nasa.gov/scan.html.

**NASA. RECON.** As of this writing, NASA is providing access to three years' worth of its RECON database. Citations from *International Aerospace Abstracts* and from *Scientific and Technical Aerospace Reports* can be searched by keyword. This is available within WWW at http://www.sti.nasa.gov/recon-wais.html.

**Other NASA WWW servers.** NASA maintains a number of other WWW resources; the NASA home page is at http://hypatia.gsfc.nasa.gov/NASA_homepage.html. Links to servers at the Kennedy Space Center provide a large amount of technical information on space shuttle missions, and historical information on NASA space flight missions.

**Fedworld.** Fedworld is a bulletin board system run by the National Technical Information Service (NTIS). Telnet to fedworld.gov; you will need to register to use the service. In addition to the Fedworld information itself, there are gateways to over a hundred other federal bulletin boards, ranging in coverage from defense conversion to rules for decommissioning nuclear power plants to offshore oil and gas data. Many of these bulletin boards will also require you to register as a user.

**National Institute of Standards and Technology (NIST).** NIST maintains a WWW server at http://www.nist.gov/welcome.html which leads to information on NIST programs, including the Malcolm Baldrige National Quality Award, and descriptions of research at NIST laboratories.

## Standards

A small number of services are starting to provide information about industry standards via the Internet. Document Center provides a free index for searching its document delivery inventory by standard number. Subscribers can also search by keyword and place delivery orders online. In addition, Document Center is planning to add the full text of standards from participating industry and government organizations. Document Center's WWW server is at http://doccenter.com/doccenter/home.html.

## Professional organizations

A number of engineering organizations are providing information via the Internet, especially through gopher servers.

**Association for Computing Machinery:** includes a calendar of forthcoming conferences, calls for papers, publication lists, and membership services (gopher.acm.org, port 70).