Using the set of databases available in the Library’s experimental DIALOG Science and Engineering Databases program, you can do all of the following and much more.

- Perform a comprehensive search of the published literature on gigabit networks.
- Look for information on fullerenes and see the world’s patent literature, as well as the conference and journal literature on this subject.
- Identify which plastics have a designated range of tensile strengths and melt flows.
- Find maps of a certain scale covering particular geographical coordinates.
- Research the mercury contamination of freshwater fish, and find government reports and conference proceedings, as well as journal literature, on this topic.

Over fifty DIALOG science and engineering databases are available to current Penn students and faculty in an experimental program initiated this fall (see page 9 for a database listing). Provided through Knight-Ridder Information Inc.’s DIALOG educational program, and supported by a gift from the George I. Alden Trust, this service greatly expands access to scientific and technical information for curriculum-related research at Penn. Included are most of the key databases in engineering, physics, chemistry, computer science, environmental science, materials science, and geology.

The DIALOG search interface is very powerful but is not user friendly. To search the database you must learn a set of basic commands. However, fifty-plus files can be searched using those same commands. You can even search several databases simultaneously.

Accessing the DIALOG files

The DIALOG databases are available through the Library Web Home Page either using a web browser (http://www.library.upenn.edu/) or via Telnet to library.upenn.edu. To log on to DIALOG, first select the “Graphical Files” item listed below “PennLIN” on the home page, and then select the “DIALOG Science and Engineering Databases.”

Types of information available

The majority of the databases are literature indexes, often accompanied by abstracts. These files may index not only journal literature, but other types of material as well. Ei Compendex*Plus is an example of a literature index (see sample record on page 8). It covers a wide range of engineering and technological subject areas. Its coverage is from 1970 to the present; as of January 1993 there were over three million records. The range of materials covered includes journal articles, book reviews, books and monographs, symposia, conferences, meetings, and reports. Two other major literature indexes are CA SEARCH, a condensed online version of Chemical Abstracts, and INSPEC, the premier physics, computer science, and electrical engineering abstracting source.

The DIALOG files also include online handbooks and directories, many of which contain searchable numeric data. For example, the Merck Index Online is an updated, expanded version of the one-volume print book The Merck Index, which covers chemicals, drugs, and biologicals. The records contain property information and bibliographic citations for single chemical entities or small groups of closely related (continued on next page)
compounds. Other files in this group include the PLASPEC Materials Selection Database, which covers over 11,500 grades of plastics materials. The Registry of Toxic Effects of Chemical Substances (RTECS) includes toxicity information for over 100,000 chemical substances.

Also available are two online encyclopedias. Kirk-Othmer Online is an online version of the Kirk-Othmer Encyclopedia of Chemical Technology, and Polymer Online is an online version of the Encyclopedia of Polymer Science and Engineering.

Penn’s online help screens

Because the DIALOG search interface is not intuitive, the Library developed a number of help screens to assist you. On the main “Help Menu” you will find both the “Guide to Searching” and the “Brief List of Commands and Features.” Also available from the help menu are sample searches and lists of the databases arranged alphabetically, by file number, and by subject.

If you are experienced in searching other systems, consult the “Brief List of Commands and Features.” This is a table of the most basic commands, with examples and brief explanatory notes. You’ll find commands to enter a database; search, display, and log off from a database; truncate search terms; search special fields; and specify output format. You might consider either printing this table or establishing a separate Telnet session so that you can easily refer back to the table while you search.

More detailed explanations, further examples, and additional features are covered in the “Guide to Searching.” For example, in the guide you will learn five different ways to truncate a search term; the technique for searching several files simultaneously; and how to search in TARGET mode, which utilizes relevancy ranking to obtain results. It’s a good idea to become familiar with all the concepts covered in this guide.

The “Sample Searches” section of the help menu offers yet another way to learn how to search the databases—with examples of author and subject searches in different types of files.

The lists of databases are an important element of the help menu. Arranged alphabetically, numerically, and by subject, the lists are useful when selecting a database. The titles in each list link to brief descriptions of the files, which detail dates of coverage as well as number and types of publications covered.
Downloading or printing your search results is a function of your communications software. From the help menu, select “Help for Printing and Downloading” to find instructions about how to do this using some of the software packages commonly used on campus.

Training

Training is available weekly; registration is required. For times and locations of training sessions, or to fill in an online registration form, select “Register for Instruction or Consultation” on the help menu. Faculty are invited to request training customized to support a specific class assignment or highlight a specific database.

An experimental program

DIALOG’s educational program provides the Penn community with affordable access to a rich set of resources. However, the program imposes limits on the number of records displayed and the overall connect time. Details of this agreement are available with the online documentation.

This new service is provided on an experimental basis. The Library will evaluate whether the program limits allow for adequate use and whether the benefit of access to this large set of major science and engineering databases outweighs the burden of learning an additional set of search commands. The Library also plans to assess which files are most valuable to the community and explore alternative search interfaces for some of the most heavily used databases.

The Library welcomes your comments and questions about this new service.

GRETCHEN SNEFF is head of the Engineering Library; BRIAN SIMBOLI is acting head of the Math-Physics-Astronomy Library.

### DIALOG Files

- Aerospace Database
- The Agrochemicals Handbook
- Aluminum Industry Abstracts
- Analytical Abstracts
- Beilstein Online
- CA SEARCH (condensed Chemical Abstracts)
- Ceramic Abstracts
- Chapman and Hall Chemical Database
- Chemical Engineering and Biotechnology Abstracts
- CHEMSEARCH (CA chemical substances)
- Current Biotechnology Abstracts
- EI Compendex*Plus (Engineering Index)
- Electric Power Database
- Energyline
- Energy Science and Technology
- Engineered Materials Abstracts
- Enviroline
- Environmental Bibliography
- European Directory of Agrochemical Products
- Federal Research in Progress (abridged)
- FLUIDEX (Fluid Engineering Abstracts)
- GeoArchive (geology)
- GEOBASE (geology)
- GeoRef (geology)
- IHS International Standards and Specifications
- INSPEC (physics, electronics, and computing)
- ISMEC Mechanical Engineering Abstracts
- JAPIO (Japanese patents)
- Kirk-Othmer Online
- The Merck Index Online
- METADEX (metallurgy)
- Meteorological & Geoastrophysical Abstracts
- Microcomputer Abstracts
- NTIS (National Technical Info. Service)
- Nuclear Science Abstracts
- Oceanic Abstracts
- Packaging Science and Technology Abstracts
- PAPERCHEM
- Pascal (French-English multidisciplinary sciences)
- PIRA (Packaging, Paper, Printing and Publishing, and Nonwovens Abstracts)
- PLASPEC Materials Selection Database
- Pollution Abstracts
- Polymer Online
- RAPRA Abstracts (rubber, plastics, adhesives, polymeric composites)
- Registry of Toxic Effects of Chemical Substances (RTECS)
- SPIN (Searchable Physics Information Notices)
- Textile Technology Digest
- TOXLINE
- TRIS (transportation)
- TSCA Chemical Substances Inventory
- WATERNET
- Water Resources Abstracts
- World Textiles