

The NLM
Grateful MED Users
Subject Searching - Page 16

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GRATEFUL MED[®] - What Do Some Of Those Computer Messages Mean?

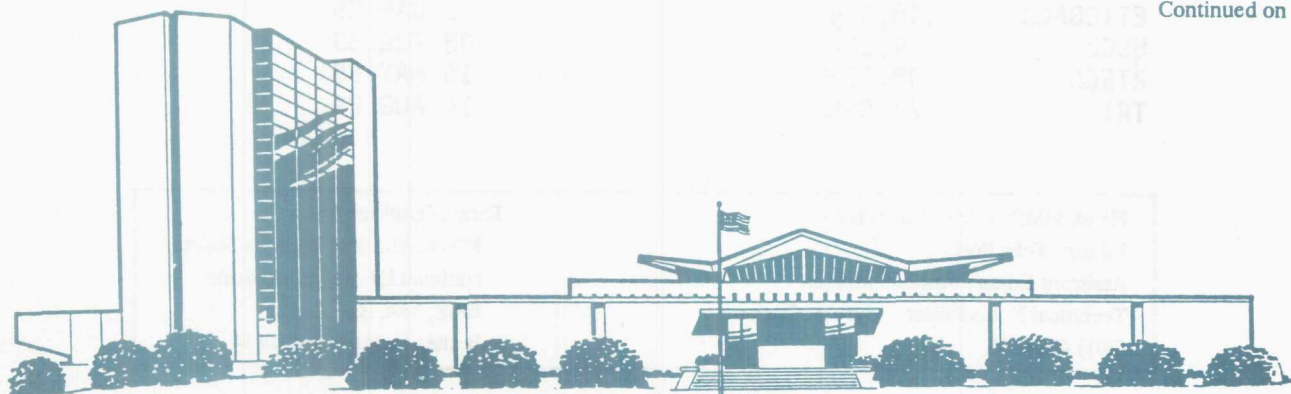
Joan Redmond Leonard
Library Associate, NLM

Here is a listing of some of the more common computer messages that you will see when you search using GRATEFUL MED. Some of these signal that a change in search terms may be needed; others just alert you to whether the system is up (operational) or down.

USER ID ALREADY IN USE

You will see this message if you have been disconnected from the computer by mistake and try to login again right away. Usually this happens if you hit the spacebar or the break key unintentionally. The User ID code is still connected to the NLM computer. When this happens, the computer holds the code for 15 minutes. You will

Continued on page 5



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES • Public Health Service • National Institutes of Health
National Library of Medicine

MEDLARS DATABASE	TOTAL RECORDS	DATES COVERED	DATE LAST UPDATED	LATEST UPDATE TAG
ELHILL COMPUTER				
AIDSLINE**	23,071	JAN 80-OCT 89	12 AUG 89	8910(EM)
AVLINE	19,398	THROUGH 1989	25 AUG 89	
BIOETHICS	28,002	JAN 73-AUG 89	05 AUG 89	8908(EM)
CANCERLIT	680,284	JAN 63-AUG 89	05 AUG 89	8908(EM)
CATLINE	651,553	THROUGH 1989	25 AUG 89	
CHEMLINE	876,636		12 AUG 89	8908(EM)
CLINPROT	7,423		18 AUG 89	8908(EM)
DENTALPROJ	776		28 JUN 89	
DIRLINE	14,744		08 MAR 89	
DOCUSER	11,469		29 JUL 89	
HEALTH	466,193	JAN 75-SEP 89	05 AUG 89	8909(EM)
HISTLINE	89,600		05 AUG 89	8908(EM)
MEDLINE*	488,726	JAN 88-OCT 89	12 AUG 89	8910(EM)
MED86	639,431	JAN 86-DEC 87	22 JUL 89	
MED83	889,211	JAN 83-DEC 85	18 FEB 89	
MED80	803,258	JAN 80-DEC 82	18 FEB 89	
MED77	775,192	JAN 77-DEC 79	18 MAR 89	
MED72	1,175,360	JAN 72-DEC 76	14 AUG 89	
MED66	1,310,376	JAN 66-DEC 71	03 JUN 89	
MESH VOC	68,930	1989	18 AUG 89	
NAME AUTH	335,988		18 AUG 89	
PDQ		THRU AUG 89	03 AUG 89	
POPLINE	169,059	1970-AUG 89	05 AUG 89	8908(EM)
SDILINE	35,119	AUG 89	29 JUL 89	8910(EM)
SERLINE	73,037	1989	07 AUG 89	
TOXLINE	717,102	1981-1989	12 AUG 89	8908(EM)
TOXLINE65	698,414	PRE 1965-1980	04 MAR 89	
TOXLIT	752,382	1981-1989	12 AUG 89	8908(EM)
TOXLIT65	586,405	1965-1980	01 SEP 87	

*N.B. FILE IS UPDATED SEMI-MONTHLY; THIS IS PART 2 OF 2.

**N.B. FILE IS UPDATED THREE TIMES A MONTH; THIS IS PART 2 OF 3.

TOXNET COMPUTER

CCRIS	1,428		31 JUL 89	
DBIR	485		15 JUL 89	
EMICBACK	67,975		02 JUN 89	
ETICBACK	46,374		30 JAN 89	
HSDB	4,202		08 AUG 89	
RTECS	99,325		16 MAY 89	
TRI	74,096		14 AUG 89	

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(301) 496-6193	Bethesda, Maryland 20894

Technical Notes

Whenever applicable, the heading of each Technical Note includes a reference to the section of the Online Services Reference Manual, 1988 that is considered most relevant to the item being discussed, e.g., (manual 4.7.2). Users should keep in mind that the item may pertain to other sections as well.

LABOR DAY HOLIDAY SCHEDULE

The following is the MEDLARS computer schedule for Labor Day, Monday, September 4.

System	Rates/Status
ELHILL [®]	non-prime non-guaranteed

TOXNET [®]	non-prime guaranteed
---------------------	-------------------------

DOCLINE [®]	not available
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Service Desks

MMS	not staffed
-----	-------------

DOCLINE	not staffed
---------	-------------

GRATEFUL MED, VERSION 1.0 FOR THE MACINTOSH

GRATEFUL MED, Version 1.0 for the Macintosh is now available for purchase from the National Technical Information Service (NTIS). Shipping is expected to begin in mid to late September. The publication number is PB89-196083/GBB. The price is \$29.95. There is a \$3.00 (U.S./Canada) shipping and handling charge required for each order. GRATEFUL MED for the Macintosh will run on one of the Apple Macintosh family of computers with at least 512 Kb memory (1 Mb recommended), and at least one floppy disk drive (3 1/2"). Also needed is a HAYES Smartmodem or completely Hayes-compatible modem. A complete description of the software will be published in the August 1989 issue of the NLM Technical Bulletin. Please send remittance with orders to:

National Technical Information Service (NTIS)

5285 Port Royal Road

Springfield, VA 22161

(703) 487-4650 (for telephone orders with deposit account or credit card)

CHANGES TO PDQ[®]

Several enhancements were made to PDQ on June 17 with Release 89.2. Please see the PDQ online news for a description of these enhancements. They are:

1) **New format for patient information statements.** Two information for patients statements, breast cancer and nonsmall cell lung cancer, have been rewritten in a new format. The new statements include an introduction describing PDQ and its intended use, and a concluding statement directing patients to resources for additional information. In addition, the language of the statements has been revised to explain cancer terminology more fully. Over the remainder of the year, all of the information for patients statements will be rewritten in the new format.

2) **Commands used in PDQ.** Once the PDQ menu system is learned, it is possible to bypass the menus using command stacking. Now, to assist searchers in remembering specific menu options while command stacking, all major menu selections have been given a name.

Instead of selecting a menu item by number, a word may be entered that corresponds to the option wanted. For example: if you are at the main PDQ menu and would like to find all Investigational Protocols with a diagnosis of breast cancer, enter the following:

```
> PROT;DIAG;BREAST
```

You may stack up to seven command words. It is not necessary to memorize the commands. If you want to use command stacking when selecting a diagnosis or a drug, the diagnosis and drug must be the last entries of your command stack due to the multiple choices that follow the diagnosis and drug selections.

At any point in PDQ, enter COMMANDS or CMDS and then select the number corresponding to the area of interest. More than one item may be selected at a time.

For example: 2,5 will display commands valid while searching or displaying Cancer Information and Investigational Protocols. Upon exiting commands, you will be returned to your original place in PDQ.

3) **Descriptive wording on display menus.** Wording of the display menus for organizations, physicians, and protocols has been changed to make them more descriptive. This should limit having to use the HELP screens to decide which display format you would like to use.

4) **Cancer Centers.** The Cancer Centers menu (under Investigational Protocols) has been expanded to include the city and state. Because of the added information the menu has been divided into three separate screens. Multiple entries are allowed when separated by a comma. For details on this feature, enter HELP while at these screens.

RTECS® UPDATED
(Manual 14.4.4.1)

The RTECS file was updated in May 1989 and is now current through the NIOSH (National Institute of Occupational Safety and Health) quarter ending April 1989. OSHA permissible exposure levels have been added to the SREG (Standards and Regulations) field and are identified by the acronym OSHAPEL. The SREG field contains notations about regulation by an

agency of the US Government, either DOT, F MSHA, or OSHA. sample partial record is listed below from RTECS to show this field.

1	RTECS
NAME	ETHYLENIMINE
RN	151-56-4
REG	DOT-HAZARD:FLAMMABLE LIQUID; LABEL:FLAMMABLE LIQUID AND POISON; CFRGBR 49,172.101,86; Code Fed RegulSREG - MSHA STANDARD-air:TWA 0.5 ppm (1 mg/m3) (skin); DTLVS* 3,111,71; Doc Threshold Limit Values
SREG	OSHAPEL:8H TWA 1 mg/m3 (skin); FEREC 54,2923,89; Fed Regist
SREG	OSHA-cancer suspect agent; CFRGBR 29,1910.1012,87; Code Fed Regul

CLINPROT® INDEX TERM LISTING

The CLINPROT Index Term listing for July 1989 is now available. It may be requested by writing to the National Cancer Institute. Please include a self-addressed label with your request. No return postage is necessary. Please send requests to:

International Cancer Research Data Bank Branch
National Cancer Institute
R.A. Bloch Building (82), Room 103
Bethesda, MD 20892

not be charged for this time. If you get this message, either wait the 15 minutes before attempting to restart GRATEFUL MED or call the MMS Service Desk to have your code released and made useable again.

ELHILL3 IS DOWN PLEASE TRY LATER

The system is down and is temporarily unavailable. Please try to log into the computer later.

SS (1) PSTG (50)

This is the way that the computer tells you how many records are in the database for your search terms. An explanation of the components in this message follows:

- SS = Search statement
- (1) = Search statement number 1
- PSTG = Postings (number of records)
- (50) = this search found 50 records

The translation for this message would be: search statement 1 found 50 records in the database.

NP

NP stands for NO POSTINGS. The computer responds with an NP message when the search term is not found in the database. The message always repeats the term you entered listed as seen below:

NP (HEEART DISEASE)

This means that the term HEEART DISEASE has no records in the database. When you get an NP, look at the term input and check that it is correctly spelled and in the proper format. In this case, there is a typographical error.

*NONE-

The message NONE occurs when your search requires that two or more terms appear in the same record and not a single record in the database meets this requirement. This can happen if you put terms on too many lines on the Input Form Screen or if you are searching a concept that is not well covered by the MEDLARS databases.

(98) SCH (11) QUAL: CONT? (Y/N)

You will see this message during a title search. It is a status report telling you how many records or citations the system has searched and how many meet your requirements. The message asks if you want to continue - GRATEFUL MED will automatically answer Y 11 times; on the twelfth query, the computer will wait for your Y or N response before proceeding.

SCH = 98 equals the number of citations searched
 QUAL = 11 is the number of citations that qualified or matched

Note: You can answer N or <spacebar> at any time to discontinue the processing. If you do discontinue processing, the computer will save what it had processed so far.

TIME OVFLW: CONT? (Y/N)

This message indicate that the search or procedure requested requires more time for processing. GRATEFUL MED automatically responds Y so that the computer can continue to process your request.

MM <term entered> <number of meanings>

The MM stands for multi-meaning. This multi-meaning occurs in response to an EXPLODE request where the term appears in more than one place in the Medical Subject Headings Tree Structures. GRATEFUL MED always selects the first tree.

ABSTRACT TRUNCATED AT () WORDS

This message is displayed at the end of an abstract in MEDLINE when the length of the abstract exceeds 250 words. Abstracts are truncated at the completed sentence immediately following the 250th word. For cancer-related abstracts and some others, truncation occurs after the 400th word. The same rules apply to abstracts in other databases, when the citations are derived from MEDLINE.®

PRINT TRUNCATED AT 1165 CITATIONS

GRATEFUL MED issues the print command no matter how large the set of retrieval. Occasionally, the number of citations retrieved is very large. The NLM computer notifies you that it will not print more than 1165 citations online for a single print command.

CONTINUE PRINTING? (YES/NO)

This message occurs when the number of records retrieved online is greater than the number in the parameters set by your computer profile. A yes response will cause the program to continue the printout. A no response will stop the printing. GRATEFUL MED automatically responds YES to the initial continue printing messages; it will periodically ask you to respond by beeping and displaying the message DO YOU WANT MORE (y/N)? You need to type in a Y or N only when cued by a beep; at the silent continue printing queries the computer will automatically respond yes.

STORPSTG OVFLW

The computer workspace holds up to 114,000 postings for each online user. When a search exceeds this limit the STORPSTG OVFLW message occurs. This usually happens when too many ORs, explodes, or truncations are requested.

GENTRM OVFLW

This message occurs when an EXPLODE or a truncation generates more than 450 search terms in one search statement. Possible solutions for GENTRM OVFLW and/or STORPSTG OVFLW are: using pre-explosions, limiting the number of explosions, and using as many letters as possible in your term, before truncating it with a colon.

Gold Standard Searches

Now you have a chance to match wits against the NLM experts. At periodic intervals we will be printing the same requests submitted to our searchers here so you can try them out in your library. These search strategies were developed by an expert searcher here at NLM with no interaction between the requester and the searcher. The size and nature of the intermediate results influenced the final search strategy of the searcher. If very few citations were retrieved, the strategy was broadened. If over 100 citations were retrieved (a number arbitrarily defined as too many to scan for relevance) the strategy was refined to increase precision.

If you mail us a copy of your search strategy with a printout of citations and your strategy is selected for publication in this column, you could win either a copy of GRATEFUL MED or 1 hour of free search time. Limit your retrieval to 50 or fewer citations. In cases of multiple submissions of the winning strategy, the first one to arrive across the editor's desk is the prizewinner. Relevancy determinations will be made here at NLM and all decisions of the judges will be final.

The first search request is:

Causes, treatment, signs and symptoms of depression specifically in the post partum period (i.e. first year after childbirth or traceable to the event of childbirth). To include symptoms from mild depression

(also known as ('baby blues') to post partum psychosis.

Search hints:

Direct Searchers: Remember to run your search in the MEDLINE file limiting retrieval to English language citations with abstracts published in 1988.

GRATEFUL MED users: See User's Guide Section 3, page 9 for instructions on limiting the year to 1988. Remember to use the F10 key to look at MeSH headings. Instructions for the Explode capability are in Section 2, page 14. Limit retrieval to English. Ask for abstracts, but don't worry about limiting only to articles with abstracts.

There are no exact answers or absolutely correct strategies, only best approximations, just like real life. Good luck!

Please send a copy of your search strategy with the retrieval, including printed abstracts and the search mode it was run against (i.e., GRATEFUL MED or MEDLINE directly) to:

Gold Standard Searches
MEDLARS[®] Management Section
National Library of Medicine
Building 38A, Room 4N421
Bethesda, MD 20894

The entries must be received by September 30 for publication in the October Technical Bulletin. Your comments and suggestions for future search subjects are welcome.

Seminar For GRATEFUL MED Trainers

More than 16,000 copies of the GRATEFUL MED software have been sold as of July 1989. Searches performed using GRATEFUL MED now account for 30% of the total number of searches run on MEDLINE and other databases mounted on the NLM computer. GRATEFUL MED has become an important tool used by health professionals to access MEDLARS databases. Many librarians, information specialists, educators, physicians, researchers, and others are conducting courses and short programs on searching using GRATEFUL MED. These programs are a helpful, non-intimidating way to introduce the world of online biomedical searching with microcomputers to hundreds of health professionals.

NLM believes librarians, information specialists, and health professionals are in an excellent position to be the resource people for introducing interested persons to online searching. The HOW TO tutorial which accompanies GRATEFUL MED is an excellent self-instructional tool, but NLM has found additional training in the MeSH vocabulary, the ELHILL software commands, and the mechanics of GRATEFUL MED to be very useful for most searchers. NLM is now offering a SEMINAR FOR GRATEFUL MED TRAINERS for persons wishing to be instructors and resource people for GRATEFUL MED users in their institutions.

The first Seminar, a one day program, will be conducted by NLM on November 9, 1989, in the Lister Hill Building Auditorium in Bethesda, Maryland. A kickoff dinner will be held the evening before on November 8 at a downtown Washington Hotel preceded by cocktails and conversation; Joyce Mitchell, Ph.D., Director, Information Science Group, School of Medicine, University of Missouri-Columbia, will be the interesting and informative dinner speaker.

The Seminar will include:

Presentations of information on how trainers have introduced the world of online searching through GRATEFUL MED in medical school programs, hospitals, and in other settings.

Practical tips on instruction, setting goals and objectives for the class, handouts, suggestions for lectures, hands-on programs, and classroom arrangements.

How to overcome the problems and political pitfalls in integrating a new course into an already existing course program.

Troubleshooting of search problems, hardware and software problem-solving, and tips on GRATEFUL MED use.

The agenda for this results-oriented, practical, information-filled program is enclosed. Plan now to reserve a spot for yourself. Send a check for \$50 made payable to "Carolyn Tilley" along with the registration form provided. Attendance will be limited to the first 130 persons who apply. The \$50 fee will cover the cost of the kickoff dinner as well as refreshments during seminar breaks and a box lunch. A sample training workbook used by NLM staff to introduce National Institutes of Health scientists to GRATEFUL MED and a booklet on troubleshooting will be distributed at no charge to each participant.

Persons who are interested in attending this seminar also encouraged to bring and display their own course materials, including syllabi, workbooks, handouts, and any important information on their training efforts concerning GRATEFUL MED. Sharing of ideas and resources is encouraged. This information will be presented in the form of "posters" in the lobby of the Lister Hill Building. Space is limited, but a poster backdrop area and display tables for materials will be available.

Also, Versions 4 and 5 (5 is to be released winter of 1989) as well as the Macintosh version of GRATEFUL MED will be operational and available on personal computers with attendant NLM staff in the lobby. Time will be provided during the seminar so that attendees can experiment with the software and ask questions. If you have further questions, please contact Carolyn Tilley, Head, MEDLARS Management Section, at (301) 496-6193 or (800) 638-8480.

If you are currently training searchers with GRATEFUL MED or anticipate instituting a program or consulting on GRATEFUL MED with health professionals, don't miss this program! If you need to hear what educators, librarians, physicians, and others are doing about introducing online searching with GRATEFUL MED well as troubleshooting tips, complete the application form on the next page and mail it together with your

check today. You will be rewarded with information, ideas, practical tips and more!

Complete and return the enclosed application form by September 30, if you plan to attend.

SEMINAR FOR GRATEFUL MED TRAINERS

AGENDA

November 8

Sheraton Washington Hotel

- 6:30 - 7:00 p.m. Cocktails and conversation (cash bar)
- 7:00 - 8:30 p.m. Dinner - Guest speaker: Joyce Mitchell, Ph.D.

November 9

Lister Hill Building Auditorium, NLM, Bethesda, Maryland

- 8:30 - 9:00 a.m. Coffee and registration
- 9:00 - 9:30 a.m. Welcome/Opening Remarks
- 9:30 - 10:30 a.m. Introducing the New User to GRATEFUL MED Searching:
How to Do It, Part 1
 - in an academic setting
 - at a hospital
- 10:30 - 10:45 a.m. BREAK - posters and GRATEFUL MED versions
- 10:45 - 11:45 a.m. How to Do It, Part 2
 - at remote sites with unaffiliated practitioners
 - at professional meetings/conference settings
- 11:45 - 1:00 p.m. BOX LUNCH: conversation, look at posters, training materials, and GRATEFUL MED versions
- 1:00 - 1:30 p.m. Panel - questions and discussion with audience
- 1:30 - 2:00 p.m. Local Area Networks (LANs)
- 2:00 - 2:30 p.m. Troubleshooting GRATEFUL MED: Glitches & Gremlins
- 2:30 - 3:00 p.m. BREAK - posters and GRATEFUL MED versions
- 3:00 - 3:30 p.m. Preview of GRATEFUL MED Version 5.0 (IBM)
- 3:30 - 4:00 p.m. Macintosh Version of GRATEFUL MED - Demonstration
- 4:00 - 4:15 p.m. Wrap-up

See reverse for further information.

Notes on Seminar Dinner, SCAMC, and Locations of Events

The seminar kickoff dinner will be held at a downtown Washington hotel. Dr. Joyce Mitchell of the University of Missouri at Columbia will be our guest speaker. The dinner at the hotel follows the Symposium on Computer Applications in Medical Care (SCAMC) meeting, which will be held in Washington, D.C. from November 6-8. The SCAMC meeting is the premier conference for the exchange of information and new ideas among medical informatics professionals; the event is well supported by major medical societies, health care associations, and computer organizations. Many librarians and information specialists are increasingly attending this meeting. If you are attending the SCAMC meeting, you will have to stay over in the Washington area only one extra night to attend the SEMINAR FOR GRATEFUL MED TRAINERS.

November 8 - Seminar kickoff dinner 5:30 - 8:00 p.m.
Downtown Washington hotel
(details will be provided with confirmation)

November 9 - the Seminar 8:30 a.m. - 4:15 p.m.
National Library of Medicine
The Lister Hill Building Auditorium
Building 38A - 8600 Rockville Pike
Bethesda, MD 20894

Phone: 1-800-638-8480 or 301-496-6193

The National Library of Medicine is on the Medical Center stop on the Redline of Washington's Metrorail, just a short ride from downtown. NLM is also conveniently served by the Washington Metropolitan Area Transit Authority Metrobus service. Some limited parking is available at NLM.

Further information on hotels near NLM and directions will be provided upon request; contact MEDLARS Management Section at the numbers listed above. Complete details will be included with confirmation of registration for the Seminar.

REGISTRATION FORM

Yes, I want to be present for NLM's **SEMINAR FOR GRATEFUL MED TRAINERS!**

Wednesday, November 8 (evening dinner) and Thursday, November 9, 1989

Name: _____

Title (optional): _____

Organization: _____

City: _____ State _____ Zip _____

Phone (Office): _____

A check made payable to Carolyn Tilley for \$50 for meals is enclosed.

Please indicate here if you'd like to present a poster and display information regarding your GRATEFUL MED training efforts; specify setting, i.e., academic, hospital, other and type of persons trained.

You will be sent further information on hotels, directions, etc. upon receipt of this form.

W. H. HILL - PHOTODUPLICATION SERVICE

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proper
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SEMINAR FOR GRATEFUL MED TRAINERS
MEDLARS MANAGEMENT SECTION
NATIONAL LIBRARY OF MEDICINE
8600 ROCKVILLE PIKE
BETHESDA, MD 20894

... seal with tape

DENTALPROJTM

Now Online

Mary Daum
National Institute of Dental Research

DENTALPROJ, a new ELHILL database is now online, as of June 21, 1989. The file contains summaries of ongoing dental research projects funded in the current Federal fiscal year (October 1 - September 30, 1989). Currently there is domestic online access only; foreign access will be made available at a later date. The National Institute of Dental Research (NIDR) developed the database and collaborated with NLM in adding it to the MEDLARS system.

The file consists of active dental projects supported by the U.S. Department of Health and Human Services, and some projects (as many as could be collected) sponsored by the Veterans Administration and the Department of Defense. The new database can be accessed by entering the command: FILE DENTALPROJ.

The purpose of DENTALPROJ is to expedite the transfer of information about ongoing dental research projects. It is unique in that it allows the scientific community to access information while the research is in progress, before results are published and otherwise available.

DENTALPROJ has approximately 1300 research projects on its file. It will be updated semi-annually and replaced annually. NIDR activities included in the database are grants, contracts, career awards, and the NIDR intramural (on-campus) research. The file does not contain training or fellowship awards.

Examples of data elements that can be searched and printed through DENTALPROJ include: the title of the project, name of the principal investigator; performing institution, sponsoring organization; and a brief abstract of the project (See Element Name' in the Unit Record, Figure 1). The database has MeSh indexing with Subheadings; note the sample unit record in Figure 2.

Prior to 1980, it was possible to search for such information through the Smithsonian Science Information Exchange (SSIE). SSIE is now unavailable. Some, but not all, Federal research information is available through FEDRIP (Federal Research in Progress), compiled and distributed by the National Technical Information Service (NTIS). DENTALPROJ, however, will provide a comprehensive source of information for dental investigators, educators, and administrators.

NIDR invites all foreign and domestic agencies, institutions, and individual investigators to list their dental projects on DENTALPROJ. For information on contributing to this database, contact: Research Data and Management Information Section, Office of Planning, Evaluation, and Communications, NIDR, Westwood Building, 5333 Westbard Avenue, Room 535, Bethesda, Maryland, 20892, phone: (301) 496-7843.

DENTALPROJ Unit Record

* = Directly searchable
 TW = Text Word searchable
 r = Rangeable
 Y = Yes
 N = No

Category Qualifier	Element Name	Search Status	Print	Print Full	Print Detailed
AB	Abstract	TW	N	N	Y
AD	Address		Y	Y	Y
AW	Award Type	*	N	N	Y
CC	Classification Code	*	N	N	Y
CY	Country	*	N	N	Y
EM	Entry Month	*,R	N	N	Y
ID	Identification Number	*	N	N	Y
IR	Investigators	*	Y	Y	Y
KW	Keywords	*,TW	N	Y	Y
LR	Last Revision Date	*,R	N	N	Y
MH	MESH Heading	*	N	Y	Y
MN	MESH Tree Number	*	N	N	N
NO	Notes	TW	N	N	Y
PO	Performing Organization	*,TW	N	N	Y
SA	Supporting Agency	*,TW	N	N	Y
SC	Subject Captions	*	N	N	Y
SI	Secondary Source ID	*	Y	Y	Y
ST	Status	*	N	N	Y
STS	States	*	N	N	Y
TEL	Telephone Number		N	N	Y
TI	Title	TW	Y	Y	Y
Y1	Initial Year	*	N	N	Y
Y2	Final Year	*	N	N	Y
ZP	Zip Code	*	N	N	Y

NOTES: STRINGSEARCH defaults to the Abstract (AB) field; Ranging defaults to the Entry Month (EM) field. Print AR is also available and includes SI, TI, IR, AD, and AB. MeSH searching includes the * for the main point of the article and explosions.

Figure 1

1
 SI - NIDR/88/1K04DE00238-01
 TI - DENTAL HEALTH--A CROSS-NATIONAL ANALYSIS OF DETERMINANTS
 IR - CHEN M
 AD - UNIVERSITY OF CHICAGO
 AD - 1101 E 58TH ST
 AD - CHICAGO, IL 60637
 AB - The purpose of the proposed study is to empirically test the relative effects of socioenvironmental, delivery system and personal/lifestyle factors on oral health status within and among twelve industrialized and middle-income countries, and to develop a theoretical model of determinants of dental health status. The data will be collected through International Collaborative Study of Oral Health Outcomes (ICS II) a cross-national project to be conducted by WHO and the University of Chicago.
 AB - Data sources include the following: 1) consumers' oral health status obtained, using trained clinical examiners, from 4,000 subjects in each system (1000 from each age group: 6-7, 12-13, 35-44, and 65-74); 2) consumers' socioeconomic characteristics, oral health beliefs and knowledge, and dental behaviors obtained by questionnaires and interviews; 3) delivery system structure and socioenvironmental factors obtained by interviews of randomly selected providers, administrators, and secondary data collection. These data will be collected from communities chosen from each participating country to exemplify the predominant dental delivery system.
 AB - Univariate and multivariate analyses will be used to examine the relative effects of the individual level variables (e.g., SES, health beliefs, dental insurance, oral hygiene practices and dental utilization) on oral health status. Linear Structural Relations system (LISREL), a causal modeling technique, will be employed to test various causal models between major variables. The relative magnitude of the regressional or causal coefficients will be compared across countries.
 AB - The structural relationships between oral health status and delivery system and socioenvironmental variables will be inferred with individual level variables controlled. Finally, a dental health status model will be developed by synthesizing the empirical findings of the proposed study with the insights gained from the dental and health literature.
 Y1 - 8807
 Y2 - 8906
 ID - K04DE00238
 AW - G
 SA - NATIONAL INSTITUTE OF DENTAL RESEARCH (NIDR)
 PO - UNIVERSITY OF CHICAGO
 CY - UNITED STATES (USA)
 STS - ILLINOIS (IL)
 ZP - 60637
 MH - Adolescence
 MH - Adult
 MH - Aged, 80 and Over
 MH - Aged
 MH - Attitude To Health
 MH - Child
 MH - Comparative Study
 MH - *Cross-Cultural Comparison
 MH - Dental Health Services/SUPPLY & DISTRIBUTION
 MH - Female
 MH - Fluoridation
 MH - Human
 MH - Male
 MH - Middle Age
 MH - *Oral Health
 EM - 8901
 ST - ACTIVE

Figure 2



VERSION 4.0

[Editor's Note: Each month the NLM features a column concerning GRATEFUL MED, often consisting of questions/answers. Contributions for this column will be appreciated.]

Question: I entered the following search for polymerase chain reaction, and got over 15,000 citations about everything but what I wanted.

Subject Words polymerase or chain or reaction

Answer: Terms entered on the same line should be alternative terms or perhaps synonyms. Notice that the word "or" appears between words on the same line. (Note: Backspacing over the "or's" to make them disappear will not negate their effect.) This is like saying, "I'm interested in citations that have any of these three terms."

If you had, instead, entered the three words on separate Subject Words lines you would have retrieved only citations that have all three terms.

Subject Words polymerase
and
2ND SUBJECT chain
and
3RD SUBJECT reaction

This example retrieves about 250 citations.
Question: I entered a search using the Title Words line but at the end the search had no

results. When I went back to edit the Input screen saw that there were 25 in the found column for the Title Words line but at the bottom of the screen it indicated that, restricted to Title Words, there were none.

Answer: The 25 citations are the results of the first step in the process required to do a title search. First the computer gathers the citations retrieved using a Text Word search (words from the Title or Abstract - if there is one). Next the computer pulls from those 25 citations any that have the words in the title. In your case, this further restriction yielded nothing.

If you want to forgo the title word restriction, move all the words from the Title Words line to Subject Words lines (one word per line).

Title searching is obviously quite restrictive. It is recommended generally in the following situations:

1. You have a title for an article for which you want to get the full citation (name of journal, volume, page number, etc.).
2. You did a subject search (using the Subject Words lines) that retrieves too many citations. If you edit that Input screen you can add a word to the Title Words line and thereby restrict citations that have a certain word in the Title. This way you can bring your results down to a manageable number.

Question: Can I use GRATEFUL MED to search TRI?

Answer: Yes, TRI (Toxic Chemical Release Inventory) is on NLM's TOXNET system which you can access with GRATEFUL MED (select TOXNET from the ACTION screen). There are no Input screens, however. Once you access TOXNET enter "file TRI" at any TOXNET "user:" prompt. You will then be asked to enter a terminal type, enter "DUMB" (Note: this is simply the type of terminal your computer is emulating). You will then see the TRI Main Menu from which you can select among other things, to look at sample searches; use either menu searching; or use direct searching. Beginners may want to take advantage of the menu searching capability. For more information about TRI, please see the articles in the January and May issues of this newsletter.

AIDSTRIALSTM and AIDS DRUGSTM

Gale A. Dutcher
Specialized Information Services, NLM

The Health Omnibus Programs Extension Act of 1988 (Public Law 100-607), passed by Congress in the Fall of 1988, provides for the development of a variety of AIDS-related activities including research grants, establishment of research centers, and information services. A specific directive of the law provides that certain information about AIDS-related clinical trials be made public through a database. Prior to the enactment of this legislation, information about investigational drugs was considered confidential unless the sponsor of the drug agreed to the disclosure of the information. The new law requires the release of specified information regarding clinical trials related to AIDS or HIV, the etiologic agent for AIDS, conducted under the Food and Drug Administration's (FDA) investigational new drug (IND) regulations.

The National Library of Medicine is cooperating in the effort to make information about these clinical trials available to persons infected with HIV, health care providers, researchers, and others. In support of that effort two new databases, AIDSTRIALS and AIDS DRUGS, have been added to the NLM system. AIDS Clinical Trials (AIDSTRIALS) contains information about clinical trials of agents undergoing evaluation for use against Acquired Immunodeficiency Syndrome (AIDS), AIDS-Related Complex (ARC) and AIDS-related opportunistic diseases such as *Pneumocystis carinii* pneumonia (PCP). The information contained in the database includes the title of the trial, the trial purpose, the agent being studied, the trial phase, diseases studied, patient inclusion and exclusion criteria, locations at which the study is taking place, and whether the trial is still open (adding patients to the study). In addition, details about the medication regimen may also be included.

The information in AIDSTRIALS comes from two sources. The National Institute of Allergy and Infectious Diseases (NIAID) is providing detailed information about all AIDS-related clinical trials funded by the National Institutes of Health (NIH). These include those conducted by intramural researchers, as well as those located at other sites throughout the country.

FDA is providing information about non-NIH funded clinical trials undergoing trials for efficacy. The FDA is requesting the cooperation of the various trial sponsors in order to provide the most complete information possible.

AIDSTRIALS may be searched in a variety of ways; a unit record is shown in Figure 1. The file may be used to identify the trials that are testing a particular agent or to locate open trials in a specific State. Once the trials that meet the search criteria are identified, they may be reviewed for the details of eligibility and treatment plan. If additional information is required about the trial, all the records contain a telephone number for contacting either the specific trial site or the sponsor of the trial. If additional information about the agent being tested is required, the searcher can search the AIDS DRUGS database using either the generic drug name or drug accession number contained in the trial record, or the number of the protocol.

For example, to determine if there are any open trials that accept women with AIDS-related complex (ARC) located in Boston, MA, see the example in Figure 2.

The companion database, AIDS DRUGS, contains descriptive information about the agents being tested in clinical trials; a unit record is shown in Figure 3. As new trials are added to AIDSTRIALS, information will be compiled about the agents and the appropriate records added to AIDS DRUGS. The description includes the synonyms for the name of the agent including trade names, the standard chemical name, pharmacology, contraindications, adverse reactions, manufacturer, and physical/chemical properties such as molecular composition, molecular formula, and molecular weight.

After a user has identified a trial in which he/she is interested, the user may then switch to the AIDS DRUGS database and view descriptive information about the agent being used in the trial. For example, see Figure 4 for a sample record for the drug dideoxycytidine.

In order to access these databases on the NLM system, enter AIDST or AIDSTRIALS for protocols; or enter AIDS DRUGS OR AIDS DRUGS for drug information. The information contained in both AIDSTRIALS and AIDS DRUGS is also available through the AIDS Clinical Trials Information Service (1-800-TRIALSA). This is a telephone hotline which is staffed by health and information professionals, and which will provide information to the general public as well as health professionals, about clinical trials and the agents being

tested. This free service is a Public Health Service (PHS) project sponsored by NIAID and FDA, in cooperation with the Centers for Disease Control.

NLM plans several enhancements to these two databases. Although MeSH terms are present in the Keywords (KW) field of the AIDSTRIALS database, the complete MeSH searching capabilities cannot be used. NLM is planning to add MeSH to this database in the correct format to support MeSH searching. The AIDSDRUGS database will also be enhanced with additional fields such as other major uses for the agent and selected bibliographic references as sources of additional information.

The following are important terms for understanding AIDS Clinical Trials:

Clinical Trial/Protocol: A clinical protocol is a precise and detailed plan for the study of a biomedical problem, such as AIDS or HIV infection, or a regimen of therapy. A clinical trial is the actual study.

Accrual Status: How many patients are currently participating in the trial. This number is frequently presented as the number of patients in the trial in relation to the total number desired, e.g., 23/50. If

the total number of patients accrued is fewer than the number desired, the trial is open to more patients. An investigator may, under various circumstances however, close a trial before accruing the total number of patients originally specified.

Trial Phase: There are several phases of clinical trials. Phase I tests for the toxicity of a compound. This type of testing is done prior to examining the effectiveness of the agent in treating any disease in order to determine its safety. Phase II tests the effectiveness of the agent against a specific disease. The agent may be tested alone or in combination with other agents. In addition, various doses and treatment schedules may be examined. Phase III seeks to find additional information about an agent such as additional dose levels, combination therapies or, additional disease states in which the agent may be effective. The records in AIDSTRIALS, supplied by FDA, do not use these phasing categories, while those supplied by NIH do use them.

Efficacy Trial: Usually a Phase II trial. The FDA has established a definition of efficacy trials for the purpose of compiling data for the clinical trials database. This definition was published in the Federal Register, July 21, 1989.

AIDSTRIALS Unit Record

* = Directly searchable
 TW = Text Word searchable
 Y = Yes
 N = No
 + = Data is textextracted into same field

CATEGORY QUALIFIER	ELEMENT NAME	SEARCH STATUS	PRINT	PRINT FULL	PRINT DETAILED
UI	UNIQUE IDENTIFIER	*	Y	Y	Y
TI	PROTOCOL TITLE	TW	Y	Y	Y
PNS	PROTOCOL NUMBER	*	Y	Y	Y
OPNS	OTHER PROTOCOL ID NUMBERS	*	N	Y	Y
VND	VERSION NUMBER & DATE	*	N	N	N
CH	PROTOCOL CHAIRS	*	N	Y	Y
GD	GENERAL DESCRIPTION	TW	N	Y	Y
PH	PHASE	*	N	Y	Y
DIS	DISEASES STUDIED	TW	N	Y	Y
DST	DISEASE STATUS	TW	N	N	Y
PD	PROTOCOL DETAILS	N	N	Y	Y
IO	INPATIENT/OUTPATIENT	*, +	N	Y	Y
OC	OPEN/CLOSED INDICATOR	*, +	N	Y	Y
PIC	PATIENT INCLUSION CRITERIA	N	N	Y	Y
PICA	PATIENT INCLUSION AGE	*	N	Y	Y
PICX	PATIENT INCLUSION SEX	*	N	Y	Y
OPIC	OTHER PATIENT INCLUSION CRITERIA	N	N	N	Y
PEX	PATIENT EXCLUSION CRITERIA	N	N	N	Y
SID	SUBSTANCE IDENTIFICATION	*	Y	Y	Y
SAI	SUBSTANCE ADMINISTRATION INFORMATION	N	N	N	Y
OTI	OTHER TREATMENT INFORMATION	N	N	N	Y
MANF	MANUFACTURERS	+	N	N	Y
SITE	LOCATION OF TRIALS	TW	N	Y	Y
SA	SUPPORTING AGENCY	*	N	N	Y
KW	KEYWORDS	*, TW	N	N	Y
CITY	CITY	*	N	N	N
STS	STATE	*	N	N	N
ZIP	ZIPCODE	*	N	N	N
LR	LAST REVISION DATE	*	N	Y	Y
EM	ENTRY MONTH	*	N	N	Y

Figure 1

SS 1 /C?
 USER:
 female (picx) and open (oc) and boston (city)
 PROG:
 SS (1) PSTG (15)

SS 2 /C?
 USER:
 arc (tw)
 PROG:
 SS (2) PSTG (31)

SS 3 /C?
 USER:
 1 and 2
 PROG:
 SS (3) PSTG

SS 3 /C?
 USER:
 prt 1 dl indented

1
 UNIQUE IDENTIFIER
 PROTOCOL ID NUMBERS
 PROTOCOL TITLE

NIH/CT-00037
 NIAID ACTG 047
 A Clinical Trial of Alternating and
 Intermittent Regimens of 2',3'-
 Dideoxycytidine and
 3'-Azido-3'-Deoxythymidine in the Treatment
 of Patients With AIDS and Advanced ARC.

OTHER PROTOCOL NUMBERS
 VERSION NUMBER & DATE
 PROTOCOL CHAIRS
 GENERAL DESCRIPTION

IND 31,669
 Version 4 (890206).
 CHAIR: Skowron G
 Purpose: To determine if alternating
 azidothymidine (AZT) and 2',3'-
 dideoxycytidine (ddC) (first one and then the
 other) or intermittent therapy (1 week of
 drug then 1 week off) will lessen the toxic
 effects of either drug alone, while still
 inhibiting HIV (the AIDS virus) in patients
 with AIDS or AIDS-related complex. Rationale:
 AZT extends the survival of some patients
 with AIDS, and both AZT and ddC are known to
 inhibit the growth of HIV. When AZT or ddC is
 given continuously over a prolonged period of
 time, toxic effects occur that are not found
 when the drugs are given for 4-6 weeks. It is
 hoped that by alternating the drugs or by
 alternating the drugs or by giving one drug
 intermittently, the toxic effects can be
 decreased without lowering the therapeutic
 effectiveness of the drugs. Methodology:
 Patients will be assigned to 1 of 7 treatment
 groups. Both AZT and ddC will be given by
 mouth every 4 hours. One group will take AZT
 continuously for 52 weeks. One group will
 alternate 1 week of AZT with a week with no
 drug for 48 weeks and another group will
 alternate 1 week of ddC with a week of no
 drug for 48 weeks. Other groups will
 alternate AZT and either low-dose or
 high-dose ddC on a weekly basis or a monthly
 basis for 48 weeks. Patients will be seen
 weekly for the first 8 weeks of study and
 less often thereafter. Blood samples will be
 withdrawn frequently and evaluated for
 possible changes in the immune system, toxic
 effects, and possible changes in the amount
 of HIV in the blood. Lumbar punctures and
 skin biopsies will also be performed.

Figure 2A

PROTOCOL PHASE	Phase II Combination
OPEN/CLOSED INDICATOR	Open to accrual (890526).
DISEASE STUDIED	Primary HIV infection.
DISEASES STATUS	Of the 16 patients in each of 7 arms, 8 patients will have AIDS-related complex and 8 will have AIDS within 4 months after the first episode of <i>Pneumocystis carinii</i> pneumonia.
PROTOCOL DETAILS	STUDY INTENT: Chemotherapy of HIV infection in patients with AIDS and ARC. STUDY DESIGN: Open-label, randomized, seven-arm. Stratified for CD4 cell number. PROJECTED ACCRUAL: 112 patients (16 per arm). DURATION OF PATIENT ON STUDY: 52 weeks. ACTUAL ACCRUAL: 108/112 (890526). NUMBER OF PARTICIPATING AGENCIES: 12 units
INPATIENT/OUTPATIENT ST. PATIENT INCLUSION CRIT.	Outpatient ELIGIBILITY: AIDS. ARC. GENERAL INCLUSION CRITERIA: All patients must have the following: o A consistently positive serum HIV p24 antigen = or > 70 pg/ml, defined by the Abbott HIV antigen test, on two occasions. The tests must be within 1 month prior to entry, separated by at least 72 hours, and the last must be within 2 weeks of starting therapy. Any negative antigen test during the period will exclude the patient from the study. o A positive antibody to HIV confirmed by any federally licensed ELISA test kit. Patients in group A must have AIDS-related complex (ARC) as defined by the documented presence of at least one of the following: o Recurrent oral candidiasis. o Hairy leukoplakia. o History of herpes zoster. o Temperature > 38.5 degrees C with or without night sweats, persisting for > 14 consecutive days or > 15 days in a 30-day interval prior to entry. o Weight loss of > 15 lbs. or 10 percent of body weight noted in a 120-day period HEMOGLOBIN: = or > 9.5 g/dl. GRANULOCYTES: = or > 1200 cells/mm ³ . PLATELET COUNT: = or > 100000 platelets/mm ³ . TRANSAMINASES: < 5 x upper limit of normal. CREATININE CLEARANCE: > 50 ml/min/1.73m ² . KARNOFSKY: = or > 60
PATIENT AGE	AGE: 13 - 99. Consent of parent or guardian if under 19.
PATIENT SEX	MALE
PATIENT SEX	FEMALE
OTHER PATIENT INCL. CH.	REPRODUCTIVE CRITERIA: Females: pregnancy - no, pregnancy test - negative within 30 days of entry, breast-feeding - no, birth control / contraception - adequate. CONCURRENT TREATMENT: Up to 4 units of packed red blood cells may be transfused for hemoglobin toxicity. CONCURRENT MEDICATION: Inhaled pentamidine for prophylaxis of <i>Pneumocystis carinii</i> pneumonia (PCP) is allowed but is discouraged for patients who have not had a previous bout of PCP. AL-721 use is discouraged but not prohibited. Use of aspirin, acetaminophen, and nonsteroidal anti-inflammatory agents should be minimized, with continuous use for > 72 hours discouraged. Acute therapy with ketoconazole may be given.

Figure 2B

<p>PATIENT EXCLUSION CRIT.</p>	<p>GENERAL EXCLUSION CRITERIA: Any negative HIV p24 antigen test during the month prior to entry will exclude the patient from the study. AGE: 0 - 12. REPRODUCTIVE CRITERIA: Pregnancy - yes, breast-feeding - yes. RISK BEHAVIOR: Active drug or alcohol abuse. PRIOR TREATMENT: Blood transfusion within 2 weeks of entry. CONCURRENT TREATMENT: Patients cannot be transfusion dependent (requiring 2 units of blood more than once per month). PRIOR MEDICATION: The participant must not have received any of the following: o Antiretroviral agents within 60 days prior to entry. o Biologic modifiers or corticosteroids within 30 days prior to entry. o Dideoxycytidine (ddC). CONCURRENT MEDICATION: During the study the participants must not receive any of the following: o Neurotoxic drugs. o Prolonged acyclovir therapy. o Antineoplastic therapy. o Systemic therapy and/or prophylaxis for an AIDS-defining opportunistic infection, other than inhaled pentamidine for Pneumocystis carinii pneumonia prophylaxis. o Other antiretroviral agents, biologic modifiers, or systemic corticosteroids. o Other experimental medication. COMPLICATIONS: Patients may not have any of the following symptoms or diseases: o Transfusion dependence requiring 2 units of blood more than once per month. o Significant malabsorption (> 10 percent weight loss within the past 3 months with serum carotene < 75 U/ml or vitamin A < 74 IU/ml). o Significant cardiac or liver disease. o Significant neurologic abnormalities defined by any one of the following: o A significant abnormality on the ddC Neuropathy Targeted Symptom Questionnaire defined as a symptom score > 4 (moderate severity) in any one of six categories or a score > 2 (mild severity) in any two of six categories. o Moderate abnormalities on standardized neurologic exam. o Any severe abnormality (a value = or > 4.0) on standardized 4-arm quantitative sensory testing of vibration threshold. o Diabetes, renal failure, or alcoholism. o Dose-limiting or transfusion-requiring toxicity during a previous course of azidothymidine therapy. o History of idiopathic thrombocytopenic purpura. AVAILABILITY: Unwilling to be followed by the medical center for the duration of the study and follow-up.</p>
<p>SUBSTANCE IDENTIFICATION</p>	<p>Drug 1: DRG-0004: Azidothymidine</p>
<p>SUBSTANCE IDENTIFICATION</p>	<p>Drug 2: DRG-0015: 2',3'- Dideoxycytidine (ddC) Antiretroviral</p>
<p>SUBSTANCE ADMIN. INFO.</p>	<p>DOSAGE SCHEDULE: Drug 1: Arms 1 - 5 and 7: 200 mg q4h. Drug 2: Arms 1 and 3: 0.01 mg/kg q4h. Arms 2, 4, and 6: 0.03 mg/kg q4h DAILY DOSAGE: Drug 1: arms 1 - 5 and 7: 1200 mg. Drug 2: arms 1 and 3: 0.06 mg/kg. arms 2, 4, and 6: 0.18 mg/kg DELIVERY MODE: Drug 1: Oral, capsule. Drug 2: Oral, tablet</p>

Figure 2C

OTHER TREATMENT INFO.

TREATMENT DURATION: Drug 1: Arms 1, 2, and 5: Alternate weeks for 48 weeks. Arms 3 and 4: Alternate 4-week periods for 48 weeks. Arm 7: 52 weeks. Drug 2: Arms 1, 2, and 6: Alternate weeks for 48 weeks. Arms 3 and 4: Alternate 4-week periods for 48 weeks. END POINT: An arm will cease to enroll additional patients if either of the following criteria is met: o Toxicity: 40 percent (but at least 4 patients) of the patients enrolled in an arm develop the same toxicity requiring drug discontinuation. For this purpose, only patients with a neurotoxicity symptom score of = or > 4 in any category at some point during their course will be considered to have had limiting neurotoxicity. o Failure of efficacy: If less than 25 percent of patients in an arm meet efficacy criteria at bimonthly interim analysis. Efficacy is defined as a stable or increased CD4 cell number or a stable or reduced serum p24 antigen. Patients already on study will be given the option of continuing after the arm ceases to enroll patients. Completion of 48 or 52 weeks of therapy. DISCONTINUE: Patients will be removed from the study for the following reasons: o Noncompliance: At a minimum, failing to take at least 25 percent of the study medication or missing two consecutive clinic visits without just cause. o Requirement for therapy for Kaposi's sarcoma or other malignancies. o Requirement for therapy for any AIDS-defining opportunistic infection. o Pregnancy. Both drugs will be permanently discontinued for dose-limiting neuropathy defined as the occurrence of one of the following: o Symptoms of moderate intensity (analgesia required) which are characteristic of 2',3'- dideoxycytidine (ddC) neuropathy (burning or shooting pain bilaterally affecting the lower extremities) and which are continuous and persistent for = or > 72 hours. o Symptoms of severe intensity (marked antalgic gait, narcotic analgesia required, with symptomatic improvement, or incapacitant, intolerable discomfort not improved or unable to walk despite narcotic analgesics. o A symptom of moderate intensity in any category on ddC Neuropathy Targeted Symptom Questionnaire. Plus one of the following: o A supporting abnormality (loss of a reflex, etc.) in the affected limb on standardized peripheral nerve physical examination. o A supporting abnormality (> 2.5 standard deviations above the mean) in the affected limb on standardized 4-limb quantitative sensory testing. Both drugs will be permanently discontinued for toxicity grades (Recommendations for Grading of Acute and Subacute Toxic Effects (Adults)) as follows: Grade 2 or 3 hemoglobin toxicity: o If transfusion requirement for patient on azidothymidine (AZT) is not improved by reduction of AZT to 100 mg q4h. o If patient on AZT 100 mg q4h requires more than 4 units of packed red cell transfusion per 6-week interval. o If patient declines transfusion and recovery does not occur within 21 days of withholding AZT or a second episode occurs. o If patient is on intermittent ddC alone.

Figure 2D

Grade 4 hemoglobin toxicity: o If patient is MODIFICATION: Dosages will be modified for toxicity grades (Recommendations for Grading of Acute and Subacute Toxic Effects (Adults)) as follows: o Grade 2 or 3 hemoglobin toxicity: If a patient requires more than 4 units of packed red cell transfusion per 6-week interval, patient on azidothymidine (AZT) 200 mg q4h will be reduced to 100 mg q4h. If patient declines to be transfused, AZT will be held and if toxicity returns to grade 0, 1, or baseline within 21 days, AZT will be restarted at 100 mg q4h. o Grade 4 hemoglobin toxicity: If patient receives packed red cells, AZT will be held for 2 weeks, then restarted at 100 mg q4h without frame shift (either immediately at the end of 14 days if that falls within an AZT treatment period or at the next scheduled AZT treatment period). If the patient declines to be transfused, AZT and 2',3'- dideoxycytidine (ddC) will be held until toxicity returns to grade 0, 1, or baseline. If recovery occurs within 21 days, ddC will be restarted at the previous dose and AZT will be restarted at 100 mg q4h, as specified for that week in protocol. o Grade 3 leukocyte or granulocyte toxicity: If the patient is on AZT 200 mg q4h, AZT will be reduced to 100 mg q4h. If the patient is on AZT 100 mg q4h, dose will be held until recovery to grade 1 or better, and if recovery occurs within 21 days, AZT will be restarted at 100 mg q4h. If granulocytes/leukocytes return to grade 1, and are stable or improving for 14 days on AZT 100 mg q4h, AZT may be increased to 200 mg q4h. Subsequent episodes will be treated similarly. If the patient is on intermittent ddC alone, ddC will be held and if toxicity returns to grade 0, 1, or baseline within 21 days, ddC will be restarted as specified for that week in protocol (no frame shift). o Grade 4 leukocyte or granulocyte toxicity: AZT and ddC will be held until toxicity returns to grade 2 or better. If recovery occurs within 21 days ddC will be restarted at the previous dose and AZT at 100 mg q4h, as specified for that week in protocol.

University of California at San Diego
Medical Center San Diego, CA Contact Person:
Unspecified Phone: (619) 298-7021.

LOCATION OF TRIAL

Figure 2E

LOCATION OF TRIAL	University of Southern California Medical Center Los Angeles, CA Contact Person: Barranday, Yvonne Contact Person: Halley, Jane Phone: (213) 226-5225.
LOCATION OF TRIAL	Stanford University School of Medicine Stanford, CA Contact Person: Unspecified Phone: (415) 723-6231.
LOCATION OF TRIAL	George Washington University Medical Center Washington, DC Contact Person: Olson, Jamie Phone: (202) 994-2293. (Backup only) Courtless, Jane Phone: (202) 994-3027.
LOCATION OF TRIAL	Miami School of Medicine Miami, FL Contact Person: Misdraji, Joe Phone: (305) 549-7538 Casuso, Juan Phone: (305) 549-7538.
LOCATION OF TRIAL	Northwestern University Medical School Chicago, IL Contact Person: Williams, Lisa Phone: (312) 908-8358 Newquist, Susan Phone: (312) 908-8388.
LOCATION OF TRIAL	Tulane University Medical Center New Orleans, LA Contact Person: Istre, Jennifer Phone: (504) 587-7316.
LOCATION OF TRIAL	Massachusetts General Hospital Harvard Medical School Boston, MA Contact Person: Godfrey, Ellen Phone: (617) 726-5596.
LOCATION OF TRIAL	University of Minnesota Health Sciences Center Minneapolis, MN Contact Person: Reed, Nancy Phone: (612) 625-1462 or Pollock, Susan Reaney, Su Phone: (612) 625-1462.
LOCATION OF TRIAL	Washington University School of Medicine St. Louis, MO Contact Person: Bose, Diana Phone: (314) 454-0058.
LOCATION OF TRIAL	Robert Wood Johnson Medical School New Brunswick, NJ Contact Person: Connolly, Doris Phone: (201) 937-8571.
LOCATION OF TRIAL	St. Luke's Roosevelt Hospital New York, NY Contact Person: Kolatch, Brenda Phone: (212) 523-6741.
SUPPORTING AGENCY	National Institute of Allergy and Infectious Diseases (Federal).
KEYWORDS	Human
KEYWORDS	Acquired immunodeficiency syndrome -- drug therapy
KEYWORDS	Acquired immunodeficiency syndrome -- immunology
KEYWORDS	Administration, oral
KEYWORDS	AIDS-related complex -- drug therapy
KEYWORDS	AIDS-related complex -- immunology
KEYWORDS	Dose-response relationship, drug
KEYWORDS	Azidothymidine -- administration & dosage
KEYWORDS	Azidothymidine -- therapeutic use
KEYWORDS	Azidothymidine -- adverse effects
KEYWORDS	Dideoxynucleosides -- therapeutic use
KEYWORDS	Dideoxynucleosides -- administration & dosage
KEYWORDS	Dideoxynucleosides -- adverse effects
KEYWORDS	Deoxycytidine -- analogs
LAST REVISION DATE	890526
ENTRY MONTH	8907

Figure 2F

AIDSDRUGS Unit Record

* = Directly searchable
 TW = Text Word Searchable
 Y = Yes
 N = No
 + = Data is textracted into same field

CATEGORY QUALIFIER	ELEMENT NAME	SEARCH STATUS	PRINT	PRINT FULL	PRINT DETAILED
UI	UNIQUE IDENTIFIER	*	Y	Y	Y
NM	NAME OF SUBSTANCE	*,NF	Y	Y	Y
N1	STANDARD CHEMICAL NAME	*,NF	N	Y	Y
RN	REGISTRY NUMBER	*	Y	Y	Y
PNS	PROTOCOL NUMBERS	*	Y	Y	Y
SY	SYNONYMS	*,NF	N	Y	Y
IND	IND NUMBER	*	N	N	Y
SI	SECONDARY SOURCE ID	*	N	N	Y
CC	CLASSIFICATION CODE	*	N	Y	Y
CPP	CHEMICAL/PHYSICAL DATA	N	N	N	Y
INTC	SUBSTANCE INTERACTIONS	N	N	N	Y
PA	PHARMACOLOGY	TW	N	Y	Y
DIS	DISEASES STUDIED	TW	N	Y	Y
OUSE	OTHER MAJOR USES	TW	N	N	Y
ADEF	ADVERSE EFFECTS	N	N	Y	Y
CIND	CONTRAINDICATIONS	N	N	N	Y
SDD	SUBSTANCE DELIVERY DATA	N	N	N	Y
REFS	REFERENCES	N	N	N	Y
MANF	MANUFACTURERS	*,+	N	N	Y
COMM	DRUG DEVELOPMENT COMM	N	N	N	Y
PLAN	NIAID PLAN	N	N	N	Y
EM	ENTRY MONTH	*	N	N	Y
LR	LAST REVISION DATE	*	N	Y	Y

Figure 3

UNIQUE IDENTIFIER	DRG-0015
NAME OF SUBSTANCE	Dideoxycytidine
REGISTRY NUMBER	7481-89-2
STANDARD CHEMICAL NAME	2',3'-Dideoxycytidine [CA]
PROTOCOL ID NUMBERS	NIAID ACTG 011
PROTOCOL ID NUMBERS	NIAID ACTG 012
PROTOCOL ID NUMBERS	NIAID ACTG 047
PROTOCOL ID NUMBERS	NIAID ACTG 050
PROTOCOL ID NUMBERS	NCI T88 0064N
PROTOCOL ID NUMBERS	NCI T88 0202N
PROTOCOL ID NUMBERS	NCI T87 0296N
IND NUMBER	IND 29,982
IND NUMBER	IND 31,669
PHARMACOLOGICAL ACTION	MODE OF ACTION: inhibits replication and cytopathic effect of HIV; decreases serum levels of HIV p24 antigen; continuous infusion of 47 mg/kg/day in mice produced a steady-state plasma level of 1.09 micrograms/mL; infusion of 0.03 and 0.25 mg/kg in humans indicated plasma levels of 0.1-0.3 and 1-2 micromolar, respectively (with mean CSF levels about 30 percent of plasma level); plasma half-life: about 1 hour; steady-state volume of distribution: about 0.9 L/kg; total body clearance: 12 mL/min/kg; well absorbed orally in both fasting and non-fasting states; most of the drug is eliminated by renal clearance. [ACTG 047]
CLASSIFICATION CODE	Antiviral agent [ACTG 047]
ADVERSE EFFECTS	Short-term dosing: aphthous stomatitis, rash, transient thrombocytopenia, low-grade fever; prolonged high dosing: reversible distal, sensory, peripheral neuropathy; severe shooting, burning, or cramping pains. [ACTG 047]
CONTRAINDICATIONS	Should not be taken by patients with significant neurologic abnormalities, diabetes, renal failure or by pregnant or lactating women.
CHEMICAL/PHYSICAL DATA	DESCRIPTION: Dideoxynucleoside
CHEMICAL/PHYSICAL DATA	MOLECULAR FORMULA: C9H13N3O3 [CA]
CHEMICAL/PHYSICAL DATA	MOLECULAR WEIGHT: 211
CHEMICAL/PHYSICAL DATA	PHYSICAL DESCRIPTION: Crystalline solid
SUBSTANCE DELIVERY DATA	DOSAGE FORM: Capsules/tablets
SUBSTANCE DELIVERY DATA	MODE OF DELIVERY: Oral; intravenous infusion
SUBSTANCE DELIVERY DATA	DOSAGE FORM: Sterile solution
MANUFACTURERS	Hoffman-La Roche
ENTRY MONTH	8906

Figure 4

Serials Update

INDEXED TITLES UPDATE, JULY 1989

The following titles cited in MEDLINE, HEALTH, and POPLINE have recently been selected for indexing, undergone a title change, or ceased publication. This list is not cumulative; the information provided is only for titles whose status has changed since the

last UPDATE. More detailed information may be found in SERLINE. For further information, please contact MMS or Ms. Esther Baldinger, (301) 496-1276, Technical Services Division, NLM.

TITLES SELECTED FOR INDEXING, JUNE 1989

- | | |
|---|--|
| <p>IM ANNUAL REVIEW OF PHYSICAL CHEMISTRY
ANNU REV PHYS CHEM
1,1950--
ANNUAL REVIEWS
PALO ALTO CA UNITED STATES
INDEXING BEGAN WITH V39,1988.
W1 AN778P 0066-426X
A54225000 JC: ADU
ANNUAL REVIEWS, PHYSICAL CHEMISTRY, 4139
EL CAMINO WAY, PALO ALTO CA 94306</p> | <p>IM CARLSBERG RESEARCH COMMUNICATIONS
CARLSBERG RES COMMUN
41,1976--
SPRINGER VERLAG
COPENHAGEN DENMARK
CONTINUES COMPTES RENDUS DES TRAVAUX DU
LABORATOIRE CARLSBERG
INDEXING BEGAN WITH V53N1,1988.
W1 CAS2 0105-1938
C08060000 JC: ADT</p> |
| <p>IM ARCHIVES OF GERONTOLOGY AND GERIATRICS.
SUPPLEMENT
ARCH GERONTOL GERIATR SUPPL
1,1989--
ELSEVIER SCIENCE PUBLISHERS
AMSTERDAM NETHERLANDS
SUPPLEMENT TO: ARCHIVES OF GERONTOLOGY AND
GERIATRICS.
INDEXING BEGAN WITH V1,1989.
W1 AR455ALA 0167-4943
SR0065840 JC: ACY</p> | <p>IM DRUG DESIGN AND DELIVERY
DRUG DES DELIV
1N1,AUG 1986--
HARWOOD ACADEMIC
CHUR SWITZERLAND
INDEXING BEGAN WITH V1N1,1986.
W1 DR521CT 0884-2884
SR0057720 JC: AD9
STBS,1 BEDFORD ST,LONDON WC2E 9PP,ENGLAND</p> |
| <p>IDL AUSTRALIAN BEGG ORTHODONTICS NEWSLETTER
AUST BEGG ORTHOD NEWSL
1988--
AUSTRALIAN BEGG LIGHTWIRE STUDY GROUP
AUSTRALIA
INDEXING BEGAN WITH JUNE,1988.
ON ORDER
SR0065861 JC: ADE
DR. BARRY MOLLENHAUER,229 UPPER
HEIDELBERG RD.,IVANHOE VICTORIA
3079,AUSTRALIA</p> | <p>IM GENETIC EPIDEMIOLOGY. SUPPLEMENT
GENET EPIDEMIOL SUPPL
1,1986--
ALAN R. LISS
NEW YORK NY UNITED STATES
INDEXING BEGAN WITH V1,1986.
IN PROCESS
SR0065900 JC: ADZ</p> |
| <p>IM BIOFACTORS
BIOFACTORS
1,1988--
IRL PRESS LTD. ON BEHALF OF THE
INTERNATIONAL UNION OF BIOCHEMISTRY
OXFORD ENGLAND
INDEXING BEGAN WITH V1N1,1988.
W1 BI664C 0951-6433
SR0060823 JC: AEB</p> | <p>IM IMMUNOLOGY TODAY
IMMUNOL TODAY
1,JUL 1980--
ELSEVIER
CAMBRIDGE ENGLAND
INDEXING BEGAN WITH V9N1,1988.
W1 IM53P 0167-4919
I06245000 JC: AEA</p> |
| <p>IDL CANADIAN JOURNAL OF COMMUNITY DENTISTRY
CAN J COMMUNITY DENT
1N1,JAN 1986--
CANADIAN SOCIETY OF PUBLIC HEALTH DENTISTS
SCARBOROUGH CANADA
OFFICIAL PUBLICATION OF THE CANADIAN
SOCIETY OF PUBLIC HEALTH DENTISTS.
INDEXING BEGAN WITH 2N2,JUL 1987.
W1 CA585C
SR0060956 JC: CJO</p> | <p>IDL INTERNATIONAL JOURNAL OF PROSTHODONTICS
INT J PROSTHODONT
1N1,JUL/AUG 1988--
QUINTESSENCE PUBLISHING
LOMBARD IL UNITED STATES
INDEXING BEGAN WITH V1N2,SEP-OCT 1988.
W1 IN775KE 0893-2174
SR0063213 JC: AC3</p> |

- IM JOURNAL OF AUTOIMMUNITY
 J AUTOIMMUN
 IN1,FEB 1988--
 ACADEMIC PRESS
 LONDON ENGLAND
 INDEXING BEGAN WITH VIN1,1988.
 WI J0547NJ 0896-8411
 SR0061744 JC: ADL
 ACADEMIC PRESS,24-28 OVAL ROAD,LONDON
 NW1 7DX,UK
- IM JOURNAL OF GERIATRIC PSYCHIATRY AND
 NEUROLOGY
 J GERIATR PSYCHIATRY NEUROL
 IN1,JAN 1988--
 PSG PUBLISHING
 LITTLETON MA UNITED STATES
 CONTINUES: MASSACHUSETTS GENERAL HOSPITAL
 NEWSLETTER. TOPICS IN GERIATRICS.
 INDEXING BEGAN WITH VIN1,JAN 1988.
 WI J0669ND 0891-9887
 SR0059706 JC: AD5
 PSG PUBLISHERS,545 GREAT RD,BOX
 6,LITTLETON MA 01460-9990
- IM JOURNAL OF MOLECULAR AND CELLULAR IMMUNOLOGY
 J MOL CELL IMMUNOL
 IN1,1983--
 SPRINGER VERLAG
 NEW YORK UNITED STATES
 INDEXING BEGAN WITH VIN1,1983.
 WI J0772F 0724-6803
 J30370000 JC: AED
- IM JOURNAL OF MOLECULAR ENDOCRINOLOGY
 J MOL ENDOCRINOL
 IN1,JUL 1988--
 JOURNAL OF ENDOCRINOLOGY
 BRISTOL ENGLAND
 A JOURNAL OF THE SOCIETY FOR ENDOCRINOLOGY.
 INDEXING BEGAN WITH VIN1,JUL 1988.
 WI J0773G 0952-5041
 SR0062650 JC: AEG
 JOURNAL OF ENDOCRINOLOGY LTD.,23
 RICHMOND HILL,BRISTOL BS8 1EN ENGLAND
- IM JOURNAL OF PROTEIN CHEMISTRY
 J PROTEIN CHEM
 IN1,MAY 1982--
 PLENUM PRESS
 NEW YORK NY UNITED STATES
 INDEXING BEGAN WITH V7N1,FEB 1988.
 WI J0851H 0277-8033
 J36010000 JC: AEJ
- IM JOURNAL OF SURGICAL ONCOLOGY. SUPPLEMENT
 J SURG ONCOL SUPPL
 1,1989--
 ALAN R LISS
 NEW YORK NY UNITED STATES
 INDEXING BEGAN WITH V1,1989.
 IN PROCESS
 SR0065852 JC: ADB
- IM MEDICAL DOSIMETRY
 MED DOSIM
 I2N1,1987--
 PERGAMON PRESS
 ELMSFORD NY UNITED STATES
 OFFICIAL JOURNAL OF THE AMERICAN
 ASSOCIATION OF MEDICAL DOSIMETRISTS.
 CONTINUES: JOURNAL / AMERICAN ASSOCIATION
 OF MEDICAL DOSIMETRISTS.
 INDEXING BEGAN WITH V13N1,1988.
 WI ME306 0739-0211
 SR0062083 JC: AEN
 PERGAMON PRESS INC.,FAIRVIEW
 PARK,ELMSFORD NY 10523
- IM MOLECULAR CARCINOGENESIS
 MOL CARCINOG
 IN1,1988--
 ALAN R. LISS
 NEW YORK NY UNITED STATES
 4Y, VOL.1 (1988); 6Y, VOL.2 (1989)-
 INDEXING BEGAN WITH VIN1,1988.
 WI M0196DF 0899-1987
 SR0061952 JC: AEQ
- IM NEUROPSYCHOPHARMACOLOGY
 NEUROPSYCHOPHARMACOLOGY
 IN1,DEC 1987--
 ELSEVIER
 NEW YORK UNITED STATES
 OFFICIAL PUBLICATION OF THE AMERICAN
 COLLEGE OF NEUROPSYCHOPHARMACOLOGY.
 INDEXING BEGAN WITH VIN1,DEC 1987.
 WI NE342F 0893-133X
 SR0061210 JC: ADQ
- IM OXFORD SURVEYS ON EUKARYOTIC GENES
 OXF SURV EUKARYOT GENES
 1,1984--
 OXFORD UNIVERSITY PRESS
 OXFORD ENGLAND
 INDEXING BEGAN WITH VIN1,1984.
 WI OX621TM 0265-0738
 SR0061129 JC: ADW
- IM TRANSPLANT INTERNATIONAL
 TRANSPL INT
 IN1,APR 1988--
 SPRINGER INTERNATIONAL
 HEIDELBERG GERMANY, WEST
 OFFICIAL JOURNAL OF THE EUROPEAN SOCIETY
 FOR ORGAN TRANSPLANTATION.
 INDEXING BEGAN WITH VIN1,1988.
 WI TR233G 0934-0874
 SR0062324 JC: ADY
- IM VIRAL IMMUNOLOGY
 VIRAL IMMUNOL
 IN1,SPRING 1987--
 MARY ANN LIEBERT
 NEW YORK UNITED STATES
 INDEXING BEGAN WITH VIN1,1987.
 WI VI763 0882-8245
 SR0054006 JC: ADO
 MARY ANN LIEBERT INC,1651 THIRD AVE,NEW
 YORK NY 10128

IM WHO REGIONAL PUBLICATIONS EUROPEAN SERIES
WHO REG PUBL EUR SER
N1,1976--
WORLD HEALTH ORGANIZATION
COPENHAGEN DENMARK
CALLED ALSO REGIONAL PUBLICATIONS SERIES
INDEXING BEGAN WITH NO.24,1988.
W1 W156 0378-2255
W04500000 JC: AD7

IM WORLD HEALTH FORUM
WORLD HEALTH FORUM
1,1980--
WORLD HEALTH ORGANIZATION
GENEVA SWITZERLAND
ISSUED ALSO IN FRENCH: FORUM MONDIALE DE LA
SANTE.
INDEXING BEGAN WITH V9N1,1988.
W1 W0873 0251-2432
W09470000 JC: AD2
WORLD HEALTH ORGANIZATION, LIBRARY, 1211
GENEVA 27, SWITZERLAND

TITLE CHANGES, JUNE 1989

INI ADVANCING CLINICAL CARE
ADV CLIN CARE
4N3, MAY/JUN 1989--
DATA DESIGN
FRANKSVILLE WI UNITED STATES
THE OFFICIAL PUBLICATION OF THE NATIONAL
ORGANIZATION FOR THE ADVANCEMENT OF
ASSOCIATE DEGREE NURSING (NOAADN).
CONTINUES: AD NURSE.
IN PROCESS 1042-9565
SR0065850 JC: AC8

IM FARMACO
FARMACO
44N1, 1989--
SOCIETA CHIMICA ITALIANA
PAVIA ITALY
MERGER OF: FARMACO, EDIZIONE SCIENTIFICA;
AND FARMACO, EDIZIONE PRATICA.
IN PROCESS
SR0065843 JC: ACZ

IM AMERICAN JOURNAL OF REPRODUCTIVE IMMUNOLOGY
AM J REPROD IMMUNOL
19N1, JAN 1989--
ALAN R. LISS
NEW YORK NY UNITED STATES
CONTINUES: AMERICAN JOURNAL OF REPRODUCTIVE
IMMUNOLOGY AND MICROBIOLOGY.
IN PROCESS
SR0065978 JC: AEZ

INI HAWAII NURSE
HAWAII NURSE
30N4, MAY 1989--
HAWAII NURSES ASSOCIATION
HONOLULU HI UNITED STATES
CONTINUES: HAWAII NURSES PIPELINE, WHICH
IS NOT IN THE NLM COLLECTION. OFFICIAL
MONTHLY NEWSLETTER OF THE HAWAII NURSES
ASSOCIATION.
ON ORDER
SR0065913 JC: AD6

HLI AOHA TODAY
AOHA TODAY
33N2, APR 1989--
AMERICAN OSTEOPATHIC HOSPITAL ASSOCIATION
ALEXANDRIA VA UNITED STATES
CONTINUES: OSTEOPATHIC HOSPITAL LEADERSHIP.
W1 A062 1044-1980
SR0065627 JC: ACX

IM INTERNATIONAL JOURNAL OF MEDICAL
MICROBIOLOGY
INT J MED MICROBIOL
271N1, MAY 1989--
GUSTAV FISCHER VERLAG
STUTTGART GERMANY, WEST
CONTINUES: ZENTRALBLATT FUR BAKTERIOLOGIE,
MIKROBIOLOGIE, UND HYGIENE. SERIES A,
MEDICAL MICROBIOLOGY, INFECTIOUS DISEASES,
VIROLOGY, PARASITOLOGY.
W1 IN769RK 0934-8840
SR0065846 JC: AC2

HLI EHT
EHT
10N2, FEB 1989--
ZIMMERMAN PUBLIC RELATIONS
COLUMBUS OH UNITED STATES
CONTINUES: EXECUTIVE HOUSEKEEPING TODAY.
ON ORDER
SR0065898 JC: ADX

INI OSTOMY/WOUND MANAGEMENT
OSTOMY WOUND MANAGE
8, 1985--
HEALTH MANAGEMENT PUBLICATIONS
KING OF PRUSSIA UNITED STATES
PA
CONTINUES: OSTOMY MANAGEMENT.
INDEXING BEGAN WITH V21, WINTER 1988.
W1 OS963 0889-5899
SR0054803 JC: AC4

IM EUROPEAN RESPIRATORY JOURNAL. SUPPLEMENT
EUR RESPIR J [SUPPL]
1, 1988--
SOCIETY FOR CLINICAL RESPIRATORY PHYSIOLOGY
AND MUNKSGAARD
COPENHAGEN DENMARK
OFFICIAL JOURNAL OF THE EUROPEAN SOCIETY
FOR CLINICAL RESPIRATORY PHYSIOLOGY.
CONTINUES: EUROPEAN JOURNAL OF RESPIRATORY
DISEASES. SUPPLEMENT. SUPPLEMENT TO:
EUROPEAN RESPIRATORY JOURNAL.
INDEXING BEGAN WITH V1, 1988.
W1 EU722KA 0904-1850
SR0065764 JC: ACK

IM REPRODUCTION, NUTRITION, DEVELOPMENT
REPROD NUTR DEV
29N1, 1989--
ELSEVIER
PARIS FRANCE
CONTINUES: REPRODUCTION, NUTRITION,
DEVELOPPEMENT.
IN PROCESS
SR0065960 JC: AEW

IM SCIENCE IN CHINA. SERIES B, CHEMISTRY,
LIFE SCIENCES AND EARTH SCIENCES
SCI CHINA [B]
32N1, JAN 1989--
CHINESE ACADEMY OF SCIENCES
BEIJING CHINA
CONTINUES: SCIENTIA SINICA. SERIES B,
CHEMICAL, BIOLOGICAL, AGRICULTURAL, MEDICAL
AND EARTH SCIENCES.
IN PROCESS
SR0065958

JC: AEU

IM ZEITSCHRIFT FUR NATURFORSCHUNG. SECTION C.
JOURNAL OF BIOSCIENCES
Z NATURFORSCH [C]
41N1-2, JAN-FEB 1986--
VERLAG DER ZEITSCHRIFT FUR NATURFORSCHUNG
TUBINGEN GERMANY, WEST
CALLED ALSO: ZEITSCHRIFT FUR
NATURFORSCHUNG. SECTION C, A JOURNAL OF
BIOSCIENCES. CONTINUES: ZEITSCHRIFT FUR
NATURFORSCHUNG. SECTION C, BIOSCIENCES.
W1 ZE4957 0341-0382
SR0065768 JC: ACL

IM ZENTRALBLATT FUR HYGIENE UND UMWELTMEDIZIN
ZENTRALBL HYG UMWELTMED
188N1-2, MAY 1989--
GUSTAV FISCHER VERLAG
STUTTGART GERMANY, WEST
CONTINUES: ZENTRALBLATT FUR BAKTERIOLOGIE,
MIKROBIOLOGIE UND HYGIENE. SERIE B,
UMWELTHYGIENE, KRANKENHAUSHYGIENE,
ARBEITSHYGIENE, PRAVENTIVE MEDIZIN.
W1 ZE778NH 0934-8859
SR0065844 JC: ACL

TITLES NO LONGER INDEXED AS OF JUNE 1989

IDL ACTA DE ODONTOLOGIA PEDIATRICA
ACTA ODONTOL PEDIATR
1N1, JUN 1980-9, 1988
CENTRO DE ODONTOLOGIA PEDIATRICA
SANTO DOMINGO DOMINICAN REPUBLIC
OFFICIAL PUBLICATION OF THE CENTRO DE
ODONTOLOGIA PEDIATRICA.
INDEXING BEGAN MAY, 1981.
W1 AC789M 0252-1032
A07460000 JC: 59P

CHANGE OF ADDRESS FORM
(U.S. users only)

User ID Code _____ (Must be included)

Check here _____ if you purchased GRATEFUL MED.
The new address information will be forwarded to NTIS.

New Billing Address: (please print or type)

Name: _____

Telephone: _____

New NLM Technical Bulletin/GRATEFUL MED Address:

Name: _____

Telephone: _____

NOTE:

This form **DOES NOT** change the address of Automatic SDIs
or your stored address for offline prints. Call the MMS
Service Desk for information on changing these addresses.

Signature

Printed Name

Date

Please affix current address label here:

Please mail this form to:

MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike
Bethesda, MD 20894

GRATEFUL MED Users
FDQ Access - Page 7

The NLM Technical Bulletin

ISSN 0146-3055
AUGUST 1989

No. 244

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Macintosh Version 1.0** 1

**NLM Online Training
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Appendix B: NTIS Order Form

Enclosures: TRI Fact Sheet

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Introducing: GRATEFUL MED,[®] Macintosh Version 1.0

Bill Trefzger
MEDLARS Management Section, NLM

The much-anticipated Macintosh version of GRATEFUL MED is now available. GRATEFUL MED, the National Library of Medicine's interface for the MEDLARS online system, set a new standard for user-friendly searching when it was introduced in 1986 for IBM-PC and compatible computers. The "Mac" version offers the same ease of use to a whole new population of users.

GRATEFUL MED on the Mac takes proven searching features such as the Input Form Screen and selection of MeSH (Medical Subject Headings) terms, and incorporates them with the interface familiar to Mac users: the menu bar, windows, dialog boxes, and "point and click" mouse selection. This combination makes "GM Mac" an extremely easy yet powerful way to access MEDLINE and other MEDLARS databases.

Continued on page 8.



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES • Public Health Service • National Institutes of Health
National Library of Medicine

MEDLARS DATABASE	TOTAL RECORDS	DATES COVERED	DATE LAST UPDATED	LATEST UPDATE TAG
ELHILL COMPUTER				
AIDSDRUGS	48		09 SEP 89	8906(EM)
AIDSLINE**™	23,374	JAN 80-NOV 89	09 SEP 89	8911(EM)
AIDSTRIALS	208		16 SEP 89	8909(EM)
AVLINE®	19,559	THROUGH 1989	22 SEP 89	
BIOETHICS®	28,002	JAN 73-AUG 89	05 AUG 89	8908(EM)
CANCERLIT®	687,746	JAN 63-SEP 89	05 SEP 89	8909(EM)
CATLINE®	652,400	THROUGH 1989	22 SEP 89	
CHEMLINE®	876,636		12 AUG 89	8908(EM)
CLINPROT®	7,423		18 AUG 89	8908(EM)
DENTALPROJ	776		28 JUN 89	
DIRLINE®	15,506		18 SEP 89	
DOCUSER®	11,579		16 SEP 89	
HEALTH	469,932	JAN 75-OCT 89	05 SEP 89	8910(EM)
HISTLINE®	89,914		05 SEP 89	8909(EM)
MEDLINE*®	500,944	JAN 88-NOV 89	09 SEP 89	8911(EM)
MED86	639,431	JAN 86-DEC 87	22 JUL 89	
MED83	889,211	JAN 83-DEC 85	18 FEB 89	
MED80	803,258	JAN 80-DEC 82	18 FEB 89	
MED77	775,192	JAN 77-DEC 79	18 MAR 89	
MED72	1,175,360	JAN 72-DEC 76	14 AUG 89	
MED66	1,310,376	JAN 66-DEC 71	03 JUN 89	
MESH VOC®	69,148	1989	16 SEP 89	
NAME AUTH®	336,823		16 SEP 89	
PDQ®		THRU SEP 89	09 SEP 89	
POPLINE®	170,012	1970-SEP 89	16 SEP 89	8909(EM)
SDILINE®	35,119	AUG 89	29 JUL 89	8910(EM)
SERLINE®	73,262	1989	18 SEP 89	
TOXLINE®	725,820	1981-1989	09 SEP 89	8909(EM)
TOXLINE65	698,414	PRE 1965-1980	04 MAR 89	
TOXLIT™	760,044	1981-1989	09 SEP 89	8909(EM)
TOXLIT65	586,405	1965-1980	01 SEP 87	

*N.B. FILE IS UPDATED SEMI-MONTHLY; THIS IS PART 1 OF 2. **N.B. FILE IS UPDATED THREE TIMES A MONTH; THIS IS PART 1 OF 3.

TOXNET COMPUTER

CCRIS	1,453		12 SEP 89
DBIR®	634		28 AUG 89
EMICBACK	67,975		02 JUN 89
ETICBACK	46,374		30 JAN 89
HSDB®	4,202		14 SEP 89
RTECS®	100,547		06 SEP 89
TRI	74,096		14 AUG 89

Head, MMS: Carolyn B. Tilley
 Editor: Toby Port
 Assistant Editor: Annette Morris
 Technical Notes Editor: Joyce A. Conner
 (301) 496-6193

Direct Inquiries to:
 MEDLARS Management Section
 National Library of Medicine
 Bldg., 38A, Rm. 4N421
 Bethesda, Maryland 20894

Technical Notes

Whenever applicable, the heading of each Technical Note includes a reference to the section of the Online Services Reference Manual 1989 that is considered most relevant to the item being discussed, e.g., (Manual 4.7.2). Users should keep in mind that the item may pertain to other sections as well.

COLUMBUS DAY HOLIDAY SCHEDULE

MONDAY OCT. 9 OBSERVANCE

System	Rates/Status
ELHILL	non-prime non-guaranteed
TOXNET	non-prime guaranteed
DOCLINE	N/A non-guaranteed

Service Desks

MMS	not staffed
DOCLINE	not staffed

THURSDAY OCT. 12

System	Rates/Status
ELHILL	regular guaranteed
TOXNET	regular guaranteed
DOCLINE	N/A guaranteed

Service Desks

MMS	open
DOCLINE	open

MESH TOOLS 1990

The following 1990 MeSH tools may now be ordered from the National Technical Information Service (NTIS).

Medical Subject Headings -- Annotated Alphabetic List, 1990

PB90-100009/GBB
\$33.00, U.S. and Canada
(\$66.00 foreign);
microfiche, \$18.50 (\$37.00 foreign)

Medical Subject Headings -- Tree Structures, 1990
Beginning with the 1990 edition, *Medical Subject Headings -- Tree Structures* also includes MeSH Tree Annotations, formerly published separately as a tool for indexers and searchers.

PB90-100017/GBB
\$28.50, U.S. and Canada
(\$57.00 foreign);
microfiche, \$12.00 (\$24.00 foreign)

Permuted Medical Subject Headings, 1990

PB90-100025/GBB
\$26.00, U.S. and Canada
(\$52.00 foreign);
microfiche, \$9.00 (\$18.00 foreign)

Orders should be sent to:

National Technical Information Service (NTIS)
U.S. Department of Commerce
5285 Port Royal Road
Springfield, VA 22161
(703) 487-4650 (for telephone orders from individuals/organizations with an NTIS deposit account or major credit card)

An NTIS order form is included as Appendix B for your convenience. Remittance should be sent with all mail orders. Remember to add \$3.00 (\$4.00 non-U.S.) shipping/handling charge per order, not per item ordered.

MEDLINE ON CD-ROM PUBLICATION

A publication titled *MEDLINE on CD-ROM* is available for purchase. Last year on September 23, 1988, members of the health science library community met at the National Library of Medicine (NLM) for an evaluation forum entitled "MEDLINE on CD-ROM". Working with private-sector vendors, the Library coordinated the placement, testing, and evaluation of seven CD-ROM systems at 21 health science libraries and clinical sites around the country. The newly published *MEDLINE on CD-ROM* includes a transcription of the evaluation forum proceedings as well as all of the evaluation project reports, which were presented only in abbreviated form at the meeting. It also includes a summary report of the nationwide evaluation, a checklist of CD-ROM features, an extensive bibliography, and an index. Purchase information is below:

MEDLINE on CD-ROM: National Library of Medicine Evaluation Forum, edited by Rose Marie Woodsmall, Becky Lyon-Hartmann, and Elliot Siegel. Medford, NJ: Learned Information Press, 1989. 506 p.; softbound only. Order from Learned Information, Inc.,

143 Old Marlton Pike, Medford, NJ 08055-8707; p! (609) 654-6266. Price: \$49.95 (plus \$2.50 postage handling for the first volume; for additional volumes in the same order, add \$2.00 per volume).

TRI RANGING OPERATORS

Ranging operators are now available in the Direct Search mode for the TRI (Toxic Chemical Release Inventory) database (see the May 1989 issue of the *NLM Technical Bulletin* for details). The three ranging operators are:

LESS THAN value
 GREATER THAN value
 FROM value1 TO value2

These ranging operators can be used in combination with certain data elements in TRI to set numerical boundaries on a search. For more information on these ranging operators, type EXPLAIN RANGING while in the TRI Direct Search mode.

NLM Online Training Program 1990

Patricia C. Buchan
MEDLARS Management Section, NLM

The schedule of NLM Online Services Training classes has been announced for 1990. See Figure 1. Classes instruct users on techniques for searching the MEDLARS databases directly using ELHILL; GRATEFUL MED searching is not discussed. As in the past, classes are being taught at the National Library of Medicine as well as at numerous sites throughout the United States. There is no charge for these classes; you do have to cover any costs incurred for travel, food and lodging.

In 1990, the "Fundamentals of MEDLARS Searching" class will be taught 37 times and the "Follow-Up" class will be offered 12 times. If you are accepted for training, approximately one month prior to the class you will receive a packet with information about hotels, local site arrangements and the agenda. Every attempt will be made to place training applicants in the class requested or taught in the location nearest to them. If a class is filled, the applicant will be notified and placed on a waiting list for that site. Because many of the 1989 classes have already been filled, applicants are currently being scheduled for the 1990 classes.

HOW TO APPLY

To apply for either the "Fundamentals" or the "Follow-Up" class, interested searchers should complete the "Request for NLM Online Training" (found in Appendix A). Please make photocopies of this form for your files.

1) The same form is used for applying for either class; however, only one type of class can be requested per form and only one applicant per form.

2) You must have a MEDLARS User ID code in order to take any of the classes. If you do not, please submit a completed application for access with your training request.

3) Please specify the class dates and sites on your form. Remember, some classes fill rapidly; therefore, it's a good idea to list a second choice to expedite scheduling.

4) Indicate the modules you plan to attend. You will have an opportunity later to confirm those modules once you have been scheduled; however, noting your attendance now gives the registrar an estimate of attendees in each module.

****Important note:** In order to attend Modules 2 or 3 of the "Fundamentals" class, it is necessary to have completed Module 1 either during the same week or in a previous class.

There is not a similar prerequisite for the "Follow-Up" class; however, it is recommended that you have previous experience/training or prior knowledge of the ELHILL command language before attending. NLM also encourages searchers to wait 6 months after completing the "Fundamentals" class before enrolling for the "Follow-Up" class.

5) No more than one person per User ID code will be scheduled into a particular class (except where space becomes available within two weeks prior to the beginning of the class).

6) All classes are considered "tentative" pending sufficient enrollment (a minimum of 12 attendees) by approximately one month before the class.

**NLM ONLINE SERVICES TRAINING
"TENTATIVE"
1990 SCHEDULE OF CLASSES**

FUNDAMENTALS OF MEDLARS SEARCHING

JANUARY	8-12 8-12 8-12	PROVIDENCE, RI BETHESDA, MD DENVER, CO	JULY	9-13 16-20 23-27	BETHESDA, MD LOS ANGELES, CA HANOVER, NH
FEBRUARY	5- 9 5- 9 12-16 26- 2	LOS ANGELES, CA MINNEAPOLIS, MN NEW YORK, NY BETHESDA, MD	AUGUST	6-10 13-17 13-17 20-24	NEW YORK, NY SEATTLE, WA CHICAGO, IL BETHESDA, MD
MARCH	5- 9 12-16 19-23	HOUSTON, TX PORTLAND, OR BETHESDA, MD	SEPTEMBER	10-14	BETHESDA, MD
APRIL	2- 6 2- 6 23-27 23-27	PHOENIX, AZ BETHESDA, MD NEW YORK, NY LOS ANGELES, CA	OCTOBER	1- 5 15-19 15-19 22-26 29- 2	SAN JOSE, CA TAMPA, FL ALBUQUERQUE, NM BETHESDA, MD LOS ANGELES, CA
MAY	7-11 14-18	LOUISVILLE, KY BETHESDA, MD	NOVEMBER	5- 9 5- 9	BETHESDA, MD WICHITA, KS
JUNE	4- 8 18-22 25-29	ATLANTA, GA OMAHA, NE BETHESDA, MD	DECEMBER	3- 7 10-14 10-14	PORTLAND, OR CHAPEL HILL, NC BETHESDA, MD

FOLLOW-UP TO THE FUNDAMENTALS

JANUARY	22-26 29- 2	SEATTLE, WA BETHESDA, MD	JUNE	11-15	LOS ANGELES, CA
MARCH	5- 9	NASHVILLE, TN	JULY	16-20 30- 3	SALT LAKE CITY, UT BETHESDA, MD
APRIL	2- 6 30- 4	CHICAGO, IL BETHESDA, MD	NOVEMBER	5- 9 26-30	NEW YORK, NY BETHESDA, MD
MAY	7-11	BOSTON, MA	DECEMBER	3- 7	OKLAHOMA CITY, OK

Figure 1



VERSION 4.0

[Editor's Note: Each month the NLM features a column concerning GRATEFUL MED, often consisting of questions/answers. Contributions for this column will be appreciated.]

Question: Is there any way to have GRATEFUL MED print only the information I want from a PDQ search (such as the state-of-the-art treatment information) without having to print all the menus and other prompts that appear during the search?

Answer: When using GRATEFUL MED to search PDQ, your results can only be printed in their entirety. What you may want to do is copy the OUTPUT file (the file that contains your search results) to a word-processing or text editing program which would allow you to delete the portions you're not interested in before printing.

PDQ, for those who are not familiar with it, is a source of information about cancer, for both the patient and physician. It contains information about treatment protocols (both standard and experimental) that are currently accepting patients. A physician can use PDQ to locate a treatment facility appropriate for a cancer patient. PDQ also has a directory of cancer physicians.

If you search PDQ regularly, you may want to consider getting *PDQ Access*, a software product developed by the National Cancer Institute that streamlines using PDQ. It can also perform searches on the CANCERLIT database on a variety of cancer subjects automatically.

PDQ Access (order no. PB88-103692) comes on a 5 1/4 inch floppy diskette for IBM (and compatibles). It may be ordered from NTIS for \$19.95 plus \$3.00 handling per order (order form is included as Appendix B). You can use the MEDLARS User ID code with the passwords already assigned to you.

You may also want to request the *PDQuick Reference Guide* at no charge from:

PDQ/NCI
Bldg. 82, Room PAA
Bethesda, MD 20892

or call: (301) 496-7403.

Question: I use version 3.0 successfully but have been unable to use version 4.0. My PC has only 256K RAM. Could this be the problem?

Answer: Yes. We recommend that you have at least 384K of available RAM for version 4.0 of GRATEFUL MED. GRATEFUL MED may run successfully on a PC with 256K total RAM. This can only be accomplished if DOS 2.0 or 2.1 (which use only around 24K RAM) are used. If, however, you are using DOS 3.0 or greater you will run into trouble. These higher versions of DOS use up a significant chunk of RAM and on a 256K machine this doesn't leave enough RAM for GRATEFUL MED. Try using GRATEFUL MED with DOS 2.0 or 2.1. You will have to make two concessions, however. SETUP (the part of the program where you enter phone numbers, passwords, etc.) should be typed at a DOS prompt while in your GMED subdirectory; do not select SETUP from within the GMED directory. You will also not be able to download from the Bulletin Board as this capability requires 384K.

You should note that Version 5.0 of GRATEFUL MED will require 384K, so if you want to continue to "grow" with the program, now's the time to consider upgrading your system with more memory. You'll find that many software programs available these days require more RAM, so you may be benefitting your other applications as well.

GRATEFUL MED Macintosh Version
Continued from page 1.

One of the things that makes the Macintosh interface different from the PC-compatible environment is the use of windows, and GRATEFUL MED on the Mac is no exception. The Input Form Screen becomes the "Search" window, where search terms are entered in much the same way as the PC version. However, the Mac version also offers a "Search Results" window, which lets you scroll up and down to review your references; a "Communications" window, which allows easy viewing of the online interaction; and

the ability to perform many functions at any time, in order, simply by clicking on a menu choice or button.

From the moment you "double click" on the GRATEFUL MED icon to start the program, the windows, menus, and buttons offer an intuitive interface which makes searching quick and easy. The first time you use the program you are presented with the "Communications Parameters" box to input your User ID Code, Password and phone numbers (this information is stored permanently in GRATEFUL MED, so it is only necessary to type it once). After that is done, you see a fresh Search window, ready to receive terms for a search in MEDLINE. See Figure 1.

File Edit Search Help

Search File

Enter your search for the MEDLINE database:

Author/Name:

Title Words:

Subject Words:

2nd Subject:

3rd Subject:

4th Subject:

Journal Abbrev.:

English Only Review Only Print Abstracts Exclude MeSH

Run Search **Find MeSH Entry** **Change Database** **Search Back Files**

Figure 1

As mentioned earlier, the Search window is much like the Input Form screen in the PC-compatible version of GRATEFUL MED. However, the Mac interface allows the inclusion of some unique features to assist in the creation of the search. First, information on

how to input search terms on any of the lines can be found via the "Help" menu. The Help window can be left "open" for reference while entering terms. If it is, the help remains context-sensitive; as you move down the window, the Help screen offers advice pertinent to each different line. See Figure 2.

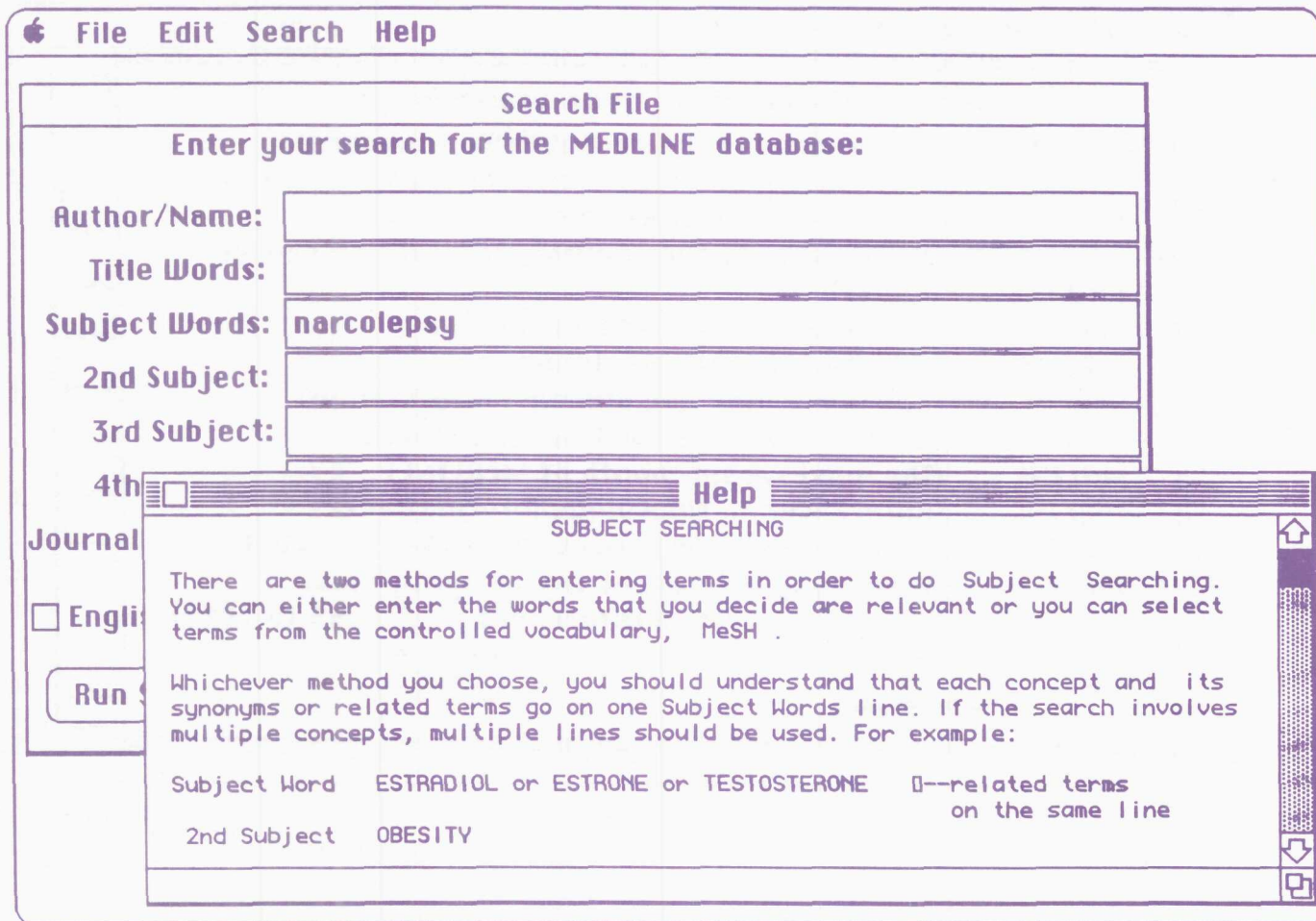


Figure 2

Another thing you can do quickly and easily is change databases. The database to be searched can be re-selected at any point, without leaving the Search window and without having to re-type any

entered terms. All you have to do is click on the "Change Database" button in the Search window to see a list of available databases. After selecting the database you want, GRATEFUL MED returns you to the Search window. See Figure 3.

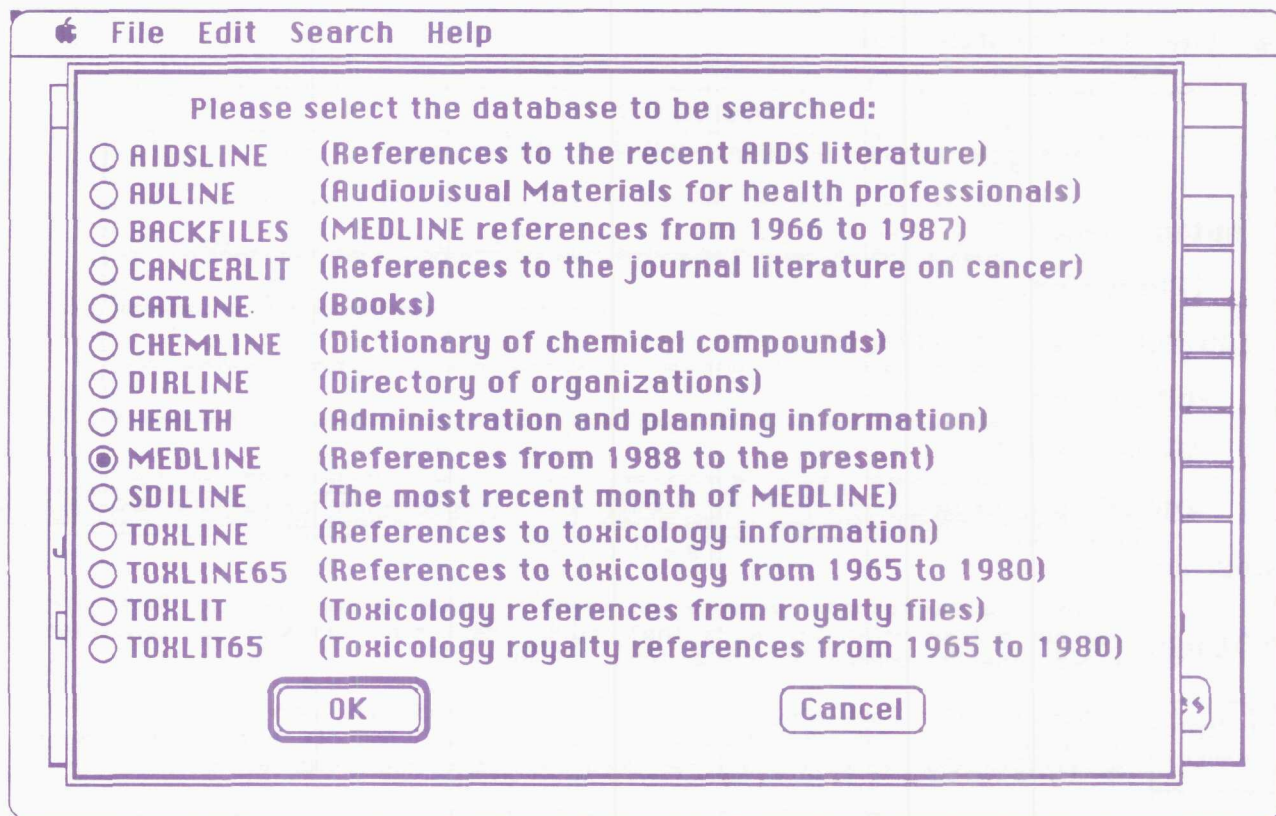


Figure 3

Of course, GRATEFUL MED on the Mac offers access to the MeSH vocabulary. MeSH terms can be selected from an alphabetical list by clicking on the "Find MeSH Entry" button (or by pressing Command-M). This presents the "MeSH Keyword" box,

where you can select the MeSH terms relevant to your search. "Click boxes" allow you to limit the heading to the major concept of the article (using the *), or to include the more specific headings under a term, also known as "exploding" (using the +). See Figure 4.

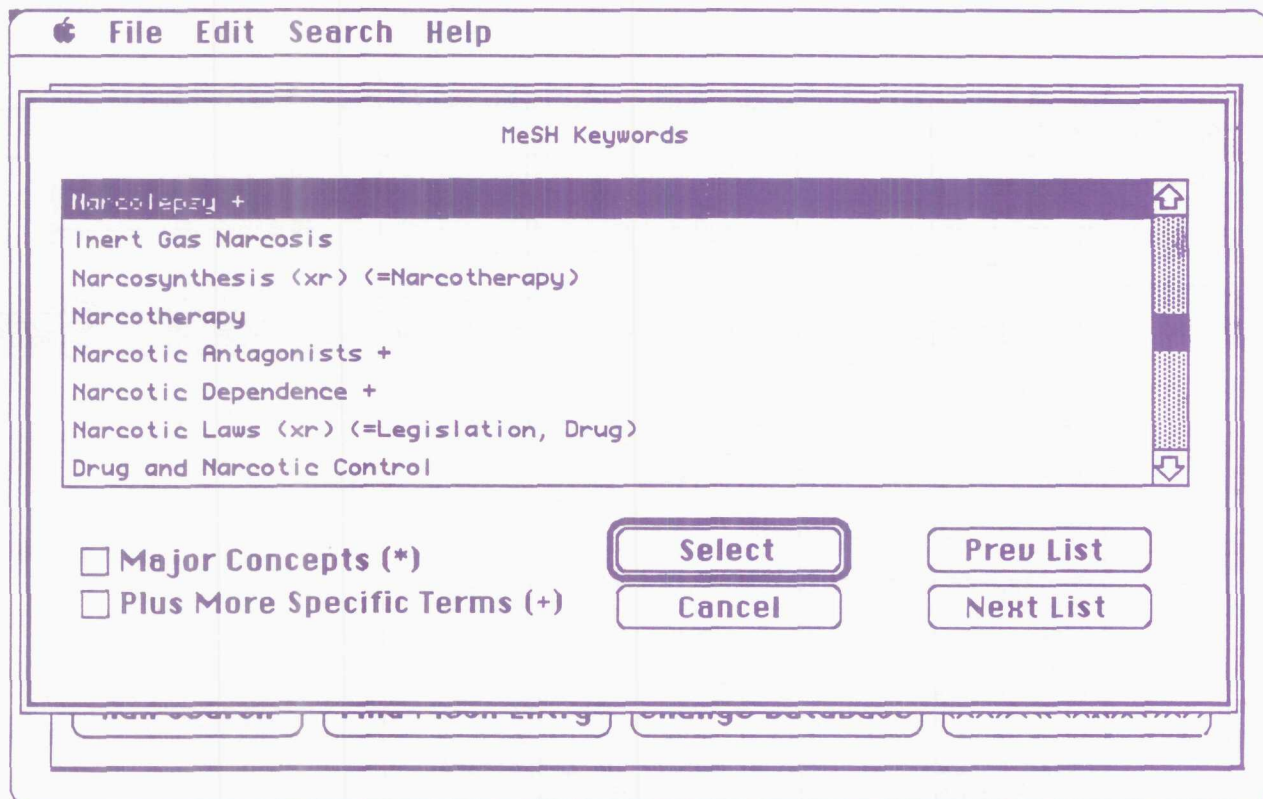


Figure 4

Once your search strategy has been completed, all you have to do is click on the "Run Search" button (see Figure 1). The program prompts you to save your search strategy under a unique name; this allows you to identify and run a search easily at a later time if you need to. GRATEFUL MED then calls the NLM computer, runs the search, and downloads the retrieval, just as it does in the PC-compatible version. All you need to do is sit back and watch. This takes place in the "Communications" window, so you can see how the retrieval is going.

After the retrieved references have been downloaded GRATEFUL MED shows them to you in the "Results" window. Here you can decide to print the whole retrieval, or selected references by "clicking and dragging" the mouse over the ones you want. In addition, the retrieval is saved under a unique file name, which allows you to open and review the results in the future. See Figure 5.



Figure 5

If you want to edit your search strategy , GRATEFUL MED offers information to help you do this. First, it presents MeSH headings that were found frequently in the downloaded retrieval. These suggested headings are listed in the Results window after the last reference, under the header "Relevance Feedback." See Figure

6. You can "copy" desired headings from this list and "paste" them into the Search window. This feature uses standard Macintosh editing features found under the "Edit" menu. In fact, using standard Mac editing techniques, you can "copy and paste" any heading or term from the Results window into the Search window.

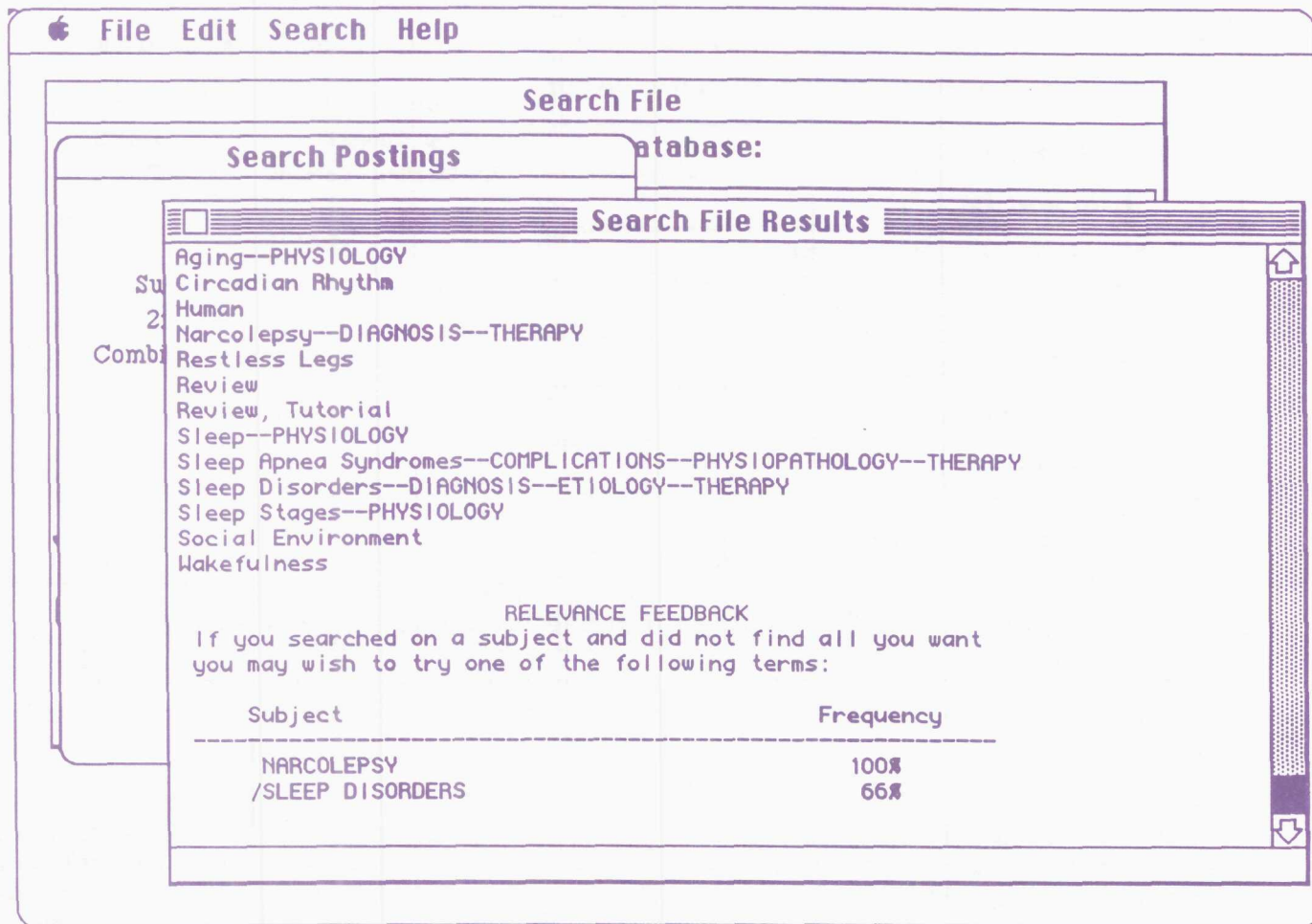


Figure 6

Another feature to assist you in editing your search is the "Search Postings" box. This box contains the number of citations found for each search line. This lets you know which search lines found too few or too many citations, and adjust the strategy accordingly. See Figure

7. And in case you want to run your search against remaining earlier years in the MEDLINE file, "Search Backfiles" button becomes enabled at this point. Click on it, and GRATEFUL MED will run your search as far back as 1966.

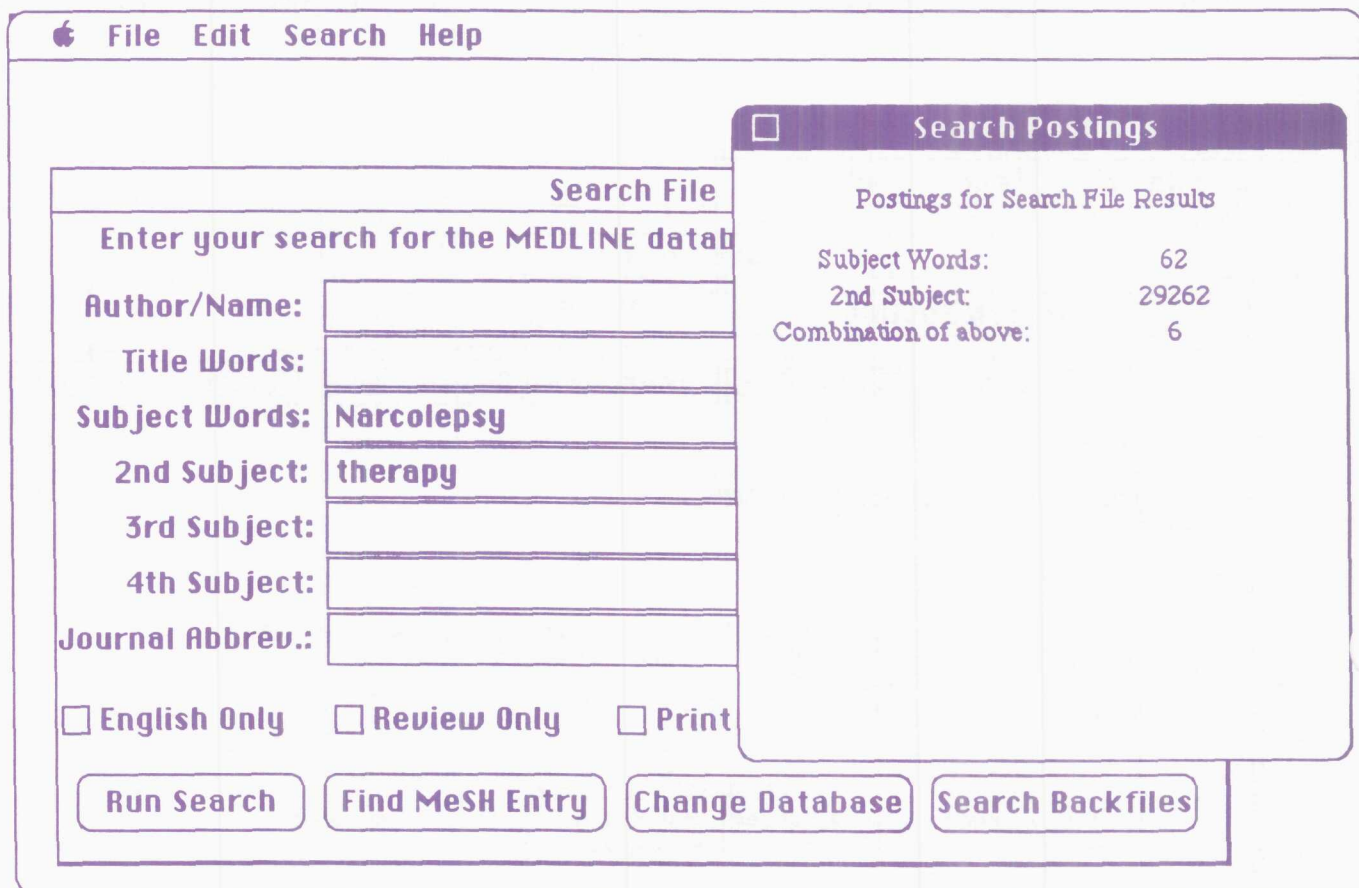


Figure 7

The features explained above allow you to create and run a search the first time you start the program, even if you have never used MEDLINE or any other online searching system before. If you are an experienced Macintosh user, you will appreciate GRATEFUL MED's use of the interface. If you are new to the Macintosh as well as MEDLINE searching, the simplicity of the program will also allow you to run searches right off.

To use GRATEFUL MED for the Macintosh, you need the following equipment: one of the Apple Macintosh family of computers with at least 512Kb available memory (1 megabyte recommended), at least one floppy disk drive, and a Hayes or Hayes-compatible

modem. Of course, a MEDLARS User ID code is also necessary. You may obtain a User ID code by writing or calling the Medlars Management Section for the necessary paperwork to be sent to you; the toll free number is 1-800-638-8480. GRATEFUL MED is available to domestic users and to Canadian users.

As with the IBM-compatible version, GRATEFUL MED for the Apple Macintosh (order no. PB89-196083/GBB) can be ordered for \$29.95, plus a \$3.00 handling charge per order from the National Technical Information Service (NTIS). Ordering this version entitles you to the anticipated yearly updates at no extra charge. Please use the enclosed order form in Appendix B to order your copy.

Serials Update

INDEXED TITLES UPDATE, AUGUST 1989

The following titles cited in MEDLINE, HEALTH, and POPLINE have recently been selected for indexing, undergone a title change, or ceased publication. This list is not cumulative; the information provided is only for titles whose status has changed since the

last UPDATE. More detailed information may be found in SERLINE. For further information, please contact MMS or Ms. Esther Baldinger, (301) 496-1276, Technical Services Division, NLM.

TITLES SELECTED FOR INDEXING, JULY 1989

HLI EMPLOYMENT RELATIONS TODAY
 EMPLOY RELAT TODAY
 1,1974?--
 EXECUTIVE ENTERPRISES
 NEW YORK NY UNITED STATES
 THIS TITLE IS NOT IN THE NLM COLLECTION.
 INDEXING BEGAN WITH V15N1, SPRING 1988.
 AHA 0745-7790
 SR0066073 JC: AFJ
 EMPLOYMENT RELATIONS TODAY, 22 W. 21ST
 ST., NEW YORK NY 10010-6904

IM EPILEPSY RESEARCH. SUPPLEMENT
 EPILEPSY RES SUPPL
 N1,1988--
 ELSEVIER
 AMSTERDAM NETHERLANDS
 SUPPLEMENT TO: EPILEPSY RESEARCH.
 INDEXING BEGAN WITH V1,1988.
 W1 EP455KEA 0920-1211
 SR0065995 JC: AE7

HLI HEALTH POLICY WEEK
 HEALTH POLICY WEEK
 11N13, APR 1982--
 UNITED COMMUNICATIONS GROUP
 BETHESDA MD UNITED STATES
 CONTINUES: MORRIS REPORTS ON FEDERAL
 HEALTH POLICY. NLM COLLECTS V18,1989-
 INDEXING BEGAN WITH V18,1989.
 ON ORDER 0732-7439
 H07345700 JC: AFE
 UNITED COMMUNICATIONS GROUP, 4550
 MONTGOMERY AVE., SUITE 700N, BETHESDA MD
 20814

INI JOURNAL OF HUMAN LACTATION
 J HUM LACT
 1,1985--
 INTERNATIONAL LACTATION CONSULTANT
 ASSOCIATION
 CHARLOTTEVILLE VA UNITED STATES
 CALLED ALSO: JHL, DEC. 1986?- .
 SUPPLEMENTS ACCOMPANY SOME VOLS. OFFICIAL
 JOURNAL OF THE INTERNATIONAL LACTATION
 CONSULTANT ASSOCIATION.
 INDEXING BEGAN WITH V4N3, SEP 1988.
 W1 J0673VL 0890-3344
 SR0058725 JC: AE1
 INTERNATIONAL LACTATION CONSULTANT
 ASSOCIATION, BOX 4031, UNIVERSITY OF VA
 STATION, CHARLOTTEVILLE VA 22903

IM JOURNAL OF NEURAL TRANSMISSION. PARKINSONS
 DISEASE AND DEMENTIA SECTION
 J NEURAL TRANSM PARK DIS DEMENT SECT
 IN1-2,1989--
 SPRINGER VERLAG
 WIEN AUSTRIA
 INDEXING BEGAN WITH V1N1-2,1989.
 W1 J0781H 0936-3076
 SR0066007 JC: AE9
 SPRINGER VERLAG, MOLKERRBASTEI 5, P.O.
 BOX 367, A-1100 WIEN, AUSTRIA

TITLE CHANGES, JULY 1989

IM ARBEITEN AUS DEM PAUL-EHRLICH-INSTITUT
 (BUNDESAMT FUR SERA UND IMPFSTOFFE) ZU
 FRANKFURT A.M.
 ARB PAUL EHRLICH INST BUNDESAMT SERA
 IMPFSTOFFE FRANKF A M
 82,1988--
 GUSTAV FISCHER VERLAG
 STUTTGART GERMANY, WEST
 CONTINUES: ARBEITEN AUS DEM
 PAUL-EHRLICH-INSTITUT, DEM
 GEORG-SPEYER-HAUS UND DEM
 FERDINAND-BLUM-INSTITUT ZU FRANKFURT A.M.
 W1 AR115DW 0066-5665
 SR0065961 JC: AEX

IM BURNS
 BURNS
 15N1, FEB 1989--
 BUTTERWORTHS
 GUILDFORD ENGLAND
 CONTINUES: BURNS, INCLUDING THERMAL INJURY.
 JOURNAL OF THE INTERNATIONAL SOCIETY FOR
 BURN INJURIES
 W1 BU9732F 0305-4179
 SR0066013 JC: AFC

INI CANADIAN JOURNAL OF CARDIOVASCULAR NURSING
 CAN J CARDIOVASC NURS
 INI, APR 1989--
 CANADIAN COUNCIL OF CARDIOVASCULAR NURSES
 OF THE HEART AND STROKE FOUNDATION OF CANADA
 OTTAWA CANADA
 CONTINUES: CANADIAN BULLETIN OF
 CARDIOVASCULAR NURSING..
 IN PROCESS 0843-6096
 SR0065952 JC: AFB

IM GASTROENTEROLOGISCHES JOURNAL
 GASTROENTEROL J
 49NI, 1989--
 JOHANN AMBROSIUS BARTH
 LEIPZIG GERMANY, EAST
 ORGAN DER GESELLSCHAFT FUR
 GASTROENTEROLOGIE DER DDR. CONTINUES:
 DEUTSCHE ZEITSCHRIFT FUR VERDAUUNGS- UND
 STOFFWECHSEL-KRANKHEITEN.
 IN PROCESS 0863-1743
 SR0066060 JC: AFF

IM CHUNG-KUO CHUNG YAO TSA CHIH [CHINA JOURNAL
 OF CHINESE MATERIA MEDICA]
 CHUNG KUO CHUNG YAO TSA CHIH
 14NI, JAN 1989--
 CHUNG-KUO HSUEH HUI; CHUNG I YEN CHIU YUAN,
 CHUNG YAO CHIU SO
 PEKING CHINA
 CONTINUES: CHUNG YAO TUNG PAO.
 IN PROCESS
 SR0066074 JC: AFL

TITLES NO LONGER INDEXED AS OF JULY 1989

IDL ACTA DE ODONTOLOGIA PEDIATRICA
 ACTA ODONTOL PEDIATR
 INI, JUN 1980-8NI, 1988
 CENTRO DE ODONTOLOGIA PEDIATRICA
 SANTO DOMINGO DOMINICAN REPUBLIC
 OFFICIAL PUBLICATION OF THE CENTRO DE
 ODONTOLOGIA PEDIATRICA.
 INDEXING BEGAN MAY, 1981.
 W1 AC789M 0252-1032
 A07460000 JC: 59P

HLI REGULATION
 REGULATION
 INI, JUL/AUG, 1977-12N3, 1988
 AMERICAN ENTERPRISE INSTITUTE FOR PUBLIC
 POLICY UNITED STATES
 WASHINGTON DC
 INDEXING BEGAN WITH V2N2, MAR-APR 1978.
 W1 RE173I 0147-0590
 R10700000 JC: RBG

REQUEST FOR NLM ONLINE TRAINING

APPENDIX A

DATE: ___/___/___

TRAINEE NAME: _____ PHONE: (____) _____ X _____

ORGANIZATION: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

User ID code: _____ OR I am applying for a User ID code* /
*STOP! If you are currently applying for a User ID code, be sure to include the complete "Application for Online Access" with your training request.

TRAINING CLASS INFORMATION: Classes instruct users on techniques for searching the MEDLARS databases directly using ELHILL; GRATEFUL MED is not discussed. You may apply for either the "Fundamentals" or the "Follow-Up" class but NOT both. Check all the modules you will attend.

1. **FUNDAMENTALS OF MEDLARS SEARCHING:**

- a. Module 1 - Intro to MEDLARS/MEDLINE (Monday-Wednesday) _____
 - b. *Module 2 - Chemical/Toxicological Databases (Thursday) _____
 - c. *Module 3 - Cancer Databases (Friday a.m.) _____
- * Must have attended Module 1 prior to attending these modules.

DATES/SITES REQUESTED: _____
1st Choice 2nd Choice

2. **FOLLOW-UP TO THE FUNDAMENTALS:** (Requires familiarity with MEDLARS.)

- a. Module 1 - MEDLINE/MeSH/HEALTH Search Skills (Monday) _____
- b. Module 2 - Cancer Information Searching (Tuesday a.m.) _____
- c. Module 3 - POPLINE/BIOETHICS/HISTLINE (Tuesday p.m.) _____
- d. Module 4 - Technical Services Databases (Wednesday) _____
- e. Module 5 - CHEMLINE/TOXLINE/TOXLIT Searching (Thursday) _____
- f. Module 6 - Tips & Techniques for TOXNET (Friday) _____

DATES/SITES REQUESTED: _____
1st Choice 2nd Choice

MAIL TRAINING REQUEST TO: MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike, Bldg. 38A
Bethesda, MD 20894

QUESTIONS? Call: 800/638-8480 or 301/496-6193

NLM USE ONLY - Do not write in this area. DATE: _____
"FUNDAMENTALS" "FOLLOW-UP"

Class Dates: _____ Class Dates: _____

MODULES: 1 _____ 2 _____ 3 _____ MODULES: 1 _____ 3 _____ 5 _____
2 _____ 4 _____ 6 _____

Site: _____ Site: _____

U.S. DEPARTMENT OF COMMERCE
National Technical Information Service
SPRINGFIELD, VA 22161

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 - FOREIGN:** Regular service: Printed reports and microfiche copies are shipped surface mail.
 - Air Mail service to Canada and Mexico: add \$3 per printed report; 75¢ per microfiche copy.
 - Air Mail service to all other addresses: add \$6 per printed report; 75¢ per microfiche copy.
- SUBSCRIPTIONS and standing orders are sent surface mail; contact NTIS for air mail rates.

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City/State/ZIP _____

Attention _____

Telephone number _____

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Charge my NTIS Deposit Account _____

Check/Money order enclosed for \$ _____

Charge my Amer. Express VISA MasterCard
Account No. _____ Exp. _____

Please bill **ADD \$7.50 per Order** (See below for restrictions)[†]
Purchase Order No. _____

Signature: _____
(Required to validate all orders)

Employer Identification No. _____

3 Order Selection

(For Computer products, see reverse)

Enter NTIS order number(s) (Ordering by title only will delay your order)	Customer Routing ^{††} (up to 8 digits)	QUANTITY		UNIT PRICE	Foreign Air Mail	TOTAL PRICE
		Paper Copy	Micro-fiche			
1. _____	_____	_____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____	_____

OVER - Order continued on reverse

Billing Service: This service is restricted to U.S. addresses for an additional \$7.50 per order. Your business employer identification number plus phone number of the office paying the bill are required. A late payment charge will be applied to all billings more than 30 days overdue.

^{††} Customer Routing Code: NTIS can label each item for routing within your organization. If you want this service, put your routing code in this box.

SUBTOTAL From Other Side	_____
Regular Service Handling Fee per order (\$3 U.S., Canada, Mexico; \$4 others)	_____
Billing Fee if required (\$7.50)	_____
GRAND TOTAL	_____

3 Order Selection (Cont.)

Enter the NTIS order number(s) (Ordering by title only will delay your order)	Customer Routing ^{††}	QUANTITY		UNIT PRICE	Foreign Air Mail	TOTAL PRICE
		Paper Copy	Micro- fiche			
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						
16.						
17.						
18.						
19.						
					Subtotal	

ENTER this amount on the other side of this form. ➡

4 Computer Products Order Selection

If you have questions about a particular computer product, please call our Computer Products Support Group at (703) 487-4763.

Enter the NTIS order number(s) (Ordering by title only will delay your order)	Customer Routing ^{††}	TAPE DENSITY (9 track)		TOTAL PRICE
		1600bpi	6250bpi	
20.				
21.				
22.				
23.				
				Subtotal

All magnetic tapes are sent air mail or equivalent service to both U.S. and foreign addresses.

ENTER this amount on the other side of this form. ➡

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 in Virginia call
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EXPRESS SERVICE (U.S. Addresses Only): Orders are processed within 24 hours AND delivered by overnight courier for an additional \$20 per item.

GRATEFUL MED Users
Searching BACKFILES First - Page 13

ISSN 0146-3055
SEPTEMBER 1989

No. 245

THE NLM Technical Bulletin

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GRATEFUL MED pocket card

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NLM Online Users' Meeting, MLA Annual Meeting, Boston, MA, May 22, 1989

The following questions were posed during the NLM Online Users' Meeting at the last MLA annual meeting. The answers provided are based on the answers given at the time of the meeting, but have been edited and, in some cases, amplified by staff at NLM.

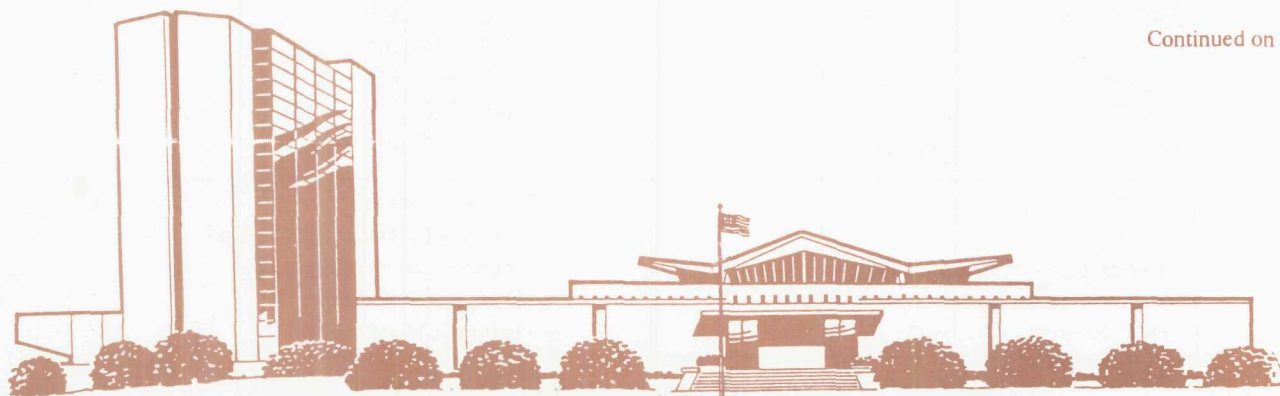
Question 1: Thanks for the new edition of *The Basics of Searching MEDLINE*. However, could you please change the colors the *Technical Bulletin* is printed in? Some colors do not photocopy well.

Answer: In response to reader requests, the colors were reviewed and certain reds and blues will be eliminated from the print color selections.

Question 2: Is NLM going to do more on the teaching of Multifile Search?

Answer: When Multifile Search (MFS) was introduced last year, NLM published articles in the October and November 1988 issues of the *Technical Bulletin*, published a summary in the Special Issue in February 1989 and made free codes available to

Continued on page 4



NLM TECHNICAL BULLETIN SEP 89

MEDLARS [®] DATABASE	TOTAL RECORDS	DATES COVERED	DATE LAST UPDATED	LATEST UPDATE TAG
ELHILL [®] COMPUTER				
AIDSDRUGS	57		16 OCT 89	
AIDSLINE**™	24,148	JAN 80-NOV 89	14 OCT 89	8912(EM)
AIDSTRIALS	213		16 OCT 89	
AVLINE [®]	19,691	THROUGH 1989	20 OCT 89	
BIOETHICS [®]	28,402	JAN 73-OCT 89	07 OCT 89	8910(EM)
CANCERLIT [®]	693,560	JAN 63-OCT 89	30 SEP 89	8910(EM)
CATLINE [®]	653,474	THROUGH 1989	20 OCT 89	
CHEMLINE [®]	885,854		21 OCT 89	8910(EM)
CLINPROT [®]	7,539		20 OCT 89	8910(EM)
DENTALPROJ	776		28 JUN 89	
DIRLINE [®]	15,506		18 SEP 89	
DOCUSER [®]	11,579		16 SEP 89	
HEALTH	472,997	JAN 75-NOV 89	30 SEP 89	8911(EM)
HISTLINE [®]	90,444		07 OCT 89	8910(EM)
MEDLINE* [®]	539,457	JAN 88-NOV 89	14 OCT 89	8912(EM)
MED86	639,431	JAN 86-DEC 87	22 JUL 89	
MED83	889,211	JAN 83-DEC 85	18 FEB 89	
MED80	803,258	JAN 80-DEC 82	18 FEB 89	
MED77	775,192	JAN 77-DEC 79	18 MAR 89	
MED72	1,175,360	JAN 72-DEC 76	14 AUG 89	
MED66	1,310,376	JAN 66-DEC 71	03 JUN 89	
MESH VOC [®]	69,552	1989	23 OCT 89	
NAME AUTH [®]	337,711		14 OCT 89	
PDQ [®]		THRU OCT 89	30 SEP 89	
POPLINE [®]	171,074	1970-OCT 89	07 OCT 89	8910(EM)
SDILINE [®]	27,951	NOV 89	23 SEP 89	8911(EM)
SERLINE [®]	73,366	1989	14 SEP 89	
TOXLINE [®]	732,615	1981-1989	07 OCT 89	8910(EM)
TOXLINE65	698,414	PRE 1965-1980	04 MAR 89	
TOXLIT [®]	768,179	1981-1989	07 OCT 89	8910(EM)
TOXLIT65	586,405	1965-1980	01 SEP 87	

*N.B. FILE IS UPDATED SEMI-MONTHLY; THIS IS PART 1 OF 2. **N.B. FILE IS UPDATED THREE TIMES A MONTH; THIS IS PART 1 OF 3.

TOXNET[®] COMPUTER

CCRIS	1,765		19 OCT 89	
DBIR [®]	999		12 OCT 89	
EMICBACK	67,975		02 JUN 89	
ETICBACK	46,374		30 JAN 89	
HSDB [®]	4,202		14 SEP 89	
RTECS	100,547		06 SEP 89	
TRI [®]	74,096		14 AUG 89	

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 MEDLARS Management Section
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 Bldg., 38A, Rm. 4N421
 Bethesda, Maryland 20894

Technical Notes

Whenever applicable, the heading of each Technical Note includes a reference to the section of the Online Services Reference Manual, 1988 that is considered most relevant to the item being discussed, e.g., (manual 4.7.2). Users should keep in mind that the item may pertain to other sections as well.

VETERANS DAY HOLIDAY SCHEDULE

FRIDAY, NOVEMBER 10, OBSERVED

System	Rates/Status
ELHILL	non-prime; non-guaranteed
TOXNET	non-prime; guaranteed
DOCLINE	N/A non-guaranteed

Service Desks

MMS	not staffed
DOCLINE	not staffed

SATURDAY, NOVEMBER 11 (ACTUAL HOLIDAY)

System	Rates/Status
ELHILL	non-prime; non-guaranteed
TOXNET	non-prime; guaranteed
DOCLINE	not available

Service Desks

MMS	not staffed
DOCLINE	not staffed

TRI REFERENCE GUIDE

The Toxic Chemical Release Inventory (TRI) Reference Guide is now available. TRI is a database on the TOXNET system which contains estimated releases of toxic chemicals to the environment (air, water, land, and underground injection) and is based upon data collected by the Environmental Protection Agency. The May 1989 issue of the NLM Technical Bulletin contains a description of this database. To request a free single copy of the TRI Reference Guide, please send a typed, self-addressed mailing label to:

TRI Representative
Specialized Information Services Division
National Library of Medicine
8600 Rockville Pike
Bethesda, MD 20894

Also, please indicate whether you need a copy of the TOXNET chapter from the Online Services Reference Manual, 1988. Because of limited availability, only requests for single copies can be filled.

1200 BAUD DIRECT DIAL ROTOR

The 1200 baud direct dial number to the NLM mainframe computer for ELHILL and PDQ searching, 301-480-3150, has a rotor which automatically dials the next number up to 480-3173, if the base number, "3150", is busy. This rotor previously went up to the nineties (i.e., 480-3190). The rotor has been reduced so that 480-3173 is the highest number that may be dialed. Please check your GRATEFUL MED or other automatic login procedures for stored telephone numbers higher than "3173" and change them to either the base number "3150" or a higher number up to and including 480-3173.

NLM Online Users' Meeting

Continued from page 1

individuals who wanted to study and teach others about MFS. NLM plans to review including Multifile Search as part of the NLM Training Program in the near future. A new pocket card, which will include Multifile Searching, is also planned. Multifile Searching will be included again in the Special Issue of the Technical Bulletin this winter.

Question 3: Are there plans to change the print formats in Multifile Search?

Answer: No, the same format options currently available for printing, will remain. However the Multifile SPRINT command will be able to print and sort records continuously from more than one database; the single SPRINT command will allow streamlined printing, omitting the "file connect" messages and the "reprint" messages. The database name will appear after the relative citation number for each citation. Details of ELHILL'S expanded print capabilities will be explained in an upcoming issue of the Technical Bulletin, at the time these new options become available in the fall of 1989.

Question 4: Could NLM get the Special Issue out to the users earlier?

Answer: NLM will try to get the Special Issue out as early as possible. New system enhancements are featured in the Special Issue and in order to illustrate the new capabilities of ELHILL, we must often wait for the new features to become fully operational in mid-December to produce these examples. February is the earliest month that can be expected for a release date given the anticipated timetable for system enhancements and the time necessary to produce the Special Issue.

Question 5: Any chance of getting offline prints on 8-1/2 x 11 paper?

Answer: There is no action currently being considered to change the size or format of the offprints. The costs of printing and mailing are both factors in the decision to print on 8-1/2 x 6-1/2 paper.

Question 6: Are there plans to support a break signal for the CONTINUE PRINTING? (YES/NO) prompts?

(This question actually referred to increasing the maximum number of lines between Continue Printing

prompts and overriding the requirement to answer either "Y" or "N" to the prompts when printing).

Answer: ELHILL architecture does not permit recognition of the Break command. If the searcher hits the break key, the connection between the searcher's computer and the telecommunications network is disrupted. However, the ELHILL mainframe is still connected to the telecommunications network and will continue to send the batch of data it is currently processing. The user will be billed for the data sent, even though it is never received.

Currently ELHILL does not permit users to bypass the Continue Printing system prompt. Some users create searching "scripts" or "macros" within their telecommunications software, which send the "Y" answers to the Continue Printing prompt automatically. There is presently an upper limit of 100 lines between these prompts that can be set by the user with the PROFILE MODIFY command. NLM is considering raising the limit for the maximum page length to 200 lines. Note: GRATEFUL MED users should not change the page length for their codes; the originally assigned 25-line page length works best for GRATEFUL MED'S use of the personal computer buffer and downloading of citations to disk storage devices.

Question 7: In searching ELHILL I have noticed that response time has deteriorated and it is costing more to search.

In the spring of this year, there was some deterioration in response time. It occurred primarily within the TELENET network and the problem that caused it was corrected. With the addition of the CompuServe and Infonet networks for MEDLARS services to supplement TELENET and TYMNET, problems should be infrequent. NLM carefully monitors response time; current data indicate that ELHILL's mainframe response time is under one second and over 99% of our responses are processed in under 5 seconds, with only 6 responses per 1,000 over 5 seconds.

In general, poor response times are due to difficulties with the telecommunications network and not with the NLM computer. Telecommunication response times slow during the hours of maximum use (approximately 66 users can be supported on each copy of ELHILL simultaneously). Entering the command USERS at any user prompt will give the response XX USERS LOGGED IN PRESENTLY. This information is helpful in determining the speed with which searches are likely to be processed. Also searching is most expensive

during prime time which is currently 10:00 a.m. to 5:00 p.m. ET Monday-Friday. Searching later in the evening or before prime time begins in the morning, should help reduce response times and costs.

Question 8: Do you plan to offer SDI service on AIDSLINE?

Answer: SDI service on AIDSLINE became available in July 1989 with the 8908 (EM). SDI searches on AIDSLINE must have the letter D as the first letter naming the search (see the April 1989 Technical Bulletin).

DOCLINE/Interlibrary Loan (ILL) Questions

Question 9: Is NLM stapling retracting articles to the retracted articles when providing interlibrary loan?

Answer: The answer is generally no, but in the very specific circumstances as listed below, a requester would receive a copy of the retracting article together with the requested retracted article.

A. If the retraction statement appears in the same volume as the retracted article, NLM will copy and supply both in response to ILL requests.

B. Retraction statements may also be identified and attached to the retracted article, if the request requires in-depth searching by ILL specialists.

Otherwise, NLM supplies only what is requested via interlibrary loan. NLM identifies retracted articles in MEDLINE by adding a title rubric that gives the bibliographic citation for the retraction statement. The retraction rubric was added to the title field in MEDLINE because most users print and refer to an article's title. The user therefore, should already be aware that an article has been retracted before requesting a copy of it and should have the bibliographic information necessary to request the retraction. The retraction statement is a separate bibliographic entity; it should be requested separately via interlibrary loan.

Question 10: We requested a document on DOCLINE with an American Hospital Association (AHA) Secondary Source ID (SI) and it was returned. The AHA holdings aren't in SERHOLD. Is NLM going to incorporate AHA holdings into SERHOLD soon?

Answer: NLM will be incorporating AHA holdings into SERHOLD by January 1990. AHA should then be added to routing maps.

Question 11: How many simultaneous users are allowed on DOCLINE?

Answer: The system currently accommodates 65 users simultaneously.

MEDTUTOR[®]: Microcomputer- Based Training for MEDLINE[®]

Miriam P. Perkins
Melvin L. Spann, Ph.D.
Specialized Information Services, NLM

Patricia C. Buchan
MEDLARS Management Section, NLM

The National Library of Medicine is pleased to announce the release of MEDTUTOR, one of a series of PC-based, self-instructional tools for selected MEDLARS databases. MEDTUTOR is an interactive, microcomputer based training package designed to teach librarians, information specialists, and others users how to search MEDLINE effectively. Its menu-driven structure makes it easy for new users to learn the basics of searching MEDLINE. In addition, MEDTUTOR provides the skilled searcher with an easy way to reinforce or recall previously-learned search techniques. MEDTUTOR may be used in place of formal training, as a precursor to or a refresher following formal training, or for review of a particular concept.

MEDTUTOR is organized into seven chapters. The introduction is presented in Chapter One. Chapters Two, Four, and Six present information on the content and use of MEDLINE followed by multiple choice and/or completion problems. Chapter Two covers the basic data elements used when searching MEDLINE. A detailed discussion on the structure and use of MeSH is presented in Chapter Four and selected search limiters are covered in Chapter Six. Chapters Three, Five, and Seven provide searches that simulate actual online sessions. A hierarchical listing of the sections in MEDTUTOR is given below.

- Introduction
- Basic Data Elements
 - . Unique Identifier
 - . . Unique Identifier
 - . . Searching by Unique Identifier
 - . Author
 - . . Author
 - . . Searching By Author
 - . . Author Truncation
 - . Title & Abstract
 - . . Title
 - . . Abstract
 - . . Searching By Text Word
 - . . Text Word Truncation

- . MeSH Headings
 - . . MeSH Headings
 - . . Searching By MeSH Headings
 - . CAS Registry/EC Number
 - . . CAS Registry/EC Number
 - . . Searching By CAS Registry/EC Number
 - . Source
- Simulated Searches Utilizing Basic Data Elements
 - . Author Search
 - . MeSH Heading/Author Search
 - . Text Word Search
 - . Text Word/Author Search
 - . Registry Number/Text Word Search
- MeSH Headings
 - . Annotated MeSH
 - . . Annotated MeSH
 - . . Searching By MeSH
 - . Tree Structures
 - . . Tree Structures
 - . . TREE Command
 - . . EXPLODE Command
 - . . Pre-Explosions
 - . Permuted MeSH
 - . Sub-Headings
 - . . Subheadings
 - . . Searching By Sub-Headings
 - . . SUBS APPLY Command
 - . Check Tags
 - . . Check Tags
 - . . Searching By Check Tags
- Simulated Searches Utilizing MeSH Headings
 - . MeSH Heading Search
 - . Central Concept Search
 - . MeSH Heading/Subheading Search
 - . EXPLODEd MeSH Heading/Subheading Search
- Search Limiters
 - . Language
 - . . Language
 - . . Searching By Language
 - . Title Abbreviation
 - . . Title Abbreviation
 - . . Searching By Title Abbreviation
 - . Abstract Author
 - . . Abstract Author
 - . . Searching By Abstract Author
 - . Year
 - . . Year
 - . . Searching By Year
 - . Journal Subset
 - . . Journal Subset
 - . . Searching By Journal Subset

Simulated Searches Utilizing Search Limiters

- . Author/Title Abbreviation Search
- . MeSH Heading/Language Search
- . Text Word/Abstract Author Search
- . MeSH Heading/Subheading/Year Search
- . MeSH Heading/Journal Subset Search

User interactions with MEDTUTOR (problems and simulated searches) are displayed in an area of the screen designed to simulate actual MEDLINE sessions. Users interact with MEDTUTOR by entering a letter, word, or phrase after the USER: prompt, followed by a carriage return. For purposes of illustration, user input, as well as search terms, are highlighted. Figures 1 and 2 illustrate user-system interactions with MEDTUTOR.

MEDTUTOR provides user-specific feedback for correct and incorrect answers to both multiple choice and completion problems. The program responses to correct answers reinforce or summarize the concepts essential to the problem. Program responses to incorrect answers provide a brief explanation of the detected errors. See Figure 3. The user is given unlimited opportunities to answer a problem correctly, as well as the option of having the program automatically enter the answer. In the simulated searches, MEDTUTOR detects incorrect search statements and commands and provides users the opportunity to reformulate their search strategy or have the correct search strategy entered automatically.

Function keys are utilized to facilitate movement throughout MEDTUTOR. The F1, F2, F3, and F4 Keys allow the user to go directly to the main menu, return to the previous menu, advance to the next screen; and return to the previous screen, respectively. The F10 Key allows the user to exit the MEDTUTOR program and return to PC DOS.

Several of MEDTUTOR's features include: a MAP, a DICTIONARY, HELPS, SUMMARIES, and a tracking function. The MAP serves as an index to the program as well as providing a report on the user's progress through the program by highlighting the completed sections. It also serves as an overall menu for MEDTUTOR. See Figure 4. THE DICTIONARY contains definitions for the MEDLINE data elements, publications, and ELHILL system commands referred to in MEDTUTOR. See Figure 5. MEDTUTOR provides the user optional HELP for formulating responses to the

multiple choice and completion problems, as well as for entering search statements and commands throughout the simulated searches. This is illustrated in Figure 6. Optional SUMMARIES are available for every topic covered in the program. They may be used for review or as a synopsis of the information covered in MEDTUTOR. See Figure 7. The tracking function allows users to monitor their progress through MEDTUTOR in current and subsequent sessions. (MEDTUTOR contains approximately four hours of interactive instruction. Users may want to take several sessions to complete the program.)

In several instances, MEDTUTOR utilizes "ESCAPE sequences" to present optional information. Examples of these are: STOPWORDS, MeSH Categories and Subcategories, Pre-Explosions, MeSH Subheadings, Language Abbreviations, and Journals indexed in *Abridged Index Medicus*. See Figure 8. In the simulated searches, MEDTUTOR uses windows to provide additional information for selected data in the records. See Figure 9.

MEDTUTOR is developed under PILOTplus using the NLM LEARN Programmer.[®] It runs on IBM-PC, PC-XT, PC-AT, PS/2, and fully compatible computers. It requires 512K RAM memory, one disk drive, and DOS 2.0 or higher. It supports most monochrome, color graphics, enhanced color graphics, or visual graphics displays.

MEDTUTOR can be purchased from NTIS for \$25 (plus \$3 handling charge per order). The order number is PB88-157219. Please include it with your order. The address and phone number for NTIS are:

National Technical Information Service
 U.S. Department of Commerce
 5285 Port Royal Road
 Springfield, Virginia 22161
 Phone: (703) 487-4650

Please direct any questions or comments regarding MEDTUTOR to:

MEDLARS Management Section
 National Library of Medicine
 8600 Rockville Pike
 Bethesda, Maryland 20894
 Phone: (301) 496-6193
 (800) 638-8480

The following is the entry for the MeSH Heading, FATIGUE, MENTAL, from "Annotated MeSH."

```
FATIGUE, MENTAL
F3.126.354
do not use /drug eff /physiol /rad eff
```

Enter a search statement to retrieve citations in MEDLINE to articles indexed by the MeSH Heading, FATIGUE, MENTAL.

```
USER:
FATIGUE, MENTAL
PROG:
Good! MeSH Headings which are in an inverted format in "Annotated
MeSH" may be entered online in either the inverted format or in an
uninverted format and with or without the (MH) qualifier. MeSH
Headings may also be entered online in the singular or plural form.
```

Press space bar to continue

Figure 1
Completion Problem

Please enter a search statement to retrieve citations to articles indexed by the MeSH Heading, STEROIDS, or by any of the MeSH Headings indented under STEROIDS in the "Tree Structures." Remember, to use the Pre-Explosion name, not the EXPLODE command. This will avoid unnecessary TIME OVERFLOWS.

```
SS 1 /C?
USER:
STEROIDS (PX)
PROG:
SS (1) PSTG (21455)
```

The program response SS (1) PSTG (21455) indicates that MEDTUTOR found 21,455 citations indexed by the MeSH Heading, STEROIDS, or one of the MeSH Headings indented under it the the "Tree Structures."

Press space bar to continue

Figure 2
Simulated Search

How would you search for citations to articles written in German concerning BAMIPINE? Type the letter of your choice from the list below:

- A. BAMIPINE (TW) AND GERMAN
- B. BAMIPINE (TW) AND GER (LA)
- C. BAMIPINE (TW) AND GERMAN (LA)

USER:

A

PROG:

Your answer is incorrect. You should use the three-character abbreviation GER when searching in MEDLINE for citations to articles written in German.

Press space bar to try again

Figure 3
Multiple Choice

MEDTUTOR MAP

Introduction

Basic Data Elements

Unique Identifier

Unique Identifier

Searching By Unique Identifier

Author

Author

Searching By Author

Author Truncation

Title & Abstract

Title

Abstract

Search By Text Word

Text Word Truncation

MeSH Headings

MeSH Headings

Searching By MeSH Headings

CAS Registry/EC Number

CAS Registry/EC Number

Use ↑ or ↓ and ENTER to make a selection. Simultaneously press CTRL and F8 to print the MAP.

Press Esc to return to the program
Press PgDn for next frame and PgUp for previous frame

Figure 4
MAP Frame

MEDTUTOR DICTIONARY

Abridged Index Medicus (AIM)
 Abstract (AB)
 Abstract Author (AA)
 Annotated Alphabetic List, MeSH
 Author
 Check T Entry Term
 CAS Reg Synonym or near synonym for a MeSH Heading
 Data Fo which may be used for online searching.
 Date of
 ELHILL

Entry Term
 EXPLODE (EXP)
 GRATEFUL MED
 Index to Dental Literature
 Index Medicus
 International Nursing Index
 Issue/Part/Supplement (IP)
 Journal Subset (SB)
 Language (LA)

Use ↑ or ↓ and ENTER
 to make a selection.
 Simultaneously press
 CTRL and F7 to print
 the DICTIONARY.

Press Esc to return to the program
 Press PgDn for next frame and PgUp for previous frame

Figure 5
DICTIONARY Frame

F3 Answer

How would you search in MEDLINE for articles that appear in the "Journal of Cardiovascular Surgery"? The Title Abbreviation for the journal is J CARDIOVASC SURG (TORINO).

USER:

Help

To search for citations to articles appearing in a particular journal, enter the Title Abbreviation qualified by (TA). Title Abbreviations that include parentheses, should be searched with the parentheses.

Figure 6
Optional HELP

Summary

You may limit a search with a single Subheading by entering the MeSH Heading immediately followed by a slash (/) and the two-letter abbreviation for the Subheading. You may further limit the search to citations in which the MeSH Heading/Subheading is a main point of the articles by placing an asterisk (*) immediately before the MeSH Heading. You may use Subheadings in conjunction with the EXPLODE command. However, you may not use Subheadings with Pre-Explosion names.

Press space bar to continue

Figure 7
Optional SUMMARY

ALPHABETICAL LIST OF SUBHEADINGS

Subheading	Abbrev	Allowable Categories
Abnormalities	AB	A1-9;A13-15;B2
Administration & Dosage	AD	D
Adverse Effects	AE	D;E;F4;H;J;*
Analogs & Derivatives	AA	D1-7;D9-26
Analysis	AN	A;B1;B3-6;C4;D;G3;J;*
Anatomy & Histology	AH	A;B1-2;B5-6
Antagonists & Inhibitors	AI	D
Biosynthesis	BI	D
Blood	BL	B2;C;D;F3;*
Blood Supply	BS	A1-6;A8-10;A13-16;C4
Cerebrospinal Fluid	CF	B2;C;D;F3;*
Chemical Synthesis	CS	D
Chemically Induced	CI	C;F3
Classification	CL	A11;B-N
Complications	CO	C;F3
Congenital	CN	C1-15;C17-23
Cytology	CY	A;B1;B3;B5-6;*

Press Esc to return to the program
Press PgDn for next frame and PgUp for previous frame

Figure 8
ESCAPE Sequence Frame

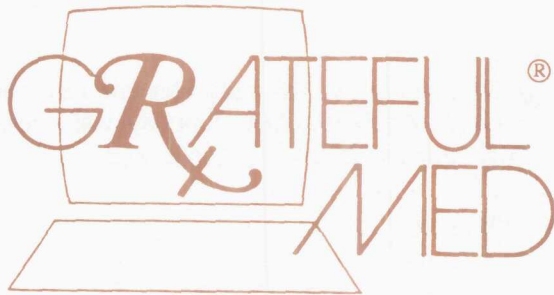
```

MH - Dermatitis, Atopic/DRUG THERAPY
MH - Disodium Cromoglycate/THERAPEUTIC USE
MH - Hay Fever/DRUG THERAPY
MH - Histamine H1 Receptor Blockaders/THERAPEUTIC USE
MH - Human
MH - Hypersensitivity, Immediate/*DRUG THERAPY
MH - Infant
MH - Ketotifen/THERAPEUTIC USE
MH - Review
MH - Review, Tut
MH - Rhinitis, A
MH - Theophyllin
RN - 15826-37-6
RN - 34580-13-7
RN - 58-55-9 (Theophylline)
RF - REVIEW ARTICLE: 18 REFS.
SO - Prim Care 1987 Sep;14(3):605-21
    
```

The RF field is present for citations indexed by the Check Tag, REVIEW. It gives the number of references cited in the article.

Press space bar to continue

Figure 9
Information Window



VERSION 4.0

[Editor's Note: Each month the NLM Technical Bulletin features a column of questions/answers concerning GRATEFUL MED. Contributions for this column will be appreciated].

Question: I am looking for articles about someone's technique but I don't really want articles written by this person. Should I enter the name of the person on the Author/Name line?

Answer: No, using the Author/Name line will retrieve citations for articles authored by the person. Instead, you should first check the F10/MeSH display to see if a MeSH term containing the surname exists for the technique, procedure, test, etc., that interests you. If there is no MeSH term, try a search to see if any citations in MEDLINE mention the person's name in the title or the abstract. To do this, enter the person's surname only on a Subject Words line:

Author/Name:
 Title:
 Subject Words: Sanger <- note: NOT Sanger's
 2nd Subject:
 3rd Subject:
 .
 .

Question: I am unable to print my results. I get the question asking, "DO YOU HAVE A PRINTER AND WANT TO PRINT...?" but even when I answer Yes, nothing prints on my laser printer.

Answer: Laser printers often pose a problem. First, make sure the "Online" light is lit, indicating that your printer is able to receive print commands. Second, determine what port on your computer your printer is

using. If it is anything other than LPT1, you will need to re-direct the printer using the DOS MODE command. If, for example, the printer is using COM 1, use the following command:

MODE LPT1:=COM1:

It may also be necessary to set the port's speed and parameters:

MODE COM1:96,n,8,1,p

Question: Can I search a BACKFILE without first searching MEDLINE?

Answer: Yes. Select "Other databases" from the ACTION screen, and then select "BACKFILES" from the list of Other databases. The list of BACKFILES looks like this:

- BACKFILES (MEDLINE references from 1966 to 1987.)
- BACK86 (References to journals from 1986 and 1987.)
- BACK83 (References to journals from 1983 to 1985.)
- BACK80 (References to journals from 1980 to 1982.)
- BACK77 (References to journals from 1977 to 1979.)
- BACK72 (References to journals from 1972 to 1976.)
- BACK66 (References to journals from 1966 to 1971.)

USE THE ARROW KEYS TO HIGHLIGHT YOUR CHOICE AND PRESS ENTER

You can search all the BACKFILES at one time by selecting "BACKFILES" from this screen, or select a single BACKFILE. After you make your selection, the appropriate Input screen will appear and you can enter your search.

FYI

Enclosed with this issue you will find a **GRATEFUL MED pocket card**. Save it, fold it in thirds, and place it next your computer. It is a handy, brief reference guide to use while searching.

Counts the number of times the data element (rstr) contains data, taking into account multiple occurrences. Thus, if there are 25 different data-containing occurrences of (rstr) in a set of 20 records, this command would give the number 25. That is, the name of a receiving stream appears 25 times.

CALC CNT (DIS(rstr))

Counts the number of times unique receiving stream names appear within the set of records. Thus, staying with the example above, those 25 occurrences of a receiving stream name may only represent 17 unique receiving stream names, because some names appear more than once.

CALC MAX (erelt)

To determine the maximum among environmental releases of the retrieved set of records.

CALC MIN (otr)

To calculate the minimum off-site (other than to a POTW) waste transfer among the retrieved set of records.

CALC Continued: The EACH Option

The CALC command, as illustrated previously, functions on an entire retrieval set, that is, operations are performed on a set of records as a whole. The EACH option, on the other hand, allows certain of these same functions to be applied to each record of the set. The result is another set, assigned a name by the user, which may subsequently be displayed with a PRT command. This named set may also be used in other CALC commands. EACH is especially useful when applied to data fields containing multiple occurrences. For example, assume a search retrieved 100 records; if you were looking for the average amount of chemicals transferred to non-publicly owned treatment works, the strategy would be: CALC AVG (OTR). The result would be a single number representing the average of the entire retrieval set. A different approach would be to calculate an average OTR for EACH record of the set and assign a name, say MIDWASTE, to this new set of average OTRs. The strategy in this case would be: CALC AVG (EACH OTR) = MIDWASTE. For a record with only a single value in the OTR data element, the average is the same as the single value. For a record where OTR repeats, the numerical average of all OTR occurrences for that record is calculated. The generalized format for the EACH command is:

CALC [FUNCTION] [(EACH [MNEMONIC])] = [USER ASSIGNED NAME]

Note that the word EACH and the letter "E" can be used interchangeably.

CALC: Mixing Data Elements

Another CALC feature allows calculations across different data elements. Thus, the following search will calculate the SUM of ERELT, OLOCT, POTWT for ALL retrieved records:

CALC SUM (ERELT POTWT OLOCT)

A similar search statement, created in conjunction with the EACH option, will calculate the SUM of ERELT, OLOCT, POTWT for each record and use these to create a set with a user assigned name, say SUMEACH:

CALC SUM (EACH ERELT POTWT OLCOT) = SUMEACH

SUMEACH may be used in subsequent search statements, such as CALC MAX (SUMEACH). See Figure 2 for examples of various CALC searches, including those using the EACH option.

PRT COMPUTE

Certain of the functions (AVG, CNT, MAX, MIN, NCT, SUM) described previously may be used to perform numerical calculations not only with the CALC command, but also through the use of the PRT COMPUTE command. The main difference is that whereas performing a CALC displays the calculated value, the PRT COMPUTE command allows you to perform the calculation, display the result and at the same time, display selected data elements for the retrieval set. The format of the command is:

PRT [MNEMONICS] COMPUTE [(FUNCTION)] OF [MNEMONIC]

CALC SUM (LANDT) instructs TOXNET to add up all LANDT values for the retrieved set and to display the sum. However, PRT LAND COMPUTE (SUM) OF LANDT instructs TOXNET to display all the data elements under the header LAND for each retrieved record and to conclude with a display of the calculated SUM of the LANDTS. See Figure 3 for a search example using PRT COMPUTE.

CONCLUSION

The ability to perform some basic statistical manipulations on TRI data is a major advance for the TOXNET system. Although the more

sophisticated operations such as PRT COMPUTE and the EACH option may appear formidable, continued practice will lessen their mystique. Studying and replicating the following sample searches online will help you formulate CALC searches of your own.

RANGING

1. What New Jersey facilities have listed more than 1,000,000 lbs of toluene "point" air releases?

[TRI] SS 1 /cf?

USER:

(name) toluene and nj (fst) and greater than 1000000 (airpr)

SEARCH IN PROGRESS

SS (1) PSTG (1)

[TRI] SS 2 /cf?

USER:

prt hits

1	- TRI	
FNM	PERMACEL	
NAME	TOLUENE	
RN	108-88-3	
SUBN	13-87-01061889-0-NJ	
FST	NJ	
AIRPR	POINT AIR RELEASE	2,737,000 lbs. Spec. Est.

Figure 1

Using a "plain" calculate:

1. In the county of Honolulu, Hawaii, what was the most chlorine released to the environment by any facility during 1987?

[TRI] SS 1 /cf?

USER:

(fstco) hi/honolulu and chlorine (name)

SEARCH IN PROGRESS

SS (1) PSTG (4)

[TRI] SS 2 /cf?

USER:

calc max (erelt)

Calc processing

MAX (ERELT) = 64500

Calc completed

[Searches for the maximum of all the ERELТ data element values.]

[TRI] SS 2 /cf?

USER:

prt erelt continuous

1	TRI
FNM	CHEVRON U.S.A. INC. HAWAIIAN REFINERY
NAME	CHLORINE
RN	7782-50-5
SUBN	13-87-01011780-8-HI
ERELT	500 LBS.

2	TRI
FNM	OAHU SUGAR COMPANY, LTD.
NAME	CHLORINE
RN	7782-50-5
SUBN	13-87-01026173-7-HI
ERELT	64,500 LBS

[This record contains the maximum value.]

3	TRI
FNM	WAIALUA SUGAR COMPANY, INC.
NAME	CHLORINE
RN	7782-50-5
SUBN	13-87-01039421-9-HI
ERELT	61,000 LBS.

4	TRI
FNM	DOLE PACKAGED FOODS - DOLE COMPANY
NAME	CHLORINE
RN	7782-50-5
SUBN	13-87-01051637-5-HI
ERELT	0 LBS.

Figure 2A

Using a "calculate" with "ranging":

2. What is the total amount of acetone released to the air in zip codes 45320 through 45331?

[TRI] SS 1 /cf?

USER:

(name) acetone and from 45320 to 45331 (fzip)

SEARCH IN PROGRESS

SS (1) PSTG (3)

[TRI] SS 2 /cf?

USER:

calc sum (airt)

Calc processing

SUM (AIRT) = 45377

Calc completed

[TRI] SS 2 /cf?

USER:

prt airt

1	TRI
FNM	BASF CORP., INKS & COATING DIV. GREENVILLE
NAME	ACETONE
RN	67-64-1
SUBN	13-87-01001053-4-OH
AIRT	2,100 LBS.

2	TRI
FNM	ALLIED AFTERMARKET DIVISION
NAME	ACETONE
RN	67-64-1
SUBN	13-87-01026328-7-OH
AIRT	42,430 LBS.

3	TRI
FNM	GREENVILLE TECHNOLOGY, INC.
NAME	ACETONE
RN	67-64-1
SUBN	13-87-01067181-4-OH
AIRT	847 LBS.

Figure 2B

Using a "calculate" with the DIS option:

3. How many different facilities outside of Washington State are sending their toxic wastes there?

[TRI] SS 1 /cf?

USER:

(fst) wa

SEARCH IN PROGRESS

SS (1) PSTG (1091)

[Searches for facilities in Washington]

[TRI] SS 2 /cf?

USER:

(twst) wa or wa (ost)

SEARCH IN PROGRESS

SS (2) PSTG (794)

[Searches for waste sites in Washington]

[TRI] SS 3 /cf?

USER:

2 and not 1

SEARCH IN PROGRESS

SS (3) PSTG (138)

[Searches for waste sites in Washington State and facilities NOT in that state.]

[TRI] SS 4 /cf?

USER:

calc cnt (dis(fnm))

Calc processing

CNT(DIS(FNM)) = 43

Calc completed

[There are 43 such distinct facilities]

Figure 2C

Using a "calculate" with the EACH option:

4. What are the average amounts of toluene or xylene transferred to non-publicly owned treatment works by the company Meridian Incorporated?

[TRI] SS 1 /cf?
 USER:
 meridian incorporated (fnm)
 SEARCH IN PROGRESS
 SS (1) PSTG (7)

[TRI] SS 2 /cf?
 USER:
 (nf) toluene or xylene
 SEARCH IN PROGRESS
 SS (2) PSTG (6535)

[TRI] SS 3 /cf?
 USER:
 1 and 2
 SEARCH IN PROGRESS
 SS (3) PSTG (2)

[TRI] SS 4 /cf?
 USER:
 calc avg (each otr) = midwaste [Observe no value is
 Calc processing displayed because the
 Calc completed result is a set]

[TRI] SS 4 /cf?
 USER:
 prt onm, otr, midwaste continuous

1	TRI	
FNM	MERIDIAN INCORPORATED	
NAME	TOLUENE	
RN	108-88-3	
SUBN	13-87-01075168-7-MI	
ONM	OFF-SITE NAME	INDUSTRIAL FUELS AND RESOURCES
ONM	OFF-SITE NAME	ENVIRONMENTAL WASTE CONTROL
ONM	OFF-SITE NAME	PETRO/CHEM PROCESSING
OTR	OFF-SITE LOC TR	54,511 LBS. SPEC. EST.
OTR	OFF-SITE LOC TR	178,740 LBS SPEC EST
OTR	OFF-SITE LOC TR	33,834 LBS SPEC EST
MIDWA	89028.33	[Calculated average for Record 1]

2	TRI	
FNM	MERIDIAN INCORPORATED	
NAME	XYLENE (MIXED ISOMERS)	
RN	1330-20-7	
SUBN	13-87-01075173-7-MI	
ONM	OFF-SITE NAME	INDUSTRIAL FUELS AND RESOURCES
ONM	OFF-SITE NAME	ENVIRONMENTAL WASTE CONTROL
ONM	OFF-SITE NAME	PETRO/CHEM PROCESSING
OTR	OFF-SITE LOC TR	454 LBS. SPEC. EST.
OTR	OFF-SITE LOC TR	1,490 LBS. SPEC. EST.
OTR	OFF-SITE LOC TR	282 LBS. SPEC EST
MIDWA	742	[Calculated average for Record 2]

Figure 2D

Using a "calculate" with mixed data elements:

5. How many pounds of chemicals do New Hampshire reporting facilities transfer to waste sites in Maine or Rhode Island?

[TRI] SS 1 /cf?

USER:

(fst) nh

SEARCH IN PROGRESS

SS (1) PSTG (435)

[TRI] SS 2 /cf?

(twst) me or ri (twst) or me (ost) or ri (ost)

SEARCH IN PROGRESS

SS (2) PSTG (581)

[TRI] SS 3 /cf?

1 and 2

SEARCH IN PROGRESS

SS (3) PSTG (9)

[TRI] SS 4 /cf?

calc sum (potwt oloct)

Calc processing

SUM (POTWT OLOCT) = 119902

[This number represents the total amount of chemicals transferred to publicly owned AND other waste sites.]

Figure 2E

1. What amounts of which chemicals are being transferred to POTWs in Napa County and what is the total amount?

[TRI] SS 1 /cf?

napa (twco)
SEARCH IN PROGRESS
SS (1) PSTG (6)

[TRI] SS 2 /cf?

USER:

prt hits, potwt compute (sum) of potwt cont indented

1	TRI
FACILITY NAME	ICI RESINS U.S.
NAME OF SUBSTANCE	METHYL METHACRYLATE
CAS REGISTRY NUMBER	80-62-6
SUBMISSION NUMBER	13-87-01034697-9-CA
TOTAL POTW TRANSFER	93 LBS.
POTW IDENTIFIERS	

COUNTY: NAPA

2	TRI
FACILITY NAME	ICI RESINS U.S.
NAME OF SUBSTANCE	ACRYLIC ACID
CAS REGISTRY NUMBER	79-10-7
SUBMISSION NUMBER	13-87-01034698-1-CA
TOTAL POTWT TRANSFER	34 LBS.
POTW IDENTIFIERS	

COUNTY: NAPA

3	TRI
FACILITY NAME	ICI RESINS U.S.
NAME OF SUBSTANCE	GLYCOL ETHERS
CAS REGISTRY NUMBER	ND
SUBMISSION NUMBER	13-87-02034699-3-CA
TOTAL POTWT TRANSFER	6,567 LBS.
POTW IDENTIFIERS	

COUNTY: NAPA

4	TRI
FACILITY NAME	ICI RESING U.S.
NAME OF SUBSTANCE	STYRENE
CAS REGISTRY NUMBER	100-42-5
SUBMISSION NUMBER	13-987-01034700-7-CA
TOTAL POTWT TRANSFER	177 LBS.
POTW IDENTIFIERS	

COUNTY: NAPA

5	TRI
FACILITY NAME	ICI RESINS U.S.
NAME OF SUBSTANCE	BUTYL ACRYLATE
CAS REGISTRY NUMBER	141-32-2
SUBMISSION NUMBER	3-87-01034701-9-ca
TOTAL POTWT TRANSFER	141 lbs
POTW IDENTIFIERS	

COUNTY: NAPA

6	TRI
FACILITY NAME	SAWYER OF NAPA
NAME OF SUBSTANCE	CHROMIUM COMPOUNDS
CAS REGISTRY NUMBER	ND
SUBMISSION NUMBER	13-87-01070864-8-CA
TOTAL POTWT TRANSFER	3,827 LBS.
POTW IDENTIFIERS	

COUNTY: NAPA

*** TOTAL SUM (POTWT) - 10839

[SUM calculated and
displayed by the
PRT COMPUTE command.]

Figure 3
PRT COMPUTE

Serials Update

INDEXED TITLES UPDATE, SEPTEMBER 1989

The following titles cited in MEDLINE, HEALTH, and POPLINE have recently been selected for indexing, undergone a title change, or ceased publication. This list is not cumulative; the information provided is only for titles whose status has changed since the

last UPDATE. More detailed information may be found in SERLINE. For further information, please contact MMS or Ms. Esther Baldinger, (301) 496-1276, Technical Services Division, NLM.

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IDL BILTEN UDRUZENJA ORTODONATA JUGOSLAVIJE
BILT UDRUZ ORTODONATA JUGOSL
1,1968--
UDRUZENJE ORTODONATA SAVEZA LEKARSKIH
DRUSTAVA JUGOSLAVIJE
BEOGRAD YUGOSLAVIA
ON ORDER 0350-1043
SR0063630 JC: AGD
UDRUZENJE ORTODONATA SAVEZA LEKARSKIH
DRUSTAVA JUGOSLAVIJE,GASTON GRAJIJEA
2,11000 BEOGRAD YUGOSLAVIA

INI DECUBITUS
DECUBITUS
INI,FEB 1988--
S-N PUBLICATIONS
CHICAGO IL UNITED STATES
A COMPENDIUM OF PREVENTION AND TREATMENT OF
PRESSURE ULCERS.
INDEXING BEGAN WITH VINI,FEB 1988.
WI DE111C 0898-1655
SR0063101 JC: AFV
S-N PUBLICATIONS,600 S. FEDERAL
ST.,SUITE 701,CHICAGO IL 60605

IDL ESENCIA ODONTOLOGICA
ESENCIA ODONTOL
NI,1984?--
ASOCIACION NACIONAL DEL COMERCIO DENTAL
SANTIAGO CHILE
INDEXING BEGAN WITH N29,OCT 15,1988.
ON ORDER
SR0066105 JC: AFW
ASOCIACION NACIONAL DEL COMERCIO
DENTAL,SANTO TORIBIO 633,SANTIAGO CHILE

HLI JOURNAL OF AGING AND HEALTH
J AGING HEALTH
INI,FEB 1989--
SAGE PUBLICATIONS
NEWBURY PARK CA UNITED STATES
INDEXING BEGAN WITH VINI,FEB 1989.
WI JO534BH 0898-2643
SR0063138 JC: AFS
SAGE PUBLICATIONS,2111 W. HILLCREST
DR.,NEWBURY PARK CA 91320

HLI JOURNAL OF APPLIED GERONTOLOGY
J APPL GERONTOL
1,JUN 1982--
SAGE PUBLICATIONS FOR THE SOUTHERN
GERONTOLOGICAL SOCIETY
NEWBURY PARK CA UNITED STATES
CALLED ALSO: JAG.
INDEXING BEGAN WITH V8NI,MAR 1989.
WI JO541G 0733-4648
SR0054332 JC: AFT
SAGE PUBLICATIONS,2111 W. HILLCREST
DR.,NEWBURY PARK CA 91320

IDL JOURNAL OF CLINICAL DENTISTRY
J CLIN DENT
INI,SUMMER 1988--
PROFESSIONAL AUDIENCE COMMUNICATIONS
YARDLEY PA UNITED STATES
INDEXING BEGAN WITH VINI,SUMMER 1988.
WI JO587M 0895-8831
SR0063622 JC: AGC
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INC.,P.O. BOX 243,YARDLEY PA 19067

IDL ODONTOESTOMATOLOGIA
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INI,AUG 1988--
UNIVERSIDAD DE LA REPUBLICA, FACULTAD DE
ODONTOLOGIA
MONTEVIDEO URUGUAY
INDEXING BEGAN WITH VINI,AUG 1988.
WI OD233 0797-0374
SR0065066 JC: AFU

IDL REVISTA DO CENTRO DE CIENCIAS BIOMEDICAS DA
UNIVERSIDADE FEDERAL DE UBERLANDIA
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INI,DEC 1985--
UNIVERSIDADE FEDERAL DE UBERLANDIA
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INDEXING BEGAN WITH V2NI,DEC 1986.
WI RE519HC 0102-5996
SR0062840 JC: AGK
UNIVERSIDADE FEDERAL DE
UBERLANDIA,DIVISAO DE BIBLIOTECAS
UMJARAMA,CAMPUS UMJARAMA,AV. PARA
1720,CEP 38.400 UBERLANDIA, BRAZIL

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SEMIN DENT HYG
INI,MAY 1989--
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YARDLEY PA UNITED STATES
INDEXING BEGAN WITH VINI,MAY 1989.
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SR0066424 JC: AGL
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INC.,P.O. BOX 243,YARDLEY PA 19067

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INI,SEP 1987--
PROFESSIONAL AUDIENCE COMMUNICATIONS
YARDLEY PA UNITED STATES
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WI UP518D 0897-876X
SR0064811 JC: AGA
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INC.,P.O. BOX 243,YARDLEY PA 19067

TITLE CHANGES, AUGUST 1989

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|---|---|
| <p>IM ACTA PHARMACEUTICA NORDICA
ACTA PHARM NORD
1N1,1989--
SWEDISH PHARMACEUTICAL PRESS
STOCKHOLM SWEDEN
FORMED BY THE MERGER OF: ACTA
PHARMACEUTICA SUECICA, AND: FARMACI.
SCIENTIFIC EDITION, AND: NORVEGICA
PHARMACEUTICA ACTA.
INDEXING BEGAN WITH VIN1,1989.
W1 AC9176N 1100-1801
SR0065804 JC: AGJ</p> | <p>IM CRITICAL REVIEWS IN MICROBIOLOGY
CRIT REV MICROBIOL
7N4,AUG 1980--
CRC PRESS
BOCA RATON FL UNITED STATES
COVER TITLE: CRC CRITICAL REVIEWS IN
MICROBIOLOGY. CONTINUES: CRC CRITICAL
REVIEWS IN MICROBIOLOGY.
W1 C555H 1040-841X
SR0066113 JC: AFN</p> |
| <p>IM CHEMICAL IMMUNOLOGY
CHEM IMMUNOL
46,1989--
KARGER
BASEL SWITZERLAND
CONTINUES: PROGRESS IN ALLERGY.
ON ORDER 1015-0145
SR0066203 JC: AF7</p> | <p>IM CRITICAL REVIEWS IN TOXICOLOGY
CRIT REV TOXICOL
7N1,JUL 1980--
CRC PRESS
BOCA RATON FL UNITED STATES
COVER TITLE: CRC CRITICAL REVIEWS IN
TOXICOLOGY. CONTINUES: CRC CRITICAL
REVIEWS IN TOXICOLOGY.
W1 C555N 1040-8444
SR0066116 JC: AFR</p> |
| <p>IM CRITICAL REVIEWS IN CLINICAL LABORATORY
SCIENCES
CRIT REV CLIN LAB SCI
12N3,AUG 1980--
CRC PRESS
BOCA RATON FL UNITED STATES
COVER TITLE: CRC CRITICAL REVIEWS IN
CLINICAL LABORATORY SCIENCES. CONTINUES:
CRC CRITICAL REVIEWS IN CLINICAL LABORATORY
SCIENCES.
W1 C555B 1040-8363
SR0066195 JC: AFY</p> | <p>IM DNA AND CELL BIOLOGY
DNA CELL BIOL
9,1990--
MARY ANN LIEBERT
NEW YORK NY UNITED STATES
CONTINUES: DNA.
ON ORDER 1044-5498
SR0066240 JC: AF9</p> |
| <p>IM CRITICAL REVIEWS IN DIAGNOSTIC IMAGING
CRIT REV DIAGN IMAGING
13N1,1980--
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COVER TITLE: CRC CRITICAL REVIEWS IN
DIAGNOSTIC IMAGING. CONTINUES: CRC
CRITICAL REVIEWS IN DIAGNOSTIC IMAGING.
W1 C555CI 1040-8371
SR0066252 JC: AF2</p> | <p>IM FETAL DIAGNOSIS AND THERAPY
FETAL DIAGN THER
5,1990--
KARGER
BASEL SWITZERLAND
CONTINUES: FETAL THERAPY.
ON ORDER
SR0066199 JC: AF5</p> |
| <p>IM CRITICAL REVIEWS IN FOOD SCIENCE AND
NUTRITION
CRIT REV FOOD SCI NUTR
12N3,JUN 1980--
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COVER TITLE: CRC CRITICAL REVIEWS IN FOOD
SCIENCE AND NUTRITION. CONTINUES: CRC
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W1 C555F 1040-8398
SR0066250 JC: AF0</p> | <p>POP INTERNATIONAL REVIEW
INT REV
12N1,SPRING 1988--
HUMAN LIFE CENTER, UNIVERSITY OF
STUEBENVILLE
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CONTINUES: INTERNATIONAL REVIEW OF NATURAL
FAMILY PLANNING.
W1 IN8295 0146-1745
SR0066267 JC: AF8</p> |
| <p>IM CRITICAL REVIEWS IN IMMUNOLOGY
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1N2,MAY 1980--
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COVER TITLE: CRC CRITICAL REVIEWS IN
IMMUNOLOGY. CONTINUES: CRC CRITICAL
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W1 CR1243 1040-8401
SR0066251 JC: AFI</p> | <p>IM MAGNESIUM AND TRACE ELEMENTS
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9,1990--
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CONTINUES: MAGNESIUM.
ON ORDER-TITLECHANGE
SR0066200 JC: AF3</p> |
| | <p>IDL OHU DAIGAKU SHIGAKKAISHI
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16N1,1989--
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FUKUSHIMA JAPAN
CONTINUES: TOHOKU SHIKA DAIGAKU GAKKAI SHI.
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SR0066302 JC: AGE</p> |

IM PATHOBIOLOGY
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 58,1990--
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 SR0066351 JC: AGH

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IDL CANADIAN JOURNAL OF COMMUNITY DENTISTRY
 CAN J COMMUNITY DENT
 IN1, JAN 1986-3N2, 1988
 CANADIAN SOCIETY OF PUBLIC HEALTH DENTISTS
 SCARBOROUGH CANADA
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 SOCIETY OF PUBLIC HEALTH DENTISTS. VOL. 3
 NO. 2 CALLED WINTER/JANUARY 1988. VOL. 3
 NO. 1, 1988 NEVER PUBLISHED.
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 WI CA585C
 SR0060956 JC: CJO

IM CRITICAL REVIEWS IN MEDICAL INFORMATICS
 CRIT REV MED INFORM
 IN1, 1986-1N4, 1988
 CRC PRESS
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 RUNNING TITLE: CRC CRITICAL REVIEWS IN
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 INDEXING BEGAN WITH VIN1, 1986.
 WI CR216ZBH 0882-0503
 SR0058892 JC: CRM

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 REV FAC ODONTOL RIBEIRO PRETO
 20N2, JUL/DEC 1983-23N2, JUL/DEC 1986
 REVISTA DA FACULDADE DE ODONTOLOGIA DE
 RIBEIRAO PRETO
 RIBEIRAO PRETO BRAZIL
 CONTINUES: REVISTA DA FACULDADE DE FARMACIA
 E ODONTOLOGIA DE RIBEIRAO PRETO.
 WI RE37R 0102-129X
 SR0053957 JC: REQ

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**Telephone Numbers for TYMNET,
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and Direct Dial Access to the NLM
Computer**

This list is regularly produced by the Systems Support Branch, Office of Computer and Communications Systems, NLM. MEDLARS Management Section reproduces and distributes it as an enclosure with the NLM Technical Bulletin.

Please note the following features when using this list:

The list is alphabetized by the full spelling of the state; however, the two-letter abbreviations appear on the list. Not all suburban areas are listed; therefore, when looking for a specific city, one should check for cities in the entire calling area as well as the specific exchange.

To locate the speed of the line, read the modem designation at the right of each number and refer to the legend at the beginning of the list. For example, "A" following a telephone number indicates Bell 212A compatible, 300 or 1200 bps (bits per second, or baud).

The networks are offering an increasing number of 2400 bps nodes. As indicated in the legend these numbers are followed by a dollar sign (\$). A comparable 2400 bps modem is required to use these nodes.

NETWORK ACCESS NUMBERS

```

*****
*
* X = Bell 113: 300 bps
* A = Bell 212A: 300/1200 bps
* V = vadic 3405:1200 bps
* BV = Bell 212A/2224
* $ = 2400 bps:must have compatible
* 2400 bps modem
* * = NLM Direct Dial Number
* % = changes in last update
* AN = AlaskaNet (does not work with
* Grateful Med)
* CN = ConnNet (does not work with
* Grateful Med)
* PDN= Public Data Network (does not
* work with Grateful Med)
*****
    
```

City	St	Tymnet	Telenet	Infonet	CompuServ
Anniston	AL	205/236-3342 BV	205/236-9711 BV	205/820-7609 A	
Bessemer	AL				205/879-2250 A
Birmingham	AL	205/942-4141 BV	205/328-2310 BV	205/254-3120 A	205/879-2250 A
Birmingham	AL	205/942-7898 \$	205/251-1885 \$	205/279-0314 A	205/871-2936 \$
Daleville	AL			205/598-4762 A	
Decatur	AL		205/355-0206 BV		
Dothan	AL	205/794-7954 BV	205/793-5034 BV		
Douglasville	AL	205/760-0030 BV	205/767-7960 BV		205/766-9925 A
Douglasville	AL		205/767-0497 \$		205/767-0696 \$
Fort McClellan	AL		-	205/820-7609 A	
Gadsden	AL	205/543-3550 BV			
Huntsville	AL	205/882-3003 BV	205/539-2281 BV	205/883-2130 A	205/536-4405 A
Huntsville	AL	205/880-8912 \$	205/539-1631 \$		205/534-4079 \$
Mobile	AL	205/343-8414 BV	205/432-1680 BV		205/478-0688 A
Mobile	AL	205/460-2515 \$	205/438-6881 \$		205/476-2701 \$
Montgomery	AL	205/265-4570 BV	205/269-0090 BV	205/279-0314 A	205/262-0010 A
Montgomery	AL		205/832-4314 \$		205/834-5513 \$
Northport	AL	205/758-1116 BV			
Opelika	AL	205/742-9040 \$			
Tuscaloosa	AL		205/752-1472 BV		205/553-1120 A
Anchorage	AK	907/258-7222 BV AN	907/276-0453 BV AN		907/563-8425 A
Anchorage	AK		907/276-0453 \$		907/561-7503 \$
Barrow	AK	907/852-2425 BV AN	907/852-2425 BV AN		
Bethel	AK	907/543-2411 BV AN	907/543-2411 BV AN		
Cold Bay	AK	907/532-2371 BV AN	907/532-2371 BV AN		
Cordova	AK	907/424-3744 BV AN	907/424-3744 BV AN		
Dead Horse	AK	907/659-2777 BV AN	907/659-2777 BV AN		
Delta Junction	AK	907/895-5070 BV AN	907/895-5070 BV AN		
Dillingham	AK	907/842-2688 BV AN	907/842-2688 BV AN		
Fairbanks	AK	907/456-3282 BV AN	907/456-3282 BV AN		
Glennallen	AK	907/822-5231 BV AN	907/822-5231 BV AN		907/479-4102 A
Haines	AK	907/766-2171 X AN			
Homer	AK	907/235-5239 BV AN	907/235-5239 BV AN		
Iliamna	AK	907/571-1364 BV AN	907/571-1364 BV AN		
Juneau	AK	907/789-7009 BV AN	907/789-7009 BV AN		
Kenai	AK	907/262-1990 BV AN			
Ketchikan	AK	907/225-1871 BV AN	907/225-1871 BV AN		
King Salmon	AK	907/246-3049 BV AN	907/246-3049 BV AN		
Kiikhaq	AK	907/486-4061 BV AN	907/486-4061 BV AN		
Kobuk	AK	907/442-2602 BV AN	907/442-2602 BV AN		
Kotzebue	AK	907/524-3256 BV AN	907/524-3256 BV AN		
Kotzebue	AK	907/832-5214 X AN			
Menana	AK	907/443-2256 BV AN	907/443-2256 BV AN		
Nome	AK	907/778-2301 BV AN	907/778-2301 BV AN		
Northway	AK	907/745-0200 BV AN	907/745-0200 BV AN		
Palmer	AK	907/772-3878 X AN			
Petersburg	AK	907/772-3878 X AN			
Prudhoe Bay	AK	907/659-2777 BV AN	907/659-2777 BV AN		

City	St	Tymnet	Telenet	Infonet	CompuServ
Seward	AK	907/224-3126 BV AN	907/224-3126 BV AN		
Sitka	AK	907/747-5887 BV AN	907/747-5887 BV AN		
Skagway	AK	907/983-2170 X AN			
Soldotina	AK	907/262-1990 BV AN	907/262-1990 BV AN		
St. Paul	AK	907/546-2320 BV AN	907/546-2320 BV AN		
Talkeetna	AK	907/733-2227 BV AN	907/733-2227 BV AN		
Tanana	AK	907/366-7167 X AN	907/366-7167 BV X		
Tok	AK	907/883-4747 X AN			
Valdez	AK	907/835-4987 BV AN	907/835-4987 BV AN		
Wasilla	AK	907/745-0200 BV AN			
Whittier	AK	907/472-2467 BV AN	907/472-2467 BV AN		
Wrangell	AK	907/784-3453 X AN			
Yakutat	AK	907/784-3453 BV AN	907/784-3453 BV AN		
Flagstaff	AZ	602/774-3857 \$			
Fort Huachuca	AZ			602/458-1260 A	
Mesa	AZ	602/254-5811 BV			602/256-2951 A
Mesa	AZ	602/258-0554 \$			
Phoenix	AZ	602/254-5811 BV	602/254-0244 BV	602/233-9592 A	602/256-2951 A
Phoenix	AZ	602/258-0554 \$	602/256-6955 \$		602/371-8171 A
Phoenix	AZ				602/256-9493 \$
Phoenix	AZ				602/943-9425 \$
Scottsdale	AZ				602/256-2951 A
Sierra Vista	AZ				602/459-6390 A
Tempe	AZ				602/256-2951 A
Tucson	AZ	602/797-0047 BV	602/747-0107 BV		602/748-2004 A
Tucson	AZ	602/575-8850 \$	602/747-9395 \$		602/748-2009 A
Tucson	AZ				602/745-8745 \$
Yuma	AZ	602/343-9000 BV/\$			602/782-7191 A
Fayetteville	AR	501/442-0234 BV			
Fort Smith	AR	501/782-2486 BV	501/782-2852 BV		
Hot Springs	AR	501/623-3576 BV			
Jonesboro	AR	501/935-7957 BV			
Little Rock	AR	501/666-6886 BV	501/372-4616 BV	501/376-1535 A	501/224-931
Little Rock	AR	501/666-6024 \$	501/374-2861 \$		501/228-0006
Pine Bluff	AR	501/535-2629 BV			
Springdale	AR				
Alameda	CA	415/430-2900 BV			415/531-1820 A
Alameda	CA	415/633-1896 \$			
Alhambra	CA	818/308-1800 BV			
Alhambra	CA	818/308-1994 \$			
Anaheim	CA	714/756-8341 BV			714/520-9724 A
Anaheim	CA	714/852-8141 \$			714/520-5231 \$
Antioch	CA	415/754-8222 BV			
Arcadia	CA	818/308-1800 BV			
Arcadia	CA	818/308-1994 \$			
Bakersfield	CA	805/325-0371 BV	805/327-8146 BV		805/323-7691 A
Bakersfield	CA				805/324-0971 \$
Belmont	CA	415/366-1092 BV			415/592-5490 A
Belmont	CA	415/361-8701 \$			
Berkeley	CA	415/430-2900 BV			415/531-1820 A
Berkeley	CA	415/633-1896 \$			
Beverly Hills	CA	818/789-9002 BV			213/739-8906 A
Beverly Hills	CA	818/789-9557 \$			213/383-9284 \$
Beverly Hills	CA				213/487-6461 V
Burbank	CA	818/841-4795 BV		818/954-9161 A	
Burlingame	CA	415/588-3043 BV			
Canoga Park	CA	818/789-9002 BV			818/902-0932 A
Canoga Park	CA	818/789-9557 \$			
Castro Valley	CA				415/581-2631 A
Castro Valley	CA				415/889-0369 \$
Cathedral City	CA	619/324-0920 \$			619/325-4584 A
Chico	CA	916/343-4401 BV	916/894-6882 BV		
Colton	CA	714/370-1200 BV	714/824-9000 BV		
Colton	CA	714/422-0222 \$	714/824-8976 \$		
Compton	CA		213/516-1007 BV		
Concord	CA	415/935-0370 BV	415/827-3960 BV		415/682-2633
Concord	CA	415/935-1507 \$	415/674-0127 \$		
Corona	CA	714/737-5510 BV		714/736-6820 A	
Covina	CA	714/860-0057 BV			
Culver City	CA				213/216-0010 A
Culver City	CA				213/390-9617 A
Culver City	CA				213/390-7531 A
Culver City	CA				213/390-7601 \$
Culver City	CA				213/397-8812 V

City	St Tymnet	Telenet	Infonet	CompuServ
ertino	CA			408/988-8762 A
.pertino	CA			408/988-5366 \$
Davis	CA	916/758-3551 BV		
Diamond Bar	CA	714/860-0057 BV		
El Monte	CA	818/308-1800 BV	818/442-9291 A	
El Monte	CA	818/308-1994 \$		
El Segundo	CA	213/643-2907 BV		
El Segundo	CA	213/643-4228 \$		
Encinitas	CA			619/753-2728 A
Escondido	CA	619/941-6700 BV	619/741-7756 BV	
Eureka	CA	707/445-3021 BV	707/444-3091 BV	
Eureka	CA	707/445-9271 BV		
Fairfield	CA	707/426-5900 BV		
Fremont	CA	415/490-7366 BV		
Fresno	CA	209/442-4328 BV	209/233-0961 BV	209/252-1892 A
Fresno	CA		209/441-1861 \$	209/453-0535 \$
Garden Grove	CA		714/898-9820 BV	
Garden Grove	CA		714/895-1207 \$	
Glendale	CA	818/841-4795 BV	818/507-0909 BV	818/763-0558 A
Glendale	CA		818/246-3886 \$	
Hayward	CA	415/430-2900 BV	415/881-1382 BV	415/581-2631 A
Hayward	CA	415/633-1896 \$		
Inglewood	CA	213/587-0030 BV		213/739-8906 A
Inglewood	CA	213/587-7514 \$		213/383-9284 \$
Inglewood	CA			213/487-6461 V
Irvine	CA	714/756-8341 BV		714/851-0145 A
Irvine	CA	714/852-8141 \$		714/833-9915 \$
Lancaster	CA	805/945-4962 BV		805/942-3888 A
Livermore	CA			415/443-9202 A
Livermore	CA			415/373-0546 \$
Long Beach	CA	213/435-0900 BV		213/591-8392 A
Long Beach	CA	213/436-6033 \$		213/599-5966 \$
Los Altos	CA	408/432-3430 BV		
Los Altos	CA	408/432-8618 \$		
Los Angeles	CA	213/587-0030 BV	213/624-2251 BV	213/739-8906 A
Los Angeles	CA	213/587-7514 \$	213/937-3580 BV	213/384-1261 A
Los Angeles	CA		213/622-1138 \$	213/383-9284 \$
Los Angeles	CA			213/487-6461 V
Mar Vista	CA	213/643-2907 BV		
Mar Vista	CA	213/643-4228 \$		
Marina Del Rey	CA	213/643-2907 BV	213/306-2984 BV	
Marina Del Rey	CA	213/643-4228 \$	213/306-4922 \$	
Merced	CA	209/383-7593 BV	209/383-2557 BV	
Modesto	CA	209/527-0150 BV	209/576-2852 BV	209/521-9970 A
Monterey	CA	408/375-2644 BV	408/646-9092 BV	408/375-9931 A
Moorpark	CA	805/523-0203 \$		
Mountain View	CA		415/964-8240 \$	408/988-8762 A
Napa	CA	707/257-6810 BV		707/257-7710 A
Newport Beach	CA	714/756-8341 BV	714/895-4946 \$	714/851-0145 A
Newport Beach	CA	714/852-8141 \$		714/724-0778 A
Newport Beach	CA			714/833-9915 \$
North Hollywood	CA		818/786-4111 A	818/763-0558 A
Norwalk	CA	213/435-0900 BV	213/404-2237 BV	
Norwalk	CA	213/436-6033 \$		
Oakland	CA	415/430-2900 BV	415/836-4911 BV	415/531-1820 A
Oakland	CA	415/633-1896 \$	415/834-3194 \$	425/482-0190 \$
Oceanside	CA		619/430-0613 BV	
Ontario	CA	714/860-0057 BV		
Oxnard	CA	805/985-7843 BV		805/486-3386 A
Pacheco	CA	415/935-0370 BV		415/682-2633 A
Pacheco	CA	415/935-1507 \$		
Palm Springs	CA	619/324-0920 BV		619/325-4584 A
Palm Springs	CA			619/325-0319 \$
Palo Alto	CA	415/366-1092 BV	415/856-9995 BV	415/591-5591 A
Palo Alto	CA	415/361-8701 \$	415/856-0484 \$	
Pasadena	CA	818/308-1800 BV		
Pasadena	CA	818/308-1994 \$		
Pasadena	CA	415/462-2101 BV		415/443-9202 A
Pleasanton	CA			415/373-0546 \$
Pleasant Hill	CA	415/935-0370 BV		415/682-2633 A
Pleasant Hill	CA	415/935-1507 \$		
Pomona	CA	714/860-0057 BV	714/626-1284 BV	714/865-2229 A
Pomona	CA			714/622-5454 \$
Port Hueneme	CA	805/985-7843 BV		
Poway	CA	619/679-0200 BV		
Redding	CA	916/241-4820 BV		
Redwood City	CA	415/366-1092 BV		

City	St	Tymnet	Telenet	Infonet	CompuServ
Redwood City	CA	415/361-8701 \$			
Riverside	CA	714/370-1200 BV			714/359-7801
Riverside	CA	714/422-0222 \$			714/354-6191 A
Riverside	CA				714/354-5022 \$
Sacramento	CA	916/448-4300 BV	916/448-6262 BV	916/452-7356 \$	916/971-4681 A
Sacramento	CA	916/447-7434 \$	916/443-7434 \$	916/920-3855 A	916/482-1094 \$
Salinas	CA	408/754-2206 BV	408/443-4940 BV		408/754-2751 A
San Bernadino	CA	714/370-1200 BV		714/888-7611 \$	714/881-1583 A
San Bernadino	CA	714/422-0222 \$			714/882-9626 \$
San Carlos	CA		415/591-0726 BV		415/591-5591 A
San Carlos	CA		415/595-8870 \$		
San Clemente	CA	714/240-9424 \$			
San Diego	CA	619/296-3370 BV	619/233-0233 BV	619/293-3620 \$	619/283-6021 A
San Diego	CA	619/296-8747 \$	619/231-1703 \$		619/283-6091 A
San Diego	CA				619/569-0697 A
San Diego	CA				619/569-8324 \$
San Diego	CA				619/280-1896 \$
San Fernando	CA	818/789-9002 BV			213/739-8906 A
San Fernando	CA				213/383-9284 \$
San Fernando	CA				213/487-6461 V
San Francisco	CA	415/974-1300 BV	415/956-5777 BV	415/391-9080 \$	415/956-4191 A
San Francisco	CA	415/543-0691 \$	415/788-0825 \$		415/781-2922 A
San Francisco	CA				415/398-0905 \$
San Francisco	CA				415/982-9055 V
San Jose	CA	408/432-3430 BV	408/294-9119 BV		408/988-8762 A
San Jose	CA	408/432-8618 \$	408/286-6340 \$		408/986-0345 A
San Jose	CA				408/988-5366 \$
San Luis Obispo	CA	805/549-0770 BV			805/549-8605 A
San Marcos	CA				619/471-0960 A
San Mateo	CA	415/588-3043 BV			415/591-5591 A
San Mateo	CA				415/592-5490 A
San Mateo	CA				415/591-5415 \$
San Pedro	CA	213/435-0900 BV	213/548-6141 BV		
San Pedro	CA	213/436-6033 \$	213/514-1590 \$		
San Rafael	CA	415/453-2087 BV/\$	415/472-5360 BV		
San Ramon	CA		415/829-6705 BV		
Santa Ana	CA	714/756-8341 BV	714/558-7078 BV	714/250-0120 A	
Santa Ana	CA	714/852-8141 \$	714/550-4625 \$		
Santa Barbara	CA	805/564-2354 BV	805/682-5361 BV		805/682-2331 A
Santa Barbara	CA	805/965-1612 \$			
Santa Clara	CA	408/432-3430 BV			408/988-8762 A
Santa Clara	CA	408/432-8618 \$			408/986-0345 A
Santa Clara	CA				408/988-5366 \$
Santa Cruz	CA	408/475-0981 BV	408/429-6937 BV		408/476-0422 A
Santa Maria	CA	805/922-3308 \$			
Santa Monica	CA	213/643-2907 BV			
Santa Monica	CA	213/643-4228 \$			
Santa Rosa	CA	707/527-6180 BV	707/578-4447 BV		707/579-1490 A
Santa Rosa	CA				707/579-4611 \$
Sherman Oaks	CA	818/789-9002 BV			818/902-0932 A
Sherman Oaks	CA	818/789-9557 \$			
Sierra Madre	CA				818/357-0971 A
Sierra Madre	CA				818/303-5780 \$
Solana Beach	CA				619/481-3527 A
South Lake Tahoe	CA				916/541-5940 A
South San Francisco	CA	415/588-3043 BV			
Stockton	CA	209/467-0601 BV	209/957-7610 BV		209/465-7251 A
Stockton	CA				209/465-7284 \$
Sunnyvale	CA	408/432-3430 BV			408/988-8762 A
Sunnyvale	CA	408/432-8618 \$			408/988-5366 \$
Thousand Oaks	CA		805-495-3588 BV		805/499-0371 A
Thousand Oaks	CA				805/498-3453 \$
Torrance	CA				213/542-4311 A
Torrance	CA				213/214-1442 \$
Upland	CA	714/985-1153 BV			
Vallejo	CA	707/644-1192 BV	415/724-4200 BV		
Van Nuys	CA	818/789-9002 BV		818/786-4111 A	818/902-093
Van Nuys	CA	818/789-9557 \$			818/902-048
Ventura	CA	805/985-7843 BV	805/656-6760 BV		805/643-0177
Ventura	CA		805/650-1070 \$		805/648-1906 \$
Vernon	CA	213/587-0030 BV			
Vernon	CA	213/587-7514 \$			
Visalia	CA	209/625-4891 BV	209/627-1201 BV		
Vista	CA	619/941-6700 BV			
Walnut Creek	CA	415/935-0370 BV			415/682-2633 A
Walnut Creek	CA	415/935-1507 \$			415/682-0762 \$
West Covina	CA	714/860-0057 BV	818/915-5151 BV		

City	St Tymnet	Telenet	Infonet	CompuServ
East Los Angeles	CA 818/789-9002 BV			213/739-8906 A
West Los Angeles	CA 818/789-9557 \$			213/383-9284 \$
West Los Angeles	CA			213/487-6461 V
Woodland	CA 916/758-3551 BV			
Woodland Hills	CA	818/887-3160 BV		
Woodland Hills	CA	818/348-7141 \$		
Aspen	CO			303/925-5892 A
Aurora	CO 303/830-9210 BV			303/629-5563 A
Aurora	CO 303/832-3447 \$			303/629-9145 \$
Aurora	CO			303/623-4711 V
Boulder	CO 303/830-9210 BV			303/629-5563 A
Boulder	CO 303/832-3447 \$			303/629-9145 \$
Boulder	CO			303/623-4711 V
Colorado Springs	CO 719/590-1003 BV	719/635-5361 BV	719/540-8220 A	719/596-0910 A
Colorado Springs	CO	719/578-0950 \$		
Denver	CO 303/830-9210 BV	303/337-6060 BV	303/893-3808 \$	303/629-5563 A
Denver	CO 303/832-3447 \$	303/696-0159 \$		303/892-7920 A
Denver	CO			303/629-9145 \$
Denver	CO			303/623-4711 V
Dillon	CO			303/668-0991 A
Durango	CO			303/259-5880 A
Fort Collins	CO 303/224-9819 BV/\$	303/493-9131 BV		303/493-8601 A
Fort Collins	CO	303/493-4014 \$		
Glenwood Spring	CO			303/945-0351 A
Glenwood Spring	CO			303/945-9509 \$
Grand Junction	CO 303/241-1643 \$	303/241-3004 BV		303/241-1885 A
Greeley	CO 303/352-0960 BV	303/352-8563 BV		
Lakewood	CO			303/629-5563 A
Lakewood	CO			303/629-9145 \$
Lakewood	CO			303/623-4711 V
Longmont	CO			303/651-3207 A
Loveland	CO			303/663-0992 A
Loveland	CO 719/543-9712 BV	719/542-4053 BV		719/546-1891 A
Steamboat Springs	CO			303/879-4900 A
Vail	CO			303/949-1336 A
Bloomfield	CT 203/242-7140 BV			
Bloomfield	CT 203/242-1986 \$			
Bloomfield	CT 203/724-6219 BV CN			
Bridgeport	CT 203/366-6972 BV CN	203/335-5055 BV		203/926-0001 A
Bridgeport	CT 203/332-7256 \$	203/367-9130 \$		203/926-0316 \$
Bridgeport	CT 203/579-1479 BV			
Bristol	CT 203/589-5100 BV CN			
Canaan	CT 203/824-5103 BV CN			
Clinton	CT 203/669-4243 BV CN			
Danbury	CT 203/797-9539 BV	203/794-9075 BV		203/797-1815 A
Danbury	CT 203/743-2906 BV CN	203/792-5354 \$		203/794-9169 \$
Danielson	CT 203/779-1880 BV CN			
Fairfield	CT			203/222-1748 A
Greenwich	CT 203/637-5552 BV CN			203/964-1027 A
Hartford	CT 203/242-7140 BV	203/247-9479 BV	203/728-6766 A	203/728-0633 A
Hartford	CT 203/242-1986 \$	203/724-9396 \$		203/728-3622 A
Hartford	CT 203/724-6219 BV CN			203/548-9369 \$
Meriden	CT 203/237-3460 BV CN			
Meriden	CT 203/634-9249 BV			
Middletown	CT 203/347-5665 BV CN	203/344-8217 BV		
Middletown	CT 203/634-9249 BV			
Milford	CT		203/877-2751 A	203/926-0001 A
New Britain	CT	203/225-7027 BV		
New Haven	CT 203/776-1142 BV CN	203/624-5954 BV	203/877-2751 A	203/467-3489 A
New Haven	CT 203/773-0082 BV	203/773-3569 \$		203/468-7165 \$
New Haven	CT 203/787-4674 \$			
New London	CT 203/443-0884 BV CN	203/447-8455 BV		203/444-2509 A
New London	CT 203/444-7030 BV			
New Milford	CT 203/355-0764 BV CN			
Newtown Haven	CT 203/776-1142 BV CN			203/467-3489 A
Newtown Haven	CT 203/773-0082 BV			
Norwalk	CT 203/866-5305 BV CN	203/866-7404 BV		203/222-1748 A
Norwich	CT 203/444-7030 BV			
Norwich	CT 203/443-0884 BV CN			
Old Greenwich	CT 203/637-8872 BV CN			
Old Saybrook	CT 203/388-0778 BV CN			
Seymour	CT 203/881-1455 BV CN			
Somers	CT 203/763-3521 BV			
Stamford	CT 203/965-0000 BV	203/348-0787 BV	203/327-6745 \$	203/964-1027 A
Stamford	CT 203/327-2974 \$	203/359-9404 \$		203/324-8943 \$

City	St	Tymnet	Telenet	Infonet	CompuSer
Stamford	CT	203/324-9701 BV CN			
Storrs	CT	203/429-4243 BV CN			
Stratford	CT	203/579-1479 BV			
Stratford	CT	203/366-6972 BV CN			
Torrington	CT	203/482-9849 BV CN			
Waterbury	CT	203/597-0064 BV CN	203/753-4512 BV		203/574-0500 A
Waterbury	CT	203/755-5994 BV			203/754-2012 \$
Waterbury	CT				203/573-0392 V
Westport	CT	203/454-2129 BV			203/222-1748 A
Westport	CT				203/222-8558 \$
Westport	CT				203/222-1742 V
Willimantic	CT	203/456-4552 BV CN			
Windsor	CT	203/688-9330 BV CN			
Windsor Locks	CT	203/623-9804 BV CN			
Washington	DC	703/691-8200 BV	202/429-7800 BV	301/937-0990 X	703/352-7500 A
Washington	DC	703/352-3136 \$	202/429-7896 BV	301/937-0880 V	703/841-9834 A
Washington	DC		202/429-0956 \$	301/937-0530 A	202/388-4280 A
Washington	DC	*301/480-3150 A *	*301/480-3150 A *	301/937-0722 \$	703/591-5039 A
Washington	DC	*301/480-3129 V *	*301/480-3129 V *		703/591-0506 \$
Washington	DC				703/352-8750 V
Dover	DE	302/678-9545 BV	302/678-8328 BV		
Dover	DE	302/734-9465 BV PDN			
Georgetown	DE	302/856-7055 BV PDN			
Georgetown	DE	302/856-1788 \$			
Newark	DE	302/652-2060 BV	302/454-7710 BV		302/731-2940 A
Newark	DE	302/428-0030 BV PDN	302/737-4340 \$		302/731-2965 \$
Newport	DE			302/571-1433 A	
Wilmington	DE	302/652-2060 BV		302/571-1433 A	302/731-2940 A
Wilmington	DE	302/652-2036 BV			
Wilmington	DE	302/428-0030 BV PDN			302/731-2965 \$
Wilmington	DE	302/655-1144 \$ PDN			
Boca Raton	FL	407/272-7900 BV	407/338-3701 BV		
Bonyton Beach	FL	407/471-9310 BV			407/684-9051 A
Cape Coral	FL		813/275-7924 BV		
Clearwater	FL	813/441-9017 BV			
Clearwater	FL	813/441-1621 \$			
Cocoa	FL	407/639-3022 BV			
Cocoa Beach	FL		305/267-0800 BV		
Daytona Beach	FL	904/788-3660 BV	904/255-2629 BV		904/257-5019 A
Deerfield Beach	FL				305/428-6104 A
Deerfield Beach	FL				305/429-0552 \$
Delray Beach	FL	407/272-7900 BV			
Fort Lauderdale	FL	305/463-0882 BV	305/764-4505 BV	305/462-3104 A	305/771-8074 A
Fort Lauderdale	FL	305/467-1870 \$	305/524-5304 \$	305/398-2074 A	305/772-3240 A
Fort Lauderdale	FL				305/772-3603 A
Fort Lauderdale	FL				305/772-1339 \$
Fort Meyers	FL	813/337-0006 BV			813/939-7060 A
Fort Meyers	FL				813/939-5044 \$
Fort Pierce	FL	407/466-5661 BV			
Gainesville	FL	904/335-0544 BV	904/338-0220 BV		
Gainesville	FL	904/378-4576 BV	904/338-1700 \$		
Hollywood	FL	305/463-0882 BV			
Hollywood	FL	305/467-1870 \$			
Jacksonville	FL	904/721-8100 BV	904/353-1818 BV		904/396-7105 A
Jacksonville	FL	904/721-8559 \$	904/791-9201 \$		904/398-6335 \$
Lakeland	FL	813/858-6970 BV	813/683-5461 BV		
Longwood	FL	407/841-0020 BV			
Longwood	FL	405/841-0217 \$			
Melbourne	FL	407/639-3022 BV	407/242-8247 BV		407/724-0857 A
Melbourne	FL				407/723-2622 \$
Merrit Isle	FL	407/639-3022 BV			
Miami	FL	305/599-2900 BV	305/372-0230 BV	305/651-2387 \$	305/266-0231 A
Miami	FL	305/599-2964 \$	305/372-1355 \$		305/262-1643
Naples	FL	813/434-8080 BV	813/263-3033 BV		
Ocala	FL	904/351-0305 BV	904/351-3790 BV		
Orlando	FL	407/841-0020 BV	407/422-4088 BV		407/896-4298 A
Orlando	FL	407/841-0217 \$	407/422-8858 \$		407/896-3053 \$
Ormond Beach	FL	904/673-0034 BV			
Panama City	FL	904/769-0709 BV			904/871-0660 A
Pensacola	FL	904/477-3344 BV	904/432-1335 BV	904/438-7203 A	904/434-3911 A
Pensacola	FL				904/435-2851 \$
Pompano Beach	FL	305/463-0882 BV	305/941-5445 BV		
Pompano Beach	FL	305/467-1870 \$			
Port St. Lucie	FL	407/337-1992 \$			

City	St	Tymnet	Telenet	Infonet	CompuServ
St. Petersburg	FL	813/441-9017 BV	813/323-4026 BV		813/525-0378 A
St. Petersburg	FL		813/327-1163 \$		813/527-0338 \$
Sarasota	FL	813/952-9000 BV	813/923-4563 BV		813/355-9331 A
Sarasota	FL				813/351-7702 A
Sarasota	FL				813/355-0832 \$
Tallahassee	FL	904/878-2267 BV	904/681-1902 BV		904/385-0590 A
Tallahassee	FL				904/385-8699 \$
Tampa	FL	813/932-7070 BV	813/224-9920 BV	813/626-5235 A	813/237-8189 A
Tampa	FL	813/933-6210 \$	813/223-5859 \$		813/237-8798 A
Tampa	FL				813/238-6067 \$
Vero Beach	FL	407/569-8207 BV			407/778-0550 A
West Palm Beach	FL	407/471-9310 BV	407/833-6691 BV		407/684-9051 A
West Palm Beach	FL		407/655-2993 \$		407/684-3941 \$
Winterhaven	FL	813/858-6970 BV			813/299-3311 A
Albany	GA	912/888-9282 BV	912/888-3011 BV		912/435-9420 A
Albany	GA				912/436-7223 \$
Athens	GA	404/548-7006 BV	404/548-5590 BV		404/549-0888 A
Atlanta	GA	404/451-2208 BV	404/523-0834 BV	404/256-9151 \$	404/266-7014 A
Atlanta	GA	404/451-3362 \$	404/584-0212 \$		404/237-3227 A
Atlanta	GA				404/266-7060 \$
Atlanta	GA				404/261-0646 V
Augusta	GA	404/855-0442 BV/\$	404/724-2752 BV	404/790-5406 A	404/736-8750 A
Augusta	GA		404/724-4494 \$		404/737-6362 A
Columbus	GA	404/327-0597 BV	404/571-0556 BV	404/682-1103 A	404/596-2700 A
Columbus	GA				
Doraville	GA	404/451-2208 BV			
Doraville	GA	404/451-3362 \$			
Hinesville	GA			912/368-2005 A	
Macon	GA	912/923-7590 BV	912/743-8844 BV		912/471-0147 A
Marietta	GA	404/451-2208 BV		404/256-9151 A	
Marietta	GA	404/451-3362 \$			
Martinez	GA	404/855-0442 BV			404/733-0346 A
Morcross	GA	404/451-2208 BV			
Morcross	GA	404/451-3362 \$			
Rome	GA	404/234-0102 BV	404/234-1428 BV		
Savannah	GA	912/232-6751 BV	912/236-2605 BV		912/355-0222 A
Savannah	GA		912/236-2875 \$		
Warner Robins	GA	912/923-7590 BV			
Agana Heights, Guam		671/477-2222 \$			
Saipan, Guam		670/234-1121 BV			
Hilo	HI	808/935-5717 BV			
Honolulu	HI	808/545-7610 BV		808/524-7950 A	
Honolulu	HI	808/528-5300 \$			
Kailua	HI				808/263-6670 A
Kailua	HI				808/263-6603 \$
Mauai	HI	808/242-8411 BV			808/871-6310 A
Mauai	HI				808/877-5079 \$
Oahu	HI		808/528-0200 BV/\$		
Other Islands	HI		808/272-5299 BV/\$		
Boise	ID	208/343-0404 BV	208/343-0611 BV	208/345-1681 A	208/384-5660 A
Boise	ID	208/345-5951 \$			208/344-1845 \$
Idaho Falls	ID	208/522-3624 BV	208/529-0406 BV/\$		
Idaho Falls	ID				
Ketchum	ID				208/788-5060 A
Lewiston	ID		208/743-0099 BV		
Pocatello	ID	208/233-2501 BV	208/232-1764 BV/\$		208/232-9452 A
Pocatello	ID				
Twin Falls	ID	208/734-0221 BV/\$			
Arlington Heights	IL		312/255-6465 BV/\$	312/325-7212 A	
Arlington Heights	IL				
Deer Park	IL	312/844-0700 BV	312/896-0620 BV		312/859-1557 A
Deer Park	IL				312/859-0584 \$
Elmhurst	IL	309/829-2802 BV	309/827-7000 BV		309/827-3343 A
Bradley	IL	815/935-2352 BV			
Champaign	IL	217/344-3400 BV			217/352-0041 A
Champaign	IL				217/352-9457 \$
Chicago	IL	312/922-4601 BV	312/938-0600 BV	312/704-0313 A	312/332-7382 A
Chicago	IL	312/922-6571 \$	312/938-8725 \$	312/242-0207 A	312/443-1250 A
Chicago	IL				312/693-0330 A
Chicago	IL				312/372-2977 A
Chicago	IL				312/263-5636 \$
Chicago	IL				312/693-1220 \$

City	St	Tymnet	Telenet	Infonet	CompuSer
Chicago	IL				312/372-1402
Cicero	IL	312/345-9100 BV			
Danville	IL	217/442-1452 BV			
Decatur	IL	217/429-5995 BV	217/429-0235 BV		
Dekalb	IL		815/758-2623 BV		
Dekalb	IL		815/758-5046 \$		
Downers Grove	IL	312/790-4400 BV			
Downers Grove	IL	312/790-4955 \$			
East St. Louis	IL	618/874-5702 BV			314/241-3102 A
East St. Louis	IL				314/241-3110 V
Elgin	IL	312/888-8113 BV			
Forest Park	IL	312/345-9100 BV			
Fort Sheridan	IL			312/433-5830 A	
Freeport	IL	815/232-7111 BV			
Glen Ellyn	IL	312/790-4400 BV			
Glen Ellyn	IL	312/790-4955 \$			
Highland Park	IL			312/433-5830 A	
Joliet	IL	815/727-2169 BV	815/726-0070 BV		
Kankakee	IL	815/935-2352 BV			
Lake Bluff	IL	312/295-7075 BV/\$			
Lake Zurich	IL	312/991-7171 BV			
Lansing	IL	312/474-1422 BV			
Libertyville	IL	312/295-7075 BV			
Lombard	IL				312/953-9680 A
Lombard	IL				312/953-4991 \$
Maywood	IL	312/345-9100 BV			
O'Fallon	IL	618/632-3993 BV			
Oak Brook	IL			312/572-8550 \$	
Oak Brook	IL			312/572-8566 \$	
Palatine	IL	312/991-7171 BV			
Peoria	IL	309/637-5961 BV	309/637-8570 BV	309/671-0254 A	309/685-2543 A
Peoria	IL		309/637-8582 \$		309/685-1275 \$
Rock Island	IL	309/788-3713 BV		319/324-0042 A	
Rockford	IL	815/654-1900 BV	815/965-0400 BV		815/968-3412
Rockford	IL	815/633-2080 \$	815/965-0696 \$		815/962-7017
Springfield	IL	217/525-8025 BV	217/753-1373 BV	217/525-6683 A	217/789-0944 A
Springfield	IL	217/544-0312 \$			217/789-1092 A
St. Charles	IL	312/844-0700 BV			
Urbana	IL	217/344-3400 BV	217/384-6428 BV		
Urbana	IL		217/328-0317 \$		
Wheaton	IL	312/790-4400 BV			
Wheaton	IL	312/790-4955 \$			
Bloomington	IN	812/332-0544 BV	812/332-1344 BV		
Elkhart	IN	219/293-8860 BV			219/293-1593 A
Elkhart	IN				219/294-5533 \$
Evansville	IN	812/464-8181 BV	812/424-7693 BV		812/479-0165 A
Evansville	IN		812/428-2522 \$		812/473-5987 \$
Ft. Wayne	IN	219/422-2581 BV	219/426-2268 BV		219/447-0510 A
Ft. Wayne	IN		219/422-3431 \$		219/447-0113 \$
Gary	IN	219/885-0002 BV	219/882-8800 BV		219/980-1333 A
Gary	IN				219/884-4940 \$
Hammond	IN	219/885-0002 BV			
Highland	IN	219/885-0002 BV			
Indianapolis	IN	317/631-1002 BV	317/299-0024 BV	317/634-4301 \$	317/638-2517 A
Indianapolis	IN	317/632-6408 \$	317/299-6766 \$		317/638-2762 A
Indianapolis	IN				317/631-6824 \$
Indianapolis	IN				317/638-5785 V
Kokomo	IN	317/453-7818 BV	317/455-2460 BV		
Lafayette	IN	317/423-4616 BV	317/742-6000 BV		317/448-1357 A
Lafayette	IN				317/448-9925 \$
Marion	IN	317/662-1928 BV			
Mishawaka	IN	219/234-5005 BV			
Muncie	IN	317/284-7821 BV	317/282-6418 BV		317/284-3812 A
Muncie	IN				317/282-7415 \$
Richmond	IN				317/935-0061 \$
South Bend	IN	219/234-6410 \$	219/233-7104 BV		219/271-9541
South Bend	IN		219/233-4031 \$		219/271-9197
South Bend	IN				219/271-0489 V
Terre Haute	IN	812/232-0112 BV	812/232-5329 BV		
Ames	IA	515/232-0157 \$	515/233-6300 BV		
Ames	IA		515/233-2603 \$		
Cedar Falls	IA	319/236-9020 BV			
Cedar Rapids	IA	319/363-7514 BV	319/364-0911 BV		319/365-9363 A
Cedar Rapids	IA		319/362-2764 \$		
Davenport	IA	309/788-3713 BV	319/324-2445 BV	319/324-0042 \$	319/323-7388 A

City	St	Tymnet	Telenet	Infonet	CompuServ
Des Moines	IA	515/277-7752 BV	515/288-4403 BV	515/224-0011 A	515/270-1581 A
Des Moines	IA	515/277-9684 \$	515/288-6206 \$		515/270-9410 A
Des Moines	IA				515/276-5992 \$
Dubuque	IA	319/582-3599 BV	319/556-0783 BV		
Iowa City	IA	319/354-3633 BV	319/351-1421 BV		
Marshalltown	IA	515/753-0670 BV			
Sioux City	IA	712/255-3834 BV	712/255-1545 BV		
Waterloo	IA	319/236-9020 BV	319/232-5441 BV		
Junction City	KS			913/784-3783 A	
Kansas City	KS	913/384-1226 BV		816/283-3719 A	
Kansas City	KS	913/384-5012 \$			
Lawrence	KS	913/843-4870 BV	913/843-8124 BV		
Leavenworth	KS	913/651-8094 BV			
Manhattan	KS	913/776-9803 BV	913/537-0948 BV		
Mission	KS	913/384-1226 BV			816/474-3770 A
Mission	KS	913/384-5012 \$			
Salina	KS	913/825-4845 BV	913/825-7900 BV		
Shawnee	KS	913/384-1226 BV			816/474-3770 A
Shawnee	KS	913/384-5012 \$			
Shawnee Mission	KS				816/474-3770 A
Shawnee Mission	KS				816/472-1283 \$
Topeka	KS	913/234-3070 BV	913/233-9880 BV		913/234-1051 A
Topeka	KS		913/233-4660 \$		913/232-9520 \$
Wichita	KS	316/681-0832 BV	316/262-5669 BV		316/689-8765 A
Wichita	KS	316/681-2719 \$	316/262-7961 \$		316/689-8132 \$
Bowling Green	KY	502/781-5711 BV	502/782-7941 BV		
Fort Campbell	KY			615/431-5194 A	
Fort Knox	KY			502/942-0393 A	
Frankfort	KY	502/223-0724 BV	502/875-4654 BV		
Lexington	KY	606/266-0019 BV	606/233-0312 BV		606/259-3446 A
Lexington	KY	606/266-7063 \$	606/233-7217 \$		606/254-0585 \$
Louisville	KY	502/499-7110 BV	502/589-5580 BV	502/587-9560 A	502/581-9526 A
Louisville	KY	502/499-9825 \$	502/583-1006 \$		502/583-1277 \$
Owensboro	KY	502/685-0959 BV	502/686-8107 BV		502/683-0777 A
Rose Terrace	KY			502/942-0393 A	
Alexandria	LA	318/445-2694 BV	318/445-1053 BV		
Baton Rouge	LA	504/924-5102 BV	504/343-0753 BV		504/273-0184 A
Baton Rouge	LA	504/291-0967 \$	504/343-0771 \$		504/272-4596 \$
Lafayette	LA	318/234-8255 BV	318/233-0002 BV		318/234-9880 A
Lafayette	LA		318/234-8451 \$		
Lake Charles	LA	318/494-1991 BV	318/436-0518 BV		318/433-0215 A
Leesville	LA			318/537-8082 A	
Monroe	LA	318/388-8810 BV	318/387-6330 BV		318/361-0700 A
Monroe	LA		318/322-9826 \$		318/361-0980 \$
New Orleans	LA	504/522-1370 BV	504/524-4094 BV	504/566-0002 A	504/734-8150 A
New Orleans	LA	504/525-2014 \$	504/522-3967 \$		504/733-2297 \$
Shreveport	LA	318/688-5840 BV	318/221-5833 BV	318/226-9249 A	318/424-5380 A
Shreveport	LA				318/424-9300 \$
Slidell	LA	504/646-2900 BV			
Auburn	ME	207/795-6013 BV			
Augusta	ME	207/622-3083 BV	207/622-3123 BV		
Bangor	ME	207/989-2831 BV			
Brewer	ME	207/989-2831 BV	207/989-3081 BV		
Lewiston	ME	207/795-6013 BV	207/784-0105 BV		
Portland	ME	207/775-5971 BV	207/761-4000 BV		207/879-0005 A
Portland	ME				207/871-8081 \$
Aberdeen	MD	301/273-7100 BV		301/679-6508 A	
Annapolis	MD	301/269-7942 BV	301/224-8550 BV		301/266-7530 A
Annapolis	MD		301/224-0795 \$		301/266-1695 \$
Baltimore	MD	301/547-8100 BV	301/727-6060 BV	301/760-1950 A	301/832-0100 A
Baltimore	MD	301/528-9296 \$	301/752-5555 \$		301/832-0168 A
Baltimore	MD				301/832-0160 \$
Baltimore	MD				301/832-0166 V
Bethesda	MD	*301/480-3150 A *	*301/480-3150 A*		703/352-7500 A
Bethesda	MD	*301/480-3129 V *	*301/480-3129 V*		703/841-9834 A
Bethesda	MD	703/691-8200 BV			703/352-8750 V
Bethesda	MD	703/352-3136 \$			
Cumberland	MD	301/777-9320 BV			
Dundalk	MD				301/832-0100 A
Dundalk	MD				301/832-0160 \$
Dundalk	MD				301/832-0166 V

City	St	Tymnet	Telenet	Infonet	CompuSer
Edgewood	MD			301/760-1950 A	
Elkridge	MD			301/760-1950 A	
Frederick	MD	301/293-3380 BV	301/293-9596 BV		
Glen Burnie	MD			301/760-1950 A	
Hagerstown	MD	301/293-3380 BV			
Hyattsville	MD				301/559-0200 A
Hyattsville	MD				301/559-8000 A
Hyattsville	MD				301/853-3900 \$
Myersville	MD	301/293-3380 BV			
Ocean City	MD				301/548-1502 A
Odenton	MD			301/937-0530 A	
Rockville	MD	301/869-2700 \$			
Salisbury	MD	301/860-0480 \$			301/548-1502 A
Silver Spring	MD			301/937-0530 A	
Towson	MD				301/832-0160 \$
Towson	MD				301/832-0166 V
Amherst	MA				413/549-7431 A
Arlington	MA				617/542-1796 A
Arlington	MA				617/542-1779 V
Attleboro	MA	508/226-6441 BV			
Bedford	MA	617/271-0420 BV			
Billerica	MA				508/667-4266 A
Boston	MA	617/439-3400 BV	617/292-0662 BV	617/964-5240 V	617/542-1796 A
Boston	MA	617/439-3531 \$	617/574-9244 \$	617/965-4900 \$	617/868-0204 A
Boston	MA				617/426-6970 A
Boston	MA				617/482-7061 \$
Boston	MA				617/868-0524 \$
Boston	MA				617/542-1779 V
Brockton	MA	617/986-0500 BV	508/580-0721 BV		508/588-3222 A
Brockton	MA				508/588-1837 \$
Brookline	MA				617/542-1796 A
Brookline	MA				617/542-1779 V
Cambridge	MA	617/439-3400 BV			617/542-1796
Cambridge	MA	617/439-3531 \$			617/542-1779
Chicopee	MA				413/734-7362 A
Concord	MA				508/371-0354 A
Fall River	MA	508/676-3087 BV	508/677-4477 BV		508/676-6910 A
Fall River	MA				508/677-0405 \$
Fitchburg	MA	508/537-6451 BV			
Fort Devens	MA			508/772-5727 A	
Framingham	MA		508/879-6798 BV		508/875-3814 A
Framingham	MA				508/820-9349 \$
Groton	MA	508/448-9361 BV/\$			508/448-9301 A
Holyoke	MA	413/787-0048 BV			
Hudson	MA				508/568-8019 A
Kingston	MA	617/585-7616 \$			
Lawrence	MA	508/683-2680 BV	508/975-2273 BV		508/687-0374 A
Lawrence	MA				508/975-2040 \$
Leominster	MA	508/537-6451 BV			
Lexington	MA		617/863-1550 BV		
Lexington	MA		617/863-1745 \$		
Lowell	MA	508/452-5112 \$	508/937-5214 BV		
Lynn	MA	617/593-4051 BV			
Manchester	MA	508/526-1506 BV/\$			
Marlborough	MA	508/481-0026 \$			
Maynard	MA				508/897-4746 A
Medfield	MA				508/359-7603 A
Medford	MA				617/542-1796 A
Medford	MA				617/542-1779 V
Medway	MA				508/533-2722 A
Mendon	MA				617/478-0653 A
New Bedford	MA	508/999-4521 BV	508/999-2915 BV		
Newton	MA				617/542-1796 A
Newton	MA				617/542-1779 V
North Hampton	MA		413/586-0510 BV		
Pittsfield	MA	508/499-0971 BV	413/499-7741 BV		
Quincy	MA				617/542-1796
Quincy	MA				617/542-1779 V
Randolph	MA	617/986-0500 BV			
Salem	MA		508/744-1559 BV		
Somerset	MA	508/676-3087 BV			
Springfield	MA	413/787-0048 BV	413/781-3811 BV	413/737-1789 A	413/734-7362 A
Springfield	MA	413/785-1762 \$	413/737-9285 \$		413/731-9680 \$
Taunton	MA	508/824-6692 BV			
Waltham	MA				617/542-1796 A
Waltham	MA				617/542-1779 V

City	St	Tymnet	Telenet	Infonet	CompuServ
Northborough	MA				508/366-2617 A
Northburn	MA	617/271-0420 BV			
Woods Hole	MA		508/540-7500 BV		
Woods Hole	MA		508/457-9390 \$		
Worcester	MA	508/791-9000 BV	508/755-4740 BV		508/792-2512 A
Worcester	MA				508/791-0745 \$
Ann Arbor	MI	313/973-7935 BV	313/996-5995 BV		313/663-3934 A
Ann Arbor	MI	313/973-3095 \$	313/665-2900 \$		313/668-2735 \$
Battle Creek	MI	616/964-9303 BV	616/968-0929 BV		
Benton Harbor	MI	616/925-3134 BV			
Burton	MI	313/743-8350 BV			
Cadillac	MI	616/775-9242 BV			
Detroit	MI	313/962-2870 BV	313/964/2988 BV	313/963-9141 \$	313/255-9207 A
Detroit	MI	313/963-3460 \$	313/963-2274 \$		313/255-0390 \$
Detroit	MI				313/255-9877 V
East Lansing	MI				517/487-2140 A
Flint	MI	313/743-8350 BV	313/235-8517 BV		313/238-6202 A
Flint	MI		313/235-5477 \$		313/232-6408 \$
Freeland	MI	517/695-6751 BV			
Grand Rapids	MI	616/459-2304 BV	616/774-0966 BV	616/456-6047 A	616/957-3368 A
Grand Rapids	MI	616/458-3775 \$	616/774-0131 \$		616/957-9733 \$
Jackson	MI	517/788-9191 BV	517/782-8111 BV		
Kalamazoo	MI	616/388-2130 BV	616/345-3088 BV		616/383-1247 X
Kalamazoo	MI		616/345-3122 \$		616/383-3516 \$
Lansing	MI	517/482-5721 BV	517/484-0062 BV	517/482-3970 A	517/487-2140 A
Lansing	MI	517/484-5344 \$	517/484-6301 \$		517/487-2182 \$
Marquette	MI	906/228-3780 BV			
Midland	MI	517/695-6751 BV	517/832-7068 BV		
Mt. Clemens	MI				313/468-0284 A
Mt. Clemens	MI				313/463-1945 \$
Muskegon	MI	616/739-3453 BV	616/726-5723 BV		
Northampton	MI	313/451-2400 BV		313/963-9141 \$	
Northampton	MI	313/338-8384 BV	313/332-5120 BV		313/334-2900 A
Northampton	MI				313/338-4760 \$
Port Huron	MI	313/982-0301 BV	313/982-8364 BV		
Roseville	MI	313/774-1000 BV			
Saginaw	MI	517/695-6751 BV	517/790-5166 BV		517/893-1161 A
Saginaw	MI		517/799-3190 \$		517/893-4339 \$
Southfield	MI	313/424-8024 BV	313/827-4710 BV		
Southfield	MI	313/557-0900 \$			
St. Joe	MI	616/925-3134 BV			
Traverse City	MI	616/947-0050 BV	616/946-2121 BV		
Troy	MI				313/362-2540 A
Troy	MI				313/362-3242 \$
Warren	MI	313/778-9260 BV	313/575-9152 BV		
Warren	MI		313/558-8460 \$		
Duluth	MN	218/722-0655 BV	218/722-1719 BV		
Mankato	MN	507/387-7313 BV	507/388-3780 BV		
Minneapolis	MN	612/333-2799 BV	612/341-2459 BV	612/338-5540 \$	612/342-2207 A
Minneapolis	MN	612/332-4024 \$	612/338-1661 \$		612/333-8737 A
Minneapolis	MN				612/339-2507 \$
Minneapolis	MN				612/375-0328 V
Rochester	MN	507/282-0830 BV	507/282-5917 BV		
Rochester	MN	507/289-5599			
St. Cloud	MN	612/251-4942 BV	612/253-2064 BV		
St. Paul	MN	612/333-2799 BV			612/342-2207 A
St. Paul	MN	612/332-4024 \$			612/339-2507 \$
St. Paul	MN				612/375-0328 V
Gulfport	MS	601/868-2331 BV	601/863-0024 BV		
Hattiesburg	MS	601/582-0286 BV/\$			
Jackson	MS	601/355-9741 BV	601/969-0036 BV	601/355-9508 A	601/948-6411 A
Jackson	MS				601/352-3073 \$
Jackson	MS	601/482-4335 BV	601/482-2210 BV		
Jackson	MS	601/769-0121 BV			
Jackson	MS		601/324-2155 BV		
Jackson	MS	601/841-0090 \$			
Jackson	MS	601/638-1551 BV			
Bridgeton	MO	314/731-8002 BV			
Bridgeton	MO	314/731-8283 \$			
Cape Girardeau	MO	314/335-1518 BV			
Columbia	MO	314/874-2771 BV	314/449-4404 BV		314/442-4600 A
Columbia	MO				314/875-0746 \$
Florissant	MO				314/241-3102 A

City	St	Tymnet	Telenet	Infonet	CompuSer
Florissant	MO				314/241-311
Fort Leonardwood	MO			314/329-3084 A	
Hazelwood	MO	314/731-8283 \$			
Independence	MO	913/384-1226 BV			816/474-3770 A
Independence	MO	913/384-5012 \$			816/472-1283 \$
Jefferson City	MO	314/634-8296 BV	314/634-5178 BV		314/635-9170 A
Joplin	MO	417/781-8718 BV			
Kansas City	MO	913/384-1226 BV	816/221-9900 BV	816/283-3719 A	816/474-3770 A
Kansas City	MO	913/384-5012 \$	816/472-1430 \$		816/472-1283 \$
Rolla	MO	314/364-2084 BV			
St. Joseph	MO	816/232-1455 BV	816/279-4797 BV		
St. Louis	MO	314/731-8002 BV	314/421-4990 BV	314/721-4801 A	314/241-3102 A
St. Louis	MO	314/731-8283 \$	314/421-0381 \$		314/436-7677 A
St. Louis	MO				314/241-5337 \$
St. Louis	MO				314/241-3110 V
Springfield	MO	417/881-6225 BV	417/864-4814 BV		
Billings	MT	406/252-4880 BV	406/245-7649 BV		406/245-0863 A
Bozeman	MT	406/585-9719 BV			
Butte	MT	406/494-6682 BV			
Great Falls	MT	406/727-9510 BV	406/771-0067 BV		
Helena	MT	406/443-0112 BV	406/443-0000 BV		406/449-3680 A
Missoula	MT	406/721-8960 BV	406/721-5900 BV		
Grand Island	NE	308/382-3176 BV			
Lincoln	NE	402/464-6235 BV	402/475-4964 BV		402/474-1006 A
Lincoln	NE		402/475-3839 \$		
Omaha	NE	402/393-0903 BV	402/341-7733 BV	402/341-2425 A	402/895-5288 A
Omaha	NE	402/393-1305 \$	402/346-6419 \$		402/895-4073 \$
Omaha	NE				402/896-3853 V
Boulder City	NV	702/293-0300 BV			
Boulder City	NV	702/294-0602 \$			
Carson City	NV	702/885-8411 BV			
Las Vegas	NV	702/293-0300 BV	702/737-6861 BV		702/737-888
Las Vegas	NV		702/737-5466 \$		702/737-1292 ✓
Reno	NV	702/885-8411 BV	702/827-6900 BV		702/323-4426 A
Reno	NV		702/827-5290 \$		702/323-6608 \$
Concord	NH	603/228-4732 BV	603/224-1024 BV		
Concord	NH		603/225-8710 \$		
Durham	NH	603/868-1502 BV	603/868-2924 BV		
Hanover	NH	603/643-4011 BV			
Manchester	NH	603/623-0409 BV	603/627-8725 BV	603/627-9439 A	
Manchester	NH		603/625-8088 \$		
Nashua	NH	603/882-0435 BV	603/880-6241 BV		603/883-5551 A
Peterborough	NH	603/924-7090 \$			
Portsmouth	NH		603/431-2302 BV		
Salem	NH	603/882-0435 BV			
Atlantic City	NJ	609/345-4050 BV	609/348-0561 BV		609/645-8778 A
Atlantic City	NJ		609/344-8571 \$		
Bayonne	NJ				201/624-6565 A
Bernardsville	NJ	201/766-7138 BV PDN			
Boonton	NJ			201/335-2332 A	
Camden	NJ	609/665-5600 BV			609/665-7555 A
Cherry Hill	NJ	609/665-5600 BV		609/235-3220 A	609/665-7555 A
Cherry Hill	NJ				609/665-0775 \$
Clinton	NJ	201/730-8693 BV PDN			
Dover	NJ	201/361-9211 BV PDN			
Eatontown	NJ	201/758-0337 BV			
Eatontown	NJ	201/758-8000 BV PDN			
Elizabeth	NJ	201/824-1212 BV			201/624-6565 A
Elizabeth	NJ	201/824-3044 \$			
Elizabeth	NJ	201/289-5100 BV PDN			
Englewood	NJ	201/871-3000 BV PDN			
Englewood Cliffs	NJ	201/567-9841 BV			
Englewood Cliffs	NJ	201/567-8951 \$			
Fair Lawn	NJ	201/871-3000 BV PDN			
Fair Lawn	NJ	201/567-9841 BV			
Fort Dix	NJ			609/723-5200 A	
Freehold	NJ	201/780-8890 BV PDN	201/780-5030 BV		
Greenbrook	NJ				201/356-0202 \$
Greenbrook	NJ				201/356-4747 \$
Hackensack	NJ	201/343-9200 BV PDN	201/488-6567 BV	201/489-9020 \$	201/368-8300 A
Hackensack	NJ		201/488-2063 \$		201/368-0334 \$
Hackettstown	NJ				201/852-8502 A

City	St Tymnet	Telenet	Infonet	CompuServ
Kettstown	NJ			201/852-2887 \$
Jersey City	NJ	201/824-1212 BV		201/624-6565 A
Jersey City	NJ	201/824-3044 \$		
Jersey City	NJ	201/659-3800 BV PDN		
Livingston	NJ	201/533-0561 BV PDN		
Long Branch	NJ	201/758-0337 BV		
Long Branch	NJ	201/758-8000 BV PDN		
Lyndhurst	NJ	201/864-8468 BV		
Madison	NJ	201/593-0004 BV PDN		
Marlton	NJ		609/596-1500 BV	
Marlton	NJ		609/596-8659 \$	
Merchantville	NJ		609/663-9297 BV	
Merchantville	NJ		609/665-6860 \$	
Metuchen	NJ	201/906-9500 BV PDN		201/846-9310 A
Middletown	NJ	201/957-9000 BV PDN		
Montclair	NJ			201/783-5400 A
Montclair	NJ			201/783-8633 \$
Moorestown	NJ			609/235-3220 A
Morristown	NJ	201/539-1222 BV	201/455-0275 BV	201/267-0085 A
Morristown	NJ	201/455-0437 BV PDN	201/644-4745 \$	201/267-4558 \$
Morristown	NJ			201/267-4547 V
New Brunswick	NJ	201/247-2700 BV PDN	201/745-2900 BV	201/846-9310 A
New Brunswick	NJ		201/745-7010 \$	
New Foundland	NJ	201/697-9380 BV PDN		
Newark	NJ	201/824-1212 BV	201/623-0469 BV	201/624-6565 A
Newark	NJ	201/824-3044 \$	201/623-7122 \$	201/624-0210 A
Newark	NJ	201/623-0083 BV PDN		201/624-3444 \$
Parsippany	NJ			201/267-0085 A
Parsippany	NJ			201/267-4558 \$
Parsippany	NJ			201/267-4547 V
Passaic	NJ	201/473-6200 BV PDN	201/778-5600 BV	
Passaic	NJ		201/773-3674 \$	
Paterson	NJ	201/742-0752 BV	201/684-7560 BV	
Paterson	NJ	201/345-7700 BV PDN	201/742-4415 \$	
Pennsauken	NJ	609/665-5600 BV		609/665-7555 A
Pennsauken	NJ	609/665-5902 \$	-	
Phillipsburg	NJ	201/454-9270 BV PDN		
Piscataway	NJ	201/562-9700 BV		
Piscataway	NJ	201/562-8550 \$		
Princeton	NJ	609/452-1018 BV	609/799-5587 BV	609/921-7066 A
Princeton	NJ	609/452-9529 \$		609/921-2855 \$
Princeton	NJ			609/921-2207 V
Rahway	NJ	201/396-8550 BV	201/815-1885 BV	
Red Bank	NJ	201/758-0337 BV	201/571-0003 BV	
Red Bank	NJ	201/758-8000 BV PDN		
Ridgewood	NJ	201/445-4800 BV PDN		201/444-3913 A
Ridgewood	NJ	201/742-0752 BV		201/670-4497 \$
Riverdale	NJ	201/835-8400 BV PDN		
Rochelle Park	NJ			201/368-8300 A
Rochelle Park	NJ			201/368-0334 \$
Roseland	NJ		201/227-5277 BV	
Roseland	NJ		201/227-6722 \$	
Sayreville	NJ		201/525-9507 BV	
Somerville	NJ	201/218-1200 BV PDN		
South Brunswick	NJ	609/452-1018 BV		
South Brunswick	NJ	609/452-9529 \$		
South River	NJ	201/390-9100 BV PDN		
Spring Lake	NJ	201/974-0850 BV PDN		
Springfield	NJ			201/564-6300 A
Summit	NJ			201/564-6300 A
Toms River	NJ	201/286-3800 BV PDN		201/244-7722 A
Toms River	NJ			201/505-0252 \$
Trenton	NJ	609/394-1900 BV	609/989-8847 BV	609/883-5113 A
Trenton	NJ		609/989-7127 \$	
Union City	NJ	201/864-8468 BV		201/624-6565 A
Union City	NJ	201/864-0995 \$ PDN		
Union	NJ	201/824-1212 BV		201/624-6565 A
Union	NJ	201/824-3044 \$		
Vineland	NJ	609/691-6446 BV		
Washington	NJ	201/689-6894 BV PDN		
Wayne	NJ	201/345-7700 BV PDN		201/633-5030 A
Wayne	NJ	201/742-0752 BV		
Whippany	NJ			201/335-2332 A
Woodbridge	NJ			201/906-0960 A
Woodbridge	NJ			201/632-1811 \$
Albuquerque	NM	505/242-8344 BV	505/243-4479 BV	505/842-0028 X

City	St	Tymnet	Telenet	Infonet	CompuSer
Albuquerque	NM	505/242-8931 \$	505/242-1742 \$	505/842-0031 A	505/255-8620
Albuquerque	NM				505/662-4122 A
Las Cruces	NM	505/525-3401 BV/\$	505/526-9191 BV		
Los Alamos	NM				505/662-4122 A
Santa Fe	NM	505/471-0606 BV	505/473-3403 BV	505/982-4248 A	
Santa Fe	NM			505/982-9884 A	
Albany	NY	518/458-8300 BV	518/465-8444 BV	518/463-4277 A	518/439-7491 A
Albany	NY	518/458-9724 \$	518/465-8632 \$		518/439-8104 \$
Binghampton	NY	607/724-4351 BV	607/772-6642 BV		607/724-1171 A
Binghampton	NY		607/772-9526 \$		
Buffalo	NY	716/893-1306 BV	716/847-1440 BV	716/896-5410 A	716/874-3751 A
Buffalo	NY	716/893-1014 \$	716/847-1825 \$		716/875-3711 \$
Centereach	NY	516/471-6080 \$			
Corning	NY	607/962-4481 BV			
Deer Park	NY		516/667-5566 BV		
Deer Park	NY		516/243-1105 \$		
Elmira	NY	607/737-9065 BV			
Hempstead	NY	516/485-7422 BV	516/292-3800 BV		
Hempstead	NY	516/481-0150 \$	516/485-3380 \$		
Hicksville	NY				516/932-1470 A
Hicksville	NY				516/932-2088 \$
Huntington	NY	516/420-1221 BV			
Ithaca	NY	607/257-6601 BV	607/277-2142 BV		607/257-0155 A
Jamestown	NY	716/488-0794 BV			
Kingston	NY	914/336-2790 BV			
Lake Grove	NY	516/471-6080 \$			516/981-0880 A
Lake Grove	NY				516/981-1120 \$
Limestone	NY				716/925-7042 A
Long Island	NY			516/481-8028 \$	
Manhattan	NY			212/391-1920 A	
Manhattan	NY			212/391-0370 \$	
Melville	NY	516/420-1221 BV			
Melville	NY	516/420-4579 \$			
Middletown	NY				914/344-3800
Mineola	NY	516/485-7422 BV			
New City	NY	914/638-0882 BV			
New York	NY	212/943-4700 BV	212/741-8100 BV		212/422-8820 A
New York	NY	212/809-9660 \$	212/741-4950 BV		212/758-2090 A
New York	NY		212/620-6000 BV		212/758-4114 A
New York	NY		212/645-0560 \$		212/968-7790 \$
New York	NY				212/888-1020 \$
New York	NY				212/344-5474 V
New York	NY				212/758-0330 V
Niagara Falls	NY	716/285-2561 BV	716/282-1462 BV		716/284-3570 A
Perinton	NY	716/385-5817 BV			
Perinton	NY	716/385-5710 \$			
Pittsford	NY	716/385-5817 BV			
Pittsford	NY	716/385-5710 \$			
Plattsburgh	NY		518/562-1890 BV		
Poughkeepsie	NY	914/473-0401 BV	914/473-2240 BV	914/454-1808 \$	914/473-2617 A
Poughkeepsie	NY		914/473-3200 \$		914/473-5991 \$
Rochester	NY	716/385-5817 BV	716/454-1020 BV		716/458-3460 A
Rochester	NY	716/385-5710 \$	716/454-5730 \$		716/647-1567 \$
Ronkonkoma	NY	516/471-6080 \$			
Schnectady	NY	518/458-8300 BV			518/439-7491 A
Schnectady	NY	518/458-9724 \$			
Syracuse	NY	315/437-7111 BV	315/472-5583 BV	315/428-1674 A	315/458-6016 A
Syracuse	NY	315/433-1593 \$	315/479-5445 \$		315/458-4510 \$
Torawanda	NY				716/694-6263 A
Troy	NY				518/439-7491 A
Utica	NY	315/797-7001 BV	315/797-0920 BV		
White Plains	NY	914/328-7730 BV	914/328-9199 BV	914/997-5077 A	914/761-9360 A
White Plains	NY	914/761-9590 \$	914/682-3505 \$		914/761-3163 \$
White Plains	NY				914/761-3203 BV
Williston Park	NY				516/294-1482
Williston Park	NY				516/294-4190
Windsor	NY	914/561-9103 BV			
Asheville	NC	704/253-8945 BV	704/252-9134 BV		704/274-3991 A
Asheville	NC		704/252-0133 \$		704/274-9491 \$
Burlington	NC				919/584-3762 A
Chapel Hill	NC	919/549-8952 BV			
Charlotte	NC	704/377-0521 BV	704/332-3131 BV	704/374-0567 \$	704/333-6654 A
Charlotte	NC	704/374-0803 \$	704/333-6204 \$		704/331-0905 \$
Davidson	NC				919/725-1550 A
Durham	NC	919/549-8952 BV			919/682-6239 A

City	St	Tymnet	Telenet	Infonet	CompuServ
Cham	NC	919/549-9025 \$			
Rayetteville	NC	919/486-0103 BV	919/323-8165 BV	919/436-0145 A	
Gastonia	NC	704/867-2203 BV	704/865-4708 BV		
Greensboro	NC	919/273-0332 BV	919/273-2851 BV		919/373-1635 A
Greensboro	NC		919/275-1251 \$		919/272-4994 \$
Greenville	NC	919/758-0102 BV			
High Point	NC	919/883-6121 BV	919/889-7494 BV		
Kannapolis	NC	704/932-4131 BV			
North Wilkesboro	NC		919/838-9034 BV		
Raleigh	NC	919/829-0536 BV	919/834-8254 BV/\$	919/821-7535 A	919/876-9095 A
Raleigh	NC				919/876-8150 \$
Res. Trl. Park	NC		919/549-8139 BV		919/682-6239 A
Res. Trl. Park	NC		919/541-9096 \$		
Rocky Mount	NC	919/937-4828 BV			
Tarboro	NC		919/823-0578 BV		
Wilmington	NC	919/762-1865 BV	919/763-8313 BV		919/392-4700 A
Winston-Salem	NC	919/765-1221 BV/\$	919/725-2126 BV		919/725-1550 A
Winston-Salem	NC		919/777-0312 \$		919/723-9471 \$
Bismark	ND	701/255-0869 BV			
Fargo	ND	701/280-0210 BV	701/235-7717 BV	701/237-5282 A	
Grand Forks	ND	701/746-0344 BV	701/775-7813 BV		
Mandan	ND		701/663-2256 BV		
Minot	ND	701/839-4210 BV			
Akron	OH	216/376-6227 BV		216/535-6635 A	216/868-1237 A
Akron	OH	216/376-8330 \$		513/241-1446 \$	216/869-5085 \$
Athens	OH				614/592-2109 A
Cambridge	OH				614/439-7360 A
Canton	OH	216/456-0840 BV	216/452-0903 BV		216/455-2126 A
Canton	OH		216/452-6642 \$		216/455-2516 A
Canton	OH				216/452-3491 \$
Cincinnati	OH	513/530-9019 BV	513/579-0390 BV	513/241-1446 A	513/771-1630 A
Cincinnati	OH	513/530-9021 \$	513/241-8008 \$		513/771-8543 \$
Cincinnati	OH	513/768-2222 BV			513/771-1760 V
Cleveland	OH	216/241-0024 BV	216/575-1658 BV	216/621-3880 \$	216/781-5720 A
Cleveland	OH	216/861-6709 \$	216/771-6480 \$	216/771-7817 A	216/781-3725 A
Cleveland	OH				216/781-4135 \$
Cleveland	OH				216/781-3539 V
Columbus	OH	614/221-1862 BV	614/463-9340 BV	614/461-8450 A	614/457-2105 A
Columbus	OH	614/221-1612 \$	614/461-9044 \$		614/876-2116 A
Columbus	OH				614/761-1133 \$
Columbus	OH				614/771-9778 \$
Columbus	OH				614/442-2082 V
Dayton	OH	513/898-0124 BV	513/461-5254 BV		513/461-1064 A
Dayton	OH	513/898-0696 \$	513/461-0755 \$		513/226-1907 \$
Dublin	OH			614/461-8450 A	
Elyria	OH	216/324-7156 BV	216/322-8712 BV		
Elyria	OH		216/322-8645 \$		
Euclid	OH				216/781-5720 A
Euclid	OH				216/781-4135 \$
Euclid	OH				216/781-3539 V
Granville	OH				614/587-0932 A
Hamilton	OH	513/874-1744 BV	513/863-4116 BV		
Kent	OH		216/678-5115 BV		
Kent	OH		216/678-5043 \$		
Lima	OH	419/228-6343 BV			
Lorain	OH		216/960-1771 BV		
Mansfield	OH	419/529-3303 BV	419/526-0686 BV		
Newark	OH	614/345-8953 BV			
North Canton	OH				216/867-1237 A
Parma	OH				216/781-5720 A
Parma	OH				216/781-4135 \$
Parma	OH				216/781-3539 V
Ravenna	OH				216/678-5066 A
Ravenna	OH		419/627-0050 BV		
Ravenna	OH		513/324-1520 BV		
Ravenna	OH	513/325-0511 BV			
Ravenna	OH	614/266-2170 BV			
Toledo	OH	419/255-7790 BV	419/255-7881 BV		419/244-0073 A
Toledo	OH	419/255-7705 \$	419/255-1906 \$		419/243-2818 \$
Warren	OH	216/392-2542 BV	216/394-0041 BV		
Wintersville	OH	614/266-2170 BV			
Wooster	OH		216/264-8920 BV		
Youngstown	OH	216/759-8892 BV	216/743-1296 BV		216/743-4992 A
Youngstown	OH		216/743-6843 \$		216/743-4428 \$
Ardmore	OK	405/226-1260 BV			

City	St	Tymnet	Telenet	Infonet	CompuSer
Bartlesville	OK		918/336-3675 BV		
Bethany	OK				405/946-5799
Bethany	OK				405/946-4860 A
Enid	OK	405/242-0113 BV			
Enid	OK	405/234-5320 BV			
Lawton	OK	405/353-6987 BV	405/353-0333 BV	405/355-0275 A	
Norman	OK				405/946-4799 A
Norman	OK				405/946-4860 A
Oklahoma City	OK	405/495-8201 BV	405/232-4546 BV	405/272-9751 A	405/946-4799 A
Oklahoma City	OK	405/495-9201 \$	405/232-9513 \$		405/946-4860 A
Oklahoma City	OK				405/946-2082 \$
Stillwater	OK		405/624-1112 BV		
Stillwater	OK		405/743-1447 \$		
Tulsa	OK	918/585-2010 BV	918/584-3247 BV		918/749-8801 A
Tulsa	OK	918/585-2706 \$	918/587-2774 \$		918/742-9884 \$
Tulsa	OK				918/749-8953 V
Corvallis	OR	503/757-6341 BV	503/754-9273 BV		
Eugene	OR	503/343-0044 \$	503/683-1460 BV		503/689-9800 A
Hood River	OR		503/386-4405 BV		
Klamath Falls	OR		503/882-6282 BV/\$		
Medford	OR	503/772-0831 BV	503/779-6343 BV		503/779-0504 A
Medford	OR		503/773-7601 \$		
Portland	OR	503/222-0900 BV	503/295-3028 BV	503/241-0549 A	503/232-1072 A
Portland	OR	503/222-2151 \$	503/241-0496 \$		503/239-6126 A
Portland	OR				503/239-6124 \$
Salem	OR	503/370-4314 BV	503/378-7712 BV		503/362-2523 A
Springfield	OR	503/343-0044 \$			
Allentown	PA	215/865-6978 BV	215/435-3330 BV		215/776-6960 A
Allentown	PA	215/435-0266 BV PDN	215/770-1405 \$		215/776-1087 \$
Altoona	PA	814/943-5848 BV	814/949-0310 BV		
Altoona	PA	814/946-8639 BV PDN			
Ambler	PA	215/283-2170 BV PDN			
Ambridge	PA	412/266-9610 BV PDN			
Bethlehem	PA	215/865-6978 BV	-		
Butler	PA	412/283-2286 BV			412/285-8187 A
Carlisle	PA		717/249-9311 BV		
Carnegie	PA	412/276-1882 BV PDN			
Charleroi	PA	412/483-9100 BV PDN			
Chester Heights	PA	215/358-0820 BV PDN			
Coatesville	PA	215/383-0440 BV			
Coatesville	PA	215/383-7212 BV PDN			
Connellsville	PA	412/628-7560 BV PDN			
Coroapolis	PA			412/261-9305 A	
Danville	PA		717/271-0102 BV		
Downington	PA	215/383-0440 BV			
Downington	PA	215/383-7212 BV PDN			
Doylestown	PA	215/340-0052 BV PDN			
Erie	PA	814/456-8501 BV	814/899-2241 BV		814/864-4018 A
Glenshaw	PA	412/487-6868 BV PDN			
Greensburg	PA	412/836-4470 BV			
Greensburg	PA	412/836-7840 BV PDN	412/836-4771 BV/\$		
Harrisburg	PA	717/763-6481 BV	717/236-6882 BV	717/236-5241 A	717/657-9633 A
Harrisburg	PA	717/975-9881 \$	717/236-2007 \$		717/545-7116 \$
Harrisburg	PA	717/236-3274 BV PDN			
Hatboro	PA			215/829-0912 A	
Indiana	PA	412/465-7210 BV PDN			
Johnstown	PA	814/539-5059 BV	814/535-7576 BV		
King of Prussia	PA	215/666-9190 BV	215/337-4300 BV		215/279-5811 A
King of Prussia	PA	215/270-2970 BV PDN	215/337-2850 \$		215/279-4568 A
King of Prussia	PA				215/277-3708 \$
Kirklyn	PA	215/789-5650 BV PDN			
Lancaster	PA	717/569-1081 BV	717/295-5405 BV		
Lansdowne	PA	215/626-9001 BV PDN			
Latrobe	PA	412/836-4470 BV			
Latrobe	PA	412/537-0340 BV PDN			
Lebanon	PA			717/236-5241 A	
Lemoyne	PA	717/763-6481 BV			
Lemoyne	PA	717/975-9881 \$			
Lemoyne	PA	717/236-3274 BV PDN			
Levittown	PA	215/943-3700 BV			
McKeesport	PA	412/673-6200 BV PDN			
Monroeville	PA		412/856-1330 BV/\$		
Mt. Penn	PA	215/779-9580 BV			
New Castle	PA	412/658-5056 BV			
New Castle	PA	412/658-5982 BV PDN			

City	St	Tymnet	Telenet	Infonet	CompuServ
w Kensington	PA	412/337-0510 BV PDN			
Norristown	PA	215/666-9190 BV			215/279-5811 A
Norristown	PA	215/270-2970 BV PDN			215/279-4568 \$
Paoli	PA	215/648-0010 BV PDN			
Penn Hills	PA				412/391-7732 A
Penn Hills	PA				412/391-8818 A
Penn Hills	PA				412/261-4192 \$
Penn Hills	PA				412/391-8218 V
Philadelphia	PA	215/625-0770 \$ PDN		215/829-0912 \$	215/977-9758 A
Philadelphia	PA	215/923-7792 BV PDN		215/829-0967 V	215/564-4384 A
Philadelphia	PA	215/592-8309 BV	215/574-9462 BV		215/977-9794 \$
Philadelphia	PA	215/592-8750 \$	215/574-0990 \$		215/977-9790 V
Pittsburgh	PA	412/642-6778 BV	412/288-9950 BV	412/261-9305 \$	412/391-7732 A
Pittsburgh	PA	412/642-2015 \$	412/288-9974 BV		412/391-8818 A
Pittsburgh	PA	412/281-8950 BV PDN	412/471-6430 \$		412/261-4192 \$
Pittsburgh	PA	412/261-9732 \$ PDN			412/391-8218 V
Pottstown	PA	215/327-8032 BV PDN			
Quakertown	PA	215/538-7032 BV PDN			
Reading	PA	215/375-7570 BV PDN			215/375-4850 A
Reading	PA	215/779-9580 BV	215/376-8750 BV		215/375-0914 \$
Ridley Park	PA			215/829-0912 A	
Rochester	PA	412/728-9770 BV PDN			
Scranton	PA	717/348-0765 BV			
Scranton	PA	717/348-1123 BV PDN	717/961-5321 BV		
Secane	PA	215/543-3045 BV			
Sharon	PA	412/342-1681 BV PDN			
Somerset	PA				
State College	PA	814/234-3853 BV	814/231-1510 BV		814/443-6402 A
Tullytown	PA	215/547-3300 BV PDN			
Uniontown	PA	412/437-5640 BV PDN			
Upper Darby	PA				215/977-9758 A
Upper Darby	PA				215/977-9794 \$
Upper Darby	PA				215/977-9790 V
Wallingford	PA	215/270-2970 BV PDN			
Wallingford	PA	215/666-9190 BV			
Wallingford	PA			717/682-8383 A	
Washington	PA	412/223-9090 BV PDN			
Wayne	PA	215/341-9605 BV PDN			
Wilkes Barre	PA	717/826-8991 BV	717/829-3108 BV	717/825-4155 A	
Wilkes Barre	PA	412/241-1006 BV PDN			
Williamport	PA	717/323-0386 BV	717/494-1796 BV		
York	PA	717/848-9850 BV	717/846-6550 BV		717/845-7631 A
York	PA				717/854-7284 \$
Mayaguez	PR	800/462-4213 BV			
Ponce	PR	809/462-4213 BV			
San Juan	PR	809/725-1882 BV	809/792-3030 BV	809/731-3153 \$	809/728-3012 A
San Juan	PR	809/725-4343 BV			
Santurce	PR				809/728-3012 A
Santurce	PR				809/728-6407 \$
Middletown	RI	401/849-1660 BV			
Newport	RI	401/849-1660 BV			
North Kingstown	RI		401/295-7100 BV/\$		
Pawtucket	RI	401/273-0200 BV			
Providence	RI	401/273-0200 BV	401/751-7912 BV		401/438-3000 A
Providence	RI	401/274-7380 \$	401/831-3990 \$		401/438-7960 \$
Warwick	RI	401/273-0200 BV			
Woonsocket	RI	401/765-5994 BV			
Charleston	SC	803/553-0860 BV	803/722-4303 BV		803/763-0090 A
Charleston	SC		803/577-4710 \$		803/556-0422 V
Columbia	SC	803/254-7563 BV	803/254-0695 BV	803/771-7665 A	803/783-5484 A
Columbia	SC	803/252-7375 \$	803/252-0328 \$		803/776-8459 A
Columbia	SC				803/776-5355 \$
Florence	SC	803/664-0550 BV			
Georgetown	SC	803/271-9213 BV	803/233-3486 BV		803/255-4686 A
Georgetown	SC	803/233-5621 \$	803/271-0231 \$		803/232-3878 \$
Hampton Head	SC				803/785-4970 A
Myrtle Beach	SC	803/448-5401 BV			803/238-8625 A
Spartanburg	SC	803/585-0016 BV	803/585-1637 BV		803/585-9611 A
Pierre	SD	605/224-7700 BV	605/224-0481 BV		
Pierre	SD		605/224-2257 \$		
Rapid City	SD	605/341-4007 BV	605/348-2621 BV		605/341-3733 A
Sioux Falls	SD	605/334-0085 BV	605/336-8593 BV	605/334-1995 A	
Sioux Falls	SD		605/336-6438 \$	605/334-1832 A	

City	St	Tymnet	Telenet	Infonet	CompuServ
Bristol	TN		615/968-1130 BV		
Chattanooga	TN	615/265-1020 BV	615/756-1161 BV		615/877-5804
Chattanooga	TN		615/265-7929 \$		615/870-4793 \$
Clarkesville	TN	615/645-8877 BV	615/552-0032 BV		
Gatinburg	TN				615/436-2001 A
Jackson	TN	901/423-1244 BV			
Johnson City	TN	615/928-9544 BV	615/282-6645 BV		615/928-2431 A
Kingsport	TN	615/378-5746 BV			
Knoxville	TN	615/690-1543 BV	615/523-5500 BV	615/525-9531 A	615/522-0164 A
Knoxville	TN	615/693-0498 \$	615/521-5072 \$		615/522-2152 \$
Memphis	TN	901/527-8006 BV	901/521-0215 BV	901/521-0529 A	901/452-1710 A
Memphis	TN	901/527-8122 \$	901/527/5175 \$		901/323-0220 \$
Memphis	TN				901/452-2470 V
Nashville	TN	615/885-3530 BV	615/244-3702 BV	615/292-6801 A	615/366-1947 A
Nashville	TN	615/889-5790 \$	615/255-2608 \$		615/360-7923 \$
Oak Ridge	TN	615/482-1466 BV	615/481-3590 BV		615/483-2292 A
Oak Ridge	TN				615/482-2074 \$
Sevierville	TN	615/453-0401 BV			
Abilene	TX	915/676-0091 BV	915/676-9151 BV		915/698-1111 A
Allen	TX	214/542-2641 BV			
Amarillo	TX	806/355-7088 BV/\$	806/373-0458 BV	806/371-8685 A	806/379-8411 A
Amarillo	TX		806/373-1833 \$		806/372-4494 \$
Arlington	TX	817/877-3630 BV		817/460-3711 A	
Arlington	TX	817/332-9397 \$			
Athens	TX		214/677-1712 BV		
Austin	TX	512/444-3280 BV	512/928-1130 BV	512/499-8029 A	512/444-7234 A
Austin	TX	512/448-1096 \$	512/929-3622 \$	512/478-9261 A	512/440-1411 A
Austin	TX				512/444-0566 \$
Baytown	TX	713/420-3389 BV			
Brownsville	TX	512/548-1331 BV	512/542-0367 BV		
Bryan	TX	409/823-1090 BV	409/822-0159 BV		
College Station	TX	409/823-1090 BV			
Conroe	TX				409/756-8904
Corpus Christi	TX	512/883-8050 BV	512/884-9030 BV		512/882-146
Corpus Christi	TX	512/887-9621 \$	512/884-6946 \$		512/884-4171
Dallas	TX	214/638-8888 BV	214/748-6371 BV	214/638-7850 \$	214/953-1971 A
Dallas	TX	214/630-5516 \$	214/745-1359 \$		214/953-0212 A
Dallas	TX				214/869-0378 A
Dallas	TX				214/953-1164 A
Dallas	TX				214/953-0436 \$
Dallas	TX				214/953-1168 V
Denton	TX	817/565-0552 \$			
El Paso	TX	915/533-1453 BV	915/532-7907 BV	915/562-0286 A	915/565-4661 A
El Paso	TX	915/532-6295 \$	915/541-1931 \$		915/565-0970 \$
Fort Hood	TX			817/532-8980 A	
Fort Worth	TX	817/877-3630 BV	817/332-4307 BV	817/460-3711 A	817/283-0041 A
Fort Worth	TX	817/332-9397 \$	817/332-6794 \$		817/283-1803 \$
Galveston	TX	409/762-8053 BV	409/762-4382 BV		409/763-5125 A
Galveston	TX		409/765-7298 \$		
Houston	TX	713/556-6700 BV	713/227-1018 BV	713/981-9797 \$	713/462-0202 A
Houston	TX	713/496-1332 \$	713/227-8208 \$	713/652-0552 A	713/462-1417 A
Houston	TX				713/462-0923 \$
Houston	TX				713/462-0372 V
Killeen	TX	817/526-8118 BV		817/532-8980 A	
Laredo	TX	512/727-8308 BV	512/724-1791 BV		512/722-8008 A
Longview	TX	214/236-7475 BV	214/236-4205 BV		
Lubbock	TX	806/797-0765 BV	806/747-4121 BV		806/763-5081 A
Mc Allen	TX	512/631-6101 BV	512/686-5360 BV		
McAllen	TX		512/686-2452 \$		
McKinney	TX	214/542-2641 BV			
Midland	TX	915/561-8401 BV	915/561-9811 BV		915/697-8211 A
Midland	TX	915/683-5645 BV	915/561-8597 \$		915/697-5448 \$
Nederland	TX	409/721-3400 BV	409/722-3720 BV		
Nederland	TX		409/727-4090 \$		
Odessa/Midland	TX	915/561-8401 BV			
Port Arthur	TX	409/721-3400 BV			
San Angelo	TX	915/658-4590 BV	915/944-7621 BV		
San Antonio	TX	512/225-8002 BV	512/225-8004 BV	512/525-1692 A	512/435-3883
San Antonio	TX	512/222-9877 \$	512/225-3444 \$		512/433-8098 \$
Sherman	TX	214/868-0089 BV	214/893-4995 BV		
Temple	TX	817/773-0982 BV	817/773-9723 BV		
Texarkana	TX	214/792-4521 BV			
Texas City	TX	409/762-8053 BV			
Tyler	TX	214/581-8652 BV	214/597-8925 BV		
Waco	TX	817/776-0880 BV	817/752-9743 BV		

City	St	Tymnet	Telenet	Infonet	CompuServ
hita Falls	TX	817/723-2386 BV	817/322-3774 BV		
Ogden	UT	801/393-5280 BV	801/627-1630 BV	801/544-0086 A	
Provo	UT	801/373-2192 BV	801/373-0542 BV		801/377-1120 A
Salt Lake	UT	801/364-0780 BV	801/359-0149 BV	801/544-0086 A	801/521-2890 A
Salt Lake	UT	801/533-8152 \$	801/359-0578 \$		801/521-6326 \$
Barre	VT	802/229-4508 BV			
Burlington	VT	802/864-5714 BV	802/864-0808 BV		802/862-1575 A
Burlington	VT				802/865-0536 \$
Manchester Center	VT				802/362-5580 A
Montpelier	VT	802/229-4508 BV	802/229-4966 BV		
Rutland	VT		802/775-1676 BV		
White River	VT		802/295-7631 BV		
Alexandria	VA	703/691-8200 BV			703/352-7500 A
Alexandria	VA	703/352-3136 \$			703/841-9834 A
Alexandria	VA				703/352-8750 V
Arlington	VA	703/691-8200 BV			703/841-9834 A
Arlington	VA	703/352-3136 \$			
Blacksburg	VA		703/552-9181 BV		
Charlottesville	VA	804/977-5661 BV	804/977-5330 BV		804/979-5159 A
Chesapeake	VA				804/461-6128 A
Chesapeake	VA				804/461-6167 A
Covington	VA		703/962-2217 BV		
Fairfax	VA	703/691-8200 BV			703/352-7500 A
Fairfax	VA	703/352-3136 \$			703/841-9834 A
Fairfax	VA				703/591-5039 A
Fairfax	VA				703/591-0506 \$
Fairfax	VA				703/352-8750 V
Fort Eustis	VA			804/874-7149 A	
Fredericksburg	VA		703/371-0188 BV		
Hampton	VA	804/727-0572 BV		804/874-7149 A	804/888-0555 A
Hampton	VA	804/596-0898 BV			
Hampton	VA	703/433-6333 \$	703/434-7121 BV		
Hampton	VA		703/435-1800 BV		
Herndon	VA		703/481-6807 \$		
Lynchburg	VA	804/846-0213 BV	804/845-0010 BV		
Manassas	VA				703/368-5707 A
Manassas	VA				703/369-9427 \$
McLean	VA			301/937-0530 A	
Midlothian	VA	804/330-2465 BV			
Midlothian	VA	804/330-2673 \$			
Newport News	VA	804/596-0898 BV	804/596-6600 BV	804/874-5121 A	804/888-0555 A
Newport News	VA				804/888-2480 \$
Norfolk	VA	804/855-7751 BV	804/625-1186 BV	804/858-2715 \$	804/461-6128 A
Norfolk	VA	804/857-0148 \$	804/625-2408 \$		804/461-6167 A
Norfolk	VA				804/461-8117 \$
Petersburg	VA	804/861-1788 BV			
Portsmouth	VA	804/855-7751 BV			804/461-6128 A
Portsmouth	VA	804/857-0148 \$			804/461-6167 A
Richmond	VA	804/330-2465 BV	804/788-9902 BV	804/788-0401 A	804/741-0158 A
Richmond	VA	804/330-2673 \$	804/353-0219 \$		804/741-3503 \$
Roanoke	VA	703/344-2762 BV	703/344-2036 BV		703/563-8421 A
Roanoke	VA		703/344-2404 \$		
Virginia Beach	VA	804/855-7751 BV			804/461-6128 A
Virginia Beach	VA				804/461-6167 A
Williamsburg	VA	804/229-6786 BV			804/888-0555 A
Williamsburg	VA				804/888-2556 \$
Auburn	WA	206/735-3975 BV	206/939-9982 BV		
Belleveue	WA	206/285-0109 BV			
Belleveue	WA	206/281-7141 \$			
Bellingham	WA	206/671-5990 BV	206/733-2720 BV		
Blaine	WA				206/332-8100 A
Bremerton	WA	206/377-2792 \$			
Burien	WA	206/735-3975 BV			
Clallam	WA	206/258-1018 BV	206/775-9929 BV		206/252-4414 A
Everett	WA	206/423-9072 BV	206/577-5835 BV		
Longview	WA	206/943-9050 BV	206/754-0460 BV		206/786-6666 A
Olympia	WA	206/452-6800 \$			
Port Angeles	WA	509/332-3760 \$			
Pullman	WA	509/375-3367 BV	509/943-0649 BV		
Richland	WA	206/285-0109 BV	206/625-9612 BV	206/624-3580 \$	206/241-9111 A
Seattle	WA	206/281-7141 \$	206/623-9951 \$		206/243-8933 A
Seattle	WA				206/242-5767 \$
Seattle	WA				206/241-8137 BV

City	St	Tymnet	Telenet	Infonet	CompuServ
Spokane	WA	509/624-1549 BV	509/455-4071 BV	509/455-9398 A	509/326-051
Spokane	WA	509/747-3011 \$	509/838-9065 \$		509/326-6526
Tacoma	WA	206/572-2026 \$	206/627-1791 BV	206/964-4828 A	206/922-1790 A
Tacoma	WA				206/922-7181 \$
Vancouver	WA	206/574-0427 \$	206/693-6914 BV		
Wenatchee	WA		509/663-6227 BV		
Yakima	WA	509/248-1462 \$	509/575-1060 BV		
Beckley	WV			304/256-1101 A	
Charleston	WV	304/345-9575 BV	304/345-6471 BV	304/345-7505 A	304/768-9700 A
Charleston	WV		304/345-7140 \$		
Huntington	WV	304/523-8432 BV	304/523-2802 BV		304/733-4010 A
Morgantown	WV	304/292-3092 BV	304/292-0104 BV		
Parkersburg	WV	304/485-9470 BV		304/485-7569 A	304/485-4225 A
Westover	WV	304/292-3092 BV			
Wheeling	WV	304/233-7676 BV	304/233-7732 BV		304/233-9470 A
Appleton	WI	414/730-8029 BV			
Beloit	WI	608/362-4655 BV	608/362-5287 BV		
Brookfield	WI	414/785-1614 BV			414/258-5616 A
Brookfield	WI	414/785-0630 \$			
Eau Claire	WI	715/833-0121 BV	715/836-9295 BV		
Green Bay	WI	414/432-3064 BV	414/432-2815 BV		414/494-0917 A
Green Bay	WI		414/432-0346 \$		414/494-3128 \$
Janesville	WI	608/362-4655 BV			
Kenosha	WI	414/553-9044 BV	414/552-9242 BV		
La Crosse	WI	608/784-9099 BV	608/784-0560 BV		608/785-7530 A
Madison	WI	608/221-0891 BV	608/257-5010 BV	608/255-5857 A	608/256-6525 A
Madison	WI		608/257-8472 \$		608/256-5346 \$
Milwaukee	WI	414/785-1614 BV	414/271-3914 BV	414/475-5811 \$	414/258-5616 A
Milwaukee	WI	414/785-0630 \$	414/278-8007 \$		414/258-1419 A
Milwaukee	WI				414/258-6049 \$
Neenah	WI		414/722-7636 BV		
Oshkosh	WI	414/235-7473 BV			
Racine	WI	414/553-9044 BV	414/632-6166 BV		
Sheboygan	WI	414/457-6128 BV	414/452-3995 BV		
Wausau	WI	715/848-6171 BV	715/845-9589 BV		
Wauwatosa	WI				414/258-5616 A
Wauwatosa	WI				414/258-1419 A
West Bend	WI	414/334-1755 BV	414/334-2206 BV		
Casper	WY	307/234-4211 BV	307/265-5167 BV		307/234-6914 A
Cheyenne	WY	307/638-0403 BV	307/638-4421 BV		307/637-3027 A
Cheyenne	WY		307/637-3958 \$		
Jackson	WY				307/733-1640 A
Laramie	WY	307/742-9441 \$	307/721-5878 BV		307/742-9641 A