

Networking: The Linking of People, Resources and Ideas

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CUSSnet: dipping from and aiding in Human Services.

Communicating at:
300-2400 baud
8 data bits
1 stop bit
no parity

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Building on FIDONET
The World's First
BBS Network

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FIDO
(130/5)

CUSSnet
[Support provided by]
Apple Computers
U.S. Robotics
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U.S. Department of Health and Human Services
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About the Network

Computer Use in Social Services (CUSS) Network is a nonprofit association of professionals interested in exchanging information and experiences on using computers in the human services. Members participate in the Network by:

- Sending materials for the CUSSN Newsletter, such as: member needs, interests, hardware/software use, activities, resources, ideas, experiences, computer applications, and events.
- Participating in the electronic network, skills bank, software clearinghouse and subgroups.
- Distributing Newsletters at workshops and conferences. (I will send newsletters to distribute or place on a resource table.)
- Referring vendors to advertise their services and products through the CUSSN.
- Holding local CUSSN meetings. Local meetings in Dallas/Ft. Worth, Chicago, Baltimore and Australia have been successful.

Network Dues: \$10 individuals, \$15 institutions (payable in U.S. Funds). Contact Dick Schoech, Associate Professor, School of Social Work, The University of Texas at Arlington, Box 19129, Arlington, TX 76019.

The Newsletter is published approximately 4 times a year and is sent free to all network members. Back issues \$5 each.

The Electronic Network (CUSSnet) establishes local bulletin boards, national and local mail and file transfer, downloading of public domain software, and access to numerous repositories of electronically available information on human service computing. CUSSnet builds on FIDONET, approximately 900 microcomputer-based local bulletin boards across the U.S. and in 9 continents. Contact Dick Schoech for your local node, or

call 817-273-3966 and type the file in the HELP file area called FIDOLIST.80. Communications are at 300-2400 baud, 8 data bits, 1 stop bit and no parity. Almost any computer or terminal and modem will work.

The Skills Bank allows members to locate or share specific knowledge, skills and experiences for providing information about yourself. Contact Gunther R. Geiss, Adelphi U., School of Social Work, Garden City, NY 11530.

The Software Clearinghouse offers a computerized inventory of commercial and public domain available human service software, a software review file, and a software exchange. Contact Walter LaMendola, Professor, School of Social Work, U. of Denver, Denver, CO 80208.

Special Interest Group (SIGs) are subgroups where significant networking is occurring on a special topic.

Educators SIG, write Wallace Gingerich, School of Social Welfare, U of Wisconsin-Milwaukee, Milwaukee, WI 53201.

Hospital Social Services SIG, write Mike King, Director of Social Work and Discharge Planning, Saint Francis Hospital, 100 Port Washington Blvd, Roslyn, NY 11576.

Area Groups:

Baltimore, MD, contact Bob Elkin Professor, U of Maryland, School of Social Work and Community Planning, 525 W. Redwood Street, Baltimore, MD 21201

California, James M. Gardner, Department of Developmental Services, Fairview State Hospital, 2501 Harbor Boulevard, Costa Mesa, CA 92626

Australia, Floyd Bolitho, La Trobe U., School of Social Work, Bundoora Victoria, Australia, 3083.

CUSSN ADVISORY BOARD MEMBERS

Floyd H. Bolitho, Assistant Professor, La Trobe U., School of Social Work, Bundoora Victoria, Australia, 3083

Robert Elkin Professor, U of Maryland, School of Social Work and Community Planning, 525 W. Redwood Street, Baltimore, MD 21201

Marilyn Flynn, Professor, U of Illinois-Urbana Champaign, 1207 W. Oregon St., Urbana, IL 61801

James M. Gardner, Department of Developmental Services, Fairview State Hospital, 2501 Harbor Boulevard, Costa Mesa, CA 92626

Gunther R. Geiss, Associate Professor, Adelphi U. School of Social Work, Garden City, NY, 11530

Wallace Gingerich, U. of Wisconsin-Milwaukee School of Social Welfare, Milwaukee, WI 53201.

Michael Gorodezky, Poolman, Shih & Platten, Inc., Information System Consultants, 1810 Grand Ave, Santa Barbara, CA 93103

Mike King, Director, Social Work/Discharge Planning, St Francis Hospital, Port Washington Blvd, Roslyn, NY 11576

Ursula Koch, Fachhochschule Ostfriesland, Constantiaplztz 4 D-2970 Emden, Germany, Europe

Camille Lambert, Professor, Faculty of Social Work, U. of Toronto, 246 Bloor St. W., Toronto, Ontario M5S 1A1, Fidonet 111/381

Walter LaMendola, PhD, Professor, School of Social Work, U. of Denver, Denver, CO 80208

F Dean Luse, President, Outpost Inc., 119 Wilson, Park Forest, IL 60466, Fidonet 115/396

Alain MAZET, 10 Boulevard Gambetta, 87000 LIMOGES, France

Menachem Monnickendam, Deputy Director, Dept. of Development of Local Social Services, Ministry of Labor and Social Affairs, POB 1260, Jerusalem, Israel 9100.

Laurence Moseley, Computer Science Dept., University College, Singleton Park, Swansea, United Kingdom SA2 8pp

Thomas Neudecker, Assistant Vice President for Academic Affairs, Carnesie Mellon U. 5000 Forbes Ave., Pittsburgh, PA 15213, Fidonet 129/384

Lynn Harold Vogel, Assistant Professor, U. of Chicago, School of Social Service Administration, 969 E. 60th St., Chicago, IL 60637, Fidonet 129/384

Services Available

Vendor/Consultant	Contact Person	Services
Illinois		
OUTP ST, Inc. Drawer CNC6 119 Wilson St., Park Forest, IL 60466	F. Dean Luse, Ph.D., CSW, President (312) 748-3854	Consultation on feasibility and information system planning. Provides help with accountability, forms & report design, decision support systems, database development, software selection & evaluation, training your staff to use computer systems Extensive micro and mainframe computer experience.
Synergistic Office Systems (SOS) 438 Peterson Road Libertyville, IL 60048	Joseph Zefran, MSW (312) 680-8383 (312) 275-3747	The SOS team of human service/computer professionals help you with ready-to-use SOFTWARE exclusively for nonprofits - Fund Accounting, Donor/Fun Raising, Client Service/Receivables - and a full range of SERVICES - feasibility studies, programming, training, and support.
Florida		
Community Service Council of Broward County, Inc. 1300 S. Andrews Avenue P.O. Box 22877 Fort Lauderdale, FL 33335	Susan K. Buza, Executive Director (305) 524-8371	Full range of consulting and technical support in the automation of Social and Human Services. Systems include Agency Inventory/Directory Production, Information & Referral, Client Case Management, Mental Health Client Tracking, Statewide Networking, Transportation Scheduling, Carpool Matching.
Maryland		
KBL Group, Inc. 'Knowledge Based Living' 808 Pershing Drive #100 Silver Springs, MD 20910	Karen Levitan, Ph.D., President, (301) 588-4633	Services to help you use information, technology, and systems as professional resources. We work for you; we work with you; we help you do it yourself.
New York		
King Associates, LTD. 215 Shoreward Drive Great Neck, N.Y. 11021	Michael A. King, D.S.W. (516) 497-5995	Microcomputer software for social work and for discharge planning departments. Customization also available.
New York/New Jersey		
RFM/Associates, Inc. One Bridge Plaza, Suite 400 Ft. Lee, NJ 07024	Rod Monger, PhD, (201) 592-5895	A consulting and training firm whose associates are academics and experienced professionals. Services include programming, management development and training, systems design technical writing, planning, security audits, and personnel searches. Write for brochure with full description of services. No charge for initial consultation. Micro specialization.
Rhode Island		
Applied Innovations, Inc. South Kingstown Office Park Wakefield, R.I. 02879	800-272-2250 401-789-5081	A developer and manufacturer of over 20 software programs designed to operate on popular microcomputers. The programs are fully supported, documented and operational in hundreds of locations. Programs assist with Psychological testing (eg MMPI) office management (eg billing/insurance forms) or Assessment (eg psychosocial histories).
Texas		
Dick Schoech, Ph.D. 1311 W. Lavender Ln. Arlington, TX 76013	(817) 273-3964	Consultation and training on information systems feasibility, design, implementation and evaluation. Access to varied technical expertise of University setting.
Australia		
Human Services Information Systems 6 Chapman Blvd Glen Waverly Victoria 3150	Floyd Bolitho, Ph.D., (03) 687-6790, (03) 459-1806	Consultation for Human Services, feasibility studies, training, systems design and implementation. Software Development and hardware vendor.

The above paid advertisements represent no endorsement or favorable review by CUSS. When choosing a consultant, remember the standard advice: (1) talk to more than one consultant, (2) obtain several comparable bids, and (3) ask for several recent clients and talk to them about their satisfaction.

Service Listing Announcements: Interested vendors/consultants should send payment along with their description. Rates are as follows.

Description length	Rate per issue	Rate per year (4 issues)
under 15 words	\$ 5	\$18
under 30 words	\$ 8	\$28
under 45 words	\$10	\$34
under 60 words	\$12	\$40

Space Advertisements: Advertising space is available in the CUSS Newsletter at the following rates:

one eighth page in one issue = \$15	one half page in one issue = \$45	one full page in one issue = \$75
one fourth page in one issue = \$25	three fourths page in one issue = \$60	two full pages in one issue = \$120

Advertisers must furnish a copy ready ad. If the ad will be run for four issues, a 25% reduction in cost is granted.

Mailing Labels: Mailing labels are available at the cost of 5 cents per label.

Notes From The Editor

I have wanted to publish this issue announcing CUSSnet for about a year. However, when working with computers and people, things go much slower than anticipated. We may not be quite ready to announce CUSSnet even now. Building a system takes time and effort as well as trial and error. When you logon to CUSSnet, remember that it took hours for everyone to get the right equipment, the software installed and running correctly, the correct telephone codes in the system to allow it to send mail almost anywhere in the world, (a weekly chore) etc. Couple that problem to the local ones of getting approval to use a computer to operate a bulletin board, bad intercom systems, weekend energy saving steps such as not cooling buildings (allowing your computer to overheat), lightning storms which play havoc with computer systems, etc. For example, one potential node simply gave up after months of trying to get university approval. UTA's telephone manager was curious about who was sitting up at 4:00 AM calling all over the country. Hopefully, we have CUSSed enough and the results will be worthwhile and fun.

A special thanks to all those who helped get CUSSnet started. I am grateful to all those who provided detailed information on last year's survey about networking. Time prevented me from responding to each one of you personally. A special thanks to Steve Ice for his continuing technical support and willingness to run the weekly poll.

Dick Schoech
Cuss Network Coordinator
15 July 86
Sysop Net 130 Node 5

Articles, Reviews and Reports

What is CUSSnet by Dick Schoech, CUSS Coordinator, UTAGSSW, POB 19129, Arlington, TX 76019-0129

From the beginning of the CUSS network, members have been talking about communicating electronically. Getting information out in this newsletter is just too slow. When people call to request information about a problem or product, I must tell them to send me the request in writing and wait until the next newsletter is published and hopefully, someone will respond to their request. This process can take 3 to 6 months which is unacceptable. An electronic network could shorten that request to several days or at least several weeks.

Based on our experiences, several years ago I submitted a grant to the U.S. Dept. of Health and Human Services, OHDS to start an electronic network. They were sympathetic, but only provided enough money to do the initial feasibility study and begin a network. As with most projects, continuation money was not available. Apple Computer Corp. provided a computer and hard disk and some networking software to help us get started.

I soon found out that the initial sponsorship was a blessing in disguise. I now was obligated to get something started on very little money. The feasibility study survey (see Vol 5 #2) indicated that people wanted to network, but costs were prohibitive. The average electronic network costs \$20-40 per month for each user. Most previous human service electronic networks survived with outside support, but failed when users were required to pay the costs for running the network.

One network was different. It was founded on the concept of using people time and effort rather than expensive telecommunications. The phone system was used efficiently in the off hours. The software to operate the network was in the public domain and you could set up a node for free and try it out. That network is FIDOnet, started by Tom Jennings (see the story on FIDO's history). I used a big chunk of the OHDS funds to buy a PCAT computer to begin using FIDONET.

FIDONET was a solution to many of our problems. It was inexpensive, available in about 1000 locations worldwide, and was a true network, that is, it was operated by many individuals working cooperatively. Using FIDONET, CUSS would not be required to invest 10,000+ the first year to see if an electronic network is what we wanted/needed. It distributed the effort and therefore, CUSS would not have hire staff (we don't have the money to hire anyone).

FIDONET had its limitations. It is not that easy to set up a node and keep it going. FIDO communications are complex and a small error can take days to detect and hours to correct. FIDONET is growing so rapidly, the documentation is often out-

dated or not very good. And since each node operates independently, it is more difficult for users across the U.S. to share information on one specific topic. However, these limitations can be overcome with time, effort, and money for extra communications. So CUSSnet became one of the many subnetworks using FIDONET. The CUSSnet nodes listed in this newsletter are a modest beginning.

If you want to help, there are several ways. If you want to start a CUSSnet node, you need a MS-DOS PC, 256K, dual drives (a hard drive is recommended), a 1200 baud auto-answer modem, and some time and effort. Many nodes use multitasking software like multilink or desqview to allow them to use their computer at the same time someone is using CUSSnet. Call Steve Ice to get any technical assistance you need to set up a board.

You can help in small ways. For example, if you have a CUSSnet node within local calling distance, offer to help the sysop (system operator) by managing a message area or two on a subject in which you have interest. There are many other small ways, just leave a message offering to help.

CUSSnet is a true network in that each node operates independently. Local sysops are in complete control of how their board operates and the content of their board. Treat the sysop kindly, because they put many hours into getting their system running and they will continue to spend time and effort to keep their node going if treated kindly. Sysop burnout is a problem. While CUSSnet may not be impressive now, give us a few years to get the files we need and the communications flowing. The potential is great.

A Description of CUSSnet Nodes

Net/Node: 11/301

Board #: (502) 762-3140

Board Name & Details: FIDORACER, 24 hrs/day, 300/1200 baud.

Operator: Bill Allbritten, Murray State U.
2004 University Sta., Murray KY 40271

Work Phone No: (502) 762-6861

A user can obtain up to date information on issues on the use of computers by the handicapped, some public domain software to aid the handicapped use computers, and information on other boards carrying handicapped information. Also, up to date information on AIDS is posted as is general health information on a variety of topics. The board is part of MEDNET echomail which allows users to discuss current health issues with users of other boards.

Net/Node: 158/101
Board #: (919) 851-6806
Board Name & Details: Equal BBS
Operator: Michael L. Bowen, Microcomputer Support Group
 3535 S. Wilmington St., Office 205, Raleigh, NC 27603
Work Phone No: (919) 772 7513

For too long, the handicapped have found themselves isolated from much of life by a lack of access to the movement and communications the rest of us take for granted. With the development of the microcomputer, however, the way was opened for the disabled to enter the mainstream of life.

Unfortunately, both the handicapped and those who work with them have fallen victim to the same problem — a lack of knowledge of computer technology. In a dynamic, constantly changing industry, it was impossible to keep up with the latest developments.

But no more. Now a single telephone call can allow one to sift through hundreds and hundreds of references, locating the most up-to-the-minute information on adaptive hardware and software, groups serving specific handicapped populations, literature on specific disabilities and listings of local meetings, events and services.

EQUAL BBS — and its companion organization, EQUAL SIG (Special Interest Group on Computers and the Handicapped) — are designed to give the disabled a place to come together to share experiences, advice and expertise.

EQUAL BBS is a public service of Microcomputer Support Group, Inc., of Raleigh, NC, a consulting firm specializing in microcomputer system selection, setup and training for the handicapped.

Net/Node: 100/999
Board #: (314) 889-4696
Board Name & Details: WUFN BBS
Operator: Bill Butterfield, Professor, School of Social Work, Washington University, St. Louis, MO 63130
Work Phone No: (314) 889-4508

The Washington University Fido Node (WUFN) is sponsored by the George Warren Brown School of Social Work.

The Node provides a bulletin board service to social service agencies in the St. Louis area and is a part of the nationwide Fidonet electronic mail network.

The specialty of the node is bibliographic information on computers in the social services. The number of bibliographic entries is now quite small but is being expanded weekly.

Individuals or agencies having bibliographic files are invited to contribute them to the bulletin board. They can tell the bulletin board and leave the files by calling 314-889-4696 or by sending a floppy disk formatted for an IBM PC to:

Bill Butterfield
 Box 1196 Washington University
 St. Louis, Missouri 63130

Bibliographic Files on the board are maintained as ASCII files or as DBASE files.

The board uses an Epson Equity II computer with two 20 megabyte hard disks.

Net/Node: 139/450
Board #: (414) 963-4515
Board Name & Details:
Operator: Wallace Gingerich, Associate Professor, School of Social Welfare, U of Wisconsin-Milwaukee, Milwaukee, WI 53201
Work Phone No: (414)963-4440/(414)963-4851

Call the board for a description.

Net/Node: 107/37
Board #: (212) 532-2278
Board Name & Details:
Operator: Gerald Hoffman, Executive Director
 Human Technology Association, Box 1003 Cooper Station, New York, NY 10003
Work Phone No: (212) 532-5658

HumanTech CUSSNET is an electronic bulletin board for non-profit organizations in the New York City Area. The board was designed to have public domain training software on-line. However, for a variety of reasons we have not yet collected a sufficient amount of such software to consider it to be a specialty of the board.

Nevertheless, this BBS is serving as a forum for individuals in not-for-profit organizations to reach out to each other for information and assistance. The New York City area has quite a number of free access bulletin boards, both in the Fido Network and outside it. Cumulatively these boards have a vast amount of public domain software available. HumanTech CUSSNET is the only board dedicated to non-profits, and therefore has attracted this audience who interact among themselves and are often referred to other boards for specific files.

The board has served to announce the activities of the New York Personal Computer Club's non-profit sig which runs monthly clinics and workshops for non-profit organizations. It has also announced other seminars, workshops and conferences on automation which are of interest to or specially targeted to non-profits. Among those active on the board have been the Community Service Society which is very active in promoting the use of computers among non-profits.

Assistance has been sought in the acquisition of hardware, and several lively discussions on the board have revolved around public domain and/or low cost statistical and accounting packages. These discussions have benefited from the presence of interested individuals who are not from the non-profit world, but who found their way on to this non-restricted board, and stayed around to lend a hand.

The board has also served as a training ground for individuals just learning telecommunication techniques. Individuals have come on to teach themselves, and we even had a workshop leader from the Southern Regional Conference on Runaway Youth log on as a live demonstration. The New York State Division of Housing has also used the Board for training funded agencies in file transfer and other telecommunication activities.

This BBS has served a useful function primarily for the new computer user because it has no time related fees, has generous online time limits and is relatively easy to use. Additional funding would make it possible for the sysop to provide better maintenance of the board, as well as to interact more frequently with the users.

Net/node: 138/35
Board #: (206) 442-8127
Board Name & Details: US HDS HUMAN SERVICES BBS
Operator: Steve Ice, Dept of HHS, Region X, MS 411, 2901 Third Ave. Seattle, WA 98121
 CUSSNet Poll Coordinator and Technical Advisor
Work Phone No: (206) 442-8099

Located within the Northwest Regional Office of Human Development Services, an operating division of the U.S. Dept of Health and Human Services, the US HDS HUMAN SERVICES BBS specializes in hosting communications related to federal programs and administrations on: Aging, Headstart — early childhood education for the disadvantaged, Native Americans, Foster Care, Child Abuse and Neglect, Special Needs Adoption, Domestic Violence, Runaway Youth, Developmental Dis-

abilities, and WIN — work incentive for families receiving aid for dependent children. Additionally, the U.S. Public Health Service will respond to inquiries of a health nature. This BBS is open to any and all with professional affiliation or interest in human services; and the message areas are intended to provide for discussion of issues, and interests horizontally between users. Users now include states, cities, counties, United Ways, non-profit service agencies, universities, judicial and congressional offices, hospitals and clinics. The BBS is a member of CUSSnet and will support free mail to any or all CUSSnet nodes from any registered user. As part of CUSSnet, the board will contain public domain human services software from the U. of Denver Information Technology Center and the human services publication archives developed by the School of Social Work U. of TX at Arlington. Finally, the BBS will serve as a gateway for distribution of announcements and products resulting from federal human services research and development programs.

Net/Node: 104/614

Board #: (303) 871 2912

Board Name & Details:

Operator: Walter LaMendola, Professor, School of Social Work, U. of Denver, Denver, CO 80208

Work Phone No: (303) 871-2915

The Mile Hi CUSS Board specializes in human service software. Information will be provided on the Board about what software is available for use in the human services. Any demonstration or public domain software that is provided to us will be shared with every other board in CUSSNET. Such software can then be downloaded by any validated user from any of the CUSS Boards. Users will be able to place a request for software searches of the Software Clearinghouse from any of the CUSS Boards; however, the routine for placing such requests is only now under development. Until the procedure is in place we ask that all Software Clearinghouse requests be made directly to us by telephoning or writing to Jo Drenker, Software Clearinghouse, Information Technology Center, Graduate School of Social Work, University of Denver, Denver, CO 80208-0274, Telephone: AC (303) 871-2886.

We hope to use our message areas to post 1) software reviews, 2) conversations about human service software, 3) notices from people looking for software, 4) user critiques of software in use, 5) user software questions and problems, 6) human service software vendor notices, 7) human service software developer conversations or questions. We are in the process of deleting all other directories from our board, including the games, utilities, and so on.

Our Board requires that you are a validated user before you can receive normal user privileges. We have experienced a lot of vandalism and have become more rigorous about validation. This means that the first time you use our Board you will not have all the ability to do things until you are validated. We expect to have everything going full steam in three to six months. A doctoral student, Chuck Mastrini, has taken over responsibility for the maintenance and development of the Board. He is a talented computer user who has turned his life over to CUSSNET. You may send your condolences to him at any time. Please address any problems you experience with our system to him at the same address and phone number as given above.

Net/Node: 130/5

Board #: (817) 273 3966

Board Name & Details: CUSSnet UTA, 24 hrs a day, 300-2400 baud

Operator: Dick J. Schoech, Associate Professor, U. of Texas at Arlington, Graduate School of Social Work P. O. Box 19129, Arlington, TX, 76019-0129

Work Phone No: (817) 273-3964

CUSSnet UTA is located in the Graduate School of Social Work at the University of Texas at Arlington. It provides two specialty services (1) a listing of conferences/workshops related to human service computing and (2) the table of contents of recent publications received by the CUSS Network. It will also carry the information that will appear in future CUSS newsletters. There are no user fees, however, those wishing to send national or international mail must first make a deposit. The UTA Node is also the node which coordinates the CUSS network, does the network accounting, and contains the membership roster.

Net/Node: 107/240

Board #: (516) 228-7938

Board Name & Details:

Operator: Gunther R. Geiss, Professor, Adelphi U., School of Social Work, Garden City, NY 11530

Work Phone No: (516) 228-7915/228 7900)

This node will feature the Skills Bank data—information on colleagues: interests, abilities and experience levels as per the questionnaire run periodically in the CUSSNET Newsletter. Its purpose is to help us find one another by skills, equipment or software experience, by job, by interests, etc. in order to facilitate technology transfer—by expertise, by concept or by lock, stock and barrel. Our objective is to eventually permit searching of the data base directly and updating of the data by automated questionnaire presented via FIDO. For the time being we will simply try to be more responsive to inquiries received via FIDONET/CUSSNET as we work at opening the access to our data.

Locally, we will be providing agencies in the human services with access to specialized information resources developed by the various activities that the school sponsors. Our Social Services Center has information and referral materials for pre- and post-mastectomy patients, for victims of crime, especially rape victims, and for other special problems. The Social Policy Center publishes Social Policy Notes—a newsletter devoted to policy issues which we expect to carry on-line. It is also working with the Physicians For Social Responsibility in developing a Peace Center and we will support that activity. Our Senior Connections Project provides opportunities for senior citizen volunteers to work in libraries with social work and library science students in providing information and referral services to their senior colleagues. As appropriate we will be disseminating the experience gained from that activity.

Net/Node: [to be designated]

Board #: (817) 649-2857

Board Name & Details: DD Tech Library 24 hrs/day, 300-2400 baud

Operator: Carrie Brown, Bioengineering Program, ARC/US, 2501 Avenue J., Arlington, TX 76011

Work Phone No: (817) 640-0204

This CUSSnet Node, operational in October 1986, will be located in the Bioengineering Department of the U.S. Headquarters of the Association for Retarded Citizens in Arlington, TX. It will carry information related to computing for persons with developmental disabilities. Through the outside (O) feature of FIDO, users will be able to search a database of developmental disability computing resources. The database contains files on experts, vendors, publications, and local technology users. Its development was sponsored by grants from the Texas Planning Council for Developmental Disabilities.

Answers to some questions about CUSSnet and FIDONET by Dick Schoech

Do I need CUSSnet?

If you or your agency presently work with a computer and want to stay in touch with others in the human services who use computers in their work, then CUSSnet makes sense. It also makes sense if you plan on purchasing a computer or developing a computerized information system. CUSSnet offers information and support. CUSSnet is inexpensive, but it may take some time and effort to get the connections and information you are looking for. CUSSnet is a network which is as rich as its members make it. If everyone expects to get good information off without contributing good information to the system, everyone will be disappointed.

How much will it cost me to use CUSSnet?

The answer is similar to that for the question "How much will it cost me to use the U.S. mail system." If you are in a city with a friendly CUSSnet node, you may get all the benefits of CUSSnet for nothing. Some bulletin boards charge a nominal fee for their services. Typical amounts that FIDONETs charge are \$10-\$15 for 6 months logon, 25-50 cents per 45 line message for non local mail. File transfers depend on the length of the file. Many Bulletin Board users have found that paying the sysop is a wise practice because it helps prevent burnout and improves the quality of the uploads and downloads.

What hardware software do I need?

Most communications software will work with FIDO. Ask the dealer where you bought your computer for their recommendation. If you do not have any, it is not necessary to go out and buy a package. Most bulletin boards contain several excellent "shareware" MS-DOS communication packages such as PC Talk, Qmodem, and Procomm. With shareware, you are encouraged to get a copy of the software and try it out. If you like it, then you send \$15 or \$30 to the developer to help cover enhancements, etc.

If you have a dumb terminal, set it for 1200 baud, 8 data bits, 1 stop bit and no parity. If you have a computer, a communication software package is necessary.

What is the CUSSnet Poll?

FIDO software has the capacity for any node to call another node and pick up specially designated mail. If a poll has been set up among a group of FIDONET nodes, mail can be sent to one computer and automatically picked up (polled) each week by many computers. Thus, one can conveniently distribute mail each week to many people by one phone call. The poll allows maximum distribution of mail with minimum charges to the sender and receiver.

All CUSSnet nodes participate in a poll. If you have no CUSSnet node near you, you may be able to convince a local FIDO sysop to each week poll Steve Ice's Node in Seattle. Send Steve a message at 138/35 for details. You can also send Steve a message that will go out to all nodes polling his system. Sysops and others pay the phone bill for picking up the poll, so I suggest you not use it for advertisements and meaningless messages. Steve will discard messages which are not suitable. Bill Albritten runs a poll for those interested in higher education news.

How do I find the Net Node of other CUSS members?

At present the only way to find this listing is by calling one of the CUSSnet nodes. Each should maintain a listing of the net/nodes of CUSS members. Here is the list as we begin. Other CUSS network members may have net/node numbers, however, I do not have them.

Net/Nodes of members of the CUSS Network

Mike King	107/37
Dale McDonald	111/381
Kim Lambert	111/381
Dean Luse	115/396
Tom Neudecker	129/384

Do not send private mail until you know that you have the person's name precisely as they are listed on the board. Fido checks for mail by doing a precise match on first and last name. Messages where the name does not match the intended receiver just sit in limbo if they are sent as private mail.

I have logged on to a CUSSnet node and seen a "DEMO" interviewing program I want to try out. How do I download it?

If a file is a text file and not compressed using arc or another program, you can type the file and set your printer or computer to capture what appears on the screen. If the file is an executable computer program, then the sending and receiving computer must have software that use the same protocols (agreed upon transmitting methods). FIDO supports most protocols used in the microcomputer world. You must read the manual of your communications software to see what you need to do to download files.

I notices that many utilities and games I need for my work end in the extension .arc, .lqc or .lbr. When download, they do not seem to work on my computer. What am I doing wrong?

Most BBS files have extensions such as: arc, cqm, eqe, lbr, lqr, or tqt. The meaning of these extensions follows. The following description of these extensions applies only to computers running MS-DOS or compatible operating systems. I am not familiar with similar programs for those running CP/M TRS-DOS, APPLE DOS. If you know of any similar non MS-DOS programs, please send them.

A "q" in the extension means the file has been squeezed by a software utility to reduce its size. You must download this utility (NUSQ.COM) and its accompanying documentation (NUSQ.DOC) to unsqueeze the software before you can use it. Then, type NUSQ followed by the name of the file you want to unsqueeze.

Lbr or just "l" in the extension means the file is a library of many smaller files. The file was constructed using one of the library utilities and you must unlibrary the file before you can use it. Try a program such as LU8640.exe and LU8640.doc to unlibrary a file. A file can be both squeezed and librated, it may have lqr in the extension.

ARC or A in the file extension means has been archived. This is a process which both squeezes and libraries files in one operation. You must use an archive utility to unarchive the file before you can use it. Try downloading arc.eqe or arc512.arc (or a later version) to unarchive any file. Type arc and the instructions for using the archive utility will be provided. Basically to unarchive you type the following:

```
ARC X fn
```

where fn is the name of the file to unarchive.

How can I become a CUSSnet node?

First, you need an MS-DOS machine that you can leave on day and night to receive user calls and send and receive mail. A auto answer Hayes compatible 1200 or 2400 baud modem is necessary. A hard disk and good surge protector are recom-

mended. Then ask yourself some basic questions. Do you want to increase your communications with peers locally and nationally? Can you devote a couple of days to get the system set up. Do you have several hours a week to keep the system running? If you decide you have the equipment, time, and energy to become a node, send a message to Steve Ice (see CUSSnet nodes) requesting initial information. Steve will provide the remaining details.

Many CUSSnet nodes see themselves as a resource for local human service professionals and community agencies. If your agency has as its goal the providing of resources to the community, e.g., the Assn. for Retarded Citizens, CUSSnet offers a convenient mechanism.

FIDO'S Users Manual by Tom Jennings

FidoBBS is a Bulletin Board system that takes full advantage of MSDOS version 2. Most of the features were modeled after the usual CBBS and RBBS software, since the command system is so popular and familiar.

The user interface is pretty similar to other Bulletin Board systems, to eliminate the pain of totally relearning a new command set. All are intrinsic commands; both for simplicity and security. (User uploaded files, such as a debugger, cannot be executed.)

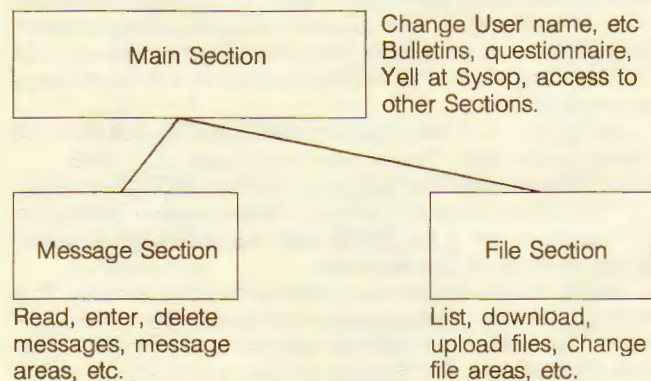
There are three help levels; the default for new callers is NOVICE. This provides a small menu of commands, and usually gives further description as commands are executed.

REGULAR help is full prompts, but does not tell which command has just been executed, etc. Useful for after you understand the structure, but have not memorized all the command mnemonics.

EXPERT help is only the simple single letter prompts. Once you are very familiar with Fido, this will make using it very fast.

Regardless of help level, you can enter ? at almost any point for a list of the options at that point.

From the Main Section, all of Fido's available commands can be accessed. The actual commands are described in detail below. Fido is arranged into three sections:



Commands

All commands in all areas are one letter, though some require further arguments or options. Most command allow entering the further arguments right after the command key; if not, or if not supplied, each necessary component is prompted for, usually with help available at each point.

For instance, to download a file you must enter the D command, the download method (one of six) then the filename. If you entered D, then Fido would ask for the download method. After that, it asks for the filename. Once you become familiar with it, you can enter it all as:

D X FILENAME.EXE

All on one line, skipping the prompts. This works for most commands.

All commands can be aborted with a Q or a blank line.

All Sections

The following are commands that are available in all Sections.

G — GoodBye

Logoff the system, optionally leave a private message to the sysop. If a message is left, it goes into the special message area (in system area 0) that is accessible only by the sysop. The usual message editor is available for comments.

S — Statistics

This command lists the time on the system, time remaining, etc. Also, depending on the area, it will list further information.

Files Area

Statistics also lists the free space left on the default drive.

Message Area

Optionally lists messages to or from this caller.

FidoNet Area

As in Message areas, and also lists FidoNet statistics.

Main Menu

This is the default section after signon, right after the Bulletins and quotations. From here, the "system" type commands are accessed, such as Change user settings, etc. The commands accessible from here are described below.

M Message Section

F File Section

Y Yell at the Sysop

A Answer a questionnaire

B Get the Bulletin again

C Change User settings

U Display the User List

G Goodbye, logoff

S Statistics

M — Message-Area

Enter the message section. From there, the message areas can be accessed.

F — Files-Area

Similar to Message-Area, but where the upload and download commands are.

A — Answer-Questionnaire

If there is a questionnaire in the system, the caller gets to fill one out with this command. A questionnaire is an text pseudo-language file, described in the Questionnaire section.

C — Change User

A small sub-menu of commands to change various user settings, such as signon name, password, screen dimensions, etc.

U Users name

C City and State

P Password

W Width of screen

L Length of screen

H Help level

M "More?" On and Off

T Tab expansion On and Off

N Nulls, 0—20

Users can change their name, city and state, and password at any time. (You can prevent this by setting the privilege level of the C command high.)

NOTE: For security reasons, when the callers name is changed, the entire users list is searched to make sure the name is unique. This is to prevent a caller from changing their name to say, sysop, which would allow them to read private messages to sysop.

The screen dimensions are used by the page pauser ("More?") and the message system. Messages are listed to fit within the set screen boundaries, and message entry is done via a word wrap editor. If "More?" is ON, then Fido will pause after each screenful. All of the command prompts are made to fit within this.

Help level is either NOVICE, REGULAR or EXPERT. NOVICE is the default; it causes all prompts to be displayed fully, and each command to be described with a one liner. REGULAR is similar, but does not list the entire wordy prompt. EXPERT is almost no prompt at all.

"More?" on and off controls whether Fido asks "More?" every screenful.

Tab expansion converts all tabs sent into spaces, for those systems that cannot handle tabs.

Fido can be set to send nulls after each linefeed. It defaults to 0 nulls.

B — Bulletin

This just displays the signon bulletin, BULLETIN.BBS again.

Y — Yell at the Sysop (Not available on Fido10)

By yelling, the caller can attempt to contact the sysop. It beeps for 30 seconds, and if the sysop does not respond by then, supplies the message "Sysop not available" to the user.

The sysop can chat with the user at any time.

U — Users List (Not available on Fido10)

Lists the names of all current callers to the system. Not very useful.

G — Goodbye

Terminates the call. It is not really necessary; however, callers seem to get upset when they cannot figure out how to log off, so there it is. It also allows entering a private message to the sysop. After (optionally) entering a message, it causes a disconnect, exactly what would have happened if the caller just hung up.

Message and Mail Section

The Message Section is accessed by the M command from the Main Menu. All message commands are available here. Return to the Main Menu is via the M command.

M Return to Main Section
G Goodbye
A Area-Change
R Read messages
E Enter a Message
K Kill (delete) a message
L List Messages
S Statistics

A — Area-Change

Change the current message area. If an area number is entered after the A, that area is selected if available. If not, a list of areas is displayed, from which you may choose one.

If a new area is selected, then the messages there are counted (why it says "Wait ...") and if it's the first time you've selected that area, asks if you want to list mail addressed to you. Nothing happens if you select the same area, or blank line or Q.

The mail search searches all messages, newest to oldest, and lists: New message to you (ones you haven't read yet) Old messages to you (ones you have read) and messages you have entered. Typing Control-C or Control-K aborts the search. If there are lots of messages in any of the above categories, it reminds you to Kill some.

The message area numbers displayed may not be sequential. Each area has an associated privilege level and if the users privilege is not high enough, that area will not be displayed nor available.

L — List Messages

Only the message headers are listed. A starting number is requested; this can be:

An ordinary number

A number followed by + or— —itself.

If just a number is entered, messages are listed starting at that one, towards the highest message.

A number followed by + or— controls the direction messages are listed in. + is redundant.— means list backwards; 100- then means start listing at 100, list towards 1.

— means list from the highest message towards the lowest. This is the most useful, and for some reason the least used. If you have called before, this is the easiest way to see any new messages.

R — Read

Actually a small menu by itself. From here messages can be read, entered, killed, replied to, etc. See the descriptions of the Kill and Enter commands for details on those.

Entering a message number reads that message. N (Next) reads the next highest message, and P (Previous) reads the next lowest message. Hitting CR repeats the previous N or P; if neither was used, then it defaults to P.

* is a special message number. It means the highest message number.

+ and— are little used keys, but one of the most powerful message features. Messages can have, and be, replies. (See R command below.) Messages created with R are linked to other messages. For example, a message about an item for sale may have a reply. If you come across the original for sale message, it will say "See also #nnn, use + key" if it has a reply. Entering a + at this point will take you directly to that message. This message will say "Reply to #xxx, use—key". Entering— will take you back to the original message.

There is no limit to the number of messages that can be linked this way. Further replies are added to the end, and if one in the middle (or either end) is Killed, the string of messages is "patched" to maintain continuity.

This is my favorite feature (dreamed up by John Madill) and I am slightly annoyed that no one uses it.

R Replies to the current message. It acts basically like Entering a message, but automatically fills in the "To:" field, and links it into the original message.

If you are replying to a message in the Mail area, it also fills in the destination system. The message will be mailed out that night.

Please read about Entering messages, further below.

E enters a message in the normal fashion.

E — Enter a Message

You fill in the To:, From:, Subject: fields, etc, then the main body of the message. After terminating the message, commands can be used to save, abort, edit, etc.

If the area is a FidoNet Mail area, then in order to enter a message, you must select the system to send it to at the prompt. If you do not have enough credit, then Fido will not let you send a message to that system. If you do, then Fido will deduct the cost of the message from your credit. (Credit not presently needed on Fido10.)

Message text entry is done with a word wrap editor. If the screen width is set properly (C command in Main Menu) then this is about as close to a full screen editor as you can get through a modem (on current DOSs anyway.)

Like WordStar, text is entered continuously without carriage returns. Words that would go past the left edge are wrapped to the next line. Carriage returns can be used to form paragraphs as in WordStar. When entered this way, later reading of a message will conform to the callers screen width.

At the Enter Message command prompt, the options are:

C for continue. Add more to the message, adding to the end.

L lists the message so far.

T lets you change the To: field.

J lets you change the subject.

E edit a line. You enter the line number, then you are prompted for the Old string (what to change) then the New string (what to change it to). Both old string and new string can be anything that you can enter, except a carriage return.

NOTE: it is possible to edit a line such that it goes beyond the edge of the screen. It will list correctly after it is saved.

A aborts the message. You will be asked yes or no.

S saves the message. The message is written out to disk, and the highest message number, etc is updated.

K — Kill

Deletes the message. Will not let you delete messages that are not To: you or From: you, unless you are the sysop. If the message you killed was mail to a remote system and it was not sent yet, you get your credit back; you are not charged for that message.

I — Index

Terrible name, but too bad. Prompts you for a string. It then searches all messages, newest to oldest for the thing you enter. It looks in the "To:", "From:", or "Subject:" fields. If the string you enter is in any one of those parts of the message, the header of the message will be listed.

Typing Control-C aborts the search. An insensitive sliding match is done; ON matches TONY or PITON, etc. Each message header matching is listed, then a list of all matching message numbers.

? will match any character. For example, if there are the following messages in the system:

#100 From: Joe Bungpop

To: All

Subject: Musical Instruments

#102 From: No Body

To: W.S. Burroughs

Subject: Guns

#200 From: All

To: Board

Subject: Music

If you enter MUS, it will list messages 100 and 200, as MUS is contained in the Subject: fields of both. If you had entered BU, then it would list messages 100 and 102, as it would match "Bungpop" and Burroughs". Entering B??R would cause #102 and #200 to be listed, as B??R matches BURroughs and BOARD.

File Section

The file Section contain all the file oriented commands for downloading, uploading, etc. The M command returns to the Main Menu.

M Main Section
G Goodbye
A Area-Change
F List Files
L Locate specific Files
D Download
U Upload
R Raw-List
K Kill a file
T Type a file

A — Area-Change

Similar in operation to the Message Area-Change. If a valid area number is entered, it is selected directly, otherwise a list is displayed.

Like the message areas, there may be numbers missing from the sequence. These are either blank paths or high privilege areas. If the caller is the sysop, then area 0 is available. Non-Sysop callers can never access area 0.

L — Locate

Given a file specifier (wildcards recommended) it searches through all file directories for the filename, and lists all occurrences of it.

This is not the general purpose list-files command.

F — Files

Lists the files in the current directory. If no specifier is given, it lists all files, otherwise only matching ones. The size of the file and the description is displayed after the filename.

If "MISSING" is displayed instead of the file size, then the file is not in the directory.

T — Type

Very simple. Displays an ASCII file on the screen. It statistically checks the file to make sure it is a text file.

U — Upload

Upload a file or files to Fido. I will not even attempt to document all the upload methods. Suffice to say you select the upload method and do it.

The total uploads made is kept in the users record. These count towards further downloads, by effectively raising the download limit on a 1 for 1 basis. It will not give you credit however. There is no limit on uploads.

If a file is uploaded with XMODEM, then Fido asks for a description of that file, and adds this to the FILES.BBS file list in the proper area. This can be setup in a number of ways; please refer to Fido's Installation Manual.

D — Download

Again, pick the method and do it. Before the download starts, Fido checks time limits and K byte limits, and prevents too long downloads. Uploading will remove some of the download limit.

Control Characters

Control characters are used by Fido for editing command lines, pausing and aborting commands. Control-C and Control-K always are identical and have the same effect:

Control-C Aborts anything

Control-K Aborts anything

Control-S pauses the display. Any key except a second Control-S will let it continue.

When not using the word wrap message editor, Fido allows simple editing of command lines. It assumes the user's terminal can support at least backspace. It supports:

^C, ^X, ^U, ^Y

Delete the entire line.

^R

Restore the previous line, from last use or deletion. (Most useful.)

^S, ^G, ^H, DEL

Delete one character to the left.

^D

Restore one character.

ESC, CR, LFO Enter the line.

FIDO Brings Out the Crazies compiled by Dick Schoech

A system operator soon finds the group of BBS users contain the same number of "crazies" as the population at large. My board has been down on and off for the last two weeks as someone had found out a way to lock up my computer through FIDO. They like to crash the system Friday night so that no one can use it over the weekend. Another reminder is the profanity which some users leave in the questionnaire and message areas. Others write long rambling incoherent messages. However, the worst are those who act normal, but have malicious intent. Let the following short articles serve as a reminder that we need all the self-help software we can get.

THE DIRTY DOZEN **Issue #3: Oct 30th, 1985** An Uploaded Program Alert List Compiled by Tom Neff

Recently, many unlawfully copied or modified programs have appeared on various IBM PC bulletin boards across the country. THE DIRTY DOZEN is a list of known examples.

There are three major categories of "bogusware": commercial pirate jobs, unauthorized "hacks" of otherwise legitimate freeware programs, and malicious "TROJAN" programs which damage your system. A more detailed explanation of each category is given below.

Sysops: Please be careful with the files you post in your download libraries! Be suspicious when an uploaded game or disk utility appears to be of professional quality, yet doesn't include the author's name, address, and distribution policy. Such programs are probably NOT public domain!

The BBS community is already under legislative threat at the State and Federal level. We cannot fight this trend effectively while our directories sit stocked with "cracked" Sega games, 1-2-3 copiers and Wargames dialers! Let's demonstrate a little social responsibility by cleaning up our download libraries. If you have any of these files on your system, please delete them and post "blocking" dummy file entries like this one:

ZAXXON.COM DELETED!! NOT PUBLIC DOMAIN!!

THE DIRTY DOZEN's brief is simultaneously to bring this issue to the attention of more Sysops and users, and to act as an information clearing-house for the latest known examples of "bogusware." I need lots of help keeping up with the busy warren of pirates and careless uploaders out there; see the end of this article for information on how to reach me with new information.

A final word on TROJANS: I have been hearing more and more reports of these "worm" programs, from all directions. While I don't doubt their existence (and all that I have heard of are listed below), let's not get hysterical.

Remember, a Trojan rumor is a lot easier to START than it is to STOP. Some people have accused "legitimate" *joke* programs, like DRAIN (which pretends to be gurgling excess water out of your A drive) of being "killers." Even if a program locks up your system, it isn't necessarily Trojan; it might not like co-residing with Superkey, or your graphics card. Ask around a little before you announce something as Trojan. I would appreciate a bagged specimen of any real Trojan program you find.

NOTE: The file extensions below refer to the unpacked, executable file in most cases. Remember that these programs may arrive on your system as ARC or LBR archives, with or without SQueezing.

1DIR.COM	PIRATED	This is "The ONE Dir," a commercial shell sold with a Hard Disk subsystem.
21C.EXE	PIRATED	From the IBM Game Library
ARC.COM	HACKED	Someone keeps running SPACEMAKER or a similar

AXX.EXE PIRATED

BUSHIDO PIRATED
COPYRITE PIRATED

DEB88.EXE PIRATED
DIGGER.COM PIRATED
DOSKNOWS.EXE *TROJAN*

EGABTR *TROJAN*

F15 PIRATED
FILER.EXE *TROJAN*

GREMLINS PIRATED
HARDHAT PIRATED
JOUST PIRATED
KONG PIRATED
LIST60 HACKED

NOVATRON PIRATED
PCBOSS PIRATED
POOL.ARC PIRATED

PSHIFT PIRATED
PSRD.ARC PIRATED
QMDM110.ARC HACKED

ROBOTRON PIRATED
ROGUE.EXE PIRATED
SECRET.BAS *TROJAN*

EXE squeezer on SEA, Inc.'s ARC archive program, then uploading the resulting COM file to BBS's without the author's permission. Not kosher, whoever you are. SEA won't support the COM version — this is an unauthorized modification. really AUTODEX, a commercial file manager

Really Quaid Software's COPYWRITE
DeSmet "C" debugger

I'm still tracking this one down — apparently someone wrote a FAT killer and re-named it DOSKNOWS.EXE, so it would be confused with the real, harmless DOSKNOWS system-status utility. All I know for sure is that the REAL DOSKNOWS.EXE is 5376 bytes long. If you see something called DOSKNOWS that isn't close to that size, sound the alarm. More info on this one is welcomed — a bagged specimen especially. BEWARE! Description says something like "improve your EGA display," but when run it deletes everything in sight and prints "Arf! Arf! Got you!"

Labelled "Great new filing system"—wiped out 20 meg HD. Looking for confirmation on this.

Vern Buerg's LIST 5.1, patched to read 6.0.

Really PC-POOL, commercial game really MEMORY SHIFT IBM utility (redirects PrtSc) ONLY versions 1.10 and 1.10A! They are QMDM110A.ARC copies of 1.09, hacked to read 1.10. There have been rumors of a worm in 1.10, but I haven't seen any evidence of it. Other versions are OK.

BEWARE!! This may be posted with a note saying it doesn't seem to work, and would someone please try it; when you do, it formats your disks.

FIDO Brings Out The Crazyies, cont.

SEE	PIRATED	DeSmet editor
SFX	PIRATED	really AUTODEX (again!)
SM.COM	PIRATED	Realia's SPACE MAKER utility
SMAP	PIRATED	IBM Internal utility, with the copyright notice blanked out and real author's name () replaced by "Dorn W. Stickle".
SPYHUNT	PIRATED	
STARGATE.EXE	PIRATED	Hacked to say "PUBLIC DOMAIN BY ATARI," but don't you believe it! Don't confuse this 57K EXE file with the public domain STARGATE MERCHANT game, which is a little 12K BASIC program by G. E. Wolfworth.
STRIPES.EXE	*TROJAN*	BEWARE SYSOPS!! This one draws an American flag (nice touch), but meanwhile it's busy copying your RBBS-PC.DEF to another file (STRIPES.BQS) so Bozo can log in later, download STRIPES.BQS, and steal all your passwords. Nice, huh! Really DOS TREE DISPLAY (IBM utility)
TREED.COM	PIRATED	This is the disk killer Jerry Pournelle told us about in BYTE Magazine. I have never seen it.
VDIR.COM	*TROJAN*	Pre-release version of DOS FILE TRACKER, an IBM "Personally Developed" program.
XDIR	PIRATED	Hacked (sound familiar?) to say "PUBLIC DOMAIN BY SEGA." Sorry, Charlie!
ZAXXON	PIRATED	

CATEGORIES:

PIRATED This is an illegal copy of a commercial program product. Examples, a "cracked" (de-protected) game, an accidentally or deliberately distributed compiler, editor or utility; sometimes a Beta test copy of a program under development, handed out by a disgruntled employee or dishonest beta tester. In the latter case, the program in question may never make it to market due to the pirating! (But it's still unlawful to distribute it.) In the case of games, there's a tendency for the pirate to patch a clumsy "PUBLIC DOMAIN" notice over top of the original copyright: see my TROJANPD.ART article for a detailed example.

HACKED An unlawfully modified copy of an otherwise legitimate freeware or user-supported program. It is illegal to distribute a modified copy of someone else's work without their permission. If the modifying party has obtained that permission, it should be mentioned in the program's display or documentation.

TROJAN BEWARE!! These programs are written and uploaded by people with the LSD-in-the-reservoir mentality, and cause some form of DAMAGE to your system if you're unwary enough to run them. It is IMPERATIVE that you let me know about any new examples of these that you find.

If you have any additions or corrections for this list, send them to me (Tom Neff) at any of the following places: If you have any additions or corrections for this list, send them to me (Tom Neff) at any of the following places:

- * CompuServe User ID [76556,2536]
(via Easyplex electronic mail or the IBM Novice Forum, GO IBMNOV)
- * Atlantic Palisades RBBS (718-238-7855)
- * DEC-WARE Fido (Net 107/Node 1)

This message appeared on DFW Fido 130/0**WARNING**

One of the nuts got out again!
Beware the file U-HDISK.COM. It has hit some of the Dallas FIDOs. This is a Trojan Horse program, billed as a great hard disk utility, will destroy all files on the disk. Legal pursuit of the author is underway.....

Whiz Kids and Communications by Richard P. Wilkes, From Fidonews, 19 May 1986.

During the past eight years, I have been heavily involved with "bulletin board" systems running on micros and mainframes. I'd like to give a few examples of the destructiveness of many of these "kids."

Most have probably heard of or called an RCP/M. Five years ago, I wrote a similar type system for a TRS-80. This software ran for 3.5 years without a problem. But now, as more and more potential crackers have access to communications equipment, this system has been crashed repeatedly.

When I was back in high school, the big thing was to find a bug in the OS. But, once we found it, instead of using it to keep the system flat on its back, we documented it and sometimes even fixed it. Doesn't seem like that is the case anymore...

On this system, some caller breaks in, deletes all the files, and then writes a program which keeps the drives selected; this burns out the motors on 5.25" drives, especially when they run all night. This was done so often, the system was brought down for a long time (until a trace could be put on the dial-up).

I run my own system and publish software that turns a TRS-80 into a mail and message system. I have sat and watched callers SYSTEMATICALLY attack the system. This takes several forms:

- 1) All commands, series of commands, and options are tried.
- 2) The system is assaulted with all manners of control sequences, trying to get some unexpected result.
- 3) I have even seen someone drop and then re-initiate carrier to see if they could get somewhere.

If that doesn't work, they begin to crack passwords. They know what they are doing... in one case, I watched as someone went through what looked like the beginning of the Webster's Dictionary trying to get superuser status. Since most people use words, not a bad idea, right? Less intelligent ones start with A and just try and try and try.

Oh, by the way, they are definitely using auto-dial modems and software to do this.

If all else fails, they simply tie up the system. They choose the most obviously disk intensive command, and execute it again and again. Since many systems only timeout after inactivity, this could tie up the system for many hours (not to mention the wear and tear on the equipment).

These little bastards certainly aren't doing anything constructive.

Seven years ago, I called up MIT-MC and got a tourist account which I kept for three years until I got an authorized one. It was a free account on an open system; the only strings were

- that I use it after hours and not tie up too many resources. But things have changed. You can't have totally open systems anymore without many precautions and almost constant supervision. For example, I have had to add many security features to these small systems:

1) Three attempts and you lose the connection. Nine illegal attempts at a user name without a correct login causes a suspension. Anyone trying to login under that name is immediately suspended (with some exceptions).

2) Connection limited use.

3) Application process reviewed by sysop before someone can use all features, or even use the system.

4) Isolate the user completely from all operating system functions, even to the point of modifying the DOS to hang or reset when necessary.

I do have one little "joke" up my sleeve. There is an account on these systems called SYSOP. Now, if I was going to break in, that is where I would start. I've put a little patch into my host. After 39 incorrect tries on that account, IT ALLOWS THE CALLER THROUGH. He gets a welcome message and Sysop command:. He can renumber messages, change the date and time, even delete from the directory, change user names and passwords. He can do all the things that a sysop can do. Of course, he isn't *really* doing anything (he he he!) After, oh say, 10 minutes, output stops. 24 linefeeds are issued and the following appears (slowly, as if from a TTY):

HELLO INTRUDER! Gee, I want to thank you for hanging around for the past ten minutes while we had a chance to trace your call. It is too bad that some people just can't live responsibly. But, I guess that is the reason we have the police and FBI, right? 2disconnect3

I don't know what the answer is, but I do know that treating this type of behavior casually must be stopped. There will always be people who will try to circumvent all security measures, sometimes out of curiosity, but recently more often with the intention of doing something destructive.

It's too bad that the days of the unsecured systems is coming to a close, but with hundreds of people scanning the exchanges with their auto-dial modems looking for carriers, armed with 10 pages of pirated MCI access codes, we don't have much choice.

From Fidonews 30 Jun 1986

*** WARNING ***

TROJAN HORSE ALERT

FIDOPROM.COM

Well, we have a new one. This program claims to be written by Tom Jennings:

Welcome to the Fido prompt writer

Written by: Tom Jennings

Intended for use with Fido Versions 11v-11w ONLY

Copyright 1986, Tom Jennings

I just got off the phone with Tom, and HE DID NOT WRITE IT! The first clue was that it is written in TURBO PASCAL. Tom only writes in C or ASM. Next, the cute dialog in the file is atypical of what Tom does. From looking at the strings in the program (using CHK4BOMB), I guess that it will either delete your USER.BBS file, or copy it to another file (REPORTS.PAS), where it could be downloaded at some later date. Interestingly enough, another "new user" was on the next day, searching all the file areas for files of the type indicated in the program.

It was uploaded to both 109/74 and 109/483 within 1 hour of each other. If you have received a copy of this "gift", I would appreciate getting any information you might have on the fool who uploaded it.

And, if you have run it, I would like to know what happened.

SYSOP

109/74—The Bear's Den

109/483—Wash-A-RUG

The following message is from FIDO 22 in St. Louis.

21 JUN 86

WARNING: DO NOT RUN A PROGRAM CALLED FIDOPROM.COM (FIDO PROMPT WRITER). IT IS A variant ON THE STRIPES TROJAN HORSE AND CLAIMS AUTHOR AS TOM JENNINGS AND IS WRITTEN IN TURBO.

Please look for and delete any copies of this program you may find. Please identify and persons uploading this program to us all.

Selected Items from FIDONET News

Fidonet has a weekly newsletter which is useful for rapidly distributing information. The following are articles of interest out of Fidonews.

FIDONET News

Editor in Chief:

Thom Henderson

Chief Procrastinator Emeritus:

Tom Jennings

FidoNews is the official newsletter of the International FidoNet Association, and is published weekly by SEAdog Leader, node 1/1.

Duff Smith, 109/624

Deaf TTY service for the Fido network?

I hope to generate interest in accommodating the Deaf citizens owning a TTY (teletype device).

I believe there is a huge market of fairly isolated deaf people who could greatly benefit from Fido service—and the hardware is basically compatible, though it runs slower than the 300 Baud lower limit.

The only necessary modification to Fido is that it recognize the lower Baud rate.

Hardware modification to any Fido board that supports 300 Baud is unnecessary, as the bell 300 baud standard provides 0-300 Baud.

Fidonews

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24 Mar 1986

Announcing a new FIDO

Fido 107/601

(215) 367-6558

SYSOPS

Annette Sine-Weilnau

Peter Weilnau

There is a new FIDO on the East Coast! It's free, public and already has a good assortment of PC and Macintosh public domain software. So far it's only 20 meg and 1200 baud, but the 2400 will soon be here, and we promise to add more storage when it's needed.

What's the catch? There is none, but, we do have a special theme for "Stone Wall". We think that computer technology can be used to help fight some of mankind's basic problems. So, we chose to help with the hunger problem. Now, you might ask "How in the world can a BBS help fight the hunger problem?" We have some ideas that we're going to try, and with your help, we hope to find a lot more ideas in the future.

Initially, The Stone Wall BBS will carry information about individuals and small organizations that have come up with noteworthy ideas and methods to help fight hunger. But we're sure there are many more things a BBS can do to help with these tough problems. So, if you have any ideas how computer technology can help, please share them with us, after all, that's what we're here for!

We think that by carrying extensive public domain libraries, we can attract more people—which in turn helps to spread ideas and increase our effectiveness. So any software contributions you can make, will make a big difference. See how easy it is to help!

We hope that our public service orientation will help bring credibility to the BBSing community. After all, we sure do need some good press. And your support will contribute to maintaining the freedom that Bulletin Boards enjoy today.

Fidonews

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10 Feb 1986

Looking for Old Talkies

It occurred to me that a LOT of radio stations are switching from commercial two way gear to cellular mobile phones. Makes sense, faster, better quality, easier to put on the air, less maintenance. And I know that right now, anyway, used two-way gear is a drag on the market. Well, if your station is making the switch and you'd like to get rid of the old walkie-talkies and get a nice tax deduction, consider giving them to the American Council of the Blind.

Every year we have to rent them for our annual convention at rip-off prices, but we just don't have the free cash right now to buy our own. Our annual convention has grown to the point where we have to have 'em just to keep functioning. Going to look for someone, or sticking a message up on a cork board just doesn't work when you are dealing with a meeting of 3,000 people, 95% of them blind. Plus our next convention, in Knoxville, Tennessee, in July, will be spread out between two major hotels!

We are interested in most any kind of used commercial two-way gear, VHF or UHF. We also would be interested in chargers, batteries, cases, spare rubber duckies, etcetera. Just send Fidomail to Vernon Henley, Fido 147/1 and I will get right back to about your donation. Also, be watching down in this direction for a burst of interest in Fido from blind users. Our monthly magazine, the Braille Forum, will soon carry an article about Fido, and there are several other projects in the works. If you or someone you know would like a free subscription, just drop me a line at the same address. You need not be blind to receive the magazine. Please specify large print, cassette or Braille (the cassette requires a special type player that usually only a blind person would have.)

I would be pleased to answer any or all questions concerning ACB or blindness in general for you, your users or their friends, relatives or acquaintances. If I don't know the answer, I usually know someone who does, and I love sending and receiving letters, so please feel free to direct any inquiry this way, no matter how off the wall it might be. (No matter what

it is, I've heard it before, probably.) Thanks for your consideration, and ask your boss about those talkies. It might be just the push he finally needs to make the jump to cellular.

—Vernon Henley, Fido 147/1
Chair, Board of Publications
American Council of the Blind
800-424-8666 (voice)

Call after 5:30 pm Eastern time for a free, pre-recorded update on legislative, administrative and judicial action concerning the blind and handicapped.

Postscript: Vernon Henley, who was setting up a CUSSnet node died recently in a house fire. We will miss him.

History of FIDOnet by Ken Kaplan, Tom Jennings, Ben Baker

This history was written in February 1985. Since then, FIDO has grown substantially from the 160 nodes to over 1000 nodes in about 10 continents. This edited version is included here to give you some idea of FIDO, its purpose, its founders, and its growth.

This is a long and convoluted document; it has been sorely needed for months now, and it finally got done. FidoNet is growing at a tremendous rate, and newer sysops don't have the information that us oldies (pre Sept 84 sysops) assume everyone knows; hence the history section here.

FidoNet is no longer just a piece of software; it has become complex organism. There are about 160 Fidos in FidoNet right now; this does not include Fidos being run as Bulletin Board only systems, just ones that you can converse with over the net. If the average number of users on each system is 300 people, you can start to guess at the scale of things today.

HISTORY: When FidoNet was first tested, there were two nodes: myself here at Fido #1 in San Francisco, and John Madill at Fido #2 in Baltimore. John and I did all of the testing and development for the first pass at FidoNet. Its purpose: to see if it could be done, merely for the fun of it, like ham radio. It quickly became useful; instead of trying to call each others' boards up to leave messages, or expensive voice phone calls, Fidonet messages became more or less routine.

This was version 7 of Fido sometime in June 84 or so; it did not have routing, file attach, retry control, error handling, cost accounting, log files, or any of the niceties since added. A packet was made, a call placed, the packet transferred, that was it. This was adequate for a month or two, when there were less than 20 nodes.

In August of 84, the number of nodes was approaching 30; the net was becoming clogged, believe it or not. FidoNet wasn't too smart about making calls then. With 30 systems, coordination became difficult; instead of a simple voice phone call to the (very few!) sysops to straighten out problems like modems not answering, wrong numbers, clock problems, etc, it took days to get the slightest problem repaired. There were by now six nodes in St. Louis, and Fido #1 was making separate phone calls for each, when obviously one could be made. Enter the beginnings of routing.

The "original" FidoNet was very simple and friendly; you told me at Fido #1 that you had a FidoNet node ready, I put you in the list, with your phone number, and people called up and downloaded the list; done!

Well ... at first, "everyone knew each other"; we were in more or less constant contact. However, when the node numbers got into the twenties, there were people bringing up FidoNodes who none of us knew. This was good, but it meant we were not in close contact anymore.

The Net started to deteriorate; every single week without fail there was at least one wrong number, usually two. To impress

on you the seriousness of wrong numbers in the node list, imagine you are a poor old lady, who every single night is getting phone calls EVERY TWO MINUTES AT 4:00AM, no one says anything, then hangs up. This actually happened; I would sit up and watch when there was mail that didn't go out for a week or two, and I'd pick up the phone after dialing, and was left in the embarrassing position of having to explain bulletin boards to an extremely tired, extremely annoyed person.

There were also cases where the new node really wasn't up yet, and the number given was a home phone to be used temporarily, but I'd forget that, and include it in the list anyway. Or the new node wasn't really up yet, and we'd all make calls to it and it would not answer, or worse, the modem would answer but the software wasn't running, and we'd get charged for the call.

This obviously could not go on. We had to have some way to make sure that at least the phone numbers were correct! I started a new policy; before giving out a node number and putting it in the list, I had to receive a FidoNet message from the new node, directly. This verified that at least the new Fido was half way running. At the time, Fido had a provision whereby Fido #1 could set the node number remotely; I'd send a message back, and presto! a new node was up.

Well, this didn't work properly either; at the same time, the Fido software was changing so rapidly, to accommodate all the changes (literally a version a day for a few weeks there) that I was losing new node requests, wrong numbers caused by illegible handwriting, all sorts of problems. Out of laziness I would still assign nodes "word of mouth", and got in the same trouble as before.

The people in St. Louis (Tony Clark, Ben Baker, Ken Kaplan, Jon Wichman, Mike Mellinger) had their local FidOs going strong, and understood what FidoNet did, how it worked, and what it was about. They volunteered to take over the node list, handle new node requests, and leave me with the software. They tightened up on the FidoNet message requirement, and in a few months, had the "error rate" (wrong numbers, etc) down to practically zero, where it is today.

Though I did the programming, Ken Kaplan, Ben Baker, and the crowd in St. Louis did much of the design and most of the testing of routing, forwarding, and local nets. They still remain the experts on the intricacies of routing, and help sysops set up local nets. They also maintain the nodelist, which is a text file containing all the names, phone numbers and other things on each node.

Please keep in mind the entire process, from two nodes to over 50, took only three months! Fifty nodes is more than it sounds; at that level it becomes a large scale project. FidoNet went from about 50 nodes in Sept 84 or so, to the current 160+ in Jan/Feb of 85.

FidoNet today is a network quickly approaching the levels of complexity of commercial networks, and has many more capabilities than many "mini" networks, such as USENET, which has no routing or hosts. Only ARPAnet has some of the features of FidoNet. The southern California local network is three levels deep, with hosts in Orange, LA, Ventura, San Bernardino and San Diego counties.

FidoNet is just too large today to run as an informal club. The potential for error is just too high to include numbers at random within the node list. I imagine we are in a predicament today what the radio amateur operators had a number of years ago.

The requirements for new FidoNet nodes are pretty minimal, and they appear to be arbitrary and harsh if you aren't aware of what's going on. This is to spell them out in detail, so everyone will understand the process.

FidoNet'S PURPOSE: Very simple; it is a hobby, a non-commercial network of computer hobbyists ("hackers", in the older, original meaning) who want to play with, and find uses for, packet switch networking. It is not a commercial venture in any way; FidoNet is totally supported by it's users and sysops,

and in many ways is similar to ham radio, in that other than a few "stiff" rules, each sysop runs their system in any way they please, for any reason they want.

I hope FidoNet is a bit clearer now; if you have any suggestions, or want to volunteer to help, please let us know. Our only interest is in keeping the node list correct and up to date; this simple list is what ties the entire net together.

"Virtual Offices" For Management Of The Mental Retardation Program and Their Essential Functions by Gordon C. Krantz, Consultant in Human Services, 8706—134th St. West, Apple Valley, MN 55124 (612) 431-3756.

(Ed Note: I had this article from for about a year, but held off on publication because I felt it pertained to networking and should be a part of this issue. I thank for his patience).

This is a description of what will be needed in order to manage the information and the office functions of a field team deployed by the Minnesota Department of Human Services (was Department of Public Welfare) to manage the statewide mental retardation program, as needed to implement the legislation of 1983.

BACKGROUND CAPSULE: The legislation and the realities that impelled it have given the Department additional responsibilities and additional staff to carry them out. A number of field representatives (Regional Services Specialist, RSSs) will be deployed regionally throughout the state, each dealing with several counties. They will do their work in the field, rather than working in offices with secretaries, and each will be responsible for new state functions in relation to services funded under Title XIX of Social Security, for technical assistance in case management, and for facilitating case management standards and caseload accountability. They will have to have ready access to, and accountability for, information about all the service resources in their areas and (insofar as they will have to access them) statewide.

This is a basic statement about what they will have to have in order to operate in the field, and what central office backing they will need.

BASIC NEEDS: These regional representatives will be without secretarial service for their routine paperwork and correspondence. They will have to be mobile, "Carrying their offices with them." They will have to have records, perhaps spare in content but of many kinds of things (caseloads, agencies, counties, perhaps service vacancies) and they must be capable of accessing specific records and of relating sets of records to each other. They will have to generate reports. They will need to correspond with the home office on a regular basis, and must transfer information to and from the state center.

The state center, itself, will need the capability of transmitting and accessing information used and generated by the field people. Further, it will have to carry out the statewide integration of information, and do the higher-order information management that is not readily portable.

The state center will have additional functions that relate this work to other Department units and sometimes to organizations outside the Department. A salient example of this kind of function is transmittal and receipt of data with the Department's Systems and Data Flow Division.

Finally, it will be necessary to tie the state office and the mobile "virtual" offices into a single, though distributed, entity. This will require ready communication capability.

MAJOR FUNCTIONS: The regional field staff of the Department could operate "in the field, out of the office," a familiar mode. More effectively, they could operate "in the field, in a virtual office," a newly possible mode, with full office functions available to them wherever they may be. This requires a portable, automated office that has the functions of record keeping and retrieval, correspondence, telephone communication, information management, and production of reports and

documents. These functions will be discussed here in the language of automated office function, classified into categories described as "software."

Several software capabilities will be needed, either as separate units or in a multi-function package.

WORD PROCESSING will be needed for correspondence, reports, and some notes. In general, most professional people no longer need secretaries for their routine work. They can dictate longer things to a word processing center, but they can personally keyboard correspondence and transmit either hard copy or its phoned electronic equivalent. All common word processor software will do what is needed for this function, when used in a microcomputer. (The professional person who will staff the virtual office must be willing and able to do elementary keyboard work. Since these are new positions, and since this skill is now common among professionals, they can be recruited with this as a requirement.)

A DATA BASE MANAGING SYSTEM will store the several kinds of information that the field people will use, an example being the resource inventory. A data base managing system (DBMS) will allow easy modification, relate data items to each other, and retrieve associated and computed data for inspection or for reports. For this purpose, the DBMS must have these characteristics.

1. Able to take a record with about 100 fields or variables (100 facts about each of the subjects of a file, such as a client). The requirement of 100 fields may be modified if the DBMS will EASILY allow relational or hierarchic data bases that can be merged in processing to achieve the necessary size.

2. Capable of being used by a person who isn't a programmer and will not learn a programming language. If a naive person can run the DBMS⁹ + T⁹ after a half day of instruction, this is easy enough.

3. (This is desired, but not essential) The DBMS should be able to access data matrixes that are not peculiar to itself. That is, it should be able to use data that were entered by a word processor or by a spreadsheet.

4. (Again not essential, but very much desired) The DBMS should output tabular summaries of the data, especially of raw data converted to interval. And it should be able to produce, in addition to the essential tallies and sums, simple descriptive and statistical summaries.

BULLETIN BOARD capability is essential. In this, instructions and other communication can be entered and stored at the convenience of the sender, and retrieved at the convenience of the receiver. This will facilitate supervision of the field staff as well as the access of field staff to information, and transmission of messages. It is needed to weld the statewide staff into a single entity.

SPREADSHEET software, unlike word processing and data management, is not essential. But it is highly useful, so that the field staff can try out (simulate) options and run situations over time.

SPECIAL PURPOSE capabilities are needed, such as programs to maintain checkbook-like accounts of not only money, but or non-monetary resources such as quotas. This may turn out to be one of the most necessary field functions in the management of statewide resources.

OPERATING SYSTEMS The operating system is the program that relates the central part of a computer to its peripherals, such as file storage discs, display screens, and printers for paper output. There are three common choices open here: CP/M, still the de facto standard of microcomputers; Apple DOS, used on the Apple; and the MS-DOS of the IBM personal computer. becoming common is the CP/M 86 operating system for 16-bit machines. Smaller and proprietary operating systems are too easily orphaned to be seriously considered.

The operating system dictates the specific software that can be used. The operating system is entailed in the choice of the hardware, though it is now becoming common for microcomputers to come equipped with more than one operating sys-

tem. The hardware commits one to a single operating system (except for those microcomputers that offer both CP/M and MS-DOS, or that have upgrades that run CP/M, MS-DOS, and CP/M 86). It would be good if the mental retardation service system could use the same operating system as does the rest of the Department's micros, MSDOS. Most hardware, of course, will require the software to be configured for that particular hardware even if the operating system is one of the three general ones.

If one is transmitting information by phone, the sending and receiving machines need not be identical or even have the same operating system. The problem of incompatibility is rapidly becoming a pseudo-problem. Because MRPD is a member of a network that can accept input from any common microcomputer and transmit it to any other common computer, all that is required is that text and data files be readable by the same family of software.

HARDWARE All of the foregoing implies that each of the field people will have a portable microcomputer with printer and integral telephone capability. That is precisely what is proposed here, because the system is one of the "information age" office. There are at least 25 portable microcomputers now on the market, most of which would serve the purposes as far as hardware itself is concerned. (There are many additional briefcase-sized micros on the market, but none of them is complete with multiple storage, modem, and printer.) Twenty of the portable micros have 64K or more RAM and 204K or more disc storage, a few have built-in printers, just about all of them can drive printers, and most can be linked by phone line (usually, with add-on equipment). The prices range from under \$1,000 to \$9,370, with most between \$1,795 to \$2,500 without a printer or \$2,500 to \$3,500 with printer. They weigh from 10 to 34 pounds, plus peripherals if any.

Fully portable microcomputers have become common within the last year, so that desk-top models are being displaced for even in-office use. Increasingly, portable microcomputers are "IBM-compatible" meaning that they can use software designed for the IBM Personal Computer; at least 16 portables have that compatibility now, some of them incompletely.

The central office in this system needs one or more microcomputers, perhaps a minicomputer, and linkage to the Department's mainframe. This last capability can be foregone initially, until the mainframe is made more capable of remote access; mainframe systems take months or years to set up, while micros can be set up in weeks and a system of several micros can use "cookie-cutter" setup.

THE BOTTOM LINE Clearly, there is now available the technical capability necessary to mobilize virtual offices that are in organic contact with the state office. This would enable them to be truly state offices, and would enable them to function optimally in the modern world. They would, in other words, be at home in the information age.

It is also clear that it is possible to put together the package of hardware, software, and end-user utility that is needed. It may be necessary to compromise with the idealized system. However, the difficulties are not insurmountable or even very great; in the few months since this proposition was first drafted, some fundamentally enabling innovations have become available. In the next few months, perhaps a better set of compromises will be possible, but the essentials are available in time to meet the program schedule.

The cost of equipment to field each virtual office may be as low as \$3,500. But the bottom line is that fully functional, modern virtual offices are now available at reasonable fiscal and human cost.

(Since the foregoing was first drafted, specifications for the system have been drawn up and bids received. Fully adequate systems have been located. The idea of a "virtual office" is feasible of implementation.)

rev 1/10/84
rev 6/12/84
gck

ADDENDUM 2/14/85: In the summer of 1984, the Department purchased nine Actrix machines with both Z80 and 8088 CPUs. DD/DS disk drives were also installed. They were delivered to field staff with minimal instruction (2 hours!).

We experienced perfectly terrible hardware failures that the vendor's service contractor did not fix with anything like reasonable competence. Several of the disk drives malfunctioned, several modems had to have their tone generators disconnected because they sounded continually, and one printer was disabled by the service of its modem. The paper furnished was too lightweight, resulting in bad print. We found, also, that tractors are really necessary. Then, due to bad State RFP, the wrong word processing software was furnished; six months later, that still hasn't been resolved.

In spite of all those problems, the machines do what they are supposed to do when they are functional. The communications software is very easy to use, though training has not yet been furnished to the field staff on this. The central data base that will be downloaded to the field staff is not yet operational. The main use given to the machines so far is word processing.

If this were done now, the current state of the art could be tapped with smoother results. The main problem remains an administrative one; the management of the system is more critical than its hardware or software, and the Department is unready.

Gordon C. Krantz (now in private practice)

SOME SPECIFICATIONS FOR AUTOMATING VIRTUAL OFFICES

These are some specifications for equipping and structuring the mobile "virtual offices" needed to implement a statewide management system for mental retardation services. They are not in order of any priority.

These specifications are in consideration of the fact that the system must operate in what Giuliano (Scientific American, Sept. 1982) calls the "information age." Giuliano describes three stages in the development of office work: the preindustrial or craft stage; the industrial office (which is essentially a production line); and the information-age office, which "exploits new technology to preserve the values of the preindustrial office while handling a large volume of complex information." Using the illustration of an insurance claims-adjustment office, he says that "Each adjuster mans a work station which is linked to a computer that maintains and continuously updates all client records. Each adjuster can therefore operate as an account manager, handling all operations rather than one repetitive operation for a large number of clients. Necessary action can be taken immediately. Forms are updated and letters written at the same work station that gives access to stored data, and the forms and letters can be printed automatically. The same facilities are available to adjusters visiting a client's home or working in one of the company's field offices. The work is more interesting, service to clients is improved and costs are reduced."

Add to Giuliano's analysis the fact that the technology is changing rapidly, and that possibilities are expanding while physical size and capital costs per unit of equipment (especially per memory unit) are dropping. These, then, are desirable specifications.

FOCUS ON INFORMATION: The work of the division will be that of making information-based decisions, communicating the, negotiating about facts and actions, maintaining audit trails, planning, and monitoring. The focus is not upon "using a computer," because the computer is a tool. The focus is upon information and its management.

FACE TO FACE: The physical presence of the state will be embodied in the field staff. Each person, physically present in the county offices and elsewhere in the field, will have to deal with all aspects of whatever is being done. This precludes the use of the industrial office model. It is just too cumbersome to

survive in that environment, on economic grounds alone but also on logistic grounds.

PORTABLE: The field worker can and should literally carry the office in one hand. See the statement elsewhere as to what functions must be carried out by that "Virtual office." Briefly, the functions include communications in paper documents and by electronic mail, the management of files and data, the entry of notes and records, and management of resources. At present, the smallest unit that will perform all the needed functions weighs 33 pounds, and this is marginal as to portability, but the alternatives are much more difficult to transport and set up or are unable to perform the functions alone. As to the portability of records as such, a portable electronic medium can compress 327 records, each of 83 fields, onto one single-density 5.25 floppy disc. The point of this is that on-the-shelf technology now enables portable "virtual offices" with a reality that can pack a portable office into a 10" x 10" x 16" package, so that portability is no longer a formidable barrier to field mobility of real office functions.

CHEAP: The technology is changing so fast that it is not practical to invest in a system, however good, that is expected to last for a long time. The major capital items must be capable of write-off in no more than two years. That is, it should be practical to "garage sale" or abandon the equipment after using it for just two years or so, without feeling that the investment is so great that more use must be got out of it. In two years, something much better and probably cheaper will be available, and should replace what is acquired now. By "cheap" is meant the purchase of the equipment of a portable office for less than \$3000.

SIMPLE The whole system must be so simple that it can be used by professional people who, with inservice training, will have only those skills that will be common to professional people in the information age. The hardware and software cannot be user-vicious, and cannot require programming skill per se. Typing, at least hunt-and-peck, is reasonable to expect of professionals, and their self-interest will motivate them to be end-users of the now-common electronic media, but they are not generally going to be computer programmers. And even under the surface, the system must be simple. It must be simple enough so that everyone using it can understand it.

SMALL-SCALE Partly on the principle of damage-containment and partly because large systems build from scratch don't work for a long time, each functioning element that is free-standing must be a small one. The entire system must work as the result of many self-contained subsystems' working. It must be possible to run the system even if one or more subsystems fails. (Then, as a second step, the small subsystems can be aggregated for some purposes. But only after the small-scale elements work.) This system must work very soon.

DIRECTLY OPERATED: No data-entry staff are envisioned, and no secretaries, in most instances. Minimum duplication of paper and electronics; no drafting out letters and reports for someone else to type, no filling out of paper forms for someone else to use in data entry. This will minimize situations of "Work in progress," because the office will be immediately present and in use by the professional, with rapid call-up of formats and the ability to directly produce documents. The files must be backed up, of course, but by the end users.

LINKABLE: The offices must be capable of direct, interactive communication with the central office and with each other. In practical terms, this means capability to communicate on the telephone as well as by postal mail — data transmission, and electronic mail. The central office must be capable of similar communication with the Departmental mainframe, to the extent that that installation is capable to communicate.

morspecs
rev 1/10/84

ADDENDUM 2/15/85: The Actrix machines were purchased, with the following changes from the specs given above:

Software: in view of the fact that the second CPU gives MS-DOS operation, with its ability to share data and text files with the IBM-PC, additional software was ordered —

WordStar: this was ordered to enable use of joint text files with the IBM-PC. Unfortunately, the State RFP specified "WORD-PC," the catalog code for WordStar that is used by the primary vendor. The primary vendor (TeleTerminals) did not bid, and the bidding vendors quite reasonably thought we wanted Word[®] PC, a completely different word processor; so that's what we got. Six months later, the State has not been administratively able to rectify this problem, and the field people make do with a substitute that doesn't trade text with WordStar on the IBM-PC.

DataStar: this was ordered as the data base manager because of its own merits, its command compatibility with WordStar, and its ability to trade data file with the IBM-PC.

Staff training: the field staff got only 2 hours of instruction on the machine before going forth, and several of them also got a field visit from me. We plan a second session this month, focus upon use of the communication software.

Administrative backup: the Department hired a hardware/software specialist only last month, six months after the system was fielded; his duties do not include backup to the field staff, nor training in their use of the Actrix. The central office data files and bulletin board, with which the field offices were to interact, do not exist and do not have appreciable resources allocated to their development. The supervisor of the field staff has been assigned an overload of duties, including imminent

transfer to another job in the Department, and does not interact with the field staff via electronic media for evidently those reasons. The duties of the field staff have been so structured as to impel only minimal use of the portable computers. Finally, the Systems Division has no evident interest in facilitating the success of the virtual office, and expresses mostly disapproval of it; their interests are against the use of free-standing information management.

My conclusion is that the concept of the virtual office was sound only if it had been fully accepted. It was a mistake to actually implement it under the circumstances that prevailed and that continue to prevail. Another unforeseen insoluble (beyond lack of administrative support and absence of Division-level technical supervision) was the astonishingly bad dealer support, specifically the incompetent repair work that was done under warranty. In the private sector, the warranty would simply be run out and/or action taken against the vendor, and then some on-staff electronic handyman would be set to work fixing things. The State doesn't work that way. And no private sector organization would buy a system and then not support it, but this is the State, where obstructionism is tolerated and indifference has no penalty. So: I now think, with 20/20 hindsight, that I should have taken note of the administrative indifference and the well-placed hostilities, and recommended against the virtual office in this setting. Since the system is there, and since its utilities are still both needed and possible, at least minimal support should be given to it now. As was proposed from the first, it should be amortized by mid-1986 and replaced with a more up-to-date system.

Gordon Krantz
(now no longer a state employee, and speaking freely)
2/15/85

FIDONET Nodelist as of 11 July 86

Consider the following list the FIDONET equivalent of your telephone directory. Since this list is updated weekly, some of the information below may be outdated. So, do not call a number below late at night until you know for sure that it is still a FIDONET number. This list is automatically produced by FIDO each week. This list is organized by Fidonet region, net and node. A listing by state/city is not available.

Type	No. Board's Name SysOp	Phone Number City	Baud *Flags				
REGION	1 Int'l FNet Assn	1-314-576-2743	2400	26 Sleeping Dogs	1-209-454-8229	2400	
	Ken Kaplan	St Louis MO	XP:	Bob Robesky	Fresno CA	WK:5p-8a,WE:	
	1 FidoNews	1-201-472-8065	2400	31 GENESIS BBs	1-209-732-7204	1200	
	Thom Henderson	Clifton NJ	MO:XP:	Ray Means	Visalia CA		
	10 FIDO CONF COORD	1-303-596-6232	2400	32 KRUG-Net	1-209-638-7865	1200	
	George Wing	Colorado Spgs CO	XP:	Steve Deschenes	Reedley CA	WK:6p-10a,WE:	
	98 Fido BUG's WEST	1-602-235-9653	2400	425 RSVP BBS	1-415-659-9169	1200	
	David Dodell	Phoenix AZ	MO:XP:	Jim Thomas	Fremont CA		
	99 Fido BUG's EAST	1-201-284-2198	1200	616 Surf Board	1-415-726-9659	1200	
	Marv Shelton	Clifton NJ	WK:5p-7a,WE:	Trippy Wilson	Half Moon Bay CA		
	100 IBM HELP	1-201-249-1898	2400	HOST	102 SOCIALNET	1-213-874-9484	2400
	Gee Wong	E Brunswick NJ	XP:		Richard Martz	Los Angeles CA	XP:
	101 DEC RB HELP	1-312-759-5402	2400		101 Rainbow Data	1-213-204-2996	2400
	Rob Elliott	Bolingbrook IL			Don Brauns	Culver City CA	
	102 SANYO HELP	1-316-343-8028	2400		106 Third World	1-213-733-7059	2400
	EJ McKernan	Emporia KS			Chuma Agbodike	Los Angeles CA	
	103 Netware HELP	1-405-947-7294	1200		116 PrgrmrXchange	1-818-281-7586	2400
	Kurt Vanderwater	Okla City OK			Peter Chow	Monterey Park CA	
	104 Multilink HELP	1-513-579-2587	2400		112 W Hillywd GBBS	1-213-874-9484	2400
	Allen Miller	Cincinnati OH			Richard	W Hollywood CA	XP:
	105 DoubleDOS HELP	1-516-246-3689	2400		109 Rainbow Brite	1-213-644-1963	2400
David Melnik	Stoney Brook NY		Bruce Headley		Hawthorne CA		
106 PC Jr HELP	1-615-226-6628		451 The Meadows		1-213-337-0206	1200	
Bruce Fuqua	Nashville TN		Robert Johnson		Inglewood CA		
107 Routing HELP	1-618-251-2169	2400	110 Long IslandRB		1-213-370-4113	2400	
Ben Baker	So Roxana IL	XP:	George Dahico		Los Angeles CA		
108 Modern HELP EAST	1-203-878-6355	2400	111 Beach City RB		1-213-376-9567	2400	
Jim Ryan	Milford CT		Dan Tanna		Redondo Beach CA		
109 Tandy HELP	1-206-527-5618	1200	104 King James II		1-213-618-8454	2400	
Neal Curtin	Seattle WA		Glenn Bowes		Torrance CA	DA:10p-4p	
110 Modern HELP WEST	1-714-675-7106	2400	102 The 32nd Fido		1-213-402-6217	1200	
Juan Jimenez	Newport Beach CA		George Gilbert	Artesia CA			
111 SEAdog HELP	1-302-764-7522	2400	105 HP Users Club	1-213-498-1546	2400		
REGION	Bob Klahn	Wilmington DE	XP:	Dick Habegger	Signal Hill CA	MO:	
	10 Calif Nevada	1-209-454-8229	2400	192 MicroBBS	1-213-598-8495	2400	
	Bob Robesky	CA NV	WK:5p-8a,WE:	Doug Coatney	Alamitos CA		
	6 Turbo Fido	1-916-481-9557	2400	115 Machinedo	1-213-548-3546	2400	
	Rod Cole	Carmichael CA		Barry Dobyns	San Pedro CA		
	7 Programmer's WB	1-916-487-3428	1200	108 Sanyos Friend	1-213-207-3295	2400	
	Tim Grogan	Sacramento CA	DA:2a-8p	Sean-Michael Connor	Los Angeles CA		
				107 CompuMart	1-213-829-3623	2400	
				Andy Takahashi	Santa Monica CA	DA:8p-8a	

	113 Rainbow West	1-213-305-8303	2400		8 Thrasher Magazine BB	1-415-822-5630	1200
	Jay Rosenberg	Los Angeles CA	MO:		Chauf Fer	San Francisco	WK:5p-9a,WE:
	601 1000Oaks Fido	1-805-499-8378	2400		14 Cold Moon With Singl	1-415-668-6101	1200
	Gary Vedvik	Thousand Oaks CA			Joseph Puig	San Francisco	
	602 Com-Trics	1-805-522-4211	2400		21 MacQueue II	1-415-753-3002	2400
	Gregg Cassity	Simi CA			Leo LaPorte	San Francisco CA	
	701 OberonSystems	1-805-643-0982	2400		321 Well Tempered BBS	1-415-239-4979	1200
	Scott Johnson	Ventura CA			Mark Budig	San Bruno CA	
	901 The DawgHouse	1-818-782-6366	2400		371 Modifido	1-415-282-2366	1200
	Bill Bogartz	Van Nuys CA			Ezra Shapiro	San Francisco CA	
	903 Sports Talk	1-818-893-8736	1200		406 KLOK-FM BBS	1-415-788-3907	1200
	Mike Ben-Ari	N Hollywood CA	MO:		Tim Pozar	San Francisco CA	WK:8p-8a,W-
	904 The Interface	1-818-609-8954	2400				E:RE:
	Tim Brown	Northridge CA					1200
	905 Vanguard	1-818-896-8602	2400		433 Skateboard	1-415-776-7228	
	Dennis Sullivan	Mission Hills CA			Bruce Ong	San Francisco CA	
	902 Light Artists	1-818-985-0541	2400		448 Bernal Bears Board	1-415-648-3014	1200
	Gerald Lehtola	N Hollywood CA	XP:		Bernal Bear	San Francisco CA	
	801 Hovercraft	1-818-354-7659	1200		612 *SuperResume*	1-415-546-0119	1200
	Jeff Skaletsky	Altadena CA			Lee Johnson	San Francisco CA	
	802 CAD n MOUSE	1-818-249-5120	2400		625 BAVUG I	1-415-635-4747	1200
	Steve Wilson	LaCrescenta CA			Franz Hirner	Oakland CA	WK:6p-6a,WE:
	1301 Surf BBS	1-805-736-8714	2400		666 The Bear's Den	1-415-550-2445	1200
	Steve Jordan	Lompoc CA			Bernal Bear	San Francisco CA	
HOST	103 Orange Co CA	1-714-537-7355	2400	HOST	143 Silicon Valley	1-408-972-8164	1200
	Mike Hamilton	Garden Grove CA			Robert E Spivack	San Jose CA	
	201 Mikes C-Board	1-619-722-8724	2400		3 Spiv's Fido	1-408-972-8164	1200
	Mike Elkins	Oceanside CA			Robert E Spivack	San Jose CA	
	202 ByteLightning	1-619-940-0844	1200		4 CompuCruise	1-408-986-1285	1200
	Dennis Yourchisin	Vista CA			Greg Harris	San Jose CA	
	203 Alpo Net	1-619-741-3412	2400		5 Collinwood	1-408-247-2080	2400
	Mark Petersen	Escondido CA			Dan Lehtola	San Jose CA	DA:11p-7a,RE:
	204 EDI Hotline	1-619-471-0684	2400		9 C Ware Tech	1-408-720-8197	1200
	Jeff Smith	Oceanside CA			Ken Fuiks	Sunnyvale CA	DA:2p-10a
	205 Goat Net West	1-619-438-5256	2400		10 KA6S BBS	1-408-262-5174	1200
	James Hayden	La Costa CA			Steve Wilson	Milpitas CA	
	301 SD RainbowLUG	1-619-488-2116	2400		13 Vern's Fido	1-408-274-1427	2400
	Rick Eliopoulos	San Diego CA	DA:7a-7p,RE:		Vern Crawford	San Jose CA	
	401 HamRadioWest	1-714-681-0731	2400		14 Potpourri	1-408-263-9497	1200
	John Warren	Riverside CA			Robert Field	Milpitas CA	
	501 King James RB	1-714-537-7355	2400		15 Information Retrieval	1-408-987-8870	1200
	Mike Hamilton	Garden Grove CA	RE:		John Reese	San Jose CA	WK:5p-8a,WE:
	502 Take-A-Byte	1-714-847-5025	2400		20 Mindset BBS	1-408-737-3362	1200
	Robert Collins	Anaheim CA			Andrew Soderberg	Sunnyvale CA	
	505 Music Term #1	1-714-545-5768	1200		22 P-CAD's Board	1-408-279-4908	2400
	Michael David	Santa Ana CA			Bruce Fihe	San Jose CA	RE:
	507 Horton Net	1-714-751-5948	1200		23 The Flying Fido	1-408-946-3183	1200
	Larry Munson	Santa Ana CA			Bill Dunn	Milpitas CA	
	508 Medic	1-714-964-0454	1200		24 NUG Board	1-408-993-2209	1200
	Phil St Erne MD	Huntington Bch CA			Charlene Rose	San Jose CA	
	509 ConservEnergy	1-714-645-7747	1200		25 PC Resources Inc	1-408-243-4169	1200
	Rick Ellis	Costa Mesa CA			Tom Hall	Santa Clara CA	DA:8p-7a,RE:
	510 Toshiba T-Net	1-714-581-7600	2400		26 Commsort BBS	1-415-967-6730	2400
	Bob Stillwell	Tustin CA			Ken Whitaker	Mountain View CA	
	511 DataFlex BBS	1-714-675-7106	2400		27 Looneybin	1-408-293-7894	1200
	Juan Jimenez	Newport Beach CA			Todd Looney	San Jose CA	
	512 Music Term #2	1-714-524-9326	1200		28 No Name Yet BBS	1-408-734-8632	1200
	Marc Gohres	Orange CA		HOST	156 Packet Radio	1-805-947-4357	2400
	514 AnaHUG Fido	1-714-774-7860	2400		Dan Taylor	Palmdale CA	MO:;XP:
	John Secor	Anaheim CA			4 KA6S BBS	1-408-262-5174	1200
	515 SmorgasBoard	1-714-957-0142	2400		Steve Wilson	Milpitas CA	
	Mike Rickey	Costa Mesa CA		HOST	161 SF EAST BAY/VALLEY	1-415-672-2504	2400
	516 Computrends	1-714-856-1029	1200		Butch Walker	Concord CA	
	Richard Clark	Irvine CA	WK:6p-9a,WE:		1 TBLUG1 FIDO	1-415-672-2504	2400
	517 Port A Fido	1-714-633-2481	2400		Butch Walker	Concord CA	
	Bill Heaton	Orange CA			2 TBLUG2 FIDO	1-415-672-2505	2400
	520 Sunset Bar	1-714-733-0288	2400		Butch Walker	Concord CA	
	Kenny Posey	Irvine CA			8 River City Fido	1-916-441-5654	2400
	521 F.O.G.	1-714-638-2298	2400		Jim Ewald	Sacramento CA	
	Jim Ward	Garden Grove CA			9 Info Dispatcher	1-916-682-5970	1200
	522 Laguna Xroads	1-714-494-5272	1200		Kwok Lam	Sacramento CA	
	Jay Christy	Laguna Beach CA			30 Hackers Connection	1-209-946-0833	1200
	523 PICO FIDO	1-714-772-8295	1200		Jim Jenkins	Stockton CA	
	Bob Stillwell	Tustin CA	WE:8p-6a		33 Back Door BBS	1-209-957-0949	2400
	524 Beckman Instrmnts	1-714-773-8818	1200		Randall Fox	Stockton CA	
	Mike Kearney	Fullerton CA			613 Rainbo Works	1-209-832-1002	2400
	525 AAPIS	1-714-731-1039	1200		Andre Coltrin	Manteca CA	
	Kevin Klop	Tustin CA			521 Sator Center	1-415-647-8528	2400
	528 Irvine Software	1-714-551-0565	1200		Mike Kelleher	San Francisco CA	XP
	Rick Ray	Irvine CA			594 Dog Lab	1-415-594-0781	2400
	529 Believers Hotline	1-714-647-0746	1200		Bruce Oblander	Belmont CA	XP
	Allen Jensen	Santa Ana CA			93 ThelemaNet	1-415-548-0163	2400
	530 Trixxx	1-714-550-0319	1200		Josh Gordon	Berkeley CA	XP
	Randy Snell	Santa Ana CA			5 T-1000	1-415-799-5719	1200
	602 House Atreides	1-818-965-7220	1200		Ron Cunningham	Rodeo CA	
	George Clayton	Rowland Heights CA			509 Enterprize	1-415-758-1650	2400
HOST	119 ChicoNet	1-916-893-9019	1200		Garry Lapidis	Pinole CA	
	Doug Boone	Chico CA			777 The bug's Net HP	1-415-236-1823	2400
	5 Lazarus	1-916-893-9019	1200		John Buginas	Richmond CA	XP
	Doug Boone	Chico CA		REGION	11 Central	1-312-759-5402	2400
HOST	125 SF Bay Net	1-415-776-7228	1200		Rob Elliott	IL IN KY MI OH WI	
	Bruce Ong	San Francisco CA			102 LawBoard Fido	1-217-352-6118	2400
	2 MacQueue	1-415-661-7374	2400		Fred Grosse	Champaign IL	WK:6p-7a,WE:
	Leo LaPorte	San Francisco CA			103 CourseWare	1-217-359-6165	1200
	3 Fantasy Factory	1-415-355-6047	1200		Tom Scaetges	Champaign IL	DA:6p-6a
	Ev Cheney	Pacific CA			105 NAPCC	1-217-244-1188	1200
	7 Survival Communicati	1-707-545-0746	1200		Thomas Dirks	Urbana IL	RE:
	Don Kulha	Santa Rosa CA					

	301 Fido-Racer	1-502-762-3140	1200		13 Tony's Corner	1-313-754-1131	2400
	Bill Allbritten	Murray KY			Tony-Bauman	Warren MI	
	601 Old Frog	1-715-362-3895	2400		14 Genesis II	1-313-291-2520	1200
	Ryugen Fisher	Rhineland WI			Robert Numerick	Taylor MI	
HOST	108 CINCINNATI Area	1-513-579-2587	2400		16 Millways	1-313-553-9274	2400
	Allen Miller	Cincinnati OH			Matt Weisberg	FrmingtonHills MI	
	10 Allen's Board	1-513-579-2587	2400		17 P-1 Fido	1-313-545-1931	2400
	Allen Miller	Cincinnati OH			Mike Bader	Ferndale MI	
	15 Lotus Land	1-513-829-5811	2400		19 The Matrix	1-313-884-4966	1200
	Dan Woods	Cincinnati OH			John Franzem	Grosse Pointe MI	
	20 MAC-Cincinnati	1-606-341-4747	2400		20 Walksoft	1-313-435-9905	2400
	Dave Schleper	Cincinnati OH			Don Walker	Troy MI	RE:7PM-8A-M,WE
	25 EDS/CPC Norwood	1-513-841-5029	2400				1200
	John Marlowe	Cincinnati OH	RE:		22 George's Fido	1-313-227-1573	
	30 The Barn Board	1-513-752-8248	2400		George Moses	Brighton MI	
	Robert Emerson	Cincinnati OH			24 Fido Detroit	1-313-567-4834	2400
	40 RJ's Board	1-606-356-6837	1200		Jim Brooker	Detroit MI	
	Robert Gauck	Independence KY			25 NetMeg	1-313-994-3865	2400
	45 Fido's Doghouse	1-513-931-0110	1200		Meg Geddes	Ann Arbor MI	
	Doug Goens	Cincinnati OH	RE:		26 PogoNet	1-313-484-3752	1200
	50 MIDDIFIDO	1-513-425-3001	2400		John Remmers	Ypsilanti MI	12-6AM,WE
	Jerry Maupin	Lebanon OH	WK:5p-8a,WE:		28 Little Blue	1-616-243-2645	1200
	55 ODOT District7	1-513-492-0272	1200		Dave McIntyre	Grand Rapids MI	
	John Desond	Sidney OH	WK:5p-7a,WE:		29 Rich's Roost	1-313-939-6584	1200
	60 CHRIF	1-513-559-8098	1200		Richard Harper	Sterling Hgts MI	
	Nat Hemasilpin	Cincinnati OH	WK:6p-9a,W-E,RE:		30 The Library	1-313-681-6600	1200
			2400		Steve Mosser	Keego Harbor MI	8pm-9:30am
	62 PC-Techniques	1-513-891-1947	2400		31 FD BBS	1-313-761-5343	2400
	Tim Sullivan	Cincinnati OH	WK:6p-6a,WE:		Jack Henry	ANN Arbor MI	
	64 FIDO Northwest	1-513-662-5884	2400		33 The Wall	1-313-525-1009	1200
	Jesse Armontrout	Cincinnati OH			Floyd Shinn	Livonia MI	
	65 Night Owl	1-513-931-4409	2400		34 Intransigent	1-616-846-3059	1200
	Jeffery Durham	Cincinnati OH	WK:10p-8a,WE:		Rob Kittredge	Nuncia MI	RE:
			1200		36 Black Hole	1-313-879-7387	2400
	66 Beedie's Board	1-513-771-3425			Randy Goebel	Troy MI	7pm-7am,W-E,RE:
	Brian Beatty	Cincinnati OH	WK:7p-4p,W-E:7p-4p				
	68 RESULTS Fido	1-513-531-4654	2400	HOST	121 Madison Area	1-608-258-9723	1200
	Chris Irwin	Cincinnati OH			John Galvin	Madison WI	
	70 T.I.Y./CDB.R	1-513-825-4478	1200		700 1st Circle	1-608-258-9723	1200
	Ballard Shackelford	Cincinnati OH	RE:		John Galvin	Madison WI	
	75 Mikal's Hairnet	1-513-231-3984	2400	HOST	126 Columbus Area	1-614-761-1179	2400
	Steve Sullivan	Cincinnati OH	WK:6p-9a,WE:		Scott Sharkey	Columbus OH	RE:
	82 MARS	1-513-772-6215	1200		1 Guardian	1-614-761-1179	2400
	Dan Borntrager	Cincinnati OH			Scott Sharkey	Dublin OH	RE:
HOST	111 CanadaRemote	1-416-231-8078	2400		2 Colossus	1-614-263-0422	1200
	Jud Newell	Toronto ONT			Craig Wright	Columbus OH	RE:
	327 CanadaRemote4	1-416-231-0538	2400		110 Ohio U	1-614-593-1019	1200
	Jud Newell	Toronto ONT	RE:		Brian Shapiro	Athens OH	RE:WE:WK-5p-7a
	328 CanadaRemote6	1-416-231-1262	2400				
	Jud Newell	Toronto ONT	RE:	HOST	127 BloomNet	1-812-333-9476	2400
	381 CanadaRemote9	1-416-231-8078	2400		R.G. Stubbings	Bloomington IN	
	Jud Newell	Toronto ONT	RE:		10 Cogito	1-812-333-9476	2400
	601 CanadaRemote10	1-416-231-0406	2400		R.G. Stubbings	Bloomington IN	
	Jud Newell	Toronto ONT	RE:		30 The Workshop	1-812-335-3155	1200
	613 CanadaRemote13	1-416-231-1105	2400		Patty Zielinski	Bloomington IN	RE:
	Jud Newell	Toronto ONT	RE		40 Hal's Ranch	1-812-824-7887	2400
HOST	115 Chicagoland	1-312-759-5402	2400		Harold Schneider	Smithville IN	WK:10pm-6am
	Rob Elliott	Bolingbrook IL			70 Amber's Fido	1-501-846-3884	2400
	100 Illini Data RB	1-312-759-5402	2400		Hilda Stubbings	PrairieGrove AR	MO:
	Rob Elliott	Bolingbrook IL			80 RED! Fido	1-812-335-1463	2400
	108 Samson	1-312-991-8304	2400		Alice Eads	Bloomington IN	WK:5pm-8a-m,WE:
	Larry Miglore	Rolling Meadows IL	WK:5p-8a,WE:				2400
	123 Chicago DECUS	1-312-490-9206	1200		90 Coordinator	1-812-336-0600	2400
	Chuck Garrett	Schaumburg IL			Leith Anderson	Bloomington IN	MO:
	212 Beaker's Beacon	1-312-589-2827	1200	HOST	139 Eastern WI	1-414-722-3909	2400
	John Bekas	Chicago IL			Bruce Casner	Neenah WI	DA:11p-6a
	222 ACOA Fido	1-312-675-8881	2400		110 The Sky's The Limit	1-414-334-1989	2400
	Roger Strauss	Chicago IL			Marc Hanlan	West Bend WI	
	386 DMI HotLine	1-312-932-8766	2400		450 CUSSnet-waukee	1-414-963-4515	1200
	Jim Weisz	Lombard IL			Wallace Gingerich	Milwaukee WI	
	396 AIS/Chicago	1-312-338-8827	1200		600 Omni Net 1	1-414-722-3909	2400
	Sidney Bratkovich	Chicago IL	WK:8p-8a,WE:		Bruce Casner	Neenah WI	DA:11p-6a
	419 Wildcat Fido	1-312-491-3892	2400		910 Soaring SIG	1-219-264-6429	1200
	Bill Bliss	Evanston IL	WK:6p-9a,WE:		Brian Shoemaker	Elkhart IN	
	444 Spine Fido	1-312-908-2583	1200		950 SECO	1-312-256-8119	1200
	Vernon Keenan	Chicago IL	WK:9p-5a,WE:		Jim Heider	Wilmette IL	DA:12p-6a
	445 Consult-Net	1-312-475-5442	2400				
	Vernon Keenan	Evanston IL		HOST	148 Trans Canada Sysop N	1-416-744-2352	2400
	500 Sit UBU Sit	1-312-960-5928	2400		Mark Windrim	Toronto ON	
	Rob Elliott	Lombard IL			1 Eaton's Sherway	1-416-622-3785	2400
	555 The Connection	1-312-799-4434	2400		Mark Windrim	Toronto ON	
	Fred Berger	Tinley Park IL	RE:		2 T E C	1-416-343-2325	1200
	969 Great Lakes	1-312-689-8869	1200		Dann Porter	Toronto ON	
	Lew Prather	Great Lakes IL	DA:11p-4p		3 Scarborough Town	1-416-296-0074	1200
HOST	120 Michigan Net	1-313-882-7104	2400		George Tung	Toronto ON	
	Kirk Revitzer	Detroit MI			4 TORONTO NORTH I	1-416-744-2352	2400
	4 InaNet	1-313-665-4472	2400		Mark Windrim	Toronto ON	MAILONLY
	David Simmons	Ann Arbor MI			5 TORONTO NORTH II	1-416-744-2463	1200
	5 UtiCom	1-313-739-1193	2400		Mark Windrim	Toronto ON	MAILONLY
	James Held	Utica MI	RE:		6 Ottawa Rideau	1-613-234-5488	1200
	10 Trading Post	1-313-882-7104	2400		Andy Lamorre	Ottawa ON	
	Kirk Revitzer	Detroit MI	RE:		7 Winnipeg Down	1-204-956-2849	1200
	11 Support Board	1-313-946-4821	1200		Rob Huyghe	Winnipeg MAN	
	Peter Tavener	Taylor MI			8 Vancouver Pacific	1-604-661-4448	1200
	12 Peanut Gallery	1-313-585-3893	2400		Michael Omand	Vancouver BC	
	Brian Mintz	Troy MI	RE:		9 London Wellington	1-519-439-9880	1200

	10 Calgary Downtown	1-403-237-7457	1200		Damir Bersinic	Ottawa ON		
	Rob Kehler	Calgary ALTA			5 DATA/SFnet	1-613-726-1100	1200	
	13 S V C	1-416-744-2352	2400		Farrell McGovern	Ottawa ON	TU-FRI:8p-8a, SA-TU:5p-8a, 1200	
	Mark Windrim	Toronto ON			6 BoscoNet	1-613-232-4650		
	101 DiSC 1	1-416-896-1265	2400		Andy Lusher	Nepean ON		
	Mark Windrim	Mississauga ON			7 Electric Blue	1-613-737-7994	1200	
	102 DiSC 2	1-416-622-8254	2400		Harry & Kathy	Ottawa ON		
	Rob Benner	Toronto ON			8 The Missing Link	1-613-225-4523	1200	
	103 DiSC 3	1-416-487-2889	2400		Brian Campbell	Ottawa ON		
	Andrew Jones	Toronto ON			9 BARF	1-613-825-0786	1200	
	105 Uptown	1-416-223-3067	1200		Russ Pastuch	Ottawa ON		
	Jack Cox	Toronto ON			10 Night Flight	1-613-836-7667	1200	
	106 PN Junction	1-416-465-2331	2400		Glen McReady	Ottawa ON		
	Jim Nikolich	Toronto ON			11 Exceltronixs	1-613-230-4594	1200	
	107 Adamnet	1-416-588-2841	2400		Doug Morency	Ottawa ON		
	Bill Freads	Toronto ON			12 Ottawa Rideau	1-613-234-5488	1200	
	108 Info-Tek	1-416-454-3046	1200		Andy Lamorre	Ottawa ON		
	Glen Grant	Toronto ON			REGION 12 Pacific	1-808-942-2508	2400	
	109 AQ Board	1-416-372-2427	2400		Ron Skates	Honolulu HI		
	Don Turnbull	Cobourg ON			1 Bob Overlock	1-808-941-5827	2400	
	110 Wit's End	1-519-763-1143	1200		Bob Overlock	Honolulu HI		
	Bruce McPherson	Guelph ON			4 Mega Kauai	1-808-245-2080	1200	
	111 WindsorDownld	1-519-258-8639	2400		Gene Clayton	Kauai HI		
	Paul Halyung	Windsor ON	DA:5p-5a		6 Uncle Sams FIDO	1-808-546-3719	2400	
	112 My Nightmare	1-519-825-4124	1200		Paul Fukuhara	Honolulu HI		
	Ray Moore	Wheatley ON			7 HPCUA	1-808-422-8406	2400	
	113 BarnYard Fido	1-519-352-1703	1200		Bill Arrington	Honolulu HI		
	Geert Kiers	Chatham ON	DA:7p-8a		8 Computer-Stn	1-808-942-2508	2400	
	114 Halton Fido	1-416-854-0148	1200		Ron Skates	Honolulu HI		
	Trevor McPherson	Campbellville ON			10 Polynesian CC	1-808-293-3165	2400	
	116 Boards Galore	1-416-598-1934	1200		Steve Rogers	Honolulu HI	RE: 2400	
	Steve Webster	Toronto ON			14 Mega Kauai2	1-808-337-9280	DA:6p-7a	
	117 Markham Test	1-416-471-5187	2400		Gene Clayton	Kauai HI	1200	
	Scott Magnan	Markham ON			15 Mid Pacific Air	1-808-834-8280	DA:8p-8a	
	118 DiSC V HUB	1-416-844-1792	1200		HOST 131 Indonesia Net	62-21-793286	2400	
	Matt. Mackinnon	Oakville ON	MAIL-ONLY		Jim Filgo	Jakarta INDONESIA	24hr,CCITT/ BELL	
	119 Dog Days	1-416-639-7209	1200		133 Bambang's Fido	62-21-737462	1200	
	Myles Edmonds	Burlington ON	DA:12am-6pm,		Bambang Soegiharto	Jakarta Indonesia	night,CCITT/ BELL	
	120 macPC Link	1-519-432-4856	1200		391 Computeria	62-21-71-7406	2400	
	Aaron Liang	London ON			Yan ICC	Jakarta DKI JAYA	night,CCITT/ BELL	
	121 Messenger-Canada	1-416-824-2814	1200		393 Ratu Computeria	62-21-73-7132	1200	
	Derek Chai	Mississauga ON			Elisabeth	JakSel Sel DKI JAYA	24hrs,CCITT- /BELL	
	122 The Mining Connexion	1-416-884-5556	1200		423 Intrada BBS	62-21-73-1431	2400	
	Milton Lamb	Toronto ON			Rivaldo Rustan	JakSel DKI JAYA	24hrs,CCITT- /BELL	
	301 PCOMM System 1	1-514-989-9450	2400		445 Jakarta Computer	62-21-79-3286	2400	
	Tom Kashuba	Montreal PQ			Soc	Jakarta DKI JAYA	24hrs,CCITT- /BELL	
	310 Ozzie's Fido	1-514-684-4922	1200		Jim Filgo	Bogor DKI JAYA	2400	
	Rene Champagne	Montreal PQ			446 AG NET	62-0251-22-465	night,CCITT/ BELL	
HOST	149 Louisville Net	1-502-423-0930	2400		Bill Collier	123 Ayus's BBS	62-21-35-6527	1200
	James Thompson	Louisville KY			Maku Maramis	Balikpapan Kalimantan	night,CCITT/ BELL	
	10 ScratchingPost	1-502-423-0930	2400		146 Henny's BBS	62-0542-21526	1200	
	James Thompson	Louisville KY			Ronny Thomas	Balikpapan Kalimantan	night,CCITT/ BELL	
	20 On-Line Exchan	1-502-426-8381	2400		174 Aldi's BBS	62-0542-21052-1670	1200	
	Mike Weixler	Louisville KY			Iman Soegiono	Balikpapan Kalimantan	night,CCITT/ BELL	
	30 Free Pub Libra	1-502-584-4162	1200		369 Aditya BBS	62-0542-22711-37	1200	
	Tim Hellner	Louisville KY	DA:430p-7a		Ron Prayitno	Balikpapan Kalimantan	night,CCITT/ BELL	
	40 JABBS	1-502-583-0176	2400		HOST 155 Ausnet	61-2-959-3712	2400	
	Alan Bunch	Louisville KY	DA:430p-7a		Brian Gatenby	Sydney NSW		
HOST	154 Milwaukee Metro	1-414-282-4181	2400		201 Fido Australia	61-2-959-3712	2400	
	Ted Polczynski	Milwaukee WI			Richard Morgan	Sydney NSW		
	5 GENERIC CrossRoads	1-414-282-4181	2400		HOST 162 Singapore Net	65-285-4136	1200	
	Ted Polczynski	Milwaukee WI			Lam Siew Hong	SINGAPORE		
	7 The Last Resort	1-615-892-7773	1200		1 Singapore Link	65-285-4136	1200	
	Bill Crawford	Chatnooga TN			Lam Siew Hong	SINGAPORE		
	600 Tele Post RB	1-414-964-4046	2400		REGION 13 Mid Atlantic	1-201-472-8065	2400	
	John Spiegel	Milwaukee WI			Thom Henderson	DE DC MD NJ NY PA VA WV	MO:XP:4a-5a	
HOST	157 Northeast Ohio	1-216-331-4241	2400		403 Complnnovation	1-201-542-5059	2400	
	Phil Ardussi	Rocky River OH			Howard Dean	Tinton Falls NJ		
	500 PMS-Akron	1-216-867-7463	2400		128 Unlisted node	1-518-371-1297	1200	
	Robert Nebiker	Akron OH			Marden Marshall	Albany NY		
	501 Health Care	1-216-861-4805	1200		15 The Med Tech Fido	1-716-897-0504	2400	
	Richard Truex	Cleveland OH			Bill Hliwa	Buffalo NY	WK:4p-10a,WE: 2400	
	502 NEOH PC Club	1-216-331-4241	2400		16 Finger Lakes Fido	1-716-624-4034		
	Phil Ardussi	Rocky River OH			Bob Nims	Honeoye Falls NY		
	503 TTS Comp Clinc	1-216-582-3151	1200		14 Salt City Fido	1-315-451-7790	2400	
	John Holcepl	Cleveland OH			Mark Manning	Liverpool NY		
	697 Chips	1-216-929-8483	1200		HOST 107 NY MetroNet	1-516-682-8525	2400	
	Paul Esterle	Akron OH	WK:4:30p-9: 30p,WE:		Don Daniels	Woodbury NY	WK:5p-8a,WE: 2400	
HOST	159 Michigan Capital Net	1-517-339-3885	2400		18 NYU Med Center	1-212-889-7022	2400	
	Rick Murray	Haslett MI			Jim Mihalcik MD	New York NY		
	100 RJs Bit Bucket	1-517-339-3885	2400		31 Rainbow Corner	1-914-425-2613	2400	
	Rick Murray	Haslett MI			Ted Needleman	Spring Valley NY		
	200 SSSINet	1-517-393-1982	1200					
	Don Damon	Lansing MI						
	777 (G)ents	1-517-482-4765	1200					
	Graham Newlove	Lansing MI	WK:6p-8a,WE:					
HOST	163 Ottawa Net	1-613-726-9427	2400					
	Ron Werthman	Ottawa ON						
	1 SPERRY BBS	1-613-726-9427	2400					
	Ron Werthman	Ottawa ON						
	2 Twilight Zone	1-613-225-9074	1200					
	Al Hacker	Ottawa ON						
	3 Compucentre	1-613-230-7154	1200					
	Steve Tibbett	Ottawa ON						
	4 Source Code Central	1-613-722-2016	1200					

35 PHALSE Fido	1-914-472-6522	2400	28 World Control	1-301-653-2074	1200
Dave OShea	Scarsdale NY		Rob White	Baltimore MD	RE,MO
37 HumanTech CUSSNET	1-212-532-2278	1200	74 The Bears Den	1-703-671-0598	2400
Gerry Hoffman	New York NY		Kurt Reisler	Falls Church VA	
101 MainFrame Connect	1-212-627-2673	1200	115 Arquimedes	1-703-698-8230	2400
Don Sanderson	New York NY	WK:9p-8a,WE:	Sam Hargadine	Falls Church VA	
102 BillBoard	1-212-333-3285	2400	122 MDS	1-703-893-4715	2400
Bill Bertholf	New York NY		Sam Hargadine	Falls Church VA	WK:6p-9a,WE:
103 APL PI	1-212-753-0888	2400	449 The Game Room	1-703-569-0645	2400
Chris Lincoln	New York NY		Mike Wyrick/David Ro	Springfield VA	
104 Eastern Queens	1-718-343-2185	1200	483 Wash-A-RUG	1-703-359-6549	1200
Rich Mazzara	Queens NY	MF:8p-8a	Kurt Reisler	Fairfax VA	
110 Emergency Medic	1-212-269-3023	2400	601 Beauty Board	1-301-725-7510	2400
Glenn Carlson	New York NY	WK:6p-5a,WE:	John S Raum	Laurel MD	
132 NoVaSys	1-212-304-8553	1200	603 NET-EXCHANGE	1-703-689-3561	2400
John Cottrell	New York NY		D Purks/C Cummings	Reston VA	WK:5pm-8a-
134 AMuse	1-212-269-4879	2400			m,WE:
Thomas Holaday	New York NY	XP:	604 ShanErin	1-703-941-8291	1200
207 Grummans-Fido	1-516-575-5838	1200	David Page	Alexandria VA	XP
Tom Pantazi	Bethpage NY		605 PARAGON	1-301-574-7913	2400
210 D2-FIDO	1-516-682-8525	2400	J Liebsch/A Griffin	Middle River MD	
Don Daniels	Woodbury NY	WK:5p-8a,W-	606 The BlowTorch	1-202-686-9398	1200
		E,XP:	Alexander Wall	Washington DC	
211 Daniels-FIDO	1-516-367-9626	1200	610 YAFIP	1-301-279-6774	1200
Don Daniels	Melville NY	XP:	Michael Klein	Potomac MD	
222 Gateway NRA	1-718-338-3501	1200	611 The Main Frame	1-301-654-3157	2400
Richard Clark	Brooklyn NY	WK:6p-8a,WE:	Andrew Bilski	Chevy Chase MD	
233 MicroLab BBS	1-516-246-3689	2400	612 The Flying PC AT	1-703-556-0253	2400
David Melnik	Stony Brook NY		Jim Kay	Vienna VA	
234 Future Watch Webb	1-516-265-6333	1200	613 G&R BBS	1-301-825-0422	1200
Neil Hancock	Smithtown NY		Steve Fox	Baltimore MD	
240 AU Soc Svc Ctr	1-516-228-7498	2400	614 A&A Microtech	1-301-825-0536	2400
Gunther Geiss	Garden City NY		Tas Papadopoulos	Baltimore MD	
269 Utopian Quest LI	1-516-842-1712	1200	615 IBM Wasteland	1-301-428-3418	1200
Mitch Kessler	Belmore NY	11p-9a	Chris Magyar	Germantown MD	
293 BaphoNet	1-718-499-9277	1200	616 The Cave	1-703-620-9244	1200
Tony Iannotti	Brooklyn NY		Mike Cave	Reston VA	
23 Hitch Hikers Guide	1-315-589-7361	1200	618 PRESBY FIDO	1-301-433-2014	1200
Fritz Howard	Williamson NY		Jack Sharp	Baltimore MD	WK:4:30p-8:
36 GEOMAKER BBS	1-203-762-7211	1200			30a,WE:
Mark Grand	Wilton CT	7p-7a	619 Battleship PA	1-301-428-3145	1200
701 The IBM Temple	1-716-838-2664	2400	Cliff Kendall	Germantown MD	
Jin Tan	Buffalo NY		621 TheLoadingDock	1-301-921-9650	2400
702 CUHUG BBS	1-716-265-2237	1200	Steven Ranger	Gaithersburg MD	
Adam Fritz	Potsdam NY	10p-6a	622 The Tomb	1-703-938-5876	1200
703 I-Tech1	1-716-874-6509	2400	Peter Thomas	Vienna VA	WK:10:30p-
Stewart Alpert	Buffalo NY	6p-7a			2:30p,WE:
726 SPECTRA-II	1-716-248-2743	1200	623 The Corner Stone	1-301-384-2587	2400
Doug Toombs	Rochester NY		Joseph Collins	Silver Spring MD	XP
7 SEABOARD	1-201-472-8065	2400	624 Heart of Gold	1-301-531-3917	300
Thom Henderson	Clifton NJ	DA:24hrs,XP:	Doug Lindsey	Columbia MD	
8 SEAdog Leader	1-201-472-8065	2400	625 DEC-CATT-HOUSE	1-717-794-5268	2400
Thom Henderson	Clifton NJ	DA:24hrs,XP:	Bob Catt	Blue Ridge Summit Pa	
16 Wizards Tower	1-201-288-9076	1200	626 NOVA WEG	1-703-425-0695	1200
Karl Schinke	Teterboro NJ	DA:24hrs	William/Eunhee Hunte	Burke VA	
27 The Wizard's BBS	1-201-379-2185	2400	627 Double Nut Board	1-301-997-7204	2400
Rick Siegel	Springfield NJ	DA:24hrs,XP:	David Elliott Jr.	Simpsonville MD	
29 Spider's Web	1-201-782-7640	1200	628 Reindeer Shed	1-301-833-8933	1200
Rich Karas	Flemington NJ	DA:24hrs	Robert Rudolph	Reisterstown MD	0730-1500,
310 Cloudbase	1-201-292-1365	2400			2330-0600
Bill Aubin	Morris Plains NJ	DA:24hrs	630 The Eagles Aerie	1-301-652-6832	1200
311 The Xtra BBS	1-201-284-3916	1200	Bud Garrison	Chevy Chase MD	
Marv Shelton	Clifton NJ	WK:5p-7a,W-	631 The Random Factor	1-301-340-0246	1200
		E:24hrs,XP:3	Chris Rowley	Potomac MD	
		am-6am	632 Beauty Board II	1-301-776-2300	1200
312 Dance Studio	1-201-249-1898	1200	John Raum	Laurel MD	
Gee Wong	E Brunswick NJ	XP:	634 INSIGHT	1-202-543-2146	1200
313 Cork Board	1-201-943-2226	1200	Brian Hughes	Washington DC	
Steven Linhart	Ridgefield NJ	DA:24hrs	635 Rick's Fido	1-202-833-1889	1200
316 Metatek Fido	1-201-286-2567	1200	Rick Ward	Washington DC	WK:7pm-5:3
Thomas Kenny	Toms River NJ	DA:10p-1pm-			0am,WE:
		XP:			
317 Dumps R Us	1-201-885-7404	1200	HOST 129 Pitt-Net	1-412-257-2375	2400
Gee Wong	NJ	MO,XP:	Jim Lynn	Pittsburgh PA	
318 Ginger Bread	1-201-780-3249	1200	11 TACO Sanyo Fido	1-412-856-1428	2400
Alex Naddaff	Freehold NJ		Paul Kelly	Trafford PA	
17 DEC-House	1-609-429-6630	2400	13 MYCROFTXXX	1-412-271-2764	2400
Brian Sietz	Cherry Hill NJ	DA:12m-530p	Jim McHale	Pittsburgh PA	
25 SoftShop	1-609-398-2959	2400	14 KA3LPS Rainbow	1-412-247-4488	1200
Brad Karp	Ocean City NJ	DA:24hrs	Tom Wardle	Penn Hills PA	RE:
404 Blackbeards	1-609-266-0517	2400	15 DEC-USER	1-412-469-2468	1200
Dan McGahn	Atlantic City NJ	DA:24hrs	John Vukovic	Pleasant Hills PA	
414 Pinelands BBS	1-609-354-9259	1200	16 KCA PC-Guru	1-412-561-7145	2400
Bob Pritchett	Cherry Hill NJ		Ray Kennelly	Pittsburgh PA	WK:6p-9a,W-
24 QUG BBS	1-215-743-1799	2400			E:24hrs,RE:
Mort Lightman	Philadelphia PA	DA:24hrs	17 NEVER BOARD	1-412-733-4842	2400
601 Stone Wall	1-215-367-6558	2400	Larry DiGioia	Pittsburgh PA	
Peter Weinhau	Boyetown PA		21 Hard Hat Board	1-412-856-1428	2400
602 Rydal Board	1-215-884-6122	2400	Paul Kelly	Monessen PA	MO:
Randy Mananka	Rydal PA	DA:24hrs	23 Zaphod's Computers	1-412-349-0557	1200
603 The Foxes Den	1-215-721-0363	1200	Jon Marshall	Indiana PA	
Warren Fox	Hatfield PA	DA:24hrs	26 SoundingBoard	1-412-681-9464	2400
604 Enterprise	1-215-631-9777	1200	Stu Turk	Pittsburgh PA	
Mark W Billig Jr	Norristown PA	DA:24hrs	384 PITT-BULL	1-412-257-2375	2400
606 Pats All American	1-215-544-5882	1200	Jim Lynn	Pittsburgh PA	
Patrick Byrne	Springfield PA	DA:24hrs			
HOST 109 Wash DC Metro	1-703-698-8230	2400	HOST 150 First State	1-302-764-7522	2400
Kurt Reisler	Falls Church VA		Bob Klahn	Wilmington DE	XP:
2 CLP Fido	1-301-484-2831	1200	1 MicroSolutions	1-302-764-7522	2400
John Madill	Baltimore MD		Bob Klahn	Wilmington DE	
			2 Stockware	1-302-655-6342	2400
			Van Olmstead	Wilmington DE	WK:8p-8a,WE:

FIDONET Nodelist, cont.

	110 dWolf	1-302-478-8703	1200		1001 Sanyo BUGS	1-505-822-8268	1200
	Lee Wolf	Wilmington DE			Jami Morgan	Albuquerque NM	DA:10p-10a
	111 Beagles Nest	1-302-731-7842	2400		1002 UofA CAG	1-602-621-2097	1200
	Joel Garrett	Newark DE	WK:10p-5p,		Robert MacArthur	Tucson AZ	WK:10a-8a,WE:
			WE:		1003 Bug Board	1-602-621-2955	1200
	112 GoldenRetriever	1-302-737-2294	2400		Bob Smith	Tucson AZ	DA:10a-8a
	Jim Goldschneider	Newark DE			1004 Tuscon Mts	1-602-743-0875	1200
	113 Basset Board	1-302-656-8003	2400		Bob Smith	Tucson AZ	DA:8p-7a
	Garry Cantwell	Wilmington DE			1005 LOGAN Logon	1-801-752-2757	2400
	120 Hubbin's Board	1-302-239-3969	2400		Tony Loosle	Logan UT	
	Van Olmstead	Hockessin DE			1006 Teachers Pet	1-505-646-5194	2400
	190 Chemist's Companion	1-302-479-0302	1200		Bo Barry	Las Cruces NM	
	Larry McGee	Wilmington DE	DA:11p-6p		1008 At Your Service	1-801-227-4371	2400
	200 Scholar's Workbench	1-302-451-8045	1200		Harry Mahoney	Orem UT	
	Ed Ferrara	Newark DE			1009 Casper Fido	1-307-235-1726	1200
	900 K-9 & Company	1-302-475-2201	1200		Keith Flint	Casper WY	DA:9p-7a,WE:
	Mike Jacobs	Newark DE			1011 West Valley		
REGION	14 Mid West	1-507-289-8452	2400		Computer	1-801-595-0689	1200
	John Pritchard	IA KS MN MO NB ND SD			Jeff Case	West Valley UT	
	341 Terraboard	1-612-721-8967	2400		1012 EtCetera	1-801-374-8445	1200
	David Dyer-Bennet	Minneapolis MN			Sam Mecham	Provo UT	
	386 Bit Bucket	1-316-343-8028	2400		464 Prog Tech	1-801-264-8290	1200
	E J McKernan	Emporia KS			Bob Briggs	Salt Lake City UT	
	61 RAMS	1-507-289-8452	2400	HOST	104 Denver Area	1-303-973-9338	2400
	John Pritchard	Rochester MN			Oscar Barlow	Denver CO	
	415 TheGameBoard	1-612-822-1968	2400		56 Denver's Fido	1-303-973-9338	2400
	David Messer	Minneapolis MN			Oscar Barlow	Littleton CO	RE
	603 MCE Ltd KCMO	1-816-452-0005	1200		77 Boulder Fido	1-303-497-6968	2400
	Phil King	Kansas City MO			Kent Leonard	Boulder CO	
	606 QA Forum	1-612-542-5322	1200		372 CPM SIG-INC	1-303-465-1313	1200
	Wayne Stenson	Minneapolis MN	WK:6p-6a,WE:		Al Lundquist	Broomfield CO	
	607 C Station	1-612-332-1857	2400		607 FIDO ERL	1-303-497-5868	2400
	Steve Ripley	Minneapolis MN			Rich Kissel	Boulder CO	24hrs
	608 Wichita Biz Bd	1-316-522-4850	2400		108 MICROLINK B	1-303-972-4181	1200
	Ken Rucker	Wichita KS			Girard Westerberg	Littleton CO	
	609 Night Flight	1-316-721-0581	2400		610 DIVE-LINK	1-303-252-9235	2400
	Mark Stappenbeck	Wichita KS			Rod Lamping	Northglenn CO	RE
	610 Omaha Fido	1-402-348-7603	1200		611 George Net	1-303-322-4779	1200
	Jim Singer	Omaha NE	WK:6p-6a		Phillip Hein	Denver CO	24hrs
	614 Wind Dragon Inn	1-402-291-8053	1200		612 ESCO Serv Inc	1-303-363-6409	2400
	Henry Neufeld	Bellevue NE			Jim Sparks	Aurora CO	3PM-6AMW-K24WE
	619 PIL Software	1-314-449-9401	2400		444 Ads Up	1-303-444-6129	1200
	Tom Smith	Columbia MO			Ron Kuseski	Boulder CO	24hrs
	620 Fantasy Gamers	1-913-232-6504	1200		614 Mile Hi CUSS	1-303-871-2912	1200
	Chris Winterscheid	Topeka KS			Walter LaMendola	Denver CO	24hrs
	621 The Castle	1-316-788-6462	2400		615 King's Bench	1-303-377-6725	1200
	David Stalsworth	Derby KS			Ralph Allison	Denver CO	RE
	999 FIDO Lawcat	1-612-872-2352	2400		904 PCjr NET	1-303-789-4610	2400
	Paula Giese	Minneapolis MN			Phil Kaiser	Englewood CO	24hrs
HOST	100 St Louis Area	1-314-576-4067	2400		17 Musicians Den	1-303-321-6857	1200
	Ken Kaplan	St Louis MO			Andy Velasquez	Denver CO	RE7PM-9AM-SUN-24hrs
	507 Sky King	1-618-462-4891	1200		18 Eusebiea Fido	1-303-430-8376	1200
	Tom King	Alton IL	WK:M-Th,5p-10a,WE:		Jim Quiesner	Federal Heights CO	24hrs,RE
	76 Baker's Acre	1-618-251-2169	2400		19 MY FIDO	1-303-795-1215	1200
	Ben Baker	So Roxana IL	XP:		Steve Raymond	Littleton CO	24hrs
	482 Dirty Ole Man	1-618-254-2763	2400		20 Day's End	1-303-650-5636	2400
	Ervin Cole	Wood River IL			Chris Day	Denver CO	24hrs
	504 Crystal Palace	1-314-335-4902	1200		114 Phoenix Area	1-602-242-5230	2400
	Mike Bryeans	Cape Girardeau MO			John Kerr	Peoria AZ	
	506 Executive Computer	1-314-343-2013	2400	HOST	1 Phoenix Net	1-602-242-5230	2400
	Conway Christensen	Fenton MO			John Kerr	Peoria AZ	24hrs,RE:XP
	4 SLUG-IBM	1-314-772-0488	1200		2 HOG TROUGH	1-602-899-2699	1200
	Curtis Spires	St Louis MO			Jeffrey Bingham	Chandler AZ	24hrs
	10 MDC RCC	1-314-232-6881	2400		3 Rainbow BBS	1-602-952-8520	1200
	Terry Mueller	St Louis MO			Jim Kashner	Phoenix AZ	24hrs,RE:
	16 Mikes Board	1-314-726-3448	2400		446 Xtra #1	1-602-979-6352	2400
	Mike Mellinger	St Louis MO			Joe Kennedy	Glendale AZ	24hrs
	17 DCA BBS	1-314-962-2751	2400		8 C & PLAY	1-602-245-9475	2400
	John Yunker	St Louis MO			Edmond Hisamoto	Glendale AZ	24hrs
	22 PCLUG	1-314-576-2743	2400		9 C & PLAY 2	1-602-846-1406	1200
	Ken Kaplan	St Louis MO	XP:		Edmond Hisamoto	Glendale AZ	24hrs
	51 DECUS Central	1-314-576-4067	2400		14 EYE NET	1-602-941-3747	1200
	Ken Kaplan	St Louis MO			DR Leo Bores	Scottsdale AZ	RE:wk:6PM-8AM,WE:24Hrs
	64 CBM Experimental	1-314-867-1092	2400		15 ST JOES HOSPITAL	1-602-235-9653	2400
	Tony Ott	St Louis MO	MO:		David Dodell	Phoenix AZ	24Hrs,XP
	240 Dead Letter Queue	1-314-867-7013	1200		17 Answering Mach	1-602-242-3158	1200
	Bill Beers	St Louis MO	MO:		Bob Donaldson	Phoenix AZ	24Hrs
	255 AMCross Central	1-314-658-5866	2400		18 Astronomer BBS	1-602-483-9408	1200
	Tim Rand	St Louis MO	WK:5p-8a,WE:24hr		Don Epand	Paradise Valley AZ	6pm-6am
	500 Alex' Fido	1-314-771-9099	1200		20 Construction NET 1	1-602-258-8347	2400
	Alex Hartley	St Louis MO	XP:		Marv Carson	Phoenix AZ	24Hrs,XP
	505 C64 Software Only	1-314-233-7379	1200		21 CONSTRUCTION NET 2		
	Keith Hall	St Louis MO	RE:WK:6p-6a,WE:		Marv Carson	1-602-965-4513	2400
	509 Top of the Hill	1-314-997-1605	1200			Tempe AZ	5pm-5am
	Brian Kessel	St Louis MO		HOST	128 Southern Colorado	1-303-632-9494	2400
	510 Rits Board	1-314-426-7144	2400		Richard Evers	Colorado Spgs CO	
	Mark Peters	St Louis MO			11 CS BBS Service	1-303-632-9494	2400
	523 WeirdBase	1-314-389-9973	1200		Richard Evers	Colorado Spgs CO	
	Brad Hicks	St Louis MO			13 COSUG	1-303-635-5468	2400
	999 WUFN BBS	1-314-889-4696	2400		Jim Cannell	Colorado Spgs CO	
	Bill Butterfield	St Louis MO			14 RamNet	1-303-598-7667	1200
REGION	15 Mountain	1-801-752-2757	2400		Q McHenry	Colorado Spgs CO	
	Tony Loosle	AZ CO NM UT WY			15 Solid S/W	1-303-591-4273	2400
	1000 ElectroMail	1-505-898-2116	1200		Joe Rock	Colorado Spgs CO	
	Adam Hudson	Albuquerque NM					

FIDONET Nodelist, cont.

	16 Nochange Gateway	1-303-382-8326	1200		202 DEC-Line	1-617-721-1688	1200
	Randy Edwards	Colorado Spgs CO			Bill MacNeill	Winchester MA	
	17 Last Chance Fido	1-303-633-4711	2400		301 BeyondWar/PPNW BBS	1-617-876-0422	1200
	Jim MacGregor	Colorado Spgs CO			Andrew Kanter	Cambridge MA	
	18 Hip Shack	1-303-593-9959	1200		302 IPPNW Connection	1-617-566-0847	1200
	Bdale Garbee	Colorado Spgs CO			Andrew Kanter	Cambridge MA	
HOST	144 Fort Collins Net	1-303-491-5946	1200		310 Daves Annex	1-617-874-4325	1200
	Leroy Casterline	Fort Collins CO			Dave Rene	Westminister MA	WK:2p-7m,WE
	2 Fido/CSU	1-303-491-5946	1200		315 DD Network	1-617-731-2662	1200
	Leroy Casterline	Fort Collins CO			Dana Long	Boston MA	DA:12m-5p
	3 INFO MOUNTAIN	1-303-586-8197	1200		318 PC Week	1-617-536-1917	2400
	Lee Lasson	Estes Park CO			Garry Ray	Boston MA	
REGION	16 New England	1-617-481-7147	2400		367 RBG-ENG HOOTNE	1-617-486-2285	1200
	Kevin Porter	CT ME MA NH RI VT			Bruce Gibson	Littleton MA	
	42 MetChem	1-203-281-7287	2400		477 A Little Puppy	1-617-326-2615	2400
	Robert Lederman	New Haven CT			Stephen Harper	Dedham MA	WK:12m-6p, WE:
	207 NorthernReachs	1-203-865-1794	1200		625 The Doctor	1-617-879-3714	1200
	Geoff Hickey	New Haven CT			Herbie Cohen	Framingham MA	WK:10p-6a, WE:10p-12 p
	209 Fernwood	1-203-234-9567	2400				
	Bill Becker	North Haven CT	MO:	HOST	132 NH-Net	1-603-888-8179	2400
	216 Willi Board	1-203-456-1933	2400		Bob Hartman	Nashua NH	XP:
	Milo Tsukroff	Williamantic CT			101 UN*X GateWay	1-603-888-8179	2400
	605 Mac Fido	1-207-725-8456	1200		Bob Hartman	Nashua NH	XP:
	Henry Trujillo	Topsham ME			103 SAI Board	1-603-883-9891	1200
	630 The Lido Hotel	1-203-248-7324	1200		Robert Dumont	Nashua NH	WK:6p-8a,W- E:24hr
	John Jaser	Hamden CT			104 Downeast Roots Fido	1-603-964-7912	1200
	635 MINDSET Fido	1-802-658-2494	1200		David James	Rye Beach NH	
	James Pallack	Burlington VT			107 M'Cycle Bytes	1-603-889-3366	2400
	640 Info Jr	1-617-893-5772	2400		Robert Nilsen	Amherst NH	
	John A DeBay	Waltham MA			108 FasFax Fido	1-603-889-0946	1200
	645 Eric's Fido	1-203-224-7231	1200		David Gale	Nashua NH	DA:9p-8a
	Eric Nilsson	New Britain CT			109 Electronic Orphanage	1-603-882-9312	1200
HOST	101 MassNet	1-617-632-1861	2400		David Levine	Nashua NH	
	David Rene	Gardner MA	XP		110 Peterborough Connect	1-603-924-7724	1200
	14 WayStar	1-617-481-7147	2400		Tom Westheimer	Peterborough NH	
	Kevin Porter	Marlboro MA			111 On Line New Hampshire	1-603-798-4028	1200
	21 Phoenix Sfwr	1-617-769-0850	2400		Douglas Hall	Chichester NH	
	Bob Vandette	Norwood MA	RE:		225 SeaCoast Fido	1-207-439-9367	1200
	27 Daves Fido	1-617-632-1861	2400		Bill Thomas	Kittery ME	WK:24,WE:1 2a-10a
	David Rene	Gardner MA	XP		388 Revap Data	1-603-357-2090	2400
	44 NECS	1-617-646-3610	1200		Chris Von Schilling	Keene NH	
	David Mitton	Arlington MA			615 Wizards Castle	1-603-883-1596	2400
	45 Midnite DEC	1-617-787-3033	2400		Paul Gilberti	Windham NH	
	David Strickler	Brighton MA			620 Spaghetti heaven	1-603-635-7771	2400
	73 Eagle-1	1-617-881-6495	1200		Victor Coppola	Pelham NH	DA:10p-7a
	Dave Hornbaker	Ashland MA		HOST	141 ConnCentral	1-203-271-1002	2400
	103 D.R.A.G Net	1-617-491-6010	2400		Chuck Venter	Cheshire CT	RE:
	David Mann	Cambridge MA			42 MetChem	1-203-281-7287	2400
	104 BYTEnetListing	1-617-861-9774	1200		Jon Bauer	New Haven CT	
	George Bond	Peterborough NH			320 Surprise Pak	1-203-795-0339	1200
	105 CAPECOD Fido	1-617-255-9465	2400		David Hecht	Orange CT	RE:
	Rives Mc Ginley	Orleans MA			328 Megabyte Gen Hosp	1-203-795-3182	1200
	106 NewWorld Magic1	1-617-595-5626	2400		Maynard Marquis	Orange CT	WE:10pm-10am
	Hal Duprie	Swampscott MA			350 B.O.M.C.	1-203-795-6837	1200
	107 NewWorld Magic2	1-617-595-5627	2400		Ellen Snyder	Orange CT	
	Hal Duprie	Swampscott MA			491 Naugy Net	1-203-729-7569	2400
	108 The Lost Fido	1-617-244-1903	1200		Vince Perriello	Naugatuck CT	
	Dan Mahoney	Newton MA			550 Southington Fido	1-203-621-6232	1200
	109 PVPCUG 1	1-413-549-1501	1200		Ed Robertson	Southington CT	
	Mort Sternheim	Amherst MA			560 Boot Camp Fido	1-203-628-6091	1200
	110 Physics Forum	1-413-545-1959	1200		Ralph Solli	Southington CT	RE:
	Mort Sternheim	Amherst MA			600 Cheshire Fido	1-203-271-1002	2400
	111 TRUK BBS	1-617-631-3304	2400		Chuck Venter	Cheshire CT	RE:
	Mark Bornstein	Marblehead MA			710 Data Cove	1-203-754-9290	2400
	114 PC2 Tech Support	1-617-769-3779	2400		Jim Warren	Waterbury CT	
	Rich Howley	Norwood MA			730 Ganymede	1-203-274-1395	1200
	115 Fred's Fido	1-617-331-8624	1200		Joel Robb	Waterbury CT	
	Fred Donahue	Weymouth MA	WK:6p-2m, WE:		810 Compusoft I	1-203-284-8070	1200
	116 STARSHIP Fido	1-617-445-8309	1200		Bill Lyman	Wallingford CT	
	Eugene Prevo	Roxbury MA			820 Compusoft II	1-203-238-0462	1200
	117 Andover cnode	1-617-470-2548	2400		Mike Matell	Meriden CT	
	Layne DuBose	Andover MA			212 Mission Ctl II	1-203-878-6355	2400
	118 AL'S Fido	1-617-772-2036	1200		Sal Guido	Milford CT	
	Alan Williams	FortDevens MA	WK:7p-7m, WE:24HRS		215 BCP Technologi	1-203-782-9787	2400
	119 Project Crossbow	1-617-623-3244	2400		Ed Rauh	New Haven CT	RE:
	David Kaufman	Somerville MA			269 RisQue BBS	1-203-333-0493	1200
	120 Cullinet Software	1-617-769-6761	1200		Rick S.	Bridgeport CT	
	Nat Poe	Westwood MA			333 ASCII Neighborhood	1-203-934-9852	2400
	121 Info Jr	1-617-893-5772	2400		Bob Morris	Hamden CT	
	John Debay	Waltham MA			335 After 6	1-203-926-6352	1200
	122 BCSnet Host	1-617-237-3750	2400		Phil Palumbo	Shelton CT	RE:,wk:6pm-7am
	Doug Chamberlin	Boston MA			375 LIL FROG	1-203-268-3111	2400
	123 Fido Country Club	1-617-479-2462	1200		Terry Wodek	Trumbull CT	
	Nevin Markwart	N Quincy MA		HOST	142 Hartford Area	1-203-683-5466	1200
	124 The Boston L5	1-617-897-5610	1200		David Kaplan	Windsor CT	RE:
	William Caefer	Maynard MA			208 Bruce's Fido	1-203-236-3761	2400
	125 DAVY JONES LOCKER	1-617-865-3290	2400		Bruce Lomasky	W Hartford CT	
	Richard Kenadek	West Millbury MA			214 Bill's Fido	1-203-667-0076	2400
	126 Solution Systems BBS	1-617-659-1479	1200		Bill Unghire	Newington CT	
	David Nanian	Boston MA			222 SPACER'S NODE!	1-203-278-8562	1200
	129 Twilight Datalink	1-617-746-4463	2400		Tim Carter	Hartford CT	WK:6p-7a,WE:
	Peter Flynn	Plymouth MA			314 Multimate	1-203-289-4906	2400
	130 Wizards Tower	1-617-738-1968	1200		Howard Eglowstein	E Hartford CT	RE:
	Tony Rousmaniere	Brookline MA					
	131 Mountain Top Fido	1-413-684-2886	2400				
	Don Hall	Windsor MA					

	387 Aetna Fido	1-203-683-5466	1200		Rob Barker	Steilacoom WA	
	David Kaplan	Windsor CT	RE:		35 US HDS Human Service	1-206-442-8127	2400
	388 IDMS Users Assoc	1-203-273-1655	1200		Steve Ice	Seattle WA	12p-6a,WE:
	Mike Berstene	Hartford CT	RE:WK:430		37 Mac's Revenge	1-206-752-8481	1200
			p-6a,WE:		Mark Gregory	Tacoma WA	WK:6p-7a,WE:
	610 SoftwarExpress	1-203-875-9342	2400		38 Silver Fido	1-206-692-3905	1200
	Frank Kotch	Vernon CT	WK:7p-7a,WE:		Bob Renfro	Silverdale WA	WK:5p-8a,WE:
REGION	17 North West	1-206-581-7003	2400		39 Computer Coach	1-206-565-1476	2400
	Rob Barker	AK ID MT OR WA BC			Tracy Graves	Tacoma WA	MailOnly
		ALB SSK			40 Datawest	1-604-478-2234	1200
	1 The Castle	1-503-758-4701	2400		Ken Yerex	Victoria B C	
	Lee Damon	Corvallis OR	DA:9p-9a,SU:		241 Fox's Den Remote	1-206-344-5365	1200
	28 NotQuiteFulDec	1-403-791-1486	2400		Karl Andrews	Seattle WA	6p-7a,WE:XP:
	Don Thompson	Ft McMurray AB		HOST	140 Sask Net	1-306-347-4493	2400
	36 Datawest	1-604-478-2234	1200		Ken Ganshirt	Regina Sask	DA:6P-7A,WE:
	Ken Yerex	Victoria BC			18 SaskTel-1	1-306-543-1949	2400
	37 CareerInfoSys	1-503-686-3826	2400		Ken Ganshirt	Regina Sask	RE:Mail-Only
	Kent Loobey	Eugene OR	DA:5:15p-7:45a,WE:		19 SaskTel-2	1-306-347-4420	2400
HOST	105 Portland Area	1-503-233-6583	2400		Ken Ganshirt	Regina Sask	RE:Mail-Only
	Doug Forman	Portland OR			20 REGINA FIDO	1-306-347-4493	2400
	1 PDX PC Club	1-503-281-8322	2400		Ken Ganshirt	Regina Sask	DA:6P-7A,WE:
	James Debele	Portland OR	RE:		22 Benden Weyr	1-306-384-2844	1200
	2 Northwest Super Fido	1-503-692-6243	2400		Ken Read	Saskatoon Sask	RE:
	Justin Norman	Sherwood OR			24 ESTEVAN FIDO	1-306-634-9935	2400
	3 Dim Sum	1-503-644-6129	1200		Bob Swift	Estevan Sask	
	Jim Sells	Beaverton OR	11P-6P WK:	HOST	152 Eugene Net	1-503-683-4350	2400
	7 ComputerLand	1-503-620-0225	1200		Mike Harrington	Eugene Or	
	Jim Willing	Portland OR			1 Blue Telegraph	1-503-683-4350	2400
	8 MacSystem/NW	1-503-233-6583	2400		Mike Harrington	Eugene OR	
	Doug Forman	Portland OR			2 Buffer Board	1-503-747-7636	2400
	10 Oswego Fido	1-503-636-1212	2400		George Butts	Springfield OR	
	Bill Jones	Portland OR			3 ORTLAND	1-503-726-1815	2400
	11 Crosstar II	1-206-574-4773	2400		Paul Ortmann	Springfield OR	
	Dan Gallagher	Vancouver WA			7 Palantir BBS	1-503-461-0239	1200
	12 MicroLine Fido	1-503-761-7941	2400		Keith Ullman	Eugene OR	
	Mike Meyers	Portland OR	RE:DA:5PM-9AM,WK:	HOST	153 BCNet	1-604-589-5441	2400
			1200		Andy Harper	Vancouver BC	
	13 BECA Fido	1-503-760-6411	WK:11PM-5PM,WK:		101 Datatnet	1-604-589-5441	2400
	Doug Lewis	Portland OR	2400		Andy Harper	Delta BC	
					102 Dial a File	1-604-736-5311	2400
	15 PC Connection	1-503-659-7362	2400		Steve Fairbairn	Vancouver BC	
	Troy Meyers	Portland OR			104 Sunlight Zone	1-604-581-1778	1200
	16 Shotgun Fido	1-503-760-452			Chris Goodman	Delta BC	
	Jim Montgomery	Portland OR			106 KEA Board	1-604-732-1019	2,80
	17 Magnum Fido	1-503-692-1993	1200		Doug McFadyen	Vancouver BC	WK:6p-10a,WE:
	Dane McNeill	Portland OR					
	18 Mag Fido	1-503-246-1731	1200	REGION	18 South East	1-601-545-1225	2400
	John Boren	Portland OR	WK:11PM-5PM,WK:10P-M-10AM		Jerry Nuckols	AL FL GA MS NC SC TN	
			1200		3 Crystal Coast FIDO	1-919-326-3740	2400
	20 ABBS	1-503-229-3081	DA:5PM-8A-M,WK:		Michael Hill	Swansboro NC	
	Marc Feldesman	Portland OR	2400		4 The Exchange	1-919-346-5755	1200
					David Ellison	Jacksonville NC	
	361 WSO's Roost	1-503-281-0952	DA:7AM-11PM,RE:		5 The Dog Pound	1-904-581-0045	1200
	Don Flinn	Portland OR			David Payne	Fort Walton Beach FL	DA:7a5p,7p3a
HOST	122 SW Oregon Area	1-503-269-5202	2400		6 Sanyo Club	1-305-831-1679	1200
	Randy Bush	Coos Bay OR	XP:		Joe Lewis	Altamonte Spgs FL	
	4 PSG Vancouver	1-604-228-9706	1200		8 Fido	1-601-895-5112	1200
	Ted Powell	Vancouver BC			Rick Maddox	Guilford MS	
	6 PSG Coos Bay	1-503-269-5202	2400		9 QX Connect	1-919-455-1933	1200
	Randy Bush	Coos Bay OR	XP:		Phil Ferraro	Jacksonville NC	DA:6p-6a,SA:
HOST	134 Calgary Net	1-403-282-1703	2400		11 Southern Fido	1-601-545-1225	2400
	Lloyd Miller	Calgary Alberta			Jerry Nuckols	Hattiesburg MS	
	1 Calgary Fido	1-403-282-1703	2400		12 The Rat's Nest	1-803-788-6797	1200
	Lloyd Miller	Calgary Alberta			Paul Beverly	Columbia SC	
	3 HUSKY's Board	1-403-743-4900	2400		13 TABS FIDO	1-601-634-2365	2400
	Don Thompson	Fort McMurray Alberta			Don Bach	Vicksburg MS	DA:11a-12p,2p-7a,WE:
	6 Calgary Online	1-403-237-7886	1200				1200
	Grant Fengstad	Calgary Alberta			14 RSBBS	1-904-682-3232	
	7 TC-Link	1-403-295-2541	2400		Roger Smith	Crestview FL	
	Terry Cioni	Calgary Alberta			15 Dr. Fido	1-305-744-7862	2400
	101 Nemesis Fido RB	1-403-355-3881	2400		Ron Innerfield	Tequesta FL	
	Benoit Guay	Faust Alberta			16 The Last Resort	1-615-892-7773	1200
	102 Lethbridge Online	1-403-328-8024	1200		Bill Crawford	Chattanooga TN	
	Bill Ripley	Lethbridge Alberta		HOST	112 Florida's 1st Coast	1-904-721-3804	2400
HOST	138 PAC NORWEST	1-206-527-5618	2400		Pete Cascio	Jacksonville FL	
	Neal Curtin	Washington			1 Casa Mi Amiga	1-904-733-4515	1200
	3 PROBUS INTRNTL	1-206-848-9232	2400		Mitch Kelly	Jacksonville FL	
	Steve Butler	Puyallup WA	WK:11p-6p,WE:		2 JUG FIDO	1-904-783-4777	1200
			2400		Ervin Miller	Jacksonville FL	RE:
	4 PTC Net	1-206-757-5233	WK:5p-7a,WE:		3 The Twilight Zone	1-904-241-7872	1200
	Arlen Fletcher	Mt Vernon WA	2400		Brian Bream	Neptune Beach FL	
	14 BECS TandyFido	1-206-527-5618	RE		4 The Bus Depot	1-904-262-6761	1200
	Neal Curtin	Seattle WA	2400		Felix Pendas	Mandarin FL	
	17 NCRL Library	1-509-663-5232	2400		5 Mac's Madness	1-904-788-3854	1200
	Howard Purcell	Wenatchee WA			Stan McLeod	Jacksonville FL	
	24 Fox's Den	1-206-525-1357	1200		6 The Audit Trail	1-904-262-1646	1200
	Karen Andrews	Seattle WA	DA:8p-8a:XP		Bill Denham	Mandarin FL	
	29 Trouble Shooter	1-206-922-0106	2400		344 The Dog House	1-904-721-3804	2400
	John Johansen	Tacoma WA			Pete Cascio	Jacksonville FL	
	32 Glacier Peak Rainbow	1-206-644-8431	2400	HOST	116 NashvilleArea	1-615-885-2198	2400
	Gary Stebbins	Bellevue WA	WK:12m-5p,WE:Varies		Rick Steele	Nashville TN	
			2400		400 Sys/Net	1-615-885-2198	2400
					Rick Steele	Nashville TN	
					2 Clarksville Fido	1-615-645-1630	1200
					Dawayne Adams	Clarksville TN	
	34 ArcticNet	1-206-581-7003	2400				

	3 Springfield Fido Tony Howell	1-615-384-1260 Springfield TN	1200		100 TTIBBS Amnon Nissan 101 EQUAL BBS Mike Bowen 103 Wolf Comm John Mensing 104 Nibble & Byte Ron Bemis	1-919-851-8460 Raleigh NC 1-919-851-6806 Raleigh NC 1-919-876-0134 Raleigh NC 1-919-942-9267 Chapel Hill NC	2400 1200 1200 1200
HOST	118 Alabama Area Mike Williams 442 TCS Tim Meyers 603 Telcomm Bbs Mike Perdue 604 CompuNet Jon Allen	1-205-883-8367 Huntsville AL 1-205-830-2334 Huntsville AL 1-205-883-8367 Huntsville AL 1-205-534-8246 Huntsville AL	2400 1200 2400 1200	REGION	19 Texarkana Mark Grennan 329 Computer Aide Mike Johnson 198 Quik-Net Mike Brimberry 199 Electro-Net Dustin Brimberry 200 The Bull's Eye Bob Martin 201 Fido's Domain Nevin Nobles	1-405-728-2463 AR LA OK TX 1-918-493-2137 Tulsa OK 1-409-544-2257 Crockett TX 1-409-544-2120 Crockett TX 1-806-742-6832 Lubbock TX 1-318-869-1258 Shreveport LA	2400 2400 1200 RE: 2400 DA:10p-4pm 2400 DA:9p-6am 1200 DA:7pm-7a- m,SA:3pm-7 amMon 2400
HOST	123 MemphisNET Jerry Hindle 1 Stewart Software BBS Bill Stewart 2 FidoPlex Richard Kalata 6 Spacestation Earth Jerry Hindle 367 GEMS-BBS Bradford ARP	1-901-353-4563 Memphis TN 1-901-761-5018 Memphis TN 1-901-377-8180 Memphis TN 1-901-353-4563 Memphis TN 1-901-278-4367 Memphis TN	2400 1200 2400 2400 1200		203 Centex Fido V Subramanian 205 BroadsidePCjr David Wollman 206 Cal-Trek Calvin Jennings 208 SARCO LTD Jack Coursey 437 C NET Mike Ferguson 210 XroadsMedNet Bill Brendel	1-817-778-6305 Temple TX 1-918-496-2055 Tulsa OK 1-409-948-2732 Texas City TX 1-918-663-5535 Tulsa OK 1-806-293-4925 Plainview TX 1-512-572-3377 Victoria TX	2400 2400 2400 2400 2400 DA:10pm-8am 2400 MO: 2400 DA:1900-06 00,WK:24hrs 1200 MO:RE: 1200
HOST	133 ATLGATE Ken Shackelford 1 ATL/FIDO1 Ken Shackelford 2 Fido South Lane Fowler 6 AutoCAD BBS Steve Fox	1-404-928-1876 Atlanta GA 1-404-928-1876 Woodstock GA 1-404-995-0182 Atlanta GA 1-404-872-8421 Atlanta GA	2400 2400 XP: 1200 1200		211 Comtech FIDO Allen Alfrey 212 ENTRE Fido Jack Coursey 213 MicroApplicati Richard Gladden 214 DIG El Paso Sam Thomas 215 PC Designs Allen Alfrey 216 Soft Fido Daniel Tobias 217 SEAdog Fido Charles Calwell 218 PSO Tech Board Bert Hunsicker 219 Command Post Donald Shults 220 Wash 'n Ware Joey Robichaux	1-918-749-4610 Tulsa OK 1-918-493-2309 Tulsa OK 1-915-592-9409 El Paso TX 1-915-592-5424 El Paso TX 1-918-254-0354 Tulsa OK 1-318-636-4402 Shreveport LA 1-501-374-3533 Little Rock AR 1-918-599-3001 Tulsa OK 1-915-821-8835 El Paso TX 1-504-291-7353 Baton Rouge LA	2400 2400 1200 DA:2100-0800 2400 1200 1200 2400 RE:5pm-8am 1200 2400
HOST	135 S-Florida Net Christopher Baker 2 Miami Dade Fido Richard White	1-305-596-8611 Miami FL 1-305-347-2790 Miami FL	1200 RE:XP: 2400 WK:6p-7a,W- E,RE: 1200 RE: 1200 RE:XP: 2400		221 Houston Area Justin Marquez 2 I.T.C BBS Richard Polunsky 60 Artichoke Justin Marquez 64 Graf Spee Jay Maynard 332 American Conn David Reinsel	1-713-978-3554 Houston TX 1-713-523-7255 Houston TX 1-713-978-3554 Houston TX 1-713-530-8596 Houston TX 1-713-831-3868 Houston TX	2400 2400 2400 1200 RE:MO: 1200 WK:5p-7a,W- E,RE: 1200
HOST	3 Genesis BBS Blake Eiseman 4 Ram Soft Fido David Gilbert 5 Miami PC Network Michael Shalom 6 DOS Center Fido Michael Krasnove	1-305-895-2998 N Miami FL 1-305-226-3310 Miami FL 1-305-935-4964 N Miami Beach FL 1-305-391-8504 Boca Raton FL	1200 RE: 1200 RE:XP: 2400 1200 WK:630p-93 0a,WE:RE: 2400 RE:XP: 1200 RE: 1200 RE:XP: 1200		343 PC Interconn David Reinsel 352 DG Haus Lynn Lively 357 TMBBS Scott Royall	1-713-955-8120 Houston TX 1-713-681-9629 Houston TX 1-713-497-5433 Houston TX	1200 1200 WK:6p-7a,WE: 1200 RE:9:30-23:30 p,Su,Th,WE: 2400
HOST	7 Miami's First Fido Al de la Torre 8 CompuSci Fido C Moore/M Ache' 14 Metro-Fire Fido Christopher Baker	1-305-554-4602 Miami FL 1-305-758-4821 Miami Shores FL 1-305-596-8611 Miami FL	2400 RE:XP: 1200 RE: 1200 RE:XP: 1200		487 Zaisan-Net Jack Cochran 501 West Oaks Charles Cummings 502 Kool Kat David Patterson 777 TBL-COMM Jim Baker 101 Fidos Partner Gary Sanborn 105 North Ho HUG Donald Fletcher 106 Black Star Jim Black 107 The Right Place Dave Graessle 108 Stormy Weather David Monteiro 1901 Cal Trek Calvin Jennings	1-713-337-1415 Houston TX 1-713-485-7204 Houston TX 1-713-488-0707 Houston TX 1-713-661-9040 Houston TX 1-713-458-7410 Houston TX 1-713-583-1287 Houston TX 1-713-458-5406 Houston TX 1-713-933-1457 Houston TX 1-713-644-4345 Houston TX 1-409-948-2732 Galveston TX	2400 1200 WK:7p-7a,WE: 1200 2400 RE: 2400 2400 2400 1200 2400
HOST	137 Fla Suncoast Net Jim French 10 Sarasota High Online Jim Johari 11 ABC Electronics Jeff Rigby/Scott Qua Sarasota FL 19 Ark Tangent Wes Cowley 20 TSB Fido Jim French 30 Suncoast On-line Sys Dave Bebermeyer	1-813-497-1684 Venice FL 1-813-953-3033 Sarasota FL 1-813-924-4590 Sarasota FL 1-813-977-5347 Tampa FL 1-813-497-1684 Venice FL 1-813-497-1827 Venice FL	2400 RE: 1200 RE: 1200 RE: 1200 RE: 2400 DA:6pm-10am 2400 RE: 2400 RE: 2400		507 The Right Place Dave Graessle 108 Stormy Weather David Monteiro 1901 Cal Trek Calvin Jennings	1-713-933-1457 Houston TX 1-713-644-4345 Houston TX 1-409-948-2732 Galveston TX	2400 1200 2400
HOST	145 Space Coast Steve LaPha 4 CompuTrac Fido Steve LaPha 5 The Lair Robert Hupf	1-305-268-0216 Titusville FL 1-305-268-0216 Titusville FL 1-305-830-8494 Altamonte Spgs FL	1200 DA:9p-9a 1200 DA:9p-9a 1200 WK:430p-8a- WE: 1200		117 Bryan Area Paul Sittler 1 My Word 2 Paul Sittler	1-409-845-0510 Bryan TX 1-409-764-0056 College Stn TX	2400 DA:12m-8a 2400
HOST	151 Triad NC Net Ben Mann 2 Alert Data Ben Mann 3 Wizard Line David Bodman 10 Star Chamber Marshall Presnell	1-919-274-5760 Greensboro NC 1-919-274-5760 Greensboro NC 1-919-854-0261 Greensboro NC 1-919-299-4668 Greensboro NC	2400 2400 1200 RE:1AM-6AM 1200 MO: 1200 DA:12AM-7 AM 1200				
HOST	101 EQUAL Mike Bowen 102 TTIBBS Amnon Nissan 301 The BNC Connector Bill Schreiber 401 Fido's One Dish Dave Neathery 501 Crystal Coast Fido Michael Hill 502 QX Connect Phil Ferraro	1-919-851-6806 Raleigh NC 1-919-851-8460 Raleigh NC 1-704-262-1861 Boone NC 1-919-222-0801 Graham NC 1-919-326-3740 Swansboro NC 1-919-455-1933 Jacksonville NC	1200 1200 2400 2400 1200 1200 DA:6PM-6A- M,SA: 1200				
HOST	158 N C CENTRAL Amnon Nissan	1-919-851-8460 Raleigh NC	2400				

	100 The PC Connection	1-409-774-7227	2400		David Drexler	Okla City OK	
	Chris Cox	Bryan TX			3 Fido of Moore	1-405-794-9244	1200
	101 Sherwood Forest	1-409-775-2155	1200		Clarence Wormley	Moore OK	
	Sid Sherwood	Bryan TX			5 Land Ho	1-405-947-7294	1200
	102 CS/B Z100-Fido	1-409-693-2235	2400		Kurt Vanderwater	Okla City OK	WK:6p-8a,WE:
	Chris Lang	College Stn TX	2400		7 American BBS	1-405-843-5002	1200
					John Knox	Okla City OK	
	469 My Word	1-409-845-0510					
	Paul Sittler	College Stn TX			HOST 160 CC Net	1-512-992-6441	2400
	1261 Vet Tch Hos	1-409-845-9199	2400		Mark Boler	Corpus Christi TX	
	Ron Robertson	College Stn TX			101 DataBank BBS	1-512-992-6441	2400
	1262 Elite Sft Dev	1-409-846-4367	1200		Mark Boler	Corpus Christi TX	
	Mike Ringer	Bryan TX			102 DataBank II	1-512-643-2251	1200
	1265 TAMU Micro Center	1-409-845-0822	2400		Charles Murphy	PortLand TX	
	John Kane	College Stn TX			103 Data Log	1-512-853-5835	1200
	1267 TAMU Micro Supt	1-409-845-2690	2400		Phil Hawkins	Corpus Christi TX	
	Tony Overfield	College Stn TX					
	1302 Texas Green				REGION 2 European Fnet Admin	31-8380-37156	2400
	Machine	1-409-845-7346	1200		Henk Wevers	Ede Holland Europe	!
	Don Wilkerson	College Stn TX					
HOST	124 Dallas MetroplexNet	1-214-422-4772	2400		REGION 20 Sweden	46-40-54-9189	300
	Chuck Lawson	Dallas TX			Mats Knuts	S	ICT1/2/3
	101 Schnee's Friendly Fl	1-214-578-1308	2400				
	John Summers	Plano TX			HOST 501 Sweden	46-40-54-9189	300
	102 Inside Track Edition	1-214-422-4772	2400		Mats Knuts	Malmoe Sweden	ICT1/2/3
	Chuck Lawson	Plano TX	XP:6:30a-3:30a		4602 Sun City Fido	46-54-16-6988	300
	103 Micro Fido	1-214-271-8899	2400		Lennart Svensson	Karlstad Sweden	*CT1/2
	Jon Hutto	Garland TX	WK:7A-7P		4603 ATL	46-510-2-0409	300
	104 WARBLE2	1-214-521-8689	2400		Carl Nordin	Lidköping Sweden	ICT1/2
	Wayne Ross	Dallas TX	WK:6p-3a,W-E,RE:		4604 Yellow PC	46-8-760-3312	300
			2400		Lennart Eliasson	Stockholm Sweden	CT1
	106 Star's End	1-214-238-8745	2400		4606 PathFinder	46-36-13-0575	300
	Dan Thompson	Richardson TX			Haakan Bohman	Huskvarna Sweden	*CT1
	109 The Diplomat	1-214-242-9399	2400		4607 South Swedish Fido	46-40-54-9189	300
	Robert Eskridge	Carrollton TX			Mats Knuts	Malmoe Sweden	ICT1/2/3
	110 Flying Dutchman #1	1-214-642-3436	1200		4608 Fido Candator	46-54-15-0529	300
	Randy Van de Loo	Grand Prairie TX			Morgan Holt	Karlstad Sweden	*CT1
	111 Pink World Fido	1-214-991-3381	2400		4609 Future Hacker Centra	46-8-87-1667	300
	David Finster	Dallas TX			Joaquim Homrighausen	Stockholm Sweden	*CT1
	201 DalTex FIDOnet	1-214-991-7934	1200				
	Chris Bradley	Dallas TX			REGION 21 Norway	47-7-520310	1200
	3 Dodge City	1-214-494-1940	1200		Arne Asplem	NO	!#CT1/2/3
	Bernie Lawrence	Garland TX					
	10 Big D Fido	1-214-392-1121	2400		HOST 502 Norway	47-7-515780	300
	Dennis Forcier	Dallas TX			Trond Solem	Trondheim Norway	*CT1/2
	205 Video Bar BBS	1-214-939-9114	2400		11 Future Fido	47-7-515780	300
	Wendell Price	Dallas TX			Trond Solem	Trondheim Norway	*CT1/2
	206 Rising Star	1-214-231-1372	2400		12 Costa del vindenes	47-5-234129	300
	Jeff Rush	Richardson TX			Helge Vindenes	Bergen Norway	*CT1/2
	207 ComputerCraft Suppor	1-817-263-5809	2400		13 C NET Fido	47-7-520310	1200
	David Lovrien	Dallas TX			Arne Asplem	Trondheim Norway	!#CT1/2/3
	208 Arlington FIDO	1-817-265-4859	1200		16 SOTRainbow	47-5-186806	300
	John W Richter	Arlington TX			Gene Scharman	Bergen Norway	*CT1
	209 BuckSBoard	1-214-331-8813	2400		18 Polar Fido	47-83-81364	300
	Hank Burden	Dallas TX			Thorsten Lockert	Tromsø Norway	*CT1;WK:20:00-14:30;WE:20:00-10:30
	210 SCA Consulting Inc	1-214-380-9063	2400				2400
	Jon Sabol	Dallas TX			19 Flateby Dataklubb	47-2-928952	*CT1
	211 Flying Dutchman #2	1-214-494-3417	1200		Michael Jezard	Oslo Norway	
	Harold Rosee	Garland TX					
HOST	130 DFW Gateway	1-817-429-7300	2400		REGION 22 Finland	358-0-4202223	1200
	Bill Cleaver	Fort Worth TX			Heikki Suonsivu	SF	ICT3
	1 The Puddle	1-817-429-7300	2400				
	Bill Cleaver	Fort Worth TX			HOST 504 FFUA Net	358-0-4202223	2400
	2 Nomads Nook	1-817-926-8922	2400		Heikki Suonsivu	Espoo Finland	!#CT3/4
	Jack R Smith	Fort Worth TX			1 DOSbox Fido	358-0-4202223	2400
	3 The AmERICan B	1-817-457-4737	2400		H.Suonsivu/J.Blomqvist	Espoo Finland	!#CT3/4
	Eric Ewanco	Fort Worth TX			2 Pub Fido	358-0-4202385	1200
	4 The BBN	1-817-735-8006	1200		J.Blomqvist/H.Suonsi	Espoo Finland	!#CT3
	George Braswell	Fort Worth TX			3 ITT DATA Helsinki	358-0-550970	2400
	5 CUSSNET UTA	1-817-273-3966	2400		Durk Ellison	Helsinki Finland	!#B1:CT3/4:1700-0700
	Dick Schoech	Arlington TX					1200
	6 TRACK II DBS	1-817-244-4151	2400		5 The Strontium Dog	358-0-7016596	#B1:CT3:1700-0700
	Richard Bilyea	Fort Worth TX			Yka Rankka	Helsinki Finland	2400
	7 ACROPOLIS	1-817-294-7588	1200				!#CT3/4:0200-1200(1600V21)
	Mitch Hill	Fort Worth TX			6 Midnight Express	358-0-314478	2400
	8 The Key	1-817-246-1279	1200		Ilkka Hulkko	Helsinki Finland	!#CT3/4:0200-1200(1600V21)
	Jeffrey Locke	Fort Worth TX					2400
HOST	136 CenTex ProComm	1-512-836-8588	2400		7 Missing Link	358-0-8031121	!#CT3/4
	George Lehtola	Austin TX			Heikki Suonsivu	Espoo Finland	!#CT3/4
	91 The DEAD END	1-512-255-1282	1200		8 Radio City Fido	358-0-6941123	2400
	Steve Sparks	Round Rock TX			Teemu Torma	Helsinki Finland	!#CT3/4
	200 Chai Way	1-512-388-3464	2400		9 Compis Fido	358-0-570815	1200
	Thomas Gentry	Austin TX			Petri Ojala	Helsinki Finland	!#CT1/3
	201 Thunderbird	1-512-448-3701	2400		12 Vuobox	358-0-318716	2400
	James Johnston	Austin TX			Mikko Masalin	Helsinki Finland	!#CT1/3/4
	206 Commercial Energy	1-512-255-1618	1200		14 DataBox Fido	358-0-497900	2400
	Gene Chesser	Austin TX	WK:6PM-7A-M,WE:24Hr		Heikki Hanhimaki	Helsinki Finland	#CT1/3/4:1700-0700
			2400				2400
	300 Recording Studio	1-512-452-2040			17 Micro Maniacs III	358-0-467673	!#CT3/4
	Larry Seyer	Austin TX			Ron Dwight	Espoo Finland	300
	601 Dog's Breath	1-512-836-8588	2400		31 ITT DATA Helsinki	358-0-5653168	*CT1:1700-0700
	George Lehtola	Austin TX	XP:		Durk Ellison	Helsinki Finland	700
	999 Nightmare BBS	1-512-846-6151	1200				300
	Kevin Stolle	Hutto TX			32 ITT DATA Tampere	358-31-130123	*CT1
HOST	147 Okla City Area	1-405-843-5002	1200		Durk Ellison	Tampere Finland	2400
	John Knox	Okla City OK			69 Action Track	358-0-141569	!#CT3/4
	1 The SOURCEry System	1-405-728-2463	2400		Raimo Tulonen	Helsinki Finland	
					REGION 25 United Kingdom	44-483-573338	2400
					Frank Thornley	GB	ICT1/2/3/4

HOST	503 Britnet	44-483-573-338	2400	20 HCC Hoorn 1	31-2290-34046	300
	Frank Thornley	Guildford GB	ICT1/2/3/4	Frank Bieri	Hoorn Holland	*CT1/2
	1 Compulink-1	44-483-573-337	2400	21 HCC Almelo 1	31-5490-62542	300
	Frank Thornley	Guildford GB	ICT1/2/3/4	Jan Verscharen	Almelo Holland	*CT1/2
	2 Compulink-2	44-483-573-338	1200	22 HCC Middelburg 1	31-1180-34336	300
	Frank Thornley	Guildford GB	*CT1/2	Jaap Delvoye	Middelburg Holland	*CT1/2
	3 Jersey Fido	44-534-39389	1200	23 HCC Venlo 1	31-77-822522	300
	Hugh Ashborne	St Helier GB	*CT1/2	Norbert Teeuwen	Venlo Holland	*CT1
	5 TeePee Link	44-61-494-6938	1200	100 HCC CP/Mgg	31-74-423860	300
	Terry Thompson	Manchester GB	*CT1/2	Bert Koopman	Hengelo Holland	*CT1/2
	6 Colchester Fido	44-206-865737	300	101 HCC IBM-PCgg	31-2286-1421	300
	Phil Willis	Colchester GB		Han Halewin	Hoogkarspel Holland	*CT1/2
	7 Dragon Fido	44-766-4154	1200	102 HCC MSXgg	31-20-982502	300
	Faris Raouf	Gwynedd GB	*CT1/2	Maciek Kollo	Diemen Holland	*CT1
	8 Advance Fido	44-482-28367	1200	200 Fido Ben	31-3480-21407	300
	Eric Sparrow	Hull GB	*CT1/2	Ben Eliazar	Woerden Holland	*CT1/2
	9 Dataflex	44-1-543-7020	1200	201 Fido Peter	31-72-126783	300
	Bob Manekshaw	London GB	*CT1/2	Peter van Diepen	Alkmaar Holland	*CT1
	11 Poly Fido	44-1-580-1690	1200	202 NOS Hobbyscoop	31-35-45395	300
	Graham Hobson	London GB	*CT1/2/3	Luc Bijleveld	Hilversum Holland	*CT1/2
	12 PD Library	44-342-315636	300	203 Fido Gerard	31-4784-2301	300
	Rod Smith	East Grinstead GB	*CT1	Gerard Snoek	Wanssum Holland	*CT1/2
	13 Diggertel	44-204-43082	300			
	John Balshaw	Bolton GB	*CT1	REGION 33 Italy	39-971-35447	300
	14 Mektronic	44-61-773-7739	1200	Giorgio Rutigliano		
	Brian Benster	Manchester GB	*CT1/2	1 FIDO PZ	39-971-35447	300
	15 London Underground	44-1-863-0198	1200	Giorgio Rutigliano	Potenza Italy	CT1
	Brian Robinson	London GB	IB1, *CT1/2	3 FIDO AL	39-131-355506	300
	17 Log On The Tyne	44-91-477-3339	300	Flavio Bernardotti	Alessandria Italy	CT1
	John Bone	Newcastle GB	*CT1	4 FIDO PN	39-434-32020	300
				Adolfo Melilli	Pordenone Italy	CT1
REGION	28 Holland	31-8380-37156	2400	5 SOFT SERVICE	2-228467	300
	Henk Wevers	NL	I*	Franco Vandelli	Milano Italy	CT1
	3 ACS Zoelen	31-3448-1234	2400			
	Hans Kuyt	Zoelen Holland	ICT3/4:22:00-09:00	REGION 900 IBM-PCJR-NET	1-615-226-6628	2400
	4 Fido PHCC	31-55-421284	300	Bruce Fuqua	Nashville TN	
	Ignaat Simons	Apeldoorn Holland	*CT1	1 Bits-&Bytes	1-615-226-6628	2400
	5 MAC GG	31-2159-31261	300	Bruce Fuqua	Nashville TN	
	Bob Vetter	Bussum Holland	*CT1:22:00-10:00	4 PCjr-NET	1-303-789-4610	2400
				Phil Kaiser	Englewood CO	
HOST	500 HCC net	31-8380-37156	2400	6 Traveler's	1-203-277-6938	1200
	Henk Wevers	Ede Holland	I*	Tom Lake	Hartford CT	WK:6p-7a,WE:1200
	1 Fido NI1	31-8380-37156	2400	10 Little Blue	1-616-243-2645	
	Henk Wevers	Ede Holland	I*	Dave McIntyre	Grand Rapids MI	
	10 HCC DB	31-30-935137	300	11 BattleShip PA	1-301-428-3145	1200
	Jan.A. van Garderen	Utrecht Holland	*CT1/2:RE	Clifford Kendall	Germantown MD	
	11 HCC Amsterdam 1	31-20-154154	300	12 JR-HIGHTECH	1-201-233-0010	1200
	Olif van Reijen	Amsterdam Holland	*CT1/2	Ken Voorhees	Westfield NJ	
	12 HCC Rozenburg 1	31-1819-18168	300	14 K-9 & Company	1-302-475-2201	1200
	Loek Janssen	Rozenburg Holland	*CT1/2	Mike Jacobs	Newark DE	
	13 HCC Amersfoort 1	31-33-755444	300	15 PCjrUserGroup	1-918-496-2055	2400
	John Glazer	Amersfoort Holland	*CT1/2	David Wollmann	Tulsa OK	
	14 HCC Eindhoven 1	31-40-481792	300	21 Raiders BBS	1-702-641-6649	2400
	Hans van Melis	Eindhoven Holland	*CT1/2	Bob Kleins	Las Vegas NV	
	15 HCC Leiden 1	31-71-125125	300	23 NoVaSys	1-212-304-8553	1200
	Gerard Versteeg	Leiden Holland	*CT1/2	John Cottrell	New York NY	
	16 HCC Sittard 1	31-4755-2041	300	24 WestPenn	1-412-367-2505	2400
	Leo Reijnen	Sittard Holland	*CT1/2	Steve Mills	Pittsburgh PA	
	17 HCC Arnhem 1	31-85-512492	300	25 BLASE	1-616-784-4179	2400
	Jeanette Kooij	Arnhem Holland	*CT1/2	Bill DeBlase	Grand Rapids MI	
	18 HCC Kampen 1	31-5202-24380	300	33 Micro Age	1-615-360-2190	2400
	Robert v.d. Broek	Kampen Holland	*CT1/2	Roger Dahlman	Nashville TN	
	19 HCC Groningen 1	31-50-145145	300	35 Jr Forum	1-214-669-9272	1200
	Frans Hartijzer	Groningen Holland	*CT1/2	Mike Bowles	Richardson TX	WK:4p-8a,WE:

The following nodes have been excommunicated!

102/103
109/468 Point = Stone
Compuvision

FidoNode Special Operational Codes

Code
DA: Daily
WK: Week days
WE: Week ends
SU: Sundays
SA: Saturdays
MO: Mail Only

Hours of operation

RE: Node exercises some access restrictions.

XP: Node that supports the extended protocol which means it supports file request and update request.

If you would like to make a donation to support the efforts of the National FidoNet Administrators please send whatever you can to: International FidoNet Association, d/b/a FidoNet Administrators, PO Box 41143, St. Louis, Missouri 63141, USA

EUROPEAN PART OF THE NODELIST

Due to the extreme difficult situation with european modem standards please study the comment field of the nodelist before calling any Fidonode in europe.

The comment field has the following meaning:

Positions 1-2 indication for mail

meaning: ! Node runs USA mailslot

* Node runs European mailslot in CCITT 300 baud only

Node runs European mailslot baudrate reflects max

Positions 3- indicate modem standards during non-mail hours and opening times.

meaning: CT1 : 300 baud CCITT (V21)
CT2 : 1200/75 split baudrate viewdata mode (V23)
CT3 : 1200 baud full duplex bell compatible (V22)
CT4 : 2400 baud full duplex (V22bis)

Human Services Systems Survey

The purpose of this survey is to ascertain the future systems/computer needs of CUSS Network members and human service agencies in general. The information obtained from this survey will be used for the following purposes:

- (1) Help focus the direction and content of the CUSS Newsletter and the CUSS Telecommunications Network to optimally meet user needs,
- (2) Provide information to systems software and computers vendors so that they may be better able to target their products to the human service community,
- (3) Provide information to federal, state and local governments and philanthropic organizations to better enable these organizations to fund projects that meet the information needs of human service providers.

I strongly urge you to take the time to complete this survey because the CUSS Network continually needs to stay in close contact with it's members to better address your particular systems and computer information needs. The results of the survey will be presented in a future CUSS Newsletter. I would appreciate it, if the completed survey questions could be mailed to the following address as soon as possible.

Dick Schoech, CUSS Network Coordinator, The University of Texas at Arlington P.O. Box 19129, Arlington, Texas 76019-0129

1. Are you responding to the following questions as a:
☐ a. Public human service agency employee/manager
☐ b. Private human service agency employee/manager
☐ c. Academic
☐ d. Student
☐ e. Consultant/vendor
2. Estimate the number of employees in your agency _____
3. How many years of experience do you have in the human services? _____ years
4. Do you consider yourself "computer literate?" ☐ yes ☐ no
5. How much systems experience do you have? (Check one)
☐ a. No experience
☐ b. Some experience
☐ c. Moderate experience
☐ d. Expert
6. Rank the top 5 areas where in your opinion you need more information or would like to see more research or development activity. (Number 1 is your top priority...Number 5 is your last priority)
☐ a. Micro-to-Mainframe linkages
☐ b. Local Area Networks
☐ c. Multi-User micro's
☐ d. Use/Presentation of information for decision making
☐ e. Videotext e.g.
☐ f. Systems/Computer Training Curricula for Human Service Managers & Users
☐ g. Micro software development for specific human services programs
☐ h. User support groups
☐ i. Hardware acquisition and vendor support
☐ j. End user software applications [adaptions of expert system shells, spreadsheets, DBMS's for specific human service applications (case tracking, accounting, forecasting)]
☐ k. Use of computer-generated graphics
☐ l. Telecommunications
☐ m. System development strategies and guides, e.g. RFP writing, systems analysis, prototyping, knowledge engineering.
☐ n. Other _____
7. Do program analysts or professionals use computers extensively in your organization? (Check the description(s) that best fits your organization)
☐ a. Computers are not used
☐ b. Analysts are not intersted in using computers
☐ c. We only input data, others may use the results
☐ d. Only the programmers use the computers
☐ e. There are no software applications designed for our needs
☐ f. We have few user friendly software programs to use
☐ g. We have no budget for trainning in the use of computers

- ☐ h. We are adequately trained in the use of computers
- ☐ i. The computers are primarily used by secretaries for wordprocessing
- ☐ j. Most staff use computers in some aspects of their work
- ☐ k. We have too few computers and someone is always using them and I can't "get on"
- ☐ l. Computer are highly used by professional staff
- ☐ m. Other _____

8. What is the best method to distribute information to you regarding advances in the human services systems/computer area? (Put in rank order with number 1 as your first choice)

- ☐ a. Newsletters
- ☐ b. National Conferences
- ☐ c. Regional Workshops
- ☐ d. Telecommunications Network/Bulletin Boards
- ☐ e. Video Tapes

9. Which of the following would you like the CUSS Network to help you with? (Check those that apply)

A. Software

- ☐ a. Accounting (G/L, PR, A/P, A/R)
- ☐ b. Budgeting
- ☐ c. Other _____

2. Programmatic Software

- ☐ a. Client Tracking
- ☐ b. Case Load
- ☐ c. Diagnostic
- ☐ d. Other _____

3. General Software

- ☐ a. Statistics
- ☐ b. Graphics
- ☐ c. Spreadsheets
- ☐ d. Communications
- ☐ e. Word Processing
- ☐ f. Data Base Management
- ☐ g. Other _____

10. Would you be able to attend a National Conference on Human Service

Computing? Yes _____ No _____
A Regional Conference? Yes _____ No _____

11. Would you be interested in purchasing (\$20/copy) Video cassettes on human service systems topics (i.e. use of spreadsheets, a DBMS based client tracking system, etc.)? Yes _____ No _____

12. What is your biggest computer related problem at present?

13. Please add any other recommendations or areas where the CUSS Network can be of assistance.

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