An Internet Primer for IFIP Volunteers

by Howard L. Funk
IFIP vice-president

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Abstract

The ubiquitous Internet is used to good advantage by many professional and civic organizations around the world. Whereas there are many IFIP entities which make good use of the Internet capabilities, some do not. Because of substantial differences between the United States and many other countries with regard to the telecommunications infrastructure, particularly the tariff structure, this paper is directed mainly towards the IFIP community outside of the United States A list of books about the Internet is in appendix A..

Overview

The Internet is a network of networks. At last count, there were over 25.000 of them worldwide. In fact, new networks are being added about every 20 minutes. The most rapid growth of the Internet is now being seen outside of the United States. Sometime in the summer of 1994, the number of networks in the United States will be outstripped by those elsewhere. There are now over 2.000.000 host computers on the Internet. In almost every country in the world, the growth of networks, hosts, and traffic has been revolutionary. It is my hope that the IFIP volunteers who are not yet using the Internet will be motivated by this paper to join the Internet community.

E-mail

The most commonly known, but relatively small contributor to traffic on the Internet is electronic mail (e-mail). E-mail via the Internet and related networks is now feasible in over 135 countries. Individuals who are associated with universities or businesses usually have direct access to the Internet for e-mail and for other services. For others, there are a number of possibilities. Information service providers such as America Online, Compuserve, GENIE, DELPHI, and Prodigy offer gateways to the Internet for mail (and sometimes for other services). When using this type of service, the subscriber depends upon the host computer of the service provider to be a mail box; the subscriber is not connected directly to the Internet in this model. Another approach is to use a modem to establish a SLIP (serial line internet protocol), CSLIP (compressed serial line internet protocol), or PPP (point-to-point protocol). These connections allow the user's computer to serve as an Internet host. Both public domain and commercial software is available to run on Macintosh and IBM compatible computers running either DOS or Windows. Some of these products effectively shield the timid user from the commands needed to make connections, send and receive mail and use other services. I use CHAMELEON, a Windows based product developed by Netmanage of Cupertino, California.

PSILINK

The first choice for an IFIP volunteer in finding an Internet service provider should be a nearby college or university. Because of the educational purposes of IFIP, many universities will provide modem access to our volunteers. Failing that, a commercial provider must be used.

For those persons who only want to have an e-mail service, what is probably the least expensive and easiest to use service is provided by Performance Systems International (PSI). Their product runs under Windows or DOS. Local telephone numbers are now available in the following countries.

Country & City	Country IDDD Code	City Code & Number	Modem Type
Australia			
Brisbane	61	7-8323088	LowSpeed
Melbourne	61	3-6391660	LowSpeed
Sydney	61	2-2110034	LowSpeed
Austria			
Vienna	43	222.50148	LowSpeed
Belgium			
Brussels	32	2-6479847	LowSpeed
	32	2-6476398	LowSpeed
Brazil			
Sao Paulo	55	11-1081212	LowSpeed
Denmark			
Copenhagen	45	38-331499	LowSpeed
Finland			
Helsinki	358	92919	LowSpeed
	358	92917	LowSpeed
France			
Paris	33	1-43441212	LowSpeed
Germany			
Frankfurt	49	69-6666881	LowSpeed
	49	69-6666886	LowSpeed
Hong Kong			
Hong Kong	852	8241121	LowSpeed
Ireland			
Dublin	353	1-768800	LowSpeed

Italy			
Milan	39	2-40910853	LowSpeed
	39	2-40910891	LowSpeed
	39	2-40910939	LowSpeed
Japan			
Osaka	81	6-2024159	LowSpeed
	81	6-9476611	LowSpeed
Tokyo	81	3-33431100	LowSpeed
Luxembourg			
Luxembourg	352	498822	LowSpeed
Mexico			
Cancun	52	988-30013	LowSpeed
	52	988-30035	LowSpeed
	52	988-30124	LowSpeed
	52	988-30146	LowSpeed
	52	988-30149	LowSpeed
Guadalajara	52	36-260231	LowSpeed
	52	36-260236	LowSpeed
	52	36-260250	LowSpeed
	52	36-260258	LowSpeed
	52	36-260259	LowSpeed
	52	36-260337	LowSpeed
Mexico City	52	5-7267600	LowSpeed
Monterrey	52	83-542202	LowSpeed
	52	83-542291	LowSpeed
	52	83-542292	LowSpeed
	52	83-542293	LowSpeed
Netherlands			
Amstelveen	31	20-6476171	LowSpeed
Norway			
Oslo	47	2-423590	LowSpeed

Philippines			
Manila	63	2-8171449	LowSpeed
Portugal			
Lisbon	351	1-3956446	LowSpeed
Puerto Rico			
San Juan	1	809-731-3153	LowSpeed
Singapore			
Singapore	65	5351444	LowSpeed
South Africa			
Cape Town	27	21-4623050	LowSpeed
Durban	27	31-836860	LowSpeed
Johannesburg	27	11-4035730	LowSpeed
	27	11-4036934	LowSpeed
Spain			
Barcelona	34	3-4300202	LowSpeed
Madrid	34	1-3581951	LowSpeed
	34	1-3583531	LowSpeed
Sweden			
Stockholm	46	8-7646595	LowSpeed
Switzerland			
Bern	41	31-260787	LowSpeed
	41	31-260691	LowSpeed
Geneva	41	22-7986364	LowSpeed
United Kingdom			
London	44	71-4374393	LowSpeed
	44	71-4394055	LowSpeed

LowSpeed = 300-2400 V22bis

In the United States, the e-mail service is provided for a one-time charge of $19.00 plus $9.00 a month for unlimited usage. In the countries listed above, the rates are the same but there is an additional connection time charge of $18.00 an hour which is billed in five minute increments.

The PSILINK software is provided at no extra charge to subscribers. It is designed to reduce the connection time to a minimum. The subscriber composes a mail message prior to making the connection. When the message is complete, the subscriber then initiates a connection. The software connects the user's PC to the PSI server and uploads the message, downloads any mail sent to the subscriber, and disconnects automatically. To reply to a message, the subscriber views the message to be answered, clicks on "reply" with the mouse, and then composes the response. This is done offline so as to reduce connect time charges. PSILINK is an excellent choice for an IFIP volunteer who wishes to use an e-mail service. PSI may be contacted by telephone at 1 703 620 6651 or by facsimile at 1 703 620 4586. Other U.S. service providers are listed in appendix C..

In appendix B I have provided a list of other Internet service providers outside of the United States. Please contact them directly for the most recent rate and service information.

At some time in the future, after IFIP has established a new headquarters location and its finances are stable, it could itself become an even lower cost provider of e-mail and other Internet services to IFIP volunteers. This service could be operated as a profit center or on a break-even basis. This would be a decision for the GA to make after being apprised of the facts.

For the IFIP volunteer who wishes to use ftp but cannot afford a fully qualified Internet connection, the PSILINK service price increases to $19.00 a month for unlimited usage at the low modem speeds which it supports internationally.

File Transfer

File transfer protocol (ftp) is the Internet service that accounts for about 40% of the bytes traversing the network. One can think of ftp as doing a PC copyfile command where the source is remote from the user. When the ftp command is invoked, a connection is made to a remote computer (see the example in the appendix). Once the connection is established, usually a matter of a second or so, the user selects the directory in which the desired file is located and issues a get command. The file at the remote site is instantly transferred to the user's computer. Often, multiple files can be selected with a single command. Users of the more expensive PSILINK service can use ftp indirectly. Files of interest are requested by the subscriber and are sent to the PSI server. When the files arrive at the PSI server, the subscriber can then download them using any a proprietary PC file transfer program which is part of the PSILINK software.

Resource Discovery

There are literally terabytes of ftp data available. How does a user know what is available and where it is located? A tool, developed at McGill University and now enhanced, distributed and supported by Bunyip Systems, called "archie" is used for locating files in the ftp universe. An example of using "archie" is given in appendix E. "Archie" must be accessed via telnet (see below) which is not supported by PSILINK. However, university and commercial users with fully qualified Internet systems can use telnet. SLIP, CSLIP, and PPP users can also use telnet.

GOPHER

The Internet supports a growing number of "resource discovery tools" for locating information of interest. The most popular of these is GOPHER GOPHER was developed at the University of Minnesota as an on-campus information system. Because it was designed using the basic protocols of the Internet, expansion beyond the campus was straightforward. GOPHER is a client-server system. There are now about 4000 GOPHER servers in the world and the number continues to grow. Although it is not necessary for a user to have a local client, it is more convenient to do so. Public clients are accessible via telnet. Some information providers such as America Online and DELPHI offer GOPHER as part of their basis package. I have been told that PSILINK intends to offer a GOPHER capability at an unspecified date. GOPHER is a menu system which can lead the user to desired information and then allow viewing, local storage and printing of selected documents. GOPHER also supports a search tool called "veronica." Invoking "veronica" and search terms with simple Boolean expressions can lead a user directly to the information sought. See appendix F for an example of GOPHER use.

Other "resource discovery" tools such as Wide Area Information Service (WAIS, World Wide Web (WWW), and Mosaic are gaining in popularity. It is beyond the scope of this brief paper to discuss each of these facilities. Some of the books listed in appendix A will have full descriptions of these services and their use.

Telnet

Telnet is the protocol which allows any user on the Internet to connect to any other computer on the Internet. Many libraries offer public access telnet connections for searching their catalogs. Telnet is very useful for the traveller. For example, last year at the IFIP GA meeting in Tokyo, I was able to use a terminal provided by our host to telnet to my computer in the United States to read my e-mail.

BITNET

BITNET which uses a different protocol from the Internet has a well-established information service called LISTSERV (The final E has been dropped because the BITNET system based on VM is limited to eight character userids and eight character node addresses). BITNET users can send commands directly to a LISTSERVer. Other users, such as those on the Internet may send commands to a LISTSERVer via e-mail. LISTSERVers accept subscriptions, in which case selected files are sent to the subscriber whenever any new information becomes available for selected topics. LISTSERVers also will deliver specific documents on request.

IFIP Databases

IFIP maintains three repositories; an anonymous ftp server at software.watson.ibm.com, LISTSERV@CEARN, and GOPHER (gopher.isoc.org). The following section gives examples of retrieving information from each of these sites.

FTP to software.watson.ibm.com. Login as "anonymous." When prompted for a password, enter your Internet address. Issue the command "cd /pub/ifip/." Then type "get index.txt." The complete list of files with their descriptions will be written to your computer disk. Alternatively, issue the command "dir" and the list of files will be displayed but not all of the names may be sufficiently descriptive to identify the contents.
Multiple files may be may be accessed as follows.
For example, to get the March 1994 IFIP Newsletter, each page of which is indexed as
mar94pNN.psb where NN is the page number ranging from 01 to 16.
As these files are binary, before initiating the transfer the user must issue the command "binary."
Then simply entering the command "mget mar94p*.psb" will cause all sixteen pages to be transferred and store on your local computer.

To access files from the IFIP LISTSERVer, send a mail message to LISTSERV@CEARN.bitnet with the text "get index txt." The index will be sent to you by e-mail. To get the description of the IFIP '94 conference site of Hamburg, the text of the message should be "get hamburg txt."

If your system has its own GOPHER client, then simply issue "gopher gopher.isoc.org." When the menu appears on the screen, select the topic "International Federation for Information Processing" and work your way through the tree structure until a document of interest appears. For example, on the IFIP main menu, there is a directory named "Conferences." Placing the cursor on the line so identified, enter and the list of conference files will be displayed. Select the desired conference information and the text will be displayed on your screen. This text then may be stored, printed, or e-mailed. If you do not have a GOPHER client, then you can connect to a public GOPHER client via telnet.

Public GOPHER Clients.

Host	Region	Login as
consultant.micro.umn.edu	North America	gopher
gopher.uiuc.edu	North America	gopher
panda.uiowa.edu	North America	panda
gopher.sunet.se	Europe	gopher
info.anu.edu.au	Australia	info
gopher.chalmers.se	Sweden	gopher
tolten.puc.cl	South America	gopher
ecnet.ec	Ecuador	gopher

The goal of this primer was to help IFIP volunteers find economical ways to access and to use the Internet. Please refer to the list of recommended books and the appendices for further information. Once you are connected and you cannot find needed information in the books or the appendices, you may contact me as hlfunk@watson.ibm.com.

Riding the Internet highway / Sharon Fisher
Carmel, Ind. : New Riders Pub. xii, 266 p. : ill., maps ; 24 cm.
PUBLICATION DATE(S): 1993
ISBN: 156205192X :

Doing business on the Internet; how the electronic highway is transforming American companies / Mary J. Cronin
New York : Van Nostrand Reinhold xi, 308 p. ; 23 cm.
PUBLICATION DATE(S): 1994
ISBN: 0442017707

Directory of directories on the Internet; a guide to information sources / Gregory B. Newby
Westport : Meckler xvii, 153 p. ; 28 cm.
PUBLICATION DATE(S): 1994
ISBN: 0887367682 (alk. paper) :

The Windows Internet tour guide; cruising the Internet the easy way / Michael Fraase
1st ed. Chapel Hill, N.C. : Ventana Press p. cm.
PUBLICATION DATE(S): 1994
ISBN: 1566040817 :

Internet--getting started / April Marine ... [et al.]
SRI Internet information series
Internet information series
Englewood Cliffs, N.J. : PTR Prentice Hall xxii, 360 p. ; 24 cm.
PUBLICATION DATE(S): 1993
ISBN: 0133279332

The Internet companion plus; a beginner's start-up kit for global networking : includes Wordlink software to connect to the Internet / Tracy LaQuey, with Jeanne C. Ryer ; foreword by Al Gore
Reading, Mass. : Addison-Wesley x, 197 p. : ill. ; 21 cm. + 1 computer disk (3 1/2 in.)
PUBLICATION DATE(S): 1993
ISBN: 0201627191
NOTES:
System requirements for computer disk: IBM-compatible PC; 512K RAM; MS-DOS 2.x or higher; Hayes-compatible modem. Computer disk contains WorldLink. "An Editorial Inc. book." Includes index.

The Mac Internet tour guide; cruising the Internet the easy way / Michael Fraase
1st ed. Chapel Hill, NC : Ventana Press xxii, 288 p. : ill. ; 24
cm. + 1 computer disk (3 1/2 in.)
PUBLICATION DATE(S): 1993
ISBN: 1566040620 :
NOTES:
System requirements for computer disk: Macintosh computer; 4MB RAM;
System 6.0.8 or better; MacTCP; modem; Internet account required (SLIP
or PPP communications protocol or direct connection recommended).
Includes bibliographical references (p. [281]-282) and index.

An Internet primer for information professionals; a basic guide to Internet networking technology / by Elizabeth Lane and Craig Summerhill
Westport, CT : Meckler x, 182 p. : ill. ; 26 cm.
PUBLICATION DATE(S): 1993
ISBN: 088736831X (acid-free paper) :

Internet passport; NorthWestNet's guide to our world online / Jonathan Kochmer and NorthWestNet
4th ed. Bellevue, Wash. : NorthWestNet : Northwest Academic Computing Consortium xxxii, 515 p. : ill. ; 28 cm.
PUBLICATION DATE(S): 1993
ISBN: 0963528106 :

The PC Internet tour guide; cruising the Internet the easy way / Michael Fraase
1st ed. Chapel Hill, N.C. : Ventana Press p. cm.
PUBLICATION DATE(S): 1993
ISBN: 1566040841

Zen and the art of the internet; a beginner's guide / Brendan P. Kehoe
3rd ed. Englewood Cliffs, N.J. : PTR Prentice Hall p. cm.
PUBLICATION DATE(S): 1994
ISBN: 0131214926

Hands-on Internet; a beginning guide for PC users / David Sachs, Henry Stair
Englewood Cliffs, N.J. : PTR Prentice Hall p. cm.
PUBLICATION DATE(S): 1994
ISBN: 0130563927

A DOS user's guide to the Internet / Jim Gardner
Englewood Cliffs, N.J. : Prentice Hall p. cm.
PUBLICATION DATE(S): 1993
ISBN: 0131068733

The instant Internet guide; hands-on global networking / Brent Heslop and David Angell
Reading, Mass. : Addison-Wesley p. cm.
PUBLICATION DATE(S): 1994
ISBN: 0201627078

Internet; mailing lists / edited by Edward T.L. Hardie, Vivian Neou
Updated ed. Englewood Cliffs, N.J. : PTR Prentice Hall
PUBLICATION DATE(S): 1993
ISBN: 0132896613

The Internet guide for new users / Daniel P. Dern
New York : McGraw-Hill p. cm.
PUBLICATION DATE(S): 1994
ISBN: 0070165106 :; 0070165114 (pbk.) :

The whole Internet user's guide & catalog / Ed Krol
Sebastopol, CA : O'Reilly & Associates xxiv, 376 p. : ill. ; 24 cm.
PUBLICATION DATE(S): 1992
ISBN: 1565920252

The Internet navigator; a new user's guide to network exploration / Paul A. Gilster
New York : Wiley p. cm.
PUBLICATION DATE(S): 1993
ISBN: 0471597821 (pbk.)

PC Internet Tour Guide Fraase Michael
Ventana P.,U.S. Jan 94: Computer Bkshops.
24cm.230.
BINDING: Paperback with disc PRICE: L22.95 ISBN: 1566040841

Connecting to the Internet; An O'Reilly Buyer's Guide Estrada Susan
O'Reilly & Associates,U.S. Nov 93: Internat.Thomson Pub.Services
19cm.170.
BINDING: Paperback PRICE: L11.95 ISBN: 1565920619

Internet for Everyone: A Guide for Users and Providers Wiggins Richard
SERIES: J.Ranade Workstation S.
McGraw Jan 94
24cm.424. 80ill.
BINDING: Paperback PRICE: L26.95 ISBN: 0070670196

Internet for Dummies Levine John R.
I.D.G.Books Worldwide,U.S. Sep 93: Computer Bkshops.
24cm.352.
BINDING: Paperback PRICE: L14.99 ISBN: 1568840241

How to Use the Internet Butler Mark
Ziff-Davis P.,U.S. May 94: Computer Bkshops.
24cm.
BINDING: Paperback PRICE: L16.45 ISBN: 1562762222

Internet Starter Kit for the Macintosh Engst Adam C.
Hayden Bk.Co.,U.S. Nov 93: Internat.Bk.Distrib.
22cm.192.
BINDING: Paperback with disc PRICE: L18.50 ISBN: 1568300646

Macintosh Internet Tour Guide; The Friendly Handbook for Navigating the Internet Fraase Michael
Ventana P.,U.S. Aug 93: Computer Bkshops.
24cm.230.
BINDING: Paperback with disk PRICE: L25.95 ISBN: 1566040620

Hitch-hiker's Guide to Internet Que Development Group
Que Computer Publishing,U.S. Sep 93: Computer Bkshops.
24cm.512.
BINDING: Paperback PRICE: L22.95 ISBN: 1565293533

Riding the Internet Highway Blankenhorn Dana
New Riders Pub.,U.S. Aug 93: Computer Bkshops.
24cm.200.
BINDING: Paperback PRICE: L15.45 ISBN: 156205192x

Internet Primer for Information Professionals: A Basic Guide to Internet Networking Technology
Lane Elizabeth S. Sommerhill Craig
SERIES: Supplements to Computers in Libraries S.,v.54
Meckler Jan 93
23cm.175.
BINDING: Cloth PRICE: L21.00 ISBN: 088736831x

TITLE: **Windows Internet Tour Guide**
AUTHOR: Fraase, Michael
PUBLISHER: Ventana Pr PUBLICATION DATE: 1994 (940101)
NO. OF PAGES: 290p.
BINDING: pap. - $24.95
ISBN: 1-56604-146-5

TITLE: **Compelte Idiot's Guide to Internet**
AUTHOR: Kent, Peter
PUBLISHER: Alpha Bks IN PUBLICATION DATE: 02/1994 (940201)
BINDING: pap. - $14.95
ISBN: 1-56761-414-0

TITLE: **Internet Information Guide**
AUTHOR: Manger, Jason
PUBLISHER: McGraw PUBLICATION DATE: 03/1994 (940301)
BINDING: pap. - $21.95
ISBN: 0-07-707905-1

TITLE: **Bridging the Internet Gap: How to Make the World Your On-Line Oyster!**
AUTHOR: Potter, James E.; Garrotto, Alfred J.-Editor
PUBLISHER: Bridge Lrn Systs PUBLICATION DATE: 12/1993 (931201)
NO. OF PAGES: 85p.
BINDING: Trade - $16.00 spiral bound
ISBN: 0-9632069-8-2

TITLE: **The Instant Internet Guide: Hands-On Global Networking**
AUTHOR: Heslop, Brent; Angell, David
PUBLISHER: Addison-Wesley PUBLICATION DATE: 01/1994 (940101)
BINDING: Trade - write for info.
ISBN: 0-201-62707-8

TITLE: **Introduction to the Internet**
AUTHOR: Bibb
PUBLISHER: Van Nos Reinhold PUBLICATION DATE: Date not set
BINDING: pap. - $24.95
ISBN: 0-442-01850-9

TITLE: **A DOS User's Guide to the Internet**
AUTHOR: Gardner, Jim
PUBLISHER: P-H PUBLICATION DATE: 11/1993 (931101)
BINDING: pap. - $34.95
ISBN: 0-13-106873-3

TITLE: **Navigating the Internet**
AUTHOR: Smith, Richard
PUBLISHER: Sams PUBLICATION DATE: 07/1993 (930701)
NO. OF PAGES: 400p.
BINDING: Trade - $24.95

TITLE: **The HitchHiker's Guide to Internet**
AUTHOR: Que Development Group Staff
PUBLISHER: Que PUBLICATION DATE: 07/1993 (930701)
EDITION: Orig. Ed. NO. OF PAGES: 512p.
BINDING: pap. - $24.95
ISBN: 1-56529-353-3

TITLE: **WAIS & Gopher Servers: A Guide for Librarians & Internet End-Users**
AUTHOR: Morgan, Eric L.
PUBLISHER: Meckler Corp PUBLICATION DATE: 07/1993 (930701)
NO. OF PAGES: 100p.
BINDING: pap. - $30.00
ISBN: 0-88736-932-4

TITLE: **Internet Basics: Your Map to the Global Electronic Super Highway**
AUTHOR: Lambert, Steve
PUBLISHER: Random PUBLICATION DATE: 10/1993 (931001)
BINDING: Trade - $27.00
ISBN: 0-679-75023-1

TITLE: **Crossing the InterNet Threshold: An Instructional Handbook**
AUTHOR: Tennant, Roy; Ober, John; Lipow, Anne G.; Lynch, Clifford A.-Frwd. by
PUBLISHER: Library Solns PUBLICATION DATE: 03/1993 (930301)
EDITION: Orig. Ed. NO. OF PAGES: viii, 134p.
BINDING: pap. - $45.00
ISBN: 1-882208-01-3

TITLE: **Modem U. S. A.: Low Cost & Free Online Sources for Information, Databases, Internet, & Electronic Bulletin Boards Via Personal Computer & Modem in 50 States & Washington**
AUTHOR: Motley, Lynne
PUBLISHER: Allium Pr PUBLICATION DATE: 10/1993 (931001)
EDITION: 2nd, rev. ed. NO. OF PAGES: 224p.
BINDING: pap. - $19.95
ISBN: 0-9631233-6-X

TITLE: **Directory of Directories on the Internet**
AUTHOR: Newby, Gregory B.
SERIES: Supplements to Computers in Libraries Ser.,; No. 33
PUBLISHER: Meckler Corp PUBLICATION DATE: 1993 (930101)
NO. OF PAGES: 175p.
BINDING: pap. text ed. - $29.50
ISBN: 0-88736-768-2

APPENDIX B Internet Access Providers Outside of the United States
(From the Internet Navigator)

Country	**Provider**	**Contact**
Australia	connect.com.au	61 3 5282239
	kralizec	61 2 8371397
Austria	EUnet Austria Ltd.	43 1 3174969
Belgium	EUnet Belgium	32 16 20 10 15
Bulgaria	EUnet Bulgaria	359 52 259135
Canada	Communication Accessibles Montreal	514 923 2102
	PUCnet Computer Connections	403 484 1901
CIS	EUnet Relcom (Former Soviet Union)	7 095 1983796
Czech Republic	EUnet Czech Republic	42 2 332 3232
Denmark	EUnet Denmakr/DKnet	45 39 17 99 00
Finland	EUnet Finland Ltd	358 0 400 2060
France	EUnet France	33 1 45 21 02 04
Germany	EUnet Deutschland Gmb	49 231 972 00
Greece	EUnet Greece	30 81 221171/229302
Hungary	Hungarian EUnet Backbone	36 1497986
Iceland	EUnet Iceland	354 1 694747
Ireland	IEunet Ltd	353 1 6719361
Italy	EUnet Italy	39 10 3532747
Japan	InetClub	81 492 66 7312
	Internet Initiative Japan	81 03 35803781
Luxemburg	EUnet Luxemburg	353 470261/470361
Netherlands	EUnet Netherlands	31 20 592 4245
New Zealand	actrix	paul@actrix.gen.gen.nz
	cavebbs	64 4 564 5307
Norway	EUnet Norway	47 22 958327
Portugal	EUnet Portugal	351 1 395 06 42
Romania	EUnet Romania	40 1 3126886
Slovakia	EUnet Slovakia	42 7 377 434/7 725 306
	Ivan Lescak	42 7 725 306
Slovenia	NIL Systems Integration and Consulting Ltd.	38 61 105 183
Spain	EUnet Spain	34 1 413 48 56
Sweden	Swipnet AB	46 8 632 40 40
Switzerland	EUnet Wsitzerland	41 1 291 45 80
Tunisia	EUnet Tunisia	216 1 787 757/288 805

United Kingdom	Demon Internet Systems	44 (0)81 349 0063
	The Direct Connection	44(0)81 317 0100
	EUnet GB	44 227 475497
	PIPEX	44 223 250120
	UK PC User Group	44(0)81 863 6646
	Infocom	FAX44 734 32 09 88
	HelpEx	44 81 755 0077*

* Available between 1300-2300 GMT voice and fax

APPENDIX C Internet Access Providers in the United States

The Public Dialup Internet Access List (PDIAL)
===
File PDIAL014.TXT -- 01 December 1993

I make no representations about the suitability or accuracy of this document for any purpose. It is provided "as is" without express or implied warranty. All information contained herein is subject to change.

Contents:

Subject headers below are formatted so this list may be read as a digest by USENET newsreaders that support digests. Example commands: rn, "control-G" skips to next section; nn, "G%" presents as a digest.

Or, just skip to desired section by searching for the desired section number string (e.g. "-01-") from the list above.

From: PDIAL -00-
Subject: Quick Start!

THE INTERNET is a global cooperative information network which can give you instant access to millions of people and terabytes of data. Providers listed in the PDIAL provide inexpensive public access to the Internet using your regular modem and computer.

[Special note: the PDIAL currently lists only providers directly connected to the Internet. Much of the Internet can still be explored through systems with only Internet email and USENET netnews connections, but you need to check other BBS lists to find them.]

GET A GUIDE: I highly recommend obtaining one of the many good starter or guide books to the Internet. Think of them as travel guides to a new and different country, and you wouldn't be far off. See section -08- below for more details.

CHOOSING A PROVIDER: Phone charges can dominate the cost of your access to the Internet. Check first for providers with metro or regional dialins that are a local call for you (no per-minute phone charges). If there aren't any, move on to comparing prices for PDN, 800, and direct-dial long distance charges. Make sure to compare all your options. Calling long distance out-of-state or across the country is often cheaper than calling 30 miles away.

If you're not in North America and have no local provider, you may still be able to use one of the providers listed as having PDN access. Contact the individual providers with PDN access (see listings below) to find out.

INFORMATION CHANGES: The information listed in the PDIAL changes and expands rapidly. If this edition is more than 2 months old, consider obtaining a new one. You can use the Info Deli email server, which will provide you with updates and other information. Choose from the commands below and just email them to <info-deli-server@netcom.com>.

"Send PDIAL" -- receive the current PDIAL
"Subscribe PDIAL" -- receive new editions of the PDIAL automatically
"Subscribe Info-Deli-News" -- news of Info Deli changes and additions

See section -07- below for more details and other ways to obtain the PDIAL.

CHECK IT OUT: Remember, the PDIAL is only a summary listing of the resources and environment delivered by each of the various providers. Contact the providers that interest you by email or voice phone and make sure you find out if they have what you need.

Then GO FOR IT! Happy 'netting!

From: PDIAL -01-
Subject: Area Code Summary: Providers With Many Local Dialins (1-800, PDN)

PDN delphi holonet hookup.net IGC michnet millennium novalink portal
PDN psi-world-dial psilink tmn well world
800 class cns crl csn dial-n-cerf-usa hookup.net IGC jvnc OARnet

"PDN" means the provider is accessible through a public data network (check the listings below for which network); note that many PDNs listed offer access outside North America as well as within North America. Check with the provider or the PDN for more details.

"800" means the provider is accessible via a "toll-free" US phone number. The phone company will not charge for the call, but the service provider will add a surcharge to cover the cost of the 800 service. This may be more expensive than other long-distance options.

From: PDIAL -02-
Subject: Area Code Summary: US/Canada Metro and Regional Dialins

If you are not local to any of these providers, it's still likely you are able to access those providers available through a public data network (PDN). Check the section above for providers with wide area access.

201 jvnc-tiger
202 CAPCON clarknet express tmn
203 jvnc-tiger
205 nuance
206 eskimo GLAIDS halcyon netcom nwnexus olympus
212 echonyc maestro mindvox panix pipeline
213 crl dial-n-cerf kaiwan netcom
214 metronet netcom
215 jvnc-tiger PREPnet
216 OARnet wariat
217 prairienet
301 CAPCON clarknet express tmn
303 cns csn netcom nyx
310 class crl dial-n-cerf kaiwan netcom

312 mcsnet netcom
313 michnet MSen
401 anomaly ids jvnc-tiger
403 PUCnet
404 crl netcom
408 a2i netcom portal tellink
410 CAPCON clarknet express
412 PREPnet telerama
415 a2i class crl dial-n-cerf IGC netcom portal tellink well
416 hookup.net uunorth
419 OARnet
503 agora.rain.com netcom
503 teleport
504 sugar
508 anomaly nearnet northshore novalink
510 class crl dial-n-cerf holonet netcom
512 realtime
513 fsp OARnet
514 CAM.ORG
516 jvnc-tiger
517 michnet
519 hookup.net uunorth
602 crl evergreen indirect
603 MV nearnet
609 jvnc-tiger
613 uunorth
614 OARnet
616 michnet
617 delphi nearnet netcom northshore novalink world
619 class crash.cts.com cyber dial-n-cerf netcom
703 CAPCON clarknet express netcom tmn
704 concert Vnet
707 crl
708 mcsnet
713 blkbox nuchat sugar
714 class dial-n-cerf express kaiwan netcom
717 PREPnet
718 maestro mindvox netcom panix pipeline
719 cns csn oldcolo
804 wyvern
814 PREPnet
815 mcsnet
818 class dial-n-cerf netcom
906 michnet

907 alaska.edu
908 express jvnc-tiger
916 netcom
919 concert

These are area codes local to the dialups, although some prefixes in the area codes listed may not be local to the dialups. Check your phone book or with your phone company.

Most providers listed here are also accessible by packet-switched data services such as PC Pursuit ($30/month for 30 hours off-peak 2400 bps access -- call 800-736-1130 for more information), traditional long distance services, and of course telnet.

From: PDIAL -03-
Subject: Area Code Summary: International Dialins

If you are not local to any of these providers, there is still a chance you are able to access those providers available through a public data network (PDN). Check section -01- above for providers with wide area access, and send email to them to ask about availability.

+301 Ariadne
+61 2 connect.com.au
+61 3 connect.com.au
+49 23 ins
+49 Individual.NET
+49 069 in-rhein-main
+49 089 mucev
+44 (0)81 Demon
+44 (0)81 dircon
+44 (0)81 ibmpcug

From: PDIAL -04-
Subject: Alphabetical List of Providers

Fees are for personal dialup accounts with outgoing Internet access; most sites have other classes of service with other rate structures as well. Most support email and netnews along with the listed services.

"Long distance: provided by user" means you need to use services such as PC Pursuit, direct dial long distance or other long distance services.

<< a2i >>
name ----------> a2i communications
dialup --------> 408-293-9010 (v.32bis), 415-364-5652 (v.32bis), 408-293-9020 (PEP); login 'guest'
area codes ----> 408, 415
local access --> CA: West and South SF Bay Area
long distance -> provided by user
services ------> shell (SunOS UNIX and MS-DOS), ftp, telnet, irc, feeds, domains and host-less domains, virtual ttys, gopher
fees ----------> $20/month or $45/3 months or $72/6 months
email ---------> info@rahul.net
voice ---------> 408-293-8078 voicemail
ftp more info -> ftp.rahul.net:/pub/BLURB

<< agora.rain.com >>
name ----------> RainDrop Laboratories
dialup --------> 503-293-1772 (2400) 503-293-2059 (v.32, v.32 bis) 'apply'
area codes ----> 503
local access --> OR: Portland, Beaverton, Hillsboro, Forest Grove, Gresham, Tigard, Lake Oswego, Oregon City, Tualatin, Wilsonville
long distance -> provided by user
services ------> shell, ftp, telnet, gopher, usenet
fees ----------> $6/month (1 hr/day limit)
email ---------> info@agora.rain.com
voice ---------> n/a
ftp more info -> agora.rain.com:/pub/gopher-data/agora/agora

<< alaska.edu >>
name ----------> University Of Alaska Southeast, Tundra Services
dialup --------> 907-789-1314
area codes ----> 907
local access --> All Alaskan sites with local UACN access -- Anchorage, Barrow, Fairbanks, Homer, Juneau, Keni, Ketchikan, Kodiak, Kotzebue, Nome, Palmer, Sitka, Valdez
long distance -> provided by user
services ------> Statewide UACN Mail, Internet, USENET, gopher, Telnet, FTP
fees ----------> $20/month for individual accounts, discounts for 25+ and 50+ to public, gov't and non-profit organizations.
email ---------> JNJMB@acad1.alaska.edu
voice ---------> 907-465-6453
fax -----------> 907-465-6295

ftp more info -> n/a

<< anomaly >>
name ----------> Anomaly - Rhode Island's Gateway To The Internet
dialup --------> 401-331-3706 (v.32) or 401-455-0347 (PEP)
area codes ----> 401, 508
local access --> RI: Providence/Seekonk Zone
long distance -> provided by user
services ------> shell, ftp, telnet, SLIP
fees ----------> Commercial: $125/6 months or $200/year; Educational: $75/6 months or $125/year
email ---------> info@anomaly.sbs.risc.net
voice ---------> 401-273-4669
ftp more info -> anomaly.sbs.risc.net:/anomaly.info/access.zip

<< Ariadne >>
name ----------> Ariadne - Greek Academic and Research Network
dialup --------> +301 65-48-800 (1200 - 9600 bps)
area codes ----> +301
local access --> Athens, Greece
long distance -> provided by user
services ------> e-mail, ftp, telnet, gopher, talk, pad(EuropaNet)
fees ----------> 5900 drachmas per calendar quarter, 1 hr/day limit.
email ---------> dialup@leon.nrcps.ariadne-t.gr
voice ---------> +301 65-13-392
fax -----------> +301 6532910
ftp more info -> n/a

<< blkbox >>
name ----------> The Black Box
dialup --------> (713) 480-2686 (V32bis/V42bis)
area codes ----> 713
local access --> TX: Houston
long distance -> provided by user
services ------> shell, ftp, telnet, SLIP, PPP, UUCP
fees ----------> $21.65 per month or $108.25 for 6 months
email ---------> info@blkbox.com
voice ---------> (713) 480-2684
ftp more info -> n/a

<< CAM.ORG >>
name ----------> Communications Accessibles Montreal
dialup --------> 514-931-7178 (v.32 bis), 514-931-2333 (2400bps)
area codes ----> 514

local access --> QC: Montreal, Laval, South-Shore, West-Island
long distance -> provided by user
services ------> shell, ftp, telnet, gopher, wais, WWW, irc, feeds, SLIP,
PPP, AppleTalk, FAX gateway
fees ----------> $25/month Cdn.
email ---------> info@CAM.ORG
voice ---------> 514-931-0749
ftp more info -> ftp.CAM.ORG

<< CAPCON >>
name ----------> CAPCON Library Network
dialup --------> contact for number
area codes ----> 202, 301, 410, 703
local access --> District of Columbia, Suburban Maryland & Northern Virginia
long distance -> various plans available/recommended; contact for details
services ------> menu, archie, ftp, gopher, listservs, telnet, wais, whois,
full day training and 'CAPCON Connect User Manual'
fees ----------> $35 start-up + $150/yr + $24/mo for first account from an
institution; $35 start-up + $90/yr + $15/mo for additional
users (member rates lower); 20 hours/month included,
additional hours $2/hr
email ---------> capcon@capcon.net
voice ---------> 202-331-5771
fax -----------> 202-797-7719
ftp more info -> n/a

<< clarknet >>
name ----------> Clark Internet Services, Inc. (ClarkNet)
dialup --------> 410-730-9786, 410-995-0271, 301-596-1626, 301-854-0446,
301-621-5216 'guest'
area codes ----> 202, 301, 410, 703
local access --> MD: Baltimore; DC: Washington; VA: Northern VA
long distance -> provided by user
services ------> shell, menu, ftp, telnet, irc, gopher, hytelnet, www, WAIS,
SLIP/PPP, ftp space, feeds (UUCP & uMDSS), dns, Clarinet
fees ----------> $23/month or $66/3 months or $126/6 months or $228/year
email ---------> info@clark.net
voice ---------> Call 800-735-2258 then give 410-730-9764 (MD Relay Svc)
fax -----------> 410-730-9765
ftp more info -> ftp.clark.net:/pub/clarknet/fullinfo.txt

<< class >>
name ----------> Cooperative Library Agency for Systems and Services
dialup --------> contact for number; NOTE: CLASS serves libraries and

information distributors only
area codes ----> 310, 415, 510, 619, 714, 818, 800
local access --> Northern and Southern California or anywhere (800) service is available
long distance -> 800 service available at $6/hour surcharge
services ------> menus, mail, telnet, ftp, gopher, wais, hytelnet, archie, WWW, IRC, Unix shells, SLIP, etc. Training is available.
fees ----------> $4.50/hour + $150/year for first account + $50/year each additional account + $135/year CLASS membership. Discounts available for multiple memberships.
email ---------> class@class.org
voice ---------> 800-488-4559
fax -----------> 408-453-5379
ftp more info -> n/a

<< cns >>
name ----------> Community News Service
dialup --------> 719-520-1700 id 'new', passwd 'newuser'
area codes ----> 303, 719, 800
local access --> CO: Colorado Springs, Denver; continental US/800
long distance -> 800 or provided by user
services ------> UNIX shell, email, ftp, telnet, irc, USENET, Clarinet, gopher, Commerce Business Daily
fees ----------> $2.75/hour; $10/month minimum + $35 signup
email ---------> service@cscns.com
voice ---------> 719-592-1240
ftp more info -> cscns.com

<< concert >>
name ----------> CONCERT-CONNECT
dialup --------> contact for number
area codes ----> 704, 919
local access --> NC: Asheville, Chapel Hill, Charlotte, Durham, Greensboro, Greenville, Raleigh, Winston-Salem, Research Triangle Park
long distance -> provided by user
services ------> UUCP, SLIP
fees ----------> SLIP: $150 educational/research or $180 commercial for first 60 hours/month + $300 signup
email ---------> info@concert.net
voice ---------> 919-248-1999
ftp more info -> ftp.concert.net

<< connect.com.au >>
name ----------> connect.com.au pty ltd

dialup --------> contact for number
area codes ----> +61 3, +61 2
local access --> Australia: Melbourne, Sydney
long distance -> provided by user
services ------> SLIP, PPP, ISDN, UUCP, ftp, telnet, NTP, FTPmail
fees ----------> AUS$2000/year (1 hour/day), 10% discount for AUUG members; other billing negotiable
email ---------> connect@connect.com.au
voice ---------> +61 3 5282239
fax -----------> +61 3 5285887
ftp more info -> ftp.connect.com.au

<< crash.cts.com >>
name ----------> CTS Network Services (CTSNET)
dialup --------> 619-637-3640 HST, 619-637-3660 V.32bis, 619-637-3680 PEP 'help'
area codes ----> 619
local access --> CA: San Diego, Pt. Loma, La Jolla, La Mesa, El Cajon, Poway, Ramona, Chula Vista, National City, Mira Mesa, Alpine, East County, new North County numbers, Escondido, Oceanside, Vista
long distance -> provided by user
services ------> Unix shell, UUCP, Usenet newsfeeds, NNTP, Clarinet, Reuters, FTP, Telnet, SLIP, PPP, IRC, Gopher, Archie, WAIS, POPmail, UMDSS, domains, nameservice, DNS
fees ----------> $10-$23/month flat depending on features, $15 startup, personal $20-> /month flat depending on features, $25 startup, commercial
email ---------> info@crash.cts.com (server), support@crash.cts.com (human)
voice ---------> 619-637-3637
fax -----------> 619-637-3630
ftp more info -> n/a

<< crl >>
name ----------> CR Laboratories Dialup Internet Access
dialup --------> 415-389-UNIX
area codes ----> 213, 310, 404, 415, 510, 602, 707, 800
local access --> CA: San Francisco Bay area + San Rafael, Santa Rosa, Los Angeles, Orange County; AZ: Phoenix, Scottsdale, Tempe, and Glendale; GA: Atlanta metro area; continental US/800
long distance -> 800 or provided by user
services ------> shell, ftp, telnet, feeds, SLIP, WAIS
fees ----------> $17.50/month + $19.50 signup
email ---------> info@crl.com
voice ---------> 415-381-2800

ftp more info -> n/a

<< csn >>
name ----------> Colorado SuperNet, Inc.
dialup --------> contact for number
area codes ----> 303, 719, 800
local access --> CO: Alamosa, Boulder/Denver, Colorado Springs, Durango, Fort
Collins, Frisco, Glenwood Springs/Aspen, Grand Junction,
Greeley, Gunnison, Pueblo, Telluride; anywhere 800 service
is available
long distance -> provided by user or 800
services ------> shell or menu, UUCP, SLIP, 56K, ISDN, T1; ftp, telnet, irc,
gopher, WAIS, domains, anonymous ftp space, email-to-fax
fees ----------> $1/hour off-peak, $3/hour peak ($250 max/month) + $20
signup, $5/hr surcharge for 800 use
email ---------> info@csn.org
voice ---------> 303-273-3471
fax -----------> 303-273-3475
ftp more info -> csn.org:/CSN/reports/DialinInfo.txt
off-peak ------> midnight to 6am

<< cyber >>
name ----------> The Cyberspace Station
dialup --------> 619-634-1376 'guest'
area codes ----> 619
local access --> CA: San Diego
long distance -> provided by user
services ------> shell, ftp, telnet, irc
fees ----------> $15/month + $10 startup or $60 for six months
email ---------> help@cyber.net
voice ---------> n/a
ftp more info -> n/a

<< Demon >>
name ----------> Demon Internet Systems (DIS)
dialup --------> +44 (0)81 343 4848
area codes ----> +44 (0)81
local access --> London, England
long distance -> provided by user
services ------> ftp, telnet, SLIP/PPP
fees ----------> GBPounds 10.00/month; 132.50/year (inc 12.50 startup
charge). No on-line time charges.
email ---------> internet@demon.co.uk
voice ---------> +44 (0)81 349 0063

ftp more info -> n/a

<< delphi >>
name ----------> DELPHI
dialup --------> 800-365-4636 'JOINDELPHI password:INTERNETSIG'
area codes ----> 617, PDN
local access --> MA: Boston; KS: Kansas City
long distance -> Sprintnet or Tymnet: $9/hour weekday business hours, no charge nights and weekends
services ------> ftp, telnet, feeds, user groups, wire services, member conferencing
fees ----------> $10/month for 4 hours or $20/month for 20 hours + $3/month for Internet services
email ---------> walthowe@delphi.com
voice ---------> 800-544-4005
ftp more info -> n/a

<< dial-n-cerf >>
name ----------> DIAL n' CERF or DIAL n' CERF AYC
dialup --------> contact for number
area codes ----> 213, 310, 415, 510, 619, 714, 818
local access --> CA: Los Angeles, Oakland, San Diego, Irvine, Pasadena, Palo Alto
long distance -> provided by user
services ------> shell, menu, irc, ftp, hytelnet, gopher, WAIS, WWW, terminal service, SLIP
fees ----------> $5/hour ($3/hour on weekend) + $20/month + $50 startup OR $250/month flat for AYC
email ---------> help@cerf.net
voice ---------> 800-876-2373 or 619-455-3900
ftp more info -> nic.cerf.net:/cerfnet/dial-n-cerf/
off-peak ------> Weekend: 5pm Friday to 5pm Sunday

<< dial-n-cerf-usa >>
name ----------> DIAL n' CERF USA
dialup --------> contact for number
area codes ----> 800
local access --> anywhere (800) service is available
long distance -> included
services ------> shell, menu, irc, ftp, hytelnet, gopher, WAIS, WWW, terminal service, SLIP
fees ----------> $10/hour ($8/hour on weekend) + $20/month
email ---------> help@cerf.net
voice ---------> 800-876-2373 or 619-455-3900

ftp more info -> nic.cerf.net:/cerfnet/dial-n-cerf/
off-peak ------> Weekend: 5pm Friday to 5pm Sunday

<< dircon >>
name ----------> The Direct Connection
dialup --------> +44 (0)81 317 2222
area codes ----> +44 (0)81
local access --> London, England
long distance -> provided by user
services ------> shell or menu, UUCP feeds, SLIP/PPP, ftp, telnet, gopher,
WAIS, Archie, personal ftp/file space, email-to-fax
fees ----------> Subscriptions from GBPounds 10 per month, no on-line
charges. GBPounds 7.50 signup fee.
email ---------> helpdesk@dircon.co.uk
voice ---------> +44 (0)81 317 0100
fax -----------> +44 (0)81 317 0100
ftp more info -> n/a

<< echonyc >>
name ----------> Echo Communications
dialup --------> (212) 989-8411 (v.32, v.32 bis) 'newuser'
area codes ----> 212
local access --> NY: Manhattan
long distance -> provided by user
services ------> shell, ftp, telnet, gopher, archie, wais, SLIP/PPP
fees ----------> Commercial: $19.95/month; students/seniors: $13.75/month
email ---------> horn@echonyc.com
voice ---------> 212-255-3839
ftp more info -> n/a

<< eskimo >>
name ----------> Eskimo North
dialup --------> 206-367-3837 300-14.4k, 206-362-6731 for 9600/14.4k,
206-742-1150 World Blazer
area codes ----> 206
local access --> WA: Seattle, Everett
long distance -> provided by user
services ------> shell, ftp, telnet
fees ----------> $10/month or $96/year
email ---------> nanook@eskimo.com
voice ---------> 206-367-7457
ftp more info -> n/a

<< evergreen >>

name ----------> Evergreen Communications
dialup --------> (602) 955-8444
area codes ----> 602
local access --> AZ
long distance -> provided by user or call for additional information
services ------> ftp, telnet, gopher, archie, wais, www, uucp, PPP
fees ----------> individual: $239/yr; commercial: $479/yr; special
educational rates
email ---------> evergreen@libre.com
voice ---------> 602-955-8315
fax -----------> 602-955-5948
ftp more info -> n/a

<< express >>
name ----------> Express Access - A service of Digital Express Group
dialup --------> 301-220-0462, 410-766-1855, 703-281-7997, 714-377-9784,
908-937-9481 'new'
area codes ----> 202, 301, 410, 703, 714, 908
local access --> Northern VA, Baltimore MD, Washington DC, New Brunswick NJ,
Orange County CA
long distance -> provided by user
services ------> shell, ftp, telnet, irc, gopher, hytelnet, www, Clarinet,
SLIP/PPP, archie, mailing lists, autoresponders, anonymous
FTP archives
fees ----------> $25/month or $250/year
email ---------> info@digex.net
voice ---------> 800-969-9090, 301-220-2020
ftp more info -> n/a

<< fsp >>
name ----------> Freelance Systems Programming
dialup --------> (513) 258-7745 to 14.4 Kbps
area codes ----> 513
local access --> OH: Dayton
long distance -> provided by user
services ------> shell, ftp, telnet, feeds, email, gopher, archie, SLIP, etc.
fees ----------> $20 startup and $1 per hour
email ---------> fsp@dayton.fsp.com
voice ---------> (513) 258-7246
ftp more info -> n/a

<< GLAIDS >>
name ----------> GLAIDS NET (Homosexual Network)
dialup --------> 206-322-0621

area codes ----> 206
local access --> WA: Seattle
long distance -> provided by user
services ------> BBS, Gopher, ftp, telnet
fees ----------> $10/month. Scholarships available. Free 7 day trial.
Visitors are welcome.
email ---------> tomh@glaids.wa.com
voice ---------> 206-323-7483
ftp more info -> GLAIDS.wa.com

<< halcyon >>
name ----------> Halcyon
dialup --------> 206-382-6245 'new', 8N1
area codes ----> 206
local access --> Seattle, WA
long distance -> provided by user
services ------> shell, telnet, ftp, bbs, irc, gopher, hytelnet
fees ----------> $200/year, or $60/quarter + $10 start-up
email ---------> info@halcyon.com
voice ---------> 206-955-1050
ftp more info -> halcyon.com:/pub/waffle/info

<< holonet >>
name ----------> HoloNet
dialup --------> 510-704-1058
area codes ----> 510, PDN
local access --> Berkeley, CA
long distance -> [per hour, off-peak/peak] Bay Area: $0.50/$0.95; PSINet A:
$0.95/$1.95; PSINet B: $2.50/$6.00; Tymnet: $3.75/$7.50
services ------> ftp, telnet, irc, games
fees ----------> $2/hour off-peak, $4/hour peak; $6/month or $60/year minimum
email ---------> info@holonet.net
voice ---------> 510-704-0160
ftp more info -> holonet.net:/info/
off-peak ------> 5pm to 8am + weekends and holidays

<< hookup.net >>
name ----------> HookUp Communication Corporation
dialup --------> contact for number
area codes ----> 800, PDN, 416, 519
local access --> Ontario, Canada
long distance -> 800 access across Canada, or discounted rates by HookUp
services ------> shell or menu, UUCP, SLIP, PPP, ftp, telnet, irc, gopher,
domains, anonymous ftp space

fees ----------> Cdn$14.95/mo for 5 hours; Cdn$34.95/mo for 15 hrs;
Cdn$59.95/mo for 30 hrs; Cdn$300.00/yr for 50 hrs/mo;
Cdn$299.00/mo for unlimited usage
email ---------> info@hookup.net
voice ---------> 519-747-4110
fax -----------> 519-746-3521
ftp more info -> n/a

<< ibmpcug >>
name ----------> UK PC User Group
dialup --------> +44 (0)81 863 6646
area codes ----> +44 (0)81
local access --> London, England
long distance -> provided by user
services ------> ftp, telnet, bbs, irc, feeds
fees ----------> GBPounds 15.50/month or 160/year + 10 startup (no time
charges)
email ---------> info@ibmpcug.co.uk
voice ---------> +44 (0)81 863 6646
ftp more info -> n/a

<< ids >>
name ----------> The IDS World Network
dialup --------> 401-884-9002, 401-785-1067
area codes ----> 401
local access --> East Greenwich, RI; northern RI
long distance -> provided by user
services ------> ftp, telnet, SLIP, feeds, bbs
fees ----------> $10/month or $50/half year or $100/year
email ---------> sysadmin@ids.net
voice ---------> 401-884-7856
ftp more info -> ids.net:/ids.net

<< IGC >>
name ----------> Institute for Global Communications/IGC Networks (PeaceNet,
EcoNet, ConflictNet, LaborNet, HomeoNet)
dialup --------> 415-322-0284 (N-8-1), 'new'
area codes ----> 415, 800, PDN
local access --> CA: Palo Alto, San Francisco
long distance -> [per hour, off-peak/peak] SprintNet: $2/$7; 800: $11/$11
services ------> telnet, local newsgroups for environmental, peace/social
justice issues; NO ftp
fees ----------> $10/month + $3/hr after first hour
email ---------> support@igc.apc.org

voice ---------> 415-442-0220
ftp more info -> igc.apc.org:/pub

<< indirect >>
name ----------> Internet Direct, Inc.
dialup --------> 602-274-9600 (Phoenix); 602-321-9600 (Tucson); 'guest'
area codes ----> 602
local access --> AZ: Phoenix, Tucson
long distance -> provided by user
services ------> Shell/menu, UUCP, Usenet, NNTP, FTP, Telnet, SLIP, PPP, IRC,
Gopher, WAIS, WWW, POP, DNS, nameservice, QWK (offline
readers)
fees ----------> $20/month (personal); $30/month (business)
email ---------> info@indirect.com (automated); support@indirect.com (human)
voice ---------> 602-274-0100 (Phoenix), 602-324-0100 (Tucson)
ftp more info -> n/a

<< Individual.NET >>
name ----------> Individual Network e.V. (IN)
dialup --------> contact for number
area codes ----> +49
local access --> Germany: Berlin, Oldenburg, Bremen, Hamburg, Krefeld, Kiel,
Duisburg, Darmstadt, Dortmund, Hannover, Ruhrgebiet, Bonn,
Magdeburg, Duesseldorf, Essen, Koeln, Paderborn, Bielefeld,
Aachen, Saarbruecken, Frankfurt, Braunschweig, Dresden, Ulm,
Erlangen, Nuernberg, Wuerzburg, Chemnitz, Muenchen,
Muenster, Goettingen, Wuppertal, Schleswig, Giessen,
Rostock, Leipzig and other
long distance -> provided by user
services ------> e-mail, usenet feeds, UUCP, SLIP, ISDN, shell, ftp, telnet,
gopher, irc, bbs
fees ----------> 15-30 DM/month (differs from region to region)
email ---------> in-info@individual.net
voice ---------> +49 2131 64190 (Andreas Baess)
fax -----------> +49 2131 605652
ftp more info -> ftp.fu-berlin.de:/pub/doc/IN/

<< in-rhein-main >>
name ----------> Individual Network - Rhein-Main
dialup --------> +49-69-39048414, +49-69-6312934 (+ others)
area codes ----> +49 069
local access --> Frankfurt/Offenbach, Germany
long distance -> provided by user
services ------> shell (Unix), ftp, telnet, irc, gopher, uucp feeds

fees ----------> SLIP/PPP/ISDN: 40 DM, 4 DM / Megabyte
email ---------> info@rhein-main.de
voice ---------> +49-69-39048413
ftp more info -> n/a

<< ins >>
name ----------> INS - Inter Networking Systems
dialup --------> contact for number
area codes ----> +49 23
local access --> Ruhr-Area, Germany
long distance -> provided by user
services ------> e-mail,uucp,usenet,slip,ppp,ISDN-TCP/IP
fees ----------> fees for commercial institutions and any others:
uucp/e-mail,uucp/usenet:$60/month; ip:$290/month minimum
email ---------> info@ins.net
voice ---------> +49 2305 356505
fax -----------> +49 2305 25411
ftp more info -> n/a

<< jvnc >>
name ----------> The John von Neumann Computer Network - Tiger Mail & Dialin' Terminal
dialup --------> contact for number
area codes ----> 800
local access --> anywhere (800) service is available
long distance -> included
services ------> email and newsfeed or terminal access only
fees ----------> $19/month + $10/hour + $36 startup (PC or Mac SLIP software included)
email ---------> info@jvnc.net
voice ---------> 800-35-TIGER, 609-897-7300
fax -----------> 609-897-7310
ftp more info -> n/a

<< jvnc-tiger >>
name ----------> The John von Neumann Computer Network - Dialin' Tiger
dialup --------> contact for number
area codes ----> 201, 203, 215, 401, 516, 609, 908
local access --> Princeton & Newark, NJ; Philadelphia, PA; Garden City, NY; Bridgeport, New Haven, & Storrs, CT; Providence, RI
long distance -> provided by user
services ------> ftp, telnet, SLIP, feeds, optional shell
fees ----------> $99/month + $99 startup (PC or Mac SLIP software included -- shell is additional $21/month)

email ---------> info@jvnc.net
voice ---------> 800-35-TIGER, 609-897-7300
fax -----------> 609-897-7310
ftp more info -> n/a

<< kaiwan >>
name ----------> KAIWAN Public Access Internet Online Services
dialup --------> 714-539-5726, 310-527-7358
area codes ----> 213, 310, 714
local access --> CA: Los Angeles, Orange County
long distance -> provided by user
services ------> shell, ftp, telnet, irc, WAIS, gopher, SLIP/PPP, ftp space,
feeds, dns, 56K leasd line
fees ----------> $15.00/signup + $15.00/month or $30.00/quarter (3 month) or
$11.00/month by credit card
email ---------> info@kaiwan.com
voice ---------> 714-638-2139
ftp more info -> kaiwan.com:/pub/KAIWAN

<< maestro >>
name ----------> Maestro
dialup --------> (212) 240-9700 'newuser'
area codes ----> 212, 718
local access --> NY: New York City
long distance -> provided by user
services ------> shell, ftp, telnet, gopher, wais, irc, feeds, etc.
fees ----------> $15/month or $150/year
email ---------> info@maestro.com (autoreply); staff@maestro.com,
rkelly@maestro.com, ksingh@maestro.com
voice ---------> 212-240-9600
ftp more info -> n/a

<< mcsnet >>
name ----------> MCSNet
dialup --------> (312) 248-0900 V.32, 0970 V.32bis, 6295 (PEP), follow prompts
area codes ----> 312, 708, 815
local access --> IL: Chicago
long distance -> provided by user
services ------> shell, ftp, telnet, feeds, email, irc, gopher, hytelnet, etc.
fees ----------> $25/month or $65/3 months untimed, $30/3 months for 15
hours/month
email ---------> info@genesis.mcs.com
voice ---------> (312) 248-UNIX
ftp more info -> genesis.mcs.com:/mcsnet.info/

<< metronet >>
name ----------> Texas Metronet
dialup --------> 214-705-2902 9600bps, 214-705-2917 2400bps, 'info/info' or 'signup/signup'
area codes ----> 214
local access --> TX: Dallas
long distance -> provided by user
services ------> shell, ftp, telnet, feeds, SLIP
fees ----------> $10-$50/month + $20-$30 startup
email ---------> srl@metronet.com / 73157.1323@compuserve.com / GEnie:S.LINEBARG
voice ---------> 214-401-2800
fax -----------> 214-401-2802 (8am-5pm CST weekdays)
ftp more info -> n/a

<< michnet >>
name ----------> Merit Network, Inc. -- MichNet project
dialup --------> contact for number or telnet hermes.merit.edu and type 'help' at 'Which host?' prompt
area codes ----> 313, 517, 616, 906, PDN
local access --> Michigan; Boston, MA; Wash. DC
long distance -> SprintNet, Autonet, Michigan Bell packet-switch network
services ------> telnet, SLIP, PPP, outbound SprintNet, Autonet and Ann Arbor dialout
fees ----------> $35/month + $40 signup ($10/month for K-12 & libraries in Michigan)
email ---------> info@merit.edu
voice ---------> 313-764-9430
ftp more info -> nic.merit.edu:/

<< millennium >>
name ----------> Millennium Online
dialup --------> contact for numbers
area codes ----> PDN
local access --> PDN private numbers available
long distance -> PDN
services ------> shell, ftp, telnet, irc, feeds, gopher, graphical bbs (interface required)
fees ----------> $10 monthly/.10 per minute domestic .30 internationally
email ---------> jjablow@mill.com
voice ---------> 800-736-0122
ftp more info -> n/a

<< mindvox >>
name ----------> MindVOX
dialup --------> 212-989-4141 'mindvox' 'guest'
area codes ----> 212, 718
local access --> NY: New York City
long distance -> provided by user
services ------> conferencing system ftp, telnet, irc, gopher, hytelnet,
Archives, BBS
fees ----------> $15-$20/month. No startup.
email ---------> info@phantom.com
voice ---------> 212-989-2418
ftp more info -> n/a

<< MSen >>
name ----------> MSen
dialup --------> contact for number
area codes ----> 313
local access --> All of SE Michigan (313)
long distance -> provided by user
services ------> shell, WAIS, gopher, telnet, ftp, SLIP, PPP, IRC, WWW,
Picospan BBS, ftp space
fees ----------> $20/month; $20 startup
email ---------> info@msen.com
voice ---------> 313-998-4562
fax -----------> 313-998-4563
ftp more info -> ftp.msen.com:/pub/vendor/msen

<< mucev >>
name ----------> muc.de e.V.
dialup --------> contact for numbers
area codes ----> +49 089
local access --> Munich/Bavaria, Germany
long distance -> provided by user
services ------> mail, news, ftp, telnet, irc, gopher, SLIP/PPP/UUCP
fees ----------> From DM 20.-- (Mail only) up to DM 65.-- (Full Account with
PPP)
email ---------> postmaster@muc.de
voice --------->
ftp more info -> ftp.muc.de:public/info/muc-info.*

<< MV >>
name ----------> MV Communications, Inc.
dialup --------> contact for numbers
area codes ----> 603

local access --> Many NH communities
long distance -> provided by user
services ------> shell, ftp, telnet, gopher, SLIP, email, feeds, dns,
archives, etc.
fees ----------> $5.00/mo minimum + variable hourly rates. See schedule.
email ---------> info@mv.com
voice ---------> 603-429-2223
ftp more info -> ftp.mv.com:/pub/mv

<< nearnet >>
name ----------> NEARnet
dialup --------> contact for numbers
area codes ----> 508, 603, 617
local access --> Boston, MA; Nashua, NH
long distance -> provided by user
services ------> SLIP, email, feeds, dns
fees ----------> $250/month
email ---------> nearnet-join@nic.near.net
voice ---------> 617-873-8730
ftp more info -> nic.near.net:/docs

<< netcom >>
name ----------> Netcom Online Communication Services
dialup --------> 206-547-5992, 214-753-0045, 303-758-0101, 310-842-8835,
312-380-0340, 404-303-9765, 408-241-9760, 408-459-9851,
415-328-9940, 415-985-5650, 503-626-6833, 510-274-2900,
510-426-6610, 510-865-9004, 617-237-8600, 619-234-0524,
703-255-5951, 714-708-3800, 818-585-3400, 916-965-1371
area codes ----> 206, 213, 214, 303, 310, 312, 404, 408, 415, 503, 510, 617, 619, 703, 714, 718, 818, 916
local access --> CA: Alameda, Irvine, Los Angeles, Palo Alto, Pasadena,
Sacramento, San Diego, San Francisco, San Jose, Santa Cruz,
Walnut Creek; CO: Denver; DC: Washington; GA: Atlanta; IL:
Chicago; MA: Boston; OR: Portland; TX: Dallas; WA: Seattle
long distance -> provided by user
services ------> shell, ftp, telnet, irc, WAIS, gopher, SLIP/PPP, ftp space,
feeds, dns
fees ----------> $19.50/month + $20.00 signup
email ---------> info@netcom.com
voice ---------> 408-554-8649, 800-501-8649
fax -----------> 408-241-9145
ftp more info -> ftp.netcom.com:/pub/netcom/

<< northshore >>

name ----------> North Shore Access
dialup --------> 617-593-4557 (v.32bis, v.32, PEP) 'new'
area codes ----> 617, 508
local access --> MA: Wakefield, Lynnfield, Lynn, Saugus, Revere, Peabody,
Salem, Marblehead, Swampscott
long distance -> provided by user
services ------> shell (SunOS UNIX), ftp, telnet, archie, gopher, wais, www,
UUCP feeds
fees ----------> $9/month includes 10 hours connect, $1/hr thereafter, higher
volume discount plans also available
email ---------> info@northshore.ecosoft.com
voice ---------> 617-593-3110 voicemail
ftp more info -> northshore.ecosoft.com:/pub/flyer

<< novalink >>
name ----------> NovaLink
dialup --------> (800) 937-7644 'new' or 'info', 508-754-4009 2400, 14400
area codes ----> 508, 617, PDN
local access --> MA: Worcester, Cambridge, Marlboro, Boston
long distance -> CPS: $1.80/hour 2400, 9600; SprintNet $1.80/hour nights and
weekends
services ------> ftp, telnet, gopher, shell, irc, XWindows, feeds, adult,
user groups, FAX, Legends of Future Past
fees ----------> $12.95 sign-up (refundable and includes 2 hours), + $9.95/mo
(includes 5 daytime hours) + $1.80/hr
email ---------> info@novalink.com
voice ---------> 800-274-2814
ftp more info -> ftp.novalink.com:/info

<< nuance >>
name ----------> Nuance Network Services
dialup --------> contact for number
area codes ----> 205
local access --> AL: Huntsville
long distance -> provided by user
services ------> shell (Unix SVR4.2), ftp, telnet, gopher, SLIP, PPP, ISDN
fees ----------> personal $25/mo + $35 start-up, corporate: call for options
email ---------> staff@nuance.com
voice ---------> 205-533-4296 voice/recording
ftp more info -> ftp.nuance.com:/pub/NNS-INFO

<< nuchat >>
name ----------> South Coast Computing Services, Inc.
dialup --------> (713) 661-8593 (v.32) - (713) 661-8595 (v.32bis)

area codes ----> 713
local access --> TX: Houston metro area
long distance -> provided by user
services ------> shell, ftp, telnet, gopher, Usenet, UUCP feeds, SLIP,
dedicated lines, domain name service, FULL time tech support
fees ----------> dialup - $3/hour, UUCP - $1.50/hour or $100/month unlimited,
dedicated - $120, unlimited access
email ---------> info@sccsi.com
voice ---------> 713-661-3301
ftp more info -> sccsi.com:/pub/communications/*

<< nwnexus >>
name ----------> Northwest Nexus Inc.
dialup --------> contact for numbers
area codes ----> 206
local access --> WA: Seattle
long distance -> provided by user
services ------> UUCP, SLIP, PPP, feeds, dns
fees ----------> $10/month for first 10 hours + $3/hr; $20 start-up
email ---------> info@nwnexus.wa.com
voice ---------> 206-455-3505
ftp more info -> nwnexus.wa.com:/NWNEXUS.info.txt

<< nyx >>
name ----------> Nyx, the Spirit of the Night; Free public internet access
provided by the University of Denver's Math & Computer
Science Department
dialup --------> 303-871-3324
area codes ----> 303
local access --> CO: Boulder/Denver
long distance -> provided by user
services ------> shell or menu; semi-anonymous accounts; ftp, news, mail
fees ----------> none; donations are accepted but not requested
email ---------> aburt@nyx.cs.du.edu
voice ---------> login to find current list of volunteer 'voice' helpers
ftp more info -> n/a

<< OARnet >>
name ----------> OARnet
dialup --------> send e-mail to nic@oar.net
area codes ----> 614, 513, 419, 216, 800
local access --> OH: Columbus, Cincinnati, Cleveland, Dayton
long distance -> 800 service
services ------> email, ftp, telnet, newsfeed

fees ----------> $4.00/hr to $330.00/month; call for code or send email
email ---------> nic@oar.net
voice ---------> 614-292-8100
fax -----------> 614-292-7168
ftp more info -> n/a

<< oldcolo >>
name ----------> Old Colorado City Communications
dialup --------> 719-632-4111 'newuser'
area codes ----> 719
local access --> CO: Colorado Springs
long distance -> provided by user
services ------> shell, ftp, telnet, AKCS, home of the NAPLPS conference
fees ----------> $25/month
email ---------> dave@oldcolo.com / thefox@oldcolo.com
voice ---------> 719-632-4848, 719-593-7575 or 719-636-2040
fax -----------> 719-593-7521
ftp more info -> n/a

<< olympus >>
name ----------> Olympus - The Olympic Peninsula's Gateway To The Internet
dialup --------> contact voice number below
area codes ----> 206
local access --> WA:Olympic Peninsula/Eastern Jefferson County
long distance -> provided by user
services ------> shell, ftp, telnet, pine, hytelnet
fees ----------> $25/month + $10 startup
email ---------> info@pt.olympus.net
voice ---------> 206-385-0464
ftp more info -> n/a

<< panix >>
name ----------> PANIX Public Access Unix
dialup --------> 212-787-3100 'newuser'
area codes ----> 212, 718
local access --> New York City, NY
long distance -> provided by user
services ------> shell, ftp, telnet, gopher, wais, irc, feeds
fees ----------> $19/month or $208/year + $40 signup
email ---------> alexis@panix.com, jsb@panix.com
voice ---------> 212-877-4854 [Alexis Rosen], 212-691-1526 [Jim Baumbach]
ftp more info -> n/a

<< pipeline >>

name ----------> The Pipeline
dialup --------> 212-267-8606 'guest'
area codes ----> 212, 718
local access --> NY: New York City
long distance -> provided by user
services ------> Windows interface or shell/menu; all IP services
fees ----------> $15/mo. (inc. 5 hrs) or $20/20 hrs or $35 unlimited
email ---------> info@pipeline.com, staff@pipeline.com
voice ---------> 212-267-3636
ftp more info -> n/a

<< portal >>
name ----------> The Portal System
dialup --------> 408-973-8091 high-speed, 408-725-0561 2400bps; 'info'
area codes ----> 408, 415, PDN
local access --> CA: Cupertino, Mountain View, San Jose
long distance -> SprintNet: $2.50/hour off-peak, $7-$10/hour peak; Tymnet:
$2.50/hour off-peak, $13/hour peak
services ------> shell, ftp, telnet, IRC, UUCP, feeds, bbs
fees ----------> $19.95/month + $19.95 signup
email ---------> cs@cup.portal.com, info@portal.com
voice ---------> 408-973-9111
ftp more info -> n/a
off-peak ------> 6pm to 7am + weekends and holidays

<< prairienet >>
name ----------> Prairienet Freenet
dialup --------> (217) 255-9000 'visitor'
area codes ----> 217
local access --> IL: Champaign-Urbana
long distance -> provided by user
services ------> telnet, ftp, gopher, IRC, etc.
fees ----------> Free for Illinois residents, $25/year for non-residents
email ---------> jayg@uiuc.edu
voice ---------> 217-244-1962
ftp more info -> n/a

<< PREPnet >>
name ----------> PREPnet
dialup --------> contact for numbers
area codes ----> 215, 412, 717, 814
local access --> PA: Philadelphia, Pittsburgh, Harrisburg
long distance -> provided by user
services ------> SLIP, terminal service, telnet, ftp

fees ----------> $1,000/year membership. Equipment-$325 onetime fee plus
$40/month
email ---------> prepnet@cmu.edu
voice ---------> 412-268-7870
fax -----------> 412-268-7875
ftp more info -> ftp.prepnet.com:/prepnet/general/

<< psilink >>
name ----------> PSILink - Personal Internet Access
dialup --------> North America: send email to classa-na-numbers@psi.com and
classb-na-numbers@psi.com; Rest of World: send email to
classb-row-numbers@psi.com
area codes ----> PDN
local access -->
long distance -> [per hour, off-peak/peak] PSINet A: included; PSINet B:
$6/$2.50; PSINet B international: $18/$18
services ------> email and newsfeed, ftp
fees ----------> 2400: $19/month; 9600: $29/month (PSILink software included)
email ---------> all-info@psi.com, psilink-info@psi.com
voice ---------> 703-620-6651
fax -----------> 703-620-4586
ftp more info -> ftp.psi.com:/

<< psi-world-dial >>
name ----------> PSI's World-Dial Service
dialup --------> send email to numbers-info@psi.com
area codes ----> PDN
local access -->
long distance -> [per hour, off-peak/peak] V.22bis: $1.25/$2.75; V.32:
$3.00/$4.50; 14.4K: $4.00/$6.50
services ------> telnet, rlogin, tn3270, XRemote
fees ----------> $9/month minimum + $19 startup
email ---------> all-info@psi.com, world-dial-info@psi.com
voice ---------> 703-620-6651
fax -----------> 703-620-4586
ftp more info -> ftp.psi.com:/
off-peak ------> 8pm to 8am + weekends and holidays

<< PUCnet >>
name ----------> PUCnet Computer Connections
dialup --------> 403-484-5640 (v.32 bis) 'guest'
area codes ----> 403
local access --> AB: Edmonton and surrounding communities in the Extended
Flat Rate Calling Area

long distance -> provided by user
services ------> shell, menu, ftp, telnet, archie, gopher, feeds, USENET
fees ----------> Cdn$25/month (20 hours connect time) + Cdn$6.25/hr (ftp &
telnet only) + $10 signup
email ---------> info@PUCnet.com (Mail responder) or pwilson@PUCnet.com
voice ---------> 403-448-1901
fax -----------> 403-484-7103
ftp more info -> n/a

<< realtime >>
name ----------> RealTime Communications (wixer)
dialup --------> 512-459-4391 'new'
area codes ----> 512
local access --> TX: Austin
long distance -> provided by user
services ------> shell, ftp, telnet, irc, gopher, feeds, SLIP, UUCP
fees ----------> $75/year. Monthly and quarterly rates available.
email ---------> hosts@wixer.bga.com
voice ---------> 512-451-0046 (11am-6pm Central Time, weekdays)
fax -----------> 512-459-3858
ftp more info -> n/a

<< sugar >>
name ----------> NeoSoft's Sugar Land Unix
dialup --------> 713-684-5900
area codes ----> 504, 713
local access --> TX: Houston metro area; LA: New Orleans
long distance -> provided by user
services ------> bbs, shell, ftp, telnet, irc, feeds, UUCP
fees ----------> $29.95/month
email ---------> info@NeoSoft.com
voice ---------> 713-438-4964
ftp more info -> n/a

<< teleport >>
name ----------> Teleport
dialup --------> 503-220-0636 (2400) 503-220-1016 (v.32, v.32 bis) 'new'
area codes ----> 503
local access --> OR: Portland, Beaverton, Hillsboro, Forest Grove, Gresham,
Tigard, Lake Oswego, Oregon City, Tualatin, Wilsonville
long distance -> provided by user
services ------> shell, ftp, telnet, gopher, usenet, ppp, WAIS, irc, feeds,
dns
fees ----------> $10/month (1 hr/day limit)

email ---------> info@teleport.com
voice ---------> 503-223-4245
ftp more info -> teleport.com:/about

<< telerama >>
name ----------> Telerama Public Access Internet
dialup --------> 412-481-5302 'new' (2400)
area codes ----> 412
local access --> PA: Pittsburgh
long distance -> provided by user
services ------> telnet, ftp, irc, gopher, ClariNet/Usenet, shell/menu, uucp
fees ----------> 66 cents/hour 2400bps; $1.32/hour 14.4K bps; $6 min/month
email ---------> info@telerama.pgh.pa.us
voice ---------> 412-481-3505
ftp more info -> telerama.pgh.pa.us:/info/general.info

<< tellink >>
name ----------> TelLink Networking
dialup --------> (408) 247-8444 (v32bis) 'guest'
area codes ----> 408, 415
local access --> CA: San Jose, Sunnyvale, Los Altos, Mountain View, Campbell,
Cupertino, Los Gatos, Santa Clara, Saratoga
long distance -> provided by user
services ------> shell (SunOS), usenet, ftp, email, telnet, gopher, irc
fees ----------> $15/month
email ---------> info@tellink.net
voice ---------> 408-247-8445
ftp more info -> n/a

<< tmn >>
name ----------> The Meta Network
dialup --------> contact for numbers
area codes ----> 703, 202, 301, PDN
local access --> Washington, DC metro area
long distance -> SprintNet: $6.75/hr; FTS-2000; Acunet
services ------> Caucus conferencing, email, shell, ftp, telnet, bbs, feeds
fees ----------> $20/month + $15 signup/first month
email ---------> info@tmn.com
voice ---------> 703-243-6622
ftp more info -> n/a

<< uunorth >>
name ----------> UUnorth
dialup --------> contact for numbers

area codes ----> 416, 519, 613
local access --> ON: Toronto
long distance -> provided by user
services ------> shell, ftp, telnet, gopher, feeds, IRC, feeds, SLIP, PPP
fees ----------> (All Cdn$ + GST) $20 startup + $25 for 20 hours off-peak +
$1.25/hr OR $40 for 40 hours up to 5/day + $2/hr OR $3/hr
email ---------> uunorth@uunorth.north.net
voice ---------> 416-225-8649
fax -----------> 416-225-0525
ftp more info -> n/a

<< Vnet >>
name ----------> Vnet Internet Access, Inc.
dialup --------> 704-347-8839 'new'
area codes ----> 704
local access --> NC: Charlotte; RTP, Raleigh, Durham planned by 8/1/93;
special offer in other selected NC communities, contact for
details
long distance -> provided by user
services ------> shell, ftp, telnet, irc, gopher, hytelnet
fees ----------> $25/month or $259/year
email ---------> info@char.vnet.net
voice ---------> 704-374-0779
ftp more info -> n/a

<< well >>
name ----------> The Whole Earth 'Lectronic Link
dialup --------> 415-332-6106 'newuser'
area codes ----> 415, PDN
local access --> Sausalito, CA
long distance -> Compuserve Packet Network: $4/hour
services ------> shell, ftp, telnet, bbs
fees ----------> $15.00/month + $2.00/hr
email ---------> info@well.sf.ca.us
voice ---------> 415-332-4335
ftp more info -> n/a

<< wariat >>
name ----------> APK- Public Access UNI* Site
dialup --------> 216-481-9436 (V.32bis, SuperPEP on separate rotary)
area codes ----> 216
local access --> OH: Cleveland
long distance -> provided by user
services ------> shell, ftp, telnet, archie, irc, gopher, feeds,

BBS(Uniboard1.10)
fees ----------> $15/20 hours, $35/monthly, $20 signup
email ---------> zbig@wariat.org
voice ---------> 216-481-9428
ftp more info -> n/a

<< world >>
name ----------> The World
dialup --------> 617-739-9753 'new'
area codes ----> 617, PDN
local access --> Boston, MA
long distance -> Compuserve Packet Network: $5.60/hour
services ------> shell, ftp, telnet, irc
fees ----------> $5.00/month + $2.00/hr or $20/month for 20 hours
email ---------> office@world.std.com
voice ---------> 617-739-0202
ftp more info -> world.std.com:/world-info/description

<< wyvern >>
name ----------> Wyvern Technologies, Inc.
dialup --------> (804) 627-1828 Norfolk, (804) 886-0662 (Peninsula)
area codes ----> 804
local access --> VA: Norfolk, Virginia Beach, Portsmouth, Chesapeake, Newport
News, Hampton, Williamsburg
long distance -> provided by user
services ------> shell, menu, ftp, telnet, uucp feeds, irc, archie, gopher,
UPI news, email, dns, archives
fees ----------> $15/month or $144/year, $10 startup
email ---------> system@wyvern.com
voice ---------> 804-622-4289
fax -----------> 804-622-7158
ftp more info -> n/a

From: PDIAL -05-
Subject: What *Is* The Internet?

The Internet is a global cooperative network of university, corporate, government, and private computers, all communicating with each other by means of something called TCP/IP (Transmission Control Protocol/Internet Protocol). Computers directly on the Internet can exchange data quickly and easily with any other computer on the Internet to download files, send email, provide remote logins, etc.

Users can download files from publicly accessible archive sites ("anonymous FTP"); login into remote computers (telnet or rlogin); chat in real-time with other users around the world (Internet Relay Chat); or use the newest information retrieval tools to find a staggering variety of information (Wide Area Information Servers, Gopher, World Wide Web).

Computers directly on the Internet also exchange email directly and very quickly; email is usually delivered in seconds between Internet sites.

Sometimes the Internet is confused with other related networks or types of networking.

First, there are other ways to be "connected to the Internet" without being directly connected as a TCP/IP node. Some computers connect via UUCP or other means at regular intervals to an Internet site to exchange email and USENET newsgroups, for instance. Such a site can provide email (though not as quickly as a directly connected systems) and USENET access, but not Internet downloads, remote logins, etc.

"email" (or "Internet email", "netmail") can be exchanged with a wide variety of systems connected directly and indirectly to the Internet. The email may travel solely over the Internet, or it may traverse other networks and systems.

"USENET" is the collection of computers all over the world that exchange USENET news -- thousands of "newsgroups" (like forums, or echos) on a wide range of topics. The newsgroup articles are distributed all over the world to USENET sites that wish to carry them (sometimes over the Internet, sometimes not), where people read and respond to them.

The "NSFNET" is one of the backbones of the Internet in the US. It is funded by the NSF, which restricts traffic over the NSFNET to "open research and education in and among US research and instructional institutions, plus research arms of for-profit firms when engaged in open scholarly communication and research." Your Internet provider can give you more details about acceptable use, and alternatives should you need to use the Internet in other ways.

From: PDIAL -06-
Subject: What The PDIAL Is

This is the PDIAL, the Public Dialup Internet Access List.

It is a list of Internet service providers offering public access dialins and outgoing Internet access (ftp, telnet, etc.). Most of them provide email and USENET news and other services as well.

If one of these systems is not accessible to you and you need email or USENET access, but *don't* need ftp or telnet, you have many more public access systems from which to choose. Public access systems without ftp or telnet are *not* listed in this list, however. See the nixpub (alt.bbs, comp.misc) list and other BBS lists.

Some of these providers offer time-shared access to a shell or BBS program on a computer connected directly to the Internet, through which you can FTP or telnet to other systems on the Internet. Usually other services are provided as well. Generally, you need only a modem and terminal or terminal emulator to access these systems. Check for "shell", "bbs", or "menu" on the "services" line.

Other providers connect you directly to the Internet via SLIP or PPP when you dial in. For these you need a computer system capable of running the software to interface with the Internet, e.g., a Unix machine, PC, or Mac. Check for "SLIP", or "PPP" on the services line.

While I have included all sites for which I have complete information, this list is surely incomplete. If you have any additions or corrections please send them to me at one of the addresses listed in section -10-.

From: PDIAL -07-
Subject: How People Can Get The PDIAL (This List)

EMAIL:

From the Information Deli archive server (most up-to-date):
To receive the current edition of the PDIAL, send email containing the phrase "Send PDIAL" to "info-deli-server@netcom.com".

To be put on a list of people who receive future editions as they are published, send email containing the phrase "Subscribe PDIAL" to "info-deli-server@netcom.com".

To receive both the most recent and future editions, send both messages.

From time to time, I'll also be sending out news and happenings that relate to the PDIAL or The Information Deli. To receive the Info Deli News automatically, send email containing the phrase "Subscribe Info-Deli-News" to "info-deli-server@netcom.com".

From the news.answers FAQ archive:
Send email with the message "send usenet/news.answers/pdial" to "mail-server@rtfm.mit.edu". For help, send the message "help" to "mail-server@rtfm.mit.edu".

USENET:

The PDIAL list is posted semi-regularly to alt.internet.access.wanted, alt.bbs.lists, alt.online-service, ba.internet, and news.answers.

FTP ARCHIVE SITES (PDIAL and other useful information):

Information Deli FTP site:
ftp.netcom.com:/pub/info-deli/public-access/pdial [192.100.81.100]

As part of a collection of public access lists:
VFL.Paramax.COM:/pub/pubnet/pdial [128.126.220.104]
(used to be GVL.Unisys.COM)

From the Merit Network Information Center Internet information archive:
nic.merit.edu:/internet/pdial [35.1.1.48]

As part of an Internet access compilation file:
liberty.uc.wlu.edu:/pub/lawlib/internet.access [137.113.10.35]

As part of the news.answers FAQ archive:
rtfm.mit.edu:/pub/usenet/news.answers/pdial [18.70.0.224]

From: PDIAL -08-
Subject: Appendix A: Other Valuable Resources

InterNIC Internet Help Desk

The US National Science Foundation has funded Information, Registration, and Directory services for the Internet, and they are available to all

Internet users. The most useful branch for PDIAL readers is Information Services, which provides all sorts of information to help Internet users. Contact Information Services by:

voice: 800-444-4345 (US)
voice: +1 (619) 455-4600
fax: +1 (619) 455-4640
email: mailserv@is.internic.net, use subject "send help"
email: info@internic.net
gopher: gopher gopher.internic.net / telnet gopher.internic.net
ftp: is.internic.net
postal: InterNIC Information Services
General Atomics
PO Box 85608
San Diego, CA 92186-9784 USA

Internet Guide Books

Connecting To The Internet; Susan Estrada; O'Reilly & Associates; ISBN 1-56592-061-9 (A how-to on selecting the right IP provider, from dialup to dedicated.)

A DOS User's Guide to the Internet -- E-mail, Netnews and File Transfer with UUCP; James Gardner; MKS; ISBN 0-13-106873-3 ("Internet" in the title is misleading -- covers UUCP connections only.)

The Electronic Traveller -- Exploring Alternative Online Systems; Elizabeth Powell Crowe; Windcrest/McGraw-Hill; ISBN 0-8306-4498-9. (A good tour of various personal IP and other types of providers, but some data is seriously out of date.)

Internet Basics; Steve Lambert, Walt How; Random House; ISBN 0-679-75023-1

The Internet Companion; Tracy LaQuey, Jeanne C. Ryer; Addison-Wesley; ISBN 0-201-62224-6

The Internet Companion Plus; Tracy LaQuey, Jeanne C. Ryer; Addison-Wesley; ISBN 0-201-62719-1

The Internet Complete Reference; Harley Hahn, Rick Stout; Osborne; ISBN 0-07-881980-6

The Internet Directory; Eric Brawn; Fawcett Columbine; ISBN

0-449-90898-4 (Phone book style listing of resources.)

The Internet for Dummies; John R. Levine, Carol Baroudi; IDG Books Worldwide; ISBN 1-56884-024-1 (Lots of useful information, but much of it is intermediate level, not "dummy".)

Internet: Getting Started; April Marine, Susan Kirkpatrick, Vivian Neou, Carol Ward; PTR Prentice Hall; ISBN 0-13-289596-X

The Internet Guide for New Users; Daniel P. Dern; McGraw-Hill; ISBN 0-07-016511-4 (Good, very thorough guide for new users.)

The Internet Navigator; Paul Glister; John Wiley & Sons; ISBN 0-471-59782-1 (Good, comprehensive guide for new users.)

The Internet Roadmap; Bennet Falk; Sybex; ISBN 0-7821-1365-6

The Mac Internet Tour Guide; Michael Fraase; Ventana Press; ISBN 1-56604-062-0

Navigating the Internet; Richard J. Smith, Mark Gibbs; SAMS Publishing; ISBN 0-672-30362-0

Welcome to... Internet -- From Mystery to Mastery; Tom Badgett, Corey Sandler; MIS:Press; ISBN 1-55828-308-0

The Whole Internet User's Guide & Catalog; Ed Krol; O'Reilly & Associates; ISBN 1-56592-025-2 (Good all around guide.)

Zen & the Art of the Internet: A Beginner's Guide; Brendan P. Kehoe; PTR Prentice Hall; ISBN 0-13-010778-6

Other BBS/Internet Provider Lists

FSLIST -- The Forgotten Site List. USENET: alt.internet.access.wanted; ftp: freedom.nmsu.edu:/pub/docs/fslist/ or login.qc.ca:/pub/fslist/

nixpub -- public access Unixes. USENET: comp.bbs.mis, alt.bbs; email: to <mail-server@bts.com>, body containing "get PUB nixpub.long"; ftp: VFL.Paramax.COM:/pub/pubnetc/nixpub.long

----

From: PDIAL -09-

Subject: Appendix B: Finding Public Data Network (PDN) Access Numbers

Here's how to get local access numbers or information for the various PDNs. Generally, you can contact the site you're calling for help, too.

IMPORTANT NOTE: Unless noted otherwise, set your modem to 7E1 (7 data bits, even parity, 1 stop bit) when dialing to look up access numbers by modem as instructed below.

BT Tymnet

For information and local access numbers, call 800-937-2862 (voice) or 215-666-1770 (voice).

To look up access numbers by modem, dial a local access number, hit <cr> and 'a', and enter "information" at the "please log in:" prompt.

Compuserve Packet Network

You do NOT have to be a Compuserve member to use the CPN to dial other services.

For information and local access numbers, call 800-848-8199 (voice).

To look up access numbers by modem, dial a local access number, hit <cr> and enter "PHONES" at the "Host Name:" prompt.

PC Pursuit (SprintNet)

PC Pursuit may be used to call a modem in any of 44 major metro areas in the US from local access numbers around the country. As such, it can be used to access most of the providers listed in the PDIAL (those with no other PDN access or even those which are accessible by other PDNs).

For information and registration, call 800-736-1130 (voice) or 800-877-2006 (data). More information is also available on the PC Pursuit support BBS (see below).

To look up access numbers by modem, dial 800-546-1000, hit <cr><cr><cr> at 1200 baud or '@'<cr><cr> at 2400 baud. Enter "MAIL" at the "@" prompt, then "PHONES" at the "USER NAME:" prompt, and "PHONES" at the "PASSWORD:" prompt.

The PC Pursuit support BBS provides a great deal of information about PC Pursuit, including rates, terms and conditions, outdial numbers, etc.

To access the PC Pursuit support BBS, dial a local access number and hit <cr><cr><cr> at 1200 baud or '@'<cr><cr> at 2400 baud. Change modem parameters to 8N1, and enter "C PURSUIT" at the "@" prompt.

PSINet

For information, call 800-82PSI82 (voice) or 703-620-6651 (voice), or send email to "all-info@psi.com". For a list of local access numbers send email to "numbers-info@psi.com".

From: PDIAL -10-
Subject: Providers: Get Listed in PDIAL!

NEW SUBMISSION/CORRECTION PROCEDURES:

The PDIAL will be undergoing expansion in both breadth (how many and what kinds of public access providers) and depth (how much information is carried for each provider). To collect the data, I will be emailing a questionnaire to providers already on the PDIAL, and to any providers who wish to be added. Corrections can also be submitted via update questionnaires.

To be listed in the PDIAL, retrieve the PDIAL questionnaire by sending email to <info-deli-server@netcom.com> containing the command "Send PDIAL-Q". The questionnaire will not be available until 15 Dec 1993, but requests received before then will be queued and honored when it is available.

--
Peter Kaminski / The Information Deli

kaminski@netcom.com (preferred)
71053.2155@compuserve.com

APPENDIX D A sample ftp session.

My entries are listed in **boldface** type. My comments are in ***italic boldface*** type.

ietf{HFUNK}:/home/hfunk% **ftp software.watson.ibm.com**
Connected to software.watson.ibm.com.
220 software.watson.ibm.com FTP server (Version 4.1 Sat Nov 23 12:52:09 CST 1991
) ready.
Name (software.watson.ibm.com:hfunk): **anonymous**
331 Guest login ok, send ident as password.
Password: ***the password does not display when entered***
230 Guest login ok, access restrictions apply.
ftp> **pwd *(This means display the current directry)***
257 "/" is current directory.
ftp> **cd /pub/ifip *(This command takes me to the ifip files)***
250 CWD command successful.
ftp> **dir *(The dirECTORY command shows me all of the files)***
200 PORT command successful.
150 Opening data connection for /bin/ls.
total 9800
-rw-r--r-- 1 0 52202 Feb 03 12:50 93--ctry-a4.ps
-rw-r--r-- 1 0 52239 Feb 03 12:50 93--ctry-ltr.ps
-rw-r--r-- 1 0 243 Oct 11 09:35 README
-rw-r--r-- 1 0 381 Nov 12 13:32 about.acs.txt
-rw-r--r-- 1 0 26612 Jan 14 07:58 cfp2-p1.ps
-rw-r--r-- 1 0 53393 Jan 14 07:58 cfp2-p2.ps
-rw-r--r-- 1 0 12867 Jan 14 07:58 cfp2.txt
-rw-r--r-- 1 0 26937 Jul 13 1993 cfpwcc94.txt
-rw-r--r-- 1 0 2627 Jul 13 1993 fractl93.txt
-rw-r--r-- 1 0 2792 Jan 28 17:57 fractl95.txt
------------ ***omitted to save space***-------------------
-rw-r--r-- 1 0 19271 Nov 12 13:42 hamburg.psb
-rw-r--r-- 1 0 5543 Nov 12 13:42 hamburg.txt
-rw-r--r-- 1 0 7814 Dec 05 11:50 hoit94.txt
-rw-r--r-- 1 0 5600 Jul 13 1993 hpn94.txt
-rw-r--r-- 1 0 5433 Jan 28 06:09 icchp94.txt
-rw-r--r-- 1 0 11 Oct 24 14:01 ifip.bat

-rw-r--r-- 1 0 123159 Dec 05 12:32 ifipstry.exe (Receive this file in binary. Run the exec file and then enter IFIP to see the IFIP Storyboard presentation developed by Professor Alvarez)
-rw-r--r-- 1 0 8795 Feb 21 13:34 index.txt
-rw-r--r-- 1 0 999 Nov 12 13:32 interrep.acs.txt
-------------***omitted to save space***--------------------
--rw-r--r-- 1 0 8702 Jul 13 1993 women.txt

-rw-r--r--   1 0   9329 Feb 21 13:34 women1.txt
226 Transfer complete.
10277 bytes received in 5.6 seconds (1.8 Kbytes/s)
ftp> **mget *.acs.txt** ***(This command will get all the files about the Australian Computer Society because they all have the same file extension of acs.txt)***
After each of the "?," I pressed the enter key. On some systems all the files will be transferred without the "?" prompt)
mget about.acs.txt?
200 PORT command successful.
150 Opening data connection for about.acs.txt (381 bytes).
226 Transfer complete.
local: about.acs.txt remote: about.acs.txt
389 bytes received in 0.0037 seconds (1e+02 Kbytes/s)
mget code.acs.txt?
200 PORT command successful.
150 Opening data connection for code.acs.txt (945 bytes).
226 Transfer complete.
local: code.acs.txt remote: code.acs.txt
969 bytes received in 0.085 seconds (11 Kbytes/s)
-----------***omitted to save space***-------------
mget vision.acs.txt?
200 PORT command successful.
150 Opening data connection for vision.acs.txt (401 bytes).
226 Transfer complete.
local: vision.acs.txt remote: vision.acs.txt
409 bytes received in 0.0046 seconds (88 Kbytes/s)

This is to demonstrate that file names are case sensitive. The first entry is an attempt to get the description of Hamburg that was written up in the March IFIP Newsletter.

ftp> **get Hamburg.txt**
200 PORT command successful.
550 Hamburg.txt: No such file or directory.

Try again with all lower case.

ftp> **get hamburg.txt**
200 PORT command successful.
150 Opening data connection for hamburg.txt (5543 bytes).
226 Transfer complete.
local: hamburg.txt remote: hamburg.txt
5656 bytes received in 0.13 seconds (44 Kbytes/s)
ftp> **quit *(Ending the session)***
221 Goodbye.

At this point all of the selected files are on my PC for printing, editing, or sending to others.

APPENDIX E A sample telnet session using "archie."

My entries are listed in **boldface** type. My comments are in ***italic boldface*** type.

ietf{HFUNK}:/home/hfunk% **telnet archie.ans.net**
Trying 147.225.1.10 ...
Connected to forum.ans.net.
Escape character is '^]'.

AIX telnet (forum.ans.net)IBM AIX Version 3 for RISC System/6000
(C) Copyrights by IBM and by others 1982, 1991.
login: **archie**
------------------< List of active archie servers >---------------

archie.au*	139.130.4.6	Australia
archie.edvz.uni-linz.ac.at*	140.78.3.8	Austria
archie.univie.ac.at*	131.130.1.23	Austria
archie.uqam.ca*	132.208.250.10	Canada
archie.funet.fi	128.214.6.100	Finland
archie.th-darmstadt.de*	130.83.22.60	Germany
archie.ac.il*	132.65.6.15	Israel
archie.unipi.it*	131.114.21.10	Italy
archie.wide.ad.jp	133.4.3.6	Japan
archie.kr*	128.134.1.1	Korea
archie.sogang.ac.kr*	163.239.1.11	Korea
archie.rediris.es*	130.206.1.2	Spain
archie.luth.se*	130.240.18.4	Sweden
archie.switch.ch*	130.59.1.40	Switzerland
archie.ncu.edu.tw*	140.115.19.24	Taiwan
archie.doc.ic.ac.uk*	146.169.11.3	United Kingdom
archie.unl.edu	129.93.1.14	USA (NE)
archie.internic.net*	198.48.45.10	USA (NJ)
archie.rutgers.edu*	128.6.18.15	USA (NJ)
archie.ans.net*	147.225.1.10	USA (NY)
archie.sura.net*	128.167.254.179	USA (MD)

Sites marked with an asterisk '*' run archie version 3.0

There are too many interactive users at the moment. A
limit of 15 logins is now enforced. Please try one of
the many Archie clients (ftp.ans.net:pub/archie/clients).

Problems to archie-admin@ans.net.

The current time is Tue Feb 22 14:07:25 1994
Connection closed by foreign host.

Archie at ANS is very busy, so I will try the University of Nebraska at Lincoln.

ietf{HFUNK}:/home/hfunk% **telnet archie.unl.edu**
Trying 129.93.1.14 ...
Connected to crcnis2.unl.edu.
Escape character is '^]'.

SunOS UNIX (crcnis2)

login: **archie**
Password: ***(Here I entered my Internet address. Some "archie" systems do not require a password.)***

Welcome to the ARCHIE server at the University of Nebraska - Lincoln

If you need further instructions, type help at the unl-archie> prompt.

Bunyip Information Systems, 1993

Terminal type set to `vt100 24 80'.
`erase' character is `^?'.
`search' (type string) has the value `sub'.
unl-archie> **prog ifip** ***(prog is the command used to initiate the search. Here I seek all file names containing "ifip")***
Search type: sub.
Your queue position: 1
Estimated time for completion: 00:05
working... /

(Archie has found 36 host with one or more files containing the string "ifip." Archie searches can be made case sensitive or not. Archie searches can be set to retrieve only on exact matches, or as in the following example, the system default is for "sub," meaning "sub string" - that is any part of the name can contain the search expression. Using the "help" command with archie will show you how to change the search options.)

Host ftp.cs.odu.edu   (128.82.4.1) ***(This is the name of the host computer.)***
Last updated 15:14 12 Feb 1994

Location: /pub/khanna ***(This is the name of the directory with the file being sought.)***
FILE -rw-r--r-- 322044 bytes 00:00 2 Feb 1993 ifip92.ps ***(This is the file name to retrieve via ftp as in APPENDIX D)***

Host thumper.bellcore.com (128.96.41.1)
Last updated 22:11 8 Feb 1994

Location: /pub/tm
FILE -r--r--r-- 1005092 bytes 23:00 15 Jul 1992 ifip92.ps

Host ftp.cs.odu.edu (128.82.4.1)
Last updated 15:14 12 Feb 1994

Location: /pub/khanna/docs
FILE -rw-r--r-- 317138 bytes 23:00 23 Sep 1992 IFIP92.PS

Host ftp.cis.upenn.edu (130.91.6.8)
Last updated 12:39 13 Feb 1994

Location: /pub/dsl/Joe_Touch
FILE -rw-r--r-- 68725 bytes 23:00 25 Oct 1990 ifip1.ps.Z
----------------------***omitted to save space***------------------------

Host software.watson.ibm.com (129.34.139.5)
Last updated 22:31 8 Feb 1994

Location: /pub
DIRECTORY drwxr-xr-x 4608 bytes 11:53 5 Feb 1994 ifip (***This is the directory in which the ifip maintained database resides).***
--***omitted to save space***---------------------------

Host ftp.cic.net (192.131.22.5)
Last updated 14:30 22 Jan 1994

Location: /pub/nircomm/gopher/e-serials/alphabetic/c/computer-communications
-review/jan91
FILE -rw-rw-r-- 24298 bytes 00:00 2 Apr 1991 ifip6.6.ps.gz

```
    Location: /pub/nircomm/gopher/e-serials/alphabetic/i/ifip
      FILE    -rw-rw-r--      31 bytes  13:01 24 Oct 1993  ifip.bat.gz
      FILE    -rw-rw-r--     467 bytes  13:00 24 Oct 1993  ifip.sh~.gz
      FILE    -rw-rw-r--   98634 bytes  13:11 24 Oct 1993  ifip.storyboard.tar.g
z
      FILE    -rw-rw-r--      32 bytes  13:01 24 Oct 1993  ifip2.bat.gz
      FILE    -rw-rw-r--     400 bytes  13:00 24 Oct 1993  ifip2.sh~.gz
      FILE    -rw-rw-r--   12220 bytes  23:00 12 Jul 1993  ifip94-1.ps.gz
      FILE    -rw-rw-r--   13508 bytes  23:00 12 Jul 1993  ifip94-2.ps.gz
      FILE    -rw-rw-r--   10874 bytes  23:00 12 Jul 1993  ifip94-3.ps.gz
      FILE    -rw-rw-r--   11432 bytes  23:00 12 Jul 1993  ifip94-4.ps.gz
      FILE    -rw-rw-r--   10538 bytes  23:00 12 Jul 1993  ifip94-5.ps.gz
      FILE    -rw-rw-r--   11597 bytes  23:00 12 Jul 1993  ifip94-6.ps.gz
      FILE    -rw-rw-r--   28862 bytes  23:00 12 Jul 1993  ifip94.ps.gz
      FILE    -rw-rw-r--    2559 bytes  23:00 12 Jul 1993  ifip94.txt.gz
      FILE    -rw-rw-r--    3402 bytes  23:00 12 Jul 1993  ifipcal.txt.gz
      FILE    -rw-rw-r--    9744 bytes  23:00 12 Jul 1993  ifipdir.txt.gz
      FILE    -rw-rw-r--    6102 bytes  23:00 12 Jul 1993  ifipinfo.txt.gz
      FILE    -rw-rw-r--  121075 bytes  12:32  5 Dec 1993  ifipstry.exe.gz


Host software.watson.ibm.com    (129.34.139.5)
Last updated 22:31  8 Feb 1994

    Location: /pub/ifip
      FILE    -rw-r--r--    3911 bytes  06:35 23 Jan 1994  ifip96.txt


Host flubber.cs.umd.edu    (128.8.128.99)
Last updated 10:28 13 Feb 1994

    Location: /docs
      FILE    -rw-r--r--   48026 bytes  23:11  3 Jan 1994  ifip.ps.Z

unl-archie> quit (To terminate the session)
# Bye.
Connection closed by foreign host.
ietf{HFUNK}:/home/hfunk%
```

APPENDIX F A sample GOPHER session.

My entries are listed in **boldface** type. My comments are in ***italic boldface*** type.

ietf{HFUNK}:/home/hfunk% **gopher gopher.isoc.org**
Root gopher server: gopher.isoc.org

1. About this Gopher Server.
2. CNRI Information/
3. Congress E-mail Addresses/
4. Direct Links to other Gophers/

→5. International Federation for Information Processing (IFIP) (I moved the arrow to this line and pressed the enter key.)

----------------***other entries omitted***--------------

1. Conferences/
2. Federation on Computing US/
3. IFIP Information/

→ 4. IFIP Lectureship Program (I moved the arrow to this line and pressed the enter key.)

----------------***other entries omitted***--------------

(The following information is then displayed on the screeen.)

The purpose of the IFIP lectureship programme is to develop a file of
experts who, by having registered, indicate their interest in
providing services on an ad hoc basis when on travel.

The submitted forms will be placed in the IFIP roster of lecturers and
is available freely. The list is also accessible on-line in the IFIP
databases. The roster of lecturers is also provided to UNESCO's
lectureship programme. The lecturers are available to all countries.
IFIP's role in this programme is only to provide the list of
lecturers. IFIP does not take any responsibility regarding expenses
incurred by any party related to the use of the list. Neither does
IFIP vouch for the quality of the lecturers.
Those desiring to acquire the services of the lecturers should contact
them directly.

Dipak Khakhar
Co-ordinator, Lectureship Programme

Name: S.V.Raghavan

Address: Dept of Comp. Sc. & Eng.

Indian Institute of Technology
Madras, 600 036 India

Phone: 91 44 235 0732
Fax: 91 44 235 0509
Telex:
Cable:
E-mail: svr@iitm.ernet.in

Biography:
Has been with Indian industry for 5 years; in academic and research for 11 years. Currently specializing in Computer Networks and Protocols. Also the chief investigator for a nationwide project called "Education and Research in Computer Networking" (ERNET). Has been involved in the establishment of a large LAN and WAN for education and research in India. Edited 3 proceeding and have brought out a monograph of his papers.

Title(s) of specialized lecture(s):
1. OSI Protocols
2. OSINET Design, Development & Performance
3. Design of Computer Networks
4. protocol Software Engineering
5. Transaction Processing Applications using
   File Server - Client Models
6. Internetworking using TCP/IP, NCS,
   DECNET & OSI.

Title(s) of general lecture(s):
1. Computer Networks - Concepts
2. LAN, MAN WAN - Approach
3. Corporate Networks
4. Distributed Systems

Language(s) of presentation: English
Technical Committee / Working Group: IFIP TC6
Endorsed by:
Date of registration: March 1993

Name: S. Bhatnagar

Address: Computer & Information Systems Group
Indian Institute of Management
Vastrapur, Ahmedabad-380 015
India

Phone: 91 272 407241 - Ext. 4839(0)
91 272 404389 (res)
Fax: 91 272 467396
Telex: 121 6351 IIMA IN
Cable: INDINMAN
E-mail: subhash@iimahd.ernet.in

Biography:
Professor of Information Systems at the Indian Institute of Management, Ahmedabad. Working experience of 19 years including visiting professorship in US and at Eastern and Southern African Management Institute. Consultancy assignments on designing information systems done in China, Bangladesh, Tanzania, Nepal for international agencies and for several government departments/ corporations in

---------***The rest of the file has been omitted to save space***---------

→ 1. Conferences/ (Here I selected Conferences from the menu)

Conferences

1. 1994 World Congress (ASCII).
2. 1994 World Congress (PostScript).

----------------***omitted to save space***------------

15. Travel Grants for U.S Residents to IFIP Congress 1994.
→ 16. Women, Work, and Computerization - Call for Participation (Selected this item.)
17. Women, Work, and Computerization - Call for Papers.
18. Working Group 11.3 (Database Security) - Call for Papers.

(This is the file that is displayed.)

Call for Participation 5th IFIP Conference on:-
WOMEN, WORK AND COMPUTERIZATION

Breaking Old Boundaries: Building New Forms
An International Conference organized under the auspices of the IFIP WG 9.1 (Computers and Work)

at Manchester Conference Centre, UMIST, Manchester, United Kingdon
July 2nd- 5th, 1994

Preliminary Conference Programme

Aims and Scope of the Conference
This is the fifth Women, Work and Computerization conference. It will provide a forum for men and women from all over the world who are researchers, practitioners and users to present their experiences in an area of increasing international interest. In addition it will provide an opportunity for women working in computing to meet and share experiences as in previous WWC conferences. The unifying theme is Breaking Old Boundaries: Building New Forms The conference themes are:

1. Community, Communications and Information Networks
2. Information Technology, Flexibility and Restructuring
3. Information Systems Design and User-Centred Perspectives
4. Education, Training and Learning
5. Feminist Theoretical Perspectives on Power, Knowledge and Technology

Conference Arrangements
The deadline for submitting papers has now passed; however, we welcome proposals for workshops, displays, exhibitions etc.

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At this point, I selected quit and returned to preparing this paper!

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