                There's Gold in them thar Networks!
                                or
            Searching for Treasure in all the Wrong Places

Status of this Memo

   This RFC provides information for the Internet community. It does not
   specify an Internet standard. Distribution of this memo is unlimited.

Abstract

   This document was presented at the 1991 ACM SIGUCCS User Services
   Conference. It appears here in its updated form.

   There is a wealth of information on the network. In fact, so much
   information, that you could spend your entire life browsing. This
   paper will present some of the "gold nuggets" of information and file
   repositories on the network that could be of use to end users.

   The ultimate goal is to make the route to these sources of
   information invisible to the user. At present, this is not easy to
   do. I will explain some of the techniques that can be used to make
   these nuggets easier to pick up so that we can all be richer.

Table of Contents

1.0 Introduction

   This paper is a list of the essential things, in my view, that a
   person who is responsible for providing network information should
   have in their hands as reference material. One of the basic problems
   of information is making it easily available to those who have need
   of the data. Libraries have been performing a cataloging function
   for many centuries. Information flow is now being provided at such a
   fast rate that it is difficult to keep up with it, even partially.
   Computer networks have only added to the problem by opening up even
   more information.

   Attempting to make this wealth of information available to those who
   would find it useful poses some problems.

   First, we need to know of its existence. To that end, this paper
   provides an index into the vast realm of network information. Most of
   the documents listed here are POINTERS to the final information.

   Second, even if you know of a document's existence, you may not know
   if it is important or relevant. Few of us are knowledgeable in more
   than a limited area. We need to rely on others to make us aware of
   the importance of databases in a specific discipline. The librarians
   can be of great assistance here. They are familiar with the research
   databases that individuals search in Law, Mathematics, and many
   others.

   Finally, once the existence and importance are known, the information
   needs to be indexed so that researchers can find it. This is the
   most difficult task to accomplish. Information available on the
   network is hardly ever static. It is always moving, growing,
   changing, and dying. Computers should be able to assist us in
   managing this ever-changing environment. Right now, we have to
   catalog the information as it passes through the network. In my
   case, I generally save it in a file somewhere, spending far too much
   time trying to retrieve it again when needed.

2.0 Lists and Indexes of Network Resources/Bibliographies/
     Information Available over the Network

   2.01 Internet Resource Guide (Document)

      An excellent guide to major resources available on the network.
      The Table of Contents includes chapters on Computational
      Resources, Library Catalogs, Archives, White Pages, Networks,
      Network Information Centers, and Miscellaneous

        Source:
        Anonymous FTP to NNSC.NSF.NET
        cd resource-guide
        get resource-guide.ps.tar.Z (Postscript) or
        get resource-guide.txt.tar.Z (ASCII Text)

        Search:
        Telnet to pac.carl.org
        (Colorado Alliance of Research Libraries)
        Select terminal type
        Choose Item 3 (Information Databases)
        Choose Item 65 Internet Resource Guide
        You can then browse or do a keyword search
        To quit type //EXIT

   2.02 Anonymous FTP Sites (Document)

        A list of all the sites on the Internet that support anonymous
        FTP.

        Source:
        Anonymous FTP to pilot.njin.net
        cd pub/ftp-list
        get ftp.list

        Search:
        Telnet to quiche.cs.mcgill.ca
        login as user archie
        type help to get a list of commands
        type prog topic - where topic is the keyword for the search of
                          a program or topic

   2.03 INDEX - Index of all RFC's - (Document)

        RFC-1118 - The Hitchhikers Guide to the Internet
        RFC-1175 - A Bibliography of Internetworking Information
        RFC-1173 - Responsibilities of Host and Network Managers
        RFC-1206 - Answers to Commonly asked "New Internet User"
                   Questions
        RFC-1207 - Answers to Commonly asked "Experienced Internet User"
                   Questions
        RFC-1208 - Networking Glossary of Terms

        Source:
        Anonymous FTP to nis.nsf.net
        cd rfc
        get $index.rfc
        get RFC1118.TXT-1

```
   get RFC1175.TXT-1
   get RFC1173.TXT-1
   get RFC1206.TXT-1
   get RFC1207.TXT-1
   get RFC1208.TXT-1
```

   2.04 Interest Groups List-of-Lists (Document)

   This is a document that list the mailing lists or groups that
   exist. To get on the list to receive updates, send e-mail to
   Interest-groups-request@nisc.sri.com.

   Source:
   Anonymous FTP to ftp.nisc.sri.com
   cd netinfo
   get interest-groups

   2.05 Regional Network Policies (Documents)

   Many regional networks have developed policies on responsible use
   of their network. You can retrieve copies of these policies on
   line by anonymous FTP.

   Source:
   Anonymous FTP to ftp.nsic.sri.com
   cd netinfo
   dir
   get ???.policy

   where ??? is the name of the regional network. The dir command
   will give you a directory of the filenames.

   2.06 Campus ethics/policy statements (Documents)

   Many universities have developed more complete policies based on
   the regional network policies. If you wish to look at some to use
   as guidelines for your own campus, you can get them through
   anonymous FTP.

   Source:
   Anonymous FTP to ariel.unm.edu
   cd ethics
   dir
   get ???.policy

   where ??? is the name of the university or college. The dir
   command will give you a directory of the filenames.

2.07 VAX book (Document)

Joe St Sauver of the University of Oregon has developed a very
complete guide of information on the network available via
anonymous FTP. The following is a quote from the README file:
"While it is tailored to the University of Oregon's VAX8000
system, the skills it illustrates are general enough to be of
interest to users at most other VAX sites, and even users at many
non-VAX sites connected to the national networks." There is a
major section on Network Topics that is excellent. It is a large
document, over 300 pages.

Source:
Anonymous FTP to decoy.uoregon.edu
cd pub/vaxbook
get vms.ps (for postscript format)
get vms.mem (lineprinter format)

2.08 Network Tidbits COMPUNET BIBLIO (Document)

This is a "Network Bibliography" by Elliott Parker from the
Journalism Dept. of Central Michigan University. It contains a
bibliography of network related documents that he finds helpful.

Source:
Listserv

Send e-mail to comserve@rpiecs (BITNET)
the message should contain the following one line request

SEND COMPUNET BIBLIO

You will receive the file "COMPUNET BIBLIO" via return mail as
well as a "Welcome to Comserve" message and a "Getting started
with Comserve message." If you are unfamiliar with how the
program listserv works on BITNET, these documents are a good
start.

2.09 Internet Tour Macintosh Hypercard 2.0 Stack (Program)

This is a Macintosh hypercard 2.0 stack that does a nice job of
describing some of the functions of the Internet. It has a
section that you can modify for your own institutions needs.

Source:
Anonymous FTP to nnsc.nsf.net
cd internet-tour
get Internet-Tour-README

```
get Internet-Tour.sit.hqx
```

Note this is a stuffed and binhexed file. So you must have the
program Stuffit to convert it to an executable file on the
Macintosh.

2.10 A Survey of Educational Computer Networks (Document)

This is a document that list the mailing lists or groups that
exist. To get on the list to receive updates, send e-mail to
Interest-groups-request@nisc.sri.com.

```
Source:
Anonymous FTP to ariel.unm.edu
cd library
get networks survey
```

2.11 Network Managers's Reading List (Document)

This is a document is an annotated list of books and other
resources of use to network managers who are using TCP/IP, UNIC,
and Ethernet technologies.

```
Source:
Anonymous FTP to ftp.utexas.edu
cd pub/netinfo/docs
get net-read.txt
```

3.0 Libraries Available over the Network

There are hundreds of libraries available over the network, far too
many to list here. There are several documents available that list
Internet accessible Libraries. There are two major documents that
list many libraries. One is Internet-Accessible Library Catalogs and
Databases, coauthored by Dr. Art St. George of the University of New
Mexico (stgeorge@bootes.unm.edu [Internet] or stgeorge@unmb [BITNET])
and Dr. Ron Larsen of the University of Maryland. The other is UNT's
Accessing On-Line Bibliographic Databases by Billy Barron,
(billy@vaxb.acs.unt.edu [Internet]).

3.1 UNT's Accessing On-Line bibliographic Databases (Document)

```
Source:
Anonymous FTP to vaxb.acs.unt.edu
cd library
get libraries.ps (postscript format)
get libraries.txt (ASCII text version)
get libraries.wp5 (Wordperfect 5.1 source)
```

3.2 Internet-Accessible Library Catalogs & Databases (Docment)

     Source:
     Anonymous FTP to ariel.unm.edu
     cd library
     get library.ps (postscript format)
     get internet.library (ASCII text version)

4.0 The Mother Lode of Anonymous FTP Sites

   Throughout this document, there are listed sites for specific
   documents. Most of the documents listed in this paper are only
   indexes to more information. A big problem is searching through all
   of this information to find what you want. Listed below are some of
   the major sites for specific programs.

   You can also use Archie for searching for specific programs. (See
   Search: category under Anonymous FTP sites above.)

   4.1 Washington University (Anonymous FTP)

     Washington University represents perhaps one of the most popular
     sites for software on the network. The mirrors directory is where
     a copy of all of the wsmr-simtel20.army.mil files are kept.
     Wsmr-simtel20-army.mil is the originator and keeper of major
     amounts of public domain software. Their site, however, is often
     overloaded with connections and difficult to make connection to.

     You will find enough software here to keep you busy for the rest
     of your life. The mirrors directory MSDOS and Macintosh
     directories contain files for those specific machines.

     Anonymous FTP to wuarchive.wustl.edu
     cd mirrors

     cd msdos

     for Income tax time cd taxes
     for unzipping files cd zip, type binary, and get pkz110eu.exe
     for education software cd education
     for graphics files cd giff, tiff or graphics

     cd macintosh

     for the macintosh there are directories for applications, inits,
     sounds, reviews and many more.

   4.2 KERMIT (Anonymous FTP)

      Kermit is a public domain file transfer protocol that is available
      for just about all microcomputers, minicomputers, and mainframes.
      It is very popular and has been has been utilized by many computer
      facilities everywhere.

      Anonymous FTP to watsun.cc.columbia.edu

      cd kermit
      get read.me

      For executable versions of kermit

      cd bin

      get READ.ME file and read for specifics of what file to get

      For the IBM PC I get msvibm.exe after typing binary to activate
      the binary transfer mode.

   4.3 NCSA Software for Network Access from PC's
        (Anonymous FTP)

      Source:
      Anonymous FTP to ftp.ncsa.uiuc.edu
      cd NCSA_Telnet
      cd PC/Telnet (for IBM PC Software)
      get telxxbin.zip
      where xx is the current version number
      (in binary format, I also suggest getting readme files)

      cd Mac/Telnet
      get telnet.x.sithqx or
      where x is the current version number
      (in binary format, I also suggest getting readme files)

5.0 Network Information Centers - NICs

   These are the individuals to contact if you want information on what
   networking is all about, and how you can connect. They can put you
   in contact with the individuals in your area that can assist you in
   obtaining a network connection.

   They can also provide assistance if you don't know who else to ask
   about network topics.

5.1 Defense Data Network (DDN)

   Goverment Systems, Inc. (GSI)
   Attn: Network Information Center
   14200 Park Medow Drive
   Suite 200
   Chantilly, VA 22021
   (800) 365-3642 or (703) 802-4535   FAX (703)-802-8373

   NIC@NIC.DDN.MIL

   The main NIC on the Internet. The source for network numbers,
   domain names, and much more.

5.2 NSF Network Service Center (NNSC)

   NSF Network Service Center
   Bolt Baranek and Newman Inc.
   10 Moulton St.
   Cambridge, MA 02138
   (617) 873-3400

   NNSC@NNSC.NSF.NET

   Corinne Carroll
   NNSC Staff

   Publishes Newsletter called NSF Network News; to subscribe,
   contact them at address above.

5.3 NSFNET Information Services (NIS)

   NSFNET Information Services
   Merit Network, Inc.
   ITI Building
   2901 Hubbard, Pod G
   Ann Arbor, MI 48109-2016
   (313) 936-3000 or 1-800-66MERIT

   NSFNET-INFO@MERIT.EDU

   Publishes Newsletter called Linkletter, to subscribe send e-mail
   to NSFNET-linkletter-Request@merit.edu.

   5.4 SRI International Network Information Systems Center (NISC)

      SRI International
      Network Information Systems Center
      333 Ravenswood Avenue, Room EJ291
      Menlo Park, CA 94015
      (415) 859-6387 or (415) 859-3695
      Fax: (415) 859-6028

      NISC@NISC.SRI.COM

   5.5 BITNET (NIC)

      BITNET Network Information Center
      Corporation for Research and Educational Networking (CREN)
      1112 16th Street, N.W.
      Suite 600
      Washington, DC 20036
      (202) 872-4200

      INFO@BITNIC

      Lisa Covi, BITNET Support

6.0 Network Statistics

   If you would like to publish statistics in your newsletter about your
   institutions network traffic into and out of the NSFNET backbone, you
   can obtain information on either the packets or bytes sent. I prefer
   the bytes since that can be translated into some sort of
   understandable figure.

   6.1 Files containing monthly information on NSF Internet
        backbone traffic by packets or bytes (Document)

      Source:
      Anonymous FTP to nis.nsf.net
      cd stats
      get nsfyy-mm.ptraffic where yy is year, 91 and mm is month, 06
      get nsf91-06.ptraffic ptraffic is the packet traffic

      get nsfyy-mm.btraffic where yy is year, 91 and mm is month, 06
      get nsf91-06.btraffic btraffic is the byte traffic

7.0 Campus Wide Information Systems - CWIS

   The information provided in this paper is primarily intended for the
   individuals who will use this information to then provide methods for
   access from their own computing environment. Although standards have
   been proposed, there are no "packages" that give you access to all of
   the information presented here. What we at Ohio State University
   have done, as have several other universities, is to provide a menu
   to the user that accesses these services and databases behind the
   scenes. In fact, Ur had to go into the shell scripts to look up the
   network addresses of these machines, because I rely on the menu for
   access as well.

   As the name "Information Systems" implies, the user wants access to
   the information without having to know exactly how to get to it. In
   this way, the network is invisible to the end user. All they need to
   know is what they want, not the command structure needed to actually
   get the information.

   At the present, the menu system seems to be the easiest way in which
   to lead the end user to the information. A term "knowbot" has been
   used to describe the ability to indicate what information you wish in
   free form, and have a "knowbot" which knows what is available, go out
   and retrieve it.

   The following are some of the places you can connect to for a
   demonstration of their capabilities.

   7.1 Appalachian State University

      conrad.appstate.edu (152.10.1.1)
      Login as info.
      Emulate a VT100.

      Hardware/software: DEC/VTX
      Contact: Ernest Jones (jonesel@appstate.bitnet)

   7.2 Arizona State University PEGASUS and ASEDD

      asuvm.inre.asu.edu
      Login as helloasu.
      Use tn3270.

      Hardware/software: Running PNN News Network Software under
      VM/CMS
      (with Profs and FOCUS).
      Contact: Joy Kramer (iejxk@asuvm.inre.asu.edu)

      Contains two databases: PErsonal Guide to ASU Stuff (PEGASUS)
      and Arizona State Economic Development Database (ASEDD).

   7.3 Clemson University

      eureka.clemson.edu
      Login as public.
      Emulate a VT100.

      Hardware/software: DEC/VTX
      Contact: Amy Slankard (amy@clust1.clemson.edu)

      System contains information on: Weather for SC, NC, and GA;
      economics; plants; animals; engineering; food; home, health,
      family and youth.

   7.4 Columbia University

      cal.cc.columbia.edu
      Login as calendar.

      Contact: David Millman (dsm@cunixf.cc.columbia.edu)

   7.5 Cornell CUINFO

      cuinfo.cornell.edu
      Connect to port 300.
      Use telnet or tn3270. Different versions of telnet or tn3270
      have different syntax for defining the port. The following are
      the most common:

      TELNET cuinfo.cornell.edu 300
      TELNET cuinfo.cornell.edu::300
      or TELNET cuinfo.cornell.edu..300

      Hardware/software: VM/CMS; IBM S/370 assembler; locally written
      Contact: Steve Worona (slw@cornella.bitnet)

      CUINFO of interest to non-Cornell community members:

      Uncle Ezra   The Electronic Counselor - first program of its
                      kind; a must see

      Directories   Student and Staff directories includes staff
                      electronic addresses
      Ski Reports   Up to the minute Upstate New York Ski Reports
                      (Seasonal)
      Jobs Listings and Descriptions of jobs at Cornell

Computing Extensive on-line information regarding computing at
               Cornell
      Patents   Descriptions of current patents held by Cornell
      Various Newsletters Newsletters from numerous campus groups
      Weather   Up to the minute local weather forecast

   7.6 Lafayette Integrated, Networked Campus - LINC

      lafibm.lafayette.edu (139.147.8.4)
      Use telnet or tn3270. When you see the LINC logo, ignore the
      ALT-L advice and clear the logo by pressing Enter. On next
      screen, instead of logging on, type DIAL MUSIC (case does not
      matter). On login screen that appears, use GUEST as ID, and
      GUEST as password.

      Hardware/software: IBM 9375 running MUSIC/SP
      Contact: Patrick Ciriello (ciri@lafayacs.bitnet)

   7.7 Lehigh

      ibm1.cc.lehigh.edu
      Use tn3270.
      At the VM prompt, type DIAL MUSIC, and at the /ID prompt, type
      LUNA.

      Hardware/software: IBM 4381 running MUSIC.
      Planning to move to AIX on RS/6000s.
      Contact: Timothy J. Foley (tjf0@ns.cc.lehigh.edu)

   7.8 Mississippi State University (MSUinfo)

      isis.msstate.edu (130.18.164.2)
      Login as msuinfo.
      Terminal type: enter yours, most supported.

      Hardware/software: UNIX/TechInfo
      Contact: Bennet George (George_Bennet@admin.msstate.edu)

      Contains: announcements, campus events, community events,
      continuing education offerings, jobs, recent press releases,
      research funding opportunities, etc.

   7.9 MIT TechInfo

      Accessible either via telnet, or via a native Macintosh
      application that uses the MacTCP drivers to access the TechInfo
      server. MacPlus with 1 Meg memory or better required, System 6.0.3
      or better, and licensed MacTCP drivers.

   Source code available freely to other schools looking to get
   started quickly - contact folks listed below.

   For telnet access:

   telnet techinfo.mit.edu (18.72.1.146)
   No username/password is required.
   Once you're in, you can use upper or lower case commands.
   To exit the system, use the QUIT command.

   For native Macintosh access:

   anonymous ftp to net-dist.mit.edu, look in the /pub/techinfo
   directory, fetch techinfo.hqx Binhex (public domain tool)
   required to decode the binary.

   Contact: Tim McGovern (tjm@mit.edu), (617) 253-0505
   Bugs: bug-techinfo@mit.edu
   Comments: comment-techinfo@mit.edu
   Administration: admin-techinfo@mit.edu

  7.10 New Mexico State University NMSU/INFO

   info.nmsu.edu
   Login as info.
   Emulate a VT100.

   Hardware/software: DEC/VTX
   Contact: D. Brian Ormand (bormand@nmsuvm1.bitnet) or
   (bormand@nmsu.edu)

  7.11 North Carolina State University Happenings!

   ccvax1.cc.ncsu.edu (128.109.153.4)
   Login as info.
   Emulate a VT100.

   Hardware/software: DEC/VTX
   Contact: Harry Nicholos (hmn@ncsuvax.bitnet) MIT TechInfo

  7.12 NYU ACF INFO system

   info.nyu.edu (information.nyu.edu) (128.122.138.142)
   Emulating a VT100 or better enables some additional suboptions.

   Contact: Stephen Tihor (tihor@ACFcluster.nyu.edu) or
   (tihor@nyuacf.bitnet)

   7.13 Pima Community College

      pimacc.pima.edu
      Login as pimainfo.
      Emulate a VT100.

      Hardware/software: DEC/VTX
      Contact: Terry Loftus (tloftus@pimacc.pima.edu) or Al Camberos
      (acamberos@pimacc.pima.edu)

   7.14 Princeton News Network PNN

      pucc.princeton.edu
      Use telnet or tn3270. When you see the VM 370 logo, clear it,
      and instead of logging on, enter pnn (case does not matter).
      Clear the information screen that appears.

      Hardware/software: VM/CMS - locally written. A UNIX version and
      a Mac HyperCard version are up, running, and available. All
      versions (CMS, UNIX, HyperCard) are available to universities at
      no cost.
      Contact: Rita Saltz (rita@pucc.bitnet)
      System and Development: Howard Strauss (howard@pucc.bitnet)

   7.15 Rutgers University

      info.rutgers.edu 98
      No password required.
      Can be accessed from any microcomputer or terminal.

      Hardware/software: written in lush (a public domain program);
      runs on any SUN workstation.
      Contact: Leny Struminger (struming@zodiac.rutgers.edu)

      INFO contains university wide activities, graduate courses
      catalogs, Faculty/Staff phone directory, computer services,
      libraries online catalog, weather, news, bus schedules, etc.

   7.16 San Diego State University

      wintermute.sdsu.edu
      Login as sdsuinfo.
      Emulate a VT100.

      Hardware/software: pnn & nmm
      Contact: Richard Caasi (caasi@sdsu.edu)

7.17 University of Arkansas

   uafsysb.uark.edu
   Login as info.

   Hardware/software: IBM 4381-14, VM/HPO 6.0, Cornell's CUINFO
   module
   Contact: Susan Adkins (sa06037@uafsysb.bitnet) or
   (sa06037@uafsysb.uark.edu)

   System contains information on: Calendar of events, campus e-mail
   directory, and hours and services.

7.18 University of Colorado at Boulder

   culine.colorado.edu 852 (128.138.129.2 852)
   Login as CULINE.

   Contact: Donna Pattee (pattee@spot.colorado.edu)

7.19 University of Denver

   du.edu
   Login as atdu.

   Contact: Bob Stocker (bstocker@ducair.bitnet)

7.20 University of Minnesota at Duluth

   ub.d.umn.edu
   Login as info.
   Emulate a vt100.

   Contact: Frank Simmons (fsimmons@ub.d.umn.edu)

   System contains over 700 documents ranging from athletic schedules
   to micro-computer prices to art gallery showing schedules. All
   commands are displayed at the bottom of each screen and separate
   on-line help is available. Keyword searching is available,
   although at this time only words in the titles of documents are
   used.

7.21 University of New Brunswick, Canada, INFO

   unbmvs1.csd.unb.ca (131.202.1.2)
   Login with application id INFO.
   There is no password required.
   INFO is a full-screen CICS application running under MVS.

      tn3270 emulation.

      Contact: Bonita Mockler (bgm@unb.ca)

      System contains: University Calendar, class timetable, phone/fax
      numbers for faculty/staff/students, faculty and staff email ids,
      seminar schedules, minutes, newsletter, etc.

   7.22 University of New Hampshire's VideoTex

      unhvtx.unh.edu (132.177.128.58)
      USERNAME: student (no password required).
      Control-z to log off.
      VT100/VT200 terminal emulation.

      Hardware/software: DEC/VTX
      Contact: Robin Tuttle (r_tuttle1@unhh.unh.edu)

      System includes: phone directories, campus calendar, job listings,
      off-campus housing list, undergraduate catalog, class schedules,
      newsletters, services and programs, rights and rules of conduct,
      athletics and recreation information, activities and workshops.

   7.23 University of North Carolina at Chapel Hill INFO

      info.oit.unc.edu (128.109.157.1)
      Login as info.
      Emulate a VT100.

      Hardware/software: DEC/VTX
      Contact: Judy Hallman (hallman@unc.bitnet)

      System contains: Campus directory; job openings; "The Independent
      Study" catalog (courses people can take by correspondence);
      undergraduate catalog; continuing education classes; several
      campus newsletters, including "Newsbrief," the weekly campus
      computing newsletter.

   7.24 University of North Carolina at Greensboro MINERVA

      steffi.acc.uncg.edu
      Login as info or MINERVA.
      Emulate a VT100.

      Hardware/software: DEC/VTX
      Contact: Norman Hill (hillnr@uncg.bitnet)

   7.25 University of North Carolina at Wilmington SEABOARD

      vxc.uncwil.edu (128.109.221.3)
      Log in as info.
      Emulate a VT100.

      Hardware/software: DEC/VTX
      Contact: Eddy Cavenaugh (cavenaughd@uncwil.bitnet) or
      (cavenaughd@vxc.uncwil.edu)

      System includes: class schedule listings, institutional
      statistics, library services, faculty & staff publications,
      current university news releases, phone directories, facilities
      schedules.

   7.26 University of Northern Iowa

      infosys.uni.edu
      Log in as public.
      Prefers a vtxxx terminal, but works with unknown terminal types.

      Hardware/software: The program uses UNIX tput clear, tput mc4,
      and tput mc5 (for printing).
      Contact: Mike Yohe (yohe@iscsvax.uni.edu)

   7.27 University of Pennsylvania - PennInfo

      In final testing phase; due for release at the beginning of
      November, 1991.

      penninfo.upenn.edu
      (no login id is needed).
      Emulate a VT100.

      Hardware/software: MIT's Techinfo; type HELP for directions
      Human contact: Valerie Glauser (glauser@dccs.upenn.edu)
      Comments: penninfo-comments@dccs.upenn.edu
      Bugs: penninfo-bugs@dccs.upenn.edu
      Human contact: Valerie Glauser (glauser@dccs.upenn.edu)

      PennInfo can be accessed via MIT's TechInfo MAC client program as
      well. We've modified the MAC client slightly because we have
      different contact information at Penn than MIT does.

8.0 Internet Bulleting Board System/Interactive
     Databases/Freenet

   There are several systems you can establish a connection with,
   sometimes referred to as an "anonymous telnet" session, that provide
   a variety of services/information. In some respects they resemble
   Campus Wide Information Systems, in others they are more like
   bulletin boards or interactive databases.

   A file containing the most frequently asked questions about Bulletin
   Board systems is available via anonymous ftp.

   Source:
   Anonymous FTP to polyslo.calpoly.edu
   cd pub
   get alt.bbs.faq

   Listed below are some of these types of systems:

   8.1 Cleveland Freenet - Case Western Reserve University

      Telnet to freenet-in-a.cwru.edu
      Follow the menu driven instructions.

   8.2 Heartland Freenet

      heartland.bradley.edu (136.176.10.10)
      Login as fnguest

   8.3 Youngstown Freenet - Youngstown State University

      Telnet yfn.ysu.edu

      Type visitor at userid prompt and follow menu driven
      instructions.

   8.4 Ocean Network Information Center

      Telnet delocn.udel.edu
      When the Userid: prompt appears type INFO and press Enter/Return
      key.

   8.5 Geographic Name Server

      Telnet martini.eecs.umich.edu 3000

      To use just type the name of the city and state you would like
      information on, just like you would on the last line of a postal

address. Example: Zanesville, OH

8.6 ISAAC

ISAAC, the Information System for Advanced Academic Computing,
serves as a clearinghouse for information about the use of IBM-
compatible hardware and software as aids to instruction and
research in higher education. Membership is free to all students,
faculty, and staff at institutions of higher education.

For more information call 206-543-5604.

ISAAC requires that you register before you can access the system.
To register, type register for the userid and password and fill in
the information, using the TAB key to go from field to field.
Once registered you will be assigned a userid and password; you
must connect again, this time typing your assigned userid and
password.

To access ISAAC, you need to establish a telnet connection over
the network. If you do not have network access, you also can call
over phone lines. Call 1-800-237-5551 in the U.S. or, within the
local Seattle are or outside the United States, call 1-206-543-
3761.

telnet isaac.engr.washington.edu or 128.95.32.61

8.7 FEDIX

FEDIX is an on-line information service that links the higher
education community and the federal government to facilitate
research, education, and services. The system provides accurate
and timely federal agency information to colleges, universities,
and other research organizations.

There are no registration fees and no access charges for using
FEDIX. The only cost is for the phone call.

FEDIX provides daily information updates on:

Federal education and research programs (including descriptions,
eligibility, funding, deadlines).

Scholarships, fellowships, and grants.

Available used government research equipment.

New funding for specific research and education activities from

the Commerce Business Daily, Federal Register, and other sources.

Minority assistance research and education programs.

News and current events within participating agencies.

General information such as agency history, budget, organizaitonal
structure, mission statement. etc.

For more information, contact the HELPLINE at 301-975-0103
Monday-Friday, 8:30 am to 4:30 pm EST, except on federal holidays.

telnet 192.111.228.1
At the login: prompt type fedix

8.8 STIS

Science and Technology Information System at the National Science
Foundation.

Information includes: the NSF Bulletin, Guide to Programs, grants
booklet - including forms, program announcements, press releases,
NSF Telephone Book, reports of the National Science Board,
descriptions of research projects funded by NSF - with abstracts,
and analytical reports and news from the International Programs
Division.

Publications may be searched by using a keyword, such as japan or
volcano; using a phrase, such as exchange of scientists and soviet
union; or by selecting a broad topic like biosciences.

For more information, contact the National Science Foundation,
Phone (202) 357-7555, FAX (202) 357-7745, TDD (202) 357-7492 or
via E-Mail stis@nsf.gov (Internet), stis@nsf (BITNET).

telnet stis.nsf.gov
At the login: prompt type public

At the terminal type prompt type vt100nkp.

Enter your terminal type [blank=vt100]: vt100nkp

You are then asked for a userid of up to 8 characters. If you are
a new user, you will be asked to supply your name and address for
record keeping. You can then search the NSF publications for
information and have the information sent to your e-mail address
if you wish. STIS provides a menu system. To get back to the
main menu, press the esc key until you have the main menu on the

        screen. Press the arrow key until Exit is highlighted, and press
        enter to exit STIS.

    8.9 Weather

        Source:
        Telnet madlab.sprl.umich.edu 3000

9.0 WHOIS - E-mail white pages

    WHOIS is a program available on many workstation/mini/mainframe
    computers that can connect to another computer. By supplying a
    persons name, it will respond with information it has on the person.
    A similar program called finger does the same type of thing, except
    it only supplies information on individuals with an account on that
    specific computer. Whois generally is operating on a database
    containing most of the individuals at the university, not just on the
    machine you connect.

    The following is a list of universities that have a whois service
    working. It is not, by any means exhaustive, and I would be
    interested in knowing about others that may exist so I can add to
    this list.

    9.1 The Ohio State University

        Telnet to osu.edu or
        Use Whois command whois -h osu.edu
        Enter firstname.lastname
        Example: whois -h osu.edu jerry.smith

    9.2 University of Oregon

        Use Whois command whois -h oregon.uoregon.edu
        Enter firstname.lastname
        Example: whois -h oregon.uoregon.edu Rose.Smith

    9.3 University of Virginia

        Use Whois command whois -h whois.virginia.edu
        Enter lastname, firstname middlename
        Example: whois -h whois.virginia.edu Smith, John James

    9.4 University of Pennsylvania

        Use Whois command whois -h whois.upenn.edu
        Enter lastname, firstname
        Example: whois -h whois.upenn.edu Smith, Judy

9.5 University of Wisconsin

   Use Whois command whois -h wisc.edu
   Enter firstname lastname
   Example: whois -h wisc.edu Jane Smith

9.6 MIT

   Use Whois command whois -h mit.edu
   Enter firstname_lastname
   Example: whois -h mit.edu Robert_Smith

9.7 Indiana University

   Use Whois command whois -h iugate.ucs.indiana.edu
   Enter firstname_lastname
   Example: whois -h iugate.ucs.indiana.edu Gerald_Smith

10.0 Books

For a more complete listing, see sections 3.08 and 3.11.

   Internetworking with TCP/IP Principles, Protocols, and
   Architecture by Douglas Comer, Prentice Hall, ISBN 0-13-470154-2.

   The Matrix, Computer Networks and Conferencing Systems Worldwide
   by John S. Quarterman, Digital Press, ISBN 0-13-565607-9.

   !%@:: A Directory of Electronic Mail Addressing and Networks, by
   Donnalyn Frey and Rick Adams, O'Reilly & Associates, Inc., ISBN
   0-937175-39-0.

   The User's Directory of Computer Networks, Edited by Tracy L.
   LaQuey, Digital Press, ISBN 0-13-950262-9.

11.0 Free Periodicals/Tabloids/Magazines

Below are just a few of the periodicals qualified subscribers can
receive free. I find the first four, PCWeek, MacWeek, Info World,
and Network World, the ones I try to glance over routinely. Others
are dedicated to specific network, LAN, or UNIX topics that are
useful if you have need for that information.

   PC Week
   P.O. Box 1767
   Riverton, NJ 08077-9767

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     MacWEEK
     P.O. Box 1764
     Riverton, NJ 08077-9764

     Info World
     P.O. Box 3013
     Northbrook, IL 60065-3013

     Network World
     161 Worchester Road
     Framingham, Mass. 01701

     Computer System News
     Circulation Dept.
     P.O. Box 2030
     Manhasset, NY 11030-7030

     Network Management
     Circulation Department
     Box 2417
     Tulsa, Oklahoma 74101-2417

     Unix Review
     Circulation Department
     P.O. Box 7439
     San Francisco, CA 94120-7439

     Communication News
     2504 North Tamiami Trail
     Nokomis, Fl 34275-9987

     LAN Times
     P.O. Box 652
     Hightstown, NJ 08520

     Communications Week
     Circulations Dept.
     P.O. Box 2070
     Manhasset, NY 11030

     LAN Computing
     101 Witmer Road
     O.O. Box 322
     Horsham, PA 19044-0322

     Midrange Systems
     P.O. Box 445
     Horsham, PA 19044-0445
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Unix Today!
Circulation Dept.
P.O. Box 2170
Manhasset NY 11030-4376
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12.0 Glossary

    I use some concepts here that may not be familiar to all. The
    following is a brief explanation of some of the concepts.

    12.1 BITNET:

    A network of normally mini or mainframe computers. BITNET
    connects many universities and colleges together. It provides
    e-mail and file transfer capabilities. It does not have the
    ability to do remote login (Telnet sessions).

    12.2 Internet:

    A very large network that connects just about any type of
    computer together. It supports e-mail, file transfer (FTP), and
    remote login (Telnet).

    12.3 Anonymous FTP:

    The ability to transfer a file from a remote computer connected
    to Internet without having an account on the remote computer.
    The program that performs the file transfer is normal FTP. To
    connect to a remote computer offering anonymous FTP you can use
    the following commands from a computer connected to Internet:

```
FTP Internet computer name
When prompted for a userid:  type anonymous
When prompted for a password type your e-mail address
To get a listing of files type dir
To change directory type cd directory name
To get a file type get filename
To get a binary file type binary then get filename
To end session type quit

Example:
FTP pilot.njin.net
Username:  anonymous
Password:  yourname@computer.edu
cd pub/ftp-list
get ftp.list
quit
```

12.4 Telnet:

   The ability to establish a connection to a remote computer
   connected to the Internet network. There are two types of
   programs that are used to do this. One, normally referred to as
   Telnet, normally establishes a VT100 type terminal emulation to
   the remote computer. The second, TN3270, establishes a full
   screen IBM 3270 type terminal connection.

12.5 Listserv:

   A program available on many BITNET connected computers that can
   act as a mail forward system and as a file repository. BITNET is
   another network that links many colleges and universities
   together. It does not normally link to military or government
   institutions as does the Internet. To subscribe to a listserv,
   you normally send mail to the machine which has the mailing list
   with the command to subscribe. As an example, to subscribe to a
   list for discussion of topics pertinent to Mechanical Engineering,
   you would send e-mail to listserv@utarlvml with the content of the
   message containing the one line command to subscribe:

   SUB MECH-1 John Doe (Where John Doe would be your full name)

   The document "Interest Groups" listed below contains the list of
   the majority of these lists that you can subscribe.

Disclaimer

   The information provided in the previous sections has been put
   together from multiple sources acquired from the network. Much of it
   came from reading newsgroups and trying things out to see how they
   worked. The information is as accurate as I have been able to
   determine, as of December 5, 1991.

   I used a DEC5500 system running Ultrix to check most of these
   sources. Most of the information is oriented toward Internet, since
   it has the ability to remote login (Telnet) and File Transfer (FTP).

Security Considerations

   Security issues are not discussed in this memo.

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