McKinley Internet Directory Help



Welcome to the McKinley Internet Directory. This directory makes it quick and easy to locate resources on the Internet.

To learn how to use Windows help, press **F1** now.

Overview of Software

Introduction to Internet Directory

Introduction to Internet

Getting Connected

Access Tools

Addresses

<u>E-mail</u>

A Whimsical Tour

Service Providers

Further Reading

Making Your Voice Heard

Glossary

Introduction to Internet Directory

Foreword

Introduction

The Directory is for Internet Novices and Experts

Product Features

Commercial Access to the Internet Gives Business a Competitive Advantage

The Two-Way Flow of Information

The Elements of the Internet

Warning, Disclaimer, and Trademark Acknowledgments

About the Authors

The STAR Rating System

Foreword

Once the preserve of the research and education community, the global Internet has emerged from its academic cocoon to become a vital new infrastructure for electronic commerce. As this directory vividly illustrates, an almost unfathomable wealth of information and services lies below the roiling surface of the Internet ocean.

Navigating its waters and mining its riches are still tasks for the hardy and the brave—not unlike the pioneers who blazed trails across the endless prairies of the American west. But even unruly frontiers must someday be settled, and the authors of this much-needed guide provide a civilizing influence on the exponentially growing global Internet. The guideposts they have provided to both content and value of each resource are most helpful to the skilled and novice Internet users alike. New technologies with names such as Gopher, World-Wide-Web, Archie, Mosaic, and Wide Area Information Service (WAIS) are emerging as the basis for new information-browsing and indexing tools. Stable information repositories are emerging that can be cataloged and indexed in various ways. Distributed searching tools based on intelligent agents, Knowbot™ programs, and the like are appearing in both the research and commercial worlds.

Although still somewhat novel today, the application of computers to everyday living and commerce, particularly in connection with the Internet, provides a basis for new product development over the next few years. Mail-enabled applications will increase in commonality, as will combinations of print and online advertising and order fulfillment. Monetary transactions are also finding fertile ground in the Internet landscape.

It should be very apparent to anyone reading this data that the Internet community has diverse interests and skills, which, by their very heterogeneity, suggest an extraordinary breadth of potential. So much communication today is carried digitally that it seems all but inescapable that computer-managed communication and application services will become the norm.

Although the future of the Internet and its technology is still difficult to discern with certainty, it is now deeply embedded not only in the United States telecommunications infrastructure but also in that of other nations. As a global telecommunications service provider and key player in the development of the United States Internet infrastructure, MCI is deeply aware of the needs of Internet users. This massive, globe-girdling and exponentially growing resource offers almost unlimited opportunities for information service providers and users. In keeping with MCI's networkMCI philosophy, MCI is committed to helping the public make maximum use of all forms of networking technology, including the global Internet.

Vinton Cerf President, The Internet Society Senior Vice President, Data Architectures MCI Corporation

Introduction

INFORMATION ACCESS and PEOPLE ACCESS is what the Internet is all about. The Internet now has 10 times as much traffic on it and 50 times as many information and data resources as it did six months ago. Every month there are approximately 20,000 new subscribers signing on to the Internet. Traffic and the daily increase in the sheer volume of information available on the Internet have made it virtually impossible—even for a proficient Internet user—to zero in easily and quickly on the best resources. It takes far more time today, to search or browse for relevant files. For once you get to a site, you have to navigate through increased layers of intermediate menu structures before actually reaching the information required. This is true for all disciplines, regardless at what time of day (or night) you are searching.

The McKinley Internet Directory makes it quick and easy to locate resources of interest. Because entries are repeated under their relevant keyword headings, this makes the directory itself work like an index. Written in non-technical jargon and laid out in an instantly understandable and consistent format, this directory continues to set the standard for the listing of Internet resources.

Site Names are sorted alphabetically by a series of keywords as well as by title.

Keywords and Audience Fields are provided to organize and classify Internet resources for specific audiences and constituencies.

Content Analysis ensures that precise descriptions of each resource are carefully researched and laid out in a consistent template format.

Ratings of each resource, thoroughly evaluated and ranked, help the reader to focus on the most valuable information sites.

Navigational Instructions are provided, when applicable, to assist the reader in accessing a resource as efficiently as possible.

Details supply information identifying whether a resource is free or requires a fee, is moderated, and/or has image, sound or multimedia files.

Internet addresses (or URLs) are supplied at the bottom of each listing to give quick and easy access to each resource. (Whenever available, alternative addresses are given to ensure that as many people as possible can navigate their way to a given resource, even if they do not; have a high-speed modem or sufficient bandwidth to be able to access such sites using the more sophisticated search tools like Lynx or MOSAIC.

It is these features that readers of this directory have been finding particularly useful and that set the McKinley Internet Directory apart from other Internet content directories.

See also

The Directory is for Internet Novices and Experts

Product Features

Commercial Access to the Internet Gives Business a Competitive Advantage

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Access Tools

The Directory is for Internet Novices and Experts

The McKinley Internet Directory assists readers in venturing onto the Internet to locate quickly those resources that are most likely to contain the quality and kind of information being sought. Whether novice or expert, readers will discover this value-added directory (and its updates) to be the standard reference work on Internet resource listings that will truly help save them time and get them to where they want to go.

The entries chosen for this directory represent only a fraction of the resources available on the Internet. We have striven to correct omissions of coverage as well as to reassess resources originally listed. In many cases, we have replaced old listings with brand new entries that had been judged by our Advisory Board to be of superior quality.

The comprehensive cataloging of Internet content can never be completed. Our work in this regard never ceases. It is impossible to get ahead of the Internet: we can only strive consistently and conscientiously to locate and document in this directory the best resources in every field of endeavor. To that end, we are constantly adding to our Advisory Board members who are at the cutting edge of their given fields.

The Internet is, indeed, a new world community with businesses now joining educational and research institutions in embracing the Internet. Where people help one another across the world, and work collaboratively to solve problems, share insights, or provide each other with information solutions and fresh ideas. The Internet contains a treasure trove that needs to be open to all throughout the world. We are committed to providing the best information about the contents of the Internet, but also the best guideposts to access those contents. The special format we have devised ensures that readers will not drown in information overload, but will be able to swim gracefully and precisely to where they or she wish or need to go.

Product Features

- Internet Content Advisory Board Provides Independent Assessment of Resources
- New Internet Resource Rating System
- <u>Increased Selection of Internet Resources</u>

Internet Content Advisory Board Provides Independent Assessment of Resources

Following the well-established scientific publishing tradition of what is termed *peer review*, we greatly expanded our teams of experts and editorial advisors who helped to review and evaluate the Internet resources published in this directory. We are particularly pleased that Editors representing the Advisory Board of Annual Reviews—the premier international review body of published articles in 57 scientific disciplines— and world-class editors from leading international scientific and educational journals have agreed to serve on our newly established Internet Content Advisory Board—thus providing the quality-assurance factor that is so vital to today's Internet users.

Each resource listed in this directory has been reviewed by the Editorial Advisory Board, which has also rated its relative importance. This is the source of the four-star ***
rating system, that is now a part of this edition. The ranking system is unique and will be of inestimable value to professionals and individuals who want to go directly to the most useful resources in their interest areas.

Time is at a premium on the Internet, and until artificially intelligent Knowbots™ become available, a directory providing an independent review of Internet resources is essential. By way of just one example, if you were to search the Internet for resources dealing with "Accounting", you would end up with a list of over 2,000 references! Your productivity would be decreasing instead of increasing while you searched for what you needed—exactly the opposite of what the Internet promises, and can deliver!

The Internet continues to expand globally, even as it penetrates into more specialized communities and remote locations in the United States. Being particularly mindful of the global reach of the Internet, we have gone to special lengths to expand the number of international resources listed. In addition, our Advisory Board is international in scope and has been specifically asked to help us identify international Internet resources wherever they exist and to evaluate them for us.

New Internet Resource Rating System

Every listing in the Directory has been evaluated and assigned a rating within a four-star system (**,

, *,

****) to give the reader a guide to the relative importance, quality, and size of each resource. Four stars indicate that a resource has been judged by its evaluators to be exceptionally important, while one star suggests that a resource is less comprehensive, points to fewer information sources, or is less popular. Remember, however, that every listing in this directory has been selected from the millions of resources available on the Internet and, therefore, has automatically been judged to have a level of merit.

Increased Selection of Internet Resources

We have increased the selection of listings in this edition by over 35%, and have updated the navigational instructions for all the listings. One of the most challenging realities of the Internet today is its volatility. Resources made available by a provider one day may be moved or transported to another network site the next day. It is, therefore, quite difficult to keep up with these changes. Until the Internet matures and stabilizes, constant surveillance is necessary. We will continue to provide that surveillance on a daily basis in our efforts to produce the most up-to-date information available in subsequent editions of this directory.

Every effort has been made to mirror the breadth of the Internet and to include resources that cover people of all cultures and religious persuasions, as well as resources that focus on international issues and countries.

Commercial Access to the Internet Gives Business a Competitive Advantage

Far-reaching opportunities are becoming available through the recent opening of the Internet information highway to commercial use. Businesses can research new markets and track existing ones, increase their level of direct customer contact and feedback, make new business connections, and get instant feedback via electronic mail from internal staff and customers alike.

With the use of the Internet, communities no longer need to be defined entirely by where people live and where businesses are situated. Individual consumers will find that shopping on the Internet is an exploding field. Opportunities abound for learning, being entertained, and pursuing every kind of hobby or interest imaginable.

The Two-Way Flow of Information

The Internet is *interactive*. This means that it is two-directional. People use the Internet to access information, but they also use it to provide information for others to seek out and find.

In fact, it is important for both individuals and businesses to realize that the better and more useful the information you put on to the Internet, the better and more useful the information you will receive back. In keeping with the spirit of this philosophy, we want to specifically encourage readers to provide us with feedback on existing and new listings. To that end, we have provided a form titled, "Making Your Voice Heard". The form covers:

- How to register a new listing
- How to update a current listing
- How to recommend a listing
- How to become a resource evaluator

We also provide guidelines for those interested in mounting their information on the Internet.

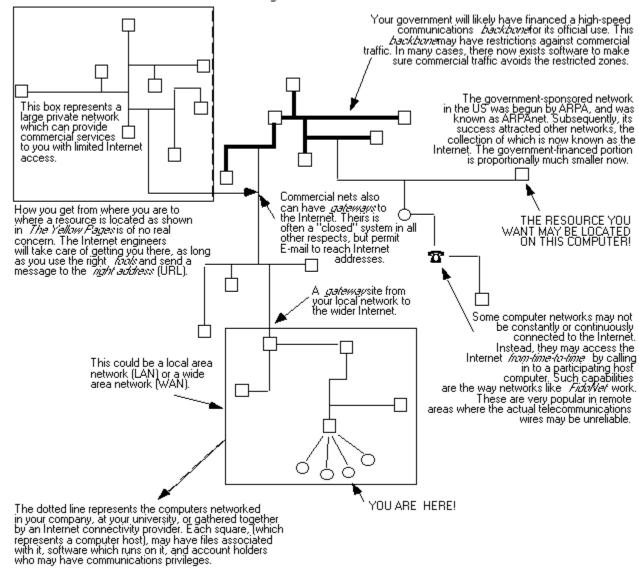
Sec	e als	50				
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Making Your Voice Heard

The Elements of the Internet

The Elements of the Internet

Some people draw a diagram of a cloud to represent the Internet. In fact, it is a hierarchical assembly of networks; a Network of networks, It could be diagrammed in schematic form like this:



Warning, Disclaimer, and Trademark Acknowledgments

Warning and Disclaimer

This software is designed to provide information about the Internet. Every effort has been made to make the data as complete and as accurate as possible, but no warranty or fitness is implied.

The information is provided on an as is basis. The authors and The McKinley Group shall have neither liability nor responsibility to any person or entity with respect to any loss or damages arising from the information contained in this data or from the use of the disks or programs that may accompany it.

Trademark Acknowledgments

All terms known to be trademarks or service marks have been appropriately capitalized. The McKinley Group cannot attest to the accuracy of this information. The use of a term in this material should not be regarded as affecting the validity of any trademark or service mark.

About the Authors

Christine Maxwell is Director of Internet Research & Development and Publisher for the McKinley Group, Inc. The McKinley Group specializes in Internet directory publishing and helping companies attain a strong market presence for themselves on the Internet.) She is also President and CEO of Research on Demand Inc., a Berkeley based information broker. Maxwell has been in the information brokering business for over 12 years and prior to that, worked in senior positions in international scientific and educational publishing. She is also a trained elementary school teacher and taught for several years in British public schools.

Maxwell's first publication was The Pergamon *Dictionary of Perfect Spelling*, published by A. Wheaton & Co. (1977). Other publications include *Spelling Basics*, published by Paradigm Publishing International (1989). She was the General Editor for the Nuevas Fronteras/New Frontiers bilingual, early education series and Edward de Bono's CoRT Thinking Program 2nd Ed., published by Pergamon Press (1983 and 1987, respectively).

Maxwell particularly likes to focus her writing skills on books that deal with the problems of information access. Her eclectic background has proved particularly well suited to exploring the riches of the Internet and helping those riches to become more accessible to all.

Czeslaw (Chet) Jan Grycz lectures in the School of Library Science and Information Technology, University of California Berkeley Extension, where he teaches two of the required courses in the "Certificate in Publishing" program. He is also on the permanent faculty of the Denver Publishing Institute, and has conducted workshops and lectured throughout the world, especially in Central and Eastern Europe.

His special interests are in developing electronic models for publishers, especially in distributed digital network environments. He was instrumental, in 1992, in initiating the "Red Sage" project, a collaborative electronic publishing effort involving the University of California at San Francisco, Springer-Verlag Publishers, and AT&T Bell Laboratories. In 1994, he helped consolidate a partnership between the University of California System, and the Institute for Electrical and Electronics Engineers (IEEE) to similarly prototype electronic publishing mechanisms for engineering information.

Chet is a consultant and a writer, having edited "Promises and Pitfalls: an AAP/PSP Briefing Paper on INTERNET Publishing," published by the Association of American Publishers. He also edited special issues on "Economic Models for Networked Information" and "Policy Issues for Network Publishing" for the journal *Serials Review* published by Pierian Press, and is the author of several articles on related subjects.

The STAR Rating System

This edition of the McKinley Internet Directory includes an expanded and simplified STAR rating system for Internet resources. These act as guides to the relative importance and/or size of each resource.

Criteria developed in cooperation with our Editorial Advisory Board have been tailored for rating specific varieties of Internet data resources. Those that apply, for example, to a Gopher database would not be appropriate criteria by which to rate an electronic discussion group. Tailored ratings help you save time, and focus on those resources most likely to help you keep up-to-date when you are in a hurry. Information resources on the Internet adjust rapidly to the real world. That means that they, themselves, continually change. By concentrating on the resources ranked with a high number of stars, the reader who is pressed for time will find the most comprehensive or dynamic sources of information available in those particular resources.

See also

The Role of the Editorial Advisory Board
Subject Area Coverage
Low Rating
Middle Rating
High Rating

The Role of the Editorial Advisory Board

Because the emphasis (and distinguishing feature) of this directory is on the *content* and *value* of Internet resources, the Editorial Advisory Board, composed of recognized specialists in specific subject areas, has been formed to help evaluate the listings selected for publication in this directory. Getting expert advice about the information you find is always helpful but often not readily available. Being confident in the reliability of information on an expanding Internet may be more difficult as the Internet includes an ever-expanding array of information. If you know a specific data provider or the author of the materials you chose to download to your computer, you may feel comfortable about the reliability of the information. If you—as millions of other Internet users—will be referring to resources about which you actually know very little, then a guide to help you may be crucial. In many instances, predictably, you will have no idea whether the information available is valid, biased, complete, or trustworthy.

This was true of print communication and it continues to be just as true with the dawning of electronic communication. In the world of print, scientific publishers developed mechanisms for *peer review*, by which articles and manuscripts were subjected to a rigorous evaluation process by the author's peers who were experts in the subject about which an article may have been written. This process ensured objectivity and critical judgment.

Similar conventions can be applied to the evaluation of Internet resources. Members of the Editorial Advisory Board are asked to help evaluate Internet resources which are found within their specific areas of expertise. It is intended that the combined judgments of such experts will help save you time. The Subject and Topic Access Rater (STAR) system will inform you about the relative merit assigned a resource by a panel of experts in the field.

Gaining the cooperation of external specialist evaluators is an expanding and ongoing process, because the evaluation and ranking of resources is one of the most important contributions that can be made to fulfill the promise of the Internet to its various constituencies.

Subject Area Coverage

Since it would be impractical to establish advisory boards for each of the over 3,000 keywords under which individual listings may be found in this directory, *umbrella* fields have been established under which may be found all the subsequent individual subject headings. These are:

- Business
- Communications
- Economy
- Education
- Energy
- Engineering
- Government and Politics
- · Health and Family
- Humanities and Arts
- Information Science
- International Affairs
- Law
- Life Sciences
- Materials Sciences and Technology
- Physical Sciences
- Popular Culture
- Recreation and Sports
- Science (General)
- Social and Behavioral Sciences

The process of evaluating Internet resources by hand, so to speak, is laborious, but there is no technological substitute for it. Transferring the Editorial Advisory Board members' knowledge and expertise to the Internet helps the public at large benefit from a level of expert advice they would otherwise have great difficulty in obtaining.

Low Rating

There are some listings that arrived too late for formal review but which were nevertheless deemed important enough to include in the McKinley Internet Directory. These have no stars.

If a resource has been given a single star, it means the resource has been judged important enough to be included in our directory. A single star designation ★ usually indicates that the information provided in the resource is:

- quite specific in scope.
- likely to change rapidly in coverage.
- under development

The single star ★ ratings are important and valuable resources, and often represent the wide range of coverage represented by Internet resources.

Middle Rating

Some resources may be given higher ratings, such as two stars ★★ or three stars

***. This will indicate that they provide access to proportionally larger amounts of information or are resources of considerable significance. They may:

- contain essential or unique information.
- have been developed in a particularly careful way.
- be the product of established and reputable entities.

When a resource has been assigned a larger number of stars, it means that the Editorial Advisory Board found that the resource:

- was more focused or dealt with a clearly defined subject area.
- had important institutional backing.
- contained essential or unique information.

High Rating

The highest, or four-star *** ranking, is reserved for resources of truly outstanding merit. Information in these resources may:

- be updated on a continual basis,
- contain unique information not found anywhere else,
- be prepared by institutions or agencies of considerable stature, in themselves,
- point to a wide range of additional resources on the Internet
- consist of layers of information about a given topic.

Four-star *** Internet resources are important both as resources in and of themselves and as pointers to hundreds of other related materials and files.

Introduction to Internet

A common vision is developing in the United States and around the world that views the Internet as a vital purveyor of information. The new resources listed in this edition have been chosen because they:

- help to expand the contents of resources into new fields.
- provide expanded coverage of existing subject areas.
- provide updated or more complete coverage of selected subject fields.

Every day, people confront situations in which they are required to find some piece of information. Businesses, individuals, organizations, and schools are learning that they all can benefit from having the ability to access the global resources available on the Internet.

Browsing through the directory listings will give readers an immediate feel for the breadth of topics covered from A-Z.

Many Internet resource sites contain such a variety of resources that any one group of individuals might access the same resource and be able to find totally different information and adapt it to their own particular advantage.

See also

Business and Commerce Come to the Internet

Expanded International Coverage

Advertising Comes to the Internet

Resources of Interest to Businesses

Resources of Interest to People of All Ages and Cultures

Resources of Interest to Differently-Abled People

Resources of Interest to Children and Teachers

Resources of Interest to Researchers, Academics, and the Intellectually Curious

Resources of Interest to Cybernauts of All Persuasions

The Growth of Online Public Access Catalogs (OPACS)

Business and Commerce Come to the Internet

The Internet has started to make substantive changes to conventional ways of doing business. However there is still a long way to go before it becomes a place where people feel comfortable 'doing business' and 'buying or selling products and services'. The issues of security, private fiscal transactions, and appropriate pricing mechanisms need to be resolved before the Internet market place fulfills its global potential.

For many companies, the Internet already represents a good, cheap communications link to geographically distant work sites. Technology companies (and increasingly, other types of companies), see the Internet as providing an excellent communications channel between customers and vendors, allowing for expanded and improved customer support, at the same time as it enables operational efficiencies. Publishers by the hundreds (self-publishers and professional publishers alike), and companies with consumer products and services, are making their catalogs available on the Internet, allowing anyone with an Internet connection to peruse them and order desired titles, products and services. Some, like Books Online even make the complete text of many books available online.

No single marketing, or advertising channel is going to reach 100% of the Internet market; but even a fraction of that market can represent millions of people. Those companies who can quickly master the rules of online commerce and find a niche market to exploit, can immediately do very good business on the Internet. Many are already doing so.

In line with this growing business emphasis, many commercial sites have been the focus of close scrutiny by other companies, to analyze and keep a close eye on what is succeeding and why. At this time, some companies have developed *home pages* (the opening menu item at all www sites). They often contain a solid body of information of general business interest and are also equipped with instrumentation by which the home page producer can learn how many searches to the home page have been made.

Expanded International Coverage

In keeping with our original intent to produce an Internet resource directory that is truly international in scope and reflects the increasingly global character of the Internet, we have substantially increased the number of listings of international resources.

Example of an international resource:

★★★★ CEDAR - Central European Environmental Data Request Facility Keywords

Central Europe, Economics, Environmental Policy, Environment

Audience

Environmental Policymakers, Environmentalists, Environmental Economists

Profile

The Central European Environmental Data Request Facility (CEDAR) Web site is a resource for professionals to learn more about environmental regulations, projects, meetings, economics and related data in Central Europe. There are a lot of links here, including those to the Austrian Federal Ministry for the Environment, the Central and Eastern European EcoDirectory Project, the World Wildlife Fund (United States), INFOTERRA (the United Nations Environmental Programme) and the UNEP Global Resource Information Database (GRID). Laws, statutes, acts, conventions, and protocols are reproduced verbatim. Newsletters are available, as are searchable databases, directories and libraries, organized by country. There are also considerable links to relevant gopher servers and websites.

Language

English, French, German, Italian

Producer

CEDAR, The Central European Environmental Data Request Facility

Phone

+43 (1) 715-5879

Contact

Bernhard Lorenz or Douglas J Kahn

Contact Email

Bernhard.Lorenz@cedar.univie.ac.at, dkahn@nywork2.undp.org

Cost

No

Commercial

No

Moderated

No

Advertising Comes to the Internet

Fun, games, hobbies, sports, and recreation are to be found in abundance on the Internet.

As resistance to traditional advertising on the part of Internet users diminishes, new opportunities for advertising are increasing. The advantages for advertising on the Internet are the opportunity to present more information—unlike advertisements in traditional media. The Internet culture encourages vendors to offer significant amounts of information about the product or service being advertised. There is no lead time between the placement of an ad and its being immediately received by an enormous market.

Many shopping malls are beginning to spring up on the Internet. These shopping malls offer a series of services, such as press release services and are busy developing other innovative ways to curry favor with businesses and Internet browsers alike. An example of one is shown below.

★★★★ Bay Area Shopping Guide

Keywords: Palo Alto, CA, Regional Guides, Internet Shopping, San Francisco Bay Area

Audience: San Francisco Bay Area Residents, Tourists, Internet Shoppers

Profile: The Bay Area Shopping Guide offers information on shopping centers and

independent stores located in the San Francisco Bay Area. Users can search through the database by vendor or by city, and view information on area retailers such as location, product line, and contact information. In addition, this site lets you 'visit' the Stanford Shopping Center in Palo Alto,

CA.

Language: English

Producer: Internet Media Services **Phone:** +1 (415) 328-4638

Contact Email: ims@netmedia.com

Cost: No Commercial: Yes Moderated: No

Resources of Interest to Businesses

Virtually any resource can be viewed as having potentially useful business applications, and useful market intelligence. The following resource might be interesting to business professionals.

*** AsiaOne - Daily news and information on Asia Keywords: Singapore, Southeast Asia, Business, News

Audience: Business Professionals, Asians, Researchers, Travelers

Profile: AsiaOne carries daily news and information from Singapore Press Holdings, southeast Asia's premier newspaper and magazine publisher. Links are provided to BusinessTimes Online which contains information on daily news on Singapore and Asia, recent changes and what's coming, choice products and services available on the Net,

phone infotainment, and daily highlights.

Language: English

Producer: Singapore Press Holdings

Phone: +65 740-1479 Contact: Cheah Cheng Poh

Contact Email: sphepd@singnet.com.sg

Cost: No Commercial:: Yes Moderated: No

Resources of Interest to People of All Ages and Cultures

With people from all over the world rushing on to the Internet, it is important to realize that its content mirrors that of the people who use it.

One can discover and access thousands of diverse resources from all over the world, as exemplified by the following example resource.

**** WITI - International Network of Women in Technology

Keywords: Technology, Women

Audience: Women Technology Professionals, Professional Women, Women's Studies

Scholars

Profile: The International Network of Women in Technology WWW page provides a wide variety of information for the organization which represents a tremendous diversity of backgrounds, positions and disciplines working in and for technology organizations, academia and governmental agencies. The site features a number of specialized indexes of resources on topics such as health, women's groups, reproductive rights, and equality in the workplace. Each index offers links to a number of organizations, bibliographies, and related Internet locations.

Language: English

Producer: International Network of Women In Technology **Phone:** +1 (818) 990-6705, Fax +1 (818) 906-3299

Contact Email: info@witi.com

Cost: No Commercial: No Moderated: No

Resources of Interest to Differently-Abled People

Many resources on the Internet are especially useful for differently-abled people. An example of such a resource is:

★★★★ Apple Computer's Worldwide Disability Solution

Keywords: Computer Software, Disability Aids

Audience: Differently Abled People, Disabled People, Blind People, Deaf & Disabled

People

Profile: This site is the location of the Macintosh Disability Resources (MDR)

database, Version 4.0. This site includes 100 commercial products for the Macintosh, enabling computer access by people with disabilities. Each record contains a product description and developer contact information. This software includes tools for people who exhibit motor impairment, blindness, hearing and speech difficulties and/or people with learning disabilities. MDR (Macintosh Disability Resources) can be searched using either keywords, product name, developer's name, disability type or

general description.

Language: English

Producer: Apple Computer Incorporated

Phone: +1 (800) 776-2333, TTY +1 (800) 833-6223

Contact: Theresa Lara

Contact Email: ftp@apple.com

Cost: No Commercial: Yes Moderated: No

Resources of Interest to Children and Teachers

As education moves into the 21st century students of all age groups and ability levels (and their teachers) will find enormous quantities of resources on the Internet to:

- support independent as well as cooperative learning efforts.
- provide tools and projects to promote connectivity with classrooms and individuals worldwide.
- supply information about any topic or curriculum issue.

An example of an educational resource accessible over the Internet is:

*** (International Student Wire) ISN KidNews

Keywords: Education (K-12), News, Student Life **Audience:** Students (K-12), Educators (K-12), Parents

Profile: ISN KidNews is a news service for students and teachers around the world. Anyone may use stories from the service, and anyone may submit stories. It covers topics such as report card jitters, dances, drinking and smoking problems, people profiles such as favorite teachers or friends, how-to stories from hockey to making bracelets, reviews of books, movies, restaurants, sports stories of local 'heroes,' poetry and fiction written by students, and discussion sections for students and teachers.

Language: English

Producer: University of Massachusetts

Phone: +1 (508) 999-8046 **Contact:** Dr. Peter Owens

Contact Email: IN%"kidnews@umassd.edu

Cost: No Commercial: : No Moderated: : No

Today students range in all ages, with the many older adults continuing in life-long education or retraining. Administrators, parents, teachers, and educational planners will find here the tools needed to transform their schools into environments that avail themselves of the Information Age with vital forums where ideas can be explored, designs shared, and solutions developed.

Resources of Interest to Researchers, Academics, and the Intellectually Curious

The Internet was founded, originally, to provide operational efficiencies to researcher and academics so they could connect with each other at various remote sites and laboratories. As the Internet grew, this successful pattern was replicated by countries around the world and has resulted in the Internet becoming the single largest network in the world.

The resources now available over the Internet have the potential to fulfill a researcher's highest aspirations or create their worst nightmare. A Cyberspace heaven and hell where the information one seeks is probably there, but the effort to find it is often equivalent to that needed to find a needle in a haystack!

An example of the international nature of many Internet resources is shown below:

★★★★ Lawrence Livermore National Laboratory Physics and Space Technology

Directorate

Keywords: Particle Physics, Plasma Physics, Space Technology, Education

(College/University)

Audience: Physicists, Students, Researchers, Educators

Profile: The Lawrence Livermore National Laboratory Physics and Space

Technology (PST) Directorate page presents its staff, divisions and

research institutes. Some research information includes microelectronics, photonics, particle physics, and plasma physics. There are also links to the Center for Microelectronics and Optoelectronics, the National Ignition Facility for Inertial Confinement Fusion, and other Lawrence Livermore

National Laboratory groups.

Language: English

Producer: Lawrence Livermore National Laboratory Physics and Space Technology

Directorate

Contact: Hal Graboske

Contact Email: graboske1@llnl.gov

Cost: No
Commercial: No
Moderated: No

The Growth of Online Public Access Catalogs (OPACs)

A recent development within the library community has been the rush to put library catalogs online. Libraries have, for the past several years, engaged themselves in the process of converting paper library card catalog systems to computerized ones. The advent Online Public Access Catalogs (OPACs) on the Internet allows libraries to reach beyond their normal constituencies, provide considerably more flexible searching capabilities than were available from the paper card catalogs. This makes their collections accessible to the widest number of researchers, academics, and the intellectually curious from anywhere in the world.

For example, having access to the Internet Library of Congress Catalog on one's computer, means having the collections catalog of the largest library in the world at one's desk. At present, it does not mean you have actual books themselves although efforts to provide textual matter behind the catalog citations are taking place in various experimental sites in many libraries around the world.

The most visible of the OPACs are contained in the HYTELNET list and the Yale Directory of Internet Libraries. Between these two listings alone, there is a huge amount of information readily accessible to anyone with Telnet or Gopher capabilities on their computer.

Yale Directory of Internet Libraries is a comprehensive listing of worldwide libraries (of which HYTELNET is a subset) that provides connection information for all its entries (usually automatic-- just press Enter) via Telnet or Gopher and provides subject information for many of its entries, and for all of its major academic research entries.

**** Library of Congress Gopher Server

Keywords: Congress (US), Government, Library of Congress, Research

Audience: Library Users, General Interest, Researchers

Profile: The Library of Congress (LC) Machine-Assisted Realization of the Virtual Electronic Library (MARVEL) is a Campus-Wide Information System that combines the vast collection of information available about the Library with easy access to diverse electronic resources over the Internet. Its goal is to serve the staff of LC, as well as the U.S. Congress and constituents throughout the world.

URL: |cmarvel@loc.gov | Producer: Library of Congress

Cost: No
Commercial: No
Moderated: No

See also

Gopher

<u>Telnet</u>

Resources of Interest to Cybernauts of All Persuasions

The diversity of resources can be clearly seen in "A Whimsical Tour of the Internet". We hope you will enjoy this compilation as a fun expression of the more lighthearted listings to be found in this directory.

Suffice it to say that whatever your interests, whatever your concerns, wherever your imagination leads you, the Internet is ready to satisfy your curiosity and to empower you with information you can put to productive, entertaining, educational, or profitable use.

Getting Connected

Getting connected to the Internet is relatively easy; however, it can be frustrating, too. We have tried to organize the information you will need to begin accessing the Internet with a minimum of frustration.

The essential components of connecting to the Internet are not complicated. You will need:

Hardware

Software

Access to the Internet

Differences Among Providers

Business Connectivity

Client/Server Programs

Hardware

- A personal computer. This can be of any size or kind. It need not be a fancy model with "bells and whistles". What will suffice is a computer that can run a conventional communications program.
- **A modem.** This device converts what is typed on a personal computer into signals that can be transmitted across standard telephone wires or data lines. Modems are usually distinguished by their speed of transmission, which is rated at bits per second, or baud rate. The higher the baud rate, the faster the transmission.
 - If you intend simply to exchange e-mail, a modem with relatively low transmission speeds like 2400 baud can handle such activities. Today's modems, however, deliver considerable functionality for their price. Purchasing a modem with the highest available baud rate you can afford is advisable. This means that the transferring and receiving of files can be done much more quickly.
- A hard drive. A hard drive where you store the files of information taken off the Internet. Buying a hard drive with increased memory storage is highly advisable. If you become active in one or more discussion groups, you will quickly find yourself storing a large number of messages. It is likely that the more interesting and complex files and certainly any image or sound files on the Internet will take up a great deal of space. The prices of hard-disk storage have dropped substantially, and sizes formerly reserved for institutional use (one gigabyte or more) are now popular for individual purchase.

Software

• A telecommunications program. Communications programs are software programs that permit your computer to send data across a modem. In an increasing number of business and office environments, local area networks (LANs) are being established, through which Internet access is available. If you work from home, you will need a software program to permit your home computer to make a phone connection across telephone lines to another computer connected directly to the Internet.

Frequently, the people who specialize in modems can recommend an appropriate communications software program. They can also answer questions about setup and provide initial trouble-shooting help.

• TCP/IP software. Standard communications programs are useful for connecting your computer to a variety of online services and bulletin board systems. They also make it possible to connect your computer to other computers. If you intend to spend much time on the Internet, you will need an additional set of enabling software tools. This is the software that permits the transmissions from your computer to conform to the widely adopted standard for communicating on the Internet known as TCP/IP (Transfer Control Protocol/Internet Protocol). Check the Internet resources listed in this directory to help you understand how to get the software tools you need.

Fortunately, a variety of packages are available; many are not expensive, and some are even free. Check with your software vendor about the specific programs you will need for your model computer. Ask for the software that will help you establish a SLIP (Serial Line Internet Protocol) connection or a PPP (Point-to-Point) connection to the Internet. Also look around for various commercially available packages that include all the software you will need for Internet connectivity. Increasingly, the Internet Protocol (IP) tools come bundled with the major communications software packages that are available, or they can be provided by your Internet service.

• **Virus Protection Software.** Computer viruses can be conveyed on executable program files that are downloaded to your computer. Since the Internet holds many such programs that will be of interest to you, it is wise to purchase high-quality virus protection software. Such software scans incoming files and uses a variety of methods to identify files that might harbor viruses that could harm or disable your computer. No virus protection software is foolproof, so you should be cautious about the files you download onto your hard disk. Caution, coupled with high-quality virus protection software, can protect your investment in equipment and time.

See also	
Service Providers	

Access to the Internet

To connect to the Internet, you will also need actual access authorization, which can be obtained only from companies specializing in providing Internet telecommunications access. These are known as Internet service providers. By contacting these vendors, you can obtain

• **An electronic account.** All Internet users must establish an Internet address. To do so, you must pay one of the Internet providers a monthly fee for an electronic account. This is just like having to pay the phone company for your telephone number.

Electronic accounts can also be obtained from universities or research institutions (if you happen to be affiliated with one), or from some businesses (many companies are already installing or investigating electronic networking). You may wish to check these sources, as they may be able to supply you with additional information and assistance for your particular set of requirements.

See also	
Service Providers	

Differences Among Providers

When looking around for an authorized access account to the Internet, it is important to be aware that some electronic network providers give subscribers access to a suite of services easily confused with the real Internet. Some may provide restricted *gateways* to the Internet, but not to the full suite of Internet access tools. Be sure to know what you are getting as you investigate the various access points to the Internet.

There is tremendous ongoing volatility in the marketplace for online connectivity and services. It is therefore difficult to generalize about these services. There are, however, very identifiable differences among certain providers. One group of companies only provides Internet connectivity, another group only provides access to individual online databases, and yet another group provides proprietary online database access and a minimum of e-mail access to the Internet. Each one is slightly different, but the differences can be confusing, since many of their services seem to overlap.

- **Internet Providers.** Providers who were once primarily interested in the technical aspects of providing Internet connectivity exclusively to institutions are now beginning to compete with one another for the individual customer. This means that they are providing a greater degree of customer service, trouble-shooting, software installation advice, and general hand-holding. These companies are becoming more and more the real Internet connectivity providers.
- **Service Providers.** Companies like CompuServe®, America Online, GEnie, and Prodigy (all headquartered in the United States), Minitel (headquartered in France), and other producers in other countries provide a number of useful electronic services, which they package in an overall user-interface. These companies may not, however, actually be on the Internet. In most cases, they still only provide e-mail access to the Internet, allowing customers to send and receive e-mail from anyone anywhere on the Internet. This is called providing a *gateway* to the Internet.

Minitel in France allows full access to the Internet from Minitel, but not vice versa. As of the time of this writing, Delphi is the only commercial access provider with a full Internet gateway. America Online has a partial gateway. CompuServe has just given notice that it will also be going to full Internet connectivity. It is obvious that the trend is for commercial providers to open up more gateways to the Internet.

 Proprietary Database Vendors. These are companies like Dialog, Data Star, Questel, Orbit, Mead (Nexis/Lexis), and CD Plus.

Business Connectivity

For businesses wanting to use the Internet for commercial or operational advantage, understanding the types of available connections to the Internet is critically important. While most individual consumers will be satisfied with a SLIP connection, businesses may require greater throughput speeds, particularly if they wish to connect their company's local area networks (and thus provide Internet access to all of their employees at one time.)

Universities and large corporations rent from the phone company dedicated lines that are directly connected to the Internet. These lines come in different categories, depending on the speed with which communications can be passed through the wires. This is commonly described as bandwidth. The smallest of these is a 56K line, but you can also lease 128K transmission capability, all the way up to T1 and T3 speeds.

The promise of distance education and the educational aspects of Internet connectivity have also spurred an interest in ISDN (Integrated Switching Data Network), which has the capability to provide both data and video channels. The prices for these connections vary enormously (in one sample, quotation prices ranged from \$45 to \$2,500 per month). It is worth spending some time comparing services and vendors with your requirements and needs, to obtain the right level of service and connectivity for the best price.

Client/Server Programs

The way one works on a personal computer and the way one works on the Internet are different. Since these differences are fundamental to understanding how the Internet works, we want to address some of them.

People used to working with personal computers are comfortable with the knowledge that their application programs reside on their computer's hard disk and that document files are created every time a Save command is issued. The interaction from the user to the program and from the program to the saved documents seems instantaneous even if it actually is not.

The Internet's various computer nodes are connected to disks containing numerous programs. Each of the computer nodes is governed by a set of programs. One of the fascinating and challenging things about the Internet is that you have the option of downloading a program from a remote computer or, in some cases, of actually running a program on a distant computer. This is the case, for example, with the online public access library catalogs (OPACs) in which the actual searching of a potentially very large library database is done by a program located at the site of the OPAC.

For many activities, it does not matter whether a program is available locally or at a distance from you. But if you imagine the scale of the Internet and the millions of users sending commands and instructions to distant programs, you can imagine some of the traffic bottlenecks and time lags that could result.

This realization has led to the development of a variety of software programs known as client/server programs. While it is not necessary to know about client/server technology in any detail, you may run across the term, and it is good to have a general understanding of its meaning, because using these new programs can result in a more efficient use of the Internet.

In general, data providers on the Internet realize they cannot anticipate all the various equipment configurations and models that can access information. Instead, they have concentrated on establishing standards to provide the information in consistent, regularized, and reliable formats. This is the server part of the effort.

Programmers can produce software specific to individual computer platforms when they know that the servers they intend to access contain information in predictable formats. Once servers are known to be reliable in their formatting of data, clients can be designed to conform to the special needs of individual hardware configurations. Thus, the Internet access tools described are available for a wide variety of computers.

This is why we can talk about SLIP connections and gopher software, confident that readers who have Macintosh computers will be able to find client software appropriate for their computers, while DOS users will be able to find similar software for the various operating systems, including OS/2 and Windows™, that are particular to their computers.

Access Tools

When one considers the size of the Internet, the numbers of computers connected to it, and the sheer number of data and information resources available, it is easy to imagine that it is impossible to get around on the Internet without getting lost. While it is true that the Internet's scale and volume are enormous, there are a number of software tools available that overcome the imagined problems and make it possible (even easy) to move around.

The following section describes the most common Internet Access Tools. The descriptions are not intended to be definitive, but descriptive. For detailed or technical information you may wish to consult books which focus specifically on the "how-to's" of the Internet. Our bibliography, titled "Further Reading", gives a list of useful books in this regard.

Moving into and onto the Internet puts one into *Cyberspace*. This is the term coined by William Gibson in his science fiction classic, *Neuromancer*. It means an electronic place where people and programs work, learn, and coexist.

Each of the tools described here have a specialized set of capabilities to help you navigate your way around when your computer is connected to the Net.

<u>Telnet</u>

Guest Access to Remote Computers

FTP (File Transfer Protocol)

Viruses

Archie

Gopher

Veronica

Wide-Area Information Servers (WAIS)

World-Wide Web (WWW)

Cello and Lynx

Mosaic

<u>Newsreaders</u>

Finger: Finding People on the Internet

Evaluating Resources

See also

How Do ListServs Work?

Further Reading

Telnet

Telnet is one of the earliest Internet Access Tools. This software permits a connection to be made to a remote computer in order to read the directory of files located on that remote computer and use its programs. Using Telnet software, an authorized user can log on to a computer and have much the same access to it as if one were actually sitting at their own keyboard console.

To use Telnet, you need to know the Internet address of the computer to which you want to establish a connection. If you do not know its address, but do know its common name, you may sometimes use the name in place of the formal Internet address. You then simply type the word "Telnet" followed by the sequence "ComputerName.ComputerLocation" all in one line with no spaces.

TELNET olorin.uchicago.edu

The Internet Telnet software is a tool that has proved to be of enormous benefit to scientific and engineering research and development, as it makes it possible for people from all over the world to work together and share resources in ways otherwise unthinkable without the connectivity that the Internet provides them.

Guest Access to Remote Computers

Most computers on the Internet are protected by passwords (at minimum, their important files are protected by some security measures). Only authorized users can have access to protected files. Many of the computers that allow a Telnet connection will permit you temporary access (usually restricted to some specific set of functions). In such cases, you may be asked to supply your computer account as a password. In other cases, you will be asked to use the word "anonymous" or "guest" as a login. You may have to try several options before being successfully connected to the remote computer. Reading the information on your screen returned by the remote computer during a Telnet session can also provide information about procedures established at a given site.

Telnet is a useful command structure with which to interact with computers on the Internet. Many commercial programs now incorporate basic Telnet programming structures, making it possible to use this facility from a variety of telecommunications software programs.

FTP (File Transfer Protocol)

File Transfer Protocol (FTP) is more specific; its special job is retrieving (downloading) files from remote computers. An FTP Internet Access Tool also allows you to place (upload) files on a remote computer. The files that are transferred can be text files, application programs, binary code, software updates, various utilities, and any of an assortment of helpful or useful computing aids.

To use an FTP Access Tool, you will need to know the computer address of the site to which you want to have access, or its common name. There are many FTP sites listed in this directory, since they represent a popular way of archiving information that is frequently requested and often downloaded.

Viruses

It is crucial to point out that most computer viruses are obtained from downloaded program files. Viruses do not come attached to documents or text files but are exclusively associated with executable or program files. If you intend to use FTP (or any other Internet Access Tool) to download executable files to your own computer, make absolutely certain that you know the reliability of the source of the executable program, and that your own computer is protected by a capable virus protection program that will scan, evaluate, and intercept all incoming files to check them for viruses.

Although FTP sites often require passwords, many have been established for the specific purpose of archiving files, programs and utilities that are specifically produced for the benefit of the Internet community as *freeware* (no cost for obtaining or using them for noncommercial purposes). These are known as *Anonymous FTP* sites, and allow you to log on with the name "anonymous" as your login name, and often your computer account as the *password*. Since many of these Anonymous FTP sites are popular, you may experience difficulty logging on at the first try. Persevere, because the information available on many of the Anonymous FTP sites is quite useful.

The difference between an FTP Internet Access Tool and a Telnet tool, is that some of the functions for exchanging files have been incorporated into the FTP software. Anything done by FTP software can be done during a Telnet session. The FTP software simply incorporates the command language into various menu items or selections, making it easier for individuals without a working knowledge of Internet Protocols to download or upload files.

What you will receive upon login, will be a directory listing of the files available. You will need to scroll through these filenames looking for items of interest. Many FTP sites have organized files into general categories, but FTP is not designed to provide anything more elaborate than a filename for your guidance. It is a powerful, but simple retrieval tool.

It is useful to know whether the file you wish to move is an executable program or a text file. If it is an executable program, it frequently needs to be identified as a *binary* file, as contrasted with an *ASCII* or *text* identification appropriate for readable files. The FTP software can sometimes make a judgment about what is appropriate (based on a series of algorithms), but if you can supply the information, yourself, the transfer may go more smoothly.

Using FTP requires an individual to know (or learn) what resource is available at which site. There is another Internet Access Tool that has been developed to index all FTP sites, producing a long listing of filenames and addresses. This can be enormously useful to those who wish to look for specific programs or files and learn where the files are actually located. This service is known as Archie.

Archie

Archie is a software program with a specific function on the Internet. Archie's job is to query all the registered Anonymous FTP sites on the Internet in a standardized manner and to create a composite index of the files located on these sites, arranging them in alphabetical order. Because there are thousands of anonymous FTP sites it could be impossible to find a specific file if you did not know where it was located. Archie solves the problem by producing a single comprehensive index. Now, if you know a file name, Archie can tell you where such a file is located.

Archie is accessible on the Internet. Directions and instructions can be obtained from the Internet resources listed in the appropriate sections of the directory.

Archie is a software tool that, on an ongoing basis, scans anonymous FTP sites and builds an index of those sites, making it easier to find specific items.

★★★★ Welcome to ArchiePlex

Keywords: Internet Resources, Internet Tools **Audience:** Internet Surfers, Internet Users

Profile: This is a direct gateway to various archie servers around the world, allowing customization of searches via HTML forms support. Archie is a tool which can locate files anywhere on the Internet that are available for FTP, using a filename keyword search.

Language: English Producer: Nexor

Contact: Martijn Koster

Contact Email: m.koster@nexor.co.uk

Cost: No Commercial: No Moderated: No

Gopher

Gopher is an extremely popular Internet tool, representing an improved level of ease of use. Gopher was developed at the University of Minnesota. Once connected to a Gopher site, you are provided with an opening menu, followed by an unlimited number of submenus. Gopher permits you to access data without knowing precisely what you are looking for. In other words, Gopher navigation is based on an inquiry about a subject, and does not depend on your knowledge of computer addresses or locations. The links among the Gopher sites are more or less invisible to the user, which has made Gopher a very popular Internet Access Tool. Gopher makes an ideal introductory tool for new Internet users.

Most of the Internet tools can be retrieved from FTP sites. These kinds of tools are often also carried on local sites, so you might check with your local administrator to find out if a copy is already available to you through your provider.

*** Gopher

Keywords: Internet Tools, Gopher (Internet Tool), Internet Directories

Audience: Internet Surfers, Information Brokers, Network Developers, Network

Administrators

Profile: Gopher is an Internet access tool that locates and retrieves resources using a graph of menus. In this directory are subdirectories containing the current versions of internet Gopher clients and servers. Technical information, user's guides, versions for different hardware platforms, and other resources can be located from this URL. You will also find a copy of the conference proceedings from the 1994 Gopher Conference.

Language: English

Producer: University of Minnesota

Contact Email: gopher@boombox.micro.umn.edu

Access Instructions:

Look for Readme and Index files for more specific directory information

Cost: No
Commercial: No
Moderated: No

You will find many Gopher sites listed in the McKinley Internet Directory, so you should locate the appropriate gopher software for your particular type of computer so that you can pursue those that are of interest to you.

Frequently, the same site that provides the actual Internet tools will have ancillary files available that will give explanations, demonstrations of use, or operations manuals.

★★★★ Gopher FAQ

Keywords: Internet Reference, FAQs (Frequently Asked Questions), Gopher (Internet Tool)

Audience: Internet Users, Internet Newcomers

Profile: This file contains answers to Frequently Asked Questions (FAQs) about gophers from the USENET newsgroup comp.infosystems.gopher. Gopher is a navigational program for finding files and resources on the Internet.

Language: English **Producer:** Paul Lindner

Contact Email: ftp-bugs@rtfm.mit.edu

Cost: No Commercial: No Moderated: No

Veronica

Veronica is a gopher service analogous to Archie for anonymous FTP sites. The difference is that Veronica has been designed to locate *keywords* at the various gopher sites that have been established on the Internet. Going to a Veronica site may speed up a search for information, because Veronica will usually contain information about a larger number of sites dealing with a specific keyword, and will permit the user to more quickly find an Internet resource location that is specific to their interests, rather than making them go through a hierarchical path-searching process which would be necessitated by the use of Gopher alone.

Veronica is an augmentation of Gopher; it provides keyword searches of the titles of gopher items. This is a major help to finding where a given file or program not only can be found among the various gopher Internet sites but also can be retrieved.

Veronica Introduction

Veronica (Very Easy Rodent-Oriented Net-wide Index to Computerized Archives) is an Internet access tool that locates titles of gopher items by keyword search.

Keywords: Internet, Tools, Veronica

Audience: Internet Users

Details: F

User Info: File is: pub/com.archives/bionet.software/veronica

ftp://cs.dal.ca

The Veronica service maintains an index of titles of gopher items and the result of a Veronica search is a gopher-like menu of files or directories. You can often get to Veronica by going through a normal gopher client, either your own or one supplied by your Internet service provider if you do not have your own.

Wide-Area Information Servers (WAIS)

WAIS is another information locating tool that allows users to search and access different types of information from a single interface. The information being sought can be in any format (e.g., text, sound, images) and can reside anywhere on the network.

When WAIS finds the information, it ranks the results and delivers a document with the search matches ranked by relevance. What is even more of an enhancement is that you can use the results of your search to modify your original search even further. Thus, if the fourth-ranked file is closer to what you want than the first-ranked file, you can add it to your query parameters, saying, in effect, "get me more like this" but including this topic.

WAIS is an example of a tool that provides an enhanced retrieval mechanism through ranking of items according to their relevance to a constructed query. WAIS is a very powerful Internet tool, and many servers exist on the Internet with WAIS-compliant databases. You can find some of these listed in this directory.

★★★★ WAIS, Inc.

Keywords: Internet Publishing, Information Retrieval

Audience: Internet Users, Professional Researchers, Database Managers, Internet

Publishers

Profile: This server offers a demonstration of WAIS, Inc.'s information retrieval systems. Through an HTML form, users can search for any subject by keyword. Users will also find general information on the products and services of WAIS, Inc., including material on the latest developments, job openings at WAIS, and links to WAIS' educational and publishing partners.

Language: English **Producer:** WAIS, Inc.

Phone: +1-415-356-5400

Contact Email: frontdesk@wais.com, webmaster@wais.com

Cost: No Commercial: Yes Moderated: No

World-Wide Web (WWW)

Another characteristic of the Internet is its ability to link documents at one location with files at another. This kind of network linking is known as *hypertext*, and a special tool has been developed to pursue hypertextual links among disparate files.

World-Wide Web (WWW) is an Internet software tool for network navigation similar to gopher. It is also menu-driven. Unlike gopher, WWW follows hypertext links between related sources rather than files related to one another by server identification. WWW allows you to pursue the *strands* of a web of information distributed across the Network. Using WWW you might locate an interesting document, notice a citation in it, and use WWW to look up the source document.

WWW holds great promise for navigating the Internet electronically.

See also		
<u>Gopher</u>		

Cello and Lynx

Cello and Lynx are useful interfaces to WWW because they are powerful, small, and simple programs. As a result, they are good introductory tools to the World-Wide Web of databases on the Internet. The look and feel of these programs is text-based. They lack the elegance of a more polished program like Mosaic. But the navigation capabilities are quick, and the programs provide straightforward and easy ways of obtaining information from WWW sites.

*** Cello FAQ

Keywords: Internet Browsing, Internet Reference, Internet Tools, FAQs (Frequently Asked

Questions)

Audience: PC Users, Internet Professionals, Internet Newcomers

Profile: This is a site containing common questions and answers about Cello, a multipurpose Internet browser. The browser supports World Wide Web, Gopher, FTP, CSO/pf/qi, and Usenet News retrievals natively, and other protocols (WAIS, Hytelnet, Telnet, and TN3270) through external clients and public gateways.

Language: English

Producer: Bruce Atherton, Will Sadler

Contact Email: bruce@flair.law.ubc.ca, will@polecat.law.indiana.edu

Cost: No Commercial: No Moderated: No

See also

World-Wide Web

Mosaic

Mosaic

Mosaic was invented by the National Center for Supercomputing Applications at the University of Chicago at Urbana-Champaign, Illinois.

Mosaic is among the most popular of the recently available Internet searching tools. It comes in many *flavors* for various computing platforms. Be sure to download the version of Mosaic that matches your computer.

Mosaic understands the protocols of many of the most-used graphical user interfaces. It unifies the searching capacities of many Internet retrieval tools and adds the ability to display images in a variety of graphic formats. This means that Mosaic can retrieve a variety of image files and show them to you on your computer even if you do not own the original graphics program from which the images have been generated. Of course, your computer must be **able** to display graphics (it must have a windowing capability of some sort).

Mosaic is very popular due to its flexibility and its comprehensiveness as an Internet navigator and retriever of a wide variety of kinds of files.

As with many such specialized tools, finding out what is available to be retrieved by Mosaic can be a problem. Just before publication of this directory, an Internet announcement heralded the appearance of *World-Wide Web (Worm)* WWW(W). The *worm* accomplishes a function similar to that of Veronica. It scours the Internet, locating WWW sites and indexing their contents so that people could more easily find information they are seeking.

★★★★ Mosaic Home Page

Keywords: Internet Tools, WWW (World Wide Web)

Audience: Internet Surfers, Internet Users

Profile: This is the welcome page to the National Center for Supercomputing Applications (NCSA) World Wide Web server, which features the Mosaic WWW application. There are links here to help you find a copy of Mosaic and other Internet software, as well as starting points from which to explore the vast resources of the WWW.

Language: English

Producer: National Center for Supercomputing Applications at the University of

Illinois

Contact Email: mosaic@ncsa.uiuc.edu

Cost: No Commercial: No Moderated: No

See also

World-Wide Web

Veronica

Newsreaders

Newsreader programs have been created specifically to give people easy ways to read postings made to specific USENET newsgroups, a specific variety of electronic discussion group. USENET is a kind of loosely organized network, stemming from the period in the Internet's development when programmers designed software for their own use. The programs created to make it easy to keep in touch with one another on a variety of topics became known as newsgroups, which became very popular and proliferated. Newsreader software was created when the number of newsgroups grew to unmanageable proportions.

Newsreaders are programs that permit you to specify those newsgroups that are of interest to you. Having been configured in this manner, the program then collects information only from the specified sources, making it a burdenless process to keep abreast of one or several discussions at a time.

The listing below contains instructions on retrieving newsreader software. Routine postings on USENET lists contain information about subscribing to them. There are also comprehensive and frequently updated lists of currently active newsgroups. These form a very dynamic and active portion of the Internet. Changes are frequent, with some newsgroup topics emerging while others are dying off for lack of sustained interest.

USENET Newsreaders

USENET newsreader programs have been created to give people ways to read the thousands of Usenet newsgroups available on the Internet. Among the most popular are: rn, trn, nn, and tin.

Newsreaders, USENET Keywords:

Audience: Internet Users

Profile: The **rn** interface uses full-screen display with direct positioning. It includes

reading, discarding, and/or processing of articles based on user-definable patterns, and the ability of the user to develop customized macros for

display and keyboard interaction.

trn allows readers to follow *threads* of discussions in newsgroups. **trn** can be obtained from ftp.coe.montana.edu in the /pub/trn directory, from uunet in the news subdirectory, and from many other Archive servers worldwide.

nn is different in that it presents a menu of article subject and sender-name lines, allowing you to preselect articles to read. **nn** is also a very fast newsreader.

tin is a reader that operates with threads, has different article organization methods, and is full-screen oriented. **tin** also works on a local news spool and has an extensive list of features.

User Info: rn software can be obtained from ftp://lib.tmc.edu

> trn can be obtained from ftp://ftp.coe.montana.edu in the /pub/trn directory and from many other Archie servers worldwide.

nn can be obtained via anonymous FTP from ftp://dkuuq.dk, uop.uop.edu

tin can be retrieved by accessing the newsgroup: news:alt.sources

Details F

Notes: Each of these newsreaders can be access from a variety of sources. Further

information regarding tin is available from Iain Lea (iain

%anl433.uucp@Germany.EU.net).

See the URL information given in the User Info. field above.

USENET is not centrally organized, so there is no control over who gets a particular newsfeed or how individual articles are sent out. But the bottom line is that whatever your interest may be, there is bound to be a discussion group dedicated to that very subject.

Finger: Finding People on the Internet

Finger is the tool that helps you locate other people on the Internet. The Finger tool can provide the e-mail addresses, full name, telephone numbers, and other information about a particular user at a specified site. Since Finger allows you to search the user log on a computer connected to the Internet, you can find someone's e-mail address provided you know the name of the computer he or she uses. Even if you do not know a person's login name, you can type in part of a person's name and Finger will produce a list of possibilities.

Service or resource providers on the Internet will often provide "help" facilities that explain the service or resource. Such is the case with the Internet Finger Database. It is also worth trying an address a few times if at first you do not succeed in getting through. You can also experiment with the possibility of reaching a resource using other Internet tools if the first tool does not work.

Finger allows you to also access other kinds of information contained in text files.

Evaluating Resources

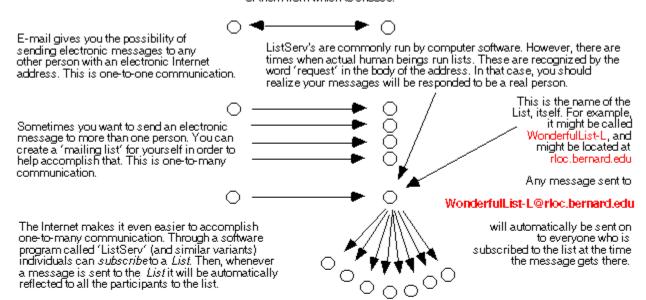
What each of these electronic Internet Access Tools lacks is an evaluation of the resource by experts. In that context, these listings are an important Internet resource because they provide an analytical judgment in a familiar format. If you are an expert in a field and would like to help evaluate resources in your area of expertise, we would encourage you to drop a note to:

McKinley@McKinley.com

How Do ListServs Work?

How do ListServ's Work?

ListServs are discussion forums that have been set up by institutions, companies or private individuals. There are literally thousands of them from which to choose.



To subscribe to a ListServ List, you must send an E-mail request to the ListServ software that is actually running the distribution mechanism. In most cases this is called 'ListServ' and in all cases, the software will be running on the computer on which the list is located. In our example, the software which controls the distribution of 'Wonderful List-L' is known as

ListServ@rloc.bernard.edu

To enter a request to have your name added to a ListServ distribuion list, send an E-mail message consisting of a single line with the name of the list to which you want your name added followed by your first name and your last name.

If Cathy Gross wanted to subscribe to Wonderfuil List-L, she would send the following message to **ListServ@rloc.bernard.edu**

SUB WonderfulList-L Cathy Gross

To unsubscribe, simply send another message to ListServ@rloc.bernard.edu:

UNSUB WonderfulList

You don't have to put your name in the body of the message because your address will automatically be recognized by the receiving computer.

Addresses

Each of the resources listed in the McKinley Internet Directory includes at least one Internet address, referred to as a Uniform Resource Locator (URL). The URL appears at the bottom of each listing and is the unique electronic address on the Internet that identifies the location of that specific site and the method(s) for gaining access to it.

It is common now to refer to Internet addresses as URLs. The McKinley Internet Directory adopts this standard for all addresses listed.

Communications on the Internet

<u>Understanding Internet Addresses</u>

Dissecting a Uniform Resource Locator (URL)

Communications on the Internet

Information moves across the Internet in much the same way as mail moves through post offices. Comparable to your message being carried in a mail truck, your electronic message is transported via a packet-switching network. In either instance, the message travels along with thousands of other unrelated messages. In the case of the Internet, the destination computer picks up and reassembles the pieces of your message before delivering it to your personal mailbox.

The Internet URL is made up of specific address parts that guarantee a unique address code for each information packet or file. The Transmission Control Protocol (TCP) is the set of rules guaranteeing that packets sent through the Internet are properly packaged, efficiently transmitted, and properly received at their destination.

Understanding Internet Addresses

When you first see an Internet URL, it appears incomprehensible, as in the following example:

telnet://purple-crayon.media.mit.edu:8888

Instead of having portions of the address separated by lines (as on an envelope), an Internet address has elements that are separated by typographical elements (e.g., periods, slashes, and colons). Just as the world is divided up into continents, countries, and regions, Internet addresses are divided up into domains and subdomains. Countries have domain names, and these are known as "top-level" domains. For example, India's domain name is **in**, Japan's is **jp**, and the United Kingdom's is **uk**.

Internet addresses are built up from left to right, beginning with the most specific piece of information (a user's personal and individual identification) and proceeding to the most general (the highest level domain within which the user can be found).

URLs provide one additional important piece of information. They identify the access tools you need to use when attempting to reach a particular Internet resource. They have names like **Telnet**, **Gopher**, **FTP**, **Mosaic**, and **WAIS**. To reach a specific Internet resource, you need to know which primary access tool will gain you access to it.

At the beginning of each URL address in this directory, the first item of information identifies the appropriate tool to use in accessing that particular resource. Depending on what software you are running, you may have to type the research tool words as commands. These may be summarized as follows:

- telnet://-use a standard Telnet tool to access the resource.
- gopher://

 —use any of the variety of gopher software that is available for your computer.
- ftp://-use File Transfer Protocol tools.

The situation, however, is different for mailto or http. The tools for accessing those types of resources instruct you on how to proceed.

- mailto: use Telnet or standard e-mail management software. (Do not type the word mailto.)
- http://-use Mosaic.

Dissecting a Uniform Resource Locator (URL)

Following is a typical URL address and a description of what each element means.

```
telnet://purple-crayon.media.mit.edu:8888
```

The first part of this address, **telnet**, tells you that you will need to use the Telnet tool to access this particular resource.

```
telnet://purple-crayon.media.mit.edu:8888
```

The :// that follows the tool is the standard way of separating the name of the research tool from the remainder of the URL address.

Note: If your host computer runs UNIX (which most host computers do), then for tools like telnet and gopher you do not need to type :// into the computer when you are trying to access the resource. Instead you leave a space between the command and the address.

```
telnet://purple-crayon.media.mit.edu:8888
```

purple-crayon.media.mit.edu is actually a specific computer! On the Internet, computers have distinguishing numerical identifiers, known as IP addresses (e.g., 18.85.0.48). These addresses are hard to remember, to simplify, the computers have also been assigned easier-to-remember names. Both the name of the computer and its IP number can be used interchangeably in an Internet address. At each major site, a computer acts as *a domain name server*, which translates any alphabetic IP address into its proper numerical one.

```
telnet://purple-crayon.media.mit.edu:8888
```

The **purple-crayon** computer is, in this example, located on a *subnet* of other computers that are all collected together in the network **media**. The subnet **media** is located at **mit**, which stands for the Massachusetts Institute of Technology, in Boston, Massachusetts.

```
telnet://purple-crayon.media.mit.edu:8888
```

The .edu at the end of the address reveals that this address represents an educational institution. Certain kinds of messages (for example, ones that are strictly business or commercial) are prohibited from traveling from computers dedicated to research or teaching. Similarly, you cannot use military computers to exchange stock market information. While the laws regarding appropriate use have relaxed over time, the individual institutional policies governing these uses, and perhaps more important, the culture of the Internet user community itself, is very good at policing itself and calling to task violators of the appropriate use. This is especially true for those who appear to be posting messages of a purely marketing or advertising content.

Therefore, there have been established (particularly within the United States) higher level domain designations that are based on different kinds of organizations instead of on geographical location. These include:

- .com for commercial
- .edu for education and research
- .gov for government agencies
- .mil for military
- .net for network support centers

• .org for other organizations

Because the Internet began in the United States, you do not presently need to identify the top-level domain **us** in an Internet address. As usage of the Internet continues to expand internationally, it may eventually be necessary to add this final suffix to addresses even within the United States. It is already required for countries outside the United States. For example,

```
telnet://purple-crayon.media.mit.edu.cz:8888
```

If our example were an address within the educational sector of the Czech Republic, it would be written with the final suffix showing the top-level domain of that country.

```
telnet://purple-crayon.media.mit.edu.cz:8888
```

Finally, the **:8888** is the *port number*, which means that your computer is being instructed to connect not only to a specific address, but more specifically to one special *port* at that address. Whereas Mosaic sites and Telnet sites might not include any port numbers at all, Gopher servers have been designated to use port 70. It you were typing in the command at a UNIX prompt, it would look like this:

```
telnet purple-crayon.media.mit.edu 8888
```

Notice that spaces separate those parts of the address that were marked as colons in the URL.

The Internet addressing system may appear at first to be rather complicated, but after a while, you will begin to recognize domain names and be able to tell not only where resources lie, but which kinds of organizations they are associated with.

E-mail

Sending and receiving Electronic Mail (e-mail) is one of the Internet's most frequently used functions. At one time it was thought that letter-writing would go the way of the horse and buggy, but e-mail has revived and transformed it into something new.

Instead of being delivered by the post office, e-mail messages are directly to your computer. This not only vastly accelerates the speed with which messages can be transmitted, but provides numerous advantages to individuals as well as businesses For example, it is simple to store electronic copies of messages, and sort them by various categories. Businesses can compose a single message and send it simultaneously to a worldwide sales staff, if they are connected to the Internet.

People use e-mail for the same reasons they use postal mail:

- For the exchange of correspondence among business colleagues.
- For the exchange of private letters among friends and family.

In addition, e-mail can be used for the following purposes:

- To transfer and receive copies of files and documents.
- To subscribe to electronic discussion groups, electronic journals, electronic newsgroups, etc.
- To obtain free copies of computer software.
- To obtain copies of sounds, graphics, and multimedia over the Internet.

E-mail is not only faster, but costs are a fraction of what they are compared with traditional means of sending and receiving mail. With speed and convenience, however, come the danger of new forms of miscommunication.

There are any number of useful e-mail management software packages available. Many have built-in functions which facilitate sending and receiving messages, attaching other files from your computer (regardless of what software program may have been used to originally create a file), and replying to messages that you may have received.

See also

Using the "Reply" Function

E-mail Software Programs

Anatomy of an E-mail Message

Using E-mail to Subscribe to ListServs, Mailing Lists, and Discussion Groups

A Note on Passwords

ListServs

Bulletin Board Systems (BBSs)

USENET (Users Network)

Using the "Reply" Function

Most e-mail software packages permit you to easily reply to an incoming message. Every message has, accompanying the text of the message, some information generated by the software itself which is kept in what is called a *header*. The header contains information about the time a message was sent, where it came from, and what path it took to reach you.

The computer uses the information in the header to identify who it was that sent you a message. When you use the "Reply" function built-in to the software, it assumes you wish to respond to the sender and uses the information from the header to "address" your reply.

While this is easy, there are two common situations you should be cautious about.

cc: [carbon copies]

Some software picks up the names of any individuals who have been copied on the original incoming message. Or you may have received a copy of a message sent to someone else. Be sure you observe how your e-mail software is treating a "Reply" to such a message. Some packages pick up only the address of the original sender; others pick up all the names of those receiving the message, in addition. You may (or may not) wish your reply to go to all the individuals receiving the original message. Be sure to check which it is that you want.

ListServs

Similarly, when a message comes to you from an electronic discussion, it is, strictly speaking, being sent by the software that provides mail management functions for a list of individuals. The most common of such software is known as ListServ or MajorDomo. Any individual posting a message to the list management software expects the message to be sent to all the subscribers to the list. But if you use the "Reply", your message will also go to everyone on the discussion list. If you do not want that to happen, pay particular attention to the address line before actually sending your message.

Perhaps the only true drawback of e-mail is that the system is not secure. This means that others may be able to read the mail you send out or receive. If you want your mail to remain truly private, do not risk sending it e-mail.

See	also	ı				

<u>Using E-mail to Subscribe to ListServs, Mailing Lists, and Discussion Groups</u>

E-mail Software Programs

To be able to write and receive e-mail messages, you need to have an e-mail software program resident on your computer. The purpose of this software is to allow you to see incoming e-mail messages and to provide an editor for outgoing messages.

The UNIX e-mail software is called "mail". There are other e-mail software programs that provide more support for controlling your incoming e-mail and keeping track of it, sorting it, etc. Check with your local computer software support staff for advice on which e-mail software is most suitable for you.

Anatomy of an E-mail Message

To send an e-mail message, you first need to know the Internet address of the person who is going to receive your message. Refer to "Understanding Internet Addresses" for help in understanding how an Internet address is put together.

Under UNIX (perhaps the most common interface used by computers linked to the Internet), e-mail prompts are kept to a minimum. After the first prompt, you need to type in the word **mail**. Then you type the recipient's full Internet address, then press Enter. At the next prompt, **Subject**, you type in the subject of your message, again followed by pressing the enter key on your computer. Then you will be in the **body**, which means that you can now type out your message.

```
>mail malloy@poniecki.berkeley.edu
Subject:> When can I see you?
message:>Hello Judy,
I was hoping that we could meet up tomorrow and discuss your project face to face? Let me know what's possible. I will check my e-mail again in two hours to see if you've replied.
Thanks.
Christine.
cc:>
```

When you have finished your message, you need to type a period on a separate line and then press **Enter**. Once you have done that, the system will prompt with **cc:**. This gives you the opportunity to decide whether to copy your message to a third party. If you decide not to, ply press **Enter** and your message will immediately get sent.

Some commercially available e-mail software packages are more user-friendly than UNIX, in that they provide greater formatting flexibility, manage commonly used addresses so that you can enter a complicated address with only a couple keystrokes, or keep copies of your e-mail correspondence for your future reference and use. Such programs are a worthwhile investment E-mail is perhaps the most popular of all the Internet's functions, and you will find that many of the listings in the directory operate through the use of e-mail.

See	also			

<u>Understanding Internet Addresses</u>

Using E-mail to Subscribe to ListServs, Mailing Lists, and Discussion Groups

Any listing that has a URL beginning with **mailto:** can be subscribed to via e-mail. You simply write to the contact person of the resource, and they write back in return. It is all accomplished, just as if you were sending a letter through the post office, except that it all happens electronically.

To subscribe to a ListServ group, you first need to send an e-mail message to the URL address. Sometimes the transaction takes place between software programs. Other times, you will be dealing directly with a human being. Knowing the difference between a list that has a human moderator and one that is controlled by software is useful. You can usually tell by the URL. If the address contains the information <code>listserv</code> the resource is handled by a computer; if it contains the information <code>-request</code> there is a human intermediary who handles the subscription and information requests and maintains the distribution list manually.

Dead-runners is a discussion group with a human moderator. It has a mailto: URL address, but the designation of a ListServ is missing. Were dead-runners a ListServ, its address would have lacked **-request**. The **-request** designation lets you know that a human moderator will be processing your subscription requests as well as your queries.

dead-runners The Dead Runners Society is a mailing list for runners who like to talk

about the psychological, philosophical, and personal aspects of running.

Keywords: Running **Audience:** Runners

Contact: Christopher Mark Conn

dead-runners-request@unx.sas.com

Details: Free

User Info: To subscribe to the list, send an e-mail message requesting a subscription to

the URL address below.

To send a message to the entire list, address it to: dead-

runners@unx.sas.com

mailto:dead-runners-request@unx.sas.com

A Note on Passwords

Security issues on the Internet have frequently made headline news around the world. Individual Internet users can minimize their risks of being victimized by installing and using virus protection software on their computers and at the same time by choosing a password that is not easily guessable. This means the password should not be a real word but a combination of alphabetic and numeric characters. Passwords should also be changed frequently.

ListServs

ListServs are software programs that enable and maintain e-mail discussion groups. You will find a lot of these in the McKinley Internet Directory. Each ListServ is dedicated to a specific topic. ListServ software permits Internet users to subscribe to a list. Once you do so, you will receive copies of any message sent to the list.

Typically, to subscribe to a ListServ list, you send an e-mail message to the software (called ListServ) that governs the subscription requests and maintains the distribution records for the discussion list in which you are interested. Invariably, the software governing a list will be located on the same computer host on which a particular discussion group is located.

The subscription request is sent as a message containing the single line:

<SUB ListName YourFirstName YourLastName>

(Substitute your real first name and your real last name for the phrases YourFirstName and YourLastName above.)

To unsubscribe is even easier. You send a message containing the single line:

<UNSUB ListName>

In this case, the computer software will be able to determine your first name and your last name based on the records it has kept about who has subscribed to the list. It is, however, important to send these messages from the same computer from which you subscribed in the first place, otherwise the records will not match.

To send a message to everyone on the list, you simply address an e-mail message to the list itself, instead of to the ListServ software. Thus, if you wanted to join a list called Wonderful-L located at rloc.bernard.edu, you would send a subscription request to:

ListServ@rloc.bernard.edu

If you intended to send a message to all the subscribers of the list you would address your message to:

Wonderful-L@rloc.bernard.edu

Note that the computer host, domain, and type (everything following the @ sign) are identical in both instances. You simply are addressing the software manager (ListServ) in the first case, and the distribution list (Wonderful-L) in the second.

ListServs are free. You do not need to pay a subscription fee. But there may be a "price" associated with subscribing to too many ListServs (or ones that are very active). You should be aware that some ListServs generate a lot of interest and a lot of mail. If you subscribe to several ListServs, be prepared for a substantial increase in mail. This can be difficult to review, but it can also take up disk space on your own computer until you can decide whether or not you wish to keep individual messages. Keep records of the lists to which you have subscribed so that you can easily unsubscribe from a list that inundates you with more messages than you care to (or are able to) handle.

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How Do ListServs Work?

Bulletin Board Systems (BBSs)

BBSs are software tools for providing bulletin board services. BBSs differ only slightly from e-mail ListServs. Any given BBS can provide e-mail, but it will also provide access to collections of data and/or documents that are available for downloading.

BBSs offer an alternative to ListServs in the sense that you can choose whether you wish to obtain information from a BBS, whereas by subscribing to a ListServ you automatically receive all messages from the ListServ.

Users can retrieve *threads* of discussions along topical lines from BBSs by requesting a search of archives of postings and e-mail messages that deal with a particular topic.

Non-Internet BBSs frequently involve a fee for access, while most Internet-based BBS are free.

USENET (Users Network)

USENET refers to a worldwide collection of thousands of computers (not all on the Internet) that host and receive USENET newsgroup information and exchanges. You will find many of these in the McKinley Internet Directory as they have become immensely popular. There are thousands of newsgroups that function as forums for the exchange of questions and answers by their users concerning a selected topic.

Each newsgroup has a distinct identifier that describes the topics discussed in the group. Newsgroups distributed worldwide are broken down into seven traditional classifications:

news Groups concerned with the news about network and administration topics.

soc Groups that primarily address social issues and socializing.

talk Groups are largely debate-oriented and tend to feature long exploratory

discussions on individual topics with little resolution.

misc Groups that address themes that are not easily classified under other headings,

or that incorporate themes from multiple headings.

sci Groups concerned with discussing practical knowledge, usually related to

research in or application of established sciences.

comp Groups that discuss topics of interest to computer professionals and hobbyists.

Hardware and software systems are also discussed.

rec Groups oriented toward the arts, hobbies, and recreational activities.

In addition, there is a rapidly growing category of newsgroups with alternatively grouped names. These involve subjects or communities that are less formal and less traditional.

alt Groups that deal with ephemeral, frivolous, or highly controversial topics.

biz Groups that discuss business and commercial topics.

A Whimsical Tour

This topic provides a whimsical guided tour of the Internet—just another way of enticing you to discover the riches that await you on the Internet!

You can start your online day by accessing the world's first random URL generator. Use your favorite WWW browser to click on an image and be taken to a random URL. You never know where you will end up!

http://kuhttp.cc.ukans.edu/cwis/organizations/kucia/uroulette/uroulette.html

Then you can look for:

An almanac entry

<http://copi@oddjob.uchicago.edu>

A verse from the Bible

<http://138.26.65.78:7777>

A virtual fortune cookie

<http://astro.temple.edu:12345>
<http://argo.temple.edu:12345>

With your morning coffee you can:

Read the headlines from USA Today

<telnet://visitor@yfn.ysu.edu>

Peruse the Electronic Newsstand

<http://cic.net:70/11/e-serials>

See how your stocks have been doing

<telnet://guest@a2i.rahul.net>

Look for a new job at the Online Career Center

<http://www.occ.com/occ/textHomePage.html>

• Find out about scholarship and minority assistance programs

<telnet://fedix.fie.com>

If you're feeling scholarly, you can check out:

The Library of Congress

<gopher://marvel.loc.gov:70/1>

The Colorado Alliance of Research Libraries

<telnet://pac.carl.org>

HYTELNET, which gives access to hundreds of libraries all around the world

<telnet://access.usask.ca>

• Your spelling in an online dictionary

<telnet://cs.indiana.edu:2627>

Science and Math types can use

• The Scientist, a biweekly newsletter

<ftp://ds.internic.net/pub/the-scientist>

The Math Gopher, for software, lesson plans, and access to other systems

<gopher://archives.math.utk.edu:70>

NASA Headline News

<http://nasanews@space.mit.edu>

An online periodic table of elements

<telnet://camms2.caos.kun.nl:2034>

If you want to take a quick tour around the world you can access:

• The CIA World Fact Book

<http://www.odci.gov/95Fact/fb94toc/fb94toc.html>

For the publisher in you, here are some favorite starting points:

CMU list of Book Publishers & Retailers On-Line

<http://thule.mt.cs.cmu.edu:8001/bookstore/>

CMU list of On-Line Books

<http://thule.mt.cs.cmu.edu:8001/bookstores/online.html>

The Digital Media Center

<http://www.ncb.gov.sg>

The World-Wide Web Virtual Library: Commercial Services

<http://www.w3.org>

• The World-Wide Web Virtual Library: Literature maintained by the Internet Book Information Center

<http://sunsite.unc.edu/ibic/IBIC-homepage.html>

For the academic in you, you can visit the University Press

University Presses (and more) collected by PRess Books/Berkeley

<http://www.fractals.com/upb/html/upb_intro.html>

For the geographer in you, visit the map site at :

Delorme Mapping

<http://www.delorme.com/home.htm>

For the bookworm in you, try:

Online BookStore (OBS)

<http://marketplace.com/0/obs/obshome.html>

Project Gutenberg

<http://www.w3.org>

or

<http://med-amsa.bu.edu/Gutenberg/Welcome.html>

To peruse periodicals and magazines, try:

The Electronic Newstand

<http://www.enuews.com/>

Global Network Navigator (GNN)

<http://nearnet.gnn.com/gnn.html>

Wired Magazine

<http://www.wired.com/>

If you've ever dreamed of visiting far away museums, now's your chance!

Scrolls from the Dead Sea: an Exhibit at the Library of Congress, Washington, D.C.

<http://sunsite.unc.edu/expo/deadsea.scrolls.exhibit/intro.html>

• The Louvre

<http://mistral.enst.fr/wm/net/>
<http://www.paaris.org/

Desperate to go downtown in the middle of the night!

• Downtown Anywhere

<http://www.awa.com/>

Want a few societies to join?! Try starting with:

The Internet Society

<http://info.isoc.org/home.html>

The International Society for Arts, Science and Technology, ISAST

< http://www_mitpress.mit.edu/leonardo/home.htm>

Interested in finding out what's going on in the cyberspace marketplace?

Marketplace

<http://marketplace.com/>

If you're a history buff, there are

Databases

<telnet://ukanaix.cc.ukans.edu history>

Documents and archives

<ftp://byrd.mu.wvnet.edu/pub/history>

If you want the latest shareware for your MS-DOS, Macintosh, UNIX, Amiga, Apple2, Apollo,

or other computer, try one of the enormous software archives on the Internet:

Shareware depositories

```
<http://www.umich.edu/~archive/>
<ftp://sumex-aim.stanford.edu>
<ftp://oak.oakland.edu>
```

To see what's been shaking, there's earthquake information at:

```
<finger://quake@geophys. washington.edu>
```

And the USGS offers land use maps of the United States at:

```
<telnet://guest@glis.cr.usgs.gov>
```

Legal information? Try

Supreme Court Rulings

<ftp://ftp.cwru.edu/hermes>

Law libraries, offering information by state or subject

```
<telnet://liberty.uc.wlu.edu lawlib>
<ftp://sulaw.law.su.oz.au/pub/law>
```

Hypertext access to legal documents

```
<http://www.LAW.indiana.edu>
<http://fatty.LAW.cornell.edu>
```

For health and clinical information, there's the National Institute of Health:

```
<gopher://gopher.nih.gov:70/11/clin>
```

Handicapped and disabled users can access medical information, disability assistance, equipment, services, and software at:

```
<ftp://handicap.shel.isc-br.com>
```

If you're Hollywood inclined, you can get access to a database of actors, directors, and cinematographers

```
<mailto://movie@ibmpcug.co.uk "HELP">
```

Home shoppers can access catalogs and place orders for CDs, books, software, and video tapes through home shopping:

```
<http://biogopher.wustl.edu:70/1/audio/bmg>
<http://holonet.net cdc>
<http://books.com>
<http://netmark.com>
```

If you're a music lover, you can get

Guitar chords in tablature form

<ftp://ftp.nevada.edu/pub/guitar>

Lyrics

<ftp://ftp.uwp.edu/pub/music>

Billboard Charts

<http://buckmr@rpi.edu>

Cyber-Sleaze reports on pop stars

```
<gopher://metaverse.com</pre>
```

If its food from the gods that you re looking for, try accessing Mythology and Folklore in the EINet galaxy catalog. This resource includes pointers to The Gateway of Darkness, books about mythology online, etc.

<http://www.einet.net/galaxy/Arts-and-Humanities/Religion/Mythology-and-Folklore.html>

If you're hungry, you can access recipe archives:

```
<ftp://gatekeeper.dec.com/pub/ recipes>
<ftp://mthvax.cs.miami.edu/pub/ recipes>
<http://cs.ubc.ca/pub/local/RECIPES>
```

And if you're thirsty, you can take a look at the HomeBrew archives:

```
<ftp://mthvax.cs.miami.edu/home>
```

If you want to taste the spirit of New York, the spirit of San Francisco, or only be mostly with women, think of becoming a subscriber to:

ECHO

phiber@echonyc.com (212) 255-3839

The WELL

http://www.well.com/ VOICE: +1-415-332-4335

If you want to play games with partners around the world, your choices include games galore!

Bolo

<http://gwis.circ.gwu.edu:1234>

• Go

<telnet://hellspark.wharton.upenn.edu:7070>

Diplomacy

```
<mailto://judge@morrolan.eff.org>
<mailto://judge@dipvax.dsto.gov.au>
<mailto://judge@shrike.und.ac.za>
<mailto://judge@u.washington.edu>
```

For Tetris, Moria, Nethack, MUDs, Text Adventures, and others.

<telnet://castor.tat.physik.uni-tuebingen.de GAMES>

Sports fans can get

NBA schedules

<telnet://culine.colorado.edu:859>

NHL schedules

<telnet://culine.colorado.edu:860>

MLB schedules

<telnet://culine.colorado.edu:862>

NFL schedules

<telnet://culine.colorado.edu:863>

and a variety of others

<http://copi@oddjob.uchicago.edu>

For access to United States Government information, there's the FedWorld Gateway providing access to scores of government databases:

<telnet://fedworld.doc.gov>

And of course, last but not least, you can even find love on the Internet!

<mailto://perfect@match.com "SEND FORM">

And there's much, much more!

Service Providers

The following chart is an updated and expanded list of commercial Internet service providers. The entries listed below run businesses that provide electronic accounts through which you can access the Internet. These include non-profit community computing services known as "Free-Nets" which are civic computer operations organized under the National Public Telecomputing Network's principles and standards.

See also

Service Providers List
Commercial Online Data Vendors
Private Network Providers

Service Providers List

COUNTRY	PROVIDER	PHONE NO.	E MAIL ADDRESS	GUEST ACCESS
Australia	connect.com.au.pty ltd	+(613) 528-2239	connect@connect.com.au	
Canada	MBnet	(204) 474-9590	info@MBnet.mb.ca	access.mbnet.mb.ca; login as guest
	Alberta Research Council	(403) 450-5179	ARnet@arc.ab.ca	
	Alberta SuperNet Inc.	(403) 441-3663	info@tibalt.supernet.ab.ca	
	CCI Networks	(403) 450-6787	info@ccnet.ab.ca	
	Internex Online, Inc.	(416) 363-8676	vid@io.org (David Mason)	telnet to io.org or grin.io.org; login as new
	UUNET-Canada, Inc.	(416) 368-6621	info@uunet.ca	
	UUNorth Incorporated	(416) 225-8649	uunorth@north.net	telnet to 198.52.32.3; login as new
	WEB	(416) 596-0212	support@web.apc.org	
	Communications Accessibles Montreal	(514) 931-0749	info@CAM.ORG	
	HookUp Communication Corporation	(800) 363-0400	info@hookup.net	
	Corporation	(519) 747-4110		
	ACS (Academic Computing Services)	(604) 291-3234	help@sfu.ca	
	Ciao! Free-Net	(604) 368-6434	kmcclean@first.etc.bc.ca	
	Cyberstore Systems, Inc.	(604) 526-3373	info@cyberstore.ca	telnet to cyberstore.ca; login as guest
	DataFlux Systems Limited	(604) 744-4553	info@dataflux.bc.ca	
	Helix Internet	(604) 689-8544	info@helix.net	(604) 689-8577, V.32bis; login as new, password is new
	Island Net	(604) 721-6030	mark@amtsgi.bc.ca (Mark Morley)	
	Mind Link! Communications Corporation	(604) 534-5663	info@mindlink.bc.ca	telnet to mindlink.bc.ca; login as guest
	National Capital	(613) 788-4448	ncf@freenet.carleton.ca	(613) 780-3733;
	free-Net			login as guest
	Victoria Free-Net	(604) 389-6026	vifa@freenet.victoria.bc.ca	(604) 595-2300; login as guest
	Wimsey Information Services	(604) 936-8649	admin@wimsey.com	
	The Almanac Users	(604) 245-3214	kmcvay@oneb.almanac.bc.ca	

	Group		(Ken McVay)	
	BCnet	(604) 291-5209	Mke@BC.net (Mike Patterson)	
	RESUDOX Online Services	(613) 567-6925	info@Resudox.net	telnet to resudox.net; login as new
	NLnet	(709) 737-8329	admin@nlnet.nf.ca	
	Nova Scotia Technology Network Inc. (NSTN)	(902)468-6786	info@nstn.ns.ca	
	Net Access Systems	(905) 524-3010	info@netaccess.on.ca	
Denmark	DKnet	+ (45 39) 17-99- 00	netpasser@dknet.dk	
Europe	EUnet	+ (31 20) 592- 5124	info@eu.net	send e-mail to eunet@country.eu.net
Germany	Bayreuth Free-Net	+ (49 0921) 55- 31-34	wolfgang.kiessling@uni- bayreuth.de	
	Contributed Software	+ (49 30) 694- 6907	info@contrib.de	+ (49 30) 694-6055; login as guest or gast
	Erlangen Free-Net	+ (49 09131) 85- 47-35	fimpsy@cnve.rrze.uni- erlangen.dbp.de	
	Individual Network	+ (49 69) 33-14- 61	in-info@individual.net	+ (49 69) 390-48-414; login as gast
	Individual Network-Rhein- Main	+ (49 69) 390- 484-13, + (49 69) 631- 2083	ip-admins@rhein-main.de	
	INS (Inter Networking Systems)	+ (49 2305) 35- 65-05	info@ins.net	
	Odb	+ (49 69) 33-14- 61	oli@odb.rhein-main.de	
Greece	FORTHnet	+ (30 81) 22-11- 71, + (30 81) 22-93- 02	stelios@ics.forth.gr	
	Ariadne	+(301) 65-13-392	dialup@leon.nrcps.ariadne- t.gr	+(301) 65-48-800 (1200-9600 bps)
Israel	Public InterNet Provider	+ (972 3) 574- 6640	gil@datasrv.co.il	
Italy	IUnet	+ (39 10) 353- 2747	info@jvnc.net	
The Netherlands	NLnet	+ (31 20) 592- 4245	nl.net@nl.net	
New Zealand	Actrix	+ (04) 389-6316	john@actrix.gen.nz	
	Wellington Citynet	+ (64 4) 801-3303	rich@tosh.wcc.govt.nz	

Norway	Telepost Communications	+ (47 22) 73-37- 00	firmapost@telepost.telemax.n o	
United States Area Codes: 201, 202, 203, 206, 208, 212, 213, 214, 215, 303, 305, 312, 313, 315, 404, 407, 408, 412, 415, 503, 508, 509, 512, 516, 518, 602, 607, 609, 614, 617, 703, 713, 716, 813, 904, 914	PSI (Performance Systems International)	(703) 620-6651	world-dial-info@psi.com	
United States Area Codes: 201, 203, 215, 401, 516, 609, 908	JVNCnet (John von Neumann Computer Network)	(800) 358-4437, (609) 258-2400	info@jvnc.net	
United States Area Codes: 201, 212, 516, 718, 914	Panix Public Access Internet	(212) 787-6160, (212) 787-4854	info@panix.com	(212) 787-3100; login as help
United States Area Codes: 202, 206, 213, 214, 303, 310, 312, 313, 404, 408, 415, 503, 510, 512, 617, 619, 703, 713, 714, 916	Netcom Online Communication Services	(800) 501-8649	info@netcom.com	(206) 547-5992, (212) 354-3870, (214) 753-0045, (303) 758-0101, (310) 842-8835, (312) 380-0340, (404) 303-9765, (408) 261-4700, (408) 459-9851, (415) 328-9940, (415) 985-5650, (503) 626-6833, (510) 274-2900, (510) 426-6610, (510) 865-9004, (512) 206-4950, (617) 237-8600, (619) 234-0524, (703) 255-5951, (714) 708-3800, (818) 585-3400, (916) 965-1371; login as guest
United States Area Codes: 301, 410, 609, 703, 714, 908, 909	Digital Express Group (Digex)	(800) 969-9090	info@digex .net	(301) 220-0258, (410) 605-2700, (609) 348-6203, (703) 281-7997, (714) 261-5201, (908) 937-9481, (909) 222-2204; login as new

United States Area Codes: 202, 301, 410, 703	CAPCON Library Network	(202) 331-5771	capcon@capcon.net	
United States Area Code: 205	Nuance Network Services	(205) 533-4296	info@nuance.com	
United States	ClarkNet	(410) 730-9764,	info@clark.net	(301) 596-1626;
Area Codes: 202, 301, 410, 703	(Clark Internet Services)	(800) 735-2258		login as guest; no password
United States Area Codes: 202, 301, 703	Grebyn	(703) 281-2194	info@grebyn.com	(703) 281-7997; login as apply
United States Area Code: 206	Cyberlink Communications	(206) 282-4919	brc@cyberspace.com	
United States Area Code: 206	Eskimo North	(206) 367-7457	nanook@eskimo.com	(206) 367-3837
United States Area Code: 202	Olympus	(206) 385-0464	info@olympus.net	
United States Area Code: 206	GLAIDS NET (Homosexual Network)	(206) 323-7483	tomh@glaids.wa.com	(206) 322-0621
United States Area Code: 206	Halcyon	(206) 955-1050	info@halcyon.com	(206) 382-6245; login as new
United States Area Code: 206	Northwest Nexus	(206) 455-3505, (800) 539-3505	info@nwnexus.wa.com	(206) 382-6245; login as guest or new
United States Area Code: 206	SPRY	(800) 777-9638	info@spry.com	
United States Area Code: 206	Seattle Community Network	(206) 865-3832	douglas@atc.boeing.com	
United States Area Codes: 206, 208, 307, 406, 503, 509, 701, 907	NorthWestNet	(206) 562-3000	ehood@nwnet.net	
United States Area Codes: 206, 503	Teleport	(503) 223-4245	info@teleport.com	(503) 220-1016
United States Area Codes: 208, 303, 307, 505, 602, 719, 801	Westnet	(303) 291-7260	pburns@yuma.acns.colostate. edu	
United States Area Codes: 212, 315, 516, 518, 607, 716, 718, 914, 917	NYSERNet	(315) 453-2912	info@nysernet.org	
United States Area Codes:	Echo	(212) 255-3839	info@echonyc.com	(212) 989-3382

212, 718

United States Area Code: 212	Maestro Information Service	(212) 240-9600	info@maestro.com	(212) 240-9700; login as new
United States Area Codes: 212, 718	MindVOX	(212) 989-2481, (800) 646-3869	info@phantom.com	(212) 989-4141; login as mindvox or guest
United States Area Code: 212	Pipeline	(212) 267-3636	infobot@pipeline.com	(212) 267-6432; login as guest
United States Area Code: 213	Los Nettos	(310) 822-1511	los-nettos-request@isi.edu	
United States Area Codes: 213, 310, 415, 510, 619, 714, 818, 909	CERFnet	(800) 876-2373, (619) 455-3990	help@cerf.net	
United States Area Codes: 214, 817	Texas Metronet	(214) 705-2900, (214) 401-2800	srl@metronet.com, info@metronet.com	(214) 705-2902, (817) 261-1127; login as info; password info
United States Area Code: 215	DSC/Voicenet	(215) 957-4060	ron@ubos.voicenet.com	
United States Area Codes: 215, 412, 717, 814	PREPnet	(412) 268-7870	prepnet@cmu.edu	
United States Area Code: 216	Akron Free-Net	(216) 972-6352	r1asm@vm1.cc.uakron.edu	
United States Area Code: 216	Cleveland Free-Net	None	None	(216) 368-3888; select #2 at the first menu
United States Area Code: 216	Medina County Freenet	(216) 725-1000	aa001@medina.freenet.edu	
United States Area Code: 216	Youngstown Free-Net	(216) 742-3075	lou@yfn.ysu.edu	(216) 742-3072; login as visitor
United States Area Code: 216	Lorain County Free-Net	none	none	(216) 366-9721; login as guest
United States Area Codes: 216, 419, 513, 614	OARnet	(800) 627-8101	demetris@oar.net; nic@oar.net	
United States Area Code: 217	Prairienet Free-net	(217) 244-3299	prairienet@uiuc.edu; prairienet@prairienet.org	(217) 255-9000; login as visitor
United States Area Code: 301	Cap-Access	(301) 933-4852	taylor@capital.com	
United States Area Code: 301	SURAnet	(301) 982-4600	info@sura.net	
United States	Denver Free-Net	(303) 270-4300	info@freenet.hsc.colorado.ed	(303) 270-4865;

Area Code: 303			u	login as guest
United States Area Code: 303	CIX (Commercial Internet Exchange)	(303) 482-2150	info@cix.org	
United States Area Code: 303	Nyx	None	aburt@nyx.cs.du.edu	(303) 871-3324; login as guest
United States Area Codes: 303, 719	Colorado SuperNet	(303) 273-3471	info@csn.org	
United States Area Code: 303, 719, 800	CNS (Community News Service)	(800) 748-1200	klaus@cscns.com	(719) 520-1700; login as new; password newuser
United States Area Code: 305	Cybergate	(305) 428-4283	sales@gate.net	
United States Area Code: 305	Gateway to the World	(305) 670-2930	m.jansen@gate.com	(305) 670-2929
United States Area Codes: 308, 314, 316, 319, 402, 405, 417, 501, 515, 605, 712, 816, 913, 918	MIDnet	(402) 472-5032	dmf@westie.unl.edu	
United States Area Code: 309	Heartland Free-net	(309) 677-2544	xxadm@heartland.bradley.edu	(309) 674-1100; login as bbguest
United States Area Codes: 310, 415, 510, 619, 714, 800, 818	Cooperative Library Agency for Systems and Services (CLASS)	(800) 488-4559	class@class.org	serves library and information services only
United States Area Code: 312	NetIllinois	(309) 677-3100	p-roll@nwu.edu	
United States Area Codes: 312, 708	Cicnet	(800) 947-4754, (313) 998-6703	info@cic.net	
United States Area Codes: 312, 708, 815	InterAccess Co.	(800) 967-1580	info@interaccess.com	(708) 671-0237
United States Area Codes: 312, 708	MCSNet	(312) 248-8649	info@mcs.com	(312) 248-0900
United States Area Codes: 312, 708, 815	Ddsw1	None	info@ddsw1.mcs.com; karl@ddsw1.mcs.com	(312) 248-0900; follow the instructions
United States Area Code: 313	Advanced Networks and Services	(313) 663-7610	maloff@nis.ans.net	
United States Area Code: 313	Arbornet	(313) 594-1769, (313) 973-7528	help@m-net.ann-arbor.mi.us	(313) 996-4644; type G for guest when prompted

United States Area Code: 313	Huron Valley Free-Net	(313) 662-8374	michael.todd.glazier@umich.e du	
United States Area Codes: 313, 517, 616	Msen	(313) 998-4562	info-request@msen.com	login as newuser
United States Area Codes: 313, 517, 616, 906	Merit Network	(313) 764-9430	info@merit.edu	
United States Area Codes: 314, 417, 816	Coin	(314) 882-2000	ccwam@ missouri.missouri.edu	(314) 884-7000; login as guest
United States Area Code: 401	The IDS World Network	(401) 884-7856	sysadmin@ids.net	login as guest
United States Area Codes: 401, 508	Anomaly	(401) 273-4669	info@anomaly.sbs.risc.net	(401) 331-3706 (v.32); (401) 455-0347 (PEP)
United States Area Codes: 408, 415	The Portal System	(408) 973-9111	cs@cup.portal.com; info@portal.com	(408) 973-8091 (high-speed); (408) 725-0561 (2400 bps); login: info
United States Area Codes: 408, 800	SCO Global Access	(800) 736-8649	info@sco.com	
United States	AC:01			
Area Code: none	AfriQnet	none	info@afriq.net	
Area Code:	AlterNet	none (800) 258-9692	info@afriq.net alternet-ingo@alter.net	
Area Code: none United States				(415) 705-6060; login as guest; password guest
Area Code: none United States Area Code: 800 United States Area Codes: 404, 415, 510,	AlterNet	(800) 258-9692	alternet-ingo@alter.net	login as guest;
Area Code: none United States Area Code: 800 United States Area Codes: 404, 415, 510, 602, 707 United States	AlterNet CRL	(800) 258-9692 (415) 837-5300	alternet-ingo@alter.net info@crl.com Franko@	login as guest; password guest (406) 683-7680;
Area Code: none United States Area Code: 800 United States Area Codes: 404, 415, 510, 602, 707 United States Area Code: 406 United States	AlterNet CRL Big Sky Telegraph	(800) 258-9692 (415) 837-5300 None	alternet-ingo@alter.net info@crl.com Franko@ bigsky.bigsky.dillon.mt.us	login as guest; password guest (406) 683-7680; login as bbs (408) 293-9010;
Area Code: none United States Area Code: 800 United States Area Codes: 404, 415, 510, 602, 707 United States Area Code: 406 United States Area Code: 408 United States	AlterNet CRL Big Sky Telegraph a2i Communications	(800) 258-9692 (415) 837-5300 None (408) 293-8078	alternet-ingo@alter.net info@crl.com Franko@ bigsky.bigsky.dillon.mt.us info@rahul.net	login as guest; password guest (406) 683-7680; login as bbs (408) 293-9010; login as guest (408) 249-9630; login
Area Code: none United States Area Code: 800 United States Area Codes: 404, 415, 510, 602, 707 United States Area Code: 406 United States Area Code: 408 United States Area Code: 408 United States Area Code: 408 United States Area Code: 408	AlterNet CRL Big Sky Telegraph a2i Communications Duck Pond Public Unix Portal Communications	(800) 258-9692 (415) 837-5300 None (408) 293-8078 None	alternet-ingo@alter.net info@crl.com Franko@ bigsky.bigsky.dillon.mt.us info@rahul.net postmaster@quack.kfu.com cs@cup.portal.com;	login as guest; password guest (406) 683-7680; login as bbs (408) 293-9010; login as guest (408) 249-9630; login as guest (408) 725-0561;

United States Area Code: 412	Telerama Communications	(412) 481-3505	sysop@telerama.lm.com	(412) 481-4644; login as new
United States Area Code: 414	MIX (Milwaukee Internet eXchange)	(414) 962-8172	sysop@mixcom.com	(414) 241-5469; login as newuser
United States Area Codes: 414, 608, 715	WiscNet	(608) 262-8874	dorl@macc.wisc.edu	
United States Area Code: 415	BARRNET	(415) 723-3104	gd.why@forsythe.stanford.edu	
United States Area Code: 415	The Little Garden	(415) 487-1902	info@tlg.org	
United States Area Code: 415	Internex	(415) 473-3060	internex@internex.net	
United States Area Code: 415	Institute for Global Communications (IGC)	(415) 442-0220	support@igc.apc.org	(415) 322-0284; login as new
United States Area Code: 415	Netsys Communications Services	(415) 424-0384	netsys@netsys.com	
United States Area Code: 415	The WELL (Whole Earth 'Lectronic Link)	(415) 332-4335	info@well.sf.ca.us	(415) 332-6106; login as guest or newuser
United States Area Codes: 416, 519	Hookup	(519) 747-4110	info@nic.hookup.net	(519) 883-4665; login as guest
United States	Agora	None	info@agora.rain.com	(503) 293-1772;
Area Code: 503	· ·			login as apply
Area Code: 503 United States Area Code: 503	TECHbooks	(503) 223-4245	info@techbook.com	login as apply
United States	-	(503) 223-4245 (505) 345-6555	info@techbook.com granoff@technet.nm.org	
United States Area Code: 503 United States	TECHbooks			
United States Area Code: 503 United States Area Code: 505 Uniited States	TECHbooks New Mexico Technet Direct Access Network,	(505) 345-6555	granoff@technet.nm.org	
United States Area Code: 503 United States Area Code: 505 Uniited States Area Code: 510 United States	TECHbooks New Mexico Technet Direct Access Network, Ltd.	(505) 345-6555 (510) 649-6110	granoff@technet.nm.org support@dnai.com	login as new (510) 998-7140;
United States Area Code: 503 United States Area Code: 505 Uniited States Area Code: 510 United States Area Code: 510 United States	TECHbooks New Mexico Technet Direct Access Network, Ltd. CCnet Communications	(505) 345-6555 (510) 649-6110 (510) 998-0680	granoff@technet.nm.org support@dnai.com info@ccnet.com	login as new (510) 998-7140; login as guest
United States Area Code: 503 United States Area Code: 505 Uniited States Area Code: 510 United States Area Code: 510	TECHbooks New Mexico Technet Direct Access Network, Ltd. CCnet Communications Holonet	(505) 345-6555 (510) 649-6110 (510) 998-0680 (510) 704-0160	granoff@technet.nm.org support@dnai.com info@ccnet.com info@holonet.net	login as new (510) 998-7140; login as guest
United States Area Code: 503 United States Area Code: 505 Uniited States Area Code: 510 United States Area Codes: 508, 603, 617 United States	TECHbooks New Mexico Technet Direct Access Network, Ltd. CCnet Communications Holonet NEARnet RealTime	(505) 345-6555 (510) 649-6110 (510) 998-0680 (510) 704-0160 (613) 873-8730	granoff@technet.nm.org support@dnai.com info@ccnet.com info@holonet.net nearnet-join@nic.near.net	login as new (510) 998-7140; login as guest (510) 704-1058
United States Area Code: 503 United States Area Code: 505 Uniited States Area Code: 510 United States Area Codes: 508, 603, 617 United States Area Code: 512 United States	TECHbooks New Mexico Technet Direct Access Network, Ltd. CCnet Communications Holonet NEARnet RealTime Communications (wixer)	(505) 345-6555 (510) 649-6110 (510) 998-0680 (510) 704-0160 (613) 873-8730 (512) 451-0046	granoff@technet.nm.org support@dnai.com info@ccnet.com info@holonet.net nearnet-join@nic.near.net hosts@wixer.bga.com.	login as new (510) 998-7140; login as guest (510) 704-1058

Area Code: 513				choose cbos, then follow instructions
United States Area Code: 514	Communications Accessibles Montreal	(514) 923-2102	info@cam.org	(514) 671-6723; login as new
United States Area Code: 519	Data Tech Canada	(519) 473-5694	info@dt-can.com	(519) 473-7685
United States Area Code: 519	Hookup Communication Corporation	(800) 363-0400	info@hookup.net	
United States Area Code: 602	Data Basix	(602) 721-1988	info@data.basix.com	(602) 721-5887
United States Area Codes: 602, 702, 801	Evergreen Internet	(602) 230-9339	evergreen@libre.com	
United States Area Code: 602	Aztec Computing	(602) 965-5985	joe.askins@.edu	
United States Area Code: 603	MV Communications	(603) 429-2223	info@mv.mv.com	(603) 424-7428
United States Area Code: 609	Global Enterprise Services, Inc.	(800) 358-4437	market@jvnc.net	
United States Area Code: 612	MRNet (Minnesota Regional Network)	(612) 342-2570	info@mr.net	
United States Area Code: 613	National Capital Free-Net	(613) 788-3947	ncf@freenet.carleton.ca	(613) 780-3733; login as guest
United States Area Codes: 615, 704, 919	Vnet Internet Access	(704) 374-0779	brat@char.vnet.net	(604) 595-2300; login as guest
United States Area Code: 616	BCA Free-Net	(616) 961-3676	fredj@aol.com	
United States Area Code: 617	Delphi	(800) 544-4005	walthowe@delphi.com	(800) 365-4636; login as JOINDELPHI with password INTERNETSIG
United States Area Code: 617	North Shore Access	(617) 593-3110	info@shore.net	(617) 593-4557; login as new
United States Area Codes: 617, 508	World	(617) 739-0202	office@world.std.com	(617) 739-9753; login as new
United States Area Code: 617	Pioneer Neighborhood	(617) 646-4800	info@pn.com	
United States Area Code: 619	CTS Network Services	(619) 593-9597	bblue@crash.cts.com	(619) 593-6400; login as help
United States Area Code: 619	Cyberspace Station	(619) 944-9498 x626	info@cyber.net; help@cyber.net	(619) 634-1376; login as guest
United States Area Codes: 703, 800	NVN	(800) 336-9096, (703) 877-4444	info@nvn.com	(800) 336-9092; enter W194WW

United States Area Code: 703	Meta Network	(703) 243-6622	info@tmn.com	
United States Area Codes: 703, 804	Vernet	(804) 924-0616	jaj@virginia.edu	
United States Area Codes: 704, 910, 919	Interpath	(800) 849-6305	info@infopath.net	
United States Area Codes: 704, 910, 919	CONCERT-CONNECT	(919) 248-1999	info@concert.net	
United States Area Codes: 708, 312, 800	CIC Net	(312) 998-6103, (800) 947-4754	info@cic.net	
United States Area Code: 708	XNet Information Systems	(708) 983-6064	info@xnet.com	(708) 983-6435; (708) 882-1101
United States Area Code: 708	Net Illinois	(708) 866-1825	info@illinois.net	
United States Area Code: 713	The Black Box	(713) 480-2684	info@blkbox.com	(713) 480-2686
United States Area Code: 713	Neosoft <u>'</u> s Sugar Land Unix	(713) 438-4964	info@NeoSoft.com	(713) 684-5900; login as new
United States Area Code: 713	South Coast Computing Services, Inc.	(713) 661-3301	info@scci.com	(713) 661-8953 (v.32); (713) 661-8595 (v.32bis)
United States Area Code: 714	Orange Country Free-Net	(714) 762-8551	palmer@world.std.com	
United States Area Code: 715	Chippewa Valley Free-Net	(715) 836-3715	smarquar@uwec.edu	
United States Area Code: 716	Buffalo Free-Net	None	None	(716) 645-6128; login as freeport
United States Area Code: 719	Old Colorado City Communications	(719) 632-4848, (719) 593-7575	dave@oldcolo.com	(719) 632-4111; login as newuser
United States Area Code: 800	Bix	(800) 695-4775	info@bix.com	
United States Area Code: 800	PC Pursuit	(800) 736-1130	none	
United States Area Code: 800	The Electronic Newsstand	(800) 403-6397	info@enews.com	
United States Area Code: 804	Wyvern Technologies, Inc.	(804) 622-4289	system@wyvern.com	(804) 627-1828; (804) 886-0662
United States Area Code: 805	Rain (Regional Access Information Network)	(805) 899-8610	rain@rain.org	(805) 899-8600; login as guest
United States Area Code: 805	SLONET	(805) 544-7328	pwagner@oboe.calpoly.edu	

United States Area Code: 808	Pacific Network Consortium	(808) 533-3969	bm189@po.cwru.edu	
United States Area Code: 813	Suncoast Free-Net	(813) 273-3714	mullam@firnvx.firn.edu	
United States Area Codes: 817, 214	DFW Internet Services, Inc.	(817) 332-5116	info@dfw.net	(817) 429-3520
United States Area Code: 818	L.A. Free-Net	none	none	(818) 776-5000; login as guest
United States Area Code: 902	NSTN	(902) 468-6786	parsons@hawk.nstn.ns.ca	
United States Area Code: 904	Gainesville Free-Net	(904) 392-2061	poke@ufl.edu	
United States Area Code: 907	University of Alaska Southeast, Tundra Services	(907) 465-6453	JNJMB@acadl.alaska.edu	(907) 789-1314
United States Area Code: 904	Tallahassee Free-Net	None	None	(904) 488-5056; login as visitor
United Kingdom	Almac	+ (44 0324) 66- 53-71	alastair.mcintyre@almac.co.uk	
United Kingdom	CIX	+ (44 49) 264- 1961	cixadmin@cis.compulink.co.uk	
United Kingdom	Demon Internet	+ (44 81) 349- 0063	internet@demon.co.uk	
United Kingdom	Direct Connection	+ (44 081) 317- 0100	helpdesk@dircon.co.uk	login as help or demo
United Kingdom	Exnet	+ (44 081) 755- 0077	helpex@exnet.co.uk	
United Kingdom	Pipex	+ (44 0223) 42- 46-16	pipex@pipex.net	
United Kingdom	RJB Communications	+ (44 0932) 25- 31-31	rob@sound.demon.co.uk	
United Kingdom	UKnet	+ (44 227) 47-54- 97	postmaster@uknet.ac.uk	
United Kingdom	UK PC User Group	+ (44 81) 863- 6646, + (44 81) 863- 1191	info@ibmpcug.co.uk; adrian@ibmpcug.co.uk	

Commercial Online Data Vendors

It is important to know about the existence of the major online systems like Dialog, Nexis/Lexis, Orbit, and CD Plus, which are accessible over the Internet. These private online worlds are very complementary to the information available over the Internet. Many are quite costly to access, however, and require specially learned research skills to handle their specific search protocols.

These mature online systems have been building extraordinary archives of information going back decades in many cases—information that allows researchers to gather vast bodies of data literally in minutes from millions of disparate bits of information.

Following is a chart of the major online system providers. You will need to contact them directly to set up a password to their systems and to find out about the availability of online training.

Provider	Phone	E-mail Address
Dialog (Dialog Information Systems)	(800) 334-2564	telnet://dialog.com
DataStar (Dialog Information Systems)	(800) 334-2564	telnet://dialog.com
Dow Jones News Retrieval	(609) 520-4000	
Nexis (Mead Data)	(800) 227-4908, (513) 859-5398	telnet:// nex.meaddata.com
Lexis (Mead Data)	(800) 227-4908, (513) 859-5398	telnet:// nex.meaddata.com
BRS (CD Plus)	(800) 950-2035	staff@cdplus.com
Orbit Questel, Inc.	(703) 442-0900	telonet://orbit.com

Private Network Providers

In addition to actual Internet Access Providers, private network providers in the United States, and other countries, offer a variety of services including their own worlds of information and proprietary user *environments*. Some maintain and make available elaborate and specialized databases for access by their subscribers. They are frequently closed systems, with only e-mail access to the Internet. However, technologies are being developed by which the private and the public Internet can be made seamless.

America Online Provides access to a wide variety of media and reference sources,

popular newspapers, magazines, and vendor support. Chat lines are

also a major offering.

Compuserve Has over 2,000 separate resources with many of the largest forums

available online. In addition to an array of financial and professional services, Compuserve provides a wide diversity of entertainment services, and a growing shopping service that also offers graphics.

Delphi Offers a comprehensive selection of news, reference and resources,

and computer information, as well as full gateway access to the Internet. Special-interest groups, conferences, and online games are

major features.

GEnie Provides a large menu of news and information services, special-

interest groups, games, and databases. GEnie's Round Tables (RTs) provide discussion areas devoted to specific topics; file libraries, bulletin boards, and real-time chat (RTC) are special features.

Prodigy A "family-oriented" service providing shopping, travel, and personal

finance, and specializing in up-to-the-minute information such as news, sports, and weather. Prodigy also offers a large collection of

shareware programs.

ZiffNet An online service with information on buying, using, supporting, and

understanding personal computer products. ZiffNet is a major

resource for technical support.

Further Reading

Badget, Tom, and Corey Sandler, *Welcome to... Internet: From Mystery to Mastery,* MIS:Press, NY, a subsidiary of Holt and Co., Inc., 1993, ISBN 1-55828-308-0

Blackman, Josh, *The Legal Researcher's Internet Directory, 1993/1994*, Legal Research of New York, Brooklyn, NY, 1993

Braun, Eric, *The Internet Directory,* Fawcett Columbine, New York, NY, 1994, ISBN 0-449-90898-4

Cronin, Mary J., *Doing Business on the Internet; How the Electronic Highway is Transforming American Companies,* Van Nostrand Reinhold, New York, NY, an International Thomson Publishing Company, 1994, ISBN 0-442-01770-7

Dern, Daniel. The Internet Guide for New Users. New York, NY: McGraw-Hill, 1993.

Engst, Adam C., *Internet Starter Kit; Everything You Need to Get on the Internet,* Hayden Books, Division of Prentice Hall Computer Publishing, Indianapolis, IN, 1993, ISBN 1-56830-064-6

Estrada, Susan. *Connecting to the Internet: An O'Reilly Buyer's Guide.* Sebastopol, CA: O'Reilly & Associates, 1993.

Fisher, Sharon, Riding the Internet Highway; Complete Guide to 21st Century Communications, New Riders Publishing, Carmel, IN, 1993, ISBN 1-56205-192-x

Fraase, Michael. *The Mac Internet Tour Guide: Cruising the Internet the Easy Way.* Chapel Hill, NC: Ventana Press, 1993.

Gibbs, Mark, and Richard Smith, *Navigating the Internet*, Sams Publishing, a division of Prentice Hall Publishing, 1993, ISBN 0-672-30362-0

Gilster, Paul, The Internet Navigator; The Essential Guide to Network Exploration for the Individual Dial-Up User, Foreword by Vinton G. Cerf, John Wiley & Sons, New York, NY, 1993, ISBN 0-471-59782-1

Hahn, Harley, A Student's Guide to UNIX, McGraw-Hill, New York, NY, 1993, ISBN 0-07-025511

Hahn, Harley, and Rick Stout, *The Internet Complete Reference*, Osborne McGraw-Hill, Berkeley, CA, 1994, ISBN 0-07-881980-6

Hesslop, Brent. *The Instant Internet Guide: Hands on Global Networking.* New York, NY: McGraw-Hill. 1994.

Kehoe, Brendan, Zen & The Art of the Internet. New York, NY: Prentice Hall, 1992.

Kennedy, Joyce Lain, and Thomas J. Morrow, *Electronic Job Search Revolution; Win With the New Technology That's Reshaping Today's Job Market,* John Wiley & Sons, Inc., New York, 1994, ISBN 0-471-59820-8

Kochmer, Jonathan, and NorthWestNet, *Internet Passport; NorthWestNet's Guide to Our World Online,* NorthWestNet and Northwest Academia Computing Consortium, Inc., Bellevue, WA, 1993, 4th Edition, ISBN 0-9635281-0-6

Krol, Ed, *The Whole Internet; User's Guide & Catalog*, O'Reilly & Associates, Inc., Sebastopol, CA, 1992, ISBN 1-56592-025-2

LaQuey, Tracy, and Jeanne C. Ryer, The Internet Plus Companion; A Beginner's Start-Up Kit

for Global Networking, Foreword by Vice President Al Gore, Addison-Wesley, Boston, MA, 1993. ISBN 0-201-62719-1

Library of Congress; Office for Subject Cataloging Policy Collection and Services, *LC Classification Outline*, Library of Congress, Washington, 1990, 6th Edition, ISBN 0-8444-0684-8

Lynch, Daniel and Marshall T. Rose. *Internet System Handbook*. Reading, MA: Addison-Wesley, 1993.

Malamud, Carl. Exploring the Internet: A Technical Travelogue. New York, NY: Prentice Hall, 1992.

Marine, April (Editor). Internet: Getting Started. Menlo Park, CA: SRI International, 1992.

Newby, Gregory B., *Directory of Directories on the Internet; A Guide to Information Sources,* Meckler, Westport, CT, 1994, ISBN 0-88736-768-2

Pfaffenberger, Bryan, *Que's Computer User's Dictionary*, Que Corporation, Indianapolis, IN, 1993, 4th Edition, ISBN 1-56529-604-4

Que Development Group Staff. *The Hitchhiker's Guide to Internet.* Indianapolis, ID: Que, 1993.

Rittner, Don, *Ecolinking; Everyone's Guide to Online Environmental Information*, Peachpit Press, Berkeley, CA, 1992, ISBN 0-938151-35-5

Making Your Voice Heard

The cooperative nature of the Internet environment is one of its strongest features. If you have discovered a resource that is particularly useful to you and happens not to be in the McKinley Internet Directory, you may call it to the attention of the editors, who will endeavor to qualify it for listing in a subsequent edition. You may make your recommendation by filling in the form below and E-Mailing or FAXing it to us.

E-Mail: mckinley@mckinley.com

FAX: (415) 331-8609

Address: The McKinley Group, Inc.

85 Liberty Ship Way #201 Sausalito, CA 94965

Please use a separate Listing Recommendation Form for each entry that you are recommending.

See also

Listing Recommendation Form

Listing Recommendation Form

I would like to recommend the following Internet resource. Title: Brief Description (up to 3 lines): Why do you particularly like this resource? Please supply as much of the following information as possible. Keywords (up to 4): Producer: Audience (up to 3): Contact Name: Contact's E-Mail: Profile (up to 10 lines): Details: (Cost, Free, Moderated, Sound Files, Images, Multi Media) Access Info: Notes: URL:

Glossary



NOPORSTUVWXYZ

We are indebted to Hans J. Rocke, University of California at Davis, for his initial work in compiling this glossary.

A

Absolute address Also called *machine address*, an address that indicates, in machine

language code, the exact storage location where data or machine

instructions are to be found.

Access To find or store information in memory or on a peripheral device such

as a magnetic tape or disk drive. To communicate in some way with

a device.

Access method Any of the data-management techniques available to the user for

transferring data from memory to an input/output device, or vice

versa.

Access time The time interval between the instant at which data is requested to be

retrieved or stored, and the instant at which the operation is carried

out.

Address A location on a disk or in memory within which a specific piece of

information can be stored, or the number assigned to that location.

(See also absolute address, indirect address.)

ADMD Administrative Management Domain

Anonymous FTP It allows users without accounts to legitimately look in several

locations and pull off files below the login directory. A copy of the "anonymous FTP list" enables users to determine the location of files

available on the Internet.

ANSI American National Standards Institute

Application A computer program that is applied to performing a specific task.

Archie An information agent that conducts searches against data stored at

various anonymous ftp sites, and indexes them for easy access by

users.

Archive 1. The storage of files (often in archived and compressed form) for

future use, or the storage area that holds those files.

2. To create an archive, to move a file into an archive, or to bundle

multiple files together into a larger archive or library file.

ARPA Advanced Research Projects Agency of the United States Department

of Defense.

Artificial Intelligence Computer programs that perform functions, often by imitation, that

are normally associated with human reasoning and knowledge.

ASCII American Standard Code for Information Interchange is a character

encoding standard that uses 7 of the 8 bits of a byte to define the codes for 128 characters (27), e.g. in ASCII, the number 7 is treated as a character and is encoded as 00010111. Because a byte can have a total of 256 possible values (28), there are an additional 128 possible characters that can be encoded into a byte, but there is no formal ASCII standard for those additional 128 characters. Most IBM-compatible personal computers use an IBM extended character set,

which includes international characters, line and box drawing characters, Greek letters, and mathematical symbols.

ASR Automatic Send and Receive, having the ability to receive data and

produce it on a printer or to send it through a keyboard.

Asynchronous Having a variable time interval between characters, bits, or events.

Automation

The implementation of several processes by automatic means.

B

Backbone A single-protocol connection among different systems. Each system

has a gateway to the common backbone protocol.

Bandwidth The difference (in hertz) between the upper and lower limits of wave

frequencies transmitted over a communications channel.

Baud In communications, a unit of transmission speed of digital signals. It

is the reciprocal of the length in seconds of the shortest element of the digital code. Generally a baud will equate to a bit (of data) per

second.

BBS Bulletin Board System. BBSs began as computers running software

that permitted people dial-up access, the ability to store messages for other dial-up users, and to retrieve messages left for them. BBSs were the source of the concept of electronic discussion groups, because people could leave and retrieve messages around individual

topics.

The concept of the BBS was transferred to the Internet, the software was modified, and now hundreds of USENET and ListServ discussion groups operate on the same principles: a topic is stated, and people interested in the topic send and receive messages, and conduct

discussions from all around the world.

Many programs now archive the discussions so that newcomers can retrieve *threads* of conversation that took place before they joined a

discussion.

Bit Contraction of binary and digit. A bit is the smallest unit of

information that a computer can work with. Each bit is either a one or a zero. Often computers work with chunks of bits rather than one bit at a time; the smallest chunk of bits a computer usually works with

consists of 8 bits, or a byte.

Bitmapping A digital representation of an image in which all dots or pixels making

up the image correspond to specifically assigned bits in memory.

BITNET Because It's Time Network is a low cost, low speed network which was

developed to satisfy a need for providing distributed network access

beyond the limits of the original ARPANet network.

Block Physical data consisting of a fixed number of characters or records,

and moved as a unit during transmission.

Body/Subject The body of an e-mail message is the actual text of a message. The

subject is a special field which gives the content of a message. Many SMTP programs take advantage of the subject line to provide sorting capabilities. Through the clever use of subject lines, an e-mail handling facility can perform as a small but useful database.

Boolean A system of logic devised by George Boole using a series of symbolic

terms such as AND, OR, and NOT to express the relationship of data

elements to one another.

Bounced message An e-mail message may not reach its destination for any of several

reasons. The address may have been typed incorrectly, the Domain Name Server might not recognize an alias, the recipient's computer might be down for maintenance, etc. In such cases, a message is sent back to the sender to inform them that their message has not

been delivered. Sometimes, the information provided in the *header* reveals why the message was undelivered.

Byte

Eight bits. A byte is simply a chunk of 8 ones and zeros. For example 01000001 is a byte. A byte is equal to one column in a file written in character format.

C

CCA

- 1. Common Cryptographic Architecture; IBM encryption software for MVS and DOS applications.
- 2. Compatible Communications Architecture; network equipment technology protocol for transmitting asynchronous data over X.25 networks. (See X.25.)
- 3. Communications Control Architecture; a United States Navy network that includes an ISDN backbone called bits.

CCITT

Consultative Committee Of International Telephone And Telegraph. Part of the International Telecommunications Union, a United Nations' treaty organization, setting international standards for worldwide telecommunication, e.g. X.25. (See X.25.)

CD-ROM

Compact Disk Read Only Memory

Cello

A WWW browser that works under Microsoft Windows and allows people with a connection to the Internet to follow hypertext (or Hypermedia) links to files and information services all over the world. It displays both regular text files and files that are written in HTML format, and will translate different Internet services like Gopher and News and FTP into a format that appears to the user as if it were a hypertext document. It was written by Thomas Bruce of the Legal Information Institute at Cornell Law School (extracted from the Cello FAQ).

You can also use Cello and the WWW-HTML standard to build local hypertext systems on LANs, on single machines, and so on. Cello also permits the postprocessing of any file for which you have set up an association in the Windows File Manager. For example, if you download an uncompressed Microsoft Word file from an FTP site, and the appropriate association exists in File Manager, Cello will run Microsoft Word on it for you. This same capability is used to view graphics and listen to sound files you get from the Internet.

Chains

In hypertext, linking randomly located material by means of address information included within the stored item, which cites the location of the succeeding and/or preceding item in the sequence. Chains permit users to traverse the Internet via links within documents to their origin, or cited materials. The *links* of the chain provide navigation information, and the user merely needs to click on a link to be moved to a (possibly remote) document whose address is contained in the link.

Channel

Any communications pathway between two computers or between a terminal and a computer. It may refer to the physical medium, such as coaxial cable, or to a specific carrier frequency (subchannel) within a larger channel or wireless medium.

Character encoding scheme

A method of encoding characters including alphabetic characters "az" (uppercase and lowercase), numbers "0-9", punctuation and other marks (comma, period, space, &, *), and various control characters (Tab, Enter, linefeed) using binary numbers. For a computer, for instance, to print a capital A or a number 7 on the computer screen, we must have a way of telling the computer that a particular group of bits represents an A or a 7. There are standards, commonly called character sets, that establish that a particular byte stands for an A

and a different byte stands for a 7. A common standard for representing characters in bytes is known as ASCII.

Character format

Any file format in which information is encoded as characters using only a standard character encoding scheme. A file written in character format contains only those bytes that are prescribed in the encoding scheme as corresponding to the characters in the scheme (e.g. alphabetic and numeric characters, punctuation marks, and spaces. A file written in the ASCII character format, for instance, would store the number "7" in eight bits (i.e. one byte) 00010111. A file written in EBCDIC would store the number "7" in eight bits as 11110111.

Client The user of a network service: also describes a computer that relies upon another computer for some of all of its resources.

Client server 1. Architecture in which the client is the requesting machine (PC or

workstation) and the server is the supplying machine (LAN file server, mini or mainframe). The client provides the user interface and performs some or most of the application processing. The server maintains the databases and processes requests from the client to extract data from or update the database. The server also controls

the application's integrity and security.

2. Request/supply relationship between programs. Applications can be designed, whether running within the same computer or in multiple computers, in which one program (the client) requests data from another program (the server). For example, in X-windows, the server is software that manages the display screen, and the client is

the application that asks the server to display something.

In a data file, a single vertical column that is one byte in length. Fixed-format data files are traditionally described as being arranged in

lines and columns. In a fixed-format file, column locations describe

the locations of variables.

Compatibility The ability of one device to interconnect or share programs or data

with another by means of having the same code, speed, and signal

Compress Reduce the size of a file considerably by removing redundant

> information. Compressed files are more economical to transmit via the Internet or to store. To use the file, it must be exploded, or

reconstituted.

Connect time The time during which an operator is in contact with a computer

online. This is different from compute time, in which the operator is

actually utilizing the computer's resources.

CREN Corporation for Research and Educational Networking. A merger of

BITNET and CSNET networks.

Cyberspace Term coined by William Gibson in his novel Neuromancer, to refer to a

futuristic computer network that people use by plugging their brains

into it.

Column

D

DASD Direct Access Storage Device

Data 1. A general term for any collection of information, facts, numbers,

letters, or symbols that refer to or describe an object, idea, condition,

situation, or other factors.

2. Name of an android in Star Trek - The Next Generation.

rather than for voice transmission.

Database A set of organized data, stored in, or available to, a computer, that

can be used by the computer or its operator to perform various tasks. The database is not the program; rather it is the information the

program will work with.

Datagram The basic unit of information passed across the Internet. It consists

of a source and destination address along with data. Large messages

are broken into a sequence of IP datagrams.

Decryption Encoding a message to its original meaningful form by means of a

key.

Document delivery A service providing printed copies (full-text) of articles, reports, and

publications, usually by subscription to a service, some of which are

connected to the Internet.

Domain A part of the naming hierarchy. Syntactically, a domain name

consists of a sequence of names or other words separated by periods;

e.g. @prep.ai.mit.edu

Domain name server A computer table which lists the IP numeric addresses of computers

on the Internet, and their given common name. It is frequently easier to remember a computer site by name, but the network stores the numerical address. Domain Name Servers keep track of which

name belongs to which numerical address.

Domain Name System (DNS)

A global naming system for use in UNIX networking for generalpurpose, name-to-resource mapping. While in the Internet the network information center manages the higher-echelon domain names, the bulk of the management is decentralized to the lowerechelon sub-domains. Each name server in an Internet community is responsible for a personal piece of the global name hierarchy over

which it has authority.

DOS Disk Operating System; any of a number of widely used operating

systems, so-called because a primary function they provide is the

control of auxiliary storage in the form of disks.

Download To transmit data from one central computer to another device or to a

remote terminal.

Driver A program that controls (drives) the operation of a device or interface.

The driver program interprets the computer data, providing the commands and signals required by the device or interface. The driver can output directly to the device or interface, or can provide

paper output.

Duplex Pertaining to a transmission system where data can be received and

transmitted. Half duplex can only transmit or receive. Full duplex

can transmit and receive simultaneously.

Е

E-mail Electronic mail (See Electronic mail.)

Electronic mail A message service using electronics and telecommunications to

deliver hard- or soft-copy information. These can take the form of text-only messages or of images that include text in font form and

graphic material.

Emotives A term coined by Chet Grycz to describe any of a series of

typographic symbols (usually made up of colons, dashes, periods, and other diacritics) by which "emotional signals" can be transmitted. Such abbreviations are sometimes called "smileys" because they resemble smiling faces, tilted on their side. (:-)) Emotives can convey happiness, sadness, pouting, tongue-in-cheek, and a variety of other

nuances that are usually conveyed by tone of voice and body

language.

Encryption An algorithm designed to protect the interpretation and use of

intellectual property in electronic files against unauthorized use.

End user The person or organization who will directly use a particular set of

information or a device.

Error Any discrepancy between the theoretically correct behavior or values

in a computer and the actual behavior or values. Most computers have routines specifically designed to detect the presence of errors.

Escape (ESC) A control code that indicates that the next code or codes has a

different meaning than it would usually have.

Ethernet A communications protocol developed by Xerox Corporation, widely

used for local area networks.

F

FAQ Frequently Asked Questions. Novices to the Internet commonly face

the same problems as their predecessors, and ask similar questions. FAQs are files containing the answers to the most frequently asked questions. FAQs have been expanded to cover a range of topics, so a

user may find FAQ files on specific non-Internet related topics.

File A physical unit of storage on a computer disk or tape.

File server A computer that stores files on the Internet, and makes such files

available for access by one of the various Internet access tools.

File Transfer Protocol A reliable method of transferring files over the Internet.

Finger A software application whose purpose it is to query information files

about individual Internet users. The user places information

regarding their phone number, address, or affiliation in a file, and the finger software is expressly designed to retrieve such files upon

request.

Firmware Software that is stored in read-only memory (ROM). Firmware

functions are not programmable by the user.

Fixed Format A file structure consisting of physical records of a constant size within

which the precise location of each variable is based on the column

location and width of the variable.

Flame This is a pejorative term, signifying a breach of *netiquette*. Flaming

can be "losing one's temper," or it can mean calling into questions

someone's personal opinions or observation.

Novices are sometimes inadvertently accused of Flaming if they

happen to type their e-mail messages in all caps.

FreeNet An organization whose purpose is to provide access to the Internet to

as large a public as possible. The first such effort was established by the highly-successful Cleveland Free Net. Such networks make Internet resources available to the public by providing access at affordable charges. They also frequently provide support and aid in

connecting to and navigating across the Internet.

FTP File Transfer Protocol (See File Transfer Protocol.)

Full-text Referring to a database that contains entire documents as opposed to

citations or abstracts.

G

Gate-keeping system

A method of facilitating as well as of controlling the process of gathering, organizing, filtering, distributing, and exchanging information in various formats between sources and users.

Gateway

The electronic communications node that connects the individual user

with specific mainframes or networks.

Glitch A sudden temporary mishap, error, or malfunction in mechanical,

electrical, or electronic equipment.

Gopher A software tool developed at the University of Minnesota. It allows

multiple platform types running a customizable client to access a centralized server that provides coherent translation of information in

myriad forms. A user can retrieve information available from

thousands of Gopher servers, anonymous FTP connections, publicly accessible Telnet connections, World-Wide Web servers, Novell

networks, WAIS servers and many more sources throughout the world. Gopher is a menu-driven system. Each Gopher server has links to other Gopher servers so that you can seamlessly bounce from one server to another with no perceived change of environments.

Gopher's down side is in finding the proper resource. There now exist hundreds of Gophers, each with numerous sub-menus. Somewhere buried in some gopher server on the other side of the world might be

some very important resource that you have been looking for. Unfortunately, there is no easy way to know about that resource unless you start a lengthy and time consuming Gopher tour.

н

Handshake A protocol wherein a transmitting device sends signal, then the

receiving device sends a "ready" signal before the transmission

continues.

Hard-wired Pertaining to the direct wiring of a terminal to a computer system (or

any device to any device), as opposed to devices that communicate

via telephone lines or wireless media.

Header Part of an e-mail message generated by the transmission protocols

that provide information about who originated a message, when it was posted, its pathway of travel across the Internet, and certain

machine identifications along the way.

Hierarchical file A file containing information that is organized in subordinate levels or

with a relational structure.

Host A system or subsystem in a network that performs actual processing

operations against a database, and with which other network devices

communicate.

Host computer The computer and associated database that run as a separate entity,

but can be accessed through the network.

Host site The location (station) that receives communications from the other

points in the network, performs operations on them via a host computer, and sends communications back to other points.

HTML Hypertext Mark-up Language. In practical terms, HTML is a collection

of styles used to define the various components of a World-Wide Web document. Used in WWW documents to embed style information (fonts, font sizes and layout), graphics and hypertext links (URLs) to

other Internet files and resources.

HTTP Hypertext Terminal Protocol is used as a prefix in a URL, this string of

letters tells the application that the address which follows is

accessible as a WWW server. (See also URL.)

Hypertext A term coined by Ted Nelson (Xanadu) to describe a form of

relationships that is non-linear. Most text is intended to be read one paragraph at a time in a serial fashion. Given electronic capabilities, it is possible to *link* one paragraph with another one in a different location, perhaps even on an entirely different computer. Hypertext

describes these more fluid relationships.

IF Interactive Facsimile is a computer function that merges voice with

facsimile transmissions to be carried over the Internet.

Indirect address An instruction that references an address specified in the content of

another address.

Information Agent A software application whose purpose it is to act on behalf of a

database, updating it from information it retrieves from other

databases. Archie and Veronica are examples of Information Agents.

Input 1. The process of entering data via a keyboard or terminal or other

device.

2. The material that is entered via a keyboard or other device.

Intelligence The ability of a device to make computational and evaluative

decisions under the control of a program.

Interactive 1. Relating to the ability of a device or procedure that allows an

operator to make decisions that influence the outcome of a procedure

in process.

2. Pertaining to a device that allows an operator to input data or commands and that then responds in some way to the operator.

Interface The point and manner in which two separate systems or devices

connect and interact with one another.

Internet directory 1. A directory of Internet resources maintained in database format by

a non-profit institution, for the benefit of the Internet community.

2. The McKinley Group publication which makes available directory

information in printed form.

Internet A concatenation of many individual TCP/IP campus, state, regional,

and national networks (such as NSFnet, ARPAnet, and MILnet,) into one single logical network all sharing a common addressing scheme.

IP Internet Protocol

IP address The Internet protocol numerical address assigned to each computer

on the network, so that its location and activities can be distinguished

from other computers.

ISDN Integrated Services Digital Network

J

There are currently no glossary entries for this letter.

K

Kernel

The level of an operating system or networking system that contains the system-level commands or all of the functions hidden from the user. In a UNIX system, the kernel is a program that contains the device drivers, the memory management routines, the scheduler, and system calls. This program is always running while the system is operating.

L

LAN Local Area Network (See Local Area Network.)

Laser Light Amplification by Stimulated Emission of Radiation

ListServ A feature of e-mail that allows a single message to be served or

delivered to many addresses simultaneously. The recipient's e-mail address must appear on a distribution list to receive these reflected

messages.

Local Area Network A collection of devices and communication channels that connects a

group of computers and peripheral devices together so that they may communicate with each other. Typically, local area networks occupy

a single building or office area.

Log 1. A record of operations on a file, indicating actions such as file

creation, modification, errors, and other data.

2. To sign on (log on) or off (log off) a computer system or area. Log

on procedures may require operator passwords, or may be

accomplished by designating the desired area.

M

MAPI Message Application Programming Interface

MD Management Domain

MELVYL® A centralized information system for all nine campuses of the

> University of California. It includes a library catalog database, periodicals database, article citation databases, and other files and can be accessed via University of California lines or the Internet.

Memory The internal storage capacity of a computer system. Memory is

generally located on some magnetic device such as disk, drum or core. Data is stored in digitally encoded bytes, and manipulated as needed during calculation processes. The amount of memory a computer has directly affects its ability to perform complex functions.

MHS Message Handling System

MILNET Military Network

MIME Multipurpose Internet Mail Extensions. A code to specify the format

of Internet messages, identifying text, program, mail message, image,

audio, video, and/or multi-part (mixed media) files.

Mode A particular condition or state under which a computer or other device

may operate, such as an insert mode, a communications mode, or a binary mode. Operations or commands may take on different

meanings in different modes.

Modem Modulator/demodulator connects computers at remote sites to the

> telephone system by converting data from the host computer into electronic signals, which are transmitted via the network to the target computer where another modem converts them back into machinereadable data. Modems can send as well as receive data, enabling

computers to converse with one another.

MOSAIC 1. A free Macintosh client browser for World-Wide Web servers. The

program can access linked data on Internet servers via many protocols: Archie, Gopher, WAIS, FTP, Telnet and network news transfer protocol. The program requires system 7 and MacTCP 2.0.2. Mosaic is available via anonymous ftp from ftp.ncsa.uiuc.edu in the

directory /MAC/mosaic.

2. Netware for Mac (developed by Novell Inc.) allows users to share non-PostScript printers connected to the PC portion of a netware network. The software intercepts the PostScript print job and translates it into PCL (Printer Control Language) before sending it to

the netware server's print services.

3. Macro-Connectionist Organization System for Artificial Intelligence Computation. This expert system has two medical applications, one

for the diagnosis of kidney graft rejections, and one for the

management of hypertension.

4. A program containing a Trojan horse strain that destroys the directories of all available unlocked hard and floppy disks, including the one it resides on. Even unmounted but available SCSI hard disks

are mounted and destroyed by the Trojan.

Mouse A handheld input device, similar to a keyboard, but limited to such

interactions with graphic images on the screen as pointing, clicking, and dragging.

MUD Multi-User Dungeon. Games have been an important (and

sometimes controversial) part of distributed networks. MUDs are sophisticated forms of Dungeons and Dragons in which numbers of individuals can play the game simultaneously, confronting each other

in the virtual dungeon made by the software.

MUDs have serious purposes, too. Programming solutions to problems involving multiple simultaneous access (a situation that comes up in many standard workgroup and collaborative applications)

are thoroughly tested in such environments.

Multiplex To transmit simultaneously two or more messages over the same

communications channel to different receivers.

MX Record Mail Exchange Record. One of the components through which e-mail

that is addressed to you, actually gets to you, the MX Record tells

domain name servers about routing and location instructions.

N

Network Two or more computers linked together physically or via

telecommunications for the purpose of electronically sharing

resources such as computer files, programs, and peripheral devices.

Network Control Program (NCP)

A program within the software of a data processing system which

controls the performance of a telecommunications network.

Network File System (NFS)

A process for mounting magnetic disks on a network so that disks not

physically attached to a computer appear as if they were physically

attached.

NFS Network File System

Node A branching or exchange point in a network.

Noise Unwanted signal or signals on an electrical circuit.

Noise immunity The ability of a device to accept valid signals while rejecting invalid

signals.

Non-switched line A communications link permanently installed between two points.

NREN National Research and Education Network. Fiber-optic (improved

capacity and transmission speed) network to link all education facilities, including grade schools and libraries, higher education

institutions, and government organizations.

NSFNET The National Science Foundation Network. The national backbone

network, funded by the NSF and operated by the Merit Corporation, used to interconnect regional (mid-level) networks such as WestNet to

one another.

Null modem The communications cable used in hardwiring.

Numeric database A database primarily containing numbers.

0

OCR Optical Character Recognition (See Optical Character Recognition.)

Octet The grouping of eight numbers in a pair and two triplets as used in

the domain name system; e.g. 35.222.222.

Offline Pertaining to a device or function that is not electronically connected

to the main device. Media transmission from an offline device must

be by means of manually carried material (disk or tape) or via

telephone lines.

Online Pertaining to devices that are electronically connected to the

computer. Generally, an online device is treated as if it were an

integral part of the computer system.

Online Public Access Catalog (OPAC)

A database of bibliographic records to which the public has access, reflecting the material owned by a library or a consortium of libraries.

OPAC Online Public Access Catalog (See Online Public Access Catalog.)

Operating system The program or set of programs which control a computer's

operations and monitor the functions of the other programs.

Optical Character Recognition (OCR)

A method of converting graphic symbols (particularly alphanumerics) to electronic signals by means of a reading device that recognizes character shapes. Until recently, material prepared for optical character recognition had to be typed in a specific format, and with a

specific type element.

Optical disk A rigid, 4-3/4" (diameter) plastic disk, , with an embedded metallic

underside on which data are recorded permanently by laser (ROM—Read Only Memory). Also known as compact disk, CD or CD-ROM. Digital information is recorded on a master disk with a strong laser beam. Copies are made by stamping 4-3/4" disks. They are read by a weaker laser beam. It is a high-density storage medium, with a

capacity of 600 megabytes.

Optical scanner A device that uses light to scan and covert text, graphics, or other

visual images into digitized data that can be read by a computer.

OSI Open System Interconnection

P

Packet An addressed data unit of convenient size for transmission through a

network.

Parallel interface A data transmission technique in which a group of binary digits (bits)

are transferred simultaneously over multiple lines. Usually, eight bits that correspond to a character are transferred as a single operation.

Parameter 1. A designation for the format of type, as requested by command

codes or system defaults. Line length, page depth, typeface, and leading are examples of parameters. Commands which take place as they are entered and do not maintain their effect (such as extra

leading, cancel escapement, etc.) are not parameters.

2. (program parameter) a constant or variable which remains unchanged in a subroutine, and fully or partly specifies a process to

be performed during the subroutine.

3. (hardware parameter) a parameter characteristic of a machine which establishes certain limitations or capabilities of the machine. For instance, a parameter of a typesetter might be its ability to

process 160 lines per minute.

Parity The transmission of data so that all codes have either an even or an

odd number of one-bits. Even parity means, that to the codes with an odd number of one-bits one bit has been added so the total is even, and odd parity means that all the even codes have a bit added

to make them have an odd number of one-bits.

Parity check A method of verifying the accuracy of a transmitted bit pattern by

examining the code to determine whether its value is odd or even.

Password An identification number keyed by the operator and checked by the

computer before the database may be accessed.

Pay-by-the-drink A method of charging the user every time a file is accessed, based on

the number of connect time units elapsed and/or records inspected. This is in contrast to paying a subscription or license fee which permits repeated and unlimited access to the file(s) and records for

the duration of the stipulated period of time.

Peripheral A device that is external to the system processor, but operates under

the processor's control, such as a line printer or a communications

signal.

Platform A manufacturer's operating system for functions that have not been

standardized in the industry and require intermediary programs to

interpret the commands across different systems.

Port A communications channel between a computer and another device,

such as a terminal, modem, or printer.

PostScript Software made by Adobe for desktop publishing. A page description

language that many laser printers understand. The next step is a PostScript-based non-application-specific document-interchange

software that will allow searching and indexing.

Printer Peripheral device, connected to a computer to render images on

paper in black/white or color. Pigments can be transferred from a ribbon pressed against the print surface by an array of wires (matrix or impact printer), heated to sputtering and directed through tiny holes (ink jet) or electrostatically attached to a metal drum and

transferred to paper by the xerographic method (laser).

Printout Display of file contents in text or graphic form on paper.

Program Series of instructions to direct the computer to perform specific tasks

in a certain order.

Prompt An on-screen processing technique that questions or *prompts* the user

of a computer system for responses.

Protocol The proper procedure and sequence of events for data transmission of

a particular input device, with regard to code structure, identification

of the text stream, and code recognition.



Query

A data message structured so as to elicit a response from a computer.

R

RAM Random Access Memory (See Random Access Memory.)

order.

Random Access Memory

A form of volatile memory which allows data (such as documents) to be stored randomly and retrieved directly by an address location. The system accesses the addressed material, with no need to read through intervening data. Information may be retrieved more speedily from random access memory than from serial media such as

tape.

Raw Data Data that has not been processed, reorganized, or manipulated.

Read Only Memory Memory that is programmed at the time of manufacture, it may be

accessed only and cannot be erased. Being non-volatile, read-only memory holds its contents after the power is shut off. It can be used to contain an operating system, language translators, and other

permanent software.

Real time Pertaining to the performance of a computer in such a way that the

operator receives responses quickly enough so that there is no

effective delay in the operator's activity.

Remote Pertaining to communication with a device located at some distance

from the central device, but connected in some way, with cables,

wires, or telephone hookup.

Rich Text Format A text exchange standard proposed by Apple to provide an application

independent file format including fonts, tab positions, rulers, line breaks, hyphenation, paragraph spacing, embedded objects, such as

pictures and sounds, and special text styles.

ROM Read Only Memory (See Read Only Memory.)

Router A dedicated computer that sends packets from one place to another,

paying attention to the current state of the network.

RS-232 Port A standard plug with 25 pins, used to connect computers and i/o

devices.

RTF Rich Text Format (See Rich Text Format.)

S

Screen The display surface of a video display terminal (VDT) or cathode ray

tube (CRT).

Scroll A function available on most video terminals where the display image

seems to move up and down (or left and right) on the screen to provide incremental viewing of material earlier or later in the file.

Search The electronic comparison of character strings entered by the

operator with those contained in files or databases, arranged in

boolean logic expressions.

Server A network computer which shares its resources, such as files and

printer, with other computers; e.g., Network file system (NFS).

SFQL Structured Full-text Query Language

SGML Standard Generalized Markup Language (See Standard Generalized

Markup Language.)

Sign On To connect with a remote computer by providing identification details

and performing appropriate procedures.

Signal The electrical quantity that coveys data from one point to another.

Signature 1. One of the requirements for a fully functional Internet is to provide

unique signatures with which to identify individuals (for example for the purpose of verifying authorization to move funds.) A number of cryptographic solutions to individual signatures have been proposed, most of which depend on a unique encoding pattern that is known

only to a single individual.

2. In e-mail, a piece of text which identifies the sender of an e-mail message. Some people develop elaborate and attractive signatures

to personalize their messages.

Simplex A modem that either sends or receives information but cannot do

both during one transmission.

Simultaneous transmission

The transmission of data in two directions at one, both sending and

receiving, by the same device.

Site license Authorization (usually subject to a fee) to have multiple copies for

simultaneous use within a specified organization or location.

SLIP Serial Line Internet Protocol

Smiley One of the things Internet users have learned is that the written

language lacks emotive symbols, by which one can tell the emotional

timbre of a given e-mail message. A series of "smileys" have emerged, by which these emotive qualities are sought to be

reintroduced in a shorthand fashion.

SMTP Simple Mail Transport Protocol. The protocol by which e-mail

messages are managed by computers on the Internet. It provides the possibility of designing e-mail *servers* and e-mail *clients*. Many of the popular e-mail handling programs, such as Eudora take advantage

of the SMTP protocol to make e-mailing easy and efficient.

Software A term coined to contrast computer programs with the hardware of a

computer system. Software is a stored set of instructions that

governs the operation of a computer system and makes the hardware

run.

Stand-alone Referring to a device which is capable of performing the functions for

which it is designed without the aid of or connection to another, smarter device. The stand-alone device may receive media from

another device for processing.

Standard Generalized Markup Language

Enables data to move between media by describing documents by their structural elements rather than their visual format and thus permitting further analysis or reuse by various application programs.

Star A network configuration in which a central controller communicates

directly with each device or station. A diagram of this configuration

looks like a star.

Station One of the input or output points of a communications system or of a

multi-user computer.

Stop bit In asynchronous communication, a marker following each character.

String A sequence of entities, such as characters or commands.

Structured Query Language (SQL)

(Pronounced *sequel*) a data access language designed to work with relational databases. First used on IBM's DB2. SOL became a *de facto*

standard in the mid-1980's.

Surfing The enjoyable act of browsing for files and interesting gems of

information on the Internet. This should be contrasted with the more goal-oriented activity of finding a particular piece of information. The aim of the McKinley Internet Directory is to facilitate the latter without

limiting any of the pleasure of the former.

Synchronous Occurring concurrently, and with a regular or predictable time

relationship. In transmission, referring to the ability of the sending and the receiving devices to run continuously at the same frequency.

System A machine or devices using various hardware and software to

accomplish certain tasks. Commonly composed of a central processor, with one or more input or output devices, and capable of making decisions about the material which is being processed.

Various fields of computer technology tend to define system in slightly

different ways.

т

TCP/IP Transmission Control Protocol/Internet Protocol

Telecommunication The transmission of signals by telegraph, radio, satellite, or some

other means that does not involve physical connection between the

sending and receiving devices.

Teleprocessing Computer operations carried out via long-distance communications

network.

Teletext A generic term for one-way information retrieval systems that

broadcast digitally encoded text and graphics to remote users. Teletext users request pages of transmitted data by means of a

keyboard.

TELNET The Internet standard protocol for remote terminal connection service.

TELNET allows a user at one site to interact with a remote timesharing system at another site as if the user's terminal were

connected directly to the remote computer.

Terminal A device (usually with a video display) on which an operator may

communicate with or receive communication from a computer.

Terminal emulation A software capability in which a computer or terminal can be made to

simulate the characteristics of another terminal for communications

compatibility.

Terminal server A small, specialized networked computer that connects many

terminals to a LAN through one network connection. Any user on the

network can then connect to various network hosts.

Text A series of words or characters having some meaning to the reader,

as opposed to command codes or instructions.

Throughput The net speed of a device or system, including input, output, and

processing speeds together. The throughput speed may be slower than the inherent input or output speeds, since input may be slowed by simultaneous output, or vice versa, or input and output may have

to take place serially.

Timesharing The use of a computer for two or more purposes during the same time

interval. The computer shares its attention among the devices by

means of some monitoring program.

Token sharing network

A communications network designed so that all computer devices (stations) on the network are connected to a common channel, called a *bus*. A group of bits (*token*) is passed from station to

give each station in turn the opportunity to transmit data.

Transmission Control Protocol (TCP)

A set of protocols, resulting from ARPA efforts, used by the Internet to support services such as remote login (TELNET), file transfer (FTP) and

mail (SMTP).

Transparent Pertaining to a process that is thoroughly compatible with another

process, so that a user is not necessarily aware that there is more than one process or function involved. A computer program that can be added to an existing program without retraining or re-educating its

users is transparent to the original program.

Tree

- 1. A *tree structure* is an arrangement of data in a hierarchical form, with each group of data containing subgroups that present more detail.
- 2. A network configuration in which a central controller communicates to a number of other devices or stations, each of which on turn communicates to another group of devices or stations, in a hierarchy.

U

UNIX A computer operating system developed by Bell Laboratories, written

in the C programming language, and distinguished by its portability to

different computers. It is widely used in graphics workstations.

Upload The function of sending a file from one computer and transferring it to

another. The opposite of this term is to download by which is meant

the transfer of a file from another computer onto your own.

URL Uniform Resource Locator

USENET An Internet system of discussion groups, some of which may contain

thousands of members, and others a mere handful. Most USENET discussions are archived, so Internet users can query the archives, and download *threads* of discussion centered on specific topics.

User Friendly A characterization of computer products that are easy to learn or to

use.

V

Value-Added Enhancement of documents or data to increase their usefulness, such

as gate-keeping and validation (by peer review), substantive and copy editing by publishers. Libraries add value by selection, cataloging, archiving and providing access. Electronic publishing adds value by providing full-text searching, audio, video, animation. Providing large data sets, reducing the time required for publication, and ease of

access from workstations.

Veronica Very Easy Rodent-Oriented Net-wide Index to Computerized Archives.

An Information Agent that is used to conduct searches against data

stored on various Gopher servers.

Video Display Terminal (VDT)

An operator station that includes a display screen as part of its hardware. VDTs at one time were called CRTs (cathode ray tubes).

Virtual library Extends resources through access to bibliographic databases, full-text

files, images and other information in electronic format.

Voice grade Referring to the capability of a data transmission circuit to permit a

transfer rate of up to 2400 bits per second (BAUD). A voice-grade circuit uses analog phone lines identical to standard telephone equipment, and encodes digital data into tones for transmission.

W

WAIS Wide Area Information Server (See Wide Area Information Server.)

Wide Area Information Server

A method of searching indexed text. Someone can come along and take a hundred files on the topic of numerical analysis and index them into one .SRC file. New resources are announced in a special indexed database called "directory-of-servers" which solves the gopher problem mentioned above.

Wide Area Network (WAN)

A network spanning hundreds or thousands of miles, in contrast to a local area network.

WWW

World-Wide Web is hypertext. It goes beyond gopher by displaying menus and beyond WAIS by allowing pointers and chains within the text. Hypertext links can lead you down a path that may be fruitful or it may be a dead end. Anyone who has used hypertext on a multimedia systems knows the power that it affords the user.

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X.25 CCITT standard (1976) for the protocols and message formats that define the interface between a terminal and a packet switching

network.

X.400 Global electronic messaging architecture



There are currently no glossary entries for this letter.

Z39.50

Application-layer protocol standard developed by the American National Standards Institute (1992) for computer-to-computer information retrieval. A number of companies and universities are using it to develop inter-operable search-and-retrieval software products for accessing the INTERNET. The Open Systems Interconnection (OSI) model defines z39.50, but because OSI is not built into the UNIX operating system like TCP/IP, z39.50 was adapted to run over TCP/IP for the Internet.

Overview of Software

The Internet Directory window contains a Site List, site description, and associated buttons and menus.

The Site List is in the upper part of the window and contains all Internet sites included in the directory, or shows sites resulting from a search. One site is always selected, and its description appears in the lower part of the window. The number of stars (1-4) next to a site name is an expert's rating of how comprehensive, dynamic, or voluminous the information at the site is.

When you start the McKinley Internet Directory, the Site List includes all sites. Use the scroll bar to browse through them, or click the Select Sites button to search for a particular site.

Basics

Touring the Directory Window
About the Site Selection Dialog
Browsing through the Site List
About the Site Description
Selecting Site Sections

Searching

Searching for a Site
Selecting from Word Lists
Using And and Or
Valid Search Criteria
Search Tips
Advanced Searching

Results

Viewing Search Results

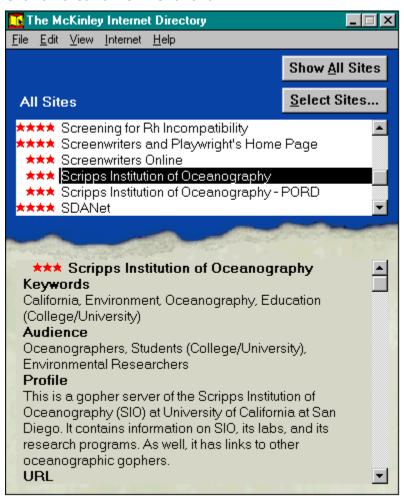
Printing a Site Description

Copying a Site Description to the Clipboard

Using the Keyboard

Touring the Directory Window

Click an area to view its function.



See also

About the Site Selection Dialog

About the Site Selection Dialog

Click an area to view its function.



See also

Touring the Directory Window

Browsing through the Site List

Browse for a site by scrolling through the list and selecting the site name you want, using one of these methods:

- Click the scroll bar or scroll arrows to move the selection bar a few entries up or down in the list.
- Drag the scroll box to move through a lot of sites quickly. While you drag, the indicator box displays red letters that show your relative position in the list. When you release the mouse button, the site name closest to those letters is selected.
- Type the first few letters of the site you want to find. The letters appear in red in the indicator box, and the selector moves to the closest matching site.
- To clear the indicator box, press the Escape (Esc) key.

Note: In the Site List, all sites beginning with numbers appear at the top of the list, followed by sites beginning with letters. Sites beginning with "The" are alphabetized under the letter "T."

About the Site Description

Use the scroll bar to view the site description. The sections you see match the sections that are checked in the Site Sections dialog.

All descriptions contain the first five sections. Many contain the following sections and/or other additional sections:

Section Name	Description
Site Name	Name of site with star rating
Keywords	Words you can search for that will find this site
Audience	Occupations and interests of individuals and groups that would be interested in this site
Profile	Description of site
URL	Universal Resource Locator. Shows up to seven types of Internet addresses used to access the site, such as http, ftp, gopher, mailto, news, telnet, and WAIS addresses.
Language	Language or languages used at the site
Producer	Entity assuming responsibility for the site
Producer Address	Physical mail address of producer
Phone	Phone number of producer
Contact	Name of person to contact for information about site
Contact Email	Contact's electronic mail address
Access Instruction	Special instructions, such as subscribing to lists
Cost	Indicates whether site requires fees for use by Yes or No
Commercial	Indicates whether site is a for-profit organization by Yes or No
Moderated	Indicates whether site has a moderator by Yes or No
See also	

Selecting Site Sections

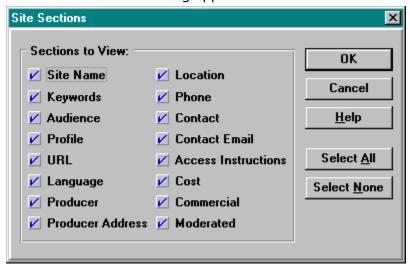
Selecting Site Sections

You can select the sections you want to view in the site description.

To select site sections:

1. Choose **Site Sections** from the View menu.

The Site Sections dialog appears.



- Click to check the sections you want to view in the site description.
- Click to clear the sections you do not want to view in the site description.
- Click Select All to check all sections.
- Click Select None to clear all sections. This is useful when you want to clear all the check boxes, then select a few sections.
- 2. Click OK to accept the changes and close the dialog, or click Cancel to exit the dialog without making any changes.

Note: The first five sections appear in the Search boxes of the Site Selection window, where you select a section to search for words or phrases.

See also

About the Site Description

Searching for a Site

From the Internet Directory window click the Select Sites button.

The Internet Directory Site Selection dialog opens, showing two sets of Search and For boxes, separated by the And/Or button.

- In a **Search** box, you can select one of the five **sections**, because these are the sections the software can search.
- In a **For** box you can specify **words** to look for within the section.

It is sufficient to specify one section, one word, and click the Search button.

To search for a site:

- 1. Select a section from the first Search box.
- 2. Type a word in the first For box, or select a word from the list.

You can type one or more characters to move the list quickly to the closest word matching those characters. What you type appears in red in the indicator box.

- 3. You can expand or narrow the search results by selecting a second section and word. Use the And/Or button to show the relationship between the two sets of criteria.
 - Use AND to produce fewer sites.
 - Use OR to produce more sites.

When the criteria is valid the <u>Search Light</u> changes from red to green.

4. Click the Search button.

Sites that match the search criteria appear in the Site List in the Internet Directory window.

If the search does not find a match for your criteria, the Search Results message tells you so. Click OK and try another search criteria.

See also

Selecting from Word Lists
Viewing Search Results
Using And and Or
Valid Search Criteria

Selecting from Word Lists

Select a word using one of these methods:

- Click the scroll bar or scroll arrows to move the selection bar a few entries up or down in the list.
- Drag the scroll box to move through a lot of entries quickly. While you drag, an indicator box displays red letters that show your relative position in the list. When you release the mouse button, the entry closest to those letters is selected.
- Type the first few letters of the word you want to find. The letters appear in red in the indicator box, and the selector moves to the closest matching entry.
- Double-click the word to place it in the For box, or click the word, then press Enter to place it in the For box.

Using And and Or

You can use the AND and OR operators to produce more or fewer sites in the search results. You can use the And/Or button to connect two sets of search criteria, or you can type these words in the For box.

- To produce fewer sites use AND.
- To produce more sites use OR.

For example, typing "classical and music" finds all sites containing BOTH words in the selected section.

Typing "classical or music" finds all sites containing EITHER word in the selected section.

You can also type "and not" between words to exclude a word. For example, typing "music and not classical" finds all sites containing the word "music" but not the word "classical" in the selected section.

See Also

Valid Search Criteria
Search Tips
Advanced Searching

Valid Search Criteria

You can enter one or more words in the For boxes. You can use the And/Or button to expand or narrow the number of sites resulting from a search, or you can type the words "and" and "or" directly into a For box between two words.

When you use "and" or "or" in a For box you must complete the expression. For example, the line "academic and" is incomplete. To make this line valid you need to delete "and" or add another word after it.

When the search expression is valid the Search Light turns green and the Search button becomes available.

If you type invalid characters into a For box the Search Light turns red and the Search button becomes unavailable.

If you are using parentheses to enclose a phrase containing and or or, such as (classical or jazz), the Search Light turns yellow until the parentheses are closed, or "balanced."

Upper-case characters are automatically translated to lower-case in the For boxes.

Valid Words and Characters:

- A valid word is a contiguous series of alphanumeric characters plus embedded hyphens and apostrophes.
- Valid alphanumeric characters are 0 through 9 and a through z.
- Invalid characters are: $! @ # $ % ^ & + | ~ = \ / <> ? { } [], ; ` "$

Valid Word Invalid Word

o'clock o' clock o o' anglo-saxon a&p

Note: You can type a slash (/) when searching for a URL.

See also

<u>Search Tips</u>
<u>Using And and Or</u>
Advanced Searching

Search Tips

You can use one or both For boxes to enter information.

- When you use two sets of criteria, whatever is showing on the And/Or button connects the two sets.
- When you click *And* it changes to *Or*, then back to *And*.
- You can type And and Or in the For box instead of using the button.
- Separating words with a space is the same as separating words with And.
- Place an * (asterisk) after one or more characters to search for all words beginning with those characters. For example, car* finds all entries beginning with car, such as cars, cart, career, and so on.
- Searches for the plural form of a word automatically include the singular form of the word. For example, seaching for dogs also finds entries with just dog.
- When your search word contains an accented character type the unaccented character. For example, if you are looking for the name José, type Jose.
- You can use parentheses to create search expressions. See Advanced Searching.

See also

Advanced Searching
Valid Search Criteria
Using And and Or

Advanced Searching

You can use parentheses to group words separated by the *And, Or,* and *And Not* to form expressions that can be evaluated.

- Expressions are evaluated in a certain order. Changing the position of parentheses can change the results of a search.
- You can use expressions in parentheses in one or both For boxes.
- The Search Light tells you when your parentheses are unbalanced or your characters are invalid.

Evaluation order:

terms in the same box (anything inside parentheses) AND OR AND NOT

Examples:

(Music AND Classical) OR Jazz

Finds all entries containing the words Music AND Classical, OR just the word Jazz.

Music AND (Classical OR Jazz)

Finds all entries containing the word *Classical* OR the word *Jazz* that also contain the word *Music*. Said another way, finds all entries containing the words Music AND Classical OR the words Music AND Jazz.

(Music AND lazz) AND NOT Classical

Finds all entries containing the words *Music* AND *Jazz* that do not contain the word Classical.

Music OR Classical OR Jazz

Finds all entries containing the word *Music* OR the word *Classical* OR the word *Jazz*. This is a much larger set than entries containing all three words Music AND Classical AND Jazz. This is the only example in this set that finds ALL music, not just Classical and/or Jazz.

See also

<u>Using And and Or</u>
<u>Valid Search Criteria</u>
Search Tips

Viewing Search Results

All sites matching your search criteria appear in the Site List. In the site description, all words that matched your search criteria appear in blue.

- To return to viewing all sites, click the Show All Sites button.
- To view the search criteria that resulted in these listings, click the Select Sites button again. Your criteria remains in the Search and For boxes so you can easily edit them to refine your search. Click the Clear button to start a new search.

Note: When viewing selected sites, the indicator box in the Site List shows your relative position in the list by percentage rather than alphabetical characters.

Printing a Site Description

You can print all or part of a selected site description, or all or part of site descriptions resulting from a search.

1. Choose **Print** from the File menu.

The Print dialog appears, ready to print the checked sections of the site description showing in the Internet Directory window.

- To print the selected site, click the Current Site button.
- To print descriptions of all sites resulting from a search, click the All Selected Sites button. This button is available only when the Site List displays Selected Sites.
- To add or remove section descriptions, check or clear the check boxes.
- To copy the entire site description, click the Select All button.
- To clear all sections, click Select None. This is useful when you want to clear the check boxes, then select a few sections.
- 2. Click OK.

Copying a Site Description to the Clipboard

You can copy all or part of the site description showing in the Internet Directory window to the Clipboard, from which you can paste the contents into another application, such as your Internet browsing program.

1. Choose **Copy to Clipboard** from the Edit menu.

The Copy to Clipboard dialog appears, ready to copy the checked sections of the site description.

- To add or remove section descriptions, check or clear the check boxes.
- To copy the entire description, click the Select All button.
- To clear all sections, click Select None. This is useful when you want to clear the check boxes, then select a few sections.
- 2. Click OK.

Using the Keyboard

You can use the keyboard instead of the mouse to navigate the directory and give commands. One control in a window is always selected and active.

- To "press" a selected button, press Enter.
- To change the selection, press Tab or Shift-Tab to move the highlight.
- To "press" a button that isn't selected, hold down the Alt key while pressing the underlined character on the button.

Following are the keys you can use to edit, scroll through, and select items and data in the McKinley Internet Directory:

Key	Description
Alt	Press with underlined letter to execute menu or button command
Esc	Clears indicator box. Cancels Site Selection dialog when indicator box is not showing.
Alt-↓	On arrow next to Search and For boxes, displays word list
Alt-	On arrow next to Search and For boxes, hides word list
Backspace	Deletes character to left of cursor
Delete	Deletes character at cursor
Home	Moves cursor to beginning of data
End	Moves cursor to end of data
F1	Displays Help for active (highlighted) part of screen
PgUp	Moves up one screenful
PgDn	Moves down one screenful
	Moves selection highlight up one line
\downarrow	Moves selection highlight down one line
←	Moves left one character or word
\rightarrow	Moves right one character or word
Tab	Moves to next available box, button, or item on screen
Shift-Tab	Moves to previous available box, button, or item on screen
Shift - ←	Selects or deselects one character left of cursor
Shift - →	Selects or deselects one character right of cursor
Shift-Del	Same as Backspace
Enter	Same as clicking a selected item or button

Internet Directory Window

Upper section shows list of all Internet sites in the Directory, or all sites resulting from a search. Lower section displays description of current site.

Star Rating

Conveys how experts rate the information available at the Internet site, according to how comprehensive, large, or dynamic it is in relation to the subject matter. Four stars is the best rating.

Site List

When viewing All Sites, shows alphabetical list of all Internet sites in the Directory. When viewing Selected Sites, shows sites matching the search criteria in the Site Selection dialog.

Site Description

Description of the current Internet site in the Site List. A site description always includes five standard sections that the software can search: Site Name, Keywords, Audience, Profile, and URL. Some or all of these might be displayed in the site description, depending on the settings in the Site Sections dialog.

Menu Bar

Shows menus containing commands you can choose to display more information.

Sites Label

Indicates whether the Site List is showing the names of all Internet sites in the directory, or selected sites that match the search criteria you specified in the Site Selection dialog. The label changes between All Sites and Selected Sites.

Show All Sites Button

Displays a list of all Internet sites in directory.

Select Sites Button

Displays Site Selection dialog, where you enter criteria to search for an Internet site.

Site Selection Dialog

Presents Search and For boxes where you enter criteria to search for an Internet site.

Section List in Search Box

List of sections the software can search. Select a section to search its words. The sections are: Keywords, Site Name, Audience, Profile, and URL.

Word List in For Box

A list of words in the section currently selected in the Search box. Display the word list to select valid criteria for the For box. Select a word to search for in the selected section, or type all or part of a word or words.

And/Or Button

Click to change from And to Or. Use to expand (Or) or narrow (And) the search results.

Second Section List

List of sections the software can search. Select a section to search its words. If you specify two sets of criteria, use the And/Or button to specify their relationship.

Second Word List

A list of words in the section currently selected in the Search box. Display the word list to select valid criteria for the For box. Select a word to search for in the selected section, or type all or part of a word.

Use this second set of criteria to refine your search.

Search Light

Green indicates that search criteria is valid. Red indicates search criteria is invalid. For example, in a For box, the line "academic and" is incomplete. To make this line valid you need to delete "and" or add another word.

Search Button

Searches for an Internet site using the criteria you entered in the Site Selection dialog. This button is not available until there is valid criteria in the top Search and For boxes.

Clear Button

Clears all criteria from Site Selection dialog.

Cancel Button

Closes Site Selection dialog without performing a search.